

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-3	MH-2	599.98	599.37	60.5	217	1.51	100	3.15689	2.8699	1.2	1.66	0.8	64.2	1.77	213.81	60.50	7.41	9.65	3	3	0	0	7.4	77.7	49.4
MH-1234	MH-1913	579.44	579.34	10.2	150	0.51	100	0.07315	0.0665	0.8	0.84	0.8	15.2	1.30	26.52	10.20	1.15	1.33	1	1	0	0	1.1	8.6	7.7
MH-1914	MH-62	585.37	585.35	10.2	217	0.6	643.215	1.27787	1.1617	1.4	1.36	1.38	49.6	1.97	40.13	10.20	1.25	1.63	1	1	0	0	1.3	14.8	8.3
MH-6142	MH-2767	585.38	585.21	28.4	150	0.6	168.265	0.24651	0.2241	1.1	0.8	1.35	29.9	1.60	90.88	28.40	3.20	3.70	1	1	0	0	3.2	30.4	21.3
MH-1345	MH-1346	571.43	571.42	6.5	150	0.24	1000	0.0979	0.089	0.9	0.96	0.83	22.9	1.40	18.20	6.50	0.73	0.85	1	1	0	0	0.7	6.0	4.9
MH-2398	MH-1773	601.02	600.89	13	150	0.69	100	0.20691	0.1881	0.9	0.98	0.8	25.6	1.40	36.40	13.00	1.46	1.69	1	1	0	0	1.5	12.0	9.8
MH-5	MH-6	580.05	580.05	0	150	0	(N/A)	0	0	0.8	0.8	0.8	0	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-13	MH-14	598.7	598.7	0	150	0.23	(N/A)	0.07887	0.0717	1.2	1.2	1.2	28	1.70	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-15	MH-16	590.53	590.52	12.9	150	0.2	1000	0.04752	0.0432	1.5	1.47	1.48	39.5	2.00	51.60	12.90	1.45	1.68	1	1	0	0	1.5	17.7	9.7
MH-19	MH-20	602.64	602.64	0	150	0.14	(N/A)	0.01309	0.0119	0.8	0.8	0.8	7.7	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-679	MH-680	594.78	594.78	0.3	150	0.6	159.934	0.22847	0.2077	1.7	1.68	1.68	29.7	2.20	1.32	0.30	0.03	0.04	1	1	0	0	0.0	0.5	0.2
MH-1989	MH-1990	581.27	581.16	10.7	150	0.23	100	0.0055	0.005	0.9	0.92	0.8	4.3	1.40	29.96	10.70	1.20	1.39	1	1	0	0	1.2	9.8	8.0
MH-41	MH-42	580.37	580.36	3.7	150	0.21	1000	0.06017	0.0547	0.8	0.81	0.81	17.7	1.30	9.62	3.70	0.42	0.48	1	1	0	0	0.4	3.1	2.8
MH-687	MH-688	597.22	597.22	0.3	150	0.17	1000	0.03091	0.0281	0.8	0.8	0.8	11.6	1.30	0.78	0.30	0.03	0.04	1	1	0	0	0.0	0.3	0.2
MH-49	MH-50	595.55	595.55	0	150	0.1	(N/A)	0.00429	0.0039	0.8	0.8	0.8	7.6	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-2029	MH-2030	581.35	581.29	11.3	150	0.6	195.028	0.29414	0.2674	1.9	1.88	2.01	33.4	2.40	54.24	11.30	1.27	1.47	1	1	0	0	1.3	22.3	8.5
MH-735	MH-736	589.74	589.79	25.9	217	0.69	439.387	1.22496	1.1136	0.8	0.86	0.8	47	1.37	70.81	25.90	3.17	4.13	1	1	0	0	3.2	24.8	21.2
MH-73	MH-74	598.05	598.04	0	150	0.6	(N/A)	0.18931	0.1721	0.8	0.8	0.8	25.7	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-75	MH-76	598.92	598.92	0	150	0.2	(N/A)	0.05324	0.0484	0.8	0.8	0.8	17.9	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-77	MH-78	598.79	598.73	10.7	150	0.6	179.497	0.26686	0.2426	0.8	0.8	0.86	31.4	1.30	27.82	10.70	1.20	1.39	1	1	0	0	1.2	9.0	8.0
MH-757	MH-758	580.03	579.95	13	150	0.6	165.635	0.23848	0.2168	1	0.93	1	30.1	1.50	39.00	13.00	1.46	1.69	1	1	0	0	1.5	12.9	9.8
MH-89	MH-90	563.42	563.36	22.5	175	0.6	395.894	0.61028	0.5548	3.4	3.39	3.44	46.1	3.93	176.63	22.50	2.62	3.16	1	0	1	0	2.6	72.0	17.4
MH-91	MH-92	597.66	597.69	21	150	0.25	1000	0.09834	0.0894	0.8	0.82	0.8	26.5	1.30	54.60	21.00	2.36	2.73	1	1	0	0	2.4	17.7	15.8
MH-1523	MH-1524	595.05	595.12	7.7	217	1.37	100	2.12586	1.9326	0.8	0.8	0.88	52	1.37	21.05	7.70	0.94	1.23	1	1	0	0	0.9	7.4	6.3
MH-2057	MH-2058	594.05	594.16	11	150	0.47	103.294	0.05753	0.0523	0.9	0.8	0.99	18	1.40	30.80	11.00	1.24	1.43	1	1	0	0	1.2	10.1	8.3
MH-783	MH-784	597.99	598.01	12.6	175	0.6	453.919	0.74987	0.6817	0.8	0.81	0.8	48.9	1.33	33.39	12.60	1.46	1.77	1	1	0	0	1.5	11.2	9.8
MH-95	MH-96	580.06	580.1	13.2	150	0.28	281.424	0.03476	0.0316	0.8	0.85	0.8	18.4	1.30	34.32	13.20	1.49	1.72	1	1	0	0	1.5	11.2	9.9
MH-101	MH-102	598.29	598.29	0	150	0.26	(N/A)	0.11627	0.1057	1.3	1.35	1.35	30.5	1.80	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-103	MH-104	586.99	586.99	0	150	0.21	(N/A)	0.05522	0.0502	1.2	1.16	1.16	15.4	1.70	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-107	MH-108	599.95	599.95	0	150	0.19	(N/A)	0.04224	0.0384	0.8	0.8	0.8	13.5	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-123	MH-124	598	598	0	150	0.6	(N/A)	0.132	0.12	0.8	0.8	0.8	21	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-1577	MH-1578	580.97	581.04	8	150	0.6	104.812	0.13629	0.1239	1.4	1.47	1.35	22.7	1.90	30.40	8.00	0.90	1.04	1	1	0	0	0.9	10.4	6.0
MH-1605	MH-1606	580.48	580.45	8.1	150	0.31	320.27	0.05819	0.0529	0.8	0.8	0.8	15.6	1.30	21.06	8.10	0.91	1.05	1	1	0	0	0.9	6.8	6.1
MH-157	MH-158	571.54	571.54	0	150	0.26	(N/A)	0.12738	0.1158	0.8	0.8	0.8	23.1	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-3265	MH-3266	592.05	592.03	18.3	150	0.14	1000	0.0143	0.013	0.8	0.8	0.82	9.2	1.30	47.58	18.30	2.06	2.38	1	1	0	0	2.1	15.5	13.7
MH-163	MH-164	574.55	574.55	0	150	0.09	(N/A)	0.00319	0.0029	0.8	0.8	0.8	4	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-169	MH-170	572.34	572.34	0	150	0.09	(N/A)	0.00341	0.0031	0.8	0.8	0.8	15.4	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-175	MH-176	580.62	580.61	12.2	150	0.16	1000	0.0253	0.023	0.8	0.8	0.81	12.1	1.30	31.72	12.20	1.37	1.59	1	1	0	0	1.4	10.3	9.2
MH-185	MH-186	576.59	576.59	0	150	0.6	(N/A)	0.24211	0.2201	1.6	1.59	1.59	30.7	2.10	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-195	MH-196	579.82	579.82	5.5	150	0.2	1000	0.0506	0.046	0.8	0.81	0.8	17.1	1.30	14.30	5.50	0.62	0.72	1	1	0	0	0.6	4.6	4.1
MH-197	MH-198	584.1	584.11	0	150	0.11	(N/A)	0.00682	0.0062	0.8	0.8	0.8	29.8	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-201	MH-202	599.03	599.04	0	150	0.09	(N/A)	0.00396	0.0036	0.8	0.8	0.8	4.4	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-215	MH-216	600.9	600.89	13.1	150	0.25	1000	0.10846	0.0986	0.8	0.8	0.81	26	1.30	34.06	13.10	1.47	1.71	1	1	0	0	1.5	11.1	9.8
MH-163	MH-1668	574.03	573.97	8.5	150	0.6	158.3	0.22484	0.2044	1.2	1.32	1.11	29.6	1.70	28.90	8.50	0.96	1.11	1	1	0	0	1.0	9.7	6.4
MH-955	MH-956	570.02	570.11	21.5	150	0.6	234.546	0.37466	0.3406	1.5	1.5	1.42	41	2.00	86.00	21.50	2.42	2.80	1	1	0	0	2.4	29.5	16.1
MH-1578	MH-1872	581.04	581.16	11.7	150	0.6	100.428	0.12947	0.1177	1.3	1.35	1.2	22.2	1.80	42.12	11.70	1.32	1.52	1	1	0	0	1.3	14.3	8.8
MH-1680	MH-1681	579.95	579.87	8.6	150	0.64	100	0.16346	0.1486	0.8	0.8	0.8	22.8	1.30	22.36	8.60	0.97	1.12	1	1	0	0	1.0	7.3	6.5
MH-235	MH-236	580.05	580.05	0	150	0.08	(N/A)	0.0022	0.002	0.8	0.8	0.8	18.9	1.30	0.00	0.00	0.00	0.00	1	1	0	0	0.0	0.0	0.0
MH-443	MH-969	592.2	592.37	21.7	150	0.6	130.616	0.17809	0.1619	1.5	1.6	1.47	24.5	2.00	86.80	21.70	2.44	2.82	1	1	0	0	2.4	29.7	16.3
MH-2188	MH-2189	581.15	581.03	11.8	150	0.5	106.078	0.07667	0.0697	0.8	0.8	0.8	17.9	1.30	30.68	11.80	1.33	1.54	1	1	0	0	1.3	10.0	8.9
MH-818	MH-989	585.91	586.01	23.7	150	0.6	249.693	0.40975	0.3725	0.8	0.85	0.8	41.1	1.30	61.62	23.70	2.67	3.08	1	1	0	0	2.7	20.0	17.8
MH-1712	MH-1713	590.13	590.04	8.8	150	0.33	100	0.01859	0.0169	0.9	0.9	0.8	9.3	1.40	24.64	8.80	0.99	1.15	1	1</					

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-385	MH-386	588.13	588.12	0.1	150	0.7	(N/A)	0.38489	0.3499	0.8	0.8	0.8	37.6	1.30	0.26	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-387	MH-388	585.08	584.89	24	150	0.6	126.064	0.17248	0.1568	1.9	1.83	2.02	25.8	2.40	115.20	24.00	2.70	3.12	1	1	0	0	2.7	47.3	18.0
MH-2189	MH-2302	581.03	580.97	12.4	150	0.44	190.286	0.09845	0.0895	0.8	0.8	0.8	20.9	1.30	32.24	12.40	1.40	1.61	1	1	0	0	1.4	10.5	9.3
MH-395	MH-396	586.05	586.05	0.1	150	0.08	(N/A)	0.00286	0.0026	0.8	0.8	0.8	3.7	1.30	0.26	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-793	MH-1181	589.76	589.86	14.5	150	0.37	144.794	0.0396	0.036	0.8	0.8	0.8	11.7	1.30	37.70	14.50	1.63	1.89	1	1	0	0	1.6	12.3	10.9
MH-403	MH-404	581.81	581.72	10.7	150	0.6	121.918	0.16423	0.1493	1.1	1.09	1.18	23.4	1.60	34.24	10.70	1.20	1.39	1	1	0	0	1.2	11.4	8.0
MH-407	MH-408	586.79	586.78	0.1	150	0.81	(N/A)	0.49599	0.4509	0.8	0.8	0.8	42.5	1.30	0.26	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-411	MH-412	579.99	579.98	8.7	150	0.19	1000	0.03795	0.0345	1.1	1.1	1.11	18.4	1.60	27.84	8.70	0.98	1.13	1	1	0	0	1.0	9.3	6.5
MH-415	MH-416	595.38	595.37	0.1	150	0.4	(N/A)	0.08613	0.0783	0.8	0.8	0.8	18.2	1.30	0.26	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-74	MH-1212	598	597.95	5.3	150	0.73	100	0.25674	0.2334	0.8	0.85	0.8	28.7	1.30	13.78	5.30	0.60	0.69	1	1	0	0	0.6	4.5	4.0
MH-417	MH-418	586.22	586.22	0.1	150	0.1	(N/A)	0.00572	0.0052	0.8	0.8	0.8	14.3	1.30	0.26	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-1251	MH-1252	578.62	578.6	5.8	150	0.6	359.067	0.52679	0.4789	2.9	2.85	2.9	53.7	3.40	39.44	5.80	0.65	0.75	1	1	0	0	0.7	15.8	4.4
MH-1256	MH-1257	564.7	564.75	4.9	150	0.41	100	0.03509	0.0319	0.8	0.8	0.86	10.6	1.30	12.74	4.90	0.55	0.64	1	1	0	0	0.6	4.1	3.7
MH-465	MH-466	593.7	593.71	13.9	271	0.6	988.028	2.67355	2.4305	0.8	0.81	0.8	62.6	1.42	39.50	13.90	1.82	2.62	1	1	0	0	1.8	14.6	12.1
MH-473	MH-474	594.98	594.98	0.1	150	0.6	(N/A)	0.18634	0.1694	1.2	1.25	1.25	26.6	1.70	0.34	0.10	0.01	0.01	1	1	0	0	0.0	0.1	0.1
MH-2362	MH-2363	601.96	602.08	12.8	150	0.6	104.93	0.13541	0.1231	0.9	0.92	0.8	22.8	1.40	35.84	12.80	1.44	1.67	1	1	0	0	1.4	11.8	9.6
MH-505	MH-506	590.46	590.44	16.9	150	0.21	1000	0.06083	0.0553	0.8	0.8	0.82	18.8	1.30	43.94	16.90	1.90	2.20	1	1	0	0	1.9	14.3	12.7
MH-1295	MH-1296	578.82	578.82	6.2	150	0.21	1000	0.05588	0.0508	1.5	1.5	1.53	27.5	2.00	24.80	6.20	0.70	0.81	1	1	0	0	0.7	8.5	4.7
MH-597	MH-1304	562.67	562.65	16.1	217	0.6	584.782	1.09483	0.9953	1.1	1.11	1.14	51.1	1.67	53.68	16.10	1.97	2.57	1	1	0	0	2.0	19.4	13.2
MH-1946	MH-377	564.54	564.53	11.9	150	0.2	1000	0.05324	0.0484	0.9	0.8	0.94	26.8	1.40	33.32	11.90	1.34	1.55	1	1	0	0	1.3	10.9	8.9
MH-583	MH-584	565.82	565.8	17.8	150	0.22	1000	0.06809	0.0619	1.2	1.21	1.24	24.9	1.70	60.52	17.80	2.00	2.32	1	1	0	0	2.0	20.4	13.4
MH-613	MH-614	564.81	564.76	12	175	0.73	261.069	0.715	0.65	1	0.93	0.97	45.7	1.53	36.60	12.00	1.40	1.68	1	1	0	0	1.4	12.5	9.3
MH-619	MH-620	577.28	577.26	11.4	271	0.6	784.307	1.70038	1.5458	2.1	2.1	2.12	52.5	2.72	62.04	11.40	1.49	2.15	1	1	0	0	1.5	28.3	9.9
MH-1728	MH-2455	577.02	577.01	13.7	400	0.63	1000	3.87926	3.5266	3.6	3.58	3.59	40.5	4.35	119.19	13.70	2.06	3.78	1	0	1	0	2.1	68.1	13.7
MH-1445	MH-1446	576.05	576.09	18	175	0.6	424.089	0.67485	0.6135	1.7	1.67	1.73	50.1	2.23	80.10	18.00	2.09	2.53	1	1	0	0	2.1	33.9	14.0
MH-1447	MH-1448	562.42	562.39	7.2	150	0.6	219.33	0.34507	0.3137	1.4	1.38	1.44	39.1	1.90	27.36	7.20	0.81	0.94	1	1	0	0	0.8	9.3	5.4
MH-2466	MH-2467	581.56	581.42	13.5	150	0.57	100	0.11033	0.1003	0.8	0.9	0.8	18.7	1.30	35.10	13.50	1.52	1.76	1	1	0	0	1.5	11.4	10.1
MH-665	MH-666	595.91	595.9	0.3	150	0.51	100	0.07425	0.0675	0.8	0.8	0.8	15.6	1.30	0.78	0.30	0.03	0.04	1	1	0	0	0.0	0.3	0.2
MH-2025	MH-2026	582.3	582.23	10.8	150	0.6	146.639	0.20636	0.1876	1.1	1.17	1.11	27.9	1.60	34.56	10.80	1.22	1.41	1	1	0	0	1.2	11.6	8.1
MH-3607	MH-3608	571.86	571.64	21.6	150	0.33	100	0.01793	0.0163	0.9	0.99	0.8	7.7	1.40	60.48	21.60	2.43	2.81	1	1	0	0	2.4	19.9	16.2
MH-2261	MH-2123	580.78	580.72	41	217	0.6	702.082	1.51492	1.3772	3.1	3.23	3.04	57.3	3.67	300.69	41.00	5.02	6.54	2	0	2	0	5.0	128.6	33.5
MH-709	MH-710	564.63	564.67	18.5	175	0.6	494.004	0.86471	0.7861	0.8	0.84	0.8	55.9	1.33	49.03	18.50	2.15	2.60	1	1	0	0	2.2	16.4	14.3
MH-729	MH-730	600.4	600.79	55.3	150	0.6	144.865	0.20328	0.1848	2.4	2.56	2.17	37.3	2.90	320.74	55.30	6.22	7.20	2	2	0	0	6.2	129.7	41.5
MH-1510	MH-1511	578.02	577.96	35.8	217	0.6	625.228	1.21704	1.1064	2.4	2.35	2.42	56.3	2.97	212.44	35.80	4.39	5.71	2	2	0	0	4.4	91.8	29.2
MH-1512	MH-1513	581.4	581.38	7.6	400	0.95	335.608	4.00917	3.6447	0.8	0.8	0.8	38.4	1.55	23.56	7.60	1.14	2.09	1	1	0	0	1.1	9.7	7.6
MH-737	MH-738	574.3	574.27	16.2	217	0.6	651.321	1.30603	1.1873	0.8	0.8	0.82	51	1.37	44.29	16.20	1.99	2.58	1	1	0	0	2.0	15.5	13.2
MH-743	MH-744	603.41	603.1	38.3	150	0.6	121.633	0.16368	0.1488	1.4	1.27	1.59	23.3	1.90	145.54	38.30	4.31	4.99	2	2	0	0	4.3	49.6	28.7
MH-3254	MH-3255	560.15	559.97	18.2	150	0.84	100	0.41613	0.3783	0.9	0.98	0.8	36.8	1.40	50.96	18.20	2.05	2.37	1	1	0	0	2.0	16.7	13.7
MH-749	MH-750	588.6	588.78	18.9	150	0.6	103.857	0.13706	0.1246	1	1.12	0.95	21	1.50	56.70	18.90	2.13	2.46	1	1	0	0	2.1	18.8	14.2
MH-753	MH-754	579.36	579.41	10	150	0.6	176.149	0.26037	0.2367	0.8	0.85	0.8	31	1.30	26.00	10.00	1.13	1.30	1	1	0	0	1.1	8.4	7.5
MH-771	MH-772	596.42	596.42	0.4	150	0.46	100	0.05159	0.0469	0.8	0.81	0.8	13	1.30	1.04	0.40	0.05	0.05	1	1	0	0	0.0	0.3	0.3
MH-1541	MH-1542	572.47	572.46	7.8	150	0.12	1000	0.00814	0.0074	0.8	0.8	0.8	10.7	1.30	20.28	7.80	0.88	1.02	1	1	0	0	0.9	6.6	5.9
MH-1546	MH-1547	582.79	582.72	7.8	150	0.6	105.079	0.13563	0.1233	1	1.02	0.96	22.7	1.50	23.40	7.80	0.88	1.02	1	1	0	0	0.9	7.8	5.9
MH-2097	MH-1061	559.57	559.51	11.2	150	0.8	171.085	0.71929	0.6539	0.8	0.8	0.8	53.1	1.30	29.12	11.20	1.26	1.46	1	1	0	0	1.3	9.5	8.4
MH-1257	MH-3285	564.81	564.99	17.7	150	0.25	100	0.00781	0.0071	0.9	0.8	0.96	5.1	1.40	49.56	17.70	1.99	2.30	1	1	0	0	2.0	16.3	13.3
MH-2112	MH-1216	562.65	562.54	11.3	150	1.07	100	1.06469	0.9679	1	1.13	0.8	61.2	1.50	33.90	11.30	1.27	1.47	1	1	0	0	1.3	11.2	8.5
MH-812	MH-813	580.35	580.33	13.8	150	0.15	1000	0.01914	0.0174	0.8	0.83	0.83	10.5	1.30	35.88	13.80	1.55	1.80	1	1	0	0	1.6	11.7	10.4
MH-828	MH-829	581.18	581.19	7	150	0.12	1000	0.00847	0.0077	1	1.06	1.04	9	1.50	21.00	7.00	0.79	0.91	1	1	0	0	0.8	7.0	5.3
MH-2566	MH-2567	601.42	601.43	14.2	150	0.15	1000	0.0165	0.015	0.9	0.93	0.8	13.1	1.40	39.76	14.20	1.60	1.85	1	1	0	0	1.6	13.1	10.7
MH-864	MH-865	580.75	580.74	9.2	150	0.21	1000	0.05654	0.0514	0.8	0.8	0.8	17.8	1.30	23.92	9.20	1.04	1.20	1	1	0	0	1.0	7.8	6.9
MH-2582	MH-2583	573.56	573.54	14.3	217	0.6	668.728	1.36939	1.2449	1.2	1.22	1.1	62.6	1.77	50.54	14.30	1.75	2.28	1	1	0	0	1.8	18.	

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-1569	MH-1570	585.81	585.73	8	150	0.51	100	0.07282	0.0662	0.8	0.86	0.8	15.2	1.30	20.80	8.00	0.90	1.04	1	1	0	0	0.9	6.8	6.0
MH-1606	MH-2519	578.75	578.7	14.3	150	0.6	272.756	0.46299	0.4209	2.6	2.5	2.63	47.1	3.10	88.66	14.30	1.61	1.86	1	1	0	0	1.6	35.7	10.7
MH-1589	MH-1590	591.48	591.4	8.1	150	0.49	100	0.06809	0.0619	0.9	0.93	0.8	14.7	1.40	22.68	8.10	0.91	1.05	1	1	0	0	0.9	7.5	6.1
MH-1670	MH-2147	582.43	582.42	11.6	150	0.15	1000	0.01826	0.0166	1	0.93	1.11	15.1	1.50	34.80	11.60	1.31	1.51	1	1	0	0	1.3	11.5	8.7
MH-2152	MH-2153	601.71	601.59	11.5	150	0.54	100	0.0902	0.082	0.9	0.93	0.8	16.9	1.40	32.20	11.50	1.29	1.50	1	1	0	0	1.3	10.6	8.6
MH-2592	MH-2593	593.08	592.95	14.4	150	0.49	109.646	0.07106	0.0646	0.8	0.85	0.8	15.2	1.30	37.44	14.40	1.62	1.87	1	1	0	0	1.6	12.2	10.8
MH-1542	MH-169	572.46	572.34	16.8	150	0.38	139.766	0.04092	0.0372	0.8	0.8	0.8	13.8	1.30	43.68	16.80	1.89	2.19	1	1	0	0	1.9	14.2	12.6
MH-2159	MH-1841	576.94	576.92	11.6	150	0.17	1000	0.02992	0.0272	1.2	1.18	1.23	13.2	1.70	39.44	11.60	1.31	1.51	1	1	0	0	1.3	13.3	8.7
MH-1633	MH-1634	581.16	581.03	12.7	150	1.21	100	1.30526	1.1866	0.8	0.85	0.8	66.9	1.30	33.02	12.70	1.43	1.65	1	1	0	0	1.4	10.7	9.5
MH-3013	MH-3014	584.19	584.1	16.9	150	0.4	179.835	0.06633	0.0603	0.9	0.94	0.8	15.6	1.40	47.32	16.90	1.90	2.20	1	1	0	0	1.9	15.5	12.7
MH-22	MH-389	599.67	599.63	10	150	0.4	236.209	0.09416	0.0856	1.1	1.15	0.98	24.7	1.60	32.00	10.00	1.13	1.30	1	1	0	0	1.1	10.7	7.5
MH-102	MH-1666	598.29	598.28	8.5	150	0.26	1000	0.12111	0.1101	1.3	1.35	1.24	28.1	1.80	30.60	8.50	0.96	1.11	1	1	0	0	1.0	10.4	6.4
MH-3035	MH-2780	603.83	603.99	17	150	0.6	103.902	0.1342	0.122	1.2	1.3	1.03	23.4	1.70	57.80	17.00	1.91	2.21	1	1	0	0	1.9	19.5	12.8
MH-1690	MH-1691	573.33	573.24	8.7	150	0.5	100	0.07183	0.0653	0.9	1.05	0.8	15.1	1.40	24.36	8.70	0.98	1.13	1	1	0	0	1.0	8.0	6.5
MH-5002	MH-4033	587.26	586.92	33.4	150	0.37	100	0.02497	0.0227	0.8	0.8	0.8	8.9	1.30	86.84	33.40	3.76	4.35	2	2	0	0	3.8	28.2	25.1
MH-1693	MH-167	579.12	579.11	13.7	150	0.17	1000	0.02948	0.0268	0.9	0.87	0.89	16.1	1.40	38.36	13.70	1.54	1.78	1	1	0	0	1.5	12.6	10.3
MH-76	MH-112	598.92	598.85	8.8	150	0.5	120.483	0.08547	0.0777	0.8	0.8	0.8	19.3	1.30	22.88	8.80	0.99	1.15	1	1	0	0	1.0	7.4	6.6
MH-1706	MH-1707	582.9	582.89	8.8	150	0.26	1000	0.12705	0.1155	1.1	1.16	1.07	26.7	1.60	28.16	8.80	0.99	1.15	1	1	0	0	1.0	9.4	6.6
MH-1708	MH-1709	586.71	586.8	8.8	150	0.58	100	0.11572	0.1052	0.8	0.8	0.88	19.2	1.30	22.88	8.80	0.99	1.15	1	1	0	0	1.0	7.4	6.6
MH-2230	MH-1174	578.88	578.86	12	150	0.17	1000	0.02959	0.0269	0.9	0.8	0.96	17.2	1.40	33.60	12.00	1.35	1.56	1	1	0	0	1.4	11.0	9.0
MH-1719	MH-1720	597.69	597.77	8.9	150	0.6	107.697	0.1419	0.129	0.9	0.98	0.8	23.5	1.40	24.92	8.90	1.00	1.16	1	1	0	0	1.0	8.2	6.7
MH-2668	MH-2669	591.23	591.29	14.8	150	0.21	258.94	0.01199	0.0109	0.8	0.8	0.8	10.9	1.30	38.48	14.80	1.67	1.93	1	1	0	0	1.7	12.5	11.1
MH-3067	MH-93	594.66	594.52	16.8	150	0.33	123.777	0.02167	0.0197	0.8	0.8	0.8	8.5	1.30	43.68	16.80	1.89	2.19	1	1	0	0	1.9	14.2	12.6
MH-235	MH-1728	579.91	579.9	8.6	271	0.6	988.205	2.68037	2.4367	0.8	0.82	0.82	54.9	1.42	24.44	8.60	1.12	1.62	1	1	0	0	1.1	9.0	7.5
MH-2677	MH-743	603.99	603.89	9.8	150	0.29	100	0.01122	0.0102	0.9	0.96	0.8	6.1	1.40	27.44	9.80	1.10	1.28	1	1	0	0	1.1	9.0	7.4
MH-2258	MH-2259	565	564.91	13.1	150	0.34	150.179	0.0308	0.028	0.9	0.8	1.02	11.3	1.40	36.68	13.10	1.47	1.71	1	1	0	0	1.5	12.0	9.8
MH-1252	MH-1733	578.6	578.58	9	150	0.6	375.674	0.56551	0.5141	2.9	2.9	2.98	55	3.40	61.20	9.00	1.01	1.17	1	1	0	0	1.0	24.5	6.8
MH-1747	MH-719	593.35	593.35	9	150	0.26	1000	0.12815	0.1165	2.2	2.32	2.18	29.5	2.70	48.60	9.00	1.01	1.17	1	1	0	0	1.0	19.8	6.8
MH-3926	MH-3927	580.71	580.94	23.1	150	0.64	100	0.16159	0.1469	0.9	0.8	1.07	22.6	1.40	64.68	23.10	2.60	3.01	1	1	0	0	2.6	21.2	17.3
MH-2702	MH-2703	605.8	605.81	15	150	0.16	1000	0.02354	0.0214	0.8	0.84	0.8	11.7	1.30	39.00	15.00	1.69	1.95	1	1	0	0	1.7	12.7	11.3
MH-1759	MH-1760	578.8	578.72	10.6	150	0.6	130.64	0.17809	0.1619	1.6	1.55	1.62	26.8	2.10	44.52	10.60	1.19	1.38	1	1	0	0	1.2	18.5	8.0
MH-829	MH-2290	581.19	581.19	6	150	0.1	1000	0.00572	0.0052	0.9	1.04	0.8	8.1	1.40	16.80	6.00	0.68	0.78	1	1	0	0	0.7	5.5	4.5
MH-2719	MH-2720	591.99	591.89	15.1	150	0.41	147.922	0.0561	0.051	0.8	0.8	0.8	14	1.30	39.26	15.10	1.70	1.97	1	1	0	0	1.7	12.8	11.3
MH-34	MH-175	580.86	580.62	24.2	150	0.31	100	0.01496	0.0136	0.8	0.82	0.8	11.1	1.30	62.92	24.20	2.72	3.15	1	1	0	0	2.7	20.4	18.2
MH-1787	MH-19	602.75	602.64	14.4	150	0.32	123.208	0.02068	0.0188	0.8	0.8	0.8	8.4	1.30	37.44	14.40	1.62	1.87	1	1	0	0	1.6	12.2	10.8
MH-872	MH-3113	579.76	579.78	18	150	0.11	1000	0.00583	0.0053	0.9	1	0.8	24.8	1.40	50.40	18.00	2.03	2.34	1	1	0	0	2.0	16.6	13.5
MH-1800	MH-1801	579.01	578.97	9.4	150	0.6	235.41	0.37653	0.3423	1.9	1.96	1.93	40.7	2.40	45.12	9.40	1.06	1.22	1	1	0	0	1.1	18.5	7.1
MH-1802	MH-1803	586.96	586.95	9.4	271	0.6	970.537	2.51867	2.2897	2.2	2.35	2.1	53.4	2.82	53.03	9.40	1.23	1.77	1	1	0	0	1.2	24.1	8.2
MH-1804	MH-1805	577.21	577.2	10	271	0.6	834.61	1.87616	1.7056	1.3	1.42	1.27	45.5	1.92	38.42	10.00	1.31	1.88	1	1	0	0	1.3	14.8	8.7
MH-2327	MH-2328	588.87	588.88	12.6	150	0.15	1000	0.01969	0.0179	0.9	0.92	0.8	16.6	1.40	35.28	12.60	1.42	1.64	1	1	0	0	1.4	11.6	9.5
MH-919	MH-3564	580.07	580.09	21.3	150	0.1	1000	0.0044	0.004	0.9	1.02	0.8	22.8	1.40	59.64	21.30	2.40	2.77	1	1	0	0	2.4	19.6	16.0
MH-1814	MH-1815	565.72	565.71	9.5	1000	1.3	1000	82.53311	75.0301	5.9	5.88	5.84	62	7.25	137.75	9.50	2.28	9.74	1	0	0	1	2.3	117.6	15.2
MH-2336	MH-2337	568.69	568.62	12.7	150	0.6	189.367	0.28325	0.2575	1.8	1.88	1.8	33.1	2.30	58.42	12.70	1.43	1.65	1	1	0	0	1.4	24.1	9.5
MH-1830	MH-1831	565.42	565.33	9.6	150	0.99	100	0.76604	0.6964	0.8	0.83	0.8	51	1.30	24.96	9.60	1.08	1.25	1	1	0	0	1.1	8.1	7.2
MH-343	MH-1854	580.37	580.38	9.8	150	0.09	1000	0.00396	0.0036	0.9	0.91	0.8	8.8	1.40	27.44	9.80	1.10	1.28	1	1	0	0	1.1	9.0	7.4
MH-2359	MH-185	576.67	576.59	12.8	150	0.6	164.757	0.23716	0.2156	1.5	1.35	1.59	30	2.00	51.20	12.80	1.44	1.67	1	1	0	0	1.4	17.5	9.6
MH-2796	MH-2797	580.59	580.56	15.6	217	0.6	532.601	0.95249	0.8659	1.9	1.99	1.81	47.4	2.47	76.97	15.60	1.91	2.49	1	1	0	0	1.9	33.6	12.7
MH-813	MH-2805	580.2	580.21	15.3	150	0.09	1000	0.00407	0.0037	0.9	0.97	0.8	24.3	1.40	42.84	15.30	1.72	1.99	1	1	0	0	1.7	14.1	11.5
MH-1872	MH-1873	581.16	581.17	9.9	150	0.26	1000	0.12023	0.1093	1.2	1.2	1.17	26.2	1.70	33.66	9.90	1.11	1.29	1	1	0	0	1.1	11.3	7.4
MH-2375	MH-2376	596.83	596.87	12.9	150	0.6	366.041	0.54263	0.4933	1.1	1.25	1.02	49.9	1.60	41.28	12.90	1.45	1.68	1	1	0	0	1.5	13.8	9.7
MH-388	MH-5123	584.89	584.77	16.2	150	0.6	134.775	0.18447	0.1677	1.9	2.02	1.77	26.9	2.40	77.76	16.20	1.82								



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-4066	MH-4067	576.23	576.2	24.1	150	0.22	1000	0.06303	0.0573	0.9	0.8	1.06	24.8	1.40	67.48	24.10	2.71	3.14	1	1	0	0	2.7	22.2	18.1
MH-1969	MH-1251	578.65	578.62	10.5	150	0.6	358.364	0.52294	0.4754	2.8	2.75	2.85	52.1	3.30	69.30	10.50	1.18	1.37	1	1	0	0	1.2	27.8	7.9
MH-1980	MH-1434	570.56	570.47	10.6	150	0.6	118.702	0.15884	0.1444	1.7	1.57	1.87	24.4	2.20	46.64	10.60	1.19	1.38	1	1	0	0	1.2	19.3	8.0
MH-1257	MH-2471	564.81	564.94	13.5	150	0.36	101.445	0.02266	0.0206	0.8	0.8	0.8	8.6	1.30	35.10	13.50	1.52	1.76	1	1	0	0	1.5	11.4	10.1
MH-1999	MH-2000	567.75	567.74	10.7	1000	1.29	1000	77.07733	70.0703	1.8	1.82	1.78	72.3	3.15	67.41	10.70	2.57	10.97	1	1	0	0	2.6	46.2	17.1
MH-2490	MH-2491	600.57	600.59	13.6	150	0.25	1000	0.10593	0.0963	0.8	0.8	0.8	27.7	1.30	35.36	13.60	1.53	1.77	1	1	0	0	1.5	11.5	10.2
MH-2492	MH-2493	582.14	582.01	13.6	150	0.25	100	0.00671	0.0061	0.8	0.86	0.8	4.7	1.30	35.36	13.60	1.53	1.77	1	1	0	0	1.5	11.5	10.2
MH-2912	MH-2913	571.93	571.77	16.3	150	0.6	100	0.12606	0.1146	1	1.22	0.8	20	1.50	48.90	16.30	1.83	2.12	1	1	0	0	1.8	16.2	12.2
MH-190	MH-1256	564.55	564.68	13.3	150	0.44	100	0.04521	0.0411	0.8	0.8	0.83	19.7	1.30	34.58	13.30	1.50	1.73	1	1	0	0	1.5	11.2	10.0
MH-394	MH-5208	578.98	579.29	30.7	150	0.45	100	0.04851	0.0441	0.8	0.8	0.8	12.5	1.30	79.82	30.70	3.45	4.00	2	2	0	0	3.5	25.9	23.0
MH-2021	MH-2022	580.31	580.23	10.8	150	0.6	137.001	0.19096	0.1736	1.6	1.61	1.6	27	2.10	45.36	10.80	1.22	1.41	1	1	0	0	1.2	18.8	8.1
MH-336	MH-2028	599.25	599.26	10.8	150	0.14	1000	0.01375	0.0125	0.9	0.91	0.8	10.2	1.40	30.24	10.80	1.22	1.41	1	1	0	0	1.2	9.9	8.1
MH-2031	MH-2032	576.98	577	10.9	150	0.15	1000	0.01991	0.0181	1.5	1.5	1.59	16.1	2.00	43.60	10.90	1.23	1.42	1	1	0	0	1.2	14.9	8.2
MH-2925	MH-2926	586.13	586.09	16.4	175	0.6	387.788	0.59202	0.5382	1.1	1.18	1.12	45	1.63	53.30	16.40	1.91	2.30	1	1	0	0	1.9	18.4	12.7
MH-2239	MH-2513	585.46	585.45	13.9	400	0.62	1000	2.91973	2.6543	1.4	1.44	1.35	36.8	2.15	59.77	13.90	2.09	3.83	1	1	0	0	2.1	30.2	13.9
MH-3304	MH-2925	586.18	586.13	18.5	175	0.6	384.522	0.58509	0.5319	1.2	1.24	1.18	44.4	1.73	63.83	18.50	2.15	2.60	1	1	0	0	2.2	22.1	14.3
MH-3266	MH-1589	591.79	591.61	18.5	150	0.34	100	0.01925	0.0175	0.9	1.06	0.8	7.9	1.40	51.80	18.50	2.08	2.41	1	1	0	0	2.1	17.0	13.9
MH-2524	MH-2525	580.86	580.79	14	150	0.32	184.363	0.03135	0.0285	0.8	0.8	0.8	11.7	1.30	36.40	14.00	1.58	1.82	1	1	0	0	1.6	11.8	10.5
MH-2026	MH-2083	582.23	582.15	11.1	150	0.6	148.576	0.20977	0.1907	1.2	1.11	1.31	28.3	1.70	37.74	11.10	1.25	1.44	1	1	0	0	1.2	12.7	8.3
MH-2542	MH-2543	601.11	601.23	14.1	150	0.62	115.371	0.1694	0.154	0.9	0.8	1	23.6	1.40	39.48	14.10	1.59	1.84	1	1	0	0	1.6	13.0	10.6
MH-3746	MH-4137	586.71	586.52	24.6	150	0.6	132.838	0.18183	0.1653	2.5	2.59	2.45	26.6	3.00	147.60	24.60	2.77	3.20	1	1	0	0	2.8	59.5	18.5
MH-2095	MH-1818	568.96	568.88	13.7	150	0.6	171.869	0.25267	0.2297	2.1	2.14	2.08	31.2	2.60	71.24	13.70	1.54	1.78	1	1	0	0	1.5	29.0	10.3
MH-2557	MH-2260	580.88	580.83	35.4	217	0.6	674.183	1.39128	1.2648	3.6	3.69	3.42	64.4	4.17	295.02	35.40	4.34	5.65	2	0	2	0	4.3	146.7	28.9
MH-2984	MH-2695	577.27	577.25	16.7	150	0.24	1000	0.09427	0.0857	0.9	0.8	1.01	30	1.40	46.76	16.70	1.88	2.17	1	1	0	0	1.9	15.4	12.5
MH-2359	MH-2508	576.67	576.78	16.8	150	0.6	149.908	0.2123	0.193	1.3	1.35	1.23	29	1.80	60.48	16.80	1.89	2.19	1	1	0	0	1.9	20.5	12.6
MH-2123	MH-2124	580.66	580.37	34.9	271	1.17	117.305	1.55969	1.4179	3.1	3.04	3.1	37.1	3.72	259.73	34.90	4.56	6.57	2	0	2	0	4.6	117.0	30.4
MH-2126	MH-2127	585.1	585.04	11.5	150	0.6	196.031	0.2959	0.269	1.7	1.75	1.66	34.2	2.20	50.60	11.50	1.29	1.50	1	1	0	0	1.3	20.9	8.6
MH-2128	MH-2129	581.53	581.46	11.5	150	0.6	177.921	0.26378	0.2398	1.6	1.59	1.51	32.2	2.10	48.30	11.50	1.29	1.50	1	1	0	0	1.3	20.1	8.6
MH-3361	MH-3362	563.22	563.18	18.9	175	0.6	424.205	0.6754	0.614	4.6	4.48	4.77	51.6	5.13	193.73	18.90	2.20	2.65	1	0	0	1	2.2	89.4	14.6
MH-3364	MH-3365	577.7	577.6	19	150	0.6	206.435	0.31988	0.2908	1.5	1.39	1.55	36.6	2.00	76.00	19.00	2.14	2.47	1	1	0	0	2.1	26.0	14.3
MH-2591	MH-2309	587.49	587.48	14.4	150	0.1	1000	0.00484	0.0044	0.8	0.8	0.83	13.3	1.30	37.44	14.40	1.62	1.87	1	1	0	0	1.6	12.2	10.8
MH-3017	MH-3018	564.89	564.84	18.2	175	0.6	400.158	0.62018	0.5638	1.1	1.15	1.05	48.6	1.63	59.15	18.20	2.12	2.55	1	1	0	0	2.1	20.4	14.1
MH-2168	MH-2169	587.21	587.09	11.7	150	0.37	100	0.02607	0.0237	0.9	0.91	0.8	11.5	1.40	32.76	11.70	1.32	1.52	1	1	0	0	1.3	10.8	8.8
MH-3389	MH-3390	583.83	583.64	19.1	150	0.36	100	0.02255	0.0205	0.8	0.84	0.8	8.5	1.30	49.66	19.10	2.15	2.49	1	1	0	0	2.1	16.1	14.3
MH-3395	MH-2381	586.16	586.27	19.1	150	0.6	165.01	0.23749	0.2159	2	2.12	1.94	30.4	2.50	95.50	19.10	2.15	2.49	1	1	0	0	2.1	39.1	14.3
MH-1034	MH-573	579.66	579.57	9.9	150	0.48	100	0.06072	0.0552	0.8	0.9	0.8	13.9	1.30	25.74	9.90	1.11	1.29	1	1	0	0	1.1	8.4	7.4
MH-3408	MH-3409	590.83	591.11	36.5	150	0.6	130.467	0.17776	0.1616	0.8	0.82	0.8	26.4	1.30	94.90	36.50	4.11	4.75	2	2	0	0	4.1	30.8	27.4
MH-399	MH-302	569.95	569.9	42.7	150	0.2	1000	0.0495	0.045	1.9	1.91	1.98	25.2	2.40	204.96	42.70	4.80	5.56	2	2	0	0	4.8	84.1	32.0
MH-2703	MH-3412	605.81	606	19.3	150	0.28	100	0.01034	0.0094	0.9	0.8	0.99	10.1	1.40	54.04	19.30	2.17	2.51	1	1	0	0	2.2	17.8	14.5
MH-2209	MH-2210	584.43	584.31	11.9	150	0.57	100	0.10912	0.0992	0.8	0.84	0.8	18.6	1.30	30.94	11.90	1.34	1.55	1	1	0	0	1.3	10.1	8.9
MH-2213	MH-2214	576.58	576.46	11.9	150	0.5	100	0.06831	0.0621	0.8	0.8	0.8	14.7	1.30	30.94	11.90	1.34	1.55	1	1	0	0	1.3	10.1	8.9
MH-2222	MH-34	580.99	580.88	11	150	0.21	100	0.00407	0.0037	0.8	0.84	0.8	3.7	1.30	28.60	11.00	1.24	1.43	1	1	0	0	1.2	9.3	8.3
MH-377	MH-3919	564.53	564.51	22.4	150	0.25	1000	0.09834	0.0894	1.1	0.94	1.26	31	1.60	71.68	22.40	2.52	2.92	1	1	0	0	2.5	24.0	16.8
MH-3920	MH-1863	585.73	585.71	23.1	150	0.14	1000	0.01485	0.0135	1.4	1.2	1.56	19.5	1.90	87.78	23.10	2.60	3.01	1	1	0	0	2.6	29.9	17.3
MH-1102	MH-2239	585.47	585.46	12	400	0.62	1000	2.91456	2.6496	1.5	1.52	1.44	39.1	2.25	54.00	12.00	1.80	3.31	1	1	0	0	1.8	27.3	12.0
MH-2246	MH-2247	580.68	580.65	12.1	217	0.6	516.551	0.91036	0.8276	2.4	2.45	2.36	45.4	2.97	71.80	12.10	1.48	1.93	1	1	0	0	1.5	31.0	9.9
MH-2248	MH-2249	567.45	567.44	12.1	271	0.6	790.617	1.72205	1.5655	1.3	1.23	1.28	53.7	1.92	46.49	12.10	1.58	2.28	1	1	0	0	1.6	18.0	10.5
MH-2691	MH-27	598.85	598.7	15	150	0.32	100	0.01661	0.0151	0.8	0.86	0.8	7.4	1.30	39.00	15.00	1.69	1.95	1	1	0	0	1.7	12.7	11.3
MH-2256	MH-2257	576.66	576.53	12.1	150	0.85	100	0.42735	0.3885	0.9	1	0.8	37.3	1.40	33.88	12.10	1.36	1.57	1	1	0	0	1.4	11.1	9.1
MH-2695	MH-2696	577.25	577.24	15	150	0.25	1000	0.10736	0.0976	1.1	1.01	1.16	32.6	1.60	48.00	15.00	1.69	1.95	1	1	0	0	1.7	16.0	11.3
MH-2260	MH-2261	580.83	580.78	36.2	217	0.6	691.665	1.																	

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-4066	MH-4067	576.23	576.2	24.1	150	0.22	1000	0.06303	0.0573	0.9	0.8	1.06	24.8	1.40	67.48	24.10	2.71	3.14	1	1	0	0	2.7	22.2	18.1
MH-1969	MH-1251	578.65	578.62	10.5	150	0.6	358.364	0.52294	0.4754	2.8	2.75	2.85	52.1	3.30	69.30	10.50	1.18	1.37	1	1	0	0	1.2	27.8	7.9
MH-1980	MH-1434	570.56	570.47	10.6	150	0.6	118.702	0.15884	0.1444	1.7	1.57	1.87	24.4	2.20	46.64	10.60	1.19	1.38	1	1	0	0	1.2	19.3	8.0
MH-1257	MH-2471	564.81	564.94	13.5	150	0.36	101.445	0.02266	0.0206	0.8	0.8	0.8	8.6	1.30	35.10	13.50	1.52	1.76	1	1	0	0	1.5	11.4	10.1
MH-1999	MH-2000	567.75	567.74	10.7	1000	1.29	1000	77.07733	70.0703	1.8	1.82	1.78	72.3	3.15	67.41	10.70	2.57	10.97	1	1	0	0	2.6	46.2	17.1
MH-2490	MH-2491	600.57	600.59	13.6	150	0.25	1000	0.10593	0.0963	0.8	0.8	0.8	27.7	1.30	35.36	13.60	1.53	1.77	1	1	0	0	1.5	11.5	10.2
MH-2492	MH-2493	582.14	582.01	13.6	150	0.25	100	0.00671	0.0061	0.8	0.86	0.8	4.7	1.30	35.36	13.60	1.53	1.77	1	1	0	0	1.5	11.5	10.2
MH-2912	MH-2913	571.93	571.77	16.3	150	0.6	100	0.12606	0.1146	1	1.22	0.8	20	1.50	48.90	16.30	1.83	2.12	1	1	0	0	1.8	16.2	12.2
MH-190	MH-1256	564.55	564.68	13.3	150	0.44	100	0.04521	0.0411	0.8	0.8	0.83	19.7	1.30	34.58	13.30	1.50	1.73	1	1	0	0	1.5	11.2	10.0
MH-394	MH-5208	578.98	579.29	30.7	150	0.45	100	0.04851	0.0441	0.8	0.8	0.8	12.5	1.30	79.82	30.70	3.45	4.00	2	2	0	0	3.5	25.9	23.0
MH-2021	MH-2022	580.31	580.23	10.8	150	0.6	137.001	0.19096	0.1736	1.6	1.61	1.6	27	2.10	45.36	10.80	1.22	1.41	1	1	0	0	1.2	18.8	8.1
MH-336	MH-2028	599.25	599.26	10.8	150	0.14	1000	0.01375	0.0125	0.9	0.91	0.8	10.2	1.40	30.24	10.80	1.22	1.41	1	1	0	0	1.2	9.9	8.1
MH-2031	MH-2032	576.98	577	10.9	150	0.15	1000	0.01991	0.0181	1.5	1.5	1.59	16.1	2.00	43.60	10.90	1.23	1.42	1	1	0	0	1.2	14.9	8.2
MH-2925	MH-2926	586.13	586.09	16.4	175	0.6	387.788	0.59202	0.5382	1.1	1.18	1.12	45	1.63	53.30	16.40	1.91	2.30	1	1	0	0	1.9	18.4	12.7
MH-2239	MH-2513	585.46	585.45	13.9	400	0.62	1000	2.91973	2.6543	1.4	1.44	1.35	36.8	2.15	59.77	13.90	2.09	3.83	1	1	0	0	2.1	30.2	13.9
MH-3304	MH-2925	586.18	586.13	18.5	175	0.6	384.522	0.58509	0.5319	1.2	1.24	1.18	44.4	1.73	63.83	18.50	2.15	2.60	1	1	0	0	2.2	22.1	14.3
MH-3266	MH-1589	591.79	591.61	18.5	150	0.34	100	0.01925	0.0175	0.9	1.06	0.8	7.9	1.40	51.80	18.50	2.08	2.41	1	1	0	0	2.1	17.0	13.9
MH-2524	MH-2525	580.86	580.79	14	150	0.32	184.363	0.03135	0.0285	0.8	0.8	0.8	11.7	1.30	36.40	14.00	1.58	1.82	1	1	0	0	1.6	11.8	10.5
MH-2026	MH-2083	582.23	582.15	11.1	150	0.6	148.576	0.20977	0.1907	1.2	1.11	1.31	28.3	1.70	37.74	11.10	1.25	1.44	1	1	0	0	1.2	12.7	8.3
MH-2542	MH-2543	601.11	601.23	14.1	150	0.62	115.371	0.1694	0.154	0.9	0.8	1	23.6	1.40	39.48	14.10	1.59	1.84	1	1	0	0	1.6	13.0	10.6
MH-3746	MH-4137	586.71	586.52	24.6	150	0.6	132.838	0.18183	0.1653	2.5	2.59	2.45	26.6	3.00	147.60	24.60	2.77	3.20	1	1	0	0	2.8	59.5	18.5
MH-2095	MH-1818	568.96	568.88	13.7	150	0.6	171.869	0.25267	0.2297	2.1	2.14	2.08	31.2	2.60	71.24	13.70	1.54	1.78	1	1	0	0	1.5	29.0	10.3
MH-2557	MH-2260	580.88	580.83	35.4	217	0.6	674.183	1.39128	1.2648	3.6	3.69	3.42	64.4	4.17	295.02	35.40	4.34	5.65	2	0	2	0	4.3	146.7	28.9
MH-2984	MH-2695	577.27	577.25	16.7	150	0.24	1000	0.09427	0.0857	0.9	0.8	1.01	30	1.40	46.76	16.70	1.88	2.17	1	1	0	0	1.9	15.4	12.5
MH-2359	MH-2508	576.67	576.78	16.8	150	0.6	149.908	0.2123	0.193	1.3	1.35	1.23	29	1.80	60.48	16.80	1.89	2.19	1	1	0	0	1.9	20.5	12.6
MH-2123	MH-2124	580.66	580.37	34.9	271	1.17	117.305	1.55969	1.4179	3.1	3.04	3.1	37.1	3.72	259.73	34.90	4.56	6.57	2	0	2	0	4.6	117.0	30.4
MH-2126	MH-2127	585.1	585.04	11.5	150	0.6	196.031	0.2959	0.269	1.7	1.75	1.66	34.2	2.20	50.60	11.50	1.29	1.50	1	1	0	0	1.3	20.9	8.6
MH-2128	MH-2129	581.53	581.46	11.5	150	0.6	177.921	0.26378	0.2398	1.6	1.59	1.51	32.2	2.10	48.30	11.50	1.29	1.50	1	1	0	0	1.3	20.1	8.6
MH-3361	MH-3362	563.22	563.18	18.9	175	0.6	424.205	0.6754	0.614	4.6	4.48	4.77	51.6	5.13	193.73	18.90	2.20	2.65	1	0	0	1	2.2	89.4	14.6
MH-3364	MH-3365	577.7	577.6	19	150	0.6	206.435	0.31988	0.2908	1.5	1.39	1.55	36.6	2.00	76.00	19.00	2.14	2.47	1	1	0	0	2.1	26.0	14.3
MH-2591	MH-2309	587.49	587.48	14.4	150	0.1	1000	0.00484	0.0044	0.8	0.8	0.83	13.3	1.30	37.44	14.40	1.62	1.87	1	1	0	0	1.6	12.2	10.8
MH-3017	MH-3018	564.89	564.84	18.2	175	0.6	400.158	0.62018	0.5638	1.1	1.15	1.05	48.6	1.63	59.15	18.20	2.12	2.55	1	1	0	0	2.1	20.4	14.1
MH-2168	MH-2169	587.21	587.09	11.7	150	0.37	100	0.02607	0.0237	0.9	0.91	0.8	11.5	1.40	32.76	11.70	1.32	1.52	1	1	0	0	1.3	10.8	8.8
MH-3389	MH-3390	583.83	583.64	19.1	150	0.36	100	0.02255	0.0205	0.8	0.84	0.8	8.5	1.30	49.66	19.10	2.15	2.49	1	1	0	0	2.1	16.1	14.3
MH-3395	MH-2381	586.16	586.27	19.1	150	0.6	165.01	0.23749	0.2159	2	2.12	1.94	30.4	2.50	95.50	19.10	2.15	2.49	1	1	0	0	2.1	39.1	14.3
MH-1034	MH-573	579.66	579.57	9.9	150	0.48	100	0.06072	0.0552	0.8	0.9	0.8	13.9	1.30	25.74	9.90	1.11	1.29	1	1	0	0	1.1	8.4	7.4
MH-3408	MH-3409	590.83	591.11	36.5	150	0.6	130.467	0.17776	0.1616	0.8	0.82	0.8	26.4	1.30	94.90	36.50	4.11	4.75	2	2	0	0	4.1	30.8	27.4
MH-399	MH-302	569.95	569.9	42.7	150	0.2	1000	0.0495	0.045	1.9	1.91	1.98	25.2	2.40	204.96	42.70	4.80	5.56	2	2	0	0	4.8	84.1	32.0
MH-2703	MH-3412	605.81	606	19.3	150	0.28	100	0.01034	0.0094	0.9	0.8	0.99	10.1	1.40	54.04	19.30	2.17	2.51	1	1	0	0	2.2	17.8	14.5
MH-2209	MH-2210	584.43	584.31	11.9	150	0.57	100	0.10912	0.0992	0.8	0.84	0.8	18.6	1.30	30.94	11.90	1.34	1.55	1	1	0	0	1.3	10.1	8.9
MH-2213	MH-2214	576.58	576.46	11.9	150	0.5	100	0.06831	0.0621	0.8	0.8	0.8	14.7	1.30	30.94	11.90	1.34	1.55	1	1	0	0	1.3	10.1	8.9
MH-2222	MH-34	580.99	580.88	11	150	0.21	100	0.00407	0.0037	0.8	0.84	0.8	3.7	1.30	28.60	11.00	1.24	1.43	1	1	0	0	1.2	9.3	8.3
MH-377	MH-3919	564.53	564.51	22.4	150	0.25	1000	0.09834	0.0894	1.1	0.94	1.26	31	1.60	71.68	22.40	2.52	2.92	1	1	0	0	2.5	24.0	16.8
MH-3920	MH-1863	585.73	585.71	23.1	150	0.14	1000	0.01485	0.0135	1.4	1.2	1.56	19.5	1.90	87.78	23.10	2.60	3.01	1	1	0	0	2.6	29.9	17.3
MH-1102	MH-2239	585.47	585.46	12	400	0.62	1000	2.91456	2.6496	1.5	1.52	1.44	39.1	2.25	54.00	12.00	1.80	3.31	1	1	0	0	1.8	27.3	12.0
MH-2246	MH-2247	580.68	580.65	12.1	217	0.6	516.551	0.91036	0.8276	2.4	2.45	2.36	45.4	2.97	71.80	12.10	1.48	1.93	1	1	0	0	1.5	31.0	9.9
MH-2248	MH-2249	567.45	567.44	12.1	271	0.6	790.617	1.72205	1.5655	1.3	1.23	1.28	53.7	1.92	46.49	12.10	1.58	2.28	1	1	0	0	1.6	18.0	10.5
MH-2691	MH-27	598.85	598.7	15	150	0.32	100	0.01661	0.0151	0.8	0.86	0.8	7.4	1.30	39.00	15.00	1.69	1.95	1	1	0	0	1.7	12.7	11.3
MH-2256	MH-2257	576.66	576.53	12.1	150	0.85	100	0.42735	0.3885	0.9	1	0.8	37.3	1.40	33.88	12.10	1.36	1.57	1	1	0	0	1.4	11.1	9.1
MH-2695	MH-2696	577.25	577.24	15	150	0.25	1000	0.10736	0.0976	1.1	1.01	1.16	32.6	1.60	48.00	15.00	1.69	1.95	1	1	0	0	1.7	16.0	11.3
MH-2260	MH-2261	580.83	580.78	36.2	217	0.6	691.665	1.																	

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-468	MH-955	569.96	570.02	16.3	150	0.6	248.053	0.40436	0.3676	1.6	1.75	1.5	40.8	2.10	68.46	16.30	1.83	2.12	1	1	0	0	1.8	28.4	12.2
MH-3161	MH-3162	580.38	580.2	17.7	150	0.59	100	0.12375	0.1125	0.9	1.1	0.8	19.8	1.40	49.56	17.70	1.99	2.30	1	1	0	0	2.0	16.3	13.3
MH-1691	MH-2912	572.59	572.35	23.7	150	0.54	100	0.09229	0.0839	1.1	1.45	0.8	17.1	1.60	75.84	23.70	2.67	3.08	1	1	0	0	2.7	25.4	17.8
MH-2788	MH-2789	598.13	597.98	15.6	150	0.45	100	0.04763	0.0433	0.9	0.96	0.8	14.1	1.40	43.68	15.60	1.76	2.03	1	1	0	0	1.8	14.3	11.7
MH-3176	MH-3177	579.31	579.23	17.8	150	0.22	222.704	0.01188	0.0108	0.8	0.8	0.8	8.5	1.30	46.28	17.80	2.00	2.32	1	1	0	0	2.0	15.0	13.4
MH-2360	MH-2361	571.37	571.35	12.8	175	0.6	466.375	0.78353	0.7123	1.2	1.34	1.1	50.3	1.73	44.16	12.80	1.49	1.80	1	1	0	0	1.5	15.3	9.9
MH-4246	MH-5148	575.09	574.88	35.1	150	0.6	164.757	0.23716	0.2156	0.9	0.8	1.03	29.2	1.40	98.28	35.10	3.95	4.57	2	2	0	0	3.9	32.3	26.3
MH-2369	MH-2370	589.98	589.97	12.8	150	0.17	1000	0.02948	0.0268	2.7	2.59	2.88	16.8	3.20	81.92	12.80	1.44	1.67	1	1	0	0	1.4	32.9	9.6
MH-3209	MH-3210	587.77	587.95	18	150	0.24	100	0.00616	0.0056	0.8	0.8	0.8	4.5	1.30	46.80	18.00	2.03	2.34	1	1	0	0	2.0	15.2	13.5
MH-2380	MH-175	580.75	580.62	13	150	0.25	100	0.0077	0.007	0.8	0.83	0.8	10	1.30	33.80	13.00	1.46	1.69	1	1	0	0	1.5	11.0	9.8
MH-2233	MH-91	598.03	597.62	40.8	217	1.11	100	0.98967	0.8997	1.3	1.72	0.8	34.4	1.87	152.35	40.80	5.00	6.51	2	2	0	0	5.0	55.7	33.3
MH-4684	MH-1	594.36	593.98	38.1	217	1.25	100	1.50436	1.3676	0.9	1.03	0.8	42.9	1.47	111.79	38.10	4.67	6.08	2	2	0	0	4.7	39.6	31.1
MH-1	MH-53	593.98	593.72	55.4	217	0.96	207.894	1.50436	1.3676	0.8	0.8	0.81	47.1	1.37	151.46	55.40	6.79	8.84	2	2	0	0	6.8	53.0	45.3
MH-5841	MH-4683	595.21	594.74	46.9	150	0.46	100	0.05159	0.0469	1.2	1.6	0.8	20.5	1.70	159.46	46.90	5.28	6.10	2	2	0	0	5.3	53.7	35.2
MH-6245	MH-975	592.81	592.64	37.4	150	0.6	222.585	0.35035	0.3185	3.4	3.28	3.45	38.5	3.90	291.72	37.40	4.21	4.87	2	0	2	0	4.2	115.7	28.1
MH-2898	MH-6412	580.28	580.1	18.6	400	1.54	100	4.74562	4.3142	0.9	0.97	0.8	39.7	1.65	61.38	18.60	2.79	5.13	1	1	0	0	2.8	25.6	18.6
MH-5728	MH-6029	579.65	579.9	25	150	1.12	100	1.28964	1.1724	1.2	0.8	1.51	68.5	1.70	85.00	25.00	2.81	3.25	1	1	0	0	2.8	28.6	18.8
MH-6029	MH-4720	580.61	581.01	40.3	150	1.1	100	1.16589	1.0599	1.2	0.8	1.55	64.5	1.70	137.02	40.30	4.53	5.25	2	2	0	0	4.5	46.1	30.2
MH-5123	MH-6197	584.77	584.63	19.4	150	0.6	145.878	0.20504	0.1864	1.8	1.77	1.86	40.1	2.30	89.24	19.40	2.18	2.53	1	1	0	0	2.2	36.8	14.6
MH-197	MH-5372	584.1	584.06	49.5	150	0.25	1000	0.10483	0.0953	0.8	0.8	0.85	24.8	1.30	128.70	49.50	5.57	6.44	2	2	0	0	5.6	41.8	37.1
MH-4251	MH-4721	582.58	582.2	47	150	0.6	124.108	0.16841	0.1531	1.3	1.1	1.4	23.7	1.80	169.20	47.00	5.29	6.12	2	2	0	0	5.3	57.3	35.3
MH-5478	MH-5471	581.51	581.46	49.7	400	0.63	1000	3.96693	3.6063	1	1.1	0.9	48	1.75	173.95	49.70	7.46	13.70	2	2	0	0	7.5	73.3	49.7
MH-4027	MH-6556	566.73	566.47	26.6	150	0.94	100	0.62744	0.5704	0.8	0.9	0.8	45.7	1.30	69.16	26.60	2.99	3.46	1	1	0	0	3.0	22.5	20.0
MH-6556	MH-5825	566.18	565.89	29.4	150	0.97	100	0.69795	0.6345	0.9	1.08	0.8	48.4	1.40	82.32	29.40	3.31	3.83	1	1	0	0	3.3	27.0	22.1
MH-5825	MH-3430	565.52	564.81	71.5	150	1.02	100	0.85822	0.7802	1	1.17	0.8	54.2	1.50	214.50	71.50	8.04	9.31	3	3	0	0	8.0	71.1	53.6
MH-5976	MH-5025	573.46	573.31	74.5	217	0.7	476.281	1.55078	1.4098	0.8	0.83	0.8	54.5	1.37	203.68	74.50	9.13	11.88	3	3	0	0	9.1	71.3	60.9
MH-4326	MH-4	579.64	578.96	74.5	150	0.9	109.444	0.59378	0.5398	0.8	0.8	0.89	44.9	1.30	193.70	74.50	8.38	9.70	3	3	0	0	8.4	62.9	55.9
MH-4	MH-3654	578.96	578.24	72	150	0.93	100	0.59378	0.5398	0.8	0.89	0.8	44.4	1.30	187.20	72.00	8.10	9.37	3	3	0	0	8.1	60.8	54.0
MH-6063	MH-5435	584.98	583.79	146.6	150	0.89	123.524	0.68189	0.6199	0.8	0.8	0.88	53.1	1.30	381.16	146.60	16.49	19.08	5	5	0	0	16.5	123.9	110.0
MH-6275	MH-6542	609.38	609.26	51.6	175	0.6	423.122	0.67265	0.6115	0.9	0.8	1.02	45.6	1.43	147.06	51.60	6.00	7.24	2	2	0	0	6.0	49.7	40.0
MH-6335	MH-6276	611.87	611.45	41.7	150	0.38	100	0.02673	0.0243	1.3	1.81	0.8	9.3	1.80	150.12	41.70	4.69	5.43	2	2	0	0	4.7	50.9	31.3

# ZONE - 5



Zone - 5

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (ML/d)	Total Flow (ML/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	7	8	9	10	16	A	B	C	18	22	Road restoration
MH-82	MH-17	570.08	569.97	78.1	150	0.27	750	0.555	0.0925	1.6	1.45	1.84	27.7	2.10	146.44	328.02	78.10	8.79	10.17	3	3	0	0	8.8	136.3	58.6
MH-257	MH-14	578.19	577.96	30.3	150	0.8	130	1.3312	0.4469	2.8	2.71	2.8	43.8	3.30	84.08	199.98	30.30	3.41	3.94	2	2	0	0	3.4	80.1	22.7
MH-9	MH-23	579.18	579.14	27.8	150	0.16	750	0.555	0.0143	1	1.04	0.97	11.4	1.50	31.28	83.40	27.80	3.13	3.62	1	1	0	0	3.1	27.7	20.9
MH-329	MH-8	579.24	579.19	44.3	150	0.29	750	0.555	0.1189	0.9	0.8	1	28.2	1.40	46.52	124.04	44.30	4.98	5.77	2	2	0	0	5.0	40.7	33.2
MH-28	MH-308	578.96	578.83	45.1	150	0.41	374	0.7865	0.1631	0.8	0.8	0.8	28.7	1.30	43.97	117.26	45.10	5.07	5.87	2	2	0	0	5.1	38.1	33.8
MH-39	MH-40	553.54	553.53	6.8	150	0.47	750	0.6105	0.5997	6.2	6.22	6.22	79.6	6.70	46.41	91.12	6.80	0.77	0.89	1	0	0	1	0.8	45.5	5.1
MH-515	MH-297	564.98	564.77	153.6	150	0.21	750	0.555	0.0349	1.1	0.8	1.34	44.5	1.60	184.32	491.52	153.60	17.28	19.99	6	6	0	0	17.3	164.3	115.2
MH-292	MH-279	555.1	554.88	35.2	150	0.8	163	1.3087	0.4685	5.3	5.24	5.38	44.8	5.80	184.80	408.32	35.20	3.96	4.58	2	0	0	2	4.0	180.2	26.4
MH-362	MH-342	551.34	550.82	64.5	150	0.8	125	1.3615	0.4223	4.6	4.32	4.89	42.6	5.10	304.76	657.90	64.50	7.26	8.40	3	0	0	3	7.3	296.4	48.4
MH-554	MH-428	563.41	560.49	346.3	150	0.8	118	1.3976	0.3919	1.6	0.8	2.46	45.2	2.10	649.31	1454.46	346.30	38.96	45.08	12	12	0	0	39.0	604.2	259.7
MH-553	MH-223	559.47	559.02	332.5	150	0.29	750	0.555	0.1149	2.7	0.8	4.67	40.3	3.20	897.75	2128.00	332.50	37.41	43.28	12	12	0	0	37.4	854.5	249.4
MH-552	MH-355	559.51	558.95	291.1	150	0.16	521	0.6657	0.0088	2.5	0.8	4.21	30.6	3.00	742.31	1746.60	291.10	32.75	37.89	10	10	0	0	32.7	704.4	218.3
MH-544	MH-451	562.13	561.83	226.1	150	0.2	750	0.555	0.0292	1.3	0.8	1.76	18.2	1.80	305.24	813.96	226.10	25.44	29.43	8	8	0	0	25.4	275.8	169.6
MH-457	MH-416	555.08	553.07	202	150	0.8	101	1.5162	0.3214	1.7	0.8	2.69	38.2	2.20	393.90	888.80	202.00	22.73	26.29	7	7	0	0	22.7	367.6	151.5
MH-541	MH-326	559.78	558.89	199.7	150	0.25	223	1.0171	0.0152	2.3	0.8	3.71	23.4	2.80	479.28	1118.32	199.70	22.47	25.99	7	7	0	0	22.5	453.3	149.8
MH-540	MH-470	560.13	559.86	198.7	150	0.24	750	0.555	0.0603	1.1	0.8	1.48	25.4	1.60	238.44	635.84	198.70	22.35	25.86	7	7	0	0	22.4	212.6	149.0
MH-494	MH-513	567.88	567.62	196.3	150	0.46	750	0.6105	0.5608	2.1	2.41	1.78	61.6	2.60	441.68	1020.76	196.30	22.08	25.55	7	7	0	0	22.1	416.1	147.2
MH-284	MH-476	578.16	577	186.2	150	0.3	160	1.2014	0.0195	0.8	0.8	0.8	30.5	1.30	181.55	484.12	186.20	20.95	24.24	7	7	0	0	20.9	157.3	139.7
MH-428	MH-537	560.49	559.51	182.6	150	0.8	188	1.2203	0.5721	2.5	2.46	2.49	48.6	3.00	465.63	1095.60	182.60	20.54	23.77	7	7	0	0	20.5	441.9	137.0
MH-158	MH-531	562.53	560.85	178.5	150	0.61	106	1.4756	0.1314	0.8	0.8	0.8	21.5	1.30	174.04	464.10	178.50	20.08	23.23	6	6	0	0	20.1	150.8	133.9
MH-423	MH-436	559.63	559.4	173.8	150	0.33	750	0.555	0.1884	2.8	2.38	3.22	33.7	3.30	482.30	1147.08	173.80	19.55	22.62	6	6	0	0	19.6	459.7	130.4
MH-526	MH-306	576.09	575.08	172.4	150	0.43	170	1.1672	0.0733	0.8	0.8	0.8	18.7	1.30	168.09	448.24	172.40	19.40	22.44	6	6	0	0	19.4	145.6	129.3
MH-137	MH-486	560.85	560.63	167	150	0.31	750	0.555	0.1401	1.4	1	1.72	35.8	1.90	237.98	634.60	167.00	18.79	21.74	6	6	0	0	18.8	216.2	125.3
MH-40	MH-384	553.53	553.31	165.5	150	0.47	750	0.6105	0.6081	6.2	6.22	6.1	65.5	6.70	1129.54	2217.70	165.50	18.62	21.54	6	0	0	6	18.6	1108.0	124.1
MH-522	MH-438	560.01	559.57	160.3	150	0.27	366	0.7949	0.0351	0.8	0.8	0.8	15.3	1.30	156.29	416.78	160.30	18.03	20.87	6	6	0	0	18.0	135.4	120.2
MH-521	MH-340	560.88	559.99	159.7	150	0.31	181	1.1314	0.026	0.8	0.8	0.8	13.6	1.30	155.71	415.22	159.70	17.97	20.79	6	6	0	0	18.0	134.9	119.8
MH-139	MH-493	569.52	568.6	150.6	150	0.8	163	1.3091	0.4681	2	1.86	2.24	45.6	2.50	327.56	753.00	150.60	16.94	19.60	6	6	0	0	16.9	308.0	113.0
MH-508	MH-396	558.66	558.36	146.2	150	0.41	480	0.694	0.2273	0.8	0.8	0.8	42.2	1.30	142.55	380.12	146.20	16.45	19.03	5	5	0	0	16.4	123.5	109.7
MH-512	MH-507	559.58	559.19	144.9	150	0.42	372	0.7883	0.1738	0.8	0.8	0.8	31.4	1.30	141.28	376.74	144.90	16.30	18.86	5	5	0	0	16.3	122.4	108.7
MH-510	MH-33	564.9	564.7	140.8	150	0.19	711	0.5699	0.0261	1	0.8	1.23	13.6	1.50	158.40	422.40	140.80	15.84	18.33	5	5	0	0	15.8	140.1	105.6
MH-509	MH-378	557.46	557.03	140.4	150	0.21	330	0.837	0.0144	1.5	0.8	2.2	13.2	2.00	210.60	561.60	140.40	15.80	18.27	5	5	0	0	15.8	192.3	105.3
MH-507	MH-508	559.19	558.66	139.9	150	0.49	266	0.9312	0.2016	0.8	0.8	0.8	35.1	1.30	136.40	363.74	139.90	15.74	18.21	5	5	0	0	15.7	118.2	104.9
MH-504	MH-58	560.43	559.81	136.8	150	0.14	219	1.0271	0.0021	0.8	0.8	0.8	11.3	1.30	133.38	355.68	136.80	15.39	17.81	5	5	0	0	15.4	115.6	102.6
MH-502	MH-379	557.61	556.96	134	150	0.31	204	1.0635	0.0305	1.6	0.8	2.35	18	2.10	251.25	562.80	134.00	15.08	17.44	5	5	0	0	15.1	233.8	100.5
MH-499	MH-304	560.25	559.72	127	150	0.18	239	0.9829	0.0063	0.8	0.8	0.8	14.4	1.30	123.83	330.20	127.00	14.29	16.53	5	5	0	0	14.3	107.3	95.3
MH-464	MH-428	561.72	560.49	125.7	150	0.52	102	1.5059	0.0759	1.8	1.16	2.46	33.6	2.30	254.54	578.22	125.70	14.14	16.36	5	5	0	0	14.1	238.2	94.3
MH-495	MH-252	560.51	559.89	123.4	150	0.17	197	1.0822	0.0036	0.8	0.8	0.8	11.5	1.30	120.32	320.84	123.40	13.88	16.06	5	5	0	0	13.9	104.3	92.6
MH-493	MH-494	568.6	567.88	123.1	150	0.8	172	1.2754	0.5039	2.3	2.24	2.41	60.3	2.80	295.44	689.36	123.10	13.85	16.02	5	5	0	0	13.8	279.4	92.3
MH-188	MH-492	552.47	551.32	122.9	150	0.43	107	1.47	0.0418	0.8	0.8	0.8	12.2	1.30	119.83	319.54	122.90	13.83	16.00	5	5	0	0	13.8	103.8	92.2
MH-491	MH-108	574.03	573.37	121.8	150	0.28	186	1.1157	0.0193	0.8	0.8	0.8	8.9	1.30	118.76	316.68	121.80	13.70	15.85	5	5	0	0	13.7	102.9	91.4
MH-399	MH-402	572.72	572.56	120.7	150	0.17	750	0.555	0.018	1.6	1.18	1.92	26.2	2.10	226.31	506.94	120.70	13.58	15.71	5	5	0	0	13.6	210.6	90.5
MH-487	MH-261	564.29	563.09	119.8	150	0.4	100	1.52	0.0297	0.8	0.83	0.8	12	1.30	116.81	311.48	119.80	13.48	15.59	4	4	0	0	13.5	101.2	89.9
MH-486	MH-116	560.63	560.47	118.9	150	0.33	750	0.555	0.1724	1.9	1.72	2.1	39.4	2.40	249.69	570.72	118.90	13.38	15.48	4	4	0	0	13.4	234.2	89.2
MH-325	MH-43	565.21	565.05	118.8	150	0.37	750	0.555	0.2823	1	0.8	1.21	45.5	1.50	133.65	356.40	118.80	13.37	15.46	4	4	0	0	13.4	118.2	89.1
MH-439	MH-407	559.21	558.69	115.8	150	0.43	223	1.0173	0.0996	0.8	0.8	0.8	21.7	1.30	112.91	301.08	115.80	13.03	15.07	4	4	0	0	13.0	97.8	86.9
MH-478	MH-289	559.4	559.25	112.8	150	0.11	750	0.555	0.004	1.1	0.8	1.42	5	1.60	135.36	360.96	112.80	12.69	14.68	4	4	0	0	12.7	120.7	84.6
MH-476	MH-477	577	576.32	111.5	150	0.8	166	1.1813	0.6305	0.9	0.8	1.08	51.8	1.40	117.08	312.20	111.50	12.54	14.51	4	4	0	0	12.5	102.6	83.6
MH-461	MH-39	559.11	558.95	107.6	150	0.3	683	0.5815	0.1071	0.9	1.05	0.8	24.8	1.40	112.98	301.28	107.60	12.11	14.01	4	4</					



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-448	MH-326	562.72	561.8	91.1	150	0.3	100	1.52	0.0113	0.9	0.94	0.8	6.4	1.40	95.66	255.08	91.10	10.25	11.86	4	4	0	0	10.2	83.8	68.3
MH-447	MH-51	565.72	565.1	90.7	150	0.8	148	1.2499	0.5329	1	0.8	1.16	54	1.50	102.04	272.10	90.70	10.20	11.81	4	4	0	0	10.2	90.2	68.0
MH-446	MH-355	563.26	562.36	90.3	150	0.32	100	1.52	0.0143	0.9	0.92	0.8	7.2	1.40	94.82	252.84	90.30	10.16	11.75	4	4	0	0	10.2	83.1	67.7
MH-397	MH-442	558.28	557.51	87.9	150	0.8	114	1.426	0.3717	1.2	0.93	1.45	40.5	1.70	112.07	298.86	87.90	9.89	11.44	3	3	0	0	9.9	100.6	65.9
MH-109	MH-371	572.46	572.34	87.8	150	0.35	750	0.555	0.2218	1.5	1.63	1.32	43.6	2.00	131.70	351.20	87.80	9.88	11.43	3	3	0	0	9.9	120.3	65.9
MH-443	MH-427	561.96	561.84	86.3	150	0.24	750	0.555	0.0553	1.1	1.02	1.11	23.1	1.60	103.56	276.16	86.30	9.71	11.23	3	3	0	0	9.7	92.3	64.7
MH-442	MH-373	557.51	556.79	85.7	150	0.8	120	1.3851	0.402	1.7	1.45	1.9	42.1	2.20	167.12	377.08	85.70	9.64	11.15	3	3	0	0	9.6	156.0	64.3
MH-417	MH-361	552.48	551.75	85.5	150	0.8	117	1.4068	0.3904	3.6	3.18	3.93	41.2	4.10	339.86	701.10	85.50	9.62	11.13	3	0	3	0	9.6	328.7	64.1
MH-440	MH-29	559.93	559.63	84.9	150	0.2	278	0.9122	0.0101	0.8	0.8	0.8	13.9	1.30	82.78	220.74	84.90	9.55	11.05	3	3	0	0	9.6	71.7	63.7
MH-438	MH-439	559.57	559.21	84.2	150	0.36	234	0.9929	0.0601	0.8	0.8	0.8	18.7	1.30	82.10	218.92	84.20	9.47	10.96	3	3	0	0	9.5	71.1	63.2
MH-307	MH-426	574.85	574.39	82	150	0.49	178	1.1389	0.1144	0.8	0.8	0.8	22.5	1.30	79.95	213.20	82.00	9.23	10.67	3	3	0	0	9.2	69.3	61.5
MH-435	MH-302	561.68	560.91	77.5	150	0.28	100	1.52	0.0093	0.8	0.86	0.8	5.8	1.30	75.56	201.50	77.50	8.72	10.09	3	3	0	0	8.7	65.5	58.1
MH-434	MH-364	564.52	563.76	75.9	150	0.5	100	1.52	0.0619	0.8	0.8	0.8	14.7	1.30	74.00	197.34	75.90	8.54	9.88	3	3	0	0	8.5	64.1	56.9
MH-429	MH-430	555.53	555.29	75.2	150	0.48	310	0.8627	0.2199	0.8	0.8	0.8	37.9	1.30	73.32	195.52	75.20	8.46	9.79	3	3	0	0	8.5	63.5	56.4
MH-363	MH-158	563.23	562.53	73.2	150	0.51	105	1.4819	0.0718	0.8	0.8	0.8	20.1	1.30	71.37	190.32	73.20	8.24	9.53	3	3	0	0	8.2	61.8	54.9
MH-367	MH-380	562.95	562.58	73.2	150	0.23	197	1.0816	0.0111	1	1.15	0.8	7.8	1.50	82.35	219.60	73.20	8.24	9.53	3	3	0	0	8.2	72.8	54.9
MH-409	MH-12	580.6	580.5	72.9	150	0.31	750	0.555	0.1528	1.3	1.46	1.09	37.7	1.80	98.42	262.44	72.90	8.20	9.49	3	3	0	0	8.2	88.9	54.7
MH-427	MH-428	561.84	561.75	72.5	150	0.26	750	0.555	0.0789	1.2	1.11	1.2	21.5	1.70	92.44	246.50	72.50	8.16	9.44	3	3	0	0	8.2	83.0	54.4
MH-426	MH-328	574.39	574.05	71.5	150	0.47	212	1.0446	0.129	0.8	0.8	0.8	23.2	1.30	69.71	185.90	71.50	8.04	9.31	3	3	0	0	8.0	60.4	53.6
MH-328	MH-402	573.39	573.3	70.7	150	0.32	750	0.555	0.1694	1.3	1.46	1.19	31.9	1.80	95.45	254.52	70.70	7.95	9.20	3	3	0	0	8.0	86.2	53.0
MH-424	MH-423	559.72	559.63	69.4	150	0.31	750	0.555	0.1398	2.2	1.98	2.38	36.7	2.70	161.36	374.76	69.40	7.81	9.03	3	3	0	0	7.8	152.3	52.1
MH-421	MH-303	561.2	560.67	68.4	150	0.22	127	1.3501	0.0051	0.8	0.8	0.8	4.5	1.30	66.69	177.84	68.40	7.70	8.90	3	3	0	0	7.7	57.8	51.3
MH-420	MH-344	560.83	560.39	68.1	150	0.2	154	1.2267	0.005	0.8	0.8	0.8	4.5	1.30	66.40	177.06	68.10	7.66	8.86	3	3	0	0	7.7	57.5	51.1
MH-394	MH-372	554.57	554.48	67.2	150	0.36	750	0.555	0.2576	1	0.95	1.01	40	1.50	75.60	201.60	67.20	7.56	8.75	3	3	0	0	7.6	66.9	50.4
MH-152	MH-6	578.77	578.34	67.1	150	0.56	158	1.209	0.1667	0.8	0.8	0.8	25.5	1.30	65.42	174.46	67.10	7.55	8.73	3	3	0	0	7.5	56.7	50.3
MH-416	MH-417	553.07	552.48	66.4	150	0.8	113	1.4289	0.3699	2.9	2.69	3.18	40.1	3.40	189.24	451.52	66.40	7.47	8.64	3	3	0	0	7.5	180.6	49.8
MH-415	MH-350	555.55	555.26	66	150	0.51	226	1.0122	0.1827	0.8	0.8	0.8	27.9	1.30	64.35	171.60	66.00	7.43	8.59	3	3	0	0	7.4	55.8	49.5
MH-414	MH-399	573.45	573.1	65.8	150	0.21	191	1.0996	0.0079	0.8	0.8	0.8	5.8	1.30	64.16	171.08	65.80	7.40	8.56	3	3	0	0	7.4	55.6	49.4
MH-413	MH-387	579.28	579.2	64.6	150	0.14	750	0.555	0.0099	1.8	1.58	2.08	10.2	2.30	130.82	297.16	64.60	7.27	8.41	3	3	0	0	7.3	122.4	48.5
MH-412	MH-389	555.81	555.45	64.1	150	0.24	176	1.1453	0.0111	0.8	0.8	0.8	7.5	1.30	62.50	166.66	64.10	7.21	8.34	3	3	0	0	7.2	54.2	48.1
MH-382	MH-409	580.68	580.6	63.4	150	0.19	750	0.555	0.0259	1.3	1.23	1.46	25	1.80	85.59	228.24	63.40	7.13	8.25	3	3	0	0	7.1	77.3	47.6
MH-227	MH-408	554.07	553.75	63.1	150	0.36	201	1.071	0.0456	0.8	0.8	0.8	13.7	1.30	61.52	164.06	63.10	7.10	8.21	3	3	0	0	7.1	53.3	47.3
MH-407	MH-397	558.69	558.28	63.1	150	0.52	153	1.2293	0.1228	0.9	0.8	0.93	31	1.40	66.26	176.68	63.10	7.10	8.21	3	3	0	0	7.1	58.0	47.3
MH-388	MH-11	579.12	579.04	59.9	150	0.17	750	0.555	0.0179	2.4	2.32	2.55	26.5	2.90	148.25	347.42	59.90	6.74	7.80	2	2	0	0	6.7	140.5	44.9
MH-268	MH-358	578.03	577.59	62.4	150	0.63	141	1.2785	0.2144	0.8	0.8	0.8	30.1	1.30	60.84	162.24	62.40	7.02	8.12	3	3	0	0	7.0	52.7	46.8
MH-334	MH-378	557.11	557.03	62.3	150	0.17	750	0.555	0.0174	2.1	2.04	2.2	14.7	2.60	140.18	323.96	62.30	7.01	8.11	3	3	0	0	7.0	132.1	46.7
MH-309	MH-354	579.67	579.24	62.1	150	0.57	145	1.2628	0.1495	0.8	0.8	0.8	25	1.30	60.55	161.46	62.10	6.99	8.08	3	3	0	0	7.0	52.5	46.6
MH-406	MH-315	560.52	560.1	61.9	150	0.17	148	1.2488	0.0029	0.8	0.8	0.8	3.4	1.30	60.35	160.94	61.90	6.96	8.06	3	3	0	0	7.0	52.3	46.4
MH-110	MH-160	571.41	570.86	61.7	150	0.29	113	1.4281	0.0118	0.9	0.8	1.07	22.4	1.40	64.79	172.76	61.70	6.94	8.03	3	3	0	0	6.9	56.8	46.3
MH-405	MH-19	559.33	559.24	61.7	150	0.09	750	0.555	0.0024	1	0.8	1.1	15.8	1.50	69.41	185.10	61.70	6.94	8.03	3	3	0	0	6.9	61.4	46.3
MH-332	MH-288	561.01	560.93	61.1	150	0.26	750	0.555	0.0786	0.9	0.8	0.99	25.5	1.40	64.16	171.08	61.10	6.87	7.95	3	3	0	0	6.9	56.2	45.8
MH-402	MH-108	572.56	572.48	61	150	0.34	750	0.555	0.1942	1.8	1.92	1.69	41.6	2.30	123.53	280.60	61.00	6.86	7.94	3	3	0	0	6.9	115.6	45.8
MH-401	MH-280	560.28	559.96	60.5	150	0.16	194	1.0915	0.0032	0.8	0.8	0.8	3.8	1.30	58.99	157.30	60.50	6.81	7.87	3	3	0	0	6.8	51.1	45.4
MH-400	MH-399	572.8	572.72	60.4	150	0.09	750	0.555	0.0023	1	0.8	1.18	8.4	1.50	67.95	181.20	60.40	6.80	7.86	3	3	0	0	6.8	60.1	45.3
MH-304	MH-29	559.72	559.63	60.4	150	0.26	680	0.5831	0.0697	0.8	0.8	0.8	21.7	1.30	58.89	157.04	60.40	6.80	7.86	3	3	0	0	6.8	51.0	45.3
MH-396	MH-397	558.36	558.28	59.6	150	0.36	750	0.555	0.2424	0.9	0.8	0.93	42.6	1.40	62.58	166.88	59.60	6.71	7.76	2	2	0	0	6.7	54.8	44.7
MH-337	MH-340	560.28	559.99	59.5	150	0.25	207	1.0563	0.0153	0.8	0.8	0.8	12.6	1.30	58.01	154.70	59.50	6.69	7.74	2	2	0	0	6.7	50.3	44.6
MH-395	MH-394	554.65	554.57	59.2	150	0.36	750	0.555	0.2527	0.9	0.8	0.95	47	1.40	62.16	165.76	59.20	6.66	7.71	2	2	0	0	6.7	54.5	44.4
MH-393	MH-15	563.28	562.69	59.2	150	0.15	102	1.5081	0.0011	0.8	0.8	0.8	8.5	1.30	57.72	153.92	59.20	6.66	7.71	2	2	0	0	6.7	50.0	44.4
MH-3																										

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-369	MH-257	578.6	578.19	53	150	0.8	130	1.3338	0.4446	2.7	2.64	2.71	43.6	3.20	143.10	339.20	53.00	5.96	6.90	2	2	0	0	6.0	136.2	39.8
MH-373	MH-353	556.79	556.38	52.9	150	0.8	127	1.3491	0.4319	2	1.9	2.19	44	2.50	115.06	264.50	52.90	5.95	6.89	2	2	0	0	6.0	108.2	39.7
MH-11	MH-369	579.04	578.6	52.5	150	0.8	119	1.3933	0.3953	2.6	2.55	2.64	42.2	3.10	137.81	325.50	52.50	5.91	6.83	2	2	0	0	5.9	131.0	39.4
MH-286	MH-35	579.64	579.52	51.9	150	0.43	433	0.7304	0.2193	0.8	0.8	0.8	33.6	1.30	50.60	134.94	51.90	5.84	6.76	2	2	0	0	5.8	43.8	38.9
MH-371	MH-291	572.34	572.27	51.8	150	0.35	750	0.555	0.2257	1.2	1.32	1.16	44	1.70	66.05	176.12	51.80	5.83	6.74	2	2	0	0	5.8	59.3	38.9
MH-370	MH-40	558.54	558.47	51.5	150	0.12	750	0.555	0.0059	1.1	0.96	1.28	6	1.60	61.80	164.80	51.50	5.79	6.70	2	2	0	0	5.8	55.1	38.6
MH-368	MH-369	580.54	580.44	51.2	150	0.26	496	0.6824	0.046	0.8	0.8	0.8	15.5	1.30	49.92	133.12	51.20	5.76	6.66	2	2	0	0	5.8	43.3	38.4
MH-366	MH-367	563.02	562.95	51.1	150	0.13	750	0.555	0.0071	1	0.8	1.15	7.5	1.50	57.49	153.30	51.10	5.75	6.65	2	2	0	0	5.7	50.8	38.3
MH-365	MH-249	564.14	563.64	51.1	150	0.2	100	1.5171	0.0028	0.8	0.8	0.8	3.2	1.30	49.82	132.86	51.10	5.75	6.65	2	2	0	0	5.7	43.2	38.3
MH-69	MH-63	553.64	553.34	51	150	0.21	166	1.179	0.007	0.8	0.8	0.8	5.9	1.30	49.73	132.60	51.00	5.74	6.64	2	2	0	0	5.7	43.1	38.3
MH-125	MH-111	571.69	571.5	50.9	150	0.19	267	0.9311	0.0079	0.8	0.85	0.8	6.6	1.30	49.63	132.34	50.90	5.73	6.63	2	2	0	0	5.7	43.0	38.2
MH-364	MH-363	563.73	563.23	50.9	150	0.51	100	1.52	0.0675	0.8	0.83	0.8	16.8	1.30	49.63	132.34	50.90	5.73	6.63	2	2	0	0	5.7	43.0	38.2
MH-323	MH-302	558.48	558.03	50.6	150	0.8	111	1.4396	0.3633	3.7	3.64	3.68	39.5	4.20	204.93	425.04	50.60	5.69	6.59	2	0	2	0	5.7	198.3	38.0
MH-223	MH-355	559.02	558.95	50.5	150	0.37	750	0.555	0.2848	4.4	4.67	4.21	51.7	4.90	231.04	494.90	50.50	5.68	6.57	2	0	2	0	5.7	224.5	37.9
MH-299	MH-28	579.09	578.96	51.4	150	0.21	391	0.7687	0.0185	0.8	0.87	0.8	20.6	1.30	50.12	133.64	51.40	5.78	6.69	2	2	0	0	5.8	43.4	38.6
MH-230	MH-264	559.84	559.75	50.5	150	0.15	566	0.639	0.0091	0.8	0.8	0.8	9	1.30	49.24	131.30	50.50	5.68	6.57	2	2	0	0	5.7	42.7	37.9
MH-338	MH-8	579.57	579.19	50.2	150	0.33	132	1.3249	0.0209	0.9	0.8	1	17.2	1.40	52.71	140.56	50.20	5.65	6.53	2	2	0	0	5.6	46.2	37.7
MH-361	MH-362	551.75	551.34	50.1	150	0.8	122	1.3756	0.4102	4.1	3.93	4.32	42	4.60	217.94	460.92	50.10	5.64	6.52	2	0	2	0	5.6	211.4	37.6
MH-76	MH-213	559.57	559.5	50	150	0.19	750	0.555	0.0253	1	0.83	1.11	15.9	1.50	56.25	150.00	50.00	5.63	6.51	2	2	0	0	5.6	49.7	37.5
MH-360	MH-331	561.62	561.28	49.7	150	0.26	146	1.2601	0.0108	0.8	0.8	0.8	8.3	1.30	48.46	129.22	49.70	5.59	6.47	2	2	0	0	5.6	42.0	37.3
MH-359	MH-215	564.32	563.83	49.5	150	0.47	100	1.52	0.0501	0.8	0.89	0.8	13.3	1.30	48.26	128.70	49.50	5.57	6.44	2	2	0	0	5.6	41.8	37.1
MH-321	MH-296	550.13	549.75	49.3	150	0.8	131	1.3264	0.4513	5.9	5.57	6.13	44	6.40	325.38	631.04	49.30	5.55	6.42	2	0	0	2	5.5	319.0	37.0
MH-358	MH-106	577.59	577.23	49.2	150	0.64	139	1.2879	0.2234	0.8	0.8	0.8	37.7	1.30	47.97	127.92	49.20	5.54	6.40	2	2	0	0	5.5	41.6	36.9
MH-61	MH-357	572.67	572.43	49	150	0.19	201	1.0716	0.0062	0.8	0.8	0.8	5.6	1.30	47.78	127.40	49.00	5.51	6.38	2	2	0	0	5.5	41.4	36.8
MH-356	MH-348	559.93	559.76	48.8	150	0.16	287	0.8974	0.0045	0.8	0.8	0.8	4.7	1.30	47.58	126.88	48.80	5.49	6.35	2	2	0	0	5.5	41.2	36.6
MH-355	MH-326	558.95	558.89	48.6	150	0.38	750	0.555	0.3152	4	4.21	3.71	45.7	4.50	207.77	437.40	48.60	5.47	6.33	2	0	2	0	5.5	201.4	36.5
MH-354	MH-153	579.24	578.92	48.8	150	0.56	151	1.239	0.154	0.8	0.8	0.8	25.6	1.30	47.58	126.88	48.80	5.49	6.35	2	2	0	0	5.5	41.2	36.6
MH-241	MH-271	559.09	559.03	48.1	150	0.11	750	0.555	0.0047	0.9	0.88	1.01	5.4	1.40	50.51	134.68	48.10	5.41	6.26	2	2	0	0	5.4	44.2	36.1
MH-348	MH-352	555.81	555.45	48	150	0.8	133	1.317	0.4602	4.9	4.74	4.99	44.4	5.40	237.60	518.40	48.00	5.40	6.25	2	0	0	2	5.4	231.4	36.0
MH-353	MH-244	556.38	556.09	47.9	150	0.8	165	1.3003	0.4775	2.2	2.19	2.29	45.5	2.70	111.37	258.66	47.90	5.39	6.23	2	2	0	0	5.4	105.1	35.9
MH-352	MH-292	555.45	555.1	47.7	150	0.8	134	1.3129	0.4642	5.1	4.99	5.24	44.6	5.60	243.27	534.24	47.70	5.37	6.21	2	0	0	2	5.4	237.1	35.8
MH-67	MH-203	571.84	571.74	47.5	150	0.43	480	0.6941	0.269	0.9	0.95	0.8	38.1	1.40	49.88	133.00	47.50	5.34	6.18	2	2	0	0	5.3	43.7	35.6
MH-105	MH-349	577.21	577.15	46.9	150	0.36	750	0.555	0.2386	1	0.89	1.11	38.4	1.50	52.76	140.70	46.90	5.28	6.10	2	2	0	0	5.3	46.7	35.2
MH-289	MH-348	556.17	555.81	46.9	150	0.8	131	1.3294	0.4486	4.6	4.5	4.74	44	5.10	221.60	478.38	46.90	5.28	6.10	2	0	0	2	5.3	215.5	35.2
MH-303	MH-344	557.67	557.27	46.7	150	0.8	115	1.4158	0.384	3.9	3.79	3.92	40.5	4.40	196.14	410.96	46.70	5.25	6.08	2	0	2	0	5.3	190.1	35.0
MH-346	MH-345	557.31	557.25	46.7	150	0.12	750	0.555	0.0065	1	0.8	1.19	8.8	1.50	52.54	140.10	46.70	5.25	6.08	2	2	0	0	5.3	46.5	35.0
MH-280	MH-289	556.53	556.17	46.5	150	0.8	129	1.3395	0.4397	4.4	4.23	4.5	43.5	4.90	212.74	455.70	46.50	5.23	6.05	2	0	2	0	5.2	206.7	34.9
MH-344	MH-315	557.27	556.88	46.5	150	0.8	118	1.3976	0.3918	4	3.92	4.02	40.9	4.50	198.79	418.50	46.50	5.23	6.05	2	0	2	0	5.2	192.7	34.9
MH-343	MH-52	571.92	571.86	46.3	150	0.09	750	0.555	0.0021	0.9	0.8	0.99	18.3	1.40	48.62	129.64	46.30	5.21	6.03	2	2	0	0	5.2	42.6	34.7
MH-327	MH-269	578.37	578.18	46.3	150	0.24	234	0.9938	0.0137	0.8	0.8	0.8	18.9	1.30	45.14	120.38	46.30	5.21	6.03	2	2	0	0	5.2	39.1	34.7
MH-342	MH-320	550.82	550.46	46.1	150	0.8	127	1.3478	0.4329	5.1	4.89	5.23	43.1	5.60	235.11	516.32	46.10	5.19	6.00	2	0	0	2	5.2	229.1	34.6
MH-341	MH-231	574.12	573.87	45.8	150	0.28	186	1.1158	0.0192	1.4	1.43	1.41	12.1	1.90	65.27	174.04	45.80	5.15	5.96	2	2	0	0	5.2	59.3	34.4
MH-340	MH-252	559.99	559.89	45.7	150	0.27	433	0.7303	0.0466	0.8	0.8	0.8	17.9	1.30	44.56	118.82	45.70	5.14	5.95	2	2	0	0	5.1	38.6	34.3
MH-77	MH-338	579.8	579.57	45.2	150	0.27	197	1.082	0.0188	0.8	0.9	0.8	9.1	1.30	44.07	117.52	45.20	5.09	5.88	2	2	0	0	5.1	38.2	33.9
MH-336	MH-337	560.54	560.28	45.2	150	0.23	174	1.1521	0.0095	0.8	0.8	0.8	7.4	1.30	44.07	117.52	45.20	5.09	5.88	2	2	0	0	5.1	38.2	33.9
MH-335	MH-94	579.78	579.48	44.8	150	0.23	148	1.2502	0.0083	0.8	0.8	0.8	6.3	1.30	43.68	116.48	44.80	5.04	5.83	2	2	0	0	5.0	37.8	33.6
MH-333	MH-334	558.27	558.21	44.8	150	0.09	750	0.555	0.0019	0.9	0.8	0.94	3.5	1.40	47.04	125.44	44.80	5.04	5.83	2	2	0	0	5.0	41.2	33.6
MH-331	MH-332	561.28	561.01	44.6	150	0.32	164	1.1883	0.0255	0.8	0.8	0.8	17.6	1.30	43.49	115.96	44.60	5.02	5.81	2	2	0	0	5.0	37.7	33.5
MH-232	MH-328	573.83	573.39	44.3	150	0.4	100	1.5195	0.0317	1.4	1.28	1.46	24.3	1.90	63.13	168.34	44.30	4.98	5.77	2	2	0	0	5.0	57.4	33.2
MH-128	MH-327																									

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-313	MH-314	562.25	561.85	40.8	150	0.27	100	1.52	0.0085	0.8	0.82	0.8	5.6	1.30	39.78	106.08	40.80	4.59	5.31	2	2	0	0	4.6	34.5	30.6
MH-66	MH-311	572.17	572.11	40.8	150	0.36	750	0.555	0.2463	0.9	0.96	0.85	39.4	1.40	42.84	114.24	40.80	4.59	5.31	2	2	0	0	4.6	37.5	30.6
MH-237	MH-274	580.01	579.73	40.6	150	0.18	147	1.2523	0.0035	0.8	0.8	0.8	4.3	1.30	39.59	105.56	40.60	4.57	5.28	2	2	0	0	4.6	34.3	30.5
MH-164	MH-309	579.95	579.67	40.5	150	0.56	143	1.2724	0.1457	0.8	0.8	0.8	24.6	1.30	39.49	105.30	40.50	4.56	5.27	2	2	0	0	4.6	34.2	30.4
MH-306	MH-307	575.08	574.85	40.3	150	0.47	178	1.1402	0.1008	0.8	0.8	0.8	20.9	1.30	39.29	104.78	40.30	4.53	5.25	2	2	0	0	4.5	34.0	30.2
MH-48	MH-251	572.75	572.56	30.5	150	0.24	158	1.2105	0.0103	0.8	0.8	0.8	7	1.30	29.74	79.30	30.50	3.43	3.97	2	2	0	0	3.4	25.8	22.9
MH-305	MH-269	578.45	578.18	40.2	150	0.59	148	1.249	0.1775	0.8	0.8	0.8	28.4	1.30	39.20	104.52	40.20	4.52	5.23	2	2	0	0	4.5	34.0	30.2
MH-175	MH-153	578.99	578.92	40	150	0.15	523	0.665	0.008	0.8	0.8	0.8	16.8	1.30	39.00	104.00	40.00	4.50	5.21	2	2	0	0	4.5	33.8	30.0
MH-58	MH-304	559.81	559.72	39.8	150	0.29	446	0.7196	0.0598	0.8	0.8	0.8	21.1	1.30	38.81	103.48	39.80	4.48	5.18	2	2	0	0	4.5	33.6	29.9
MH-302	MH-303	558.03	557.67	39.8	150	0.8	114	1.4267	0.376	3.7	3.68	3.79	40.1	4.20	161.19	334.32	39.80	4.48	5.18	2	0	2	0	4.5	156.0	29.9
MH-301	MH-206	554.27	554	39.7	150	0.22	147	1.2519	0.0068	0.8	0.8	0.8	5.9	1.30	38.71	103.22	39.70	4.47	5.17	2	2	0	0	4.5	33.5	29.8
MH-300	MH-74	572.95	572.81	39.7	150	0.18	269	0.9269	0.0063	0.8	0.8	0.8	6.5	1.30	38.71	103.22	39.70	4.47	5.17	2	2	0	0	4.5	33.5	29.8
MH-256	MH-145	553.17	552.84	39.6	150	0.32	119	1.3935	0.0174	0.8	0.8	0.8	8.5	1.30	38.61	102.96	39.60	4.46	5.15	2	2	0	0	4.5	33.5	29.7
MH-243	MH-267	578.97	578.72	39.5	150	0.28	156	1.2176	0.0142	0.8	0.8	0.8	8	1.30	38.51	102.70	39.50	4.44	5.14	2	2	0	0	4.4	33.4	29.6
MH-23	MH-299	579.14	579.09	39.5	150	0.17	750	0.555	0.0172	0.9	0.97	0.87	11.3	1.40	41.48	110.60	39.50	4.44	5.14	2	2	0	0	4.4	36.3	29.6
MH-296	MH-254	549.75	549.46	39.2	150	0.8	133	1.3205	0.4567	6.3	6.13	6.56	42.1	6.80	270.48	533.12	39.20	4.41	5.10	2	0	0	2	4.4	265.4	29.4
MH-270	MH-75	559.64	559.58	39	150	0.18	750	0.555	0.0208	0.8	0.81	0.82	13.4	1.30	38.03	101.40	39.00	4.39	5.08	2	2	0	0	4.4	32.9	29.3
MH-291	MH-195	572.27	572.22	38.5	150	0.35	750	0.555	0.229	1.1	1.16	1.05	44.3	1.60	46.20	123.20	38.50	4.33	5.01	2	2	0	0	4.3	41.2	28.9
MH-290	MH-289	560	559.87	38.5	150	0.13	300	0.8779	0.0026	0.8	0.8	0.8	3.5	1.30	37.54	100.10	38.50	4.33	5.01	2	2	0	0	4.3	32.5	28.9
MH-288	MH-136	560.93	560.88	38.4	150	0.27	750	0.555	0.0836	1.1	0.99	1.13	26.6	1.60	46.08	122.88	38.40	4.32	5.00	2	2	0	0	4.3	41.1	28.8
MH-287	MH-180	559.95	559.88	38.3	150	0.14	538	0.6552	0.0066	0.8	0.8	0.8	7.7	1.30	37.34	99.58	38.30	4.31	4.99	2	2	0	0	4.3	32.4	28.7
MH-285	MH-286	579.89	579.64	38.2	150	0.37	152	1.2325	0.039	0.8	0.8	0.8	24.8	1.30	37.25	99.32	38.20	4.30	4.97	2	2	0	0	4.3	32.3	28.7
MH-283	MH-284	578.4	578.16	38.1	150	0.14	160	1.2022	0.0017	0.8	0.8	0.8	5.8	1.30	37.15	99.06	38.10	4.29	4.96	2	2	0	0	4.3	32.2	28.6
MH-281	MH-247	580.2	579.93	37.8	150	0.19	140	1.2846	0.0036	0.8	0.8	0.8	4.3	1.30	36.86	98.28	37.80	4.25	4.92	2	2	0	0	4.3	31.9	28.4
MH-213	MH-280	559.5	559.45	37.3	150	0.21	750	0.555	0.0378	1.2	1.11	1.31	14.9	1.70	47.56	126.82	37.30	4.20	4.86	2	2	0	0	4.2	42.7	28.0
MH-279	MH-21	554.88	554.66	37.2	150	0.8	164	1.3056	0.4718	5.5	5.38	5.58	44.9	6.00	200.88	446.40	37.20	4.19	4.84	2	0	0	2	4.2	196.0	27.9
MH-276	MH-37	564.34	564.28	36.5	150	0.17	582	0.6298	0.0141	0.9	0.8	0.99	12	1.40	38.33	102.20	36.50	4.11	4.75	2	2	0	0	4.1	33.6	27.4
MH-274	MH-275	579.73	579.49	36.5	150	0.2	151	1.2358	0.0053	0.8	0.8	0.8	5	1.30	35.59	94.90	36.50	4.11	4.75	2	2	0	0	4.1	30.8	27.4
MH-17	MH-141	569.97	569.92	36.4	150	0.28	750	0.555	0.0978	1.8	1.84	1.83	28.2	2.30	73.71	167.44	36.40	4.10	4.74	2	2	0	0	4.1	69.0	27.3
MH-273	MH-68	553.91	553.74	36.3	150	0.15	206	1.0598	0.003	0.8	0.8	0.8	3.9	1.30	35.39	94.38	36.30	4.08	4.72	2	2	0	0	4.1	30.7	27.2
MH-233	MH-114	553.08	552.8	36.2	150	0.3	131	1.3277	0.0158	0.8	0.8	0.8	8.1	1.30	35.30	94.12	36.20	4.07	4.71	2	2	0	0	4.1	30.6	27.2
MH-248	MH-266	579.69	579.44	36	150	0.24	142	1.2773	0.0085	0.8	0.8	0.8	6.2	1.30	35.10	93.60	36.00	4.05	4.69	2	2	0	0	4.1	30.4	27.0
MH-272	MH-168	554.81	554.76	35.8	150	0.2	750	0.555	0.032	0.8	0.8	0.81	13.9	1.30	34.91	93.08	35.80	4.03	4.66	2	2	0	0	4.0	30.2	26.9
MH-193	MH-271	554.32	554.11	35.5	150	0.8	166	1.2982	0.4798	5.9	5.81	5.93	45.4	6.40	234.30	454.40	35.50	3.99	4.62	2	0	0	2	4.0	229.7	26.6
MH-265	MH-270	559.68	559.64	35.5	150	0.17	750	0.555	0.0173	0.8	0.8	0.81	12.5	1.30	34.61	92.30	35.50	3.99	4.62	2	2	0	0	4.0	30.0	26.6
MH-269	MH-268	578.18	578.03	35.3	150	0.51	238	0.9843	0.1938	0.8	0.8	0.8	29.8	1.30	34.42	91.78	35.30	3.97	4.59	2	2	0	0	4.0	29.8	26.5
MH-267	MH-217	578.72	578.49	35.3	150	0.3	153	1.2308	0.018	0.8	0.8	0.8	8.8	1.30	34.42	91.78	35.30	3.97	4.59	2	2	0	0	4.0	29.8	26.5
MH-169	MH-122	554.59	554.33	35.3	150	0.38	134	1.314	0.0363	0.8	0.8	0.8	12.6	1.30	34.42	91.78	35.30	3.97	4.59	2	2	0	0	4.0	29.8	26.5
MH-266	MH-190	579.44	579.19	35.2	150	0.26	143	1.2716	0.0109	0.8	0.8	0.8	8.7	1.30	34.32	91.52	35.20	3.96	4.58	2	2	0	0	4.0	29.7	26.4
MH-264	MH-265	559.75	559.68	35	150	0.17	530	0.6604	0.0134	0.8	0.8	0.8	10.9	1.30	34.13	91.00	35.00	3.94	4.56	2	2	0	0	3.9	29.6	26.3
MH-263	MH-142	572.58	572.42	34.8	150	0.21	208	1.053	0.008	0.8	0.8	0.8	6.8	1.30	33.93	90.48	34.80	3.92	4.53	2	2	0	0	3.9	29.4	26.1
MH-262	MH-181	580.06	579.81	34.8	150	0.43	140	1.2847	0.0568	0.8	0.8	0.8	15.9	1.30	33.93	90.48	34.80	3.92	4.53	2	2	0	0	3.9	29.4	26.1
MH-261	MH-31	563.09	562.84	34.6	150	0.39	140	1.2843	0.0425	0.8	0.8	0.8	13.7	1.30	33.74	89.96	34.60	3.89	4.50	2	2	0	0	3.9	29.2	26.0
MH-258	MH-255	578.96	578.75	34.4	150	0.33	160	1.2003	0.0269	0.8	0.8	0.8	10.3	1.30	33.54	89.44	34.40	3.87	4.48	2	2	0	0	3.9	29.1	25.8
MH-179	MH-256	553.41	553.17	34.3	150	0.29	146	1.2583	0.0159	0.8	0.8	0.8	8.1	1.30	33.44	89.18	34.30	3.86	4.46	2	2	0	0	3.9	29.0	25.7
MH-252	MH-57	559.89	559.82	33.9	150	0.27	516	0.6691	0.0534	0.8	0.8	0.8	19.4	1.30	33.05	88.14	33.90	3.81	4.41	2	2	0	0	3.8	28.6	25.4
MH-200	MH-81	570.35	570.3	33.5	150	0.13	750	0.555	0.0071	1.1	0.96	1.16	8.2	1.60	40.20	107.20	33.50	3.77	4.36	2	2	0	0	3.8	35.8	25.1
MH-251	MH-84	572.56	572.4	33	150	0.23	207	1.057	0.012	0.8	0.8	0.8	7.5	1.30	32.18	85.80	33.00	3.71	4.30	2	2	0	0	3.7	27.9	24.8
MH-249	MH-250	563.59	563.26	32.9	150	0.23	100	1.52	0.0049	0.8	0.84	0.8	4.2	1.30	32.08	85.54	32.90	3.70	4.28	2	2	0	0	3.7	27.8	24.7
MH-247	MH-248	579.93	579.69	32.9	150	0.21	137</																			



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-170	MH-53	572.22	572.07	30.9	150	0.2	212	1.0435	0.0079	0.8	0.8	0.8	6.2	1.30	30.13	80.34	30.90	3.48	4.02	2	2	0	0	3.5	26.1	23.2
MH-143	MH-227	554.2	554.07	30.8	150	0.34	226	1.0119	0.0437	0.9	0.91	0.8	13.9	1.40	32.34	86.24	30.80	3.47	4.01	2	2	0	0	3.5	28.3	23.1
MH-14	MH-151	577.96	577.72	30.8	150	0.8	132	1.324	0.4535	2.8	2.8	2.75	44	3.30	85.47	203.28	30.80	3.47	4.01	2	2	0	0	3.5	81.5	23.1
MH-95	MH-165	580.09	580.01	30.7	150	0.38	418	0.7433	0.1398	0.8	0.8	0.8	29	1.30	29.93	79.82	30.70	3.45	4.00	2	2	0	0	3.5	25.9	23.0
MH-224	MH-41	559.49	559.38	30.7	150	0.1	282	0.9045	0.0011	0.8	0.8	0.8	2.3	1.30	29.93	79.82	30.70	3.45	4.00	2	2	0	0	3.5	25.9	23.0
MH-103	MH-223	563.2	562.9	30.6	150	0.66	100	1.52	0.1627	0.8	0.82	0.8	23.9	1.30	29.84	79.56	30.60	3.44	3.98	2	2	0	0	3.4	25.9	23.0
MH-221	MH-193	559.44	559.33	30.3	150	0.11	282	0.9054	0.0013	0.8	0.8	0.8	2.5	1.30	29.54	78.78	30.30	3.41	3.94	2	2	0	0	3.4	25.6	22.7
MH-220	MH-116	562.07	561.76	30.2	150	0.35	100	1.52	0.0199	0.8	0.82	0.8	8.4	1.30	29.45	78.52	30.20	3.40	3.93	2	2	0	0	3.4	25.5	22.7
MH-219	MH-201	579.05	578.85	30.1	150	0.12	152	1.2318	0.0009	0.8	0.8	0.8	2.8	1.30	29.35	78.26	30.10	3.39	3.92	2	2	0	0	3.4	25.4	22.6
MH-218	MH-9	579.61	579.41	29.7	150	0.11	148	1.2494	0.0008	0.8	0.8	0.8	1.8	1.30	28.96	77.22	29.70	3.34	3.87	1	1	0	0	3.3	25.1	22.3
MH-217	MH-186	578.49	578.29	29.7	150	0.31	151	1.2372	0.0207	0.8	0.8	0.8	9.2	1.30	28.96	77.22	29.70	3.34	3.87	1	1	0	0	3.3	25.1	22.3
MH-216	MH-189	579.31	579.04	29.6	150	0.8	112	1.4374	0.3646	0.9	0.8	0.98	39.5	1.40	31.08	82.88	29.60	3.33	3.85	1	1	0	0	3.3	27.2	22.2
MH-215	MH-102	563.74	563.44	29.4	150	0.51	100	1.52	0.0683	0.8	0.89	0.8	15.4	1.30	28.67	76.44	29.40	3.31	3.83	1	1	0	0	3.3	24.8	22.1
MH-214	MH-21	559.54	559.44	29.3	150	0.12	294	0.8869	0.0021	0.8	0.8	0.8	3.3	1.30	28.57	76.18	29.30	3.30	3.81	1	1	0	0	3.3	24.8	22.0
MH-86	MH-107	571.21	571.13	29.3	150	0.11	381	0.7788	0.0021	0.8	0.87	0.8	3.7	1.30	28.57	76.18	29.30	3.30	3.81	1	1	0	0	3.3	24.8	22.0
MH-149	MH-213	559.81	559.78	29	150	0.15	750	0.555	0.0107	0.8	0.82	0.83	8	1.30	28.28	75.40	29.00	3.26	3.77	1	1	0	0	3.3	24.5	21.8
MH-198	MH-173	572.08	571.96	28.9	150	0.27	242	0.977	0.0242	0.8	0.8	0.8	11.4	1.30	28.18	75.14	28.90	3.25	3.76	1	1	0	0	3.3	24.4	21.7
MH-191	MH-212	579.15	579.12	28.7	150	0.16	750	0.555	0.0154	0.9	0.85	0.92	11.2	1.40	30.14	80.36	28.70	3.23	3.74	1	1	0	0	3.2	26.4	21.5
MH-174	MH-209	571.86	571.76	28.5	150	0.3	262	0.9384	0.0344	0.8	0.8	0.8	13.6	1.30	27.79	74.10	28.50	3.21	3.71	1	1	0	0	3.2	24.1	21.4
MH-206	MH-192	554	553.79	28.2	150	0.26	135	1.3105	0.0108	0.8	0.8	0.8	6.8	1.30	27.50	73.32	28.20	3.17	3.67	1	1	0	0	3.2	23.8	21.2
MH-203	MH-202	571.74	571.6	28.1	150	0.61	192	1.0984	0.2714	0.8	0.8	0.8	35.7	1.30	27.40	73.06	28.10	3.16	3.66	1	1	0	0	3.2	23.7	21.1
MH-201	MH-127	578.85	578.67	28	150	0.17	153	1.2279	0.0029	0.8	0.8	0.8	4	1.30	27.30	72.80	28.00	3.15	3.64	1	1	0	0	3.2	23.7	21.0
MH-199	MH-200	570.38	570.35	27.8	150	0.12	750	0.555	0.0053	0.9	0.8	0.96	7.3	1.40	29.19	77.84	27.80	3.13	3.62	1	1	0	0	3.1	25.6	20.9
MH-121	MH-198	572.22	572.08	27.8	150	0.27	196	1.0847	0.0176	0.8	0.8	0.8	9.7	1.30	27.11	72.28	27.80	3.13	3.62	1	1	0	0	3.1	23.5	20.9
MH-195	MH-65	572.22	572.18	27.7	150	0.35	750	0.555	0.2313	1	1.05	0.97	44.8	1.50	31.16	83.10	27.70	3.12	3.61	1	1	0	0	3.1	27.6	20.8
MH-194	MH-50	579.22	579.18	27.5	150	0.1	750	0.555	0.0035	0.9	0.8	1.02	7.3	1.40	28.88	77.00	27.50	3.09	3.58	1	1	0	0	3.1	25.3	20.6
MH-60	MH-25	570.16	569.91	27.4	150	0.8	109	1.4544	0.3548	1.6	1.5	1.66	35.9	2.10	51.38	115.08	27.40	3.08	3.57	1	1	0	0	3.1	47.8	20.6
MH-41	MH-193	554.49	554.32	27.1	150	0.8	165	1.3002	0.4776	5.8	5.69	5.81	45.2	6.30	176.83	341.46	27.10	3.05	3.53	1	0	0	1	3.0	173.3	20.3
MH-192	MH-178	553.79	553.59	27	150	0.28	135	1.3082	0.0129	0.8	0.8	0.8	7.4	1.30	26.33	70.20	27.00	3.04	3.51	1	1	0	0	3.0	22.8	20.3
MH-190	MH-191	579.19	579.15	26.9	150	0.16	750	0.555	0.014	0.8	0.8	0.85	11.1	1.30	26.23	69.94	26.90	3.03	3.50	1	1	0	0	3.0	22.7	20.2
MH-189	MH-147	579.04	578.81	26.9	150	0.8	114	1.4228	0.3739	1.1	0.98	1.15	37.1	1.60	32.28	86.08	26.90	3.03	3.50	1	1	0	0	3.0	28.8	20.2
MH-115	MH-188	552.64	552.47	26.8	150	0.36	163	1.1919	0.0367	0.8	0.8	0.8	12.5	1.30	26.13	69.68	26.80	3.02	3.49	1	1	0	0	3.0	22.6	20.1
MH-185	MH-96	580.19	580.13	26.8	150	0.16	426	0.7366	0.0084	0.8	0.8	0.8	17.7	1.30	26.13	69.68	26.80	3.02	3.49	1	1	0	0	3.0	22.6	20.1
MH-187	MH-161	570.24	570.2	26.5	150	0.26	750	0.555	0.0744	0.9	0.8	0.95	24.8	1.40	27.83	74.20	26.50	2.98	3.45	1	1	0	0	3.0	24.4	19.9
MH-79	MH-55	571.09	570.98	26.4	150	0.19	225	1.0136	0.0065	0.8	0.8	0.8	5.4	1.30	25.74	68.64	26.40	2.97	3.44	1	1	0	0	3.0	22.3	19.8
MH-186	MH-130	578.29	578.12	26.3	150	0.31	155	1.219	0.0221	0.8	0.8	0.8	9.3	1.30	25.64	68.38	26.30	2.96	3.42	1	1	0	0	3.0	22.2	19.7
MH-184	MH-185	580.26	580.19	26.2	150	0.15	403	0.7569	0.0059	0.8	0.8	0.8	6.9	1.30	25.55	68.12	26.20	2.95	3.41	1	1	0	0	2.9	22.1	19.7
MH-181	MH-118	579.81	579.72	26.1	150	0.34	266	0.9321	0.0577	0.8	0.8	0.8	16.9	1.30	25.45	67.86	26.10	2.94	3.40	1	1	0	0	2.9	22.1	19.6
MH-180	MH-148	559.88	559.84	26	150	0.13	750	0.555	0.0083	0.8	0.8	0.82	8.7	1.30	25.35	67.60	26.00	2.93	3.38	1	1	0	0	2.9	22.0	19.5
MH-178	MH-179	553.59	553.41	26	150	0.28	140	1.2851	0.0144	0.8	0.8	0.8	7.7	1.30	25.35	67.60	26.00	2.93	3.38	1	1	0	0	2.9	22.0	19.5
MH-177	MH-159	571.35	571.1	25.9	150	0.8	101	1.5122	0.3237	0.9	0.8	0.93	37	1.40	27.20	72.52	25.90	2.91	3.37	1	1	0	0	2.9	23.8	19.4
MH-176	MH-175	579.06	578.99	25.9	150	0.15	415	0.7462	0.0059	0.8	0.8	0.8	6.9	1.30	25.25	67.34	25.90	2.91	3.37	1	1	0	0	2.9	21.9	19.4
MH-173	MH-174	571.96	571.86	25.5	150	0.28	265	0.9341	0.0294	0.8	0.8	0.8	12.5	1.30	24.86	66.30	25.50	2.87	3.32	1	1	0	0	2.9	21.5	19.1
MH-155	MH-172	579.37	579.2	25.2	150	0.24	145	1.2617	0.0088	0.8	0.8	0.8	6.2	1.30	24.57	65.52	25.20	2.84	3.28	1	1	0	0	2.8	21.3	18.9
MH-92	MH-171	572.45	572.34	25.2	150	0.18	213	1.0418	0.005	0.8	0.8	0.8	5.3	1.30	24.57	65.52	25.20	2.84	3.28	1	1	0	0	2.8	21.3	18.9
MH-171	MH-170	572.34	572.22	25.1	150	0.19	216	1.0343	0.0066	0.8	0.8	0.8	5.9	1.30	24.47	65.26	25.10	2.82	3.27	1	1	0	0	2.8	21.2	18.8
MH-168	MH-169	554.76	554.59	24.8	150	0.36	148	1.2501	0.0345	0.8	0.81	0.8	11.9	1.30	24.18	64.48	24.80	2.79	3.23	1	1	0	0	2.8	21.0	18.6
MH-166	MH-126	571.75	571.72	24.6	150	0.06	750	0.555	0.0007	0.9	0.8	0.92	5.2	1.40	25.83	68.88	24.60	2.77	3.20	1	1	0	0	2.8	22.6	18.5
MH-165	MH-164	580.01	579.95	24.3	150	0.39	404	0.7559	0.1415	0.8	0.8	0.8	26.7	1.30	23.69	63.18	24.30	2.73	3.16	1	1	0	0	2.7	20.5	18.2
MH-90	MH-162	571.4	571.29	24.2	150	0.16	212	1.044	0.0033	0.8	0.8															



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-73	MH-143	554.23	554.2	22.4	150	0.21	750	0.555	0.0388	0.9	0.89	0.91	15.8	1.40	23.52	62.72	22.40	2.52	2.92	1	1	0	0	2.5	20.6	16.8
MH-142	MH-120	572.42	572.31	22.3	150	0.23	216	1.0346	0.0119	0.8	0.8	0.8	7.8	1.30	21.74	57.98	22.30	2.51	2.90	1	1	0	0	2.5	18.8	16.7
MH-141	MH-132	569.92	569.9	22.3	150	0.28	750	0.555	0.0994	1.8	1.83	1.76	29.9	2.30	45.16	102.58	22.30	2.51	2.90	1	1	0	0	2.5	42.3	16.7
MH-140	MH-96	580.28	580.13	22.1	150	0.53	155	1.222	0.1282	0.8	0.8	0.8	25.4	1.30	21.55	57.46	22.10	2.49	2.88	1	1	0	0	2.5	18.7	16.6
MH-138	MH-139	569.69	569.52	22	150	0.8	133	1.3185	0.4587	1.8	1.76	1.86	44.4	2.30	44.55	101.20	22.00	2.48	2.86	1	1	0	0	2.5	41.7	16.5
MH-136	MH-137	560.88	560.85	22	150	0.27	750	0.555	0.0906	1.1	1.13	1	30.6	1.60	26.40	70.40	22.00	2.48	2.86	1	1	0	0	2.5	23.5	16.5
MH-135	MH-134	580.95	580.79	21.9	150	0.53	142	1.2753	0.1194	0.8	0.8	0.8	22.2	1.30	21.35	56.94	21.90	2.46	2.85	1	1	0	0	2.5	18.5	16.4
MH-134	MH-133	580.79	580.64	21.6	150	0.53	145	1.2615	0.1221	0.8	0.8	0.8	22.5	1.30	21.06	56.16	21.60	2.43	2.81	1	1	0	0	2.4	18.2	16.2
MH-132	MH-25	569.9	569.87	21.5	150	0.28	750	0.555	0.101	1.7	1.76	1.71	37.8	2.20	41.93	94.60	21.50	2.42	2.80	1	1	0	0	2.4	39.1	16.1
MH-31	MH-15	562.84	562.69	21.4	150	0.41	144	1.2684	0.0518	0.8	0.8	0.8	14.6	1.30	20.87	55.64	21.40	2.41	2.79	1	1	0	0	2.4	18.1	16.1
MH-129	MH-126	571.85	571.72	20.9	150	0.2	162	1.1958	0.0051	0.9	0.86	0.92	6.1	1.40	21.95	58.52	20.90	2.35	2.72	1	1	0	0	2.4	19.2	15.7
MH-127	MH-128	578.67	578.53	20.9	150	0.19	157	1.2124	0.0046	0.8	0.8	0.8	5.9	1.30	20.38	54.34	20.90	2.35	2.72	1	1	0	0	2.4	17.7	15.7
MH-126	MH-125	571.72	571.69	20.6	150	0.13	750	0.555	0.0067	0.9	0.92	0.85	7.1	1.40	21.63	57.68	20.60	2.32	2.68	1	1	0	0	2.3	18.9	15.5
MH-122	MH-72	554.33	554.25	19.4	150	0.31	245	0.9702	0.037	0.8	0.8	0.8	15.3	1.30	18.92	50.44	19.40	2.18	2.53	1	1	0	0	2.2	16.4	14.6
MH-120	MH-121	572.31	572.22	19.1	150	0.25	205	1.0624	0.0144	0.8	0.8	0.8	8.4	1.30	18.62	49.66	19.10	2.15	2.49	1	1	0	0	2.1	16.1	14.3
MH-118	MH-119	579.72	579.65	19	150	0.34	282	0.9048	0.0588	0.8	0.8	0.8	19	1.30	18.53	49.40	19.00	2.14	2.47	1	1	0	0	2.1	16.1	14.3
MH-116	MH-45	560.47	560.44	18.7	150	0.34	750	0.555	0.2041	2.1	2.1	2.2	35.1	2.60	42.08	97.24	18.70	2.10	2.43	1	1	0	0	2.1	39.6	14.0
MH-114	MH-115	552.8	552.64	18.5	150	0.33	114	1.4265	0.0177	0.8	0.8	0.8	10.3	1.30	18.04	48.10	18.50	2.08	2.41	1	1	0	0	2.1	15.6	13.9
MH-113	MH-112	581.08	581.02	18.3	150	0.33	352	0.8105	0.069	0.8	0.8	0.8	19.8	1.30	17.84	47.58	18.30	2.06	2.38	1	1	0	0	2.1	15.5	13.7
MH-111	MH-110	571.5	571.41	18.3	150	0.22	201	1.0733	0.0097	0.8	0.8	0.8	6.7	1.30	17.84	47.58	18.30	2.06	2.38	1	1	0	0	2.1	15.5	13.7
MH-108	MH-109	572.48	572.46	17.8	150	0.35	750	0.555	0.2174	1.7	1.69	1.63	43.2	2.20	34.71	78.32	17.80	2.00	2.32	1	1	0	0	2.0	32.4	13.4
MH-107	MH-17	571.13	571.02	17.5	150	0.18	152	1.2349	0.0033	0.8	0.8	0.8	3.7	1.30	17.06	45.50	17.50	1.97	2.28	1	1	0	0	2.0	14.8	13.1
MH-106	MH-105	577.23	577.21	17.3	150	0.35	750	0.555	0.235	0.8	0.8	0.89	45.1	1.30	16.87	44.98	17.30	1.95	2.25	1	1	0	0	1.9	14.6	13.0
MH-104	MH-70	570.17	570.15	17.1	150	0.26	750	0.555	0.0796	1.1	1.09	1.18	25.4	1.60	20.52	54.72	17.10	1.92	2.23	1	1	0	0	1.9	18.3	12.8
MH-102	MH-103	563.39	563.22	16.9	150	0.53	100	1.52	0.077	0.8	0.85	0.8	16.4	1.30	16.48	43.94	16.90	1.90	2.20	1	1	0	0	1.9	14.3	12.7
MH-101	MH-93	572.6	572.53	16.8	150	0.14	238	0.9853	0.0025	0.8	0.8	0.8	3.9	1.30	16.38	43.68	16.80	1.89	2.19	1	1	0	0	1.9	14.2	12.6
MH-99	MH-100	571.91	571.89	16.3	150	0.07	750	0.555	0.0011	0.8	0.8	0.81	4.1	1.30	15.89	42.38	16.30	1.83	2.12	1	1	0	0	1.8	13.8	12.2
MH-96	MH-95	580.13	580.09	16.1	150	0.4	369	0.7911	0.1381	0.8	0.8	0.8	28.5	1.30	15.70	41.86	16.10	1.81	2.10	1	1	0	0	1.8	13.6	12.1
MH-94	MH-9	579.48	579.41	16	150	0.21	234	0.9945	0.0095	0.8	0.8	0.8	6.5	1.30	15.60	41.60	16.00	1.80	2.08	1	1	0	0	1.8	13.5	12.0
MH-93	MH-92	572.53	572.45	15.7	150	0.16	209	1.0507	0.0036	0.8	0.8	0.8	4.6	1.30	15.31	40.82	15.70	1.77	2.04	1	1	0	0	1.8	13.3	11.8
MH-91	MH-90	571.48	571.4	15.7	150	0.15	184	1.1201	0.0023	0.8	0.8	0.8	3.7	1.30	15.31	40.82	15.70	1.77	2.04	1	1	0	0	1.8	13.3	11.8
MH-85	MH-86	571.23	571.21	15.6	150	0.07	750	0.555	0.0008	0.8	0.8	0.87	3.3	1.30	15.21	40.56	15.60	1.76	2.03	1	1	0	0	1.8	13.2	11.7
MH-56	MH-59	570.38	570.25	14.4	150	0.8	109	1.4571	0.3533	1.4	1.38	1.46	38.6	1.90	20.52	54.72	14.40	1.62	1.87	1	1	0	0	1.6	18.6	10.8
MH-84	MH-66	572.4	572.33	13.9	150	0.24	206	1.0596	0.0129	0.8	0.8	0.8	7.4	1.30	13.55	36.14	13.90	1.56	1.81	1	1	0	0	1.6	11.7	10.4
MH-83	MH-55	570.56	570.44	13.7	150	0.8	107	1.469	0.3461	1.3	1.23	1.34	38.4	1.80	18.50	49.32	13.70	1.54	1.78	1	1	0	0	1.5	16.7	10.3
MH-81	MH-82	570.3	570.28	13.7	150	0.13	750	0.555	0.0084	1.2	1.16	1.24	7.1	1.70	17.47	46.58	13.70	1.54	1.78	1	1	0	0	1.5	15.7	10.3
MH-80	MH-79	571.15	571.09	13.1	150	0.18	245	0.9708	0.0057	0.8	0.8	0.8	5.6	1.30	12.77	34.06	13.10	1.47	1.71	1	1	0	0	1.5	11.1	9.8
MH-78	MH-77	579.81	579.8	12.7	150	0.17	750	0.555	0.0169	0.9	0.97	0.9	10.5	1.40	13.34	35.56	12.70	1.43	1.65	1	1	0	0	1.4	11.7	9.5
MH-75	MH-76	559.58	559.57	12.7	150	0.18	750	0.555	0.023	0.8	0.82	0.83	14.1	1.30	12.38	33.02	12.70	1.43	1.65	1	1	0	0	1.4	10.7	9.5
MH-74	MH-49	572.81	572.77	12.4	150	0.18	316	0.8551	0.0089	0.8	0.8	0.8	8.1	1.30	12.09	32.24	12.40	1.40	1.61	1	1	0	0	1.4	10.5	9.3
MH-72	MH-73	554.25	554.23	12.4	150	0.21	750	0.555	0.0378	0.8	0.8	0.89	17.6	1.30	12.09	32.24	12.40	1.40	1.61	1	1	0	0	1.4	10.5	9.3
MH-70	MH-71	570.15	570.13	12.3	150	0.26	750	0.555	0.081	1.2	1.18	1.25	25.6	1.70	15.68	41.82	12.30	1.38	1.60	1	1	0	0	1.4	14.1	9.2
MH-68	MH-69	553.74	553.64	11.9	150	0.2	126	1.3521	0.004	0.8	0.8	0.8	4.7	1.30	11.60	30.94	11.90	1.34	1.55	1	1	0	0	1.3	10.1	8.9
MH-52	MH-67	571.86	571.84	11.9	150	0.15	750	0.555	0.0111	1	0.99	0.95	37.4	1.50	13.39	35.70	11.90	1.34	1.55	1	1	0	0	1.3	11.8	8.9
MH-65	MH-66	572.18	572.17	11.6	150	0.35	750	0.555	0.2325	1	0.97	0.96	45.6	1.50	13.05	34.80	11.60	1.31	1.51	1	1	0	0	1.3	11.5	8.7
MH-63	MH-64	553.34	553.26	11.1	150	0.25	151	1.2382	0.01	0.8	0.8	0.8	6.8	1.30	10.82	28.86	11.10	1.25	1.44	1	1	0	0	1.2	9.4	8.3
MH-62	MH-61	572.72	572.67	11	150	0.18	228	1.0074	0.0052	0.8	0.81	0.8	5.3	1.30	10.73	28.60	11.00	1.24	1.43	1	1	0	0	1.2	9.3	8.3
MH-59	MH-60	570.25	570.16	9.6	150	0.8	109	1.456	0.3539	1.5	1.46	1.5	38.6	2.00	14.40	38.40	9.60	1.08	1.25	1	1	0	0	1.1	13.2	7.2
MH-57	MH-58	559.82	559.81	9.3	150	0.25	605	0.6181	0.0553	0.8	0.8	0.8	19.6	1.30	9.07	24.18	9.30	1.05	1.21	1	1	0	0	1.0	7.9	7.0
MH-55	MH-56	570.44	570.38	5.9	150	0.8	109	1.4575	0.3531	1.4	1.34	1.38	38.6	1.90	8.41	22.42	5									

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (ML/d)	Total Flow (ML/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-384	MH-1	553.28	552.9	82.6	175	0.8	214	1.7259	0.6967	6.2	6.1	6.31	44.3	6.73	579.18	1110.97	82.60	9.60	11.59	3	0	0	3	9.6	567.6	64.0
MH-297	MH-33	564.75	564.67	55.4	175	0.52	750	0.9208	0.8972	1.3	1.34	1.23	63.7	1.83	78.36	202.21	55.40	6.44	7.77	2	2	0	0	6.4	70.6	42.9
MH-316	MH-317	565.26	565.07	42.5	175	0.8	217	1.7137	0.7103	1.8	1.71	1.86	44.9	2.33	89.33	197.63	42.50	4.94	5.96	2	2	0	0	4.9	83.4	32.9
MH-43	MH-297	565.02	564.75	39.6	175	0.97	145	2.0956	0.8423	1.3	1.21	1.34	62.9	1.83	56.01	144.54	39.60	4.60	5.56	2	2	0	0	4.6	50.5	30.7
MH-35	MH-146	577.52	577.37	32.2	175	0.8	209	1.7461	0.6756	2.7	2.77	2.71	44.3	3.23	90.14	207.69	32.20	3.74	4.52	2	2	0	0	3.7	85.6	25.0
MH-146	MH-147	577.37	577.26	22.7	175	0.8	209	1.7448	0.6768	2.7	2.71	2.68	43.5	3.23	63.55	146.42	22.70	2.64	3.18	1	1	0	0	2.6	60.4	17.6
MH-183	MH-87	576.5	576.4	29.3	217	0.8	291	2.6236	1.1058	2.9	2.88	2.92	44.8	3.47	91.78	203.17	29.30	3.59	4.67	1	1	0	0	3.6	87.1	23.9
MH-33	MH-89	564.63	564.27	92.2	217	0.8	257	2.7904	0.9396	1.1	1.23	1.05	39.9	1.67	125.57	307.39	92.20	11.30	14.71	4	4	0	0	11.3	110.9	75.3
MH-37	MH-391	564.21	563.34	123.5	217	1.01	141	3.7736	0.9722	0.9	0.99	0.8	37.3	1.47	148.02	362.35	123.50	15.13	19.70	5	5	0	0	15.1	128.3	100.9
MH-45	MH-47	560.38	560.35	7.2	217	0.8	320	2.5034	1.2695	2.2	2.2	2.21	49.8	2.77	18.44	39.84	7.20	0.88	1.15	1	1	0	0	0.9	17.3	5.9
MH-117	MH-6	576.05	575.96	24.7	217	0.8	295	2.6068	1.1269	3.1	3.07	3.11	48	3.67	81.41	181.15	24.70	3.03	3.94	1	0	1	0	3.0	77.5	20.2
MH-531	MH-483	559.56	559.47	62.5	217	0.59	750	1.6342	1.4424	2	2.02	1.95	60.2	2.57	149.83	320.88	62.50	7.66	9.97	3	3	0	0	7.7	139.9	51.1
MH-404	MH-531	559.75	559.56	64.8	217	0.8	325	2.4818	1.3035	2	1.99	2.02	60.8	2.57	155.34	332.68	64.80	7.94	10.34	3	3	0	0	7.9	145.0	52.9
MH-477	MH-410	576.25	574.06	586.8	217	0.8	267	2.7392	0.9803	1.9	1.08	2.63	47.1	2.47	1358.76	2895.27	586.80	71.91	93.60	20	20	0	0	71.9	1265.2	479.4
MH-349	MH-410	575.06	574.06	239.1	217	0.95	238	2.9044	1.6264	2.9	3.13	2.63	53.2	3.47	748.99	1657.92	239.10	29.30	38.14	8	8	0	0	29.3	710.9	195.3
MH-542	MH-294	558.58	557.93	204.9	217	0.8	314	2.5246	1.2374	1.1	0.8	1.31	49.2	1.67	279.06	683.14	204.90	25.11	32.68	7	7	0	0	25.1	246.4	167.4
MH-496	MH-419	556.52	555.92	201.8	217	0.8	338	2.4361	1.3809	2	1.71	2.32	53.5	2.57	483.76	1036.04	201.80	24.73	32.19	7	7	0	0	24.7	451.6	164.9
MH-295	MH-480	557.81	557.25	181	217	0.8	323	2.4914	1.2881	1.4	1.43	1.35	50.8	1.97	290.87	712.05	181.00	22.18	28.87	7	7	0	0	22.2	262.0	147.9
MH-488	MH-238	561.13	560.56	160	217	0.8	282	2.6637	1.0605	2.9	3.46	2.36	42.8	3.47	501.21	1109.44	160.00	19.61	25.52	6	6	0	0	19.6	475.7	130.7
MH-147	MH-255	577.22	576.71	145.1	217	0.8	284	2.6576	1.0671	2.7	2.68	2.77	44	3.27	430.82	948.08	145.10	17.78	23.15	5	5	0	0	17.8	407.7	118.5
MH-481	MH-496	556.9	556.52	125.6	217	0.8	331	2.459	1.3417	1.7	1.65	1.71	52.6	2.27	270.31	569.47	125.60	15.39	20.04	5	5	0	0	15.4	250.3	102.6
MH-391	MH-488	561.56	561.13	120.5	217	0.8	279	2.6777	1.0459	3	2.58	3.46	43.1	3.57	387.32	859.65	120.50	14.77	19.22	5	0	5	0	14.8	368.1	98.4
MH-480	MH-481	557.25	556.9	115.4	217	0.8	328	2.4727	1.319	1.5	1.35	1.65	51.6	2.07	229.50	477.06	115.40	14.14	18.41	4	4	0	0	14.1	211.1	94.3
MH-310	MH-349	575.31	575.06	81.5	217	0.8	337	2.4399	1.3741	3.1	3.17	3.13	52.9	3.67	268.62	597.72	81.50	9.99	13.00	3	0	3	0	10.0	255.6	66.6
MH-390	MH-403	560.17	559.95	73.8	217	0.8	322	2.4947	1.2829	2.2	2.22	2.13	50.3	2.77	188.98	408.41	73.80	9.04	11.77	3	3	0	0	9.0	177.2	60.3
MH-419	MH-245	555.92	555.72	67.9	217	0.8	341	2.4245	1.4017	2.4	2.32	2.48	51.4	2.97	184.96	402.92	67.90	8.32	10.83	3	3	0	0	8.3	174.1	55.5
MH-403	MH-404	559.95	559.75	61.7	217	0.8	324	2.4885	1.2928	2.1	2.13	1.99	50.6	2.67	152.95	329.11	61.70	7.56	9.84	3	3	0	0	7.6	143.1	50.4
MH-6	MH-131	575.96	575.78	59.6	217	0.8	325	2.4844	1.2995	3.1	3.11	3.14	50.8	3.67	196.44	437.11	59.60	7.30	9.51	2	0	2	0	7.3	186.9	48.7
MH-47	MH-390	560.35	560.17	57.1	217	0.8	320	2.5018	1.2719	2.2	2.21	2.22	50	2.77	146.21	315.99	57.10	7.00	9.11	2	2	0	0	7.0	137.1	46.7
MH-350	MH-239	554.75	554.58	55.1	217	0.8	334	2.4501	1.3568	1.2	1.25	1.16	52.5	1.77	79.54	194.72	55.10	6.75	8.79	2	2	0	0	6.8	70.8	45.0
MH-351	MH-350	554.9	554.75	47.7	217	0.8	302	2.5737	1.1714	1	0.8	1.25	49.6	1.57	61.07	149.49	47.70	5.85	7.61	2	2	0	0	5.8	53.5	39.0
MH-196	MH-339	554.4	554.27	45.7	217	0.8	337	2.4372	1.3794	1.5	1.44	1.58	50.8	2.07	90.89	188.92	45.70	5.60	7.29	2	2	0	0	5.6	83.6	37.3
MH-226	MH-310	575.43	575.31	40.6	217	0.8	334	2.4494	1.3579	3.2	3.17	3.17	52.7	3.77	137.13	305.88	40.60	4.98	6.48	2	0	2	0	5.0	130.7	33.2
MH-294	MH-295	557.93	557.81	39.1	217	0.8	319	2.5043	1.2677	1.4	1.31	1.43	50	1.97	62.84	153.82	39.10	4.79	6.24	2	2	0	0	4.8	56.6	31.9
MH-255	MH-182	576.71	576.59	34.3	217	0.8	290	2.6262	1.1028	2.8	2.77	2.84	44.6	3.37	104.64	230.98	34.30	4.20	5.47	2	2	0	0	4.2	99.2	28.0
MH-130	MH-228	575.71	575.61	33	217	0.8	330	2.4639	1.3339	3.1	3.14	3.15	51.8	3.67	108.77	242.02	33.00	4.04	5.26	2	0	2	0	4.0	103.5	27.0
MH-239	MH-197	554.58	554.48	32.2	217	0.8	334	2.4482	1.3598	1.2	1.16	1.31	52.5	1.77	46.49	113.79	32.20	3.95	5.14	2	2	0	0	3.9	41.3	26.3
MH-238	MH-45	560.56	560.38	32.2	217	0.96	172	3.4145	1.065	2.3	2.36	2.2	46.1	2.87	85.08	184.63	32.20	3.95	5.14	2	2	0	0	3.9	79.9	26.3
MH-228	MH-225	575.61	575.52	30.8	217	0.8	331	2.4604	1.3397	3.2	3.15	3.16	52	3.77	104.03	232.05	30.80	3.77	4.91	2	0	2	0	3.8	99.1	25.2
MH-225	MH-226	575.52	575.43	30.7	217	0.8	332	2.4552	1.3482	3.2	3.16	3.17	52.3	3.77	103.69	231.29	30.70	3.76	4.90	2	0	2	0	3.8	98.8	25.1
MH-98	MH-163	576.22	576.13	27.8	217	0.8	293	2.6133	1.1185	3	3	3.04	45.1	3.57	89.36	198.33	27.80	3.41	4.43	1	0	1	0	3.4	84.9	22.7
MH-197	MH-196	554.48	554.4	27.7	217	0.8	334	2.4475	1.3614	1.4	1.31	1.44	52.8	1.97	44.51	108.97	27.70	3.39	4.42	1	1	0	0	3.4	40.1	22.6
MH-182	MH-183	576.59	576.5	26.1	217	0.8	291	2.625	1.1042	2.9	2.84	2.88	44.7	3.47	81.76	180.98	26.10	3.20	4.16	1	1	0	0	3.2	77.6	21.3
MH-163	MH-117	576.13	576.05	24.3	217	0.8	294	2.6107	1.1216	3.1	3.04	3.07	45.3	3.67	80.09	178.22	24.30	2.98	3.88	1	0	1	0	3.0	76.2	19.9
MH-131	MH-130	575.78	575.71	21.3	217	0.8	326	2.48	1.3066	3.1	3.14	3.14	51.3	3.67	70.20	156.21	21.30	2.61	3.40	1	0	1	0	2.6	66.8	17.4
MH-88	MH-97	576.35	576.28	20.1	217	0.8	293	2.616	1.1151	3	2.95	2.98	45	3.57	64.61	143.39	20.10	2.46	3.21	1	0	1	0	2.5	61.4	16.4
MH-97	MH-98	576.28	576.22	16.2	217	0.8	293	2.6148	1.1165	3	2.98	3	45.1	3.57	52.07	115.57	16.20	1.99	2.58	1	0	1	0	2.0	49.5	13.2
MH-89	MH-37	564.27	564.21	15.6	217	0.8	260	2.7776	0.9511	1	1.05	0.99	40.2	1.57	19.97	48.89	15.60	1.91	2.49	1	1	0	0	1.9	17.5	12.7
MH-87	MH-88	576.4	576.35	15.1	217	0.8	293	2.6169	1.1139	2.9	2.92	2.95	45	3.47	4											

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Manholes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-514	MH-462	569.3	568.5	150	271	1.22	187	5.9188	3.0814	0.8	0.8	0.8	52.9	1.42	185.65	426.30	150.00	19.60	28.25	5	5	0	0	19.6	157.4	130.7
MH-474	MH-449	554.77	554.45	145.5	271	0.8	454	3.7989	2.1552	2.3	2.26	2.31	53.5	2.92	413.83	850.01	145.50	19.01	27.40	5	5	0	0	19.0	386.4	126.7
MH-497	MH-498	572.52	571.73	126.1	271	1.27	161	6.3846	2.9105	0.8	0.8	0.8	53.9	1.42	156.07	358.38	126.10	16.47	23.74	5	5	0	0	16.5	132.3	109.8
MH-473	MH-474	555.01	554.77	109	271	0.8	448	3.8259	2.1088	2.4	2.62	2.26	52.7	3.02	319.51	658.58	109.00	14.24	20.52	4	4	0	0	14.2	299.0	94.9
MH-450	MH-3	554.24	554.07	80	271	0.8	461	3.7709	2.2063	2.3	2.47	2.12	50.3	2.92	227.54	467.36	80.00	10.45	15.06	3	3	0	0	10.5	212.5	69.7
MH-459	MH-460	557.89	557.69	99.7	271	0.8	490	3.6579	2.4428	2.8	2.81	2.69	59.4	3.42	326.99	682.15	99.70	13.03	18.77	4	4	0	0	13.0	308.2	86.8
MH-449	MH-450	554.45	554.24	92.4	271	0.8	458	3.7813	2.187	2.4	2.31	2.47	54	3.02	270.85	558.28	92.40	12.07	17.40	4	4	0	0	12.1	253.5	80.5
MH-437	MH-436	561.04	560.85	79.7	271	0.8	429	3.9101	1.9706	1.6	1.57	1.65	46.6	2.22	178.09	354.03	79.70	10.41	15.01	3	3	0	0	10.4	163.1	69.4
MH-410	MH-411	574	573.86	72.6	271	0.8	510	3.5842	2.6328	2.5	2.63	2.28	63.7	3.12	219.14	453.17	72.60	9.49	13.67	3	3	0	0	9.5	205.5	63.2
MH-545	MH-1	558.96	558.19	323.2	400	0.98	420	10.1421	5.7616	1.2	1.51	0.8	49.7	1.95	630.24	1260.48	323.20	48.48	89.07	11	11	0	0	48.5	541.2	323.2
MH-543	MH-535	552.37	551.94	320.7	400	0.8	750	7.5889	6.6114	4.8	5.92	3.78	71.1	5.55	2068.52	3559.77	320.70	48.11	88.38	11	0	0	11	48.1	1980.1	320.7
MH-518	MH-549	552.76	552.38	284.4	400	0.81	750	7.5889	7.1364	1.8	1.66	2.02	77	2.55	810.54	1450.44	284.40	42.66	78.38	10	10	0	0	42.7	732.2	284.4
MH-549	MH-547	552.38	552.05	247.2	400	0.81	750	7.5889	7.4475	2.3	2.02	2.48	65.6	3.05	828.12	1507.92	247.20	37.08	68.13	9	9	0	0	37.1	760.0	247.2
MH-483	MH-545	559.29	558.96	234.7	400	0.8	706	7.8223	5.6945	1.7	1.95	1.51	57.8	2.45	645.43	1150.03	234.70	35.21	64.68	8	8	0	0	35.2	580.7	234.7
MH-539	MH-317	567.38	565.9	226.2	400	1.24	153	16.8184	3.4237	0.8	0.8	0.8	32.7	1.55	350.61	701.22	226.20	33.93	62.34	8	8	0	0	33.9	288.3	226.2
MH-1	MH-543	552.67	552.37	225.4	400	0.8	750	7.5889	6.5029	6.1	6.31	5.92	70.5	6.85	1949.71	3087.98	225.40	33.81	62.12	8	0	0	8	33.8	1887.6	225.4
MH-511	MH-482	563.64	561.63	200.2	400	1.53	100	20.7858	4.2267	1	1.27	0.8	34.7	1.75	350.35	700.70	200.20	30.03	55.18	7	7	0	0	30.0	295.2	200.2
MH-463	MH-539	568.15	567.38	208	400	1	270	12.6497	3.336	0.9	0.99	0.8	34.9	1.65	343.20	686.40	208.00	31.20	57.32	7	7	0	0	31.2	285.9	208.0
MH-408	MH-492	551.71	551.07	188	400	1.2	296	12.0743	7.5818	1.7	2.59	0.8	54.9	2.45	517.00	921.20	188.00	28.20	51.81	7	7	0	0	28.2	465.2	188.0
MH-535	MH-408	551.94	551.71	177.6	400	0.8	750	7.5889	6.6476	3.2	3.78	2.59	63.9	3.95	754.80	1403.04	177.60	26.64	48.95	6	0	6	0	26.6	705.9	177.6
MH-500	MH-386	555.27	554.95	165.4	400	0.8	524	9.0792	3.5746	1.3	1.49	1.12	43.1	2.05	388.69	678.14	165.40	24.81	45.58	6	6	0	0	24.8	343.1	165.4
MH-254	MH-479	549.21	548.93	156.8	400	0.8	576	8.6642	4.0864	6.4	6.56	6.32	47.8	7.15	1403.36	2242.24	156.80	23.52	43.21	6	0	0	6	23.5	1360.1	156.8
MH-433	MH-518	552.97	552.76	155.9	400	0.81	750	7.5889	7.0352	1.8	1.89	1.66	75.1	2.55	444.32	795.09	155.90	23.39	42.97	6	6	0	0	23.4	401.3	155.9
MH-205	MH-489	556.05	555.75	150.9	400	0.8	510	9.2056	3.4423	1.7	1.7	1.7	42	2.45	414.98	739.41	150.90	22.64	41.59	6	6	0	0	22.6	373.4	150.9
MH-317	MH-511	564.84	563.64	144	400	1.43	119	19.0252	4.185	1.6	1.86	1.27	39.1	2.35	381.60	676.80	144.00	21.60	39.69	5	5	0	0	21.6	341.9	144.0
MH-490	MH-500	555.51	555.27	127	400	0.8	518	9.1303	3.5223	1.6	1.66	1.49	42.8	2.35	336.55	596.90	127.00	19.05	35.00	5	5	0	0	19.1	301.5	127.0
MH-489	MH-490	555.75	555.51	121.2	400	0.8	514	9.1638	3.4857	1.7	1.7	1.66	42.4	2.45	333.30	593.88	121.20	18.18	33.40	5	5	0	0	18.2	299.9	121.2
MH-482	MH-483	561.6	560.44	116.3	400	1.53	100	20.7858	4.2477	0.8	0.83	0.8	34.8	1.55	180.27	360.53	116.30	17.45	32.05	4	4	0	0	17.4	148.2	116.3
MH-260	MH-347	556.42	556.19	114	400	0.8	502	9.2765	3.3804	1.6	1.65	1.6	41.4	2.35	302.10	535.80	114.00	17.10	31.42	4	4	0	0	17.1	270.7	114.0
MH-479	MH-210	548.93	548.74	113.1	400	0.8	579	8.6406	4.1185	6.2	6.32	6.09	51.6	6.95	989.63	1572.09	113.10	16.97	31.17	4	0	0	4	17.0	958.5	113.1
MH-431	MH-278	553.66	553.43	107.5	400	0.8	461	9.6766	3.0077	1.2	0.94	1.4	37.9	1.95	209.63	419.25	107.50	16.13	29.63	4	4	0	0	16.1	180.0	107.5
MH-462	MH-463	568.37	568.15	100.3	400	0.8	471	9.5748	3.1013	0.9	0.8	0.99	36.7	1.65	165.50	330.99	100.30	15.05	27.64	4	4	0	0	15.0	137.9	100.3
MH-277	MH-339	553.35	553.14	99.3	400	0.8	465	9.6396	3.0492	2.1	1.73	2.52	55.7	2.85	312.80	566.01	99.30	14.90	27.37	4	4	0	0	14.9	285.4	99.3
MH-441	MH-422	556.8	556.63	85.3	400	0.8	495	9.3389	3.3146	0.9	0.8	0.97	40.8	1.65	140.75	281.49	85.30	12.80	23.51	3	3	0	0	12.8	117.2	85.3
MH-372	MH-433	553.07	552.97	75.7	400	0.81	750	7.5889	7.0064	2	2.18	1.89	74.6	2.75	230.89	416.35	75.70	11.36	20.86	3	3	0	0	11.4	210.0	75.7
MH-432	MH-431	553.8	553.66	75.6	400	0.8	553	9.7232	2.9725	0.9	0.8	0.94	37.6	1.65	124.74	249.48	75.60	11.34	20.84	3	3	0	0	11.3	103.9	75.6
MH-422	MH-259	556.63	556.49	68.7	400	0.8	498	9.3115	3.3429	1.3	0.97	1.57	41	2.05	161.45	281.67	68.70	10.31	18.93	3	3	0	0	10.3	142.5	68.7
MH-386	MH-253	554.95	554.85	56.1	400	0.8	525	9.0716	3.5977	1.1	1.12	1.07	43.3	1.85	103.79	207.57	56.10	8.42	15.46	2	2	0	0	8.4	88.3	56.1
MH-339	MH-372	553.14	553.07	52.8	400	0.81	750	7.5889	6.743	2.4	2.52	2.18	73.8	3.15	182.16	332.64	52.80	7.92	14.55	2	2	0	0	7.9	167.6	52.8
MH-347	MH-204	556.19	556.1	46.7	400	0.8	505	9.2517	3.4061	1.7	1.6	1.73	41.6	2.45	128.43	228.83	46.70	7.01	12.87	2	2	0	0	7.0	115.6	46.7
MH-278	MH-277	553.43	553.35	36.6	400	0.8	465	9.6375	3.0369	1.6	1.4	1.73	38.1	2.35	96.99	172.02	36.60	5.49	10.09	2	2	0	0	5.5	86.9	36.6
MH-259	MH-260	556.49	556.42	34.5	400	0.8	500	9.2959	3.3595	1.6	1.57	1.65	41.2	2.35	91.43	162.15	34.50	5.18	9.51	2	2	0	0	5.2	81.9	34.5
MH-253	MH-254	554.85	554.78	34.1	400	0.8	528	9.0479	3.6215	1	1.07	0.99	39.8	1.75	59.68	119.35	34.10	5.12	9.40	2	2	0	0	5.1	50.3	34.1
MH-210	MH-211	548.74	548.69	28.7	400	0.8	580	8.6333	4.1275	6.1	6.09	6.09	58.9	6.85	248.26	393.19	28.70	4.31	7.91	1	0	0	1	4.3	240.3	28.7
MH-204	MH-205	556.1	556.05	28.2	400	0.8	508	9.2246	3.4202	1.7	1.73	1.7	41.7	2.45	77.55	138.18	28.20	4.23	7.77	1	1	0	0	4.2	69.8	28.2
MH-211	MH-475	548.59	548.43	115.2	500	0.93	750	13.7597	11.8028	6.3	6.09	6.55	70	7.15	1113.41	1647.36	115.20	19.01	41.62	4	0	0	4	19.0	1071.8	126.7
MH-298	MH-3	548.14	548.11	27.4	500	0.93	750	13.7597	11.8477	7.9	7.86	7.86	56.8	8.75	313.05	479.50	27.40	4.52	9.90	1	0	0	1	4.5	303.1	30.1
MH-547	MH-503	551.95	551.63	238.2	500	0.85	750	13.7597	7.6159	2.7	2.48	2.87	52.5	3.55	1001.63	1691.22	23									

# ZONE - 6



**Zone - 6**

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (ML/d)	Total Flow (ML/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-879	MH-732	579.75	579.66	83.2	700	0.98	1000	23.3772	21.252	5	4.78	5.31	62.5	6.05	804.13	1006.72	83.20	16.22	48.23	3	0	0	3	16.2	755.9	108.2
MH-900	MH-899	581	580.91	88	600	0.91	1000	18.7561	17.051	5	4.81	5.23	72.2	5.95	707.52	1047.20	88.00	15.84	40.71	3	0	0	3	15.8	666.8	105.6
MH-732	MH-507	579.66	579.61	58	700	0.98	1000	23.5521	21.411	4.9	5.31	4.43	62.6	5.95	500.83	690.20	58.00	11.31	33.62	2	0	0	2	11.3	467.2	75.4
MH-899	MH-977	580.91	580.76	152.4	600	0.91	1000	18.766	17.06	4.8	5.23	4.31	73.4	5.75	1188.72	1752.60	152.40	27.43	70.50	6	0	0	6	27.4	1118.2	182.9
MH-231	MH-879	579.76	579.75	16.6	700	0.98	1000	23.2969	21.179	4.7	4.65	4.78	62.4	5.75	139.03	190.90	16.60	3.24	9.62	1	0	0	1	3.2	129.4	21.6
MH-727	MH-968	576.1	576.05	50.8	700	1.02	1000	29.7968	27.088	4.5	4.78	4.32	73	5.55	412.24	563.88	50.80	9.91	29.45	2	0	0	2	9.9	382.8	66.0
MH-736	MH-900	581.57	581.42	55.9	175	0.6	387.79	0.5918	0.538	4.5	4.27	4.81	42	5.03	268.01	561.80	55.90	6.50	7.84	2	0	0	2	6.5	260.2	43.3
MH-72	MH-727	576.5	576.4	97.8	400	0.64	1000	4.3186	3.926	4.4	4.07	4.78	53.9	5.15	591.69	1007.34	97.80	14.67	26.95	4	0	0	4	14.7	564.7	97.8
MH-178	MH-231	580.24	580.19	46.1	271	0.56	1000	1.958	1.78	4.4	4.06	4.65	49.8	5.02	243.10	462.94	46.10	6.02	8.68	2	0	0	2	6.0	234.4	40.2
MH-964	MH-231	580.25	579.86	94	600	1.62	245.29	21.2377	19.307	4.2	3.67	4.65	53.6	5.15	665.52	968.20	94.00	16.92	43.48	4	0	0	4	16.9	622.0	112.8
MH-968	MH-955	576.05	575.92	132	700	1.02	1000	29.9101	27.191	4.1	4.32	3.94	71.2	5.15	1002.54	1359.60	132.00	25.74	76.51	5	0	0	5	25.7	926.0	171.6
MH-507	MH-508	579.61	579.56	42.3	700	0.98	1000	23.6302	21.482	4.1	4.43	3.83	62.6	5.15	321.27	435.69	42.30	8.25	24.52	2	0	0	2	8.2	296.7	55.0
MH-744	MH-736	581.75	581.59	45.7	150	0.6	288.03	0.5027	0.457	4	3.8	4.27	47	4.50	195.37	411.30	45.70	5.14	5.95	2	0	2	0	5.1	189.4	34.3
MH-977	MH-397	580.76	580.65	110.9	600	0.91	1000	18.8221	17.111	4	4.31	3.64	75.6	4.95	758.56	1097.91	110.90	19.96	51.30	4	0	4	0	20.0	707.3	133.1
MH-433	MH-72	576.54	576.5	38.6	400	0.64	1000	4.1976	3.816	3.9	3.81	4.07	54.5	4.65	214.23	358.98	38.60	5.79	10.64	2	0	2	0	5.8	203.6	38.6
MH-179	MH-178	580.26	580.24	25.1	271	0.56	1000	1.9239	1.749	3.9	3.75	4.06	58.6	4.52	121.43	226.95	25.10	3.28	4.73	1	0	1	0	3.3	116.7	21.9
MH-955	MH-956	575.92	575.81	103.9	700	1.02	1000	30.4623	27.693	3.7	3.94	3.52	61	4.75	735.09	987.05	103.90	20.26	60.23	4	0	4	0	20.3	674.9	135.1
MH-594	MH-128	571	570.99	11.1	150	0.11	1000	0.0055	0.005	3.7	3.7	3.75	18.2	4.20	44.96	93.24	11.10	1.25	1.44	1	0	1	0	1.2	43.5	8.3
MH-675	MH-947	571.08	571.05	33.2	271	0.6	994.64	2.772	2.52	3.7	3.7	3.68	59.7	4.32	154.83	286.91	33.20	4.34	6.25	2	0	2	0	4.3	148.6	28.9
MH-578	MH-675	571.13	571.08	53.3	271	0.6	993.95	2.7665	2.515	3.7	3.64	3.7	72.2	4.32	248.57	460.62	53.30	6.96	10.04	2	0	2	0	7.0	238.5	46.4
MH-67	MH-433	576.58	576.54	42.9	400	0.64	1000	4.1866	3.806	3.7	3.52	3.81	54.2	4.45	229.52	381.81	42.90	6.44	11.82	2	0	2	0	6.4	217.7	42.9
MH-577	MH-578	571.19	571.13	53.3	271	0.6	994.12	2.7577	2.507	3.6	3.64	3.64	75.6	4.22	243.93	449.96	53.30	6.96	10.04	2	0	2	0	7.0	233.9	46.4
MH-397	MH-398	580.65	580.61	37.3	600	0.92	1000	20.6998	18.818	3.6	3.64	3.63	76.9	4.55	237.23	339.43	37.30	6.71	17.25	2	0	2	0	6.7	220.0	44.8
MH-48	MH-577	571.22	571.19	28.8	271	0.6	993.28	2.7434	2.494	3.6	3.62	3.64	76.7	4.22	131.80	243.13	28.80	3.76	5.42	1	0	1	0	3.8	126.4	25.1
MH-398	MH-429	580.61	580.6	6.5	600	0.92	1000	20.7141	18.831	3.6	3.63	3.63	76.8	4.55	41.34	59.15	6.50	1.17	3.01	1	0	1	0	1.2	38.3	7.8
MH-429	MH-716	580.6	580.55	49.4	600	0.92	1000	20.7295	18.845	3.6	3.63	3.62	76.6	4.55	314.18	449.54	49.40	8.89	22.85	2	0	2	0	8.9	291.3	59.3
MH-929	MH-964	580.26	580.25	12.4	600	0.92	1000	21.1057	19.187	3.6	3.57	3.67	56.1	4.55	78.86	112.84	12.40	2.23	5.74	1	0	1	0	2.2	73.1	14.9
MH-19	MH-179	580.29	580.26	31.1	271	0.56	1000	1.9063	1.733	3.5	3.35	3.75	59.1	4.12	139.62	256.33	31.10	4.06	5.86	2	0	2	0	4.1	133.8	27.1
MH-384	MH-48	571.26	571.22	44.8	271	0.6	990.99	2.7115	2.465	3.5	3.47	3.62	76.9	4.12	201.12	369.24	44.80	5.85	8.44	2	0	2	0	5.9	192.7	39.0
MH-741	MH-744	581.93	581.75	46.8	150	0.6	264.36	0.4433	0.403	3.5	3.29	3.8	47.6	4.00	154.44	374.40	46.80	5.27	6.09	2	0	2	0	5.3	148.3	35.1
MH-966	MH-929	580.31	580.26	50.6	600	0.92	1000	21.0782	19.162	3.5	3.49	3.57	65.2	4.45	315.74	450.34	50.60	9.11	23.41	2	0	2	0	9.1	292.3	60.7
MH-928	MH-966	580.35	580.31	44.5	600	0.92	1000	20.8604	18.964	3.5	3.43	3.49	70.6	4.45	277.68	396.05	44.50	8.01	20.59	2	0	2	0	8.0	257.1	53.4
MH-1011	MH-384	571.29	571.26	30.6	271	0.6	980.69	2.5982	2.362	3.5	3.44	3.47	76.3	4.12	137.38	252.21	30.60	4.00	5.76	2	0	2	0	4.0	131.6	26.7
MH-537	MH-1011	571.3	571.29	10.7	271	0.6	974.87	2.5564	2.324	3.4	3.42	3.44	75.6	4.02	47.10	86.05	10.70	1.40	2.01	1	0	1	0	1.4	45.1	9.3
MH-994	MH-537	571.33	571.3	23.9	271	0.6	970.7	2.5212	2.292	3.4	3.4	3.42	74.8	4.02	105.21	192.20	23.90	3.12	4.50	1	0	1	0	3.1	100.7	20.8
MH-128	MH-129	570.99	570.96	24.4	150	0.21	1000	0.0572	0.052	3.4	3.75	3.04	22.6	3.90	78.69	190.32	24.40	2.75	3.18	1	0	1	0	2.7	75.5	18.3
MH-412	MH-994	571.36	571.33	27	271	0.6	926.81	2.266	2.06	3.4	3.37	3.4	72.6	4.02	118.86	217.13	27.00	3.53	5.08	1	0	1	0	3.5	113.8	23.5
MH-947	MH-39	571.05	570.81	31.2	271	1.31	133.62	2.783	2.53	3.4	3.68	3.06	45.4	4.02	137.35	250.91	31.20	4.08	5.87	2	0	2	0	4.1	131.5	27.2
MH-981	MH-412	571.37	571.36	7.4	271	0.6	919.47	2.2308	2.028	3.4	3.36	3.37	70.6	4.02	32.58	59.51	7.40	0.97	1.39	1	0	1	0	1.0	31.2	6.4
MH-136	MH-981	571.4	571.37	30.2	271	0.6	914.25	2.2066	2.006	3.3	3.33	3.36	68.7	3.92	112.20	236.83	30.20	3.95	5.69	2	0	2	0	3.9	106.5	26.3
MH-269	MH-67	576.62	576.58	42.8	400	0.64	1000	3.1834	2.894	3.3	3.15	3.52	51.3	4.05	211.86	346.68	42.80	6.42	11.80	2	0	2	0	6.4	200.1	42.8
MH-716	MH-933	580.55	580.45	102.2	600	0.92	1000	20.7548	18.868	3.3	3.62	2.99	75.7	4.25	613.20	868.70	102.20	18.40	47.28	4	0	4	0	18.4	565.9	122.6
MH-480	MH-136	571.45	571.4	41.1	271	0.6	756.77	1.6093	1.463	3.3	3.28	3.33	61.5	3.92	152.69	322.31	41.10	5.37	7.74	2	0	2	0	5.4	145.0	35.8
MH-508	MH-811	579.56	579.48	81.2	700	0.98	1000	23.7523	21.593	3.3	3.83	2.76	62.3	4.35	532.27	706.44	81.20	15.83	47.07	3	0	3	0	15.8	485.2	105.6
MH-224	MH-269	576.92	576.85	29.7	175	0.6	389.02	0.5951	0.541	3.3	3.41	3.15	42.1	3.83	96.95	227.21	29.70	3.45	4.17	1	0	1	0	3.5	92.8	23.0
MH-20	MH-19	580.31	580.29	13.6	271	0.56	1000	1.8997	1.727	3.3	3.18	3.35	59.2	3.92	50.53	106.65	13.60	1.78	2.56	1	0	1	0	1.8	48.0	11.8
MH-332	MH-480	571.51	571.45	44.8	271	0.6	754.56	1.6027	1.457	3.2	3.22	3.28	52.8	3.82	162.54	342.36	44.80	5.85	8.44	2	0	2	0	5.9	154.1	39.0
MH-763	MH-900	582.4	582.27	131.9	600	0.9	1000	16.8564	15.324	3.2	2.9	3.54	54.5	4.15	775.57	1094.77	131.90	23.74	61.02	5	0					

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-784	MH-785	574.43	574.36	63.7	800	1.12	1000	45.067	40.97	2.9	2.8	3.01	63.5	4.05	418.51	515.97	63.70	13.38	45.38	3	0	3	0	13.4	373.1	89.2
MH-922	MH-994	572.49	571.45	122.1	150	0.69	116.75	0.2497	0.227	2.9	2.36	3.4	42.1	3.40	347.99	830.28	122.10	13.74	15.89	5	5	0	0	13.7	332.1	91.6
MH-791	MH-792	601.76	601.36	63.6	150	0.6	160.11	0.2288	0.208	2.9	2.94	2.81	33.8	3.40	181.26	432.48	63.60	7.16	8.28	3	3	0	0	7.2	173.0	47.7
MH-1019	MH-1057	574.12	573.91	209.8	900	1.16	1000	46.7753	42.523	2.9	3.42	2.31	62.9	4.15	1494.83	1741.34	209.80	47.21	180.61	7	0	7	0	47.2	1314.2	314.7
MH-764	MH-763	582.46	582.4	53.4	600	0.89	1000	16.4813	14.983	2.9	2.81	2.9	64.1	3.85	262.73	411.18	53.40	9.61	24.70	2	0	2	0	9.6	238.0	64.1
MH-1084	OF-2	567.92	567.9	16.5	1000	1.25	1000	64.3654	58.514	2.8	3.08	2.6	50.5	4.15	124.41	136.95	16.50	3.96	16.91	1	0	1	0	4.0	107.5	26.4
MH-866	MH-224	577.63	576.95	80	150	0.6	116.42	0.1551	0.141	2.8	2.24	3.41	29.8	3.30	222.00	528.00	80.00	9.00	10.41	3	3	0	0	9.0	211.6	60.0
MH-7	MH-918	585.83	585.68	94.7	217	0.6	648.39	1.2958	1.178	2.8	2.21	3.4	51.9	3.37	288.91	637.71	94.70	11.61	15.11	4	4	0	0	11.6	273.8	77.4
MH-629	MH-824	600.86	600.67	124.2	217	0.6	666.31	1.3596	1.236	2.8	3.05	2.51	62.8	3.37	378.91	836.36	124.20	15.22	19.81	5	5	0	0	15.2	359.1	101.5
MH-712	MH-187	580.51	580.45	32	217	0.6	579.5	1.0791	0.981	2.8	2.57	2.99	52.1	3.37	97.63	215.49	32.00	3.92	5.10	2	2	0	0	3.9	92.5	26.1
MH-69	MH-237	570.58	570.54	43.2	400	0.62	1000	2.8688	2.608	2.8	3	2.56	41.2	3.55	166.32	306.72	43.20	6.48	11.91	2	0	2	0	6.5	154.4	43.2
MH-164	MH-331	572.22	571.94	29.7	150	0.6	105.15	0.1353	0.123	2.8	2.63	2.91	22.8	3.30	82.42	196.02	29.70	3.34	3.87	1	1	0	0	3.3	78.6	22.3
MH-603	MH-604	572.05	571.98	48.6	217	0.6	639.17	1.2639	1.149	2.7	2.71	2.75	58.2	3.27	144.30	317.55	48.60	5.96	7.75	2	2	0	0	6.0	136.5	39.7
MH-844	MH-784	574.5	574.43	71.1	800	1.12	1000	45.0362	40.942	2.7	2.61	2.8	70.4	3.85	404.56	547.47	71.10	14.93	50.65	3	0	3	0	14.9	353.9	99.5
MH-43	MH-20	580.93	580.89	15.2	175	0.6	450.79	0.7414	0.674	2.7	2.71	2.69	48.7	3.23	42.55	98.04	15.20	1.77	2.13	1	1	0	0	1.8	40.4	11.8
MH-956	MH-930	575.81	572.46	512.5	700	2.16	152.66	32.6755	29.705	2.7	3.52	1.84	59.8	3.75	2652.19	3843.75	512.50	99.94	297.07	18	0	18	0	99.9	2355.1	666.3
MH-780	MH-976	575.78	575.53	128.3	217	0.6	517.49	0.913	0.83	2.6	2.91	2.24	45.4	3.17	370.46	812.65	128.30	15.72	20.47	5	5	0	0	15.7	350.0	104.8
MH-55	MH-164	572.46	572.22	24.3	150	0.6	103.04	0.1331	0.121	2.5	2.39	2.63	22.4	3.00	61.97	145.80	24.30	2.73	3.16	1	1	0	0	2.7	58.8	18.2
MH-993	MH-697	603.74	603.57	103.6	217	0.6	639.97	1.2672	1.152	2.5	2.16	2.86	51.2	3.07	290.67	635.48	103.60	12.70	16.53	4	4	0	0	12.7	274.1	84.6
MH-481	MH-712	580.53	580.51	11.4	217	0.6	504.26	0.8811	0.801	2.5	2.42	2.57	48.7	3.07	31.99	69.93	11.40	1.40	1.82	1	1	0	0	1.4	30.2	9.3
MH-288	MH-780	575.92	575.85	66.4	150	0.19	1000	0.0429	0.039	2.5	2.06	2.91	19.5	3.00	169.32	398.40	66.40	7.47	8.64	3	3	0	0	7.5	160.7	49.8
MH-811	MH-967	579.48	579.44	42.8	700	0.99	1000	25.2582	22.962	2.5	2.76	2.19	61	3.55	210.36	303.88	42.80	8.35	24.81	2	0	2	0	8.3	185.6	55.6
MH-1075	MH-1084	569.19	568.02	1173.9	900	1.21	1000	62.6703	56.973	2.5	1.86	3.08	66.3	3.75	6955.36	8804.25	1173.90	264.13	1010.55	40	0	40	0	264.1	5944.8	1760.9
MH-237	MH-238	570.54	570.51	28	400	0.62	1000	2.871	2.61	2.4	2.56	2.34	41.4	3.15	96.60	176.40	28.00	4.20	7.72	1	1	0	0	4.2	88.9	28.0
MH-7	MH-410	600.06	599.9	46.6	150	0.6	287.24	0.5005	0.455	2.4	2.39	2.46	46.9	2.90	115.34	270.28	46.60	5.24	6.07	2	2	0	0	5.2	109.3	35.0
MH-826	MH-844	574.62	574.5	122.4	800	1.12	1000	44.9207	40.837	2.4	2.24	2.61	73.7	3.55	645.05	869.04	122.40	25.70	87.20	5	0	5	0	25.7	557.9	171.4
MH-697	MH-698	603.57	603.28	54.7	217	0.96	183.5	1.2892	1.172	2.4	2.86	1.99	45.1	2.97	149.00	324.59	54.70	6.70	8.73	2	2	0	0	6.7	140.3	44.7
MH-223	MH-224	578.16	578.06	27.2	150	0.6	256.64	0.4246	0.386	2.4	2.49	2.3	42.1	2.90	67.32	157.76	27.20	3.06	3.54	1	1	0	0	3.1	63.8	20.4
MH-198	MH-603	572.78	572.12	66.2	150	0.6	100.16	0.1287	0.117	2.4	2.07	2.71	30.4	2.90	163.85	383.96	66.20	7.45	8.62	3	3	0	0	7.4	155.2	49.7
MH-742	MH-7	600.11	600.06	12.5	150	0.6	271.52	0.462	0.42	2.4	2.37	2.39	48.2	2.90	30.94	72.50	12.50	1.41	1.63	1	1	0	0	1.4	29.3	9.4
MH-604	MH-938	571.98	571.77	135.5	217	0.6	645	1.2837	1.167	2.4	2.75	2.02	51.5	2.97	369.11	804.06	135.50	16.61	21.61	5	5	0	0	16.6	347.5	110.7
MH-682	MH-481	580.6	580.57	13.7	175	0.6	496.91	0.8734	0.794	2.3	2.24	2.42	53.9	2.83	34.10	77.41	13.70	1.59	1.92	1	1	0	0	1.6	32.2	10.6
MH-1060	MH-804	597.96	596.34	162.5	150	1.06	100	1.0076	0.916	2.3	3.83	0.8	59.3	2.80	390.00	910.00	162.50	18.28	21.15	6	6	0	0	18.3	368.8	121.9
MH-54	MH-55	572.62	572.46	16.1	150	0.6	100.62	0.132	0.12	2.3	2.23	2.39	22.2	2.80	38.64	90.16	16.10	1.81	2.10	1	1	0	0	1.8	36.5	12.1
MH-410	MH-411	599.87	599.79	37.7	175	0.6	431.67	0.6941	0.631	2.3	2.46	2.12	50.4	2.83	93.85	213.01	37.70	4.38	5.29	2	2	0	0	4.4	88.6	29.2
MH-238	MH-301	570.51	570.48	31.7	400	0.62	1000	2.8743	2.613	2.3	2.34	2.22	42	3.05	106.20	193.37	31.70	4.76	8.74	2	2	0	0	4.8	97.5	31.7
MH-944	MH-945	603.37	603	102	150	0.6	280.71	0.484	0.44	2.3	2.41	2.14	63.8	2.80	244.80	571.20	102.00	11.48	13.28	4	4	0	0	11.5	231.5	76.5
MH-86	MH-741	583.03	582.63	60.4	150	0.6	154.27	0.2211	0.201	2.3	1.95	2.58	28	2.80	144.96	338.24	60.40	6.80	7.86	3	3	0	0	6.8	137.1	45.3
MH-200	MH-199	573.3	573.28	26.1	150	0.22	1000	0.0704	0.064	2.3	2.11	2.41	27.1	2.80	62.64	146.16	26.10	2.94	3.40	1	1	0	0	2.9	59.2	19.6
MH-824	MH-846	600.67	600.6	52.2	217	0.6	685.27	1.4366	1.306	2.3	2.51	2	56.3	2.87	137.93	299.31	52.20	6.40	8.33	2	2	0	0	6.4	129.6	42.6
MH-593	MH-594	571.05	571	51	150	0.09	1000	0.0033	0.003	2.3	0.8	3.7	10.2	2.80	122.40	285.60	51.00	5.74	6.64	2	2	0	0	5.7	115.8	38.3
MH-723	MH-980	585.16	585.04	112.7	600	0.88	1000	15.5485	14.135	2.2	2.6	1.89	52.3	3.15	459.82	710.01	112.70	20.29	52.14	4	4	0	0	20.3	407.7	135.2
MH-494	MH-1012	591.47	591.33	139.9	500	0.74	1000	7.4371	6.761	2.2	2.3	2.15	51.9	3.05	511.33	853.39	139.90	23.08	50.54	5	5	0	0	23.1	460.8	153.9
MH-301	MH-315	570.48	570.44	40.9	400	0.62	1000	2.8809	2.619	2.2	2.22	2.21	43.7	2.95	132.93	241.31	40.90	6.14	11.27	2	2	0	0	6.1	121.7	40.9
MH-360	MH-359	585.5	585.32	35.4	150	0.6	193.32	0.2915	0.265	2.2	2.47	1.95	34.3	2.70	82.31	191.16	35.40	3.98	4.61	2	2	0	0	4.0	77.7	26.6
MH-1074	MH-852	608.39	605.73	266.1	150	0.9	100	0.5335	0.485	2.2	3.6	0.8	41.9	2.70	618.68	1436.94	266.10	29.94	34.64	9	9	0	0	29.9	584.0	199.6
MH-153	MH-7	586.18	585.89	53.3	150	0.7	183.15	0.4818	0.438	2.2	2.17	2.21	43	2.70	123.92	287.82	53.30	6.00	6.94	2	2	0	0	6.0	117.0	40.0
MH-6	MH-153	586.39	586.18	48.7	150	0.6	236.06	0.3784	0.344	2.2	2.16	2.17	41.6	2.70	113.23	262.98	48.70	5.48	6.34	2	2	0	0	5.5		

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-302	MH-269	577.75	577.72	31.4	271	0.6	965.07	2.4838	2.258	2	1.83	2.18	55.8	2.62	81.10	164.60	31.40	4.10	5.91	2	2	0	0	4.1	75.2	27.3
MH-280	MH-1040	577.53	577.03	237.7	175	0.6	476.55	0.8129	0.739	2	1.99	1.98	58.2	2.53	536.46	1200.39	237.70	27.63	33.35	8	8	0	0	27.6	503.1	184.2
MH-32	MH-33	593.43	593.37	63.3	271	0.6	994.23	2.7599	2.509	2	2	1.96	75.2	2.62	163.50	331.82	63.30	8.27	11.92	3	3	0	0	8.3	151.6	55.1
MH-482	MH-659	580.64	580.62	8.4	175	0.6	480.54	0.8239	0.749	2	1.88	2.07	59	2.53	18.96	42.42	8.40	0.98	1.18	1	1	0	0	1.0	17.8	6.5
MH-427	MH-379	572.9	572.86	38.5	150	0.22	1000	0.0693	0.063	2	1.95	1.99	24.5	2.50	83.74	192.50	38.50	4.33	5.01	2	2	0	0	4.3	78.7	28.9
MH-45	MH-155	587.57	587.55	23.2	500	0.81	1000	11.6754	10.614	2	2.07	1.86	72	2.85	79.69	132.24	23.20	3.83	8.38	1	1	0	0	3.8	71.3	25.5
MH-935	MH-981	572.95	572.84	112.4	150	0.16	1000	0.022	0.02	2	1.9	2.01	11.3	2.50	244.47	562.00	112.40	12.65	14.63	4	4	0	0	12.6	229.8	84.3
MH-33	MH-998	593.37	593.3	72.4	271	0.6	994.23	2.7599	2.509	1.9	1.96	1.93	61.8	2.52	180.70	365.04	72.40	9.46	13.63	3	3	0	0	9.5	167.1	63.1
MH-423	MH-791	603.88	601.76	220.2	150	0.6	103.83	0.1364	0.124	1.9	0.94	2.94	26	2.40	462.42	1056.96	220.20	24.77	28.66	8	8	0	0	24.8	433.8	165.2
MH-799	MH-865	575.06	575	53.7	500	0.79	1000	10.4159	9.469	1.9	1.82	2.05	64.8	2.75	178.55	295.35	53.70	8.86	19.40	2	2	0	0	8.9	159.2	59.1
MH-871	MH-826	575.1	574.62	78.3	800	2.12	163.32	34.3233	31.203	1.9	1.62	2.24	60.1	3.05	357.83	477.63	78.30	16.44	55.78	3	3	0	0	16.4	302.1	109.6
MH-226	MH-427	572.94	572.9	45.5	150	0.18	1000	0.0363	0.033	1.9	1.91	1.95	20.8	2.40	95.55	218.40	45.50	5.12	5.92	2	2	0	0	5.1	89.6	34.1
MH-1012	MH-14	591.33	591.29	38.3	500	0.75	1000	7.7847	7.077	1.9	2.15	1.71	46	2.75	127.35	210.65	38.30	6.32	13.84	2	2	0	0	6.3	113.5	42.1
MH-411	MH-1044	599.79	599.5	123.6	175	0.6	431.67	0.6941	0.631	1.9	2.12	1.73	46.6	2.43	269.37	599.46	123.60	14.37	17.34	5	5	0	0	14.4	252.0	95.8
MH-858	MH-493	592.2	591.86	77.7	150	0.6	233.77	0.3729	0.339	1.9	1.86	1.98	56.9	2.40	163.17	372.96	77.70	8.74	10.11	3	3	0	0	8.7	153.1	58.3
MH-44	MH-45	588.05	587.92	15.2	150	0.6	123.11	0.1661	0.151	1.9	1.76	2.07	23.5	2.40	31.92	72.96	15.20	1.71	1.98	1	1	0	0	1.7	29.9	11.4
MH-395	MH-226	572.95	572.94	7.9	150	0.17	1000	0.0297	0.027	1.9	1.9	1.91	16.9	2.40	16.59	37.92	7.90	0.89	1.03	1	1	0	0	0.9	15.6	5.9
MH-1038	MH-1039	606.23	604.58	164.6	150	0.47	100	0.0561	0.051	1.9	2.99	0.8	25.6	2.40	345.66	790.08	164.60	18.52	21.42	6	6	0	0	18.5	324.2	123.5
MH-1022	MH-803	597.52	596.04	148	150	0.73	100	0.253	0.23	1.9	2.99	0.8	32.7	2.40	310.80	710.40	148.00	16.65	19.26	5	5	0	0	16.7	291.5	111.0
MH-396	MH-395	572.96	572.95	11.4	150	0.17	1000	0.0253	0.023	1.9	1.89	1.9	15.7	2.40	23.94	54.72	11.40	1.28	1.48	1	1	0	0	1.3	22.5	8.6
MH-158	MH-200	573.34	573.3	35.2	150	0.22	1000	0.0638	0.058	1.9	1.67	2.11	23.9	2.40	73.92	168.96	35.20	3.96	4.58	2	2	0	0	4.0	69.3	26.4
MH-962	MH-993	606.31	605.16	115.2	150	0.65	100	0.1694	0.154	1.9	2.98	0.8	23.2	2.40	241.92	552.96	115.20	12.96	14.99	4	4	0	0	13.0	226.9	86.4
MH-623	MH-603	572.78	572.05	72.7	217	1.15	100.03	1.1187	1.017	1.9	1.06	2.71	49.6	2.47	168.34	358.70	72.70	8.91	11.60	3	3	0	0	8.9	156.7	59.4
MH-1040	MH-780	577.03	576.95	38.8	175	0.6	487.66	0.8459	0.769	1.9	1.98	1.78	53.3	2.43	84.56	188.18	38.80	4.51	5.44	2	2	0	0	4.5	79.1	30.1
MH-556	MH-396	573	572.96	35.9	150	0.16	1000	0.0242	0.022	1.9	1.85	1.89	14.6	2.40	75.39	172.32	35.90	4.04	4.67	2	2	0	0	4.0	70.7	26.9
MH-846	MH-1044	600.6	599.46	125.1	217	1.21	109.91	1.5136	1.376	1.9	2	1.73	43.5	2.47	289.67	617.24	125.10	15.33	19.96	5	5	0	0	15.3	269.7	102.2
MH-626	MH-811	580.82	580.78	26.5	217	0.6	664.51	1.353	1.23	1.9	1.77	1.94	52.8	2.47	61.36	130.75	26.50	3.25	4.23	1	1	0	0	3.2	57.1	21.7
MH-645	MH-482	580.66	580.64	9	175	0.6	479.76	0.8217	0.747	1.9	1.83	1.88	58.3	2.43	19.61	43.65	9.00	1.05	1.26	1	1	0	0	1.0	18.4	7.0
MH-12	MH-2300	591.07	591.03	46.4	500	0.75	1000	8.1939	7.449	1.9	1.91	1.8	51.7	2.75	154.28	255.20	46.40	7.66	16.76	2	2	0	0	7.7	137.5	51.0
MH-251	MH-252	573.01	572.98	28.8	150	0.26	1000	0.1177	0.107	1.9	1.84	1.87	26.8	2.40	60.48	138.24	28.80	3.24	3.75	1	1	0	0	3.2	56.7	21.6
MH-819	MH-1078	590.6	590.09	128.9	500	1.28	253.95	8.6955	7.905	1.8	1.78	1.91	52.1	2.65	414.41	683.17	128.90	21.27	46.57	5	5	0	0	21.3	367.8	141.8
MH-1034	MH-858	595.24	593.25	199	150	0.51	100	0.0737	0.067	1.8	2.89	0.8	15.3	2.30	402.98	915.40	199.00	22.39	25.90	7	7	0	0	22.4	377.1	149.3
MH-790	MH-425	604.78	604.71	67.9	150	0.4	1000	0.5423	0.493	1.8	1.79	1.9	74.2	2.30	137.50	312.34	67.90	7.64	8.84	3	3	0	0	7.6	128.7	50.9
MH-967	MH-727	579.44	579.38	56.1	700	0.99	1000	25.3715	23.065	1.8	2.19	1.49	52.8	2.85	224.68	319.77	56.10	10.94	32.52	2	2	0	0	10.9	192.2	72.9
MH-30	MH-31	593.94	593.49	450.9	271	0.6	994.23	2.7599	2.509	1.8	1.62	2.04	77.7	2.42	1086.08	2183.26	450.90	58.91	84.91	16	16	0	0	58.9	1001.2	392.7
MH-105	MH-844	576.99	575.15	224.4	150	0.38	122.05	0.0352	0.032	1.8	1.03	2.61	10.8	2.30	454.41	1032.24	224.40	25.25	29.21	8	8	0	0	25.2	425.2	168.3
MH-85	MH-86	583.16	583.03	18.4	150	0.6	138.55	0.1936	0.176	1.8	1.69	1.95	27.8	2.30	37.26	84.64	18.40	2.07	2.39	1	1	0	0	2.1	34.9	13.8
MH-62	MH-332	572.98	572.96	16.1	217	0.6	689.73	1.4542	1.322	1.8	1.8	1.82	54.4	2.37	35.96	76.22	16.10	1.97	2.57	1	1	0	0	2.0	33.4	13.2
MH-976	MH-692	575.53	575.23	159.8	217	0.6	530.7	0.9471	0.861	1.8	2.24	1.38	46.6	2.37	356.97	756.49	159.80	19.58	25.49	6	6	0	0	19.6	331.5	130.6
MH-14	MH-12	591.29	591.07	82.6	500	1.08	371.59	7.7847	7.077	1.8	1.71	1.91	47.5	2.65	265.56	437.78	82.60	13.63	29.84	3	3	0	0	13.6	235.7	90.9
MH-1048	MH-764	584.11	582.91	184.4	150	0.6	152.78	0.2178	0.198	1.8	0.8	2.81	27.7	2.30	373.41	848.24	184.40	20.75	24.00	7	7	0	0	20.7	349.4	138.3
MH-462	MH-288	575.96	575.92	41.4	150	0.16	1000	0.0242	0.022	1.8	1.55	2.06	16.6	2.30	83.84	190.44	41.40	4.66	5.39	2	2	0	0	4.7	78.4	31.1
MH-1077	MH-784	577.41	575.08	279.3	150	0.23	119.88	0.0077	0.007	1.8	0.8	2.8	5	2.30	565.58	1284.78	279.30	31.42	36.35	10	10	0	0	31.4	529.2	209.5
MH-315	MH-126	570.44	570.41	32.6	400	0.62	1000	2.8864	2.624	1.8	2.21	1.39	46.7	2.55	92.91	166.26	32.60	4.89	8.98	2	2	0	0	4.9	83.9	32.6
MH-367	MH-368	578.69	578.51	35.7	150	0.6	196.11	0.2959	0.269	1.8	1.9	1.69	36.3	2.30	72.29	164.22	35.70	4.02	4.65	2	2	0	0	4.0	67.6	26.8
MH-293	MH-294	588.24	588.21	31.3	600	0.91	1000	18.6351	16.941	1.8	1.73	1.85	67.3	2.75	112.68	172.15	31.30	5.63	14.48	2	2	0	0	5.6	98.2	37.6
MH-961	MH-962	609.54	608.49	104.6	150	0.61	100	0.1331	0.121	1.8	2.78	0.8	20.6	2.30	211.82	481.16	104.60	11.77	13.61	4	4	0	0	11.8	198.2	78.5
MH-425	MH-478	604.71	604.67	40.9	150	0.4	1000	0.5698	0.518	1.8	1.9	1.67	60.4	2.30	82.82	188.14	40.90	4.60	5.32	2	2	0	0	4.6	77.5	30.7
MH-2300																										



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-1036	MH-366	581.74	580.12	162.1	217	1.45	100	2.6026	2.366	1.7	2.6	0.8	57.7	2.27	348.86	734.96	162.10	19.87	25.86	6	6	0	0	19.9	323.0	132.4
MH-1057	MH-1069	573.91	573.66	248.6	900	1.16	1000	46.97	42.7	1.7	2.31	1.09	54.3	2.95	1174.64	1466.74	248.60	55.94	214.01	9	9	0	0	55.9	960.6	372.9
MH-945	MH-809	603	602.87	130.8	150	0.4	1000	0.5753	0.523	1.7	2.14	1.26	63.3	2.20	255.06	575.52	130.80	14.72	17.03	5	5	0	0	14.7	238.0	98.1
MH-335	MH-42	573.11	573.06	36	217	0.6	687.48	1.4454	1.314	1.7	1.67	1.72	64.7	2.27	77.48	163.22	36.00	4.41	5.74	2	2	0	0	4.4	71.7	29.4
MH-938	MH-38	571.08	570.91	174.3	900	1.19	1000	54.6436	49.676	1.7	2.02	1.38	64.7	2.95	823.57	1028.37	174.30	39.22	150.05	6	6	0	0	39.2	673.5	261.5
MH-1062	MH-280	578.42	577.53	412.4	175	0.6	463.44	0.7755	0.705	1.7	1.38	1.99	56.2	2.23	834.85	1835.18	412.40	47.94	57.86	14	14	0	0	47.9	777.0	319.6
MH-677	MH-645	580.71	580.66	23.2	175	0.6	471.23	0.7953	0.723	1.7	1.52	1.83	57.2	2.23	46.97	103.24	23.20	2.70	3.25	1	1	0	0	2.7	43.7	18.0
MH-52	MH-7	586.11	585.87	113.5	175	0.6	465.38	0.781	0.71	1.7	1.11	2.21	52.3	2.23	229.77	505.08	113.50	13.19	15.92	4	4	0	0	13.2	213.8	88.0
MH-536	MH-367	578.92	578.69	44.2	150	0.6	188.99	0.2827	0.257	1.7	1.41	1.9	33.1	2.20	86.19	194.48	44.20	4.97	5.75	2	2	0	0	5.0	80.4	33.2
MH-719	MH-925	577.88	577.7	118.7	217	0.6	631.03	1.2364	1.124	1.6	1.59	1.71	58.9	2.17	245.76	514.45	118.70	14.55	18.93	4	4	0	0	14.5	226.8	97.0
MH-88	MH-89	586.2	586.04	18.9	150	0.6	117.96	0.1573	0.143	1.6	1.63	1.66	25.7	2.10	35.44	79.38	18.90	2.13	2.46	1	1	0	0	2.1	33.0	14.2
MH-510	MH-793	575.12	575.08	35.4	500	0.79	1000	10.3059	9.369	1.6	1.58	1.72	65.5	2.45	106.02	173.46	35.40	5.84	12.79	2	2	0	0	5.8	93.2	38.9
MH-893	MH-742	600.96	600.11	207.9	150	0.6	244.2	0.3971	0.361	1.6	0.91	2.37	44.2	2.10	389.81	873.18	207.90	23.39	27.06	7	7	0	0	23.4	362.8	155.9
MH-485	MH-1068	585.77	584.51	125.3	217	1.35	100	2.0086	1.826	1.6	2.48	0.8	50	2.17	259.43	543.05	125.30	15.36	19.99	5	5	0	0	15.4	239.4	102.4
MH-926	MH-609	577.55	577.41	100.7	217	0.6	674.44	1.3926	1.266	1.6	1.8	1.48	63.1	2.17	208.49	436.43	100.70	12.34	16.06	4	4	0	0	12.3	192.4	82.3
MH-155	MH-919	587.55	587.44	103.4	500	0.82	1000	12.6445	11.495	1.6	1.86	1.42	60.7	2.45	309.68	506.66	103.40	17.06	37.35	4	4	0	0	17.1	272.3	113.7
MH-857	MH-360	586.42	585.5	132.8	150	0.6	145.52	0.2046	0.186	1.6	0.8	2.47	30.4	2.10	249.00	557.76	132.80	14.94	17.29	5	5	0	0	14.9	231.7	99.6
MH-201	MH-1075	570.14	569.69	445.7	400	0.65	1000	4.4429	4.039	1.6	1.41	1.86	55.2	2.35	1181.11	2094.79	445.70	66.86	122.83	15	15	0	0	66.9	1058.3	445.7
MH-817	MH-964	582.03	581.9	132.6	150	0.22	1000	0.066	0.06	1.6	0.8	2.46	19.5	2.10	248.63	556.92	132.60	14.92	17.26	5	5	0	0	14.9	231.4	99.5
MH-96	MH-97	582.21	582.16	19.8	175	0.6	422.16	0.6699	0.609	1.6	1.51	1.74	50.8	2.13	38.55	84.15	19.80	2.30	2.78	1	1	0	0	2.3	35.8	15.3
MH-859	MH-269	578.22	578.14	76.9	150	0.24	1000	0.088	0.08	1.6	1.37	1.89	22.6	2.10	144.19	322.98	76.90	8.65	10.01	3	3	0	0	8.7	134.2	57.7
MH-725	MH-948	594.55	594.5	21.5	217	0.6	512.81	0.9009	0.819	1.6	1.73	1.5	45.2	2.17	44.51	93.18	21.50	2.63	3.43	1	1	0	0	2.6	41.1	17.6
MH-34	MH-930	577.75	573.8	395.3	400	2.17	100	18.3007	16.637	1.6	2.41	0.8	73	2.35	1047.55	1857.91	395.30	59.30	108.94	14	14	0	0	59.3	938.6	395.3
MH-359	MH-465	585.32	584.96	43.5	150	0.73	121.07	0.33	0.3	1.6	1.95	1.25	36.7	2.10	81.56	182.70	43.50	4.89	5.66	2	2	0	0	4.9	75.9	32.6
MH-305	MH-335	573.33	573.18	33.5	150	0.6	220.71	0.3465	0.315	1.6	1.52	1.67	43.3	2.10	62.81	140.70	33.50	3.77	4.36	2	2	0	0	3.8	58.5	25.1
MH-927	MH-957	595.59	594.55	104.4	271	1.51	100	3.1427	2.857	1.6	2.38	0.8	53.4	2.22	233.28	463.74	104.40	13.64	19.66	4	4	0	0	13.6	213.6	90.9
MH-941	MH-30	594.06	593.94	123.7	271	0.6	994.23	2.7599	2.509	1.6	1.56	1.62	78.2	2.22	276.41	549.48	123.70	16.16	23.29	5	5	0	0	16.2	253.1	107.7
MH-478	MH-612	604.65	604.52	49.3	175	0.6	389.04	0.5951	0.541	1.6	1.67	1.5	45.4	2.13	95.98	209.53	49.30	5.73	6.92	2	2	0	0	5.7	89.1	38.2
MH-921	MH-922	573.05	572.49	92.9	150	0.6	167.37	0.2409	0.219	1.6	0.8	2.36	30.4	2.10	174.19	390.18	92.90	10.45	12.09	4	4	0	0	10.5	162.1	69.7
MH-1046	MH-959	604.36	604.26	96.7	150	0.4	1000	0.5489	0.499	1.6	1.58	1.58	62	2.10	181.31	406.14	96.70	10.88	12.59	4	4	0	0	10.9	168.7	72.5
MH-870	MH-302	577.84	577.75	82	271	0.6	900.82	2.1428	1.948	1.6	1.31	1.83	63.5	2.22	183.23	364.24	82.00	10.71	15.44	3	3	0	0	10.7	167.8	71.4
MH-889	MH-881	582.93	582.9	33.3	150	0.22	1000	0.0726	0.066	1.6	1.48	1.64	26.8	2.10	62.44	139.86	33.30	3.75	4.33	2	2	0	0	3.7	58.1	25.0
MH-408	MH-871	575.19	575.1	89.2	800	1.07	1000	34.2232	31.112	1.6	1.49	1.62	52.3	2.75	370.18	490.60	89.20	18.73	63.55	3	3	0	0	18.7	306.6	124.9
MH-413	MH-354	576.79	576.53	46.8	150	0.6	180.54	0.2684	0.244	1.6	1.72	1.39	32	2.10	87.75	196.56	46.80	5.27	6.09	2	2	0	0	5.3	81.7	35.1
MH-720	MH-719	577.98	577.88	56.2	217	0.6	607.67	1.1627	1.057	1.6	1.52	1.59	55.4	2.17	116.36	243.57	56.20	6.89	8.96	2	2	0	0	6.9	107.4	45.9
MH-242	MH-347	582.1	582.02	34.7	175	0.6	453.1	0.748	0.68	1.5	1.8	1.3	55.2	2.03	64.87	140.54	34.70	4.03	4.87	2	2	0	0	4.0	60.0	26.9
MH-1059	MH-1075	570.87	569.19	271.4	900	2.4	162.01	55.0231	50.021	1.5	1.23	1.86	64.6	2.75	1200.95	1492.70	271.40	61.07	233.63	10	10	0	0	61.1	967.3	407.1
MH-1018	MH-996	571.16	570.97	190.4	900	1.2	1000	55.6776	50.616	1.5	1.94	1.13	59.6	2.75	842.52	1047.20	190.40	42.84	163.91	7	7	0	0	42.8	678.6	285.6
MH-758	MH-773	587.01	586.49	69.9	150	0.6	133.69	0.1826	0.166	1.5	0.93	2.15	31	2.00	104.85	279.60	69.90	7.86	9.10	3	3	0	0	7.9	95.8	52.4
MH-144	MH-133	585.84	585.55	42.5	150	0.6	144.48	0.2024	0.184	1.5	1.61	1.46	28.9	2.00	63.75	170.00	42.50	4.78	5.53	2	2	0	0	4.8	58.2	31.9
MH-985	MH-85	583.36	583.16	27.3	150	0.6	134.27	0.1837	0.167	1.5	1.38	1.69	26.6	2.00	40.95	109.20	27.30	3.07	3.55	1	1	0	0	3.1	37.4	20.5
MH-159	MH-158	573.36	573.34	23.5	150	0.2	1000	0.0517	0.047	1.5	1.37	1.67	22.1	2.00	35.25	94.00	23.50	2.64	3.06	1	1	0	0	2.6	32.2	17.6
MH-695	MH-696	575.42	575.36	54.6	800	1.07	1000	34.188	31.08	1.5	1.51	1.54	62.7	2.65	218.95	289.38	54.60	11.47	38.90	2	2	0	0	11.5	180.0	76.4
MH-65	MH-998	594.85	594.3	54.8	400	1.63	100	5.8817	5.347	1.5	2.24	0.8	39.2	2.25	139.74	246.60	54.80	8.22	15.10	2	2	0	0	8.2	124.6	54.8
MH-912	MH-866	578.51	577.63	91.3	150	0.6	104.31	0.1342	0.122	1.5	0.8	2.24	23.2	2.00	136.95	365.20	91.30	10.27	11.88	4	4	0	0	10.3	125.1	68.5
MH-750	MH-790	605.32	604.78	110	150	0.6	202.52	0.3124	0.284	1.5	1.23	1.79	54.8	2.00	165.00	440.00	110.00	12.38	14.32	4	4	0	0	12.4	150.7	82.5
MH-340	MH-493	592.54	591.86	103	150	0.46	151.59	0.0847	0.077	1.5	1.04	1.98	45.8	2.00	154.50	412.00	103.00	11.59	13.41	4	4	0	0	11.6	141.1	77.3
MH-553	MH-43	602.13	601.96	45.2	150	0.6	266.33	0.4477	0.407	1.5	1.64	1.39	46.8	2.00	67.80	180.80	45.20	5.09								



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructed Slope (1/S)in %	Design Capacity (ML/d)	Total Flow (ML/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-700	MH-720	578.12	577.98	81.7	217	0.6	563.98	1.0351	0.941	1.5	1.4	1.52	51.6	2.07	162.48	337.75	81.70	10.01	13.03	3	3	0	0	10.0	149.4	66.7
MH-182	MH-198	573.01	572.78	34.2	150	0.37	149.13	0.0407	0.037	1.5	0.84	2.07	17	2.00	51.30	136.80	34.20	3.85	4.45	2	2	0	0	3.8	46.8	25.7
MH-521	MH-407	575.28	575.23	42.8	800	1.07	1000	34.2012	31.092	1.5	1.46	1.45	61.2	2.65	171.63	226.84	42.80	8.99	30.49	2	2	0	0	9.0	141.1	59.9
MH-959	MH-739	604.24	604.06	83.8	175	0.6	466.27	0.7832	0.712	1.4	1.58	1.32	53	1.93	125.02	322.63	83.80	9.74	11.76	3	3	0	0	9.7	113.3	64.9
MH-897	MH-1046	604.67	604.36	85.8	150	0.6	279.8	0.4818	0.438	1.4	1.31	1.58	62	1.90	122.27	326.04	85.80	9.65	11.17	3	3	0	0	9.7	111.1	64.4
MH-260	MH-427	573.43	573.38	51	150	0.17	1000	0.0275	0.025	1.4	1.42	1.47	12.6	1.90	72.68	193.80	51.00	5.74	6.64	2	2	0	0	5.7	66.0	38.3
MH-339	MH-198	573.05	572.78	33.7	150	0.21	124.15	0.0055	0.005	1.4	0.8	2.07	13.1	1.90	48.02	128.06	33.70	3.79	4.39	2	2	0	0	3.8	43.6	25.3
MH-919	MH-918	587.34	587.25	92.7	600	0.85	1000	13.2517	12.047	1.4	1.42	1.45	47.2	2.35	289.22	435.69	92.70	16.69	42.88	4	4	0	0	16.7	246.3	111.2
MH-257	MH-202	571.34	571.04	29.8	150	0.45	100	0.0495	0.045	1.4	2.06	0.8	12.6	1.90	42.47	113.24	29.80	3.35	3.88	1	1	0	0	3.4	38.6	22.4
MH-891	MH-288	576.6	575.92	85.6	150	0.27	125.62	0.011	0.01	1.4	0.8	2.06	12.7	1.90	121.98	325.28	85.60	9.63	11.14	3	3	0	0	9.6	110.8	64.2
MH-306	MH-305	573.51	573.33	29	150	0.6	160.19	0.2288	0.208	1.4	1.34	1.52	33.5	1.90	41.33	110.20	29.00	3.26	3.77	1	1	0	0	3.3	37.6	21.8
MH-694	MH-677	580.77	580.71	24.5	175	0.6	444.56	0.726	0.66	1.4	1.33	1.52	54.4	1.93	36.55	94.33	24.50	2.85	3.44	1	1	0	0	2.8	33.1	19.0
MH-146	MH-144	586.36	586.04	33.6	150	0.6	106.35	0.1397	0.127	1.4	1.44	1.41	21.3	1.90	47.88	127.68	33.60	3.78	4.37	2	2	0	0	3.8	43.5	25.2
MH-74	MH-1033	570.23	570.22	18.7	400	0.62	1000	3.8258	3.478	1.4	1.42	1.42	53.8	2.15	45.82	80.41	18.70	2.81	5.15	1	1	0	0	2.8	40.7	18.7
MH-202	MH-201	570.17	570.14	26.3	400	0.65	1000	4.422	4.02	1.4	1.42	1.41	55.8	2.15	64.44	113.09	26.30	3.95	7.25	1	1	0	0	3.9	57.2	26.3
MH-294	MH-869	588.21	588.13	81.7	600	0.92	1000	19.096	17.36	1.4	1.85	0.99	59.2	2.35	254.90	383.99	81.70	14.71	37.79	3	3	0	0	14.7	217.1	98.0
MH-349	MH-348	573.45	573.42	34.7	150	0.19	1000	0.0374	0.034	1.4	1.4	1.43	18.9	1.90	49.45	131.86	34.70	3.90	4.52	2	2	0	0	3.9	44.9	26.0
MH-687	MH-860	581.27	581.11	63.8	175	0.6	421.99	0.6699	0.609	1.4	1.26	1.57	50.3	1.93	95.18	245.63	63.80	7.42	8.95	3	3	0	0	7.4	86.2	49.4
MH-1033	MH-542	570.22	570.2	19	400	0.62	1000	3.8269	3.479	1.4	1.42	1.4	54.9	2.15	46.55	81.70	19.00	2.85	5.24	1	1	0	0	2.9	41.3	19.0
MH-542	MH-202	570.2	570.17	30.8	400	0.64	1000	4.3582	3.962	1.4	1.4	1.42	55.7	2.15	75.46	132.44	30.80	4.62	8.49	2	2	0	0	4.6	67.0	30.8
MH-874	MH-74	570.27	570.23	33.6	400	0.62	1000	3.7257	3.387	1.4	1.4	1.42	52.6	2.15	82.32	144.48	33.60	5.04	9.26	2	2	0	0	5.0	73.1	33.6
MH-348	MH-159	573.42	573.36	55.4	150	0.2	1000	0.0462	0.042	1.4	1.43	1.37	20.4	1.90	78.95	210.52	55.40	6.23	7.21	2	2	0	0	6.2	71.7	41.6
MH-1001	MH-725	595.56	595.37	86.2	175	0.6	446.63	0.7315	0.665	1.4	1.85	0.95	48.2	1.93	128.60	331.87	86.20	10.02	12.09	3	3	0	0	10.0	116.5	66.8
MH-353	MH-874	570.3	570.27	35.4	400	0.62	1000	3.6828	3.348	1.4	1.4	1.4	51.3	2.15	86.73	152.22	35.40	5.31	9.76	2	2	0	0	5.3	77.0	35.4
MH-149	MH-150	589.43	589.41	22.8	600	0.91	1000	18.0829	16.439	1.4	1.39	1.4	52.9	2.35	71.14	107.16	22.80	4.10	10.55	1	1	0	0	4.1	60.6	27.4
MH-698	MH-815	603.28	602.58	69.1	217	1.21	100	1.3464	1.224	1.4	1.99	0.8	55.2	1.97	111.05	271.84	69.10	8.47	11.02	3	3	0	0	8.5	100.0	56.5
MH-418	MH-900	585.02	584.94	50.6	217	0.6	646.08	1.287	1.17	1.4	1.53	1.25	51.6	1.97	81.32	199.06	50.60	6.20	8.07	2	2	0	0	6.2	73.2	41.3
MH-276	MH-353	570.38	570.3	72.9	400	0.61	1000	3.5431	3.221	1.4	1.37	1.4	50	2.15	178.61	313.47	72.90	10.94	20.09	3	3	0	0	10.9	158.5	72.9
MH-825	MH-770	601.74	600.83	122.2	175	1.08	134.15	1.2826	1.166	1.4	1.89	0.88	59.9	1.93	182.31	470.47	122.20	14.21	17.14	5	5	0	0	14.2	165.2	94.7
MH-788	MH-789	604.37	604.01	63.1	150	0.6	178.79	0.2651	0.241	1.4	1.17	1.6	35.9	1.90	89.92	239.78	63.10	7.10	8.21	3	3	0	0	7.1	81.7	47.3
MH-126	MH-276	570.41	570.38	30.6	400	0.61	1000	3.4375	3.125	1.4	1.39	1.37	48.9	2.15	74.97	131.58	30.60	4.59	8.43	2	2	0	0	4.6	66.5	30.6
MH-1067	MH-4	582.76	582.3	95	150	0.67	208.09	0.4917	0.447	1.4	0.8	1.96	44.4	1.90	135.38	361.00	95.00	10.69	12.37	4	4	0	0	10.7	123.0	71.3
MH-4	MH-5	582.3	580.32	197.9	150	0.88	100	0.4961	0.451	1.4	1.96	0.8	40.3	1.90	282.01	752.02	197.90	22.26	25.76	7	7	0	0	22.3	256.2	148.4
MH-354	MH-25	576.53	576.33	36.6	150	0.6	182.95	0.2739	0.249	1.4	1.39	1.37	32.4	1.90	52.16	139.08	36.60	4.12	4.76	2	2	0	0	4.1	47.4	27.5
MH-37	MH-88	586.25	586.2	49.3	150	0.24	1000	0.0902	0.082	1.4	1.13	1.63	25.9	1.90	70.25	187.34	49.30	5.55	6.42	2	2	0	0	5.5	63.8	37.0
MH-880	MH-349	573.49	573.45	38.9	150	0.17	1000	0.0286	0.026	1.4	1.36	1.4	16.8	1.90	55.43	147.82	38.90	4.38	5.06	2	2	0	0	4.4	50.4	29.2
MH-492	MH-149	589.47	589.43	42.8	600	0.9	1000	16.8036	15.276	1.4	1.36	1.39	60.3	2.35	133.54	201.16	42.80	7.70	19.80	2	2	0	0	7.7	113.7	51.4
MH-924	MH-914	597.32	595.52	179.6	150	0.85	100	0.4356	0.396	1.4	1.95	0.8	37.7	1.90	255.93	682.48	179.60	20.21	23.38	6	6	0	0	20.2	232.6	134.7
MH-500	MH-520	580.98	580.88	28.4	150	0.6	282.3	0.4884	0.444	1.4	1.37	1.38	57	1.90	40.47	107.92	28.40	3.20	3.70	1	1	0	0	3.2	36.8	21.3
MH-25	MH-235	576.33	576.24	15.9	150	0.6	189.2	0.2827	0.257	1.4	1.37	1.38	32.7	1.90	22.66	60.42	15.90	1.79	2.07	1	1	0	0	1.8	20.6	11.9
MH-931	MH-1018	571.3	571.16	142.2	900	1.19	1000	54.1761	49.251	1.4	0.8	1.94	69.2	2.65	607.91	753.66	142.20	32.00	122.41	5	5	0	0	32.0	485.5	213.3
MH-609	MH-611	577.41	577.29	80.1	217	0.6	679.26	1.4113	1.283	1.4	1.48	1.26	63.7	1.97	128.72	315.11	80.10	9.82	12.78	3	3	0	0	9.8	115.9	65.4
MH-520	MH-262	580.88	580.87	10.2	150	0.4	1000	0.5236	0.476	1.4	1.38	1.36	63.2	1.90	14.54	38.76	10.20	1.15	1.33	1	1	0	0	1.1	13.2	7.7
MH-614	MH-966	582.46	582.33	120.8	150	0.26	1000	0.1188	0.108	1.4	0.8	1.92	26.3	1.90	172.14	459.04	120.80	13.59	15.72	5	5	0	0	13.6	156.4	90.6
MH-1064	MH-1078	590.67	590.42	126.9	175	0.6	494.98	0.8679	0.789	1.4	0.8	1.91	54.2	1.93	189.32	488.57	126.90	14.75	17.80	5	5	0	0	14.8	171.5	98.3
MH-901	MH-228	595.42	594.53	88.8	150	0.62	100	0.1463	0.133	1.4	1.91	0.8	24.8	1.90	126.54	337.44	88.80	9.99	11.56	3	3	0	0	10.0	115.0	66.6
MH-117	MH-667	586.79	586.77	17.5	150	0.21	1000	0.0583	0.053	1.4	1.26	1.45	44.1	1.90	24.94	66.50	17.50	1.97	2.28	1	1	0	0	2.0	22.7	13.1
MH-1035	MH-12	591.83	591.42	102.3	150	0.6	249.66	0.4092	0.372	1.4	0.8	1.91	41.1	1.90	145.78	388.74	102.30	11.51	13.32	4	4	0	0	11.5	132.5	76.7
MH-934	MH-935	573.05	572.95	97.4	150	0.14																				

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-145	MH-146	586.38	586.36	22	150	0.18	1000	0.0319	0.029	1.3	1.21	1.44	19.8	1.80	29.70	79.20	22.00	2.48	2.86	1	1	0	0	2.5	26.8	16.5
MH-1002	MH-1001	596.11	595.59	123.8	150	0.6	234.22	0.374	0.34	1.3	0.8	1.85	42.3	1.80	167.13	445.68	123.80	13.93	16.11	5	5	0	0	13.9	151.0	92.9
MH-642	MH-700	578.3	578.12	93.8	217	0.6	518.32	0.9141	0.831	1.3	1.25	1.4	47	1.87	143.08	350.25	93.80	11.50	14.96	4	4	0	0	11.5	128.1	76.6
MH-930	MH-931	572.46	571.5	95.6	700	2.86	100	53.2158	48.378	1.3	1.84	0.8	59	2.35	320.74	449.32	95.60	18.64	55.41	4	4	0	0	18.6	265.3	124.3
MH-376	MH-251	573.05	573.01	36.5	150	0.25	1000	0.1133	0.103	1.3	0.8	1.84	31.4	1.80	49.28	131.40	36.50	4.11	4.75	2	2	0	0	4.1	44.5	27.4
MH-948	MH-894	594.5	594.44	34.7	217	0.6	522.4	0.9251	0.841	1.3	1.5	1.13	52.9	1.87	52.93	129.57	34.70	4.25	5.54	2	2	0	0	4.3	47.4	28.3
MH-421	MH-420	575.33	575.31	25.9	500	0.79	1000	9.8835	8.985	1.3	1.34	1.29	64.6	2.15	69.02	111.37	25.90	4.27	9.36	1	1	0	0	4.3	59.7	28.5
MH-463	MH-462	575.99	575.96	35.7	150	0.13	1000	0.011	0.01	1.3	1.08	1.55	12.1	1.80	48.20	128.52	35.70	4.02	4.65	2	2	0	0	4.0	43.5	26.8
MH-38	MH-1059	570.91	570.87	40.3	900	1.19	1000	54.8306	49.846	1.3	1.38	1.23	55.3	2.55	166.24	205.53	40.30	9.07	34.69	2	2	0	0	9.1	131.5	60.5
MH-235	MH-236	576.24	576.17	14.2	150	0.6	189.55	0.2838	0.258	1.3	1.38	1.23	33	1.80	19.17	51.12	14.20	1.60	1.85	1	1	0	0	1.6	17.3	10.7
MH-726	MH-790	605.71	605.23	63.4	150	0.6	133.83	0.1837	0.167	1.3	1.27	1.34	25	1.80	85.59	228.24	63.40	7.13	8.25	3	3	0	0	7.1	77.3	47.6
MH-548	MH-504	573.9	573.88	18.5	150	0.4	1000	0.5533	0.503	1.3	1.38	1.22	57	1.80	24.98	66.60	18.50	2.08	2.41	1	1	0	0	2.1	22.6	13.9
MH-112	MH-113	587.71	587.69	20.3	150	0.19	1000	0.0396	0.036	1.3	1.19	1.41	39.8	1.80	27.41	73.08	20.30	2.28	2.64	1	1	0	0	2.3	24.8	15.2
MH-328	MH-128	573.01	572.97	33.4	150	0.2	1000	0.0495	0.045	1.3	0.83	1.77	16.9	1.80	45.09	120.24	33.40	3.76	4.35	2	2	0	0	3.8	40.7	25.1
MH-566	MH-720	578.21	578.04	62.3	150	0.36	379.6	0.1166	0.106	1.3	1.07	1.52	29.1	1.80	84.11	224.28	62.30	7.01	8.11	3	3	0	0	7.0	76.0	46.7
MH-822	MH-819	591.47	590.95	68.3	150	0.6	130.05	0.1771	0.161	1.3	0.8	1.78	24.4	1.80	92.21	245.88	68.30	7.68	8.89	3	3	0	0	7.7	83.3	51.2
MH-842	MH-841	583.33	582.87	60.6	150	0.35	133.59	0.0308	0.028	1.3	0.8	1.77	17	1.80	81.81	218.16	60.60	6.82	7.89	3	3	0	0	6.8	73.9	45.5
MH-580	MH-44	588.49	588.05	47.2	150	0.6	106.83	0.1408	0.128	1.3	0.8	1.76	23.9	1.80	63.72	169.92	47.20	5.31	6.14	2	2	0	0	5.3	57.6	35.4
MH-113	MH-116	587.69	587.54	38.3	150	0.6	269.6	0.4565	0.415	1.3	1.41	1.15	53.8	1.80	51.71	137.88	38.30	4.31	4.99	2	2	0	0	4.3	46.7	28.7
MH-57	MH-667	587.05	587.03	20.5	150	0.21	1000	0.0594	0.054	1.3	1.37	1.19	18.5	1.80	27.68	73.80	20.50	2.31	2.67	1	1	0	0	2.3	25.0	15.4
MH-1076	MH-1081	570.02	569.63	396.3	900	1.21	1000	59.2922	53.902	1.3	1.08	1.47	67.3	2.55	1634.74	2021.13	396.30	89.17	341.15	14	14	0	0	89.2	1293.6	594.5
MH-1049	MH-1052	589.91	588.48	143	150	0.96	100	0.6765	0.615	1.3	1.75	0.8	47.6	1.80	193.05	514.80	143.00	16.09	18.61	5	5	0	0	16.1	174.4	107.3
MH-347	MH-249	582.02	581.88	66.4	175	0.6	474.36	0.8063	0.733	1.3	1.3	1.25	58.7	1.83	93.91	242.36	66.40	7.72	9.32	3	3	0	0	7.7	84.6	51.5
MH-420	MH-498	575.31	575.26	44.9	500	0.79	1000	9.9528	9.048	1.3	1.29	1.25	64.9	2.15	119.66	193.07	44.90	7.41	16.22	2	2	0	0	7.4	103.4	49.4
MH-724	MH-725	594.67	594.61	57.7	150	0.26	1000	0.1221	0.111	1.3	0.8	1.73	26.8	1.80	77.90	207.72	57.70	6.49	7.51	2	2	0	0	6.5	70.4	43.3
MH-627	MH-293	588.29	588.24	50.1	600	0.91	1000	18.2886	16.626	1.3	0.8	1.73	68.3	2.25	150.30	225.45	50.10	9.02	23.18	2	2	0	0	9.0	127.1	60.1
MH-1044	MH-1009	599.4	599.22	99.9	271	0.73	554.58	2.2825	2.075	1.3	1.73	0.8	50.5	1.92	167.15	383.82	99.90	13.05	18.81	4	4	0	0	13.1	148.3	87.0
MH-121	MH-146	586.75	586.71	37.9	150	0.24	1000	0.0946	0.086	1.3	1.44	1.09	23.5	1.80	51.17	136.44	37.90	4.26	4.93	2	2	0	0	4.3	46.2	28.4
MH-498	MH-497	575.26	575.22	41.7	500	0.79	1000	10.043	9.13	1.3	1.25	1.28	65.2	2.15	111.13	179.31	41.70	6.88	15.06	2	2	0	0	6.9	96.1	45.9
MH-132	MH-133	585.76	585.55	21.6	150	0.34	103.75	0.0198	0.018	1.3	1.05	1.46	19.4	1.80	29.16	77.76	21.60	2.43	2.81	1	1	0	0	2.4	26.3	16.2
MH-971	MH-925	577.92	577.76	109.9	150	0.24	709.33	0.0627	0.057	1.3	0.8	1.71	32.3	1.80	148.37	395.64	109.90	12.36	14.30	4	4	0	0	12.4	134.1	82.4
MH-78	MH-581	581.71	581.63	49.9	217	0.6	571.75	1.0571	0.961	1.3	1.28	1.22	51.2	1.87	76.11	186.33	49.90	6.12	7.96	2	2	0	0	6.1	68.2	40.8
MH-250	MH-78	581.77	581.71	32.2	217	0.6	534.65	0.9581	0.871	1.2	1.22	1.28	48.3	1.77	46.49	113.79	32.20	3.95	5.14	2	2	0	0	3.9	41.3	26.3
MH-911	MH-368	578.88	578.51	90.9	150	0.33	240.15	0.0495	0.045	1.2	0.8	1.69	26.7	1.70	115.90	309.06	90.90	10.23	11.83	4	4	0	0	10.2	104.1	68.2
MH-640	MH-13	604.39	604.26	55	175	0.6	411.05	0.6446	0.586	1.2	1.43	1.04	49.9	1.73	73.53	189.75	55.00	6.39	7.72	2	2	0	0	6.4	65.8	42.6
MH-249	MH-250	581.88	581.82	32.1	175	0.6	495.29	0.8679	0.789	1.2	1.25	1.22	54.3	1.73	42.91	110.75	32.10	3.73	4.50	2	2	0	0	3.7	38.4	24.9
MH-1081	OF-1	569.63	569.61	10.7	900	1.21	1000	62.1478	56.498	1.2	1.47	0.99	56.4	2.45	42.53	52.43	10.70	2.41	9.21	1	1	0	0	2.4	33.3	16.1
MH-739	MH-1023	604.06	603.84	65	175	0.72	296.14	0.8382	0.762	1.2	1.32	1.14	49.9	1.73	86.90	224.25	65.00	7.56	9.12	3	3	0	0	7.6	77.8	50.4
MH-581	MH-393	581.63	581.54	49.7	217	0.6	592.44	1.1165	1.015	1.2	1.22	1.23	53.6	1.77	71.75	175.64	49.70	6.09	7.93	2	2	0	0	6.1	63.8	40.6
MH-982	MH-785	576.93	576.66	198.5	271	0.6	741.07	1.5609	1.419	1.2	1.21	1.24	42.4	1.82	314.84	722.94	198.50	25.93	37.38	7	7	0	0	25.9	277.5	172.9
MH-43	MH-801	601.96	601.71	69.8	150	0.6	278.52	0.4785	0.435	1.2	1.39	1.06	48.6	1.70	89.00	237.32	69.80	7.85	9.09	3	3	0	0	7.9	79.9	52.4
MH-882	MH-881	583.15	582.9	84	150	0.19	333.36	0.011	0.01	1.2	0.8	1.64	18.2	1.70	107.10	285.60	84.00	9.45	10.93	3	3	0	0	9.5	96.2	63.0
MH-393	MH-394	581.54	581.48	41.8	217	0.6	615.56	1.1869	1.079	1.2	1.23	1.21	55.5	1.77	60.34	147.72	41.80	5.12	6.67	2	2	0	0	5.1	53.7	34.2
MH-369	MH-306	573.75	573.51	36.9	150	0.6	152.45	0.2167	0.197	1.2	1.1	1.34	28.9	1.70	47.05	125.46	36.90	4.15	4.80	2	2	0	0	4.2	42.2	27.7
MH-1007	MH-553	603.34	602.13	128.6	150	0.6	106.25	0.1397	0.127	1.2	0.8	1.64	34.2	1.70	163.97	437.24	128.60	14.47	16.74	5	5	0	0	14.5	147.2	96.5
MH-611	MH-575	577.29	577.22	49.1	217	0.6	681.99	1.4234	1.294	1.2	1.26	1.17	64.6	1.77	70.88	173.52	49.10	6.02	7.83	2	2	0	0	6.0	63.1	40.1
MH-71	MH-72	579.52	579.5	17.3	150	0.17	1000	0.0297	0.027	1.2	1.11	1.31	13.2	1.70	22.06	58.82	17.30	1.95	2.25	1	1	0	0	1.9	19.8	13.0
MH-394	MH-649	581.48	581.44	21.8	217	0.6	626.32	1.2221	1.111	1.2	1.21	1.2	55.7	1.77	31.47	77.04	21.80	2.67	3.48	1	1	0	0	2.7	28.0	17.8
MH-649	MH-568	581.44	581.41	16.8	217	0.6																				

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-766	MH-913	595.18	595.1	71.5	271	0.6	936.17	2.3155	2.105	1.2	1.21	1.12	55.6	1.82	113.41	260.40	71.50	9.34	13.46	3	3	0	0	9.3	99.9	62.3
MH-183	MH-182	573.33	573.05	27.7	150	0.38	100	0.0286	0.026	1.2	1.52	0.8	9.6	1.70	35.32	94.18	27.70	3.12	3.61	1	1	0	0	3.1	31.7	20.8
MH-718	MH-344	574.43	574.05	38.2	150	0.96	100	0.5269	0.479	1.2	1.52	0.8	59.6	1.70	48.71	129.88	38.20	4.30	4.97	2	2	0	0	4.3	43.7	28.7
MH-406	MH-67	579.03	578.89	38.7	150	0.6	270.12	0.4576	0.416	1.2	0.87	1.45	44.2	1.70	49.34	131.58	38.70	4.35	5.04	2	2	0	0	4.4	44.3	29.0
MH-775	MH-96	582.37	582.21	62	175	0.6	386.87	0.5896	0.536	1.2	0.8	1.51	46.8	1.73	82.89	213.90	62.00	7.21	8.70	3	3	0	0	7.2	74.2	48.1
MH-667	MH-402	586.75	586.56	89.6	175	0.6	473.55	0.803	0.73	1.2	1.45	0.87	53.5	1.73	119.78	309.12	89.60	10.42	12.57	3	3	0	0	10.4	107.2	69.4
MH-692	MH-582	575.23	575.07	85.6	217	0.6	542.46	0.979	0.89	1.1	1.38	0.91	43	1.67	116.58	285.39	85.60	10.49	13.65	3	3	0	0	10.5	102.9	69.9
MH-330	MH-492	589.52	589.47	41.5	600	0.9	1000	16.7948	15.268	1.1	0.94	1.36	62.6	2.05	114.54	170.15	41.50	7.47	19.20	2	2	0	0	7.5	95.3	49.8
MH-634	MH-635	575.58	575.53	50.4	800	1.07	1000	34.0879	30.989	1.1	1.11	1.19	63.1	2.25	173.88	226.80	50.40	10.58	35.90	2	2	0	0	10.6	138.0	70.6
MH-1051	MH-1052	590.48	588.48	200.3	150	1.04	100	0.9339	0.849	1.1	1.49	0.8	56.9	1.60	240.36	640.96	200.30	22.53	26.07	7	7	0	0	22.5	214.3	150.2
MH-45	MH-818	575.79	575.66	19.6	150	0.71	157.98	0.4191	0.381	1.1	1.11	1.18	40.2	1.60	23.52	62.72	19.60	2.21	2.55	1	1	0	0	2.2	21.0	14.7
MH-495	MH-548	573.94	573.9	41.4	150	0.4	1000	0.5467	0.497	1.1	0.91	1.38	70.4	1.60	49.68	132.48	41.40	4.66	5.39	2	2	0	0	4.7	44.3	31.1
MH-731	MH-417	585.62	585.23	43.1	150	0.32	111.02	0.0187	0.017	1.1	0.8	1.49	20.5	1.60	51.72	137.92	43.10	4.85	5.61	2	2	0	0	4.8	46.1	32.3
MH-137	MH-136	573.71	573.65	21.6	175	0.6	388.96	0.594	0.54	1.1	1.11	1.17	42.1	1.63	27.20	70.20	21.60	2.51	3.03	1	1	0	0	2.5	24.2	16.7
MH-890	MH-889	583.02	582.93	85.6	150	0.18	1000	0.0341	0.031	1.1	0.8	1.48	20.9	1.60	102.72	273.92	85.60	9.63	11.14	3	3	0	0	9.6	91.6	64.2
MH-22	MH-21	589.83	589.7	91.8	500	0.93	691.67	11.2453	10.223	1.1	1.47	0.8	62.4	1.95	196.91	358.02	91.80	15.15	33.16	4	4	0	0	15.1	163.7	101.0
MH-853	MH-852	606.51	605.73	77.2	150	0.81	100	0.3663	0.333	1.1	1.46	0.8	34.4	1.60	92.64	247.04	77.20	8.69	10.05	3	3	0	0	8.7	82.6	57.9
MH-504	MH-278	573.86	573.79	26.6	175	0.6	385.22	0.5863	0.533	1.1	1.22	1.04	44.4	1.63	33.50	86.45	26.60	3.09	3.73	1	1	0	0	3.1	29.8	20.6
MH-258	MH-257	572.89	572.6	29.1	150	0.43	100	0.044	0.04	1.1	1.46	0.8	11.8	1.60	34.92	93.12	29.10	3.27	3.79	1	1	0	0	3.3	31.1	21.8
MH-189	MH-443	573.39	573.05	34.6	150	0.38	100	0.0286	0.026	1.1	1.46	0.8	14.9	1.60	41.52	110.72	34.60	3.89	4.50	2	2	0	0	3.9	37.0	26.0
MH-662	MH-691	580.55	580.36	50.6	150	0.6	268.67	0.4543	0.413	1.1	1.1	1.15	47.7	1.60	60.72	161.92	50.60	5.69	6.59	2	2	0	0	5.7	54.1	38.0
MH-1017	MH-864	592.21	592.02	192.1	600	0.88	1000	15.7707	14.337	1.1	0.8	1.45	61.7	2.05	530.20	787.61	192.10	34.58	88.87	7	7	0	0	34.6	441.3	230.5
MH-894	MH-942	594.44	594.25	122.1	217	0.6	654.64	1.3178	1.198	1.1	1.13	1.11	52.5	1.67	166.29	407.08	122.10	14.96	19.48	5	5	0	0	15.0	146.8	99.8
MH-804	MH-914	595.68	595.5	50.2	175	0.84	272.69	1.43	1.3	1.1	1.43	0.8	66	1.63	63.22	163.15	50.20	5.84	7.04	2	2	0	0	5.8	56.2	38.9
MH-803	MH-804	596.04	595.71	67.1	150	0.6	202.84	0.308	0.28	1.1	0.8	1.43	49.6	1.60	80.52	214.72	67.10	7.55	8.73	3	3	0	0	7.5	71.8	50.3
MH-124	MH-416	588.38	588.37	16.9	150	0.17	1000	0.0308	0.028	1.1	1.02	1.2	36.7	1.60	20.28	54.08	16.90	1.90	2.20	1	1	0	0	1.9	18.1	12.7
MH-236	MH-319	576.17	575.95	42.9	150	0.6	193.65	0.2915	0.265	1.1	1.23	0.99	35.8	1.60	51.48	137.28	42.90	4.83	5.58	2	2	0	0	4.8	45.9	32.2
MH-3	MH-52	586.41	586.14	70.4	150	0.42	261.76	0.1232	0.112	1.1	1.11	1.11	35.5	1.60	84.48	225.28	70.40	7.92	9.16	3	3	0	0	7.9	75.3	52.8
MH-259	MH-260	573.46	573.43	29.1	150	0.16	1000	0.0231	0.021	1.1	0.8	1.42	14.7	1.60	34.92	93.12	29.10	3.27	3.79	1	1	0	0	3.3	31.1	21.8
MH-1005	MH-853	608.43	607.16	127.1	150	0.78	100	0.3146	0.286	1.1	1.41	0.8	31.8	1.60	152.52	406.72	127.10	14.30	16.54	5	5	0	0	14.3	136.0	95.3
MH-431	MH-767	581.55	581.53	20.5	150	0.26	1000	0.1188	0.108	1.1	1.13	1.08	28.4	1.60	24.60	65.60	20.50	2.31	2.67	1	1	0	0	2.3	21.9	15.4
MH-633	MH-536	579.25	578.92	49.8	150	0.6	152.07	0.2167	0.197	1.1	0.8	1.41	30.6	1.60	59.76	159.36	49.80	5.60	6.48	2	2	0	0	5.6	53.3	37.4
MH-767	MH-387	581.53	581.47	21.1	150	0.38	364.07	0.1265	0.115	1.1	1.08	1.13	28.3	1.60	25.32	67.52	21.10	2.37	2.75	1	1	0	0	2.4	22.6	15.8
MH-699	MH-700	578.53	578.19	54.7	150	0.37	160.89	0.0462	0.042	1.1	0.8	1.4	19.7	1.60	65.64	175.04	54.70	6.15	7.12	2	2	0	0	6.2	58.5	41.0
MH-5	MH-1010	579.79	579.77	23.5	400	0.62	1000	3.784	3.44	1.1	1.08	1.11	41.6	1.85	43.48	86.95	23.50	3.53	6.48	1	1	0	0	3.5	37.0	23.5
MH-915	MH-766	595.31	595.18	115.4	271	0.6	873.92	2.0295	1.845	1.1	0.98	1.21	62.1	1.72	172.98	397.21	115.40	15.08	21.73	4	4	0	0	15.1	151.3	100.5
MH-561	MH-497	576.03	575.57	46.1	150	0.5	100.23	0.0715	0.065	1.1	0.9	1.28	15	1.60	55.32	147.52	46.10	5.19	6.00	2	2	0	0	5.2	49.3	34.6
MH-771	MH-924	599.4	598.46	93.9	150	0.74	100	0.2629	0.239	1.1	1.38	0.8	29	1.60	112.68	300.48	93.90	10.56	12.22	4	4	0	0	10.6	100.5	70.4
MH-196	MH-197	572.88	572.64	25.8	150	0.58	108.46	0.1243	0.113	1.1	0.97	1.21	22	1.60	30.96	82.56	25.80	2.90	3.36	1	1	0	0	2.9	27.6	19.4
MH-989	MH-985	583.77	583.36	43.8	150	0.6	106.05	0.1397	0.127	1.1	0.8	1.38	24.5	1.60	52.56	140.16	43.80	4.93	5.70	2	2	0	0	4.9	46.9	32.9
MH-519	MH-520	581.14	580.88	42.7	150	0.32	167.63	0.0286	0.026	1.1	0.8	1.38	37.8	1.60	51.24	136.64	42.70	4.80	5.56	2	2	0	0	4.8	45.7	32.0
MH-852	MH-1039	605.16	604.58	58	150	1.04	100	0.9284	0.844	1.1	1.37	0.8	56.7	1.60	69.60	185.60	58.00	6.53	7.55	2	2	0	0	6.5	62.1	43.5
MH-499	MH-500	581.24	580.98	41.8	150	0.6	161.8	0.2321	0.211	1.1	0.8	1.37	39.1	1.60	50.16	133.76	41.80	4.70	5.44	2	2	0	0	4.7	44.7	31.4
MH-904	MH-859	578.31	578.22	88.9	150	0.22	1000	0.0693	0.063	1.1	0.8	1.37	25.7	1.60	106.68	284.48	88.90	10.00	11.57	3	3	0	0	10.0	95.1	66.7
MH-628	MH-57	587.1	587.05	50.1	150	0.16	1000	0.0231	0.021	1.1	0.8	1.37	18.2	1.60	60.12	160.32	50.10	5.64	6.52	2	2	0	0	5.6	53.6	37.6
MH-783	MH-880	573.58	573.49	86.1	150	0.15	1000	0.0187	0.017	1.1	0.8	1.36	14.2	1.60	103.32	275.52	86.10	9.69	11.21	3	3	0	0	9.7	92.1	64.6
MH-910	MH-897	605.17	604.67	90.9	150	0.6	179.04	0.2662	0.242	1.1	0.84	1.31	40	1.60	109.08	290.88	90.90	10.23	11.83	4	4	0	0	10.2	97.2	68.2
MH-650	MH-143	585.91	585.86	51.8	150	0.18	1000	0.0341	0.031	1.1	0.8	1.35	18.6	1.60	62.16	165.76	51.80	5.83	6.74	2	2	0	0	5.8	55.4	38.9
MH-798	MH-788	604.99	604.37	79.4	150	0.6	126.57	0.1738	0.158	1																



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-192	MH-500	581.37	581.28	15.6	150	0.6	171.46	0.2519	0.229	1.1	1.03	1.07	30.3	1.60	18.72	49.92	15.60	1.76	2.03	1	1	0	0	1.8	16.7	11.7
MH-319	MH-45	575.95	575.79	36.3	150	0.6	225.01	0.3553	0.323	1.1	0.99	1.11	39.2	1.60	43.56	116.16	36.30	4.08	4.72	2	2	0	0	4.1	38.8	27.2
MH-39	MH-1055	603.14	602.8	34.2	150	0.22	100	0.0044	0.004	1.1	1.3	0.8	11.7	1.60	41.04	109.44	34.20	3.85	4.45	2	2	0	0	3.8	36.6	25.7
MH-468	MH-307	573.55	573.15	40.1	150	0.21	100	0.0044	0.004	1.1	1.3	0.8	3.8	1.60	48.12	128.32	40.10	4.51	5.22	2	2	0	0	4.5	42.9	30.1
MH-624	MH-623	573.56	573.11	44.9	150	0.18	100	0.0022	0.002	1	1.29	0.8	2.9	1.50	50.51	134.70	44.90	5.05	5.84	2	2	0	0	5.1	44.7	33.7
MH-38	MH-37	586.26	586.25	14.4	150	0.22	1000	0.0627	0.057	1	0.96	1.13	25.8	1.50	16.20	43.20	14.40	1.62	1.87	1	1	0	0	1.6	14.3	10.8
MH-715	MH-432	582.19	581.98	55.8	150	0.6	265.16	0.4455	0.405	1	1.14	0.94	46.1	1.50	62.78	167.40	55.80	6.28	7.26	2	2	0	0	6.3	55.5	41.9
MH-104	MH-105	577.01	576.99	20	150	0.15	1000	0.0198	0.018	1	1.05	1.03	12.1	1.50	22.50	60.00	20.00	2.25	2.60	1	1	0	0	2.3	19.9	15.0
MH-232	MH-171	577.71	577.48	27.5	150	0.6	116.44	0.1551	0.141	1	0.8	1.27	24.3	1.50	30.94	82.50	27.50	3.09	3.58	1	1	0	0	3.1	27.4	20.6
MH-168	MH-690	576.25	576.19	54.2	150	0.18	1000	0.0341	0.031	1	1.06	1.01	18.4	1.50	60.98	162.60	54.20	6.10	7.05	2	2	0	0	6.1	53.9	40.7
MH-840	MH-585	575.59	575.55	37	500	0.78	1000	9.5106	8.646	1	0.97	1.09	62.5	1.85	75.30	136.90	37.00	6.11	13.37	2	2	0	0	6.1	61.9	40.7
MH-477	MH-117	586.83	586.79	40.9	150	0.16	1000	0.0209	0.019	1	0.8	1.26	26.9	1.50	46.01	122.70	40.90	4.60	5.32	2	2	0	0	4.6	40.7	30.7
MH-190	MH-38	586.3	586.26	38.5	150	0.18	1000	0.033	0.03	1	1.1	0.96	20.3	1.50	43.31	115.50	38.50	4.33	5.01	2	2	0	0	4.3	38.3	28.9
MH-163	MH-277	580.37	580.33	36.1	150	0.19	1000	0.0407	0.037	1	1.25	0.81	15.4	1.50	40.61	108.30	36.10	4.06	4.70	2	2	0	0	4.1	35.9	27.1
MH-686	MH-687	581.33	581.29	35.9	150	0.11	1000	0.0066	0.006	1	0.8	1.26	28.7	1.50	40.39	107.70	35.90	4.04	4.67	2	2	0	0	4.0	35.7	26.9
MH-832	MH-797	581.26	580.55	71.7	150	0.3	100	0.0132	0.012	1	1.25	0.8	6.5	1.50	80.66	215.10	71.70	8.07	9.33	3	3	0	0	8.1	71.3	53.8
MH-465	MH-464	584.96	584.56	40	150	0.82	100	0.3773	0.343	1	1.25	0.8	39.5	1.50	45.00	120.00	40.00	4.50	5.21	2	2	0	0	4.5	39.8	30.0
MH-304	MH-303	594.18	593.85	32.8	150	0.43	100	0.0429	0.039	1	1.25	0.8	14.7	1.50	36.90	98.40	32.80	3.69	4.27	2	2	0	0	3.7	32.6	24.6
MH-641	MH-642	578.57	578.37	51.4	150	0.6	252.2	0.4147	0.377	1	0.8	1.25	41.5	1.50	57.83	154.20	51.40	5.78	6.69	2	2	0	0	5.8	51.1	38.6
MH-631	MH-163	580.42	580.37	49.9	150	0.13	1000	0.011	0.01	1	0.8	1.25	14.3	1.50	56.14	149.70	49.90	5.61	6.50	2	2	0	0	5.6	49.6	37.4
MH-167	MH-168	576.27	576.25	24.5	150	0.17	1000	0.0275	0.025	1	0.99	1.06	16.1	1.50	27.56	73.50	24.50	2.76	3.19	1	1	0	0	2.8	24.4	18.4
MH-1055	MH-599	602.8	602.12	86.4	150	0.51	127.76	0.1012	0.092	1	0.8	1.24	21.6	1.50	97.20	259.20	86.40	9.72	11.25	3	3	0	0	9.7	86.0	64.8
MH-599	MH-40	602.12	601.69	43.4	150	0.63	100	0.1529	0.139	1	1.24	0.8	24.7	1.50	48.83	130.20	43.40	4.88	5.65	2	2	0	0	4.9	43.2	32.6
MH-672	MH-129	573.61	573.2	40.9	150	0.17	100	0.0022	0.002	1	1.24	0.8	2.6	1.50	46.01	122.70	40.90	4.60	5.32	2	2	0	0	4.6	40.7	30.7
MH-812	MH-691	581.38	580.71	67.5	150	0.31	100	0.0143	0.013	1	1.24	0.8	6.9	1.50	75.94	202.50	67.50	7.59	8.79	3	3	0	0	7.6	67.2	50.6
MH-749	MH-750	605.65	605.32	59.6	150	0.6	180.6	0.2695	0.245	1	0.8	1.23	33.3	1.50	67.05	178.80	59.60	6.71	7.76	2	2	0	0	6.7	59.3	44.7
MH-365	MH-5	579.89	579.79	98.4	400	0.6	1000	3.2879	2.989	1	0.95	1.08	46.6	1.75	172.20	344.40	98.40	14.76	27.12	4	4	0	0	14.8	145.1	98.4
MH-59	MH-211	580.9	580.76	33.9	150	0.6	236.96	0.3795	0.345	1	0.98	1.05	41.6	1.50	38.14	101.70	33.90	3.81	4.41	2	2	0	0	3.8	33.7	25.4
MH-32	MH-277	580.03	579.99	38.1	150	0.13	1000	0.0121	0.011	1	0.88	1.15	18.4	1.50	42.86	114.30	38.10	4.29	4.96	2	2	0	0	4.3	37.9	28.6
MH-616	MH-192	581.44	581.37	11.8	150	0.6	168.69	0.2475	0.225	1	0.99	1.03	30.7	1.50	13.28	35.40	11.80	1.33	1.54	1	1	0	0	1.3	11.7	8.9
MH-974	MH-975	587.01	585.92	110.4	150	0.59	100.89	0.1221	0.111	1	0.8	1.22	24.3	1.50	124.20	331.20	110.40	12.42	14.37	4	4	0	0	12.4	109.8	82.8
MH-975	MH-670	585.92	585.39	52.6	150	0.68	100	0.2002	0.182	1	1.22	0.8	25.2	1.50	59.18	157.80	52.60	5.92	6.85	2	2	0	0	5.9	52.3	39.5
MH-843	MH-532	596.81	596.66	151.8	271	0.55	1000	1.7842	1.622	1	0.8	1.22	48.2	1.62	214.33	492.14	151.80	19.83	28.58	6	6	0	0	19.8	185.7	132.2
MH-532	MH-64	596.53	596.37	65.2	400	0.96	409.92	5.6936	5.176	1	1.22	0.8	56.6	1.75	114.10	228.20	65.20	9.78	17.97	3	3	0	0	9.8	96.1	65.2
MH-474	MH-120	586.81	586.77	40.6	150	0.17	1000	0.0297	0.027	1	0.8	1.22	18.1	1.50	45.68	121.80	40.60	4.57	5.28	2	2	0	0	4.6	40.4	30.5
MH-797	MH-66	580.14	579.72	65	150	0.82	154.01	0.5247	0.477	1	1.21	0.81	45.4	1.50	73.13	195.00	65.00	7.31	8.46	3	3	0	0	7.3	64.7	48.8
MH-452	MH-145	586.42	586.38	39.6	150	0.16	1000	0.022	0.02	1	0.8	1.21	15.3	1.50	44.55	118.80	39.60	4.46	5.15	2	2	0	0	4.5	39.4	29.7
MH-197	MH-38	572.64	572.24	40.2	150	0.61	100	0.1364	0.124	1	1.21	0.8	20.8	1.50	45.23	120.60	40.20	4.52	5.23	2	2	0	0	4.5	40.0	30.2
MH-13	MH-14	604.26	604.23	9.9	175	0.6	442.25	0.7205	0.655	1	1.04	0.97	52.4	1.53	11.70	30.20	9.90	1.15	1.39	1	1	0	0	1.2	10.3	7.7
MH-277	MH-72	579.99	579.96	30.6	150	0.23	1000	0.0825	0.075	1	1.15	0.85	21.9	1.50	34.43	91.80	30.60	3.44	3.98	2	2	0	0	3.4	30.4	23.0
MH-829	MH-830	592.52	592.45	71.1	600	0.88	1000	15.5364	14.124	1	1.01	1	55.8	1.95	166.37	277.29	71.10	12.80	32.89	3	3	0	0	12.8	133.5	85.3
MH-756	MH-211	581.61	581	60.6	150	0.3	100	0.0143	0.013	1	1.2	0.8	6.8	1.50	68.18	181.80	60.60	6.82	7.89	3	3	0	0	6.8	60.3	45.5
MH-389	MH-112	587.74	587.71	37	150	0.17	1000	0.0275	0.025	1	0.8	1.19	24.6	1.50	41.63	111.00	37.00	4.16	4.82	2	2	0	0	4.2	36.8	27.8
MH-706	MH-707	577.4	577.2	55.6	150	0.2	269.46	0.011	0.01	1	0.8	1.19	29.8	1.50	62.55	166.80	55.60	6.26	7.24	2	2	0	0	6.3	55.3	41.7
MH-814	MH-771	600.1	599.6	68.8	150	0.6	137.6	0.1914	0.174	1	0.8	1.18	25.7	1.50	77.40	206.40	68.80	7.74	8.96	3	3	0	0	7.7	68.4	51.6
MH-747	MH-662	581.44	580.86	58.8	150	0.33	100	0.0176	0.016	1	1.18	0.8	7.6	1.50	66.15	176.40	58.80	6.62	7.65	2	2	0	0	6.6	58.5	44.1
MH-729	MH-59	581.66	581.08	57.6	150	0.26	100	0.0088	0.008	1	1.18	0.8	5.3	1.50	64.80	172.80	57.60	6.48	7.50	2	2	0	0	6.5	57.3	43.2
MH-818	MH-512	575.66	575.45	21.5	150	0.85	100	0.4224	0.384	1	1.18	0.8	41.4	1.50	24.19	64.50	21.50	2.42	2.80	1	1	0	0	2.4	21.4	16.1
MH-58	MH-59	580.98	580.9	17.8	150	0.6	228.4	0.3619	0.329	1	0.99	0.98	39.6	1.50	20.03	53.40	17.80	2.00	2.32	1	1	0	0	2.0	17.7	13.4
MH-990	MH-943	598.37	597.19	117.6																						

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-216	MH-884	594.47	594.26	28.4	271	1.31	133.95	2.7566	2.506	1	1.14	0.8	45.2	1.62	40.10	92.07	28.40	3.71	5.35	1	1	0	0	3.7	34.7	24.7
MH-802	MH-216	594.54	594.47	66.5	271	0.6	989.02	2.6906	2.446	1	0.8	1.14	60.9	1.62	93.89	215.59	66.50	8.69	12.52	3	3	0	0	8.7	81.4	57.9
MH-215	MH-216	594.75	594.6	26.9	150	0.31	172.35	0.0275	0.025	1	0.8	1.14	9.9	1.50	30.26	80.70	26.90	3.03	3.50	1	1	0	0	3.0	26.8	20.2
MH-664	MH-581	582.63	582.12	51.5	150	0.44	100	0.0451	0.041	1	1.14	0.8	11.9	1.50	57.94	154.50	51.50	5.79	6.70	2	2	0	0	5.8	51.2	38.6
MH-1023	MH-825	603.84	602.83	100.7	175	1.11	100	0.9152	0.832	1	1.14	0.8	44.2	1.53	119.01	307.14	100.70	11.71	14.13	4	4	0	0	11.7	104.9	78.0
MH-109	MH-58	581.07	580.98	20.6	150	0.6	218.54	0.3421	0.311	1	0.95	0.99	38	1.50	23.18	61.80	20.60	2.32	2.68	1	1	0	0	2.3	20.5	15.5
MH-660	MH-394	582.45	581.95	50.4	150	0.37	100	0.0264	0.024	1	1.13	0.8	9.3	1.50	56.70	151.20	50.40	5.67	6.56	2	2	0	0	5.7	50.1	37.8
MH-247	MH-248	576.97	576.68	28.5	150	0.93	100	0.6006	0.546	1	1.13	0.8	55.1	1.50	32.06	85.50	28.50	3.21	3.71	1	1	0	0	3.2	28.4	21.4
MH-996	MH-997	570.97	570.3	123.2	900	2.31	184.57	57.2077	52.007	1	1.13	0.8	62.6	2.25	452.76	554.40	123.20	27.72	106.06	5	5	0	0	27.7	346.7	184.8
MH-949	MH-894	595	594.5	67.8	150	0.65	136.6	0.2508	0.228	1	0.8	1.13	36.3	1.50	76.28	203.40	67.80	7.63	8.83	3	3	0	0	7.6	67.4	50.9
MH-895	MH-894	594.9	594.5	87.3	150	0.42	220.49	0.0957	0.087	1	0.8	1.13	30.7	1.50	98.21	261.90	87.30	9.82	11.36	3	3	0	0	9.8	86.8	65.5
MH-22	MH-570	589.66	589.13	64.1	150	0.8	120.74	0.451	0.41	1	0.95	0.98	42.8	1.50	72.11	192.30	64.10	7.21	8.34	3	3	0	0	7.2	63.8	48.1
MH-430	MH-431	581.59	581.55	38.6	150	0.1	1000	0.0044	0.004	1	0.8	1.13	19.6	1.50	43.43	115.80	38.60	4.34	5.02	2	2	0	0	4.3	38.4	29.0
MH-298	MH-335	573.85	573.79	31.5	217	0.6	584.78	1.0956	0.996	1	0.94	0.99	46.2	1.57	40.33	98.72	31.50	3.86	5.02	2	2	0	0	3.9	35.3	25.7
MH-810	MH-329	590.23	589.55	67.6	600	2.11	100	16.6155	15.105	1	1.13	0.8	54.5	1.95	158.18	263.64	67.60	12.17	31.27	3	3	0	0	12.2	126.9	81.1
MH-386	MH-387	581.51	581.47	36.9	150	0.11	1000	0.0066	0.006	1	0.8	1.13	20.2	1.50	41.51	110.70	36.90	4.15	4.80	2	2	0	0	4.2	36.7	27.7
MH-460	MH-461	605.93	605.89	44.7	150	0.17	1000	0.0264	0.024	1	0.8	1.13	18.7	1.50	50.29	134.10	44.70	5.03	5.82	2	2	0	0	5.0	44.5	33.5
MH-483	MH-484	576.14	576.09	41.2	150	0.09	1000	0.0033	0.003	1	0.8	1.12	6.4	1.50	46.35	123.60	41.20	4.64	5.36	2	2	0	0	4.6	41.0	30.9
MH-1068	MH-1036	584.19	583.54	65.1	217	1.41	100	2.3507	2.137	1	1.12	0.8	54.5	1.57	83.34	204.02	65.10	7.98	10.38	3	3	0	0	8.0	73.0	53.2
MH-913	MH-802	595.1	594.54	130.1	271	1.04	230.91	2.4167	2.197	1	1.12	0.8	59.2	1.62	183.69	421.78	130.10	17.00	24.50	5	5	0	0	17.0	159.2	113.3
MH-746	MH-196	572.91	572.88	28.6	150	0.24	1000	0.0968	0.088	1	0.94	0.97	25	1.50	32.18	85.80	28.60	3.22	3.72	1	1	0	0	3.2	28.5	21.5
MH-1010	MH-1029	579.77	578.65	154.8	400	1.31	138.24	4.1074	3.734	1	1.11	0.8	47.7	1.75	270.90	541.80	154.80	23.22	42.66	6	6	0	0	23.2	228.2	154.8
MH-53	MH-52	586.17	586.14	38.1	150	0.15	1000	0.0198	0.018	1	0.8	1.11	35.6	1.50	42.86	114.30	38.10	4.29	4.96	2	2	0	0	4.3	37.9	28.6
MH-820	MH-819	592.25	591.62	70.9	150	0.6	113.43	0.1507	0.137	1	0.8	1.11	22.2	1.50	79.76	212.70	70.90	7.98	9.23	3	3	0	0	8.0	70.5	53.2
MH-847	MH-634	575.91	575.58	76	800	1.85	230.67	33.3223	30.293	1	0.8	1.11	53.7	2.15	251.56	326.80	76.00	15.96	54.14	3	3	0	0	16.0	197.4	106.4
MH-265	MH-634	576.38	576.21	75.7	175	0.6	451.73	0.7436	0.676	1	0.8	1.11	48.8	1.53	89.47	230.89	75.70	8.80	10.62	3	3	0	0	8.8	78.8	58.7
MH-4	MH-3	586.44	586.41	38.2	150	0.16	1000	0.0231	0.021	1	0.8	1.11	18.5	1.50	42.98	114.60	38.20	4.30	4.97	2	2	0	0	4.3	38.0	28.7
MH-533	MH-71	579.56	579.52	43.1	150	0.12	1000	0.0077	0.007	1	0.8	1.11	12.1	1.50	48.49	129.30	43.10	4.85	5.61	2	2	0	0	4.8	42.9	32.3
MH-191	MH-190	586.33	586.3	25.5	150	0.15	1000	0.0198	0.018	0.9	0.8	1.1	14.9	1.40	26.78	71.40	25.50	2.87	3.32	1	1	0	0	2.9	23.5	19.1
MH-760	MH-736	584.83	584.77	60.5	150	0.18	1000	0.033	0.03	0.9	0.8	1.1	13.8	1.40	63.53	169.40	60.50	6.81	7.87	3	3	0	0	6.8	55.7	45.4
MH-506	MH-369	574.05	573.75	42.2	150	0.6	141.54	0.198	0.18	0.9	0.8	1.1	27.9	1.40	44.31	118.16	42.20	4.75	5.49	2	2	0	0	4.7	38.8	31.7
MH-1013	MH-763	584.69	584.65	37.4	150	0.13	1000	0.0132	0.012	0.9	0.8	1.1	8.7	1.40	39.27	104.72	37.40	4.21	4.87	2	2	0	0	4.2	34.4	28.1
MH-28	MH-843	597.94	596.91	102.7	175	1.27	100	1.5532	1.412	0.9	1.09	0.8	58.9	1.43	113.42	292.70	102.70	11.94	14.41	4	4	0	0	11.9	99.0	79.6
MH-937	MH-938	572.11	572.01	98.8	900	1.18	1000	50.9938	46.358	0.9	0.8	1.09	55	2.15	348.27	424.84	98.80	22.23	85.05	4	4	0	0	22.2	263.2	148.2
MH-1052	MH-486	588.19	587.74	44.1	150	1.27	100	1.7457	1.587	0.9	1.09	0.8	79.6	1.40	46.31	123.48	44.10	4.96	5.74	2	2	0	0	5.0	40.6	33.1
MH-863	MH-1011	573.97	573.84	132.5	150	0.18	1000	0.0363	0.033	0.9	0.88	1.01	14.5	1.40	139.13	371.00	132.50	14.91	17.25	5	5	0	0	14.9	121.9	99.4
MH-584	MH-585	576.27	575.9	47.5	150	0.33	127.09	0.0231	0.021	0.9	0.8	1.09	8.8	1.40	49.88	133.00	47.50	5.34	6.18	2	2	0	0	5.3	43.7	35.6
MH-1069	MH-937	573.66	572.11	244.6	900	2.33	157.2	47.806	43.46	0.9	1.09	0.8	54.2	2.15	862.22	1051.78	244.60	55.04	210.56	9	9	0	0	55.0	651.7	366.9
MH-473	MH-463	576.03	575.99	40.8	150	0.11	1000	0.0066	0.006	0.9	0.8	1.08	8.9	1.40	42.84	114.24	40.80	4.59	5.31	2	2	0	0	4.6	37.5	30.6
MH-997	MH-1076	570.3	570.02	278.3	900	1.21	1000	58.5486	53.226	0.9	0.8	1.08	74.6	2.15	981.01	1196.69	278.30	62.62	239.57	10	10	0	0	62.6	741.4	417.5
MH-950	MH-951	597.96	596.88	107.5	150	0.59	100	0.1221	0.111	0.9	1.07	0.8	23.6	1.40	112.88	301.00	107.50	12.09	13.99	4	4	0	0	12.1	98.9	80.6
MH-214	MH-746	572.93	572.91	19.3	150	0.24	1000	0.0891	0.081	0.9	0.92	0.94	28.1	1.40	20.27	54.04	19.30	2.17	2.51	1	1	0	0	2.2	17.8	14.5
MH-567	MH-566	578.25	578.21	46.4	150	0.25	1000	0.1067	0.097	0.9	0.8	1.07	27.4	1.40	48.72	129.92	46.40	5.22	6.04	2	2	0	0	5.2	42.7	34.8
MH-991	MH-801	602.16	601.71	120.4	150	0.36	270.8	0.0726	0.066	0.9	0.8	1.06	33.5	1.40	126.42	337.12	120.40	13.55	15.67	5	5	0	0	13.5	110.7	90.3
MH-815	MH-986	602.58	602.33	178.7	217	0.6	687.27	1.4443	1.313	0.9	0.8	1.06	56.7	1.47	214.18	524.31	178.70	21.90	28.51	6	6	0	0	21.9	185.7	146.0
MH-986	MH-987	602.33	601.19	116.4	217	1.24	102.78	1.5246	1.386	0.9	1.06	0.8	43.3	1.47	139.51	341.52	116.40	14.26	18.57	4	4	0	0	14.3	120.9	95.1
MH-175	MH-167	576.31	576.27	36.9	150	0.16	1000	0.0209	0.019	0.9	0.87	0.99	14.4	1.40	38.75	103.32	36.90	4.15	4.80	2	2	0	0	4.2	33.9	27.7
MH-861	MH-561	576.11	576.03	78.3	150	0.22	1000	0.0627	0.057	0.9	0.96	0.9	19.5	1.40	82.22	219.24	78.30	8.81	10.19	3	3	0	0	8.8	72.0	58.7
MH-404	MH-158	573.99	573.95	37.5	150	0.12	1000	0.0088	0.008	0.9	0.8	1.06														

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-61	MH-351	583.21	582.86	34.9	150	0.51	100	0.0748	0.068	0.9	1.03	0.8	15.3	1.40	36.65	97.72	34.90	3.93	4.54	2	2	0	0	3.9	32.1	26.2
MH-346	MH-312	583.23	582.88	34.7	150	0.42	100	0.0407	0.037	0.9	1.03	0.8	11.4	1.40	36.44	97.16	34.70	3.90	4.52	2	2	0	0	3.9	31.9	26.0
MH-90	MH-214	572.95	572.93	22.3	150	0.19	1000	0.0407	0.037	0.9	0.9	0.92	23.5	1.40	23.42	62.44	22.30	2.51	2.90	1	1	0	0	2.5	20.5	16.7
MH-108	MH-109	581.17	581.07	20.2	150	0.6	202.06	0.3113	0.283	0.9	0.87	0.95	36	1.40	21.21	56.56	20.20	2.27	2.63	1	1	0	0	2.3	18.6	15.2
MH-217	MH-840	575.76	575.69	71.8	400	0.67	1000	5.2349	4.759	0.9	0.85	0.97	56.6	1.65	118.47	236.94	71.80	10.77	19.79	3	3	0	0	10.8	98.7	71.8
MH-125	MH-124	588.41	588.38	21.5	150	0.16	1000	0.022	0.02	0.9	0.8	1.02	24.9	1.40	22.58	60.20	21.50	2.42	2.80	1	1	0	0	2.4	19.8	16.1
MH-118	MH-117	587.05	587.03	21	150	0.17	1000	0.0297	0.027	0.9	0.8	1.02	13.1	1.40	22.05	58.80	21.00	2.36	2.73	1	1	0	0	2.4	19.3	15.8
MH-1071	MH-1082	591.56	586.43	513.1	400	1.96	100	11.6831	10.621	0.9	1.02	0.8	68.6	1.65	846.62	1693.23	513.10	76.97	141.41	18	18	0	0	77.0	705.2	513.1
MH-555	MH-671	603.08	602.72	50.5	150	0.6	139.22	0.1947	0.177	0.9	0.8	1.01	25.8	1.40	53.03	141.40	50.50	5.68	6.57	2	2	0	0	5.7	46.5	37.9
MH-12	MH-878	585.53	585.29	33.1	150	0.6	136.35	0.187	0.17	0.9	0.9	0.91	29.4	1.40	34.76	92.68	33.10	3.72	4.31	2	2	0	0	3.7	30.4	24.8
MH-808	MH-458	587.34	586.32	101.9	150	1.02	100	0.8602	0.782	0.9	1.01	0.8	54.3	1.40	107.00	285.32	101.90	11.46	13.26	4	4	0	0	11.5	93.7	76.4
MH-850	MH-536	580.3	579.53	76.6	150	0.42	100	0.0385	0.035	0.9	1.01	0.8	11.1	1.40	80.43	214.48	76.60	8.62	9.97	3	3	0	0	8.6	70.5	57.5
MH-1058	MH-384	574.05	573.84	208.9	150	0.25	1000	0.1023	0.093	0.9	0.8	1.01	24.5	1.40	219.35	584.92	208.90	23.50	27.19	7	7	0	0	23.5	192.2	156.7
MH-312	MH-249	582.67	582.35	31.9	150	0.47	100	0.055	0.05	0.9	1.01	0.8	13.2	1.40	33.50	89.32	31.90	3.59	4.15	2	2	0	0	3.6	29.3	23.9
MH-448	MH-298	573.91	573.85	39.2	217	0.6	583.78	1.0923	0.993	0.9	0.87	0.94	51.5	1.47	46.98	115.01	39.20	4.80	6.25	2	2	0	0	4.8	40.7	32.0
MH-300	MH-227	581.92	581.6	31.6	150	0.23	100	0.0055	0.005	0.9	1.01	0.8	4.2	1.40	33.18	88.48	31.60	3.56	4.11	2	2	0	0	3.6	29.1	23.7
MH-1009	MH-769	599.22	598.58	129.6	271	1.08	202.04	2.3606	2.146	0.9	0.8	1.01	52	1.52	171.69	394.24	129.60	16.93	24.40	5	5	0	0	16.9	147.3	112.9
MH-769	MH-704	598.58	597.76	81.8	271	1.58	100	3.7477	3.407	0.9	1.01	0.8	58.7	1.52	108.37	248.84	81.80	10.69	15.40	3	3	0	0	10.7	93.0	71.2
MH-289	MH-290	581.44	581.14	30.9	150	0.22	100	0.0044	0.004	0.9	1.01	0.8	4	1.40	32.45	86.52	30.90	3.48	4.02	2	2	0	0	3.5	28.4	23.2
MH-823	MH-627	589.02	588.29	72.3	600	2.17	100	18.2512	16.592	0.9	1	0.8	57.9	1.85	160.51	267.51	72.30	13.01	33.45	3	3	0	0	13.0	127.1	86.8
MH-1041	MH-28	598.93	598.23	70.5	175	1.27	100	1.5532	1.412	0.9	1	0.8	58.9	1.43	77.86	200.93	70.50	8.20	9.89	3	3	0	0	8.2	68.0	54.6
MH-830	MH-1017	592.45	592.21	137.2	600	1.1	568.94	15.5991	14.181	0.9	1	0.8	57.5	1.85	304.58	507.64	137.20	24.70	63.47	5	5	0	0	24.7	241.1	164.6
MH-884	MH-551	594.13	594.09	44.8	400	0.64	1000	3.1812	2.892	0.9	0.8	0.99	37.4	1.65	73.92	147.84	44.80	6.72	12.35	2	2	0	0	6.7	61.6	44.8
MH-371	MH-157	582.7	582.43	35.7	150	0.5	132.99	0.1012	0.092	0.9	0.8	0.99	25.8	1.40	37.49	99.96	35.70	4.02	4.65	2	2	0	0	4.0	32.8	26.8
MH-156	MH-157	582.45	582.43	23.4	150	0.2	1000	0.0506	0.046	0.9	0.8	0.99	27.4	1.40	24.57	65.52	23.40	2.63	3.05	1	1	0	0	2.6	21.5	17.6
MH-625	MH-629	603.85	603.09	144.5	150	0.6	190.95	0.2871	0.261	0.9	0.92	0.88	32.9	1.40	151.73	404.60	144.50	16.26	18.81	5	5	0	0	16.3	132.9	108.4
MH-617	MH-616	581.75	581.44	49.5	150	0.6	160.94	0.2321	0.211	0.9	0.8	0.99	30.1	1.40	51.98	138.60	49.50	5.57	6.44	2	2	0	0	5.6	45.5	37.1
MH-350	MH-222	576.75	576.7	51.4	150	0.23	1000	0.0748	0.068	0.9	0.91	0.88	23.8	1.40	53.97	143.92	51.40	5.78	6.69	2	2	0	0	5.8	47.3	38.6
MH-540	MH-541	599.2	598.75	44.4	150	0.36	100	0.0242	0.022	0.9	0.99	0.8	12.1	1.40	46.62	124.32	44.40	5.00	5.78	2	2	0	0	5.0	40.8	33.3
MH-590	MH-927	597.38	597.18	20.4	271	1.45	100	2.6752	2.432	0.9	0.99	0.8	43	1.52	27.03	62.06	20.40	2.67	3.84	1	1	0	0	2.7	23.2	17.8
MH-11	MH-12	585.54	585.53	9.3	150	0.23	1000	0.077	0.07	0.9	0.89	0.9	26.1	1.40	9.77	26.04	9.30	1.05	1.21	1	1	0	0	1.0	8.6	7.0
MH-869	MH-285	588.13	587.82	111.7	600	1.37	358.01	19.1829	17.439	0.9	0.99	0.8	50.2	1.85	247.97	413.29	111.70	20.11	51.67	4	4	0	0	20.1	196.3	134.0
MH-547	MH-798	605.06	604.99	66	150	0.25	1000	0.1089	0.099	0.9	0.8	0.98	27.9	1.40	69.30	184.80	66.00	7.43	8.59	3	3	0	0	7.4	60.7	49.5
MH-570	MH-571	589.13	588.66	46.6	150	0.88	100	0.4983	0.453	0.9	0.98	0.8	40.4	1.40	48.93	130.48	46.60	5.24	6.07	2	2	0	0	5.2	42.9	35.0
MH-878	MH-954	585.29	585.13	29.9	150	0.6	187.26	0.2783	0.253	0.9	0.91	0.87	34.3	1.40	31.40	83.72	29.90	3.36	3.89	1	1	0	0	3.4	27.5	22.4
MH-91	MH-90	572.97	572.95	21.8	150	0.17	1000	0.0264	0.024	0.9	0.88	0.9	17.2	1.40	22.89	61.04	21.80	2.45	2.84	1	1	0	0	2.5	20.1	16.4
MH-647	MH-48	574.13	574.05	77.1	150	0.17	1000	0.0286	0.026	0.9	0.87	0.91	12.9	1.40	80.96	215.88	77.10	8.67	10.04	3	3	0	0	8.7	70.9	57.8
MH-914	MH-915	595.4	595.31	87.1	271	0.57	1000	1.9591	1.781	0.9	0.8	0.98	59.9	1.52	115.39	264.96	87.10	11.38	16.40	3	3	0	0	11.4	99.0	75.9
MH-263	MH-343	576.88	576.87	9.8	150	0.16	1000	0.0231	0.021	0.9	0.89	0.89	24.3	1.40	10.29	27.44	9.80	1.10	1.28	1	1	0	0	1.1	9.0	7.4
MH-15	MH-1012	593.24	592.86	68.7	150	0.6	180.69	0.2695	0.245	0.9	0.81	0.97	31.6	1.40	72.14	192.36	68.70	7.73	8.94	3	3	0	0	7.7	63.2	51.5
MH-229	MH-479	594.33	594.1	35.4	150	0.6	150.41	0.2134	0.194	0.9	0.83	0.95	27.4	1.40	37.17	99.12	35.40	3.98	4.61	2	2	0	0	4.0	32.6	26.6
MH-951	MH-765	596.88	596.59	38.6	150	0.6	130.71	0.1793	0.163	0.9	0.8	0.98	24.6	1.40	40.53	108.08	38.60	4.34	5.02	2	2	0	0	4.3	35.5	29.0
MH-457	MH-840	575.88	575.69	111.8	400	0.79	566.93	4.2636	3.876	0.9	0.8	0.97	49.5	1.65	184.47	368.94	111.80	16.77	30.81	4	4	0	0	16.8	153.7	111.8
MH-751	MH-196	573.05	572.88	61.1	150	0.23	355.87	0.022	0.02	0.9	0.8	0.97	16.1	1.40	64.16	171.08	61.10	6.87	7.95	3	3	0	0	6.9	56.2	45.8
MH-10	MH-138	583.18	582.92	25.9	150	0.52	100	0.077	0.07	0.9	0.97	0.8	15.6	1.40	27.20	72.52	25.90	2.91	3.37	1	1	0	0	2.9	23.8	19.4
MH-46	MH-70	578.26	578.22	17.2	150	0.33	392.04	0.0902	0.082	0.9	0.97	0.8	20	1.40	18.06	48.16	17.20	1.94	2.24	1	1	0	0	1.9	15.8	12.9
MH-15	MH-47	578.72	578.64	16.8	150	0.33	224.22	0.0462	0.042	0.9	0.97	0.8	13.5	1.40	17.64	47.04	16.80	1.89	2.19	1	1	0	0	1.9	15.5	12.6
MH-14	MH-620	604.23	604.07	74.2	175	0.6	443.39	0.7348	0.668	0.9	0.97	0.8	49.1	1.43	81.94	211.47	74.20	8.63	10.41	3	3	0	0	8.6	71.5	57.5
MH-227	MH-58	581.44	581.16	27.3	150	0.29	100	0.0121	0.011	0.9	0.96	0.8	6.4	0.00	0.00											



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-343	MH-754	576.87	576.82	50.3	150	0.24	1000	0.088	0.08	0.9	0.89	0.87	28	1.40	52.82	140.84	50.30	5.66	6.55	2	2	0	0	5.7	46.3	37.7
MH-405	MH-406	579.22	579.03	37.6	150	0.6	207.75	0.3223	0.293	0.9	0.89	0.87	41	1.40	39.48	105.28	37.60	4.23	4.89	2	2	0	0	4.2	34.6	28.2
MH-467	MH-542	571.05	570.9	44.6	150	0.6	287.77	0.5027	0.457	0.9	0.8	0.95	47	1.40	46.83	124.88	44.60	5.02	5.81	2	2	0	0	5.0	41.0	33.5
MH-148	MH-147	592.8	592.78	22.4	150	0.23	1000	0.0814	0.074	0.9	0.8	0.95	25.7	1.40	23.52	62.72	22.40	2.52	2.92	1	1	0	0	2.5	20.6	16.8
MH-203	MH-397	583.92	583.81	87	271	0.61	804.44	1.837	1.67	0.9	0.95	0.8	47.2	1.52	115.26	264.65	87.00	11.37	16.38	3	3	0	0	11.4	98.9	75.8
MH-204	MH-203	584.14	584.04	26.4	150	0.6	275.34	0.4708	0.428	0.9	0.8	0.95	45	1.40	27.72	73.92	26.40	2.97	3.44	1	1	0	0	3.0	24.3	19.8
MH-325	MH-176	581.96	581.64	33	150	0.31	100	0.0154	0.014	0.9	0.95	0.8	7	1.40	34.65	92.40	33.00	3.71	4.30	2	2	0	0	3.7	30.4	24.8
MH-668	MH-615	582.74	582.69	52.6	150	0.17	1000	0.0297	0.027	0.9	0.8	0.95	15.8	1.40	55.23	147.28	52.60	5.92	6.85	2	2	0	0	5.9	48.4	39.5
MH-615	MH-614	582.69	582.46	49.5	150	0.37	209.64	0.0627	0.057	0.9	0.95	0.8	23.7	1.40	51.98	138.60	49.50	5.57	6.44	2	2	0	0	5.6	45.5	37.1
MH-970	MH-529	603.02	602.83	109.6	150	0.31	602.72	0.1177	0.107	0.9	0.8	0.95	25.7	1.40	115.08	306.88	109.60	12.33	14.27	4	4	0	0	12.3	100.8	82.2
MH-529	MH-528	602.83	602.4	43.5	150	0.63	100	0.1507	0.137	0.9	0.95	0.8	21.8	1.40	45.68	121.80	43.50	4.89	5.66	2	2	0	0	4.9	40.0	32.6
MH-366	MH-365	579.93	579.89	44.4	400	0.64	1000	3.1515	2.865	0.9	0.8	0.95	45.5	1.65	73.26	146.52	44.40	6.66	12.24	2	2	0	0	6.7	61.0	44.4
MH-21	MH-22	589.71	589.66	13.7	150	0.6	256.37	0.4246	0.386	0.9	0.8	0.95	42.7	1.40	14.39	38.36	13.70	1.54	1.78	1	1	0	0	1.5	12.6	10.3
MH-222	MH-181	576.7	576.66	26.3	150	0.28	566.37	0.0792	0.072	0.9	0.88	0.87	25	1.40	27.62	73.64	26.30	2.96	3.42	1	1	0	0	3.0	24.2	19.7
MH-422	MH-423	603.92	603.88	38.4	150	0.19	1000	0.0407	0.037	0.9	0.8	0.94	20.6	1.40	40.32	107.52	38.40	4.32	5.00	2	2	0	0	4.3	35.3	28.8
MH-663	MH-91	572.98	572.97	13.6	150	0.13	1000	0.0121	0.011	0.9	0.87	0.88	12.7	1.40	14.28	38.08	13.60	1.53	1.77	1	1	0	0	1.5	12.5	10.2
MH-256	MH-432	582.22	581.98	38.7	150	0.38	166.27	0.0495	0.045	0.9	0.8	0.94	30.1	1.40	40.64	108.36	38.70	4.35	5.04	2	2	0	0	4.4	35.6	29.0
MH-432	MH-387	581.98	581.8	41.5	150	0.66	225.44	0.5071	0.461	0.9	0.94	0.8	45.5	1.40	43.58	116.20	41.50	4.67	5.40	2	2	0	0	4.7	38.2	31.1
MH-992	MH-207	605.19	604.38	120.6	150	0.49	148.9	0.1056	0.096	0.9	0.94	0.8	22.3	1.40	126.63	337.68	120.60	13.57	15.70	5	5	0	0	13.6	110.9	90.5
MH-138	MH-77	582.77	582.56	21.8	150	0.53	100	0.0858	0.078	0.9	0.94	0.8	16.5	1.40	22.89	61.04	21.80	2.45	2.84	1	1	0	0	2.5	20.1	16.4
MH-745	MH-746	573.05	572.91	59.3	150	0.13	416.67	0.0044	0.004	0.9	0.8	0.94	16.8	1.40	62.27	166.04	59.30	6.67	7.72	2	2	0	0	6.7	54.5	44.5
MH-329	MH-330	589.55	589.52	33.6	600	0.89	1000	16.7695	15.245	0.9	0.8	0.94	63.7	1.85	74.59	124.32	33.60	6.05	15.54	2	2	0	0	6.0	59.0	40.3
MH-8	MH-382	587.14	587.11	26.4	150	0.12	1000	0.0088	0.008	0.9	0.8	0.94	9.9	1.40	27.72	73.92	26.40	2.97	3.44	1	1	0	0	3.0	24.3	19.8
MH-1047	MH-992	605.37	605.19	179.7	150	0.22	1000	0.0704	0.064	0.9	0.8	0.94	22.1	1.40	188.69	503.16	179.70	20.22	23.39	6	6	0	0	20.2	165.3	134.8
MH-673	MH-454	602.77	602.66	109.1	150	0.23	1000	0.077	0.07	0.9	0.81	0.92	23.3	1.40	114.56	305.48	109.10	12.27	14.20	4	4	0	0	12.3	100.4	81.8
MH-856	MH-557	591.94	591.39	77.4	600	1.86	140.35	16.4758	14.978	0.9	0.94	0.8	44.7	1.85	171.83	286.38	77.40	13.93	35.81	3	3	0	0	13.9	136.0	92.9
MH-543	MH-7	602.14	601.66	48.1	150	0.42	100	0.0396	0.036	0.9	0.93	0.8	11.2	1.40	50.51	134.68	48.10	5.41	6.26	2	2	0	0	5.4	44.2	36.1
MH-759	MH-758	587.56	587.01	60.4	150	0.6	110.53	0.1463	0.133	0.9	0.8	0.93	24.7	1.40	63.42	169.12	60.40	6.80	7.86	3	3	0	0	6.8	55.6	45.3
MH-287	MH-441	577.23	576.9	32.9	150	0.39	100	0.0308	0.028	0.9	0.93	0.8	10.9	1.40	34.55	92.12	32.90	3.70	4.28	2	2	0	0	3.7	30.3	24.7
MH-453	MH-410	602.49	601.56	92.6	150	0.61	100	0.1353	0.123	0.9	0.92	0.8	20.7	1.40	97.23	259.28	92.60	10.42	12.05	4	4	0	0	10.4	85.2	69.5
MH-444	MH-305	574.01	573.97	39.3	150	0.26	1000	0.1144	0.104	0.9	0.84	0.88	25.9	1.40	41.27	110.04	39.30	4.42	5.12	2	2	0	0	4.4	36.1	29.5
MH-754	MH-827	576.82	576.73	93.8	150	0.24	1000	0.0979	0.089	0.9	0.87	0.85	30.2	1.40	98.49	262.64	93.80	10.55	12.21	4	4	0	0	10.6	86.3	70.4
MH-676	MH-677	581.39	581.33	53.5	150	0.21	1000	0.0583	0.053	0.9	0.8	0.92	18.4	1.40	56.18	149.80	53.50	6.02	6.96	2	2	0	0	6.0	49.2	40.1
MH-761	MH-214	573.05	572.93	60.9	150	0.13	493.83	0.0044	0.004	0.9	0.8	0.92	16.6	1.40	63.95	170.52	60.90	6.85	7.93	3	3	0	0	6.9	56.0	45.7
MH-527	MH-185	576.84	576.8	43.1	150	0.1	1000	0.0055	0.005	0.9	0.8	0.92	14.6	1.40	45.26	120.68	43.10	4.85	5.61	2	2	0	0	4.8	39.6	32.3
MH-184	MH-185	576.97	576.8	25.3	150	0.42	145.17	0.0605	0.055	0.9	0.8	0.92	18.6	1.40	26.57	70.84	25.30	2.85	3.29	1	1	0	0	2.8	23.3	19.0
MH-352	MH-353	571.4	571.03	38	150	0.6	103.38	0.1331	0.121	0.9	0.8	0.92	20.7	1.40	39.90	106.40	38.00	4.28	4.95	2	2	0	0	4.3	35.0	28.5
MH-77	MH-78	582.44	582.26	17.8	150	0.54	100	0.0935	0.085	0.9	0.92	0.8	17.2	1.40	18.69	49.84	17.80	2.00	2.32	1	1	0	0	2.0	16.4	13.4
MH-658	MH-659	581.85	581.8	52	150	0.15	1000	0.0198	0.018	0.9	0.8	0.92	10.8	1.40	54.60	145.60	52.00	5.85	6.77	2	2	0	0	5.9	47.8	39.0
MH-194	MH-195	581.56	581.3	25.7	150	0.29	100	0.0121	0.011	0.9	0.92	0.8	6.4	1.40	26.99	71.96	25.70	2.89	3.35	1	1	0	0	2.9	23.6	19.3
MH-778	MH-625	603.91	603.85	62.3	150	0.21	1000	0.0605	0.055	0.9	0.8	0.92	27.8	1.40	65.42	174.44	62.30	7.01	8.11	3	3	0	0	7.0	57.3	46.7
MH-582	MH-199	575.07	574.82	54.5	217	0.84	217	0.9922	0.902	0.9	0.91	0.8	37.9	1.47	65.32	159.90	54.50	6.68	8.69	2	2	0	0	6.7	56.6	44.5
MH-827	MH-826	576.73	576.66	70.3	150	0.26	1000	0.1177	0.107	0.9	0.85	0.86	26.3	1.40	73.82	196.84	70.30	7.91	9.15	3	3	0	0	7.9	64.7	52.7
MH-877	MH-878	585.54	585.29	83	150	0.33	328.53	0.0715	0.065	0.9	0.8	0.91	25.5	1.40	87.15	232.40	83.00	9.34	10.80	3	3	0	0	9.3	76.3	62.3
MH-563	MH-350	576.79	576.75	37.5	150	0.09	1000	0.0033	0.003	0.9	0.8	0.91	15.4	1.40	39.38	105.00	37.50	4.22	4.88	2	2	0	0	4.2	34.5	28.1
MH-892	MH-893	601.05	600.96	86.4	150	0.22	1000	0.0704	0.064	0.9	0.8	0.91	33	1.40	90.72	241.92	86.40	9.72	11.25	3	3	0	0	9.7	79.5	64.8
MH-644	MH-645	581.66	581.61	51.6	150	0.16	1000	0.0209	0.019	0.9	0.8	0.91	11.2	1.40	54.18	144.48	51.60	5.81	6.72	2	2	0	0	5.8	47.5	38.7
MH-442	MH-443	573.44	573.05	39	150	0.27	100	0.0099	0.009	0.9	0.91	0.8	12.7	1.40	40.95	109.20	39.00	4.39	5.08	2	2	0	0	4.4	35.9	29.3
MH-837	MH-122	577.39	576.67	72.3	150	0.2	100	0.0033	0.003	0.9	0.91	0.8	3.3	1.40	75.92	202.44	72.3									

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-946	MH-947	574.05	573.95	95.1	150	0.1	1000	0.0055	0.005	0.8	0.8	0.9	5.8	1.30	92.72	247.26	95.10	10.70	12.38	4	4	0	0	10.7	80.3	71.3
MH-503	MH-504	574.77	574.3	46.3	150	0.39	100	0.0308	0.028	0.8	0.9	0.8	9.9	1.30	45.14	120.38	46.30	5.21	6.03	2	2	0	0	5.2	39.1	34.7
MH-638	MH-189	574.21	574.05	15.7	150	0.32	100	0.0154	0.014	0.8	0.89	0.8	7.1	1.30	15.31	40.82	15.70	1.77	2.04	1	1	0	0	1.8	13.3	11.8
MH-284	MH-1	573.01	572.99	23.8	150	0.11	1000	0.0066	0.006	0.8	0.84	0.86	7.5	1.30	23.21	61.88	23.80	2.68	3.10	1	1	0	0	2.7	20.1	17.9
MH-470	MH-717	576.33	575.75	57.9	150	0.42	100	0.0385	0.035	0.8	0.89	0.8	12.1	1.30	56.45	150.54	57.90	6.51	7.54	2	2	0	0	6.5	48.9	43.4
MH-1082	MH-1083	586.43	583.52	402.1	400	1.85	137.95	15.752	14.32	0.8	0.8	0.89	76.6	1.55	623.26	1246.51	402.10	60.32	110.82	14	14	0	0	60.3	512.4	402.1
MH-1083	MH-34	583.52	579.36	416.1	400	2.17	100	18.3007	16.637	0.8	0.89	0.8	73	1.55	644.96	1289.91	416.10	62.42	114.68	14	14	0	0	62.4	530.3	416.1
MH-162	MH-163	581.05	580.81	24.2	150	0.22	100	0.0044	0.004	0.8	0.89	0.8	3.9	1.30	23.60	62.92	24.20	2.72	3.15	1	1	0	0	2.7	20.4	18.2
MH-19	MH-45	588.8	588.75	52.7	500	0.8	1000	11.2453	10.223	0.8	0.8	0.89	55	1.65	95.65	173.91	52.70	8.70	19.04	2	2	0	0	8.7	76.6	58.0
MH-342	MH-343	577.1	576.87	46.5	150	0.38	198.23	0.0616	0.056	0.8	0.8	0.89	21.3	1.30	45.34	120.90	46.50	5.23	6.05	2	2	0	0	5.2	39.3	34.9
MH-488	MH-405	579.57	579.22	46.7	150	0.6	130.22	0.1771	0.161	0.8	0.8	0.89	30.7	1.30	45.53	121.42	46.70	5.25	6.08	2	2	0	0	5.3	39.5	35.0
MH-701	MH-263	577.05	576.88	54.3	150	0.2	311.41	0.0121	0.011	0.8	0.8	0.89	14.7	1.30	52.94	141.18	54.30	6.11	7.07	2	2	0	0	6.1	45.9	40.7
MH-264	MH-263	576.91	576.88	29.4	150	0.11	1000	0.0077	0.007	0.8	0.8	0.89	14.8	1.30	28.67	76.44	29.40	3.31	3.83	1	1	0	0	3.3	24.8	22.1
MH-87	MH-11	585.56	585.54	18.5	150	0.22	1000	0.0638	0.058	0.8	0.8	0.89	24.6	1.30	18.04	48.10	18.50	2.08	2.41	1	1	0	0	2.1	15.6	13.9
MH-549	MH-550	574.82	574.37	44.9	150	0.32	100	0.0165	0.015	0.8	0.89	0.8	7.3	1.30	43.78	116.74	44.90	5.05	5.84	2	2	0	0	5.1	37.9	33.7
MH-1042	MH-1072	583.4	582.78	379.1	700	1.22	602.41	26.6607	24.237	0.8	0.89	0.8	52.6	1.85	911.74	1402.67	379.10	73.92	219.75	13	13	0	0	73.9	692.0	492.8
MH-1027	MH-1042	583.58	583.4	171.2	700	1	1000	25.7598	23.418	0.8	0.8	0.89	61.3	1.85	411.74	633.44	171.20	33.38	99.24	6	6	0	0	33.4	312.5	222.6
MH-111	MH-796	574.04	573.97	64.9	150	0.11	1000	0.0066	0.006	0.8	0.81	0.88	8.5	1.30	63.28	168.74	64.90	7.30	8.45	3	3	0	0	7.3	54.8	48.7
MH-717	MH-46	575.75	575.27	53.8	150	0.41	113.6	0.0418	0.038	0.8	0.8	0.89	29.1	1.30	52.46	139.88	53.80	6.05	7.00	2	2	0	0	6.1	45.5	40.4
MH-46	MH-718	575.27	575.15	29.4	150	0.7	239.8	0.5236	0.476	0.8	0.89	0.8	45.5	1.30	28.67	76.44	29.40	3.31	3.83	1	1	0	0	3.3	24.8	22.1
MH-601	MH-46	575.33	575.27	15.9	150	0.6	278.68	0.4785	0.435	0.8	0.8	0.89	46.9	1.30	15.50	41.34	15.90	1.79	2.07	1	1	0	0	1.8	13.4	11.9
MH-40	MH-41	601.69	601.52	20.4	150	0.61	121.7	0.1749	0.159	0.8	0.8	0.89	41	1.30	19.89	53.04	20.40	2.30	2.66	1	1	0	0	2.3	17.2	15.3
MH-41	MH-42	601.52	601.13	39.3	150	1	100	0.803	0.73	0.8	0.89	0.8	61.8	1.30	38.32	102.18	39.30	4.42	5.12	2	2	0	0	4.4	33.2	29.5
MH-657	MH-35	600.48	600.19	28.7	150	0.66	100	0.1782	0.162	0.8	0.89	0.8	23.8	1.30	27.98	74.62	28.70	3.23	3.74	1	1	0	0	3.2	24.2	21.5
MH-539	MH-34	585.31	584.68	69.6	150	1.02	108.94	0.9878	0.898	0.8	0.8	0.89	68	1.30	67.86	180.96	69.60	7.83	9.06	3	3	0	0	7.8	58.8	52.2
MH-34	MH-203	584.68	584.19	48.6	150	1.13	100	1.3343	1.213	0.8	0.89	0.8	69.9	1.30	47.39	126.36	48.60	5.47	6.33	2	2	0	0	5.5	41.1	36.5
MH-983	MH-489	593.43	592.64	171	600	1.54	216.01	14.6839	13.349	0.8	0.88	0.8	51.7	1.75	359.10	598.50	171.00	30.78	79.10	6	6	0	0	30.8	280.0	205.2
MH-166	MH-983	593.55	593.43	115.1	600	0.87	1000	14.3979	13.089	0.8	0.8	0.88	49.9	1.75	241.71	402.85	115.10	20.72	53.25	4	4	0	0	20.7	188.5	138.1
MH-960	MH-573	571.45	571.34	104.5	150	0.4	1000	0.5181	0.471	0.8	0.83	0.86	71.4	1.30	101.89	271.70	104.50	11.76	13.60	4	4	0	0	11.8	88.3	78.4
MH-511	MH-512	575.84	575.45	39.3	150	0.27	100	0.0088	0.008	0.8	0.88	0.8	24.2	1.30	38.32	102.18	39.30	4.42	5.12	2	2	0	0	4.4	33.2	29.5
MH-721	MH-91	573.05	572.97	56	150	0.13	707.69	0.0088	0.008	0.8	0.8	0.88	11.5	1.30	54.60	145.60	56.00	6.30	7.29	2	2	0	0	6.3	47.3	42.0
MH-435	MH-91	573.05	572.97	45.3	150	0.11	573.08	0.0033	0.003	0.8	0.8	0.88	10	1.30	44.17	117.78	45.30	5.10	5.90	2	2	0	0	5.1	38.3	34.0
MH-1073	MH-844	576.92	576.88	37	150	0.21	1000	0.0561	0.051	0.8	0.8	0.88	18	1.30	36.08	96.20	37.00	4.16	4.82	2	2	0	0	4.2	31.3	27.8
MH-17	MH-663	573.04	572.98	52.1	150	0.12	1000	0.0088	0.008	0.8	0.81	0.87	9.7	1.30	50.80	135.46	52.10	5.86	6.78	2	2	0	0	5.9	44.0	39.1
MH-903	MH-906	592.26	591.34	133	175	1.04	144.9	1.2045	1.095	0.8	0.8	0.88	57.7	1.33	136.57	352.45	133.00	15.46	18.66	5	5	0	0	15.5	117.9	103.1
MH-906	MH-149	591.34	590.45	89.5	175	1.21	100	1.2683	1.153	0.8	0.88	0.8	52.7	1.33	91.91	237.18	89.50	10.40	12.56	3	3	0	0	10.4	79.3	69.4
MH-31	MH-32	580.05	580.03	14.1	150	0.11	1000	0.0066	0.006	0.8	0.8	0.88	9.2	1.30	13.75	36.66	14.10	1.59	1.84	1	1	0	0	1.6	11.9	10.6
MH-862	MH-863	574.05	573.97	78.6	150	0.15	1000	0.0187	0.017	0.8	0.8	0.88	15.2	1.30	76.64	204.36	78.60	8.84	10.23	3	3	0	0	8.8	66.4	59.0
MH-770	MH-1041	600.83	599.13	169.4	175	1.23	100	1.3717	1.247	0.8	0.88	0.8	55	1.33	173.95	448.91	169.40	19.69	23.77	6	6	0	0	19.7	150.2	131.3
MH-2	MH-999	578.49	578.39	103.3	400	0.66	1000	4.8136	4.376	0.8	0.86	0.82	48.9	1.55	160.12	320.23	103.30	15.50	28.47	4	4	0	0	15.5	131.6	103.3
MH-174	MH-175	576.33	576.31	25.1	150	0.14	1000	0.0143	0.013	0.8	0.8	0.87	12.4	1.30	24.47	65.26	25.10	2.82	3.27	1	1	0	0	2.8	21.2	18.8
MH-230	MH-108	581.31	581.17	27.3	150	0.6	192.29	0.2893	0.263	0.8	0.8	0.87	33.9	1.30	26.62	70.98	27.30	3.07	3.55	1	1	0	0	3.1	23.1	20.5
MH-180	MH-181	576.68	576.66	25.1	150	0.09	1000	0.0033	0.003	0.8	0.8	0.87	19.2	1.30	24.47	65.26	25.10	2.82	3.27	1	1	0	0	2.8	21.2	18.8
MH-131	MH-182	573.02	573.01	11.4	150	0.1	1000	0.0044	0.004	0.8	0.83	0.84	9.5	1.30	11.12	29.64	11.40	1.28	1.48	1	1	0	0	1.3	9.6	8.6
MH-476	MH-448	573.98	573.91	40.8	217	0.6	582.67	1.089	0.99	0.8	0.8	0.87	51.3	1.37	45.57	111.55	40.80	5.00	6.51	2	2	0	0	5.0	39.1	33.3
MH-636	MH-860	581.89	581.84	49.2	150	0.13	1000	0.011	0.01	0.8	0.8	0.87	8.3	1.30	47.97	127.92	49.20	5.54	6.40	2	2	0	0	5.5	41.6	36.9
MH-646	MH-647	574.18	574.13	51.6	150	0.14	1000	0.0154	0.014	0.8	0.8	0.87	13.7	1.30	50.31	134.16	51.60	5.81	6.72	2	2	0	0	5.8	43.6	38.7
MH-450	MH-475	599.69	599.22	47	150	0.52	100	0.0825	0.075	0.8	0.87	0.8	16.2	1.30	45.83	122.20	47.00	5.29	6.12	2	2	0	0	5.3	39.7	35.3
MH-685	MH-831	594.05	593.62	71.2	150	0.72	166.99	0.4763	0.433	0.8	0.87	0.8	47.3	1.30</												

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-24	MH-217	575.79	575.76	26.1	400	0.67	1000	5.2118	4.738	0.8	0.81	0.85	60.4	1.55	40.46	80.91	26.10	3.92	7.19	1	1	0	0	3.9	33.3	26.1
MH-544	MH-545	581.06	580.73	44.8	150	0.6	137.53	0.1914	0.174	0.8	0.8	0.86	25.6	1.30	43.68	116.48	44.80	5.04	5.83	2	2	0	0	5.0	37.8	33.6
MH-47	MH-920	576.67	575.85	82.4	150	0.22	100	0.0044	0.004	0.8	0.86	0.8	3.9	1.30	80.34	214.24	82.40	9.27	10.73	3	3	0	0	9.3	69.6	61.8
MH-600	MH-601	575.8	575.33	46.7	150	0.24	100	0.0055	0.005	0.8	0.86	0.8	26.3	1.30	45.53	121.42	46.70	5.25	6.08	2	2	0	0	5.3	39.5	35.0
MH-920	MH-503	575.79	574.86	92.8	150	0.35	100	0.0198	0.018	0.8	0.86	0.8	8	1.30	90.48	241.28	92.80	10.44	12.08	4	4	0	0	10.4	78.4	69.6
MH-849	MH-871	576.56	576.55	15.9	150	0.24	1000	0.0957	0.087	0.8	0.83	0.83	23.4	1.30	15.50	41.34	15.90	1.79	2.07	1	1	0	0	1.8	13.4	11.9
MH-35	MH-907	600.14	599.95	19	150	0.67	100	0.1903	0.173	0.8	0.86	0.8	27.3	1.30	18.53	49.40	19.00	2.14	2.47	1	1	0	0	2.1	16.1	14.3
MH-291	MH-35	600.42	600.14	29	150	0.29	100.96	0.0121	0.011	0.8	0.8	0.86	16.6	1.30	28.28	75.40	29.00	3.26	3.77	1	1	0	0	3.3	24.5	21.8
MH-1029	MH-2	578.65	578.49	155.5	400	0.66	1000	4.8136	4.376	0.8	0.8	0.86	58.3	1.55	241.03	482.05	155.50	23.33	42.86	6	6	0	0	23.3	198.2	155.5
MH-333	MH-334	577.74	577.41	33.8	150	0.17	100	0.0022	0.002	0.8	0.86	0.8	2.7	1.30	32.96	87.88	33.80	3.80	4.40	2	2	0	0	3.8	28.6	25.4
MH-344	MH-496	574.05	574	54.7	150	0.4	1000	0.5335	0.485	0.8	0.8	0.85	74.2	1.30	53.33	142.22	54.70	6.15	7.12	2	2	0	0	6.2	46.2	41.0
MH-122	MH-511	576.62	575.93	69	150	0.24	100	0.0066	0.006	0.8	0.85	0.8	4.6	1.30	67.28	179.40	69.00	7.76	8.98	3	3	0	0	7.8	58.3	51.8
MH-1004	MH-972	586.45	586.33	127.1	600	0.92	1000	21.0331	19.121	0.8	0.8	0.85	65.5	1.75	266.91	444.85	127.10	22.88	58.80	5	5	0	0	22.9	208.1	152.5
MH-972	MH-939	586.33	586.05	110.3	600	1.35	404.01	21.6282	19.662	0.8	0.85	0.8	55	1.75	231.63	386.05	110.30	19.85	51.02	4	4	0	0	19.9	180.6	132.4
MH-338	MH-443	573.25	573.05	19.8	150	0.21	100	0.0044	0.004	0.8	0.85	0.8	11.6	1.30	19.31	51.48	19.80	2.23	2.58	1	1	0	0	2.2	16.7	14.9
MH-651	MH-306	574.05	574	51.9	150	0.12	1000	0.0077	0.007	0.8	0.8	0.85	7	1.30	50.60	134.94	51.90	5.84	6.76	2	2	0	0	5.8	43.8	38.9
MH-135	MH-48	601.74	601.36	37.4	175	1.14	100	1.0153	0.923	0.8	0.85	0.8	46.7	1.33	38.41	99.11	37.40	4.35	5.25	2	2	0	0	4.3	33.2	29.0
MH-134	MH-135	601.93	601.74	21.6	175	1.09	112.04	0.9977	0.907	0.8	0.8	0.85	51.9	1.33	22.18	57.24	21.60	2.51	3.03	1	1	0	0	2.5	19.2	16.7
MH-272	MH-524	599.99	599.56	43.1	175	1.2	100	1.2507	1.137	0.8	0.85	0.8	52.3	1.33	44.26	114.22	43.10	5.01	6.05	2	2	0	0	5.0	38.2	33.4
MH-681	MH-682	582.07	582.02	53.7	150	0.15	1000	0.0209	0.019	0.8	0.8	0.84	11	1.30	52.36	139.62	53.70	6.04	6.99	2	2	0	0	6.0	45.4	40.3
MH-887	MH-910	605.74	605.17	95.2	150	0.47	168.52	0.1056	0.096	0.8	0.8	0.84	25.7	1.30	92.82	247.52	95.20	10.71	12.39	4	4	0	0	10.7	80.4	71.4
MH-963	MH-910	605.23	605.17	56.1	150	0.25	1000	0.1034	0.094	0.8	0.8	0.84	30.6	1.30	54.70	145.86	56.10	6.31	7.30	2	2	0	0	6.3	47.4	42.1
MH-518	MH-444	574.05	574.01	42.6	150	0.25	1000	0.1111	0.101	0.8	0.8	0.84	31	1.30	41.54	110.76	42.60	4.79	5.54	2	2	0	0	4.8	36.0	32.0
MH-597	MH-608	574.72	574.23	48.9	150	0.35	100	0.0209	0.019	0.8	0.84	0.8	11.1	1.30	47.68	127.14	48.90	5.50	6.36	2	2	0	0	5.5	41.3	36.7
MH-322	MH-182	573.05	573.01	22	150	0.13	533.33	0.0066	0.006	0.8	0.8	0.84	9.4	1.30	21.45	57.20	22.00	2.48	2.86	1	1	0	0	2.5	18.6	16.5
MH-1039	MH-1008	604.54	603.83	70.9	150	1.06	100	1.0153	0.923	0.8	0.84	0.8	59.6	1.30	69.13	184.34	70.90	7.98	9.23	3	3	0	0	8.0	59.9	53.2
MH-419	MH-364	573.05	573.01	38.3	150	0.19	1000	0.0385	0.035	0.8	0.8	0.84	16.7	1.30	37.34	99.58	38.30	4.31	4.99	2	2	0	0	4.3	32.4	28.7
MH-388	MH-252	574.05	574.01	37	150	0.12	1000	0.0088	0.008	0.8	0.8	0.84	7.2	1.30	36.08	96.20	37.00	4.16	4.82	2	2	0	0	4.2	31.3	27.8
MH-357	MH-284	573.05	573.01	35.3	150	0.1	1000	0.0055	0.005	0.8	0.8	0.84	7.4	1.30	34.42	91.78	35.30	3.97	4.59	2	2	0	0	4.0	29.8	26.5
MH-292	MH-10	600.77	600.48	28.7	150	0.37	100	0.0253	0.023	0.8	0.83	0.8	9.1	1.30	27.98	74.62	28.70	3.23	3.74	1	1	0	0	3.2	24.2	21.5
MH-49	MH-271	601.19	600.34	86.3	175	1.16	101.48	1.1198	1.018	0.8	0.8	0.83	55.9	1.33	88.62	228.70	86.30	10.03	12.11	3	3	0	0	10.0	76.5	66.9
MH-271	MH-272	600.34	600.03	30	175	1.19	100	1.2034	1.094	0.8	0.83	0.8	51.2	1.33	30.81	79.50	30.00	3.49	4.21	1	1	0	0	3.5	26.6	23.3
MH-1066	MH-523	601.8	601.75	50.6	150	0.21	1000	0.0605	0.055	0.8	0.8	0.83	21.2	1.30	49.34	131.56	50.60	5.69	6.59	2	2	0	0	5.7	42.7	38.0
MH-523	MH-42	601.75	601.13	143.4	150	0.41	232.51	0.0957	0.087	0.8	0.83	0.8	43.4	1.30	139.82	372.84	143.40	16.13	18.67	5	5	0	0	16.1	121.1	107.6
MH-141	MH-154	588.06	587.81	25.1	150	0.4	100	0.0033	0.003	0.8	0.83	0.8	10.2	1.30	24.47	65.26	25.10	2.82	3.27	1	1	0	0	2.8	21.2	18.8
MH-10	MH-451	600.45	600.17	27.8	150	0.37	100	0.0253	0.023	0.8	0.83	0.8	9.1	1.30	27.11	72.28	27.80	3.13	3.62	1	1	0	0	3.1	23.5	20.9
MH-443	MH-328	573.05	573.01	42	150	0.19	1000	0.0451	0.041	0.8	0.8	0.83	19.9	1.30	40.95	109.20	42.00	4.73	5.47	2	2	0	0	4.7	35.5	31.5
MH-30	MH-880	574.04	574.03	10.2	150	0.12	1000	0.0088	0.008	0.8	0.81	0.82	7.1	1.30	9.95	26.52	10.20	1.15	1.33	1	1	0	0	1.1	8.6	7.7
MH-489	MH-490	592.64	592.6	41.4	600	0.88	1000	15.2713	13.883	0.8	0.8	0.83	61.1	1.75	86.94	144.90	41.40	7.45	19.15	2	2	0	0	7.5	67.8	49.7
MH-515	MH-129	573.2	573.17	29.7	150	0.09	1000	0.0033	0.003	0.8	0.8	0.83	4.7	1.30	28.96	77.22	29.70	3.34	3.87	1	1	0	0	3.3	25.1	22.3
MH-447	MH-446	573.99	573.95	39.1	150	0.14	1000	0.0154	0.014	0.8	0.81	0.82	13.3	1.30	38.12	101.66	39.10	4.40	5.09	2	2	0	0	4.4	33.0	29.3
MH-273	MH-131	573.05	573.02	29.5	150	0.08	1000	0.0022	0.002	0.8	0.8	0.83	5.5	1.30	28.76	76.70	29.50	3.32	3.84	1	1	0	0	3.3	24.9	22.1
MH-130	MH-131	573.05	573.02	21.5	150	0.07	731.96	0.0011	0.001	0.8	0.8	0.83	4.9	1.30	20.96	55.90	21.50	2.42	2.80	1	1	0	0	2.4	18.2	16.1
MH-228	MH-229	594.53	594.33	27.2	150	0.6	136.32	0.187	0.17	0.8	0.8	0.83	27.3	1.30	26.52	70.72	27.20	3.06	3.54	1	1	0	0	3.1	23.0	20.4
MH-154	MH-153	587.78	587.55	23.1	150	0.44	100	0.0451	0.041	0.8	0.83	0.8	12	1.30	22.52	60.06	23.10	2.60	3.01	1	1	0	0	2.6	19.5	17.3
MH-142	MH-141	588.32	588.1	21.9	150	0.35	100	0.0198	0.018	0.8	0.83	0.8	8.1	1.30	21.35	56.94	21.90	2.46	2.85	1	1	0	0	2.5	18.5	16.4
MH-188	MH-189	574.3	574.05	25.4	150	0.28	100	0.011	0.01	0.8	0.83	0.8	6	1.30	24.77	66.04	25.40	2.86	3.31	1	1	0	0	2.9	21.5	19.1
MH-821	MH-807	588.93	588.23	69.7	150	0.7	100	0.2211	0.201	0.8	0.83	0.8	26.5	1.30	67.96	181.22	69.70	7.84	9.07	3	3	0	0	7.8	58.9	52.3
MH-337	MH-805	583.19	583.05	52.8	150	0.25	389.24	0.0341	0.031	0.8	0.83	0.8	18.6	1.30	51.48	137.28	52.80	5.94	6.87	2	2	0	0	5.9		



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-308	MH-656	601.37	601.03	127.1	150	0.37	370.89	0.1221	0.111	0.8	0.82	0.8	24.5	1.30	123.92	330.46	127.10	14.30	16.54	5	5	0	0	14.3	107.4	95.3
MH-451	MH-450	600.15	599.76	39.4	150	0.47	100	0.0583	0.053	0.8	0.82	0.8	13.6	1.30	38.42	102.44	39.40	4.43	5.13	2	2	0	0	4.4	33.3	29.6
MH-35	MH-36	582.74	582.72	14.4	150	0.16	1000	0.0231	0.021	0.8	0.8	0.82	11.6	1.30	14.04	37.44	14.40	1.62	1.87	1	1	0	0	1.6	12.2	10.8
MH-436	MH-416	589.27	588.77	50	150	0.77	100	0.3003	0.273	0.8	0.82	0.8	31	1.30	48.75	130.00	50.00	5.63	6.51	2	2	0	0	5.6	42.2	37.5
MH-1016	MH-999	580.16	578.09	228.8	700	2.33	110.22	27.9543	25.413	0.8	0.8	0.82	50.3	1.85	550.26	846.56	228.80	44.62	132.62	8	8	0	0	44.6	417.6	297.4
MH-999	MH-1000	578.09	577.1	123.8	700	2.32	125.49	32.8878	29.898	0.8	0.82	0.8	52.5	1.85	297.74	458.06	123.80	24.14	71.76	5	5	0	0	24.1	226.0	160.9
MH-27	MH-1054	597.5	596.79	71.7	150	0.22	100	0.0044	0.004	0.8	0.82	0.8	11.2	1.30	69.91	186.42	71.70	8.07	9.33	3	3	0	0	8.1	60.6	53.8
MH-23	MH-24	575.8	575.79	14.7	400	0.67	1000	5.2008	4.728	0.8	0.8	0.81	60.9	1.55	22.79	45.57	14.70	2.21	4.05	1	1	0	0	2.2	18.7	14.7
MH-239	MH-134	602.21	601.93	28.2	175	1.13	100	0.9724	0.884	0.8	0.81	0.8	51.3	1.33	28.96	74.73	28.20	3.28	3.96	1	1	0	0	3.3	25.0	21.9
MH-674	MH-673	602.82	602.77	53.1	150	0.16	1000	0.022	0.02	0.8	0.8	0.81	19.7	1.30	51.77	138.06	53.10	5.97	6.91	2	2	0	0	6.0	44.9	39.8
MH-152	MH-433	580.03	579.79	23.3	150	0.21	100	0.0044	0.004	0.8	0.81	0.8	3.7	1.30	22.72	60.58	23.30	2.62	3.03	1	1	0	0	2.6	19.7	17.5
MH-807	MH-808	588.22	587.55	67.3	150	0.76	100	0.2893	0.263	0.8	0.81	0.8	30.4	1.30	65.62	174.98	67.30	7.57	8.76	3	3	0	0	7.6	56.9	50.5
MH-18	MH-17	573.05	573.04	13.5	150	0.11	1000	0.0066	0.006	0.8	0.8	0.81	8.3	1.30	13.16	35.10	13.50	1.52	1.76	1	1	0	0	1.5	11.4	10.1
MH-905	MH-792	603.45	603.36	89.3	150	0.24	1000	0.0891	0.081	0.8	0.8	0.81	22.8	1.30	87.07	232.18	89.30	10.05	11.62	3	3	0	0	10.0	75.4	67.0
MH-110	MH-111	574.05	574.04	11.7	150	0.07	1000	0.0011	0.001	0.8	0.8	0.81	5.8	1.30	11.41	30.42	11.70	1.32	1.52	1	1	0	0	1.3	9.9	8.8
MH-434	MH-447	574.05	573.99	60.3	150	0.11	1000	0.0066	0.006	0.8	0.8	0.81	9.7	1.30	58.79	156.78	60.30	6.78	7.85	3	3	0	0	6.8	50.9	45.2
MH-29	MH-30	574.05	574.04	10.1	150	0.11	1000	0.0066	0.006	0.8	0.8	0.81	8.4	1.30	9.85	26.26	10.10	1.14	1.31	1	1	0	0	1.1	8.5	7.6
MH-99	MH-100	587.48	587.36	28.3	150	0.6	250.19	0.4213	0.383	0.8	0.81	0.8	45.2	1.30	27.59	73.58	28.30	3.18	3.68	1	1	0	0	3.2	23.9	21.2
MH-98	MH-99	587.56	587.48	19.9	150	0.6	249.55	0.4092	0.372	0.8	0.8	0.81	43	1.30	19.40	51.74	19.90	2.24	2.59	1	1	0	0	2.2	16.8	14.9
MH-438	MH-257	572.99	572.6	38.9	150	0.2	100	0.0033	0.003	0.8	0.81	0.8	3.5	1.30	37.93	101.14	38.90	4.38	5.06	2	2	0	0	4.4	32.9	29.2
MH-66	MH-67	579.72	579.55	17.4	150	0.97	100	0.5357	0.487	0.8	0.81	0.8	41	1.30	16.97	45.24	17.40	1.96	2.26	1	1	0	0	2.0	14.7	13.1
MH-907	MH-1022	599.95	599.69	37.6	150	0.6	148.58	0.2101	0.191	0.8	0.8	0.81	27.1	1.30	36.66	97.76	37.60	4.23	4.89	2	2	0	0	4.2	31.8	28.2
MH-1026	MH-15	593.45	593.24	37.3	150	0.6	180.69	0.2695	0.245	0.8	0.8	0.81	31.6	1.30	36.37	96.98	37.30	4.20	4.86	2	2	0	0	4.2	31.5	28.0
MH-589	MH-1054	597.29	596.79	50.1	150	0.45	100	0.0473	0.043	0.8	0.81	0.8	15.7	1.30	48.85	130.26	50.10	5.64	6.52	2	2	0	0	5.6	42.3	37.6
MH-586	MH-127	571.4	571.29	47.7	150	0.19	450.4	0.0176	0.016	0.8	0.8	0.81	34.2	1.30	46.51	124.02	47.70	5.37	6.21	2	2	0	0	5.4	40.3	35.8
MH-127	MH-126	571.29	571.25	21.5	150	0.54	487.09	0.5489	0.499	0.8	0.81	0.8	52.3	1.30	20.96	55.90	21.50	2.42	2.80	1	1	0	0	2.4	18.2	16.1
MH-513	MH-501	583.58	583.54	42.4	150	0.18	1000	0.0363	0.033	0.8	0.8	0.81	18.6	1.30	41.34	110.24	42.40	4.77	5.52	2	2	0	0	4.8	35.8	31.8
MH-501	MH-502	583.54	583.48	42	150	0.23	724.01	0.0539	0.049	0.8	0.81	0.8	18.9	1.30	40.95	109.20	42.00	4.73	5.47	2	2	0	0	4.7	35.5	31.5
MH-459	MH-539	585.76	585.31	44.3	150	1.04	100	0.9416	0.856	0.8	0.81	0.8	62.1	1.30	43.19	115.18	44.30	4.98	5.77	2	2	0	0	5.0	37.4	33.2
MH-207	MH-625	604.38	603.97	49.8	150	0.6	121.7	0.1672	0.152	0.8	0.8	0.8	23.5	1.30	48.56	129.48	49.80	5.60	6.48	2	2	0	0	5.6	42.1	37.4
MH-208	MH-207	604.4	604.38	26.7	150	0.16	1000	0.022	0.02	0.8	0.8	0.8	19.4	1.30	26.03	69.42	26.70	3.00	3.48	1	1	0	0	3.0	22.6	20.0
MH-781	MH-342	577.17	577.1	62.5	150	0.2	1000	0.0528	0.048	0.8	0.8	0.8	18.2	1.30	60.94	162.50	62.50	7.03	8.14	3	3	0	0	7.0	52.8	46.9
MH-80	MH-116	588.1	587.9	20.5	150	0.69	100	0.2068	0.188	0.8	0.8	0.8	25.7	1.30	19.99	53.30	20.50	2.31	2.67	1	1	0	0	2.3	17.3	15.4
MH-79	MH-80	588.27	588.1	17.8	150	0.67	105.63	0.1991	0.181	0.8	0.8	0.8	27.6	1.30	17.36	46.28	17.80	2.00	2.32	1	1	0	0	2.0	15.0	13.4
MH-316	MH-491	573.95	573.9	32.4	150	0.12	620.19	0.0055	0.005	0.8	0.8	0.8	11.7	1.30	31.59	84.24	32.40	3.65	4.22	2	2	0	0	3.6	27.4	24.3
MH-491	MH-314	573.9	573.85	39	150	0.2	814.42	0.0363	0.033	0.8	0.8	0.8	14.5	1.30	38.03	101.40	39.00	4.39	5.08	2	2	0	0	4.4	32.9	29.3
MH-979	MH-989	584.08	583.77	41.6	150	0.45	133.8	0.066	0.06	0.8	0.8	0.8	19.2	1.30	40.56	108.16	41.60	4.68	5.41	2	2	0	0	4.7	35.1	31.2
MH-1024	MH-889	583.69	583.62	29	150	0.22	397.33	0.0231	0.021	0.8	0.8	0.8	10.2	1.30	28.28	75.40	29.00	3.26	3.77	1	1	0	0	3.3	24.5	21.8
MH-776	MH-431	581.92	581.88	22.9	150	0.31	532.01	0.1034	0.094	0.8	0.8	0.8	22.4	1.30	22.33	59.54	22.90	2.58	2.98	1	1	0	0	2.6	19.3	17.2
MH-428	MH-502	583.59	583.48	20	150	0.24	188.23	0.0143	0.013	0.8	0.8	0.8	12.8	1.30	19.50	52.00	20.00	2.25	2.60	1	1	0	0	2.3	16.9	15.0
MH-502	MH-805	583.48	583.05	56.1	150	0.49	130.41	0.0891	0.081	0.8	0.8	0.8	20.9	1.30	54.70	145.86	56.10	6.31	7.30	2	2	0	0	6.3	47.4	42.1
MH-1080	MH-3	586.9	586.71	48.5	150	0.31	264.15	0.0429	0.039	0.8	0.8	0.8	13.2	1.30	47.29	126.10	48.50	5.46	6.31	2	2	0	0	5.5	41.0	36.4
MH-403	MH-418	586.36	585.79	82.1	175	0.99	143.31	0.9812	0.892	0.8	0.8	0.8	48	1.33	84.31	217.57	82.10	9.54	11.52	3	3	0	0	9.5	72.8	63.6
MH-76	MH-416	588.96	588.77	20.9	150	0.47	110.05	0.0638	0.058	0.8	0.8	0.8	14.4	1.30	20.38	54.34	20.90	2.35	2.72	1	1	0	0	2.4	17.7	15.7
MH-1054	MH-901	596.79	596.53	29.5	150	0.51	116.02	0.0913	0.083	0.8	0.8	0.8	17.3	1.30	28.76	76.70	29.50	3.32	3.84	1	1	0	0	3.3	24.9	22.1
MH-753	MH-927	597.57	597.3	40.6	150	0.74	149.83	0.4345	0.395	0.8	0.8	0.8	39.6	1.30	39.59	105.56	40.60	4.57	5.28	2	2	0	0	4.6	34.3	30.5
MH-855	MH-753	597.89	597.57	50	150	0.66	154.94	0.3146	0.286	0.8	0.8	0.8	37.8	1.30	48.75	130.00	50.00	5.63	6.51	2	2	0	0	5.6	42.2	37.5
MH-27	MH-223	580.01	579.86	14.9	150	0.45	100.25	0.0484	0.044	0.8	0.8	0.8	12.5	1.30	14.53	38.74	14.90	1.68	1.94	1	1	0	0	1.7	12.6	11.2
MH-679	MH-461	606.29	606.21	37.9	150	0.31	464.54	0.0869	0.079	0.8	0.8	0.8	20.2	1.30	36.95	98.54	37.90	4.26	4.93	2	2	0	0	4.3</		

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-876	MH-1027	584.51	583.68	154.5	600	1.85	186.22	23.7072	21.552	0.8	0.8	0.8	56.7	1.75	324.45	540.75	154.50	27.81	71.47	6	6	0	0	27.8	253.0	185.4
MH-1003	MH-1021	601.37	600.33	146.8	400	1.65	142.44	9.9583	9.053	0.8	0.8	0.8	59.5	1.55	227.54	455.08	146.80	22.02	40.46	5	5	0	0	22.0	187.1	146.8
MH-1015	MH-1016	580.81	580.16	137	700	1.83	212.29	27.8058	25.278	0.8	0.8	0.8	48.1	1.85	329.49	506.90	137.00	26.72	79.41	5	5	0	0	26.7	250.1	178.1
MH-170	MH-1003	602.38	601.37	126.7	400	1.69	125.56	9.1773	8.343	0.8	0.8	0.8	57.1	1.55	196.39	392.77	126.70	19.01	34.92	5	5	0	0	19.0	161.5	126.7
MH-995	MH-630	604.27	603.79	122.8	150	0.42	257.52	0.1221	0.111	0.8	0.8	0.8	25.4	1.30	119.73	319.28	122.80	13.82	15.98	5	5	0	0	13.8	103.7	92.1
MH-988	MH-989	584.59	583.77	116.7	150	0.39	143.16	0.0473	0.043	0.8	0.8	0.8	18	1.30	113.78	303.42	116.70	13.13	15.19	4	4	0	0	13.1	98.6	87.5
MH-984	MH-985	584.76	583.94	116.4	150	0.34	142.75	0.0286	0.026	0.8	0.8	0.8	10	1.30	113.49	302.64	116.40	13.10	15.15	4	4	0	0	13.1	98.3	87.3
MH-426	MH-963	605.86	605.23	104.7	150	0.43	166.32	0.0759	0.069	0.8	0.8	0.8	23.2	1.30	102.08	272.22	104.70	11.78	13.63	4	4	0	0	11.8	88.5	78.5
MH-957	MH-494	594.55	593.2	142.4	271	1.49	105.64	3.2087	2.917	0.8	0.8	0.8	47.6	1.42	176.25	404.70	142.40	18.60	26.81	5	5	0	0	18.6	149.4	124.0
MH-943	MH-838	597.19	596.49	101.2	400	1.71	144.11	11.9713	10.883	0.8	0.8	0.8	64.6	1.55	156.86	313.72	101.20	15.18	27.89	4	4	0	0	15.2	129.0	101.2
MH-286	MH-209	587.63	587.51	100.7	600	0.99	828.96	19.5866	17.806	0.8	0.8	0.8	57.8	1.75	211.47	352.45	100.70	18.13	46.58	4	4	0	0	18.1	164.9	120.8
MH-939	MH-888	586.05	585.49	99.4	600	1.86	176.84	22.3663	20.333	0.8	0.8	0.8	52.6	1.75	208.74	347.90	99.40	17.89	45.98	4	4	0	0	17.9	162.8	119.3
MH-909	MH-87	586.2	585.56	90.4	150	0.35	142.23	0.0319	0.029	0.8	0.8	0.8	17.1	1.30	88.14	235.04	90.40	10.17	11.77	4	4	0	0	10.2	76.4	67.8
MH-902	MH-903	592.61	592.26	88.9	175	0.82	252.46	1.1121	1.011	0.8	0.8	0.8	57.1	1.33	91.29	235.59	88.90	10.33	12.47	3	3	0	0	10.3	78.8	68.9
MH-896	MH-897	605.57	605.18	75.9	150	0.47	193.05	0.1221	0.111	0.8	0.8	0.8	21.3	1.30	74.00	197.34	75.90	8.54	9.88	3	3	0	0	8.5	64.1	56.9
MH-888	MH-875	585.49	584.94	85.4	600	1.96	153.62	22.5588	20.508	0.8	0.8	0.8	52.8	1.75	179.34	298.90	85.40	15.37	39.51	3	3	0	0	15.4	139.8	102.5
MH-886	MH-814	600.85	600.1	84.9	150	0.54	113.7	0.1045	0.095	0.8	0.8	0.8	23.2	1.30	82.78	220.74	84.90	9.55	11.05	3	3	0	0	9.6	71.7	63.7
MH-883	MH-3	587.06	586.71	50.5	150	0.36	145.33	0.0352	0.032	0.8	0.8	0.8	11	1.30	49.24	131.30	50.50	5.68	6.57	2	2	0	0	5.7	42.7	37.9
MH-875	MH-876	584.94	584.51	82.7	600	1.81	191.39	22.7084	20.644	0.8	0.8	0.8	53.5	1.75	173.67	289.45	82.70	14.89	38.26	3	3	0	0	14.9	135.4	99.2
MH-873	MH-874	571.55	571.12	85.4	150	0.33	198.47	0.0385	0.035	0.8	0.8	0.8	12.1	1.30	83.27	222.04	85.40	9.61	11.12	3	3	0	0	9.6	72.1	64.1
MH-713	MH-749	606.26	605.65	81.4	150	0.62	134.03	0.2112	0.192	0.8	0.8	0.8	30	1.30	79.37	211.64	81.40	9.16	10.60	3	3	0	0	9.2	68.8	61.1
MH-248	MH-265	576.68	576.4	77.3	150	0.66	276.41	0.7216	0.656	0.8	0.8	0.8	57.5	1.30	75.37	200.98	77.30	8.70	10.06	3	3	0	0	8.7	65.3	58.0
MH-854	MH-855	598.35	597.89	77.4	150	0.63	170.65	0.286	0.26	0.8	0.8	0.8	33.8	1.30	75.47	201.24	77.40	8.71	10.07	3	3	0	0	8.7	65.4	58.1
MH-94	MH-52	586.83	586.45	54.9	150	0.88	142.36	0.6116	0.556	0.8	0.8	0.8	46	1.30	53.53	142.74	54.90	6.18	7.15	2	2	0	0	6.2	46.4	41.2
MH-845	MH-846	602.19	601.87	74.6	150	0.35	229.94	0.055	0.05	0.8	0.8	0.8	14.6	1.30	72.74	193.96	74.60	8.39	9.71	3	3	0	0	8.4	63.0	56.0
MH-839	MH-509	576.43	576.31	73.1	150	0.12	594.21	0.0044	0.004	0.8	0.8	0.8	7.1	1.30	71.27	190.06	73.10	8.22	9.51	3	3	0	0	8.2	61.8	54.8
MH-219	MH-669	603.68	603.04	72.8	400	1.71	114.93	8.4623	7.693	0.8	0.8	0.8	53.9	1.55	112.84	225.68	72.80	10.92	20.06	3	3	0	0	10.9	92.8	72.8
MH-838	MH-689	596.49	595.9	72.6	400	1.83	122.74	12.2507	11.137	0.8	0.8	0.8	65.4	1.55	112.53	225.06	72.60	10.89	20.01	3	3	0	0	10.9	92.5	72.6
MH-836	MH-437	590.13	589.67	72.2	150	0.62	154.07	0.2464	0.224	0.8	0.8	0.8	31.3	1.30	70.40	187.72	72.20	8.12	9.40	3	3	0	0	8.1	61.0	54.2
MH-831	MH-835	593.62	593.14	72	150	0.83	150.08	0.6787	0.617	0.8	0.8	0.8	52.8	1.30	70.20	187.20	72.00	8.10	9.37	3	3	0	0	8.1	60.8	54.0
MH-241	MH-569	594.85	594.27	71.6	400	1.85	123.58	12.87	11.7	0.8	0.8	0.8	66.7	1.55	110.98	221.96	71.60	10.74	19.73	3	3	0	0	10.7	91.2	71.6
MH-828	MH-100	587.86	587.36	70.6	150	0.53	141.57	0.1276	0.116	0.8	0.8	0.8	34.4	1.30	68.84	183.56	70.60	7.94	9.19	3	3	0	0	7.9	59.6	53.0
MH-140	MH-156	582.6	582.45	70.2	150	0.24	471.5	0.0396	0.036	0.8	0.8	0.8	18.8	1.30	68.45	182.52	70.20	7.90	9.14	3	3	0	0	7.9	59.3	52.7
MH-26	MH-818	576.79	576.04	107.2	150	0.14	143.29	0.0022	0.002	0.8	0.8	0.8	2.5	1.30	104.52	278.72	107.20	12.06	13.95	4	4	0	0	12.1	90.6	80.4
MH-816	MH-817	582.14	582.03	69.1	150	0.19	604.27	0.0209	0.019	0.8	0.8	0.8	17.7	1.30	67.37	179.66	69.10	7.77	8.99	3	3	0	0	7.8	58.4	51.8
MH-558	MH-810	591.09	590.55	69	600	1.92	129.15	16.5825	15.075	0.8	0.8	0.8	40.3	1.75	144.90	241.50	69.00	12.42	31.92	3	3	0	0	12.4	113.0	82.8
MH-806	MH-449	583.15	583.01	66.7	150	0.31	471	0.0847	0.077	0.8	0.8	0.8	23.9	1.30	65.03	173.42	66.70	7.50	8.68	3	3	0	0	7.5	56.4	50.0
MH-800	MH-684	595.07	594.54	66.3	150	0.33	124.52	0.0231	0.021	0.8	0.8	0.8	16.2	1.30	64.64	172.38	66.30	7.46	8.63	3	3	0	0	7.5	56.0	49.7
MH-213	MH-799	576.51	576.43	66	150	0.12	829.12	0.0066	0.006	0.8	0.8	0.8	6.1	1.30	64.35	171.60	66.00	7.43	8.59	3	3	0	0	7.4	55.8	49.5
MH-160	MH-786	576.59	576.47	64.8	150	0.12	558.38	0.0044	0.004	0.8	0.8	0.8	7	1.30	63.18	168.48	64.80	7.29	8.43	3	3	0	0	7.3	54.7	48.6
MH-212	MH-793	576.43	576.35	63.9	150	0.13	829.02	0.0077	0.007	0.8	0.8	0.8	6.8	1.30	62.30	166.14	63.90	7.19	8.32	3	3	0	0	7.2	54.0	47.9
MH-786	MH-787	576.47	576.36	63	150	0.15	584.03	0.0099	0.009	0.8	0.8	0.8	9.2	1.30	61.43	163.80	63.00	7.09	8.20	3	3	0	0	7.1	53.2	47.3
MH-777	MH-776	582.08	581.92	62.2	150	0.33	394.56	0.0891	0.081	0.8	0.8	0.8	23.5	1.30	60.65	161.72	62.20	7.00	8.10	3	3	0	0	7.0	52.5	46.7
MH-772	MH-773	588.09	587.84	61.4	150	0.43	244.7	0.1188	0.108	0.8	0.8	0.8	21.6	1.30	59.87	159.64	61.40	6.91	7.99	3	3	0	0	6.9	51.9	46.1
MH-464	MH-204	584.56	584.14	60.8	150	0.75	142.35	0.4345	0.395	0.8	0.8	0.8	44.2	1.30	59.28	158.08	60.80	6.84	7.91	3	3	0	0	6.8	51.4	45.6
MH-755	MH-614	582.6	582.46	60.2	150	0.21	430.73	0.022	0.02	0.8	0.8	0.8	21.5	1.30	58.70	156.52	60.20	6.77	7.84	3	3	0	0	6.8	50.9	45.2
MH-743	MH-744	584.97	584.75	59.1	150	0.28	267.33	0.0319	0.029	0.8	0.8	0.8	11.4	1.30	57.62	153.66	59.10	6.65	7.69	2	2	0	0	6.6	49.9	44.3
MH-740	MH-741	584.64	584.42	59	150	0.26	264.27	0.0242	0.022	0.8	0.8	0.8	10	1.30	57.53	153.40	59.00	6.64	7.68	2	2	0	0	6.6	49.8	44.3
MH-738	MH-243	604.54																								

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (MI/d)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-303	MH-493	593.85	593.05	90.8	150	0.49	112.77	0.077	0.07	0.8	0.8	0.8	15.9	1.30	88.53	236.08	90.80	10.22	11.82	4	4	0	0	10.2	76.7	68.1
MH-678	MH-679	606.36	606.29	53.5	150	0.21	797.56	0.0473	0.043	0.8	0.8	0.8	20.6	1.30	52.16	139.10	53.50	6.02	6.96	2	2	0	0	6.0	45.2	40.1
MH-669	MH-169	603.04	602.59	52.6	400	1.71	116.06	8.6526	7.866	0.8	0.8	0.8	54.4	1.55	81.53	163.06	52.60	7.89	14.50	2	2	0	0	7.9	67.0	52.6
MH-541	MH-632	598.75	598.42	50.3	150	0.41	154.07	0.0605	0.055	0.8	0.8	0.8	14.6	1.30	49.04	130.78	50.30	5.66	6.55	2	2	0	0	5.7	42.5	37.7
MH-630	MH-552	603.79	603.35	50.2	150	0.66	113.36	0.2068	0.188	0.8	0.8	0.8	30	1.30	48.95	130.52	50.20	5.65	6.53	2	2	0	0	5.6	42.4	37.7
MH-622	MH-584	576.36	576.27	49.7	150	0.17	577.71	0.0154	0.014	0.8	0.8	0.8	9.6	1.30	48.46	129.22	49.70	5.59	6.47	2	2	0	0	5.6	42.0	37.3
MH-620	MH-621	604.07	603.62	49.7	175	1.03	110.1	0.7843	0.713	0.8	0.8	0.8	46.4	1.33	51.04	131.71	49.70	5.78	6.97	2	2	0	0	5.8	44.1	38.5
MH-618	MH-619	599.97	599.91	49.5	271	0.61	911.53	2.4354	2.214	0.8	0.8	0.8	56.1	1.42	61.27	140.68	49.50	6.47	9.32	2	2	0	0	6.5	51.9	43.1
MH-613	MH-586	571.51	571.4	49.5	150	0.17	448.89	0.011	0.01	0.8	0.8	0.8	9.1	1.30	48.26	128.70	49.50	5.57	6.44	2	2	0	0	5.6	41.8	37.1
MH-602	MH-516	586.51	586.17	48.5	150	0.34	142.04	0.0297	0.027	0.8	0.8	0.8	12.7	1.30	47.29	126.10	48.50	5.46	6.31	2	2	0	0	5.5	41.0	36.4
MH-205	MH-98	587.89	587.56	47.6	150	0.66	140.98	0.2816	0.256	0.8	0.8	0.8	37.6	1.30	46.41	123.76	47.60	5.36	6.20	2	2	0	0	5.4	40.2	35.7
MH-107	MH-579	587.09	586.92	47.2	600	1.52	286.58	20.5194	18.654	0.8	0.8	0.8	53.8	1.75	99.12	165.20	47.20	8.50	21.83	2	2	0	0	8.5	77.3	56.6
MH-572	MH-352	571.55	571.4	46.6	150	0.4	310.9	0.1276	0.116	0.8	0.8	0.8	23.4	1.30	45.44	121.16	46.60	5.24	6.07	2	2	0	0	5.2	39.4	35.0
MH-569	MH-165	594.27	593.81	46.5	400	1.99	101.63	12.9085	11.735	0.8	0.8	0.8	60	1.55	72.08	144.15	46.50	6.98	12.82	2	2	0	0	7.0	59.3	46.5
MH-557	MH-558	591.39	591.09	45.7	600	1.82	150.51	16.5418	15.038	0.8	0.8	0.8	44.8	1.75	95.97	159.95	45.70	8.23	21.14	2	2	0	0	8.2	74.8	54.8
MH-552	MH-553	603.35	602.97	45.4	150	0.7	120.25	0.2739	0.249	0.8	0.8	0.8	30.3	1.30	44.27	118.04	45.40	5.11	5.91	2	2	0	0	5.1	38.4	34.1
MH-546	MH-547	605.34	605.06	44.8	150	0.37	160.07	0.0429	0.039	0.8	0.8	0.8	21.5	1.30	43.68	116.48	44.80	5.04	5.83	2	2	0	0	5.0	37.8	33.6
MH-221	MH-323	576.69	576.62	44.5	150	0.14	655.67	0.0099	0.009	0.8	0.8	0.8	8.8	1.30	43.39	115.70	44.50	5.01	5.79	2	2	0	0	5.0	37.6	33.4
MH-441	MH-470	576.9	576.42	50.5	150	0.4	104.64	0.0352	0.032	0.8	0.8	0.8	10.7	1.30	49.24	131.30	50.50	5.68	6.57	2	2	0	0	5.7	42.7	37.9
MH-530	MH-531	574.34	574.09	42.5	150	0.21	171.69	0.0077	0.007	0.8	0.8	0.8	11	1.30	41.44	110.50	42.50	4.78	5.53	2	2	0	0	4.8	35.9	31.9
MH-246	MH-525	576.19	576.12	43.2	150	0.22	618.24	0.0363	0.033	0.8	0.8	0.8	13.6	1.30	42.12	112.32	43.20	4.86	5.62	2	2	0	0	4.9	36.5	32.4
MH-516	MH-517	586.17	585.87	42.6	150	0.42	143.91	0.0605	0.055	0.8	0.8	0.8	16.8	1.30	41.54	110.76	42.60	4.79	5.54	2	2	0	0	4.8	36.0	32.0
MH-514	MH-515	573.3	573.2	24.8	150	0.13	246.89	0.0022	0.002	0.8	0.8	0.8	4.5	1.30	24.18	64.48	24.80	2.79	3.23	1	1	0	0	2.8	21.0	18.6
MH-509	MH-510	576.31	576.25	42.3	150	0.14	711.94	0.0099	0.009	0.8	0.8	0.8	7.2	1.30	41.24	109.98	42.30	4.76	5.51	2	2	0	0	4.8	35.7	31.7
MH-400	MH-276	571.4	571.2	42.3	150	0.43	211.84	0.1012	0.092	0.8	0.8	0.8	19.6	1.30	41.24	109.98	42.30	4.76	5.51	2	2	0	0	4.8	35.7	31.7
MH-392	MH-287	577.65	577.36	30.2	150	0.37	104.74	0.0264	0.024	0.8	0.8	0.8	9.3	1.30	29.45	78.52	30.20	3.40	3.93	2	2	0	0	3.4	25.5	22.7
MH-487	MH-488	579.79	579.57	41.3	150	0.42	187.3	0.0836	0.076	0.8	0.8	0.8	21.6	1.30	40.27	107.38	41.30	4.65	5.38	2	2	0	0	4.6	34.9	31.0
MH-267	MH-457	575.96	575.88	39.7	400	0.83	500.93	4.2405	3.855	0.8	0.8	0.8	45.2	1.55	61.54	123.07	39.70	5.96	10.94	2	2	0	0	6.0	50.6	39.7
MH-455	MH-456	577.81	577.76	41.2	150	0.1	788.5	0.0044	0.004	0.8	0.8	0.8	9.4	1.30	40.17	107.12	41.20	4.64	5.36	2	2	0	0	4.6	34.8	30.9
MH-372	MH-233	576.38	576.31	39.6	150	0.15	578.61	0.0088	0.008	0.8	0.8	0.8	8.3	1.30	38.61	102.96	39.60	4.46	5.15	2	2	0	0	4.5	33.5	29.7
MH-449	MH-336	583.01	582.94	39.4	150	0.29	605.46	0.1001	0.091	0.8	0.8	0.8	23.1	1.30	38.42	102.44	39.40	4.43	5.13	2	2	0	0	4.4	33.3	29.6
MH-439	MH-277	580.63	580.34	39.2	150	0.3	136.86	0.0176	0.016	0.8	0.8	0.8	7.9	1.30	38.22	101.92	39.20	4.41	5.10	2	2	0	0	4.4	33.1	29.4
MH-437	MH-436	589.67	589.28	38.8	150	0.74	101.6	0.2739	0.249	0.8	0.8	0.8	29.7	1.30	37.83	100.88	38.80	4.37	5.05	2	2	0	0	4.4	32.8	29.1
MH-363	MH-371	582.8	582.7	37.9	150	0.33	386.78	0.088	0.08	0.8	0.8	0.8	20.4	1.30	36.95	98.54	37.90	4.26	4.93	2	2	0	0	4.3	32.0	28.4
MH-414	MH-71	580.06	579.83	37.8	150	0.27	165.31	0.0154	0.014	0.8	0.8	0.8	7.5	1.30	36.86	98.28	37.80	4.25	4.92	2	2	0	0	4.3	31.9	28.4
MH-399	MH-400	571.5	571.4	37.3	150	0.35	371.86	0.0957	0.087	0.8	0.8	0.8	21	1.30	36.37	96.98	37.30	4.20	4.86	2	2	0	0	4.2	31.5	28.0
MH-282	MH-392	577.94	577.65	37.1	150	0.33	127.86	0.022	0.02	0.8	0.8	0.8	9.4	1.30	36.17	96.46	37.10	4.17	4.83	2	2	0	0	4.2	31.3	27.8
MH-385	MH-16	579.41	579.08	37	150	0.29	111.98	0.0132	0.012	0.8	0.8	0.8	6.7	1.30	36.08	96.20	37.00	4.16	4.82	2	2	0	0	4.2	31.3	27.8
MH-381	MH-274	571.55	571.5	36.7	150	0.27	731.52	0.0924	0.084	0.8	0.8	0.8	22.2	1.30	35.78	95.42	36.70	4.13	4.78	2	2	0	0	4.1	31.0	27.5
MH-373	MH-47	578.98	578.64	36.2	150	0.4	107.27	0.0363	0.033	0.8	0.8	0.8	10.8	1.30	35.30	94.12	36.20	4.07	4.71	2	2	0	0	4.1	30.6	27.2
MH-356	MH-372	576.44	576.38	35.9	150	0.13	562.28	0.0055	0.005	0.8	0.8	0.8	7	1.30	35.00	93.34	35.90	4.04	4.67	2	2	0	0	4.0	30.3	26.9
MH-362	MH-363	582.88	582.8	35.5	150	0.3	453.99	0.077	0.07	0.8	0.8	0.8	21.2	1.30	34.61	92.30	35.50	3.99	4.62	2	2	0	0	4.0	30.0	26.6
MH-361	MH-275	579.38	579.32	35.1	150	0.18	594.51	0.0198	0.018	0.8	0.8	0.8	10.4	1.30	34.22	91.26	35.10	3.95	4.57	2	2	0	0	3.9	29.7	26.3
MH-358	MH-220	576.8	576.74	35.4	150	0.11	602.79	0.0033	0.003	0.8	0.8	0.8	5.8	1.30	34.52	92.04	35.40	3.98	4.61	2	2	0	0	4.0	29.9	26.6
MH-355	MH-356	576.5	576.44	35.3	150	0.1	576.98	0.0022	0.002	0.8	0.8	0.8	5.1	1.30	34.42	91.78	35.30	3.97	4.59	2	2	0	0	4.0	29.8	26.5
MH-244	MH-218	604.07	603.85	34.2	400	1.48	156.63	7.5009	6.819	0.8	0.8	0.8	50.5	1.55	53.01	106.02	34.20	5.13	9.43	2	2	0	0	5.1	43.6	34.2
MH-327	MH-200	574.83	574.61	33.3	150	0.17	150.74	0.0033	0.003	0.8	0.8	0.8	3.4	1.30	32.47	86.58	33.30	3.75	4.33	2	2	0	0	3.7	28.1	25.0
MH-326	MH-163	581.06	580.81	32.7	150	0.28	130.93	0.0154	0.014	0.8	0.8	0.8	7.2	1.30	31.88	85.02	32.70	3.68	4.26	2	2	0	0	3.7	27.6	24.5
MH-323	MH-324	576.62	576.56	33	150	0.17	531.89	0.0132	0.012	0.8	0.8	0.8	9.7	1.30	32.18	85.80	33.00	3.71	4.30	2	2					



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Constructe d Slope (1/S)in %	Design Capacity (Ml/d)	Total Flow (Ml/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstre am Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavatio n	Excavation in cu. M.	Timbering in sq. M.	Dewaterin g	PCC Bedding (Cu. M.)	Transportat ion of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-103	MH-23	575.85	575.8	26.6	400	0.85	532.43	5.1942	4.722	0.8	0.8	0.8	58	1.55	41.23	82.46	26.60	3.99	7.33	1	1	0	0	4.0	33.9	26.6
MH-220	MH-221	576.74	576.69	27.1	150	0.13	542.01	0.0066	0.006	0.8	0.8	0.8	7.5	1.30	26.42	70.46	27.10	3.05	3.53	1	1	0	0	3.0	22.9	20.3
MH-218	MH-219	603.85	603.68	27	400	1.48	158.11	7.6098	6.918	0.8	0.8	0.8	52.1	1.55	41.85	83.70	27.00	4.05	7.44	1	1	0	0	4.1	34.4	27.0
MH-209	MH-210	587.51	587.38	26.7	600	1.73	198.04	19.9078	18.098	0.8	0.8	0.8	49.4	1.75	56.07	93.45	26.70	4.81	12.35	1	1	0	0	4.8	43.7	32.0
MH-206	MH-205	588.08	587.89	26.5	150	0.65	141.34	0.2563	0.233	0.8	0.8	0.8	31.9	1.30	25.84	68.90	26.50	2.98	3.45	1	1	0	0	3.0	22.4	19.9
MH-169	MH-170	602.59	602.38	24.5	400	1.72	115.34	8.7758	7.978	0.8	0.8	0.8	55.3	1.55	37.98	75.95	24.50	3.68	6.75	1	1	0	0	3.7	31.2	24.5
MH-165	MH-166	593.71	593.65	24.3	500	1.2	410.59	14.0866	12.806	0.8	0.8	0.8	55.8	1.65	44.10	80.19	24.30	4.01	8.78	1	1	0	0	4.0	35.3	26.7
MH-101	MH-119	587.22	587.06	24.2	150	0.85	151.44	0.5786	0.526	0.8	0.8	0.8	47.7	1.30	23.60	62.92	24.20	2.72	3.15	1	1	0	0	2.7	20.4	18.2
MH-84	MH-92	587.32	587.17	21.9	150	0.37	154.45	0.044	0.04	0.8	0.8	0.8	13.5	1.30	21.35	56.94	21.90	2.46	2.85	1	1	0	0	2.5	18.5	16.4
MH-139	MH-140	582.64	582.6	21.9	150	0.2	654.93	0.0308	0.028	0.8	0.8	0.8	14.9	1.30	21.35	56.94	21.90	2.46	2.85	1	1	0	0	2.5	18.5	16.4
MH-123	MH-98	587.63	587.56	21.4	150	0.4	284.43	0.1166	0.106	0.8	0.8	0.8	32.8	1.30	20.87	55.64	21.40	2.41	2.79	1	1	0	0	2.4	18.1	16.1
MH-119	MH-93	587.06	586.9	21.2	150	0.88	138.33	0.5885	0.535	0.8	0.8	0.8	49.8	1.30	20.67	55.12	21.20	2.39	2.76	1	1	0	0	2.4	17.9	15.9
MH-82	MH-79	588.47	588.27	20.2	150	0.66	102.26	0.1892	0.172	0.8	0.8	0.8	26.9	1.30	19.70	52.52	20.20	2.27	2.63	1	1	0	0	2.3	17.1	15.2
MH-106	MH-107	587.13	587.09	20.1	600	1.2	518.23	19.9859	18.169	0.8	0.8	0.8	53.6	1.75	42.21	70.35	20.10	3.62	9.30	1	1	0	0	3.6	32.9	24.1
MH-102	MH-103	575.9	575.85	19.9	400	0.92	436.88	5.1876	4.716	0.8	0.8	0.8	52.6	1.55	30.85	61.69	19.90	2.99	5.48	1	1	0	0	3.0	25.4	19.9
MH-100	MH-101	587.36	587.22	19.9	150	0.87	137.37	0.5665	0.515	0.8	0.8	0.8	47.2	1.30	19.40	51.74	19.90	2.24	2.59	1	1	0	0	2.2	16.8	14.9
MH-95	MH-83	587.59	587.45	19.7	150	0.3	137.02	0.0187	0.017	0.8	0.8	0.8	9.4	1.30	19.21	51.22	19.70	2.22	2.56	1	1	0	0	2.2	16.6	14.8
MH-93	MH-94	586.9	586.83	19.5	150	0.69	272.93	0.6006	0.546	0.8	0.8	0.8	50.2	1.30	19.01	50.70	19.50	2.19	2.54	1	1	0	0	2.2	16.5	14.6
MH-92	MH-88	587.17	587.03	19.4	150	0.42	136.99	0.0572	0.052	0.8	0.8	0.8	14	1.30	18.92	50.44	19.40	2.18	2.53	1	1	0	0	2.2	16.4	14.6
MH-83	MH-84	587.45	587.32	18.1	150	0.35	135.4	0.0308	0.028	0.8	0.8	0.8	11.6	1.30	17.65	47.06	18.10	2.04	2.36	1	1	0	0	2.0	15.3	13.6
MH-81	MH-82	588.64	588.47	17.9	150	0.65	105.34	0.1771	0.161	0.8	0.8	0.8	26.2	1.30	17.45	46.54	17.90	2.01	2.33	1	1	0	0	2.0	15.1	13.4
MH-75	MH-76	589.13	588.96	17.6	150	0.46	103.89	0.055	0.05	0.8	0.8	0.8	14.8	1.30	17.16	45.76	17.60	1.98	2.29	1	1	0	0	2.0	14.9	13.2
MH-64	MH-65	596.37	596.29	83.7	400	0.7	963.6	5.8355	5.305	0.8	0.8	0.8	53.9	1.55	129.74	259.47	83.70	12.56	23.07	3	3	0	0	12.6	106.7	83.7
MH-60	MH-61	583.49	583.44	16.5	150	0.29	343.53	0.0495	0.045	0.8	0.8	0.8	14.5	1.30	16.09	42.90	16.50	1.86	2.15	1	1	0	0	1.9	13.9	12.4
MH-56	MH-57	587.77	587.61	16.4	150	0.37	104.73	0.0286	0.026	0.8	0.8	0.8	9.6	1.30	15.99	42.64	16.40	1.85	2.13	1	1	0	0	1.8	13.9	12.3
MH-33	MH-34	584.84	584.76	14.1	150	0.63	179.47	0.3212	0.292	0.8	0.8	0.8	34.5	1.30	13.75	36.66	14.10	1.59	1.84	1	1	0	0	1.6	11.9	10.6
MH-9	MH-10	583.38	583.35	9.2	150	0.23	314.08	0.0187	0.017	0.8	0.8	0.8	8.8	1.30	8.97	23.92	9.20	1.04	1.20	1	1	0	0	1.0	7.8	6.9
MH-5	MH-6	587.81	587.75	25.3	150	0.25	421.23	0.0396	0.036	0.8	0.8	0.8	13.5	1.30	24.67	65.78	25.30	2.85	3.29	1	1	0	0	2.8	21.4	19.0
MH-3131	MH-4	584.22	583.47	101.4	150	0.19	134.4	0.0044	0.004	0.8	0.8	0.8	4	1.30	98.87	263.64	101.40	11.41	13.20	4	4	0	0	11.4	85.7	76.1
MH-6	MH-974	587.78	587.01	79.3	150	0.21	103.13	0.0044	0.004	0.8	0.8	0.8	12.6	1.30	77.32	206.18	79.30	8.92	10.32	3	3	0	0	8.9	67.0	59.5
MH-987	MH-8	601.14	601.03	58.5	271	0.74	535.77	2.2748	2.068	0.8	0.8	0.8	50	1.42	72.40	166.26	58.50	7.64	11.02	2	2	0	0	7.6	61.4	51.0
MH-8	MH-9	601.03	600.43	173.9	271	0.94	290.07	2.2748	2.068	0.8	0.8	0.8	45.2	1.42	215.23	494.22	173.90	22.72	32.75	6	6	0	0	22.7	182.5	151.5
MH-9	MH-618	600.43	599.97	63.2	271	1.23	136.86	2.2748	2.068	0.8	0.8	0.8	55	1.42	78.22	179.61	63.20	8.26	11.90	3	3	0	0	8.3	66.3	55.0
MH-1020	MH-987	605.57	601.26	539.9	150	0.87	125.37	0.6259	0.569	0.8	0.8	0.8	47	1.30	526.40	1403.74	539.90	60.74	70.27	18	18	0	0	60.7	456.1	404.9
MH-656	MH-657	601.03	600.57	52	150	0.61	112.42	0.1551	0.141	0.8	0.8	0.8	22.5	1.30	50.70	135.20	52.00	5.85	6.77	2	2	0	0	5.9	43.9	39.0
MH-11	MH-619	601.13	600.03	125.4	150	0.21	114.75	0.0044	0.004	0.8	0.8	0.8	3.9	1.30	122.27	326.04	125.40	14.11	16.32	5	5	0	0	14.1	105.9	94.1
MH-16	MH-494	593.3	593.07	69.8	400	0.95	307.33	3.586	3.26	0.8	0.8	0.8	34.8	1.55	108.19	216.38	69.80	10.47	19.24	3	3	0	0	10.5	89.0	69.8
MH-25	MH-26	593.78	593.45	38.2	400	1.33	115.45	3.4694	3.154	0.8	0.8	0.8	34	1.55	59.21	118.42	38.20	5.73	10.53	2	2	0	0	5.7	48.7	38.2
MH-26	MH-16	593.45	593.3	43.6	400	0.96	290.58	3.4694	3.154	0.8	0.8	0.8	34.8	1.55	67.58	135.16	43.60	6.54	12.02	2	2	0	0	6.5	55.6	43.6
MH-486	MH-485	587.68	587.44	137.7	217	0.66	593.07	1.8139	1.649	0.8	0.8	0.8	62.9	1.37	153.79	376.47	137.70	16.88	21.97	5	5	0	0	16.9	131.8	112.5
MH-36	MH-913	596.29	595.54	97.4	150	0.19	131.2	0.0044	0.004	0.8	0.8	0.8	4	1.30	94.97	253.24	97.40	10.96	12.68	4	4	0	0	11.0	82.3	73.1
MH-401	MH-148	592.91	592.8	37.4	150	0.3	347.23	0.0539	0.049	0.8	0.8	0.8	21.3	1.30	36.47	97.24	37.40	4.21	4.87	2	2	0	0	4.2	31.6	28.1
MH-42	MH-1060	601.13	600.99	31.5	150	0.76	220.44	0.9108	0.828	0.8	0.8	0.8	63.7	1.30	30.71	81.90	31.50	3.54	4.10	2	2	0	0	3.5	26.6	23.6
MH-336	MH-157	582.94	582.62	40.5	150	0.53	127.43	0.1155	0.105	0.8	0.8	0.8	19.6	1.30	39.49	105.30	40.50	4.56	5.27	2	2	0	0	4.6	34.2	30.4
MH-44	MH-574	583.5	583.21	29.9	150	0.21	103.07	0.0044	0.004	0.8	0.8	0.8	8.6	1.30	29.15	77.74	29.90	3.36	3.89	1	1	0	0	3.4	25.3	22.4
MH-512	MH-601	575.45	575.33	17.3	150	0.76	145.6	0.4697	0.427	0.8	0.8	0.8	45.3	1.30	16.87	44.98	17.30	1.95	2.25	0	0	0	0	1.9	14.6	13.0

**SALIM ALI**

**PIPE REPORT FOR SALIM ALI ZONE**

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Total Flow (ML/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Backfilling in Trenches (cu. M.)	7	8	9	10	16	A	B	C	18	22	Road restoration
MH-195	OF-1	588.18	588.17	12.5	500	0.89	16.56	1.4	1.46	1.42	52.6	2.25	34.69	19.25	56.25	12.50	2.06	4.52	1	1	0	0	2.1	30.2	13.8
MH-189	MH-24	599.14	598.64	69.2	175	0.97	1.75	0.8	0.8	0.8	62.2	1.33	71.06	42.90	183.38	69.20	8.04	9.71	3	3	0	0	8.0	61.4	53.6
MH-193	MH-30	593.22	593.2	20.7	450	0.72	6.88	2	2.03	2.05	66.4	2.80	67.07	43.47	115.92	20.70	3.26	6.55	1	1	0	0	3.3	60.5	21.7
MH-210	MH-168	593.55	593.51	33.2	400	0.69	6.08	4.4	4.61	4.18	63.2	5.15	200.86	146.08	341.96	33.20	4.98	9.15	2	0	0	2	5.0	191.7	33.2
MH-13	MH-196	594.01	593.92	61.9	271	0.6	2.82	4.9	4.93	4.94	69.5	5.52	353.37	264.18	683.50	61.90	8.09	11.66	3	0	0	3	8.1	341.7	53.9
MH-88	MH-105	597.86	598.53	90.8	150	0.6	0.26	1.1	1.32	0.8	34	1.60	108.96	74.91	290.56	90.80	10.22	11.82	4	4	0	0	10.2	97.1	68.1
MH-207	MH-151	597.51	596.9	161.2	175	0.6	0.67	3.7	3.07	4.23	40.1	4.23	672.91	462.24	1362.14	161.20	18.74	22.61	6	0	6	0	18.7	650.3	124.9
MH-151	MH-226	596.85	596.48	132.6	217	0.6	1.04	3.7	4.23	3.25	50.8	4.27	581.60	400.84	1131.61	132.60	16.25	21.15	5	0	5	0	16.3	560.5	108.3
MH-226	MH-76	596.48	596.27	96.9	217	0.6	1.55	2.8	3.25	2.44	60.4	3.37	295.63	221.67	652.52	96.90	11.88	15.46	4	4	0	0	11.9	280.2	79.2
MH-93	MH-33	588.43	588.4	22.3	600	0.87	14.28	1.4	1.43	1.41	67.4	2.35	69.58	37.46	104.81	22.30	4.01	10.32	1	1	0	0	4.0	59.3	26.8
MH-33	MH-58	588.4	588.37	24.1	600	0.88	15.85	1.4	1.41	1.44	67.6	2.35	75.19	40.49	113.27	24.10	4.34	11.15	1	1	0	0	4.3	64.0	28.9
MH-7	MH-255	588.89	588.8	68.9	400	0.63	4.29	1.7	1.76	1.65	74.8	2.45	189.48	117.13	337.61	68.90	10.34	18.99	3	3	0	0	10.3	170.5	68.9
MH-255	MH-256	588.8	588.73	53	400	0.63	4.36	1.6	1.65	1.49	71.6	2.35	140.45	84.80	249.10	53.00	7.95	14.61	2	2	0	0	8.0	125.8	53.0
MH-256	MH-93	588.73	588.68	34.4	400	0.63	4.38	1.5	1.49	1.43	58.3	2.25	87.72	51.60	154.80	34.40	5.16	9.48	2	2	0	0	5.2	78.2	34.4
MH-156	MH-212	602.71	602.05	125.6	150	0.65	0.54	1.5	1.97	1.06	55.7	2.00	188.40	141.30	502.40	125.60	14.13	16.35	5	5	0	0	14.1	172.1	94.2
MH-212	MH-123	602.05	601.2	84.4	150	0.89	0.77	0.9	1.06	0.8	56.3	1.40	88.62	56.97	236.32	84.40	9.50	10.99	3	3	0	0	9.5	77.6	63.3
MH-172	MH-28	602.25	601.68	56.4	150	0.36	0.03	0.9	1	0.8	10.9	1.40	59.22	38.07	157.92	56.40	6.35	7.34	2	2	0	0	6.3	51.9	42.3
MH-115	MH-26	590.35	590.51	26.2	150	0.73	0.7	0.8	0.8	0.8	58	1.30	25.55	15.72	68.12	26.20	2.95	3.41	1	1	0	0	2.9	22.1	19.7
MH-114	MH-35	598.01	597.95	46.3	150	0.16	0.02	0.9	0.84	0.9	12.2	1.40	48.62	31.25	129.64	46.30	5.21	6.03	2	2	0	0	5.2	42.6	34.7
MH-71	MH-35	597.08	597.06	13.4	150	0.26	0.12	1.7	1.52	1.78	37.2	2.20	26.13	17.09	58.96	13.40	1.51	1.74	1	1	0	0	1.5	24.4	10.1
MH-215	MH-115	589.92	590.3	103.9	175	0.6	0.7	1	1.24	0.8	50.3	1.53	122.80	80.52	316.90	103.90	12.08	14.58	4	4	0	0	12.1	108.2	80.5
MH-26	MH-143	590.51	590.95	51.8	150	0.34	0.03	0.8	0.8	0.8	36.1	1.30	50.51	31.08	134.68	51.80	5.83	6.74	2	2	0	0	5.8	43.8	38.9
MH-143	MH-144	590.95	591.03	38.1	150	0.16	0.01	0.8	0.8	0.8	10.7	1.30	37.15	22.86	99.06	38.10	4.29	4.96	2	2	0	0	4.3	32.2	28.6
MH-26	MH-148	590.51	591.18	71.9	150	0.84	0.65	0.9	0.8	1.06	57	1.40	75.50	48.53	201.32	71.90	8.09	9.36	3	3	0	0	8.1	66.1	53.9
MH-148	MH-149	591.18	591.38	39.9	150	0.6	0.44	0.9	1.06	0.8	50.8	1.40	41.90	26.93	111.72	39.90	4.49	5.19	2	2	0	0	4.5	36.7	29.9
MH-149	MH-146	591.38	592.05	94.5	150	0.68	0.42	1.3	0.8	1.75	45.6	1.80	127.58	92.14	340.20	94.50	10.63	12.30	4	4	0	0	10.6	115.3	70.9
MH-146	MH-135	592.05	592.1	38.4	150	0.29	0.17	1.7	1.75	1.55	42.3	2.20	74.88	48.96	168.96	38.40	4.32	5.00	2	2	0	0	4.3	69.9	28.8
MH-135	MH-111	592.1	592.15	35.7	150	0.28	0.16	1.5	1.55	1.41	40.4	2.00	53.55	40.16	142.80	35.70	4.02	4.65	2	2	0	0	4.0	48.9	26.8
MH-111	MH-112	592.15	592.18	25.3	150	0.27	0.13	1.4	1.41	1.31	37.6	1.90	36.05	26.57	96.14	25.30	2.85	3.29	1	1	0	0	2.8	32.8	19.0
MH-112	MH-214	592.18	593.11	99.4	150	0.27	0.01	1.1	1.31	0.8	21.6	1.60	119.28	82.01	318.08	99.40	11.18	12.94	4	4	0	0	11.2	106.3	74.6
MH-167	MH-141	593.81	593.73	53.6	150	0.25	0.1	0.9	0.8	1	29.9	1.40	56.28	36.18	150.08	53.60	6.03	6.98	2	2	0	0	6.0	49.3	40.2
MH-141	MH-142	593.73	593.41	37.2	150	0.6	0.21	1	1	1.03	29.7	1.50	41.85	27.90	111.60	37.20	4.19	4.84	2	2	0	0	4.2	37.0	27.9
MH-142	MH-146	593.41	592.77	77.4	150	0.6	0.22	1	1.03	1.03	29.7	1.50	87.08	58.05	232.20	77.40	8.71	10.07	3	3	0	0	8.7	77.0	58.1
MH-142	MH-178	593.41	593.5	59.4	150	0.11	0	0.9	1.03	0.8	18.5	1.40	62.37	40.10	166.32	59.40	6.68	7.73	2	2	0	0	6.7	54.6	44.6
MH-183	MH-135	593.43	592.85	61	150	0.23	0.01	0.8	0.8	0.8	5.5	1.30	59.48	36.60	158.60	61.00	6.86	7.94	3	3	0	0	6.9	51.5	45.8
MH-187	MH-111	593.36	592.76	62.8	150	0.3	0.02	0.8	0.8	0.8	8.1	1.30	61.23	37.68	163.28	62.80	7.07	8.17	3	3	0	0	7.1	53.1	47.1
MH-170	MH-160	593.13	592.64	55.5	150	0.3	0.02	0.8	0.8	0.8	13.5	1.30	54.11	33.30	144.30	55.50	6.24	7.22	2	2	0	0	6.2	46.9	41.6
MH-160	MH-147	592.64	592.23	47.2	150	0.46	0.08	0.8	0.8	0.8	25.1	1.30	46.02	28.32	122.72	47.20	5.31	6.14	2	2	0	0	5.3	39.9	35.4
MH-147	MH-112	592.23	592.18	39.3	150	0.25	0.11	1.1	0.8	1.31	33.9	1.60	47.16	32.42	125.76	39.30	4.42	5.12	2	2	0	0	4.4	42.0	29.5
MH-213	MH-160	592.99	592.64	96.3	150	0.29	0.05	0.8	0.8	0.8	17.5	1.30	93.89	57.78	250.38	96.30	10.83	12.53	4	4	0	0	10.8	81.4	72.2
MH-237	MH-148	593.44	591.44	200.3	150	0.61	0.19	1	1.26	0.8	26.8	1.50	225.34	150.23	600.90	200.30	22.53	26.07	7	7	0	0	22.5	199.3	150.2
MH-215	MH-216	589.92	589.62	100.3	175	0.6	0.94	1.2	1.24	1.18	50	1.73	134.09	93.28	346.04	100.30	11.66	14.07	4	4	0	0	11.7	120.0	77.7
MH-216	MH-205	589.57	589.26	132.9	217	0.6	1.36	1.2	1.18	1.27	55.4	1.77	191.86	130.30	469.67	132.90	16.29	21.20	5	5	0	0	16.3	170.7	108.6
MH-205	MH-163	589.26	589.07	85.6	217	0.6	1.54	1.2	1.27	1.14	50.8	1.77	123.58	83.92	302.51	85.60	10.49	13.65	3	3	0	0	10.5	109.9	69.9
MH-163	MH-33	589.07	588.75	52.1	217	0.89	1.57	1.3	1.14	1.41	43.3	1.87	79.47	55.34	194.54	52.10	6.38	8.31	2	2	0	0	6.4	71.2	42.6
MH-58	MH-194	588.37	588.28	69.5	600	0.88	15.87	1.6	1.44	1.72	66.5	2.55	233.52	133.44	354.45	69.50	12.51	32.15	3	3	0	0	12.5	201.4	83.4
MH-194	MH-195	588.28	588.18	69.5	600	0.88	15.89	1.6	1.72	1.46	61.7	2.55	233.52	133.44	354.45	69.50	12.51	32.15	3	3	0	0	12.5	201.4	83.4
MH-229	MH-230	596.43	595.05	137.8	150	0.5	0.09	1.1	1.42	0.8	29.8	1.60	165.36	113.69	440.96	137.80	15.50	17.94	5	5	0	0	15.5	147.4	103.4
MH-230	MH-86	595.05	594	178	150	0.6	0.34	0.9	0.8	1.03	39.1	1.40	186.90	120.15	498.40	178.00	20.03	23.17	6	6	0	0	20.0	163.7	133.5
MH-86	MH-87	593.95	593.87	17.7	175	0.6	0.59	1	1.03	0.92	36.8	1.53	20.92	13.72	53.99	17.70	2.06	2.48	1	1	0	0	2.1	18.4	13.7
MH-87	MH-165	592.43	591.62	81.4	175	0.86	0.69	1.6	2.36	0.8	35.6	2.13	158.48	100.94	345.95	81.40	9.46	11.42							



Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Backfilling in Trenches (cu. M.)	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-48	MH-85	589.87	590.02	15.8	150	0.6	0.2	0.8	0.9	0.8	27.5	1.30	15.41	9.48	41.08	15.80	1.78	2.06	1	1	0	0	1.8	13.3	11.9
MH-85	MH-200	590.02	590.76	74.1	150	0.52	0.11	1.1	0.8	1.47	24.8	1.60	88.92	61.13	237.12	74.10	8.34	9.65	3	3	0	0	8.3	79.3	55.6
MH-48	MH-67	589.67	590.78	110.3	450	1.62	8.38	1.1	0.8	1.48	49.5	1.90	220.05	127.40	419.14	110.30	17.37	34.91	4	4	0	0	17.4	185.1	115.8
MH-67	MH-68	591.75	591.88	12.8	150	0.7	0.3	0.8	0.8	0.85	34	1.30	12.48	7.68	33.28	12.80	1.44	1.67	1	1	0	0	1.4	10.8	9.6
MH-68	MH-182	591.93	592.53	60.7	150	0.63	0.21	0.9	0.8	1.01	28.4	1.40	63.74	40.97	169.96	60.70	6.83	7.90	3	3	0	0	6.8	55.8	45.5
MH-67	MH-174	591.45	592.38	92.7	450	1.6	8	1	0.8	1.1	43	1.80	175.20	97.34	333.72	92.70	14.60	29.34	4	4	0	0	14.6	145.9	97.3
MH-174	MH-152	592.68	593.02	57.6	450	1.29	7.51	0.9	0.8	0.94	44.6	1.70	102.82	54.43	195.84	57.60	9.07	18.23	2	2	0	0	9.1	84.6	60.5
MH-152	MH-153	593.02	593.07	42.1	450	0.73	7.43	1.2	0.94	1.37	54.5	2.00	88.41	53.05	168.40	42.10	6.63	13.32	2	2	0	0	6.6	75.1	44.2
MH-153	MH-30	593.07	593.2	92.4	450	0.73	7.14	1.7	1.37	2.05	65.1	2.50	270.27	164.93	462.00	92.40	14.55	29.24	4	4	0	0	14.6	241.0	97.0
MH-193	MH-168	593.22	593.46	174.7	450	0.71	6.47	3.1	2.03	4.18	64.6	3.90	767.81	568.65	1362.66	174.70	27.52	55.29	6	0	6	0	27.5	712.5	183.4
MH-75	MH-116	596.43	596.52	27.1	175	0.6	0.78	2.3	2.32	2.2	52.5	2.83	67.46	48.31	153.12	27.10	3.15	3.80	1	1	0	0	3.2	63.7	21.0
MH-116	MH-38	596.52	596.64	35.1	175	0.6	0.77	2.2	2.2	2.13	48.1	2.73	84.66	59.85	191.30	35.10	4.08	4.92	2	2	0	0	4.1	79.7	27.2
MH-39	MH-136	596.65	596.85	50.9	175	0.6	0.65	2.2	2.13	2.25	43.9	2.73	122.76	86.78	277.41	50.90	5.92	7.14	2	2	0	0	5.9	115.6	39.4
MH-38	MH-39	596.64	596.65	2.7	175	0.6	0.68	2.1	2.13	2.13	46.7	2.63	6.30	4.39	14.18	2.70	0.31	0.38	1	1	0	0	0.3	5.9	2.1
MH-136	MH-94	596.85	596.99	35.7	175	0.6	0.64	2.3	2.25	2.32	41.7	2.83	88.87	63.64	201.71	35.70	4.15	5.01	2	2	0	0	4.2	83.9	27.7
MH-94	MH-59	598.56	598.98	74.4	150	0.64	0.47	0.9	0.8	1.02	46.4	1.40	78.12	50.22	208.32	74.40	8.37	9.68	3	3	0	0	8.4	68.4	55.8
MH-60	MH-36	599.04	599.15	22.9	150	0.6	0.45	0.9	0.94	0.8	49.8	1.40	24.05	15.46	64.12	22.90	2.58	2.98	1	1	0	0	2.6	21.1	17.2
MH-59	MH-60	598.98	599.04	11.9	150	0.6	0.46	1	1.02	0.94	49.1	1.50	13.39	8.93	35.70	11.90	1.34	1.55	1	1	0	0	1.3	11.8	8.9
MH-113	MH-114	598.05	598.01	26.5	150	0.12	0.01	0.8	0.8	0.84	12.3	1.30	25.84	15.90	68.90	26.50	2.98	3.45	1	1	0	0	3.0	22.4	19.9
MH-35	MH-94	597.06	597.04	19.5	150	0.28	0.15	2	1.78	2.32	31.9	2.50	42.41	29.25	97.50	19.50	2.19	2.54	1	1	0	0	2.2	39.9	14.6
MH-184	MH-104	597.21	597.13	61.3	150	0.22	0.06	1	0.8	1.13	27.4	1.50	68.96	45.98	183.90	61.30	6.90	7.98	3	3	0	0	6.9	61.0	46.0
MH-104	MH-70	597.13	597.1	23.8	150	0.24	0.09	1.2	1.13	1.25	32.1	1.70	30.35	21.42	80.92	23.80	2.68	3.10	1	1	0	0	2.7	27.2	17.9
MH-70	MH-71	597.1	597.08	13.1	150	0.26	0.12	1.4	1.25	1.52	34.8	1.90	18.67	13.76	49.78	13.10	1.47	1.71	1	1	0	0	1.5	17.0	9.8
MH-185	MH-70	597.52	597.1	61.6	150	0.24	0.01	1	0.8	1.25	20.7	1.50	69.30	46.20	184.80	61.60	6.93	8.02	3	3	0	0	6.9	61.3	46.2
MH-166	MH-39	598.04	597.97	53.6	150	0.11	0.01	0.8	0.8	0.86	6.4	1.30	52.26	32.16	139.36	53.60	6.03	6.98	2	2	0	0	6.0	45.3	40.2
MH-92	MH-54	597.63	597.57	20.4	150	0.2	0.02	0.8	0.8	0.86	11.6	1.30	19.89	12.24	53.04	20.40	2.30	2.66	1	1	0	0	2.3	17.2	15.3
MH-54	MH-79	597.57	597.4	38.4	150	0.26	0.03	1	0.86	1.18	19	1.50	43.20	28.80	115.20	38.40	4.32	5.00	2	2	0	0	4.3	38.2	28.8
MH-79	MH-80	597.4	597.38	14.3	150	0.22	0.07	1.2	1.18	1.26	26.2	1.70	18.23	12.87	48.62	14.30	1.61	1.86	1	1	0	0	1.6	16.4	10.7
MH-80	MH-38	597.38	597.35	25.9	150	0.23	0.08	1.4	1.26	1.47	22.1	1.90	36.91	27.20	98.42	25.90	2.91	3.37	1	1	0	0	2.9	33.5	19.4
MH-50	MH-79	597.43	597.4	22.9	150	0.18	0.03	1.2	1.16	1.18	21.7	1.70	29.20	20.61	77.86	22.90	2.58	2.98	1	1	0	0	2.6	26.2	17.2
MH-50	MH-138	597.43	597.52	66.4	150	0.15	0.02	1	1.16	0.8	15.5	1.50	74.70	49.80	199.20	66.40	7.47	8.64	3	3	0	0	7.5	66.1	49.8
MH-49	MH-50	597.83	597.79	9.8	150	0.17	0.01	0.8	0.8	0.8	6.4	1.30	9.56	5.88	25.48	9.80	1.10	1.28	1	1	0	0	1.1	8.3	7.4
MH-74	MH-71	597.81	597.79	13.7	150	0.1	0	0.8	0.8	0.82	5.5	1.30	13.36	8.22	35.62	13.70	1.54	1.78	1	1	0	0	1.5	11.6	10.3
MH-53	MH-54	597.58	597.57	10.4	150	0.1	0	0.8	0.8	0.86	9.5	1.30	10.14	6.24	27.04	10.40	1.17	1.35	1	1	0	0	1.2	8.8	7.8
MH-234	MH-228	606.3	604.73	156.7	150	0.86	0.65	2.6	4.37	0.8	51.4	3.10	411.34	305.57	971.54	156.70	17.63	20.40	6	6	0	0	17.6	390.9	117.5
MH-228	MH-190	601.78	600.44	133.8	150	0.96	1.08	2.3	3.75	0.8	69.2	2.80	321.12	230.81	749.28	133.80	15.05	17.42	5	5	0	0	15.1	303.7	100.4
MH-190	MH-191	599.81	599.13	68	150	0.98	1.28	1.1	1.43	0.8	77.3	1.60	81.60	56.10	217.60	68.00	7.65	8.85	3	3	0	0	7.7	72.7	51.0
MH-191	MH-180	599.08	598.44	72.8	175	0.98	1.36	0.8	0.8	0.8	52.1	1.33	74.76	45.14	192.92	72.80	8.46	10.21	3	3	0	0	8.5	64.5	56.4
MH-180	MH-219	594.94	595.55	114.9	150	0.6	0.4	3.2	4.35	2.08	44.9	3.70	353.32	275.76	850.26	114.90	12.93	14.96	4	0	4	0	12.9	338.4	86.2
MH-219	MH-124	595.55	596.27	104.5	150	0.6	0.29	1.6	2.08	1.2	39.8	2.10	195.94	125.40	438.90	104.50	11.76	13.60	4	4	0	0	11.8	182.3	78.4
MH-124	MH-125	596.27	596.31	30.8	150	0.29	0.17	1	1.2	0.8	37.9	1.50	34.65	23.10	92.40	30.80	3.47	4.01	2	2	0	0	3.5	30.6	23.1
MH-201	MH-202	604.46	603.66	80.8	150	0.7	0.29	1.1	1.42	0.8	33.6	1.60	96.96	66.66	258.56	80.80	9.09	10.52	3	3	0	0	9.1	86.4	60.6
MH-202	MH-36	600.76	599.15	161.2	150	0.76	0.41	2.2	3.69	0.8	45.6	2.70	374.79	265.98	870.48	161.20	18.14	20.98	6	6	0	0	18.1	353.8	120.9
MH-88	MH-100	597.86	596.66	175.3	150	0.6	0.29	1.6	1.32	1.8	38.5	2.10	328.69	210.36	736.26	175.30	19.72	22.82	6	6	0	0	19.7	305.9	131.5
MH-100	MH-101	596.66	596.53	23.5	150	0.6	0.36	2	1.8	2.14	44.2	2.50	51.11	35.25	117.50	23.50	2.64	3.06	1	1	0	0	2.6	48.1	17.6
MH-11	MH-27	594.1	594.06	31.7	271	0.6	2.7	4.6	4.56	4.71	70.1	5.22	172.69	127.01	331.01	31.70	4.14	5.97	2	0	0	2	4.1	166.7	27.6
MH-101	MH-11	596.53	595.87	128.9	150	0.6	0.42	2.5	2.14	2.94	44.4	3.00	328.70	241.69	773.40	128.90	14.50	16.78	5	5	0	0	14.5	311.9	96.7
MH-27	MH-13	594.06	594.01	29.9	271	0.6	2.73	4.8	4.71	4.93	70.7	5.42	168.09	125.01	324.18	29.90	3.91	5.63	1	0	0	1	3.9	162.5	26.0
MH-224	MH-13	597.84	597.69	114.3	150	0.22	0.07	1.1	0.8	1.4	21.1	1.60	137.16	94.30	365.76	114.30	12.86	14.88	4	4	0	0	12.9	122.3	85.7
MH-2	MH-173	598.23	598.31	56.7	150	0.22	0.06	1.1	0.94	1.23	20.3	1.60	68.04	46.78	181.44	56.70	6.38	7.38	2	2	0	0	6.4	60.7	42.5
MH-173	MH-177	598.31	598.39	58.5	150	0.15	0.02	1	1.23	0.8	19.2	1.50	65.81	43.88	175.50	58.50	6.58	7.61	2	2	0	0	6.6	58.2	43.9
MH-24	MH-2	593.7	593.77	49.7	400	0.63	4.16	5																	

Upstream Node	Downstream Node	Upstream Invert Elevation (m)	Downstream Invert Elevation (m)	Length (m)	Section Size	Ultimate Velocity (m/s) (2041)	Total Flow (MI/d)	Average Pipe Cover (m)	Upstream Cover (m)	Downstream Cover (m)	Normal Depth / Rise (d/D) (%)	Depth of Excavation	Excavation in cu. M.	Backfilling in Trenches (cu. M.)	Timbering in sq. M.	Dewatering	PCC Bedding (Cu. M.)	Transportation of earth	Man holes	2.0 m dia	2.2 m dia	2.5 m dia	Bedding in Cum	Rifilling in trenches	Road restoration
MH-21	MH-161	590.81	590.33	61	271	1.21	3.76	1.1	1.41	0.8	54.1	1.72	91.44	58.44	209.96	61.00	7.97	11.49	3	3	0	0	8.0	80.0	53.1
MH-171	MH-21	592.26	591.42	138.7	271	1.05	3.06	1.6	2.43	0.8	48.2	2.22	309.92	193.29	616.11	138.70	18.12	26.12	5	5	0	0	18.1	283.8	120.8
MH-161	MH-7	590.33	589.9	46.6	271	1.31	3.86	0.8	0.8	0.8	51.6	1.42	57.68	32.47	132.44	46.60	6.09	8.77	2	2	0	0	6.1	48.9	40.6
MH-225	MH-9	597.23	595.98	124.7	150	0.62	0.2	1	1.26	0.8	27.4	1.50	140.29	93.53	374.10	124.70	14.03	16.23	5	5	0	0	14.0	124.1	93.5
MH-235	MH-19	593.94	592.5	171.6	150	0.6	0.22	1.9	0.8	3.07	34.8	2.40	360.36	244.53	823.68	171.60	19.31	22.34	6	6	0	0	19.3	338.0	128.7
MH-233	MH-227	593.14	591.57	156.7	150	0.67	0.26	1.1	1.31	0.8	41.6	1.60	188.04	129.28	501.44	156.70	17.63	20.40	6	6	0	0	17.6	167.6	117.5
MH-227	MH-21	591.57	590.96	128.3	150	0.6	0.46	1.1	0.8	1.41	47.5	1.60	153.96	105.85	410.56	128.30	14.43	16.70	5	5	0	0	14.4	137.3	96.2
MH-186	MH-159	591.22	590.68	61.9	150	0.41	0.06	0.8	0.8	0.8	24.6	1.30	60.35	37.14	160.94	61.90	6.96	8.06	3	3	0	0	7.0	52.3	46.4
MH-5	MH-7	589.53	589.09	75.9	150	0.6	0.36	1.6	1.49	1.76	42.1	2.10	142.31	91.08	318.78	75.90	8.54	9.88	3	3	0	0	8.5	132.4	56.9
MH-159	MH-5	590.68	590.22	46.9	150	0.67	0.27	0.8	0.8	0.8	32.4	1.30	45.73	28.14	121.94	46.90	5.28	6.10	2	2	0	0	5.3	39.6	35.2
MH-232	MH-5	589.71	589.53	140.8	150	0.2	0.04	1.1	0.8	1.49	30.9	1.60	168.96	116.16	450.56	140.80	15.84	18.33	5	5	0	0	15.8	150.6	105.6
MH-206	MH-207	598.26	597.56	108.8	150	0.6	0.3	1.9	0.8	3.07	36.2	2.40	228.48	155.04	522.24	108.80	12.24	14.16	4	4	0	0	12.2	214.3	81.6
MH-134	MH-150	601.31	600.86	45.1	150	0.64	0.22	1	1.22	0.8	28.8	1.50	50.74	33.83	135.30	45.10	5.07	5.87	2	2	0	0	5.1	44.9	33.8
MH-150	MH-151	600.78	600.38	40.2	150	0.67	0.26	0.8	0.88	0.8	31.6	1.30	39.20	24.12	104.52	40.20	4.52	5.23	2	2	0	0	4.5	34.0	30.2
MH-211	MH-212	603.25	602.3	95.1	150	0.56	0.14	1.1	1.5	0.8	22.9	1.60	114.12	78.46	304.32	95.10	10.70	12.38	4	4	0	0	10.7	101.7	71.3
MH-156	MH-218	603.89	604.89	100.6	150	0.7	0.3	1.4	0.8	2.07	34	1.90	143.36	105.63	382.28	100.60	11.32	13.09	4	4	0	0	11.3	130.3	75.5
MH-16	MH-179	602.14	602.43	29	150	0.43	0.06	0.8	0.8	0.85	14.8	1.30	28.28	17.40	75.40	29.00	3.26	3.77	1	1	0	0	3.3	24.5	21.8
MH-28	MH-16	601.68	602	32	150	0.47	0.08	0.9	0.8	0.94	17	1.40	33.60	21.60	89.60	32.00	3.60	4.17	2	2	0	0	3.6	29.4	24.0
MH-123	MH-28	600.54	600.69	30.5	150	0.6	0.42	1.6	1.46	1.79	44.2	2.10	57.19	36.60	128.10	30.50	3.43	3.97	2	2	0	0	3.4	53.2	22.9
MH-192	MH-158	601.69	601	68.6	150	0.66	0.25	0.9	0.92	0.8	34	1.40	72.03	46.31	192.08	68.60	7.72	8.93	3	3	0	0	7.7	63.1	51.5
MH-158	MH-28	601	600.69	46.3	150	0.6	0.29	1.3	0.8	1.79	41	1.80	62.51	45.14	166.68	46.30	5.21	6.03	2	2	0	0	5.2	56.5	34.7
MH-180	MH-181	594.84	594.72	60.4	217	0.6	1.81	5.2	4.35	5.99	56.8	5.77	338.94	256.60	696.65	60.40	7.40	9.63	3	0	0	3	7.4	329.3	49.3
MH-181	MH-204	594.67	594.51	84.7	271	0.6	1.91	5.7	5.99	5.38	52.9	6.32	618.78	420.51	1070.78	84.70	11.07	15.95	3	0	0	3	11.1	602.8	73.8
MH-204	MH-203	594.51	594.26	137.5	271	0.6	2.02	5.3	5.38	5.14	56.2	5.92	832.86	634.74	1628.28	137.50	17.96	25.89	5	0	0	5	18.0	807.0	119.8
MH-203	MH-11	594.26	594.1	90.5	271	0.6	2.2	4.8	5.14	4.56	64	5.42	508.76	378.36	981.20	90.50	11.82	17.04	4	0	0	4	11.8	491.7	78.8
MH-217	MH-203	599.76	598.75	100.9	150	0.49	0.09	1	1.23	0.8	18.1	1.50	113.51	75.68	302.70	100.90	11.35	13.13	4	4	0	0	11.4	100.4	75.7
MH-209	MH-197	599.7	599.3	93.6	150	0.33	0.06	0.8	0.8	0.8	25	1.30	91.26	56.16	243.36	93.60	10.53	12.18	4	4	0	0	10.5	79.1	70.2
MH-197	MH-198	599.3	599.2	71.9	150	0.25	0.11	1.5	0.8	2.23	32.4	2.00	107.85	80.89	287.60	71.90	8.09	9.36	3	3	0	0	8.1	98.5	53.9
MH-198	MH-226	599.2	598.28	125.9	150	0.6	0.26	1.9	2.23	1.55	32.7	2.40	264.39	179.41	604.32	125.90	14.16	16.39	5	5	0	0	14.2	248.0	94.4
MH-201	MH-223	605.08	606.22	113.4	150	0.6	0.18	1.2	0.8	1.63	25.8	1.70	144.59	102.06	385.56	113.40	12.76	14.76	4	4	0	0	12.8	129.8	85.1
MH-105	MH-106	598.53	598.77	23.8	150	0.61	0.19	0.8	0.8	0.87	30.3	1.30	23.21	14.28	61.88	23.80	2.68	3.10	1	1	0	0	2.7	20.1	17.9
MH-106	MH-137	598.84	599.2	36.6	150	0.57	0.15	0.8	0.8	0.87	23.4	1.30	35.69	21.96	95.16	36.60	4.12	4.76	2	2	0	0	4.1	30.9	27.5