

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
J1	J2	CIRCULAR	Proposed Pipe	75.72	0.01	0.900	0	0	1.51	2.15	2.28	2.27	R 731 459.20
J2	J3	CIRCULAR	Proposed Pipe	79.1	0.01	0.900	0	0	1.51	2.14	2.38	2.35	R 731 459.20
J3	J4	CIRCULAR	Proposed Pipe	56.18	0.01	0.900	0	0	1.49	2.19	2.84	2.87	R 548 594.40
J4	J5	TRAPEZOIDAL	Proposed Trapezoidal Channel	156.28	0.00462	0.900	0.9	3	1.50	2.15	3.94	4.99	R 424 962.56
J1	J2	RECT_OPEN	Rectangular channel / Overflow conduit	79.18	0.00956	0.250	10	0	0.00	0.00	2.30	3.30	n/a
J2	J3	RECT_OPEN	Rectangular channel / Overflow conduit	84.69	0.00934	0.250	10	0	0.00	0.00	2.19	3.23	n/a
J3	J4	RECT_OPEN	Rectangular channel / Overflow conduit	60.33	0.00932	0.250	10	0	0.00	0.00	1.18	2.22	n/a
JUNC-100-01	JUNC-79-02	PARABOLIC	Overland Channel	98.3	0.06835	1.000	10	0	0.43	0.74	1.39	1.68	n/a
JUNC-100-02	JUNC-100-01	PARABOLIC	Overland Channel	98.39	0.12102	1.000	10	0	0.35	0.58	1.11	1.35	n/a
JUNC-100-03	JUNC-100-02	PARABOLIC	Overland Channel	26.83	0.0518	1.000	5	0	0.35	0.59	1.12	1.35	n/a
JUNC-100-04	JUNC-100-03	RECT_OPEN	Rectangular channel / Overflow conduit	62.98	0.0071	0.250	10	0	0.09	0.31	0.83	1.07	n/a
JUNC-100-04	JUNC-100-03	CIRCULAR	Pipe	60.39	0.0074	0.400	0	0	0.26	0.27	0.28	0.29	n/a
JUNC-10-01	JUNC-1-11	PARABOLIC	Overland Channel	23.84	0.46833	1.000	10	0	0.43	0.99	2.82	3.56	n/a
JUNC-10-02	JUNC-10-01	CIRCULAR	Pipe	16.6	0.00096	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-101-01	JUNC-82-03	CIRCULAR	Pipe	21.42	0.11	0.300	0	0	0.21	0.29	0.30	0.30	n/a
JUNC-101-01	JUNC-82-03	RECT_OPEN	Rectangular channel / Overflow conduit	22.43	0.09426	0.250	10	0	0.00	0.00	0.20	0.30	n/a
JUNC-1-02	OUT-1-01	PARABOLIC	Natural Channel	125.42	0.01278	5.000	300	0	435.33	690.50	1634.23	2262.75	n/a
JUNC-102-01	JUNC-82-04	RECT_OPEN	Rectangular channel / Overflow conduit	121.27	0.08982	0.250	10	0	0.00	0.00	1.93	2.77	n/a
JUNC-102-01	JUNC-82-04	CIRCULAR	Pipe	119.91	0.10247	0.525	0	0	0.62	1.18	1.38	1.38	R 709 143.00
JUNC-102-02	JUNC-102-01	RECT_OPEN	Rectangular channel / Overflow conduit	61.64	0.05508	0.250	10	0	0.00	0.00	1.70	2.42	n/a
JUNC-102-02	JUNC-102-01	CIRCULAR	Pipe	59.49	0.0319	0.525	0	0	0.43	0.90	1.07	1.08	R 333 929.50
JUNC-102-03	JUNC-102-02	CIRCULAR	Pipe	24.8	0.05452	0.525	0	0	0.43	0.93	0.99	0.97	R 139 137.29
JUNC-102-03	JUNC-102-02	RECT_OPEN	Rectangular channel / Overflow conduit	25.83	0.01433	0.250	10	0	0.00	0.00	2.19	2.91	n/a
JUNC-102-04	JUNC-102-03	CIRCULAR	Pipe	8.5	0.12208	0.525	0	0	0.43	0.98	1.48	1.47	R 55 654.92
JUNC-102-04	JUNC-102-03	RECT_OPEN	Rectangular channel / Overflow conduit	9.31	0.11132	0.250	10	0	0.00	0.00	1.32	2.04	n/a
JUNC-102-05	JUNC-102-04	PARABOLIC	Natural Channel	31.62	0.18194	1.000	5	0	0.43	0.99	2.76	3.48	n/a

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Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-102-06	JUNC-102-05	PARABOLIC	Natural Channel	77.16	0.01154	1.000	5	0	0.00	0.00	0.00	0.00	n/a
JUNC-1-03	JUNC-1-02	PARABOLIC	Natural Channel	43.16	0.01045	5.000	75	0	263.30	415.29	980.64	1356.37	n/a
JUNC-103-01	JUNC-82-05	CIRCULAR	Pipe	13.26	0.14556	0.450	0	0	0.31	0.44	0.71	0.81	R 76 149.11
JUNC-103-01	JUNC-82-05	RECT_OPEN	Rectangular channel / Overflow conduit	15.01	0.07214	0.250	10	0	0.00	0.00	0.00	0.03	n/a
JUNC-1-04	JUNC-1-03	PARABOLIC	Natural Channel	351.31	0.00965	5.000	75	0	263.09	414.93	979.77	1355.20	n/a
JUNC-104-01	JUNC-96-03	RECT_OPEN	Rectangular channel / Overflow conduit	43.91	0.05874	0.250	10	0	0.08	0.52	1.73	2.20	n/a
JUNC-104-01	JUNC-96-03	TRIANGULAR	Channel	43.52	0.05927	0.300	0.6	0	0.35	0.35	0.35	0.35	n/a
JUNC-104-02	JUNC-104-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.93	0.08544	0.250	10	0	0.06	0.36	1.33	1.68	n/a
JUNC-104-02	JUNC-104-01	CIRCULAR	Pipe	13.1	0.09748	0.250	0	0	0.20	0.20	0.20	0.20	n/a
JUNC-104-03	JUNC-104-02	RECT_OPEN	Rectangular channel / Overflow conduit	129.64	0.12055	0.250	10	0	0.00	0.00	0.98	1.34	n/a
JUNC-104-03	JUNC-104-02	TRIANGULAR	Channel	127.01	0.12309	0.300	0.6	0	0.25	0.54	0.54	0.54	n/a
JUNC-1-05	JUNC-1-04	PARABOLIC	Natural Channel	103.59	0.00965	5.000	75	0	263.00	414.77	979.50	1354.83	n/a
JUNC-105-01	JUNC-100-01	PARABOLIC	Natural Channel	13.92	0.0658	1.000	5	0	0.10	0.19	0.32	0.38	n/a
JUNC-105-02	JUNC-105-01	RECT_OPEN	Rectangular channel / Overflow conduit	21.58	0.04253	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-105-02	JUNC-105-01	CIRCULAR	Pipe	20.1	0.04567	0.400	0	0	0.10	0.19	0.32	0.38	n/a
JUNC-1-06	JUNC-1-05	PARABOLIC	Natural Channel	268.37	0.00965	5.000	75	0	262.56	414.04	977.86	1352.66	n/a
JUNC-1-07	JUNC-1-06	PARABOLIC	Natural Channel	493.78	0.00965	5.000	75	0	262.42	413.77	977.13	1351.50	n/a
JUNC-1-08	JUNC-1-07	PARABOLIC	Natural Channel	37.75	0.00964	5.000	75	0	262.30	413.58	976.68	1350.86	n/a
JUNC-1-09	JUNC-1-08	PARABOLIC	Natural Channel	13.09	0.08719	5.000	75	0	262.11	413.35	976.28	1350.37	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	3 No. off Box Culvert	17.63	0.00925	1.200	1.2	0	42.98	46.01	48.82	49.21	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	5 No. off Box Culvert	20.64	0.0079	0.600	0.6	0	10.43	11.16	11.84	11.94	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	9 No. off Box Culvert	17.1	0.00953	1.200	1.2	0	130.92	140.14	148.70	149.91	n/a
JUNC-1-10	JUNC-1-09	PARABOLIC	Natural Channel	15.62	0.01044	3.400	75	0	77.78	216.04	766.92	1139.31	n/a
JUNC-11-01	JUNC-1-15	PARABOLIC	Natural Channel	331.75	0.03607	1.500	15	0	3.27	5.77	14.37	18.55	n/a
JUNC-11-02	JUNC-11-01	PARABOLIC	Natural Channel	134.13	0.03603	1.500	15	0	2.43	4.18	10.51	13.93	n/a
JUNC-11-03	JUNC-11-02	PARABOLIC	Natural Channel	151.07	0.03606	1.500	15	0	2.17	3.86	9.75	13.12	n/a

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Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-11-04	JUNC-11-03	PARABOLIC	Natural Channel	122.77	0.03606	1.500	15	0	2.02	3.70	9.36	12.77	n/a
JUNC-11-05	JUNC-11-04	PARABOLIC	Natural Channel	117.53	0.03049	1.500	15	0	0.96	1.69	3.88	5.51	n/a
JUNC-11-06	JUNC-11-05	CIRCULAR	Pipe	6.44	0.03107	0.600	0	0	0.91	1.63	2.16	2.22	R 60 789.26
JUNC-11-06	JUNC-11-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.77	0.02281	0.500	10	0	0.00	0.00	1.62	3.17	n/a
JUNC-11-07	JUNC-11-06	CIRCULAR	Pipe	26.68	0.0075	0.450	0	0	0.31	0.43	0.43	0.43	R 152 298.21
JUNC-11-07	JUNC-11-06	RECT_OPEN	Rectangular channel / Overflow conduit	30.35	0.00659	0.500	10	0	0.00	0.07	0.93	1.23	n/a
JUNC-11-08	JUNC-11-07	CIRCULAR	Pipe	49.38	0.00403	0.450	0	0	0.31	0.32	0.31	0.31	R 253 830.35
JUNC-11-08	JUNC-11-07	RECT_OPEN	Rectangular channel / Overflow conduit	54.41	0.00366	0.500	10	0	0.00	0.31	1.00	1.27	n/a
JUNC-11-09	JUNC-11-08	CIRCULAR	Pipe	50.4	0.00421	0.450	0	0	0.30	0.30	0.29	0.29	R 253 830.35
JUNC-11-09	JUNC-11-08	RECT_OPEN	Rectangular channel / Overflow conduit	54.38	0.0039	0.500	10	0	0.08	0.39	1.07	1.33	n/a
JUNC-1-11	JUNC-1-10	PARABOLIC	Natural Channel	594.32	0.01045	5.000	75	0	262.04	413.20	975.90	1349.87	n/a
JUNC-11-10	JUNC-11-09	CIRCULAR	Pipe	10.23	0.00479	0.450	0	0	0.32	0.34	0.32	0.30	R 60 919.28
JUNC-11-10	JUNC-11-09	RECT_OPEN	Rectangular channel / Overflow conduit	13.69	0.00358	0.500	10	0	0.14	0.43	1.07	1.33	n/a
JUNC-1-12	JUNC-1-11	PARABOLIC	Natural Channel	377.3	0.01045	5.000	75	0	262.07	413.23	975.92	1349.90	n/a
JUNC-1-13	JUNC-1-12	PARABOLIC	Natural Channel	2131.26	0.0059	5.000	75	0	262.31	413.51	976.30	1350.33	n/a
JUNC-1-14	JUNC-1-13	PARABOLIC	Natural Channel	298.65	0.00589	5.000	50	0	259.61	408.62	964.75	1334.92	n/a
JUNC-1-15	JUNC-1-14	PARABOLIC	Natural Channel	135.44	0.00591	5.000	50	0	259.43	408.33	964.13	1334.10	n/a
JUNC-1-16	JUNC-1-15	PARABOLIC	Natural Channel	1903.31	0.00591	5.000	50	0	259.33	408.13	963.57	1333.34	n/a
JUNC-1-17	JUNC-1-16	PARABOLIC	Natural Channel	25332.98	0.05238	5.000	35	0	113.72	173.68	402.59	555.46	n/a
JUNC-12-01	JUNC-1-16	PARABOLIC	Natural Channel	4149.7	0.00337	5.000	50	0	200.95	307.28	690.72	944.72	n/a
JUNC-12-02	JUNC-12-01	PARABOLIC	Natural Channel	33872.33	0.03788	5.000	20	0	240.86	361.10	771.10	1042.13	n/a
JUNC-13-01	JUNC-2-02	PARABOLIC	Natural Channel	392.52	0.0911	1.000	5	0	0.95	2.13	6.22	8.03	n/a
JUNC-13-02	JUNC-13-01	PARABOLIC	Natural Channel	39.97	0.01326	1.000	5	0	0.96	2.19	6.46	8.29	n/a
JUNC-13-03	JUNC-13-02	CIRCULAR	Pipe	26.66	0.03656	0.300	0	0	0.24	0.25	0.25	0.25	n/a
JUNC-13-03	JUNC-13-02	RECT_OPEN	Rectangular channel / Overflow conduit	28.06	0.03473	0.500	10	0	0.71	1.93	6.19	8.04	n/a
JUNC-13-04	JUNC-13-03	CIRCULAR	Pipe	28.84	0.11027	0.300	0	0	0.32	0.32	0.32	0.32	n/a

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Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-13-04	JUNC-13-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.34	0.10476	0.500	10	0	0.64	1.86	6.11	7.96	n/a
JUNC-14-01	JUNC-2-02	PARABOLIC	Natural Channel	29.85	0.23439	1.000	5	0	2.22	3.62	7.40	9.12	n/a
JUNC-14-02	JUNC-14-01	CIRCULAR	Pipe	103.51	0.00483	0.600	0	0	0.70	0.73	0.77	0.78	R 679 571.22
JUNC-14-02	JUNC-14-01	RECT_OPEN	Rectangular channel / Overflow conduit	107.09	0.00934	0.500	10	0	1.04	2.07	4.83	6.11	n/a
JUNC-14-03	JUNC-14-02	CIRCULAR	Pipe	17.66	0.02832	0.600	0	0	1.03	1.03	1.02	1.01	R 121 578.52
JUNC-14-03	JUNC-14-02	RECT_OPEN	Rectangular channel / Overflow conduit	20.39	0.02453	0.500	10	0	0.78	1.84	4.66	5.95	n/a
JUNC-14-04	JUNC-14-03	CIRCULAR	Pipe	13.41	0.03731	0.600	0	0	1.18	1.18	1.18	1.18	R 91 183.89
JUNC-14-04	JUNC-14-03	RECT_OPEN	Rectangular channel / Overflow conduit	17.78	0.02813	0.500	10	0	0.61	1.65	4.45	5.74	n/a
JUNC-14-05	JUNC-14-04	CIRCULAR	Pipe	83.25	0.00601	0.600	0	0	0.66	0.66	0.66	0.66	R 531 271.78
JUNC-14-05	JUNC-14-04	RECT_OPEN	Rectangular channel / Overflow conduit	91.68	0.00545	0.500	10	0	0.80	1.57	3.66	4.64	n/a
JUNC-14-06	JUNC-14-05	CIRCULAR	Pipe	100.5	0.07447	0.600	0	0	1.13	1.68	1.67	1.67	R 649 176.59
JUNC-14-06	JUNC-14-05	RECT_OPEN	Rectangular channel / Overflow conduit	107.5	0.06492	0.500	10	0	0.00	0.08	1.78	2.51	n/a
JUNC-15-01	JUNC-2-03	PARABOLIC	Natural Channel	21.26	0.35492	1.000	5	0	0.20	0.32	0.68	0.84	n/a
JUNC-15-02	JUNC-15-01	CIRCULAR	Pipe	109.02	0.00211	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-02	JUNC-15-01	RECT_OPEN	Rectangular channel / Overflow conduit	113.19	0.00203	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-03	JUNC-15-02	CIRCULAR	Pipe	36.67	0.02895	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-03	JUNC-15-02	RECT_OPEN	Rectangular channel / Overflow conduit	41.92	0.02532	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-16-01	JUNC-2-04	PARABOLIC	Natural Channel	22.33	0.32402	1.000	5	0	1.53	2.46	4.88	5.98	n/a
JUNC-16-02	JUNC-16-01	CIRCULAR	Pipe	117.57	0.01276	0.750	0	0	1.27	1.30	1.37	1.39	R 1 001 135.64
JUNC-16-02	JUNC-16-01	RECT_OPEN	Rectangular channel / Overflow conduit	123.17	0.01218	0.250	10	0	0.26	1.16	3.52	4.59	n/a
JUNC-16-03	JUNC-16-02	CIRCULAR	Pipe	27.79	0.01799	0.750	0	0	1.31	1.45	1.45	1.45	R 239 962.91
JUNC-16-03	JUNC-16-02	RECT_OPEN	Rectangular channel / Overflow conduit	32.52	0.01538	0.250	10	0	0.00	0.49	2.22	2.99	n/a
JUNC-16-04	JUNC-16-03	CIRCULAR	Pipe	30.49	0.01916	0.750	0	0	1.31	1.54	1.55	1.55	R 279 956.73
JUNC-16-04	JUNC-16-03	RECT_OPEN	Rectangular channel / Overflow conduit	34.04	0.01716	0.250	10	0	0.00	0.40	2.13	2.90	n/a
JUNC-16-05	JUNC-16-04	CIRCULAR	Pipe	77.92	0.03242	0.750	0	0	1.32	2.01	2.01	2.00	R 660 543.09
JUNC-16-05	JUNC-16-04	RECT_OPEN	Rectangular channel / Overflow conduit	80.79	0.03127	0.250	10	0	0.00	0.00	1.68	2.45	n/a

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JUNC-17-01	JUNC-2-05	PARABOLIC	Natural Channel	20.63	0.2731	1.000	10	0	2.42	2.87	6.25	8.11	n/a
JUNC-17-02	JUNC-17-01	RECT_CLOSED	Closed Channel	4.08	0.07373	1.200	1.2	0	2.42	2.87	6.25	8.11	R 76 311.93
JUNC-17-02	JUNC-17-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.06	0.05939	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-03	JUNC-17-02	RECT_CLOSED	Closed Channel	9.48	0.0211	1.200	1.2	0	2.42	2.87	6.25	8.11	R 152 623.87
JUNC-17-03	JUNC-17-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.71	0.01708	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-04	JUNC-17-03	RECT_CLOSED	Closed Channel	255.06	0.00198	1.200	1.2	0	2.42	2.87	3.22	3.22	R 4 071 478.58
JUNC-17-04	JUNC-17-03	RECT_OPEN	Rectangular channel / Overflow conduit	258.2	0.00195	1.000	15	0	0.00	0.00	3.21	4.90	n/a
JUNC-17-05	JUNC-17-04	RECT_CLOSED	Closed Channel	10.77	0.02378	0.750	0.75	0	1.50	2.04	2.15	2.12	R 88 331.50
JUNC-17-05	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	15.49	0.01653	0.500	15	0	0.00	0.00	3.33	4.14	n/a
JUNC-17-06	JUNC-17-05	RECT_CLOSED	Closed Channel	17.34	0.00525	0.750	0.75	0	1.50	1.65	1.59	1.58	R 160 602.72
JUNC-17-06	JUNC-17-05	RECT_OPEN	Rectangular channel / Overflow conduit	21.19	0.00429	0.500	10	0	0.00	0.63	1.96	2.54	n/a
JUNC-17-07	JUNC-17-06	RECT_CLOSED	Closed Channel	6.67	0.0054	0.750	0.75	0	1.50	1.66	1.58	1.54	R 56 210.95
JUNC-17-07	JUNC-17-06	RECT_OPEN	Rectangular channel / Overflow conduit	13.15	0.00274	0.250	10	0	0.00	0.76	2.06	2.60	n/a
JUNC-17-08	JUNC-17-07	RECT_OPEN	Rectangular channel / Overflow conduit	38.87	0.02156	0.500	10	0	0.00	0.00	1.30	1.87	n/a
JUNC-17-08	JUNC-17-07	RECT_CLOSED	Closed Channel	34.05	0.02462	0.750	0.75	0	1.52	2.09	2.13	2.13	R 333 429.44
JUNC-17-09	JUNC-20-04	RECT_CLOSED	Closed Channel	201.56	0.00245	0.500	0.5	0	0.14	0.15	0.18	0.19	n/a
JUNC-17-09	JUNC-17-08	RECT_OPEN	Rectangular channel / Overflow conduit	135.03	0.05479	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-09	JUNC-17-08	RECT_CLOSED	Closed Channel	133.56	0.05539	0.750	0.75	0	0.73	0.93	1.35	1.67	R 1 183 729.04
JUNC-17-10	JUNC-17-09	RECT_CLOSED	Closed Channel	43.28	0.04709	0.500	0.5	0	0.60	0.78	1.14	1.13	n/a
JUNC-17-10	JUNC-17-09	RECT_OPEN	Rectangular channel / Overflow conduit	44.38	0.04592	0.250	10	0	0.00	0.00	0.09	0.37	n/a
JUNC-17-11	JUNC-17-10	RECT_CLOSED	Closed Channel	11.65	0.04632	0.500	0.5	0	0.23	0.34	0.47	0.54	n/a
JUNC-17-11	JUNC-17-10	RECT_OPEN	Rectangular channel / Overflow conduit	13.02	0.04143	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-12	JUNC-17-11	RECT_OPEN	Rectangular channel / Overflow conduit	8.77	0.03937	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-12	JUNC-17-11	RECT_CLOSED	Closed Channel	6.88	0.05021	0.500	0.5	0	0.23	0.34	0.47	0.54	n/a
JUNC-17-13	JUNC-17-12	RECT_CLOSED	Closed Channel	113.23	0.00506	0.500	0.5	0	0.23	0.34	0.46	0.47	n/a
JUNC-17-13	JUNC-17-12	RECT_OPEN	Rectangular channel / Overflow conduit	119.34	0.0048	0.250	10	0	0.00	0.00	0.01	0.07	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-18-01	JUNC-60-01	CIRCULAR	Pipe	91.79	0.00801	0.600	0	0	0.49	0.49	0.48	0.48	R 586 015.18
JUNC-18-01	JUNC-60-01	RECT_OPEN	Rectangular channel / Overflow conduit	94.47	0.00778	1.000	15	0	0.00	0.06	14.62	18.55	n/a
JUNC-18-01	JUNC-2-06	RECT_OPEN	Rectangular channel / Overflow conduit	283.54	0.0444	0.500	15	0	0.00	0.13	15.72	20.03	n/a
JUNC-18-02	JUNC-18-01	CIRCULAR	Pipe	15.68	0.00523	0.600	0	0	0.50	0.53	0.58	0.58	R 97 262.81
JUNC-18-02	JUNC-18-01	RECT_OPEN	Rectangular channel / Overflow conduit	19.6	0.00418	1.000	15	0	0.00	0.26	0.88	1.32	n/a
JUNC-19-01	JUNC-2-07	PARABOLIC	Natural Channel	8.35	0.24618	1.000	10	0	0.39	0.65	1.61	2.12	n/a
JUNC-19-02	JUNC-19-01	CIRCULAR	Pipe	133.52	0.002	0.500	0	0	0.28	0.29	0.31	0.32	n/a
JUNC-19-02	JUNC-19-01	RECT_OPEN	Rectangular channel / Overflow conduit	134.45	0.00199	0.250	10	0	0.11	0.36	1.30	1.80	n/a
JUNC-19-03	JUNC-19-02	CIRCULAR	Pipe	5.59	0.00197	0.500	0	0	0.37	0.41	0.39	0.36	R 55 654.92
JUNC-19-03	JUNC-19-02	RECT_OPEN	Rectangular channel / Overflow conduit	7.91	0.00139	0.250	10	0	0.21	0.54	1.59	2.14	n/a
JUNC-19-04	JUNC-19-03	CIRCULAR	Pipe	18.5	0.002	0.500	0	0	0.37	0.39	0.35	0.32	R 111 309.83
JUNC-19-04	JUNC-19-03	RECT_OPEN	Rectangular channel / Overflow conduit	20.95	0.00177	0.250	10	0	0.29	0.61	1.67	2.19	n/a
JUNC-20-01	JUNC-2-08	PARABOLIC	Natural Channel	33.52	0.17996	1.000	10	0	2.48	3.46	5.17	6.96	n/a
JUNC-20-02	JUNC-57-01	RECT_CLOSED	Closed Channel	95.03	0.00202	0.500	0.5	0	0.37	0.44	0.44	0.44	n/a
JUNC-20-02	JUNC-20-01	RECT_CLOSED	Closed Channel	252.38	0.00552	1.200	1.2	0	2.48	3.46	4.17	4.16	R 3 930 079.48
JUNC-20-02	JUNC-20-01	RECT_OPEN	Rectangular channel / Overflow conduit	255.38	0.00545	0.500	10	0	0.00	0.00	1.37	3.09	n/a
JUNC-20-02	JUNC-57-01	RECT_OPEN	Rectangular channel / Overflow conduit	95.69	0.00201	0.250	15	0	0.00	0.00	4.25	4.91	n/a
JUNC-20-03	JUNC-20-02	RECT_CLOSED	Closed Channel	16.73	0.04434	1.000	0.5	0	2.33	2.67	2.67	2.67	R 196 357.87
JUNC-20-03	JUNC-20-02	RECT_OPEN	Rectangular channel / Overflow conduit	18.44	0.04022	0.250	10	0	0.00	0.86	4.13	5.71	n/a
JUNC-20-04	JUNC-20-03	RECT_CLOSED	Closed Channel	180.14	0.03325	1.000	0.5	0	2.24	2.20	2.24	2.24	R 2 144 141.74
JUNC-20-04	JUNC-20-03	RECT_OPEN	Rectangular channel / Overflow conduit	182.4	0.03284	0.250	10	0	0.26	1.27	4.43	5.89	n/a
JUNC-20-04	JUNC-57-08	RECT_CLOSED	Closed Channel	202.9	-0.01111	0.500	0.5	0	0.54	0.54	0.54	0.54	n/a
JUNC-20-05	JUNC-20-04	RECT_CLOSED	Closed Channel	52.02	0.04231	1.000	0.5	0	1.38	2.16	2.52	2.52	R 612 848.06
JUNC-20-05	JUNC-20-04	RECT_OPEN	Rectangular channel / Overflow conduit	53.77	0.04093	0.250	10	0	0.00	0.00	2.12	3.13	n/a
JUNC-20-06	JUNC-20-05	RECT_CLOSED	Closed Channel	9.17	0.0464	1.000	0.5	0	1.38	2.16	2.61	2.61	R 115 504.63
JUNC-20-06	JUNC-20-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.69	0.03979	0.250	10	0	0.00	0.00	1.99	2.99	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-20-07	JUNC-20-06	RECT_CLOSED	Closed Channel	7.4	0.04315	1.000	0.5	0	1.14	1.80	2.38	2.38	R 92 403.70
JUNC-20-07	JUNC-20-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.55	0.03342	0.250	10	0	0.00	0.00	1.47	2.33	n/a
JUNC-20-08	JUNC-20-07	CIRCULAR	Pipe	61.89	0.0473	0.525	0	0	1.01	1.02	1.02	1.02	R 365 702.48
JUNC-20-08	JUNC-20-07	RECT_OPEN	Rectangular channel / Overflow conduit	63.49	0.0461	0.250	10	0	0.13	0.82	2.91	3.77	n/a
JUNC-20-09	JUNC-20-08	RECT_OPEN	Rectangular channel / Overflow conduit	15.15	0.03897	0.250	10	0	0.21	0.86	2.91	3.77	n/a
JUNC-20-09	JUNC-20-08	CIRCULAR	Pipe	12.42	0.04756	0.525	0	0	1.06	1.08	1.06	1.06	R 72 351.39
JUNC-2-01	JUNC-1-02	RECT_OPEN	Rectangular channel / Overflow conduit	32.62	0.01208	1.000	20	0	0.00	0.00	0.00	0.00	n/a
JUNC-2-01	JUNC-1-02	RECT_CLOSED	Closed Channel	30.8	0.01279	2.650	6	0	189.55	300.42	713.65	983.84	n/a
JUNC-20-10	JUNC-20-09	RECT_OPEN	Rectangular channel / Overflow conduit	64.53	0.04614	0.250	10	0	0.00	0.58	2.38	3.12	n/a
JUNC-20-10	JUNC-20-09	CIRCULAR	Pipe	62.76	0.04744	0.525	0	0	0.93	0.93	0.94	0.94	R 371 267.97
JUNC-20-11	JUNC-20-10	RECT_OPEN	Rectangular channel / Overflow conduit	23.75	0.04147	0.250	10	0	0.00	0.59	2.38	3.12	n/a
JUNC-20-11	JUNC-20-10	CIRCULAR	Pipe	20.87	0.0472	0.525	0	0	0.98	1.00	0.99	0.99	R 122 987.32
JUNC-20-12	JUNC-20-11	RECT_OPEN	Rectangular channel / Overflow conduit	74.4	0.06652	0.250	10	0	0.00	0.10	1.62	2.23	n/a
JUNC-20-12	JUNC-20-11	CIRCULAR	Pipe	71.87	0.06887	0.525	0	0	0.74	1.15	1.15	1.15	R 421 357.40
JUNC-20-13	JUNC-20-12	RECT_OPEN	Rectangular channel / Overflow conduit	14.87	0.09048	0.250	10	0	0.00	0.00	1.35	1.97	n/a
JUNC-20-13	JUNC-20-12	CIRCULAR	Pipe	12.65	0.10653	0.525	0	0	0.75	1.24	1.40	1.40	R 72 351.39
JUNC-20-14	JUNC-20-13	RECT_OPEN	Rectangular channel / Overflow conduit	10.05	0.05001	0.250	10	0	0.00	0.00	1.44	2.05	n/a
JUNC-20-14	JUNC-20-13	CIRCULAR	Pipe	5.54	0.09099	0.525	0	0	0.75	1.25	1.37	1.36	R 33 392.95
JUNC-20-15	JUNC-20-14	RECT_OPEN	Rectangular channel / Overflow conduit	103.81	0.10414	0.250	10	0	0.00	0.00	1.36	1.97	n/a
JUNC-20-15	JUNC-20-14	CIRCULAR	Pipe	101.57	0.10647	0.525	0	0	0.74	1.29	1.50	1.49	R 594 434.15
JUNC-20-16	JUNC-20-15	RECT_OPEN	Rectangular channel / Overflow conduit	65.65	0.01633	0.250	10	0	0.28	0.64	1.64	2.02	n/a
JUNC-20-17	JUNC-20-16	CIRCULAR	Pipe	13.57	0.10754	0.300	0	0	0.29	0.31	0.31	0.31	n/a
JUNC-20-17	JUNC-20-16	RECT_OPEN	Rectangular channel / Overflow conduit	16.18	0.09004	0.250	10	0	0.00	0.35	1.35	1.74	n/a
JUNC-20-18	JUNC-20-17	CIRCULAR	Pipe	34.01	0.15545	0.300	0	0	0.29	0.38	0.38	0.38	n/a
JUNC-20-18	JUNC-20-17	RECT_OPEN	Rectangular channel / Overflow conduit	35.89	0.14712	0.250	10	0	0.00	0.29	1.29	1.67	n/a
JUNC-20-19	JUNC-20-18	CIRCULAR	Pipe	35.58	0.05032	0.300	0	0	0.25	0.26	0.26	0.26	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-20-19	JUNC-20-18	RECT_OPEN	Rectangular channel / Overflow conduit	36.9	0.04851	0.250	10	0	0.04	0.45	1.45	1.84	n/a
JUNC-2-02	JUNC-2-01	PARABOLIC	Natural Channel	892.86	0.00245	5.000	250	0	188.81	299.23	711.06	982.60	n/a
JUNC-2-03	JUNC-2-02	PARABOLIC	Natural Channel	285.41	0.00246	5.000	250	0	188.77	299.12	710.65	982.17	n/a
JUNC-2-04	JUNC-2-03	PARABOLIC	Natural Channel	93.01	0.00245	5.000	250	0	188.78	299.13	710.63	982.21	n/a
JUNC-2-05	JUNC-2-04	PARABOLIC	Natural Channel	100.95	0.00246	5.000	250	0	188.73	299.06	710.50	982.02	n/a
JUNC-2-06	JUNC-2-05	PARABOLIC	Natural Channel	23.76	0.00244	5.000	250	0	188.57	298.81	710.02	981.43	n/a
JUNC-2-07	JUNC-2-06	PARABOLIC	Natural Channel	89.74	0.00245	5.000	250	0	188.55	298.78	709.96	981.35	n/a
JUNC-2-08	JUNC-2-07	PARABOLIC	Natural Channel	89.37	0.00246	5.000	250	0	188.54	298.76	709.90	981.28	n/a
JUNC-2-09	JUNC-2-08	PARABOLIC	Natural Channel	17.72	0.00243	5.000	250	0	188.43	298.61	709.60	980.90	n/a
JUNC-2-10	JUNC-2-09	PARABOLIC	Natural Channel	172.44	0.00245	5.000	250	0	187.52	297.02	705.98	976.31	n/a
JUNC-21-01	JUNC-2-09	PARABOLIC	Natural Channel	30.18	0.20617	1.500	10	0	11.52	17.30	48.72	73.77	n/a
JUNC-21-02	JUNC-21-01	PARABOLIC	Natural Channel	116.79	0.02439	1.500	10	0	11.40	17.12	48.04	72.79	n/a
JUNC-21-03	JUNC-21-02	RECT_CLOSED	Box Culvert	27.83	0.00999	1.200	2.2	0	11.40	17.12	21.02	21.26	n/a
JUNC-21-03	JUNC-21-02	RECT_OPEN	Rectangular channel / Overflow conduit	28.76	0.00967	0.500	10	0	0.00	0.00	2.03	6.91	n/a
STOR-21-04	JUNC-21-03	RECT_CLOSED	Box Culvert	51.14	0.01001	1.200	2.2	0	10.87	16.71	20.30	20.61	n/a
STOR-21-04	JUNC-21-02	RECT_OPEN	Rectangular channel / Overflow conduit	80.5	0.02348	1.000	20	0	0.00	0.00	25.81	51.35	n/a
JUNC-21-05	STOR-21-04	PARABOLIC	Natural Channel	99.02	0.00366	4.000	20	0	11.29	21.88	65.01	93.53	n/a
JUNC-21-06	JUNC-21-05	PARABOLIC	Natural Channel	241.65	0.03846	2.000	15	0	11.68	22.91	68.72	93.18	n/a
JUNC-21-07	JUNC-21-06	PARABOLIC	Natural Channel	387.4	0.01475	2.000	15	0	9.28	17.83	53.01	72.22	n/a
JUNC-2-11	JUNC-2-10	PARABOLIC	Natural Channel	14.89	0.00248	5.000	250	0	187.50	296.99	705.92	976.22	n/a
JUNC-2-12	JUNC-2-11	PARABOLIC	Natural Channel	15.33	0.00228	3.000	250	0	179.21	289.13	699.23	970.14	n/a
JUNC-2-12	JUNC-2-11	CIRCULAR	6 No. off Pipes	14.18	0.00247	0.600	0	0	9.25	9.23	9.18	9.18	n/a
JUNC-2-13	JUNC-2-12	PARABOLIC	Natural Channel	60.45	0.00245	5.000	250	0	187.34	296.76	705.47	975.65	n/a
JUNC-2-14	JUNC-2-13	PARABOLIC	Natural Channel	117.36	0.00245	5.000	250	0	187.34	296.75	705.45	975.62	n/a
JUNC-2-15	JUNC-2-14	PARABOLIC	Natural Channel	199.48	0.00246	5.000	250	0	187.35	296.75	705.45	975.64	n/a
JUNC-2-16	JUNC-2-15	PARABOLIC	Natural Channel	463.29	0.00708	5.000	250	0	183.03	289.11	688.64	954.65	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-2-17	JUNC-2-16	PARABOLIC	Natural Channel	58.58	0.00708	5.000	250	0	182.85	288.83	723.58	965.43	n/a
JUNC-2-18	JUNC-2-17	RECT_OPEN	Rectangular channel / Overflow conduit	12.18	0.00657	1.000	30	0	0.00	0.00	16.02	17.68	n/a
JUNC-2-18	JUNC-2-17	RECT_CLOSED	Existing Bridge	11.33	0.00706	2.600	7.4	0	182.85	288.82	740.48	1021.59	n/a
JUNC-2-19	JUNC-2-18	PARABOLIC	Natural Channel	648.87	0.00708	5.000	250	0	182.93	289.19	688.18	953.20	n/a
JUNC-2-20	JUNC-2-19	PARABOLIC	Natural Channel	122.05	0.00708	5.000	250	0	182.67	289.25	686.86	952.18	n/a
JUNC-22-01	JUNC-2-10	RECT_OPEN	Rectangular channel / Overflow conduit	15.34	0.39787	1.000	10	0	0.63	1.03	1.98	2.40	n/a
JUNC-22-02	JUNC-22-01	CIRCULAR	Pipe	66.25	0.00755	0.400	0	0	0.23	0.24	0.24	0.25	n/a
JUNC-22-02	JUNC-22-01	RECT_OPEN	Rectangular channel / Overflow conduit	67.73	0.00738	0.250	10	0	0.40	0.80	1.74	2.16	n/a
JUNC-22-03	JUNC-22-02	CIRCULAR	Pipe	65.38	0.04359	0.400	0	0	0.43	0.43	0.43	0.43	n/a
JUNC-22-03	JUNC-22-02	RECT_OPEN	Rectangular channel / Overflow conduit	67.83	0.04201	0.250	10	0	0.12	0.43	1.11	1.43	n/a
JUNC-22-04	JUNC-22-03	CIRCULAR	Pipe	29.15	0.05246	0.300	0	0	0.27	0.27	0.27	0.27	n/a
JUNC-22-04	JUNC-22-03	RECT_OPEN	Rectangular channel / Overflow conduit	32.31	0.04731	0.250	10	0	0.35	0.66	1.33	1.65	n/a
JUNC-2-21	JUNC-2-20	PARABOLIC	Natural Channel	196.99	0.00708	5.000	250	0	182.63	289.40	686.71	951.62	n/a
JUNC-2-22	JUNC-2-21	PARABOLIC	Natural Channel	58.5	0.00708	5.000	250	0	182.36	288.14	685.67	950.23	n/a
JUNC-2-23	JUNC-2-22	PARABOLIC	Natural Channel	144.13	0.00708	5.000	250	0	182.29	287.76	685.48	950.02	n/a
JUNC-2-24	JUNC-2-23	PARABOLIC	Natural Channel	207.63	0.00708	5.000	250	0	182.20	287.66	685.08	949.53	n/a
JUNC-2-25	JUNC-2-24	PARABOLIC	Natural Channel	228.12	0.00708	5.000	250	0	181.84	287.09	683.87	948.11	n/a
JUNC-2-26	JUNC-2-25	PARABOLIC	Natural Channel	272.72	0.00708	5.000	250	0	180.54	284.86	679.24	942.36	n/a
JUNC-2-27	JUNC-2-26	PARABOLIC	Natural Channel	419.94	0.00708	5.000	250	0	180.52	284.81	679.13	942.20	n/a
JUNC-2-28	JUNC-2-27	PARABOLIC	Natural Channel	111.91	0.00709	5.000	250	0	179.54	283.23	675.58	937.75	n/a
JUNC-2-29	JUNC-2-28	PARABOLIC	Natural Channel	275.29	0.00708	5.000	250	0	179.53	283.25	675.54	937.71	n/a
JUNC-2-30	JUNC-2-29	PARABOLIC	Natural Channel	365.55	0.00708	5.000	250	0	178.54	281.92	672.24	933.59	n/a
JUNC-23-01	JUNC-2-12	PARABOLIC	Natural Channel	43.42	0.12532	1.000	5	0	3.72	5.75	7.59	10.39	n/a
JUNC-23-02	JUNC-23-01	RECT_CLOSED	Closed Channel	239.87	0.01677	1.200	1.2	0	3.55	5.46	6.67	6.49	n/a
JUNC-23-02	JUNC-23-01	RECT_OPEN	Rectangular channel / Overflow conduit	242.45	0.0166	0.500	15	0	0.00	0.00	1.04	3.61	n/a
JUNC-23-03	JUNC-23-02	RECT_CLOSED	Closed Channel	17.78	0.01057	1.200	1.2	0	3.55	5.46	6.55	6.57	R 311 359.74

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-23-03	JUNC-57-03	RECT_CLOSED	Closed Channel	29.48	0.00231	0.500	0.5	0	0.54	0.64	0.65	0.64	n/a
JUNC-23-03	JUNC-23-02	RECT_OPEN	Rectangular channel / Overflow conduit	20.14	0.00934	0.500	15	0	0.00	0.00	1.56	4.36	n/a
JUNC-23-03	JUNC-57-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.7	0.00221	0.250	15	0	0.00	0.56	5.14	6.41	n/a
JUNC-23-04	JUNC-23-03	RECT_CLOSED	Closed Channel	10.25	0.02645	0.900	0.9	0	2.43	3.60	3.86	3.89	R 127 055.09
JUNC-23-04	JUNC-23-03	RECT_OPEN	Rectangular channel / Overflow conduit	12.67	0.02139	0.500	15	0	0.00	0.30	4.91	7.35	n/a
JUNC-23-05	JUNC-23-04	RECT_CLOSED	Closed Channel	159.98	0.00153	0.900	0.9	0	1.47	1.54	1.55	1.56	R 1 901 582.03
JUNC-23-05	JUNC-23-04	RECT_OPEN	Rectangular channel / Overflow conduit	162.37	0.00151	0.500	15	0	0.96	2.34	5.83	7.66	n/a
JUNC-23-06	JUNC-23-05	RECT_CLOSED	Closed Channel	8.78	0.00513	0.900	0.9	0	1.66	1.63	1.59	1.51	R 115 504.63
JUNC-23-06	JUNC-23-05	RECT_OPEN	Rectangular channel / Overflow conduit	12.11	0.00372	0.500	15	0	1.25	2.34	4.74	5.90	n/a
JUNC-23-07	JUNC-23-06	RECT_CLOSED	Closed Channel	7.91	0.00569	0.900	0.9	0	1.71	1.69	1.64	1.56	R 92 403.70
JUNC-23-07	JUNC-23-06	RECT_OPEN	Rectangular channel / Overflow conduit	10.7	0.00421	0.500	15	0	1.01	2.10	4.60	5.81	n/a
JUNC-23-08	JUNC-23-07	RECT_OPEN	Rectangular channel / Overflow conduit	15.86	0.00429	0.500	15	0	0.82	1.84	4.28	5.50	n/a
JUNC-23-08	JUNC-23-07	RECT_CLOSED	Closed Channel	12.57	0.00541	0.900	0.9	0	1.72	1.73	1.67	1.62	R 150 156.01
JUNC-23-09	JUNC-23-08	RECT_CLOSED	Closed Channel	4.97	0.02717	1.000	0.5	0	1.84	1.86	1.83	1.77	R 57 752.31
JUNC-23-09	JUNC-23-08	RECT_OPEN	Rectangular channel / Overflow conduit	6.17	0.02189	0.500	10	0	0.35	1.21	3.49	4.71	n/a
JUNC-2-31	JUNC-2-30	PARABOLIC	Natural Channel	347.25	0.00708	5.000	250	0	176.29	277.70	664.14	923.29	n/a
JUNC-23-10	JUNC-23-09	RECT_CLOSED	Closed Channel	12.78	0.0256	1.000	0.5	0	1.91	1.90	1.90	1.88	R 150 156.01
JUNC-23-10	JUNC-23-09	RECT_OPEN	Rectangular channel / Overflow conduit	13.5	0.02423	0.250	10	0	0.16	1.01	3.20	4.39	n/a
JUNC-23-11	JUNC-23-10	RECT_CLOSED	Closed Channel	161.78	0.02656	1.000	0.5	0	2.05	2.03	2.05	2.05	R 1 924 682.95
JUNC-23-11	JUNC-23-10	RECT_OPEN	Rectangular channel / Overflow conduit	163.17	0.02633	0.250	10	0	0.00	0.98	3.11	4.28	n/a
JUNC-23-12	JUNC-23-11	RECT_CLOSED	Closed Channel	44.33	0.02638	1.000	0.5	0	0.97	1.39	1.89	1.89	R 531 994.82
JUNC-23-12	JUNC-23-11	RECT_OPEN	Rectangular channel / Overflow conduit	45.43	0.02574	0.250	10	0	0.00	0.00	0.35	0.84	n/a
JUNC-23-13	JUNC-23-12	RECT_OPEN	Rectangular channel / Overflow conduit	26.77	0.02537	0.250	10	0	0.00	0.00	0.29	0.77	n/a
JUNC-23-13	JUNC-23-12	RECT_CLOSED	Closed Channel	25.7	0.02643	1.000	0.5	0	0.97	1.38	1.99	1.99	R 306 424.03
JUNC-23-14	JUNC-23-13	RECT_OPEN	Rectangular channel / Overflow conduit	14.82	0.02389	0.250	10	0	0.00	0.00	0.61	0.96	n/a
JUNC-23-14	JUNC-23-13	CIRCULAR	Pipe	13.78	0.0257	0.600	0	0	0.72	1.04	1.26	1.27	R 91 216.96

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-23-15	JUNC-23-14	CIRCULAR	Pipe	66.36	0.02665	0.600	0	0	0.72	1.03	1.08	1.08	R 427 930.04
JUNC-23-15	JUNC-23-14	RECT_OPEN	Rectangular channel / Overflow conduit	67.77	0.0261	0.250	10	0	0.00	0.00	0.63	0.98	n/a
JUNC-23-16	JUNC-23-15	CIRCULAR	Pipe	9.18	0.02659	0.600	0	0	0.19	0.27	0.37	0.45	R 66 901.26
JUNC-23-16	JUNC-23-15	RECT_OPEN	Rectangular channel / Overflow conduit	10.27	0.02377	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-23-17	JUNC-23-16	CIRCULAR	Pipe	68.28	0.02628	0.400	0	0	0.19	0.27	0.36	0.36	n/a
JUNC-23-17	JUNC-23-16	RECT_OPEN	Rectangular channel / Overflow conduit	70.1	0.0256	0.250	10	0	0.00	0.00	0.00	0.10	n/a
JUNC-23-18	JUNC-23-17	CIRCULAR	Pipe	13.31	0.02661	0.400	0	0	0.19	0.27	0.36	0.37	n/a
JUNC-23-18	JUNC-23-17	RECT_OPEN	Rectangular channel / Overflow conduit	14.46	0.02449	0.250	10	0	0.00	0.00	0.03	0.14	n/a
JUNC-23-19	JUNC-23-18	CIRCULAR	Pipe	9.66	0.02806	0.400	0	0	0.19	0.27	0.37	0.39	n/a
JUNC-23-19	JUNC-23-18	RECT_OPEN	Rectangular channel / Overflow conduit	11.1	0.02442	0.250	10	0	0.00	0.00	0.03	0.14	n/a
JUNC-2-32	JUNC-2-31	PARABOLIC	Natural Channel	3610.14	0.01262	5.000	250	0	176.93	278.34	664.58	923.61	n/a
JUNC-23-20	JUNC-23-19	RECT_OPEN	Rectangular channel / Overflow conduit	67.57	0.02617	0.250	10	0	0.00	0.00	0.04	0.15	n/a
JUNC-23-20	JUNC-23-19	CIRCULAR	Pipe	66.62	0.02655	0.400	0	0	0.19	0.27	0.38	0.38	n/a
JUNC-2-33	JUNC-2-32	PARABOLIC	Natural Channel	12006.34	0.00119	5.000	200	0	61.21	104.95	287.97	412.90	n/a
JUNC-2-34	JUNC-2-33	PARABOLIC	Natural Channel	16992.02	0.05074	5.000	150	0	0.00	0.00	0.00	0.00	n/a
JUNC-24-01	JUNC-2-13	PARABOLIC	Natural Channel	22.94	0.24463	1.000	5	0	0.34	0.44	0.86	1.07	n/a
JUNC-24-02	JUNC-24-01	CIRCULAR	Pipe	51.52	0	0.500	0	0	0.34	0.41	0.43	0.44	n/a
JUNC-24-02	JUNC-24-01	RECT_OPEN	Rectangular channel / Overflow conduit	52.79	0	0.250	10	0	0.00	0.03	0.42	0.63	n/a
JUNC-25-01	JUNC-2-14	PARABOLIC	Natural Channel	24.59	0.21475	1.000	5	0	0.16	0.27	0.47	0.56	n/a
JUNC-25-02	JUNC-25-01	TRAPEZOIDAL	Trapezoidal Channel	40.79	0.00934	0.300	0.65	4	0.16	0.27	0.47	0.56	n/a
JUNC-26-01	JUNC-2-15	PARABOLIC	Natural Channel	291.45	0.04428	2.000	10	0	7.75	13.49	33.30	44.15	n/a
JUNC-26-02	JUNC-26-01	PARABOLIC	Natural Channel	164.49	0.04428	2.000	10	0	6.84	11.77	29.00	38.52	n/a
JUNC-26-03	J5	PARABOLIC	Natural Channel	43.62	0.04429	2.000	10	0	5.32	9.62	24.90	33.33	n/a
J5	JUNC-26-02	PARABOLIC	Natural Channel	78.49	0.04428	2.000	10	0	6.71	11.59	28.71	38.15	n/a
JUNC-26-04	JUNC-26-03	PARABOLIC	Natural Channel	54.41	0.01176	2.000	10	0	5.32	9.62	24.92	33.35	n/a
JUNC-26-05	JUNC-26-04	PARABOLIC	Natural Channel	478.81	0.03984	2.000	10	0	5.36	9.71	26.07	34.69	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-26-06	JUNC-26-05	PARABOLIC	Natural Channel	82.89	0.00169	2.000	10	0	3.68	6.97	22.03	29.57	n/a
JUNC-26-07	JUNC-26-06	PARABOLIC	Natural Channel	435.21	0.00857	2.000	10	0	3.80	7.09	20.20	27.21	n/a
JUNC-27-01	JUNC-2-19	PARABOLIC	Natural Channel	58.49	0.01715	1.500	15	0	3.17	4.89	10.72	14.26	n/a
JUNC-27-02	JUNC-27-01	CIRCULAR	Pipe	202.84	0.00415	1.200	0	0	2.90	3.08	3.16	3.25	n/a
JUNC-27-02	JUNC-27-01	RECT_OPEN	Rectangular channel / Overflow conduit	203.56	0.00414	1.000	10	0	0.27	1.82	7.57	11.01	n/a
JUNC-27-03	JUNC-27-02	CIRCULAR	Pipe	97.08	0.03454	0.900	0	0	2.72	3.52	3.49	3.48	R 941 078.00
JUNC-27-03	JUNC-27-02	RECT_OPEN	Rectangular channel / Overflow conduit	99.62	0.03366	0.500	10	0	0.00	0.49	4.03	6.44	n/a
JUNC-27-04	JUNC-27-03	CIRCULAR	Pipe	26.47	0.03133	0.900	0	0	2.20	3.14	3.18	3.18	R 252 979.48
JUNC-27-04	JUNC-27-03	RECT_OPEN	Rectangular channel / Overflow conduit	28.59	0.02901	0.500	10	0	0.00	0.02	2.90	4.87	n/a
JUNC-27-05	JUNC-27-04	CIRCULAR	Pipe	16.48	0.03078	0.900	0	0	2.20	3.17	3.23	3.23	R 161 547.08
JUNC-27-05	JUNC-27-04	RECT_OPEN	Rectangular channel / Overflow conduit	18.91	0.02682	0.500	10	0	0.00	0.01	2.88	4.84	n/a
JUNC-27-06	JUNC-27-05	CIRCULAR	Pipe	3.26	0.0313	0.750	0	0	1.92	2.77	2.81	2.80	R 39 993.82
JUNC-27-06	JUNC-27-05	RECT_OPEN	Rectangular channel / Overflow conduit	4.34	0.02351	0.250	10	0	0.00	0.48	2.62	3.03	n/a
JUNC-27-07	JUNC-27-06	TRAPEZOIDAL	Trapezoidal Channel	233.58	0.0221	0.600	0.6	2	1.89	2.92	4.22	4.24	R 434 309.62
JUNC-27-07	JUNC-70-01	RECT_OPEN	Rectangular channel / Overflow conduit	234.56	0.02175	0.250	10	0	0.00	0.00	0.75	2.32	n/a
JUNC-27-08	JUNC-27-07	RECT_OPEN	Rectangular channel / Overflow conduit	4.63	0.02528	0.250	10	0	0.00	0.00	2.87	4.52	n/a
JUNC-27-08	JUNC-27-07	CIRCULAR	Pipe	4.04	0.02897	0.750	0	0	1.89	3.03	4.03	4.02	R 39 993.82
JUNC-27-09	JUNC-27-08	RECT_OPEN	Rectangular channel / Overflow conduit	9.12	0.02973	0.250	10	0	0.00	0.14	3.42	4.93	n/a
JUNC-27-09	JUNC-27-08	CIRCULAR	Pipe	8.31	0.03263	0.750	0	0	1.89	2.80	2.81	2.80	R 79 987.64
JUNC-27-10	JUNC-27-09	RECT_OPEN	Rectangular channel / Overflow conduit	3.44	0.03112	0.250	10	0	0.00	0.56	3.36	4.84	n/a
JUNC-27-10	JUNC-27-09	CIRCULAR	Pipe	2.91	0.03679	0.750	0	0	1.89	2.64	2.64	2.64	R 39 993.82
JUNC-27-11	JUNC-27-10	CIRCULAR	Pipe	20.51	0.03586	0.675	0	0	0.65	1.03	1.49	1.49	R 145 494.93
JUNC-27-11	JUNC-27-10	RECT_OPEN	Rectangular channel / Overflow conduit	21.56	0.03411	0.250	10	0	0.00	0.00	0.28	0.78	n/a
JUNC-27-12	JUNC-27-11	CIRCULAR	Pipe	98.38	0.0191	0.675	0	0	0.66	1.06	1.23	1.23	R 690 482.24
JUNC-27-12	JUNC-27-11	RECT_OPEN	Rectangular channel / Overflow conduit	100.15	0.01877	0.250	10	0	0.00	0.00	0.59	1.07	n/a
JUNC-27-13	JUNC-27-12	CIRCULAR	Pipe	2.87	0.03975	0.675	0	0	0.65	1.05	1.64	1.69	R 33 186.41

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-27-13	JUNC-27-12	RECT_OPEN	Rectangular channel / Overflow conduit	4.63	0.02463	0.250	10	0	0.00	0.00	0.30	0.76	n/a
JUNC-27-14	JUNC-27-13	CIRCULAR	Pipe	9.97	0.03483	0.675	0	0	0.65	1.05	1.58	1.58	R 66 372.82
JUNC-27-14	JUNC-27-13	RECT_OPEN	Rectangular channel / Overflow conduit	11.07	0.03136	0.250	10	0	0.00	0.00	0.32	0.79	n/a
JUNC-27-15	JUNC-27-14	RECT_OPEN	Rectangular channel / Overflow conduit	77.23	0.01466	0.250	10	0	0.00	0.00	0.84	1.31	n/a
JUNC-27-15	JUNC-27-14	CIRCULAR	Pipe	75.8	0.01494	0.675	0	0	0.65	1.04	1.21	1.21	R 525 075.46
JUNC-27-16	JUNC-27-15	RECT_OPEN	Rectangular channel / Overflow conduit	34.43	0.05186	0.250	10	0	0.00	0.00	0.06	0.54	n/a
JUNC-27-16	JUNC-27-15	CIRCULAR	Pipe	32.55	0.05486	0.675	0	0	0.65	1.05	1.94	1.94	R 225 142.32
JUNC-27-17	JUNC-27-16	RECT_OPEN	Rectangular channel / Overflow conduit	7.79	0.04189	0.250	10	0	0.00	0.00	0.08	0.55	n/a
JUNC-27-17	JUNC-27-16	CIRCULAR	Pipe	6.16	0.053	0.675	0	0	0.65	1.05	1.98	1.98	R 46 460.98
JUNC-28-01	JUNC-2-20	PARABOLIC	Natural Channel	55.66	0.02503	1.500	10	0	1.50	1.80	3.34	4.25	n/a
JUNC-28-02	JUNC-28-01	CIRCULAR	Pipe	24.42	0.01163	0.900	0	0	1.50	1.80	3.11	3.19	R 234 693.00
JUNC-28-02	JUNC-28-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.21	0.0094	0.250	10	0	0.00	0.00	0.23	1.06	n/a
JUNC-28-03	JUNC-28-02	RECT_OPEN	Rectangular channel / Overflow conduit	184.37	0.02343	0.250	10	0	0.00	0.09	1.26	1.84	n/a
JUNC-28-03	JUNC-28-02	RECT_OPEN	Rectangular channel / Overflow conduit	179.08	0.02524	0.300	0.9	0	1.02	1.08	1.08	1.08	n/a
JUNC-28-04	JUNC-28-03	RECT_CLOSED	Closed Channel	21.43	0.03474	0.500	0.5	0	1.02	1.08	1.08	1.08	n/a
JUNC-28-04	JUNC-28-03	RECT_OPEN	Rectangular channel / Overflow conduit	23.41	0.0318	0.250	10	0	0.00	0.47	1.64	2.20	n/a
JUNC-28-05	JUNC-28-04	RECT_OPEN	Rectangular channel / Overflow conduit	56.61	0.01235	0.250	10	0	0.00	0.27	1.21	1.67	n/a
JUNC-28-05	JUNC-28-04	CIRCULAR	Pipe	55.7	0.01255	0.675	0	0	0.86	0.94	0.95	0.95	R 392 329.81
JUNC-28-06	JUNC-28-05	RECT_OPEN	Rectangular channel / Overflow conduit	34.6	0.00699	0.250	10	0	0.46	0.97	1.89	2.35	n/a
JUNC-28-06	JUNC-28-05	CIRCULAR	Pipe	29.53	0.0082	0.450	0	0	0.43	0.43	0.43	0.43	R 158 410.21
JUNC-28-07	JUNC-28-06	RECT_OPEN	Rectangular channel / Overflow conduit	59.68	0.00794	0.250	10	0	0.32	0.58	1.18	1.48	n/a
JUNC-28-07	JUNC-28-06	CIRCULAR	Pipe	56.9	0.00833	0.450	0	0	0.26	0.26	0.26	0.27	R 310 008.60
JUNC-28-08	JUNC-28-07	RECT_OPEN	Rectangular channel / Overflow conduit	13.51	0.03392	0.250	10	0	0.00	0.16	0.76	1.06	n/a
JUNC-28-08	JUNC-28-07	CIRCULAR	Pipe	12.05	0.03804	0.300	0	0	0.15	0.18	0.18	0.18	n/a
JUNC-28-08	JUNC-28-07	CIRCULAR	Pipe	12.05	0.03804	0.450	0	0	0.45	0.53	0.53	0.53	R 65 995.89
JUNC-29-01	JUNC-2-21	PARABOLIC	Natural Channel	91.79	0.00048	2.000	15	0	7.54	11.04	34.33	42.11	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-29-02	JUNC-29-01	RECT_OPEN	Rectangular channel / Overflow conduit	48.67	0.01438	1.000	15	0	0.00	2.88	25.18	33.79	n/a
JUNC-29-02	JUNC-29-01	CIRCULAR	Pipe	46.38	0.01509	1.200	0	0	7.56	8.20	8.32	8.20	n/a
JUNC-29-03	JUNC-29-02	CIRCULAR	Pipe	150.86	0.03706	1.200	0	0	7.19	8.09	8.12	8.12	n/a
JUNC-29-03	JUNC-75-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.62	0.04305	0.500	15	0	0.00	2.79	24.25	32.93	n/a
JUNC-29-04	JUNC-29-03	CIRCULAR	Pipe	6.89	0.08037	1.200	0	0	7.33	8.81	9.33	9.47	n/a
JUNC-29-04	JUNC-29-03	RECT_OPEN	Rectangular channel / Overflow conduit	7.95	0.04432	0.500	15	0	0.00	2.04	22.84	31.37	n/a
JUNC-29-05	JUNC-29-04	RECT_OPEN	Rectangular channel / Overflow conduit	11.46	0.04052	0.500	15	0	0.00	2.43	23.67	32.35	n/a
JUNC-29-05	JUNC-29-04	CIRCULAR	Pipe	10.16	0.04572	1.200	0	0	7.25	8.44	8.55	8.52	n/a
JUNC-29-06	JUNC-29-05	CIRCULAR	Pipe	5.15	0.02836	1.200	0	0	7.49	8.66	8.48	8.67	n/a
JUNC-29-06	JUNC-29-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.29	0.01761	0.500	15	0	0.00	3.35	23.73	32.16	n/a
JUNC-29-07	JUNC-29-06	CIRCULAR	Pipe	58.2	0.04186	1.200	0	0	5.21	6.62	6.64	6.62	n/a
JUNC-29-07	JUNC-29-06	RECT_OPEN	Rectangular channel / Overflow conduit	61.15	0.02837	0.500	10	0	0.00	1.04	15.79	21.51	n/a
JUNC-29-08	JUNC-29-07	CIRCULAR	Pipe	318.73	0.04405	1.200	0	0	4.96	7.90	8.27	8.31	n/a
JUNC-29-08	JUNC-29-07	RECT_OPEN	Rectangular channel / Overflow conduit	322.95	0.04347	0.500	15	0	0.00	0.00	13.76	19.27	n/a
JUNC-29-09	JUNC-29-08	CIRCULAR	Pipe	19.71	0.03976	1.200	0	0	4.68	7.65	9.98	9.74	n/a
JUNC-29-09	JUNC-29-08	RECT_OPEN	Rectangular channel / Overflow conduit	24.76	0.03164	0.500	15	0	0.00	0.00	13.62	18.92	n/a
JUNC-29-10	JUNC-29-09	CIRCULAR	Pipe	93.53	0.00679	1.200	0	0	4.68	6.28	6.30	6.30	n/a
JUNC-29-10	JUNC-29-09	RECT_OPEN	Rectangular channel / Overflow conduit	95.9	0.01184	0.500	15	0	0.00	1.37	16.98	22.25	n/a
JUNC-29-11	JUNC-29-10	CIRCULAR	Pipe	79.97	0.01274	1.200	0	0	2.84	4.37	4.34	4.30	n/a
JUNC-29-11	JUNC-29-10	RECT_OPEN	Rectangular channel / Overflow conduit	83.27	0.01224	0.500	10	0	0.00	1.68	8.89	11.59	n/a
JUNC-29-12	JUNC-29-11	RECT_OPEN	Rectangular channel / Overflow conduit	12.81	0.01647	0.500	10	0	0.00	0.25	7.03	9.88	n/a
JUNC-29-12	JUNC-29-11	CIRCULAR	Pipe	7.52	0.02807	1.200	0	0	2.91	5.51	5.82	5.64	n/a
JUNC-29-13	JUNC-29-12	RECT_OPEN	Rectangular channel / Overflow conduit	57.12	0.02886	0.500	10	0	0.00	0.00	2.37	4.32	n/a
JUNC-29-13	JUNC-29-12	CIRCULAR	Pipe	50.29	0.03279	1.200	0	0	2.42	4.64	6.73	6.72	n/a
JUNC-29-14	JUNC-29-13	CIRCULAR	Pipe	71.74	0.04736	1.200	0	0	1.70	3.52	7.39	8.33	n/a
JUNC-29-14	JUNC-29-13	RECT_OPEN	Rectangular channel / Overflow conduit	76.45	0.04444	0.250	10	0	0.00	0.00	0.00	0.59	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-29-15	JUNC-29-14	CIRCULAR	Pipe	162.22	0.04787	1.200	0	0	1.43	2.79	5.97	7.32	n/a
JUNC-29-15	JUNC-29-14	RECT_OPEN	Rectangular channel / Overflow conduit	167.45	0.04637	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-30-01	JUNC-2-22	PARABOLIC	Natural Channel	74.77	0.08283	1.000	10	0	0.74	1.12	2.08	2.53	n/a
JUNC-30-02	JUNC-30-01	RECT_OPEN	Pipe	277.59	0.01	0.500	10	0	0.05	0.07	0.12	0.14	n/a
JUNC-30-03	JUNC-30-02	RECT_OPEN	Pipe	13.84	0.01026	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-30-03	JUNC-30-02	CIRCULAR	Pipe	11.8	0.01203	0.300	0	0	0.07	0.10	0.15	0.18	n/a
JUNC-3-01	JUNC-1-03	RECT_OPEN	Rectangular channel / Overflow conduit	16.62	0.36845	0.300	10	0	1.60	3.28	6.94	9.05	n/a
JUNC-3-02	JUNC-3-01	RECT_CLOSED	Closed Channel	82.31	0.00607	1.200	1.2	0	0.93	1.86	2.64	2.89	R 1 293 532.11
JUNC-3-02	JUNC-3-01	RECT_OPEN	Rectangular channel / Overflow conduit	85.95	0.00582	0.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-3-03	JUNC-3-02	RECT_CLOSED	Closed Channel	138.1	0.00362	1.200	1.2	0	0.92	1.81	2.69	2.90	R 2 186 594.16
JUNC-3-03	JUNC-3-02	RECT_OPEN	Rectangular channel / Overflow conduit	143.66	0.00348	0.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-3-04	JUNC-3-03	RECT_CLOSED	Closed Channel	274.34	0.00182	1.200	1.2	0	0.92	1.53	2.54	2.55	R 4 281 114.38
JUNC-3-04	JUNC-3-03	RECT_OPEN	Rectangular channel / Overflow conduit	278.31	0.0018	0.500	15	0	0.00	0.00	0.00	0.01	n/a
JUNC-3-05	JUNC-3-04	RECT_OPEN	Rectangular channel / Overflow conduit	235.49	0.00085	0.500	15	0	0.00	0.00	0.12	1.48	n/a
JUNC-3-05	JUNC-3-04	RECT_CLOSED	Closed Channel	229.51	0.00218	1.200	1.2	0	0.93	1.57	2.67	2.76	R 3 588 194.97
JUNC-3-06	JUNC-3-05	RECT_CLOSED	Closed Channel	12.95	0.05413	0.500	0.5	0	0.00	0.01	0.02	0.04	n/a
JUNC-3-06	JUNC-3-05	RECT_OPEN	Rectangular channel / Overflow conduit	13.27	0.0908	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-31-01	JUNC-2-23	PARABOLIC	Natural Channel	122.09	0.00499	2.000	15	0	2.50	4.23	9.25	11.61	n/a
JUNC-31-02	JUNC-31-01	RECT_OPEN	Rectangular channel / Overflow conduit	291.33	0.02928	0.500	10	0	2.77	4.65	9.76	12.15	n/a
JUNC-31-03	JUNC-31-02	PARABOLIC	Natural Channel	203.49	0.04027	1.000	10	0	1.49	2.66	6.33	8.00	n/a
JUNC-31-04	JUNC-31-03	RECT_OPEN	Rectangular channel / Overflow conduit	33.35	0.07496	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-31-04	JUNC-31-03	CIRCULAR	Pipe	31.93	0.07832	0.400	0	0	0.21	0.32	0.52	0.62	n/a
JUNC-32-01	JUNC-2-24	PARABOLIC	Natural Channel	158.7	0.00472	1.500	15	0	4.00	7.78	21.49	24.50	n/a
JUNC-32-02	JUNC-32-01	RECT_OPEN	Rectangular channel / Overflow conduit	294.18	0.02343	0.500	10	0	4.19	7.98	21.57	24.53	n/a
JUNC-32-03	JUNC-32-02	PARABOLIC	Natural Channel	544.46	0.03694	1.500	10	0	4.24	8.07	21.87	29.76	n/a
JUNC-32-04	JUNC-32-03	PARABOLIC	Natural Channel	25.74	0.03557	2.000	15	0	0.54	0.78	1.21	1.54	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-32-05	JUNC-32-04	RECT_OPEN	Rectangular channel / Overflow conduit	24.03	0.07696	0.250	10	0	0.00	0.00	0.10	0.41	n/a
JUNC-32-05	JUNC-32-04	CIRCULAR	Pipe	22.83	0.08104	0.500	0	0	0.54	0.79	1.11	1.13	n/a
JUNC-32-06	JUNC-32-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.37	0.02682	0.250	10	0	0.00	0.00	0.52	0.83	n/a
JUNC-32-06	JUNC-32-05	CIRCULAR	Pipe	8.55	0.03253	0.500	0	0	0.54	0.80	1.08	1.08	R 50 089.42
JUNC-32-07	JUNC-32-06	RECT_OPEN	Rectangular channel / Overflow conduit	39.17	0.06013	0.250	10	0	0.00	0.00	0.33	0.61	n/a
JUNC-32-07	JUNC-32-06	CIRCULAR	Pipe	37.36	0.06305	0.500	0	0	0.54	0.78	1.00	1.00	R 217 600.68
JUNC-33-01	JUNC-2-24	PARABOLIC	Natural Channel	159.4	0.00213	2.000	15	0	0.77	1.21	2.26	3.38	n/a
JUNC-33-02	JUNC-33-01	RECT_OPEN	Rectangular channel / Overflow conduit	287.16	0.02508	0.500	10	0	1.13	1.58	3.07	3.75	n/a
JUNC-33-03	JUNC-33-02	PARABOLIC	Natural Channel	282.44	0.04339	1.000	10	0	1.18	1.58	3.19	3.88	n/a
JUNC-33-04	JUNC-33-03	RECT_OPEN	Rectangular channel / Overflow conduit	34.61	0.06532	0.250	10	0	0.00	0.00	1.55	2.22	n/a
JUNC-33-04	JUNC-33-03	CIRCULAR	Pipe	31.93	0.07083	0.600	0	0	1.20	1.59	1.70	1.73	R 200 637.63
JUNC-33-05	JUNC-33-04	PARABOLIC	Natural Channel	54.05	0.06057	1.000	5	0	0.73	1.09	1.82	2.19	n/a
JUNC-33-06	JUNC-33-05	CIRCULAR	Pipe	7.37	0.05994	0.525	0	0	0.74	1.09	1.56	1.58	R 44 523.93
JUNC-33-06	JUNC-33-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.6	0.05135	0.250	10	0	0.00	0.00	0.26	0.62	n/a
JUNC-33-07	JUNC-33-06	RECT_OPEN	Rectangular channel / Overflow conduit	13.46	0.05215	0.250	10	0	0.00	0.00	0.76	1.14	n/a
JUNC-33-07	JUNC-33-06	CIRCULAR	Pipe	11.97	0.05866	0.525	0	0	0.73	1.09	1.28	1.28	R 66 785.90
JUNC-33-08	JUNC-33-07	RECT_OPEN	Rectangular channel / Overflow conduit	59.67	0.05968	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-33-08	JUNC-33-07	CIRCULAR	Pipe	58.02	0.06139	0.525	0	0	0.36	0.49	0.78	0.93	R 343 440.52
JUNC-34-01	JUNC-2-27	PARABOLIC	Natural Channel	155.08	0.01871	2.000	50	0	8.19	15.11	39.10	54.18	n/a
JUNC-34-02	JUNC-34-01	RECT_OPEN	Rectangular channel / Overflow conduit	24.95	0.0004	0.500	30	0	3.00	9.47	32.26	47.07	n/a
JUNC-34-02	JUNC-34-01	CIRCULAR	Pipe	21.8	0.00046	0.750	0	0	4.85	5.13	5.64	5.81	n/a
JUNC-34-03	JUNC-34-02	PARABOLIC	Natural Channel	89.69	0.05526	2.000	15	0	7.54	13.71	36.46	50.65	n/a
JUNC-34-04	JUNC-34-03	PARABOLIC	Natural Channel	145.75	0.02346	2.000	15	0	6.45	11.81	32.67	44.95	n/a
JUNC-34-05	JUNC-34-04	PARABOLIC	Natural Channel	87.59	0.07853	2.000	15	0	6.27	11.51	31.86	43.98	n/a
JUNC-34-06	JUNC-34-05	PARABOLIC	Natural Channel	114.12	0.04408	2.000	15	0	6.11	11.18	31.10	43.09	n/a
JUNC-34-07	JUNC-34-06	PARABOLIC	Natural Channel	52.7	0.02771	2.000	15	0	6.11	11.18	31.07	43.10	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-34-08	JUNC-34-07	PARABOLIC	Natural Channel	93.38	0.0075	1.500	5	0	0.26	0.41	0.72	0.88	n/a
JUNC-34-09	JUNC-34-08	RECT_OPEN	Rectangular channel / Overflow conduit	13.7	0.00445	0.500	10	0	0.00	0.00	0.24	0.41	n/a
JUNC-34-09	JUNC-34-08	CIRCULAR	Pipe	12.32	0.00495	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-34-09	JUNC-34-08	CIRCULAR	Pipe	12.32	0.00495	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-35-01	JUNC-2-29	PARABOLIC	Natural Channel	168.52	0.00766	1.500	30	0	2.59	3.83	6.80	8.55	n/a
JUNC-35-02	JUNC-35-01	PARABOLIC	Natural Channel	182.75	0.00805	1.500	20	0	1.84	2.72	4.85	6.16	n/a
JUNC-35-03	JUNC-35-02	PARABOLIC	Natural Channel	140.85	0.01148	1.500	20	0	1.58	2.20	3.84	4.87	n/a
JUNC-35-04	JUNC-35-03	PARABOLIC	Natural Channel	44.78	0.06562	1.500	20	0	1.37	1.87	3.44	4.31	n/a
JUNC-35-05	JUNC-35-04	PARABOLIC	Natural Channel	37.66	0.06562	1.500	20	0	1.23	1.68	3.10	3.86	n/a
JUNC-35-06	JUNC-35-05	RECT_CLOSED	Culvert	7.8	0.06359	0.400	0.7	0	0.11	0.14	0.25	0.31	n/a
JUNC-35-06	JUNC-35-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.62	0.05752	0.500	10	0	1.13	1.54	2.86	3.56	n/a
JUNC-35-07	JUNC-35-06	RECT_CLOSED	Culvert	9.72	0.06216	0.400	0.7	0	0.92	1.20	1.72	1.74	n/a
JUNC-35-07	JUNC-35-06	RECT_OPEN	Rectangular channel / Overflow conduit	11.29	0.05349	0.500	10	0	0.00	0.00	0.49	1.01	n/a
JUNC-35-08	JUNC-35-07	RECT_CLOSED	Culvert	12.41	0.05625	0.400	0.7	0	0.92	1.20	1.63	1.64	n/a
JUNC-35-08	JUNC-35-07	RECT_OPEN	Rectangular channel / Overflow conduit	13.81	0.05054	0.500	10	0	0.00	0.00	0.90	1.44	n/a
JUNC-35-09	JUNC-35-08	RECT_CLOSED	Culvert	53.39	0.0339	0.400	0.7	0	0.92	1.18	1.18	1.18	n/a
JUNC-35-09	JUNC-35-08	RECT_OPEN	Rectangular channel / Overflow conduit	55.38	0.03268	0.500	10	0	0.00	0.09	1.20	1.74	n/a
JUNC-35-10	JUNC-35-09	RECT_CLOSED	Culvert	39.86	0.05397	0.400	0.7	0	0.92	1.31	1.38	1.39	n/a
JUNC-35-10	JUNC-35-09	RECT_OPEN	Rectangular channel / Overflow conduit	42.59	0.0505	0.500	10	0	0.00	0.00	1.05	1.53	n/a
JUNC-35-11	JUNC-35-10	RECT_CLOSED	Culvert	113.11	0.05325	0.400	0.7	0	0.45	0.65	1.06	1.27	n/a
JUNC-35-12	JUNC-35-11	RECT_CLOSED	Culvert	9.71	0.00886	0.400	0.7	0	0.45	0.74	1.06	1.27	n/a
JUNC-35-12	JUNC-35-11	RECT_OPEN	Rectangular channel / Overflow conduit	13.9	0.00619	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-35-13	JUNC-35-12	RECT_CLOSED	Culvert	53.29	0.07794	0.400	0.7	0	0.18	0.26	0.41	0.49	n/a
JUNC-35-13	JUNC-35-12	RECT_OPEN	Rectangular channel / Overflow conduit	56.75	0.07316	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-36-01	JUNC-2-29	PARABOLIC	Natural Channel	288.72	0.00626	1.500	15	0	1.21	1.91	6.68	10.54	n/a
JUNC-36-02	JUNC-36-01	PARABOLIC	Natural Channel	60.83	0.01675	1.000	15	0	0.96	1.75	6.09	9.55	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-36-03	JUNC-36-02	RECT_OPEN	Rectangular channel / Overflow conduit	30.12	0.00169	0.500	10	0	0.00	0.56	4.75	8.13	n/a
JUNC-36-03	JUNC-36-02	RECT_CLOSED	Box Culvert	27.12	0.00188	0.600	0.6	0	0.96	1.19	1.34	1.42	n/a
JUNC-36-04	JUNC-36-03	PARABOLIC	Natural Channel	284.87	0.04629	1.000	15	0	1.11	1.73	5.52	8.22	n/a
JUNC-36-05	JUNC-36-04	CIRCULAR	Pipe	5.17	0.07487	0.600	0	0	1.11	1.74	2.64	2.71	R 36 473.56
JUNC-36-05	JUNC-36-04	RECT_OPEN	Rectangular channel / Overflow conduit	6.9	0.05603	0.300	10	0	0.00	0.00	3.01	5.68	n/a
JUNC-36-06	JUNC-36-05	CIRCULAR	Pipe	16.66	0.07779	0.600	0	0	1.11	1.74	1.97	1.97	R 109 453.74
JUNC-36-06	JUNC-36-05	RECT_OPEN	Rectangular channel / Overflow conduit	17.9	0.07237	0.300	10	0	0.00	0.00	3.93	6.68	n/a
JUNC-36-07	JUNC-36-06	CIRCULAR	Pipe	5.84	0.06245	0.600	0	0	1.11	1.74	1.87	1.87	R 36 473.56
JUNC-36-07	JUNC-36-06	RECT_OPEN	Rectangular channel / Overflow conduit	6.88	0.05298	0.300	10	0	0.00	0.00	4.08	6.82	n/a
JUNC-36-08	JUNC-36-07	PARABOLIC	Natural Channel	334.32	0.07087	1.000	15	0	0.95	2.01	5.82	7.61	n/a
JUNC-37-01	JUNC-2-30	PARABOLIC	Natural Channel	159.74	0.00182	2.000	20	0	11.89	19.73	49.85	78.19	n/a
JUNC-37-02	JUNC-37-01	RECT_CLOSED	5 No. off Box Culvert	30.78	0.01625	1.200	1.5	0	11.74	19.38	49.18	59.51	n/a
JUNC-37-02	JUNC-37-01	RECT_OPEN	Rectangular channel / Overflow conduit	35.53	0.01407	1.000	20	0	0.00	0.00	0.00	11.09	n/a
JUNC-37-03	JUNC-37-02	PARABOLIC	Natural Channel	144.38	0.00277	2.000	25	0	11.51	19.01	48.30	67.36	n/a
JUNC-37-04	JUNC-37-03	RECT_OPEN	Rectangular channel / Overflow conduit	21.07	0.00475	1.000	10	0	0.00	0.00	4.38	24.62	n/a
JUNC-37-04	JUNC-37-03	CIRCULAR	Pipe	18.18	0.0055	1.650	0	0	11.53	22.60	44.44	47.61	n/a
JUNC-37-05	JUNC-37-04	PARABOLIC	Natural Channel	345.7	0.0533	2.000	10	0	11.86	18.91	48.70	68.32	n/a
JUNC-38-01	JUNC-2-30	PARABOLIC	Natural Channel	260.39	0.00457	2.000	10	0	1.05	2.06	5.52	7.13	n/a
JUNC-39-01	JUNC-2-32	PARABOLIC	Natural Channel	23234.58	0.02059	5.000	50	0	169.26	254.85	566.18	769.22	n/a
JUNC-40-01	JUNC-2-33	PARABOLIC	Natural Channel	12643.82	0.00459	5.000	200	0	185.82	284.94	656.76	903.54	n/a
JUNC-4-01	JUNC-1-04	PARABOLIC	Natural Channel	257.92	0.03269	1.000	10	0	1.24	2.60	6.88	8.72	n/a
JUNC-4-02	JUNC-4-01	PARABOLIC	Natural Channel	274.85	0.06655	1.000	10	0	0.92	2.02	5.60	7.12	n/a
JUNC-4-03	JUNC-4-02	PARABOLIC	Natural Channel	680.2	0.53427	1.000	10	0	0.95	2.15	6.01	7.58	n/a
JUNC-41-01	JUNC-3-05	RECT_OPEN	Rectangular channel / Overflow conduit	274.72	0.00145	0.500	15	0	0.00	0.00	0.25	1.17	n/a
JUNC-41-01	JUNC-3-05	RECT_CLOSED	Closed Channel	271.07	0.00147	1.200	1.2	0	0.69	1.21	2.08	2.07	R 4 235 327.22
JUNC-41-02	JUNC-41-01	RECT_OPEN	Rectangular channel / Overflow conduit	177.95	0.00023	0.500	15	0	0.00	0.00	1.52	2.57	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-41-02	JUNC-58-01	RECT_CLOSED	Closed Channel	11.08	0.00839	0.900	0.9	0	0.71	0.89	1.48	1.55	R 144 717.55
JUNC-41-02	JUNC-41-01	RECT_CLOSED	Closed Channel	173.72	0.00024	1.200	1.2	0	0.73	1.26	1.70	1.86	R 2 711 627.31
JUNC-41-03	JUNC-41-02	RECT_CLOSED	Closed Channel	14.9	0.01913	0.900	0.9	0	1.20	1.70	2.80	2.80	R 179 368.94
JUNC-41-03	JUNC-41-02	RECT_OPEN	Rectangular channel / Overflow conduit	18.58	0.01534	0.500	15	0	0.00	0.00	0.68	2.05	n/a
JUNC-41-04	JUNC-41-03	RECT_CLOSED	Closed Channel	232.87	0.00837	0.900	0.9	0	0.69	0.99	1.67	2.21	R 2 769 103.80
JUNC-41-04	JUNC-41-03	RECT_OPEN	Rectangular channel / Overflow conduit	235.85	0.00826	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-41-05	JUNC-41-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.55	0.05011	0.250	10	0	0.00	0.00	0.28	0.94	n/a
JUNC-41-05	JUNC-41-04	RECT_CLOSED	Closed Channel	10.73	0.04927	0.500	0.5	0	0.70	1.00	1.45	1.46	n/a
STOR-41-06	JUNC-41-05	RECT_CLOSED	Closed Channel	12.89	1.15445	0.500	0.5	0	0.22	0.35	0.66	0.81	n/a
JUNC-42-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	65.93	0.05165	0.250	10	0	0.00	0.13	0.44	0.59	n/a
JUNC-42-01	JUNC-41-05	CIRCULAR	Pipe	65.35	0.05211	0.300	0	0	0.24	0.24	0.24	0.24	n/a
JUNC-42-02	JUNC-42-01	RECT_OPEN	Rectangular channel / Overflow conduit	16.47	0.06572	0.250	10	0	0.00	0.14	0.42	0.55	n/a
JUNC-42-02	JUNC-42-01	CIRCULAR	Pipe	14.08	0.07693	0.300	0	0	0.26	0.29	0.28	0.28	n/a
JUNC-42-03	JUNC-42-02	RECT_OPEN	Rectangular channel / Overflow conduit	65.88	0.05169	0.250	10	0	0.19	0.33	0.61	0.75	n/a
JUNC-42-03	JUNC-42-02	CIRCULAR	Pipe	63.2	0.05389	0.200	0	0	0.09	0.09	0.09	0.09	n/a
JUNC-42-04	JUNC-42-03	RECT_OPEN	Rectangular channel / Overflow conduit	17.5	0.05396	0.250	10	0	0.21	0.35	0.62	0.76	n/a
JUNC-42-04	JUNC-42-03	CIRCULAR	Pipe	15.07	0.0627	0.200	0	0	0.10	0.10	0.10	0.09	n/a
JUNC-43-01	JUNC-5-07	PARABOLIC	Natural Channel	94.22	0.0587	1.000	5	0	0.96	2.14	5.78	7.25	n/a
JUNC-43-02	JUNC-43-01	PARABOLIC	Natural Channel	480.37	0.25123	1.000	5	0	0.97	2.20	5.97	7.46	n/a
JUNC-44-01	JUNC-6-01	PARABOLIC	Natural Channel	146.08	0.07289	1.000	5	0	0.20	0.32	0.56	0.69	n/a
JUNC-44-02	JUNC-44-01	CIRCULAR	Pipe	8.78	0.01891	0.450	0	0	0.20	0.32	0.57	0.69	R 45 689.46
JUNC-44-02	JUNC-44-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.88	0.0168	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-44-03	JUNC-44-02	CIRCULAR	Pipe	44.05	0.0134	0.450	0	0	0.20	0.32	0.47	0.47	R 234 559.32
JUNC-44-03	JUNC-44-02	RECT_OPEN	Rectangular channel / Overflow conduit	46.77	0.01262	0.250	10	0	0.00	0.00	0.10	0.28	n/a
JUNC-45-01	JUNC-7-02	CIRCULAR	Pipe	35.71	0.08383	0.300	0	0	0.18	0.28	0.30	0.30	n/a
JUNC-45-01	JUNC-7-02	RECT_OPEN	Rectangular channel / Overflow conduit	38.28	0.07816	0.250	10	0	0.00	0.00	0.00	0.00	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-45-02	JUNC-45-01	CIRCULAR	Pipe	8.54	0.08047	0.300	0	0	0.18	0.28	0.30	0.30	n/a
JUNC-45-02	JUNC-45-01	RECT_OPEN	Rectangular channel / Overflow conduit	11.4	0.0602	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-45-03	JUNC-45-02	RECT_OPEN	Rectangular channel / Overflow conduit	68.64	0.08164	0.250	10	0	0.11	0.17	0.31	0.38	n/a
JUNC-45-04	JUNC-45-03	CIRCULAR	Pipe	13.42	0.00142	0.300	0	0	0.11	0.17	0.20	0.20	n/a
JUNC-45-04	JUNC-45-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.86	0.00128	0.250	10	0	0.00	0.00	0.11	0.19	n/a
JUNC-46-01	JUNC-8-06	RECT_OPEN	Rectangular channel / Overflow conduit	100.06	0.00999	0.250	10	0	0.40	0.63	1.11	1.37	n/a
JUNC-47-01	JUNC-8-05	RECT_OPEN	Rectangular channel / Overflow conduit	80.55	0.06084	0.250	10	0	0.31	0.48	1.00	1.24	n/a
JUNC-47-02	JUNC-47-01	CIRCULAR	Pipe	53.87	0.00195	0.300	0	0	0.11	0.11	0.11	0.12	n/a
JUNC-47-02	JUNC-47-01	RECT_OPEN	Rectangular channel / Overflow conduit	55.61	0.00189	0.250	10	0	0.21	0.37	0.89	1.13	n/a
JUNC-47-03	JUNC-47-02	CIRCULAR	Pipe	33.1	0.00079	0.300	0	0	0.10	0.10	0.09	0.09	n/a
JUNC-47-03	JUNC-47-02	RECT_OPEN	Rectangular channel / Overflow conduit	34.69	0.00075	0.250	10	0	0.30	0.48	1.00	1.25	n/a
JUNC-47-04	JUNC-47-03	CIRCULAR	Pipe	7.27	0.00344	0.300	0	0	0.08	0.07	0.07	0.07	n/a
JUNC-47-04	JUNC-47-03	RECT_OPEN	Rectangular channel / Overflow conduit	8.25	0.00303	0.250	10	0	0.21	0.34	0.70	0.88	n/a
JUNC-48-01	JUNC-8-10	RECT_OPEN	Rectangular channel / Overflow conduit	97.3	0.03775	0.250	10	0	0.33	0.51	0.85	1.02	n/a
JUNC-48-02	JUNC-48-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.32	0.06355	0.250	10	0	0.10	0.28	0.62	0.79	n/a
JUNC-48-02	JUNC-48-01	CIRCULAR	Pipe	28.61	0.06737	0.300	0	0	0.23	0.24	0.24	0.24	n/a
JUNC-48-03	JUNC-48-02	RECT_OPEN	Rectangular channel / Overflow conduit	19.4	0.05555	0.250	10	0	0.00	0.00	0.18	0.31	n/a
JUNC-48-03	JUNC-48-02	CIRCULAR	Pipe	16.16	0.06673	0.400	0	0	0.27	0.43	0.53	0.53	n/a
JUNC-49-01	JUNC-9-04	RECT_OPEN	Rectangular channel / Overflow conduit	2.54	0.04967	0.250	10	0	0.00	0.43	1.26	1.57	n/a
JUNC-49-01	JUNC-9-04	CIRCULAR	Pipe	1.98	0.06377	0.300	0	0	0.34	0.53	0.52	0.53	n/a
JUNC-49-02	JUNC-49-01	RECT_OPEN	Rectangular channel / Overflow conduit	8.54	0.04243	0.250	10	0	0.02	0.49	1.28	1.58	n/a
JUNC-49-02	JUNC-49-01	CIRCULAR	Pipe	7.89	0.04593	0.300	0	0	0.32	0.33	0.33	0.33	n/a
JUNC-50-01	JUNC-11-01	PARABOLIC	Natural Channel	76.13	0.03547	1.000	5	0	0.23	0.36	0.61	0.72	n/a
JUNC-50-02	JUNC-50-01	CIRCULAR	Pipe	10.59	0.10185	0.300	0	0	0.23	0.37	0.38	0.39	n/a
JUNC-50-02	JUNC-50-01	RECT_OPEN	Rectangular channel / Overflow conduit	12.68	0.08493	0.500	10	0	0.00	0.00	0.23	0.35	n/a
JUNC-5-01	JUNC-1-05	PARABOLIC	Natural Channel	156.88	0.03545	1.500	20	0	4.35	9.20	26.37	34.70	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-5-02	JUNC-5-01	PARABOLIC	Natural Channel	212.49	0.03545	1.500	20	0	4.12	8.70	25.04	32.97	n/a
JUNC-5-03	JUNC-5-02	RECT_CLOSED	Pipe	6.7	0.07092	0.900	1.2	0	4.12	8.70	15.65	15.68	R 98 279.92
JUNC-5-03	JUNC-5-02	RECT_OPEN	Rectangular channel / Overflow conduit	7.75	0.06128	1.000	20	0	0.00	0.00	9.55	17.68	n/a
JUNC-5-04	JUNC-5-03	RECT_OPEN	Rectangular channel / Overflow conduit	9.45	0.06032	1.000	20	0	0.00	0.00	16.02	24.01	n/a
JUNC-5-04	JUNC-5-03	RECT_CLOSED	Pipe	8.54	0.06678	0.900	1.2	0	4.12	8.70	11.65	11.65	R 126 359.90
JUNC-5-05	JUNC-5-04	RECT_OPEN	Rectangular channel / Overflow conduit	9.89	0.03703	1.000	20	0	0.00	0.00	17.86	25.73	n/a
JUNC-5-05	JUNC-5-04	RECT_CLOSED	Pipe	8.91	0.04111	0.900	1.2	0	4.12	8.70	10.38	10.45	R 126 359.90
JUNC-5-06	JUNC-5-05	PARABOLIC	Natural Channel	57.58	0.04759	1.500	10	0	4.13	8.74	25.06	32.97	n/a
JUNC-5-07	JUNC-5-06	PARABOLIC	Natural Channel	155.75	0.04759	1.500	5	0	4.13	8.74	25.07	32.99	n/a
JUNC-5-08	JUNC-5-07	PARABOLIC	Natural Channel	204.3	0.06196	1.500	5	0	2.75	5.83	17.28	23.12	n/a
JUNC-5-09	JUNC-5-08	PARABOLIC	Natural Channel	862.35	0.20443	1.500	5	0	2.81	5.91	17.79	23.79	n/a
JUNC-51-01	JUNC-11-01	PARABOLIC	Natural Channel	78.37	0.076	1.000	5	0	0.73	1.63	4.12	5.11	n/a
JUNC-51-02	JUNC-51-01	CIRCULAR	Pipe	8.37	0.07091	0.300	0	0	0.37	0.38	0.39	0.39	n/a
JUNC-51-02	JUNC-51-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.89	0.05997	0.500	10	0	0.07	0.63	2.26	2.87	n/a
JUNC-52-01	JUNC-11-02	PARABOLIC	Natural Channel	19.2	0.15344	1.000	5	0	0.34	0.56	0.94	1.13	n/a
JUNC-52-02	JUNC-52-01	CIRCULAR	Pipe	16.97	0.04991	0.450	0	0	0.34	0.56	0.77	0.78	R 92 414.32
JUNC-52-02	JUNC-52-01	RECT_OPEN	Rectangular channel / Overflow conduit	19	0.04457	0.500	10	0	0.00	0.00	0.17	0.35	n/a
JUNC-53-01	JUNC-11-03	PARABOLIC	Natural Channel	13.85	0.65281	1.000	5	0	0.17	0.26	0.45	0.55	n/a
JUNC-53-02	JUNC-53-01	CIRCULAR	Pipe	9.94	0.03624	0.300	0	0	0.17	0.26	0.29	0.29	n/a
JUNC-53-02	JUNC-53-01	RECT_OPEN	Rectangular channel / Overflow conduit	12.48	0.02886	0.500	10	0	0.00	0.00	0.17	0.26	n/a
JUNC-54-01	JUNC-11-04	PARABOLIC	Natural Channel	8.66	0.58683	1.000	5	0	1.09	2.16	6.08	8.04	n/a
JUNC-54-02	JUNC-54-01	CIRCULAR	Pipe	11.44	0.00131	0.300	0	0	0.24	0.25	0.26	0.26	n/a
JUNC-54-02	JUNC-54-01	RECT_OPEN	Rectangular channel / Overflow conduit	13.31	0.00113	0.500	10	0	0.02	0.17	0.50	0.66	n/a
JUNC-55-01	JUNC-11-06	CIRCULAR	Pipe	68.17	0.00971	0.600	0	0	0.61	0.81	0.81	0.81	R 440 087.89
JUNC-55-01	JUNC-11-06	RECT_OPEN	Rectangular channel / Overflow conduit	72.25	0.00916	0.500	10	0	0.00	0.40	2.09	3.32	n/a
JUNC-55-02	JUNC-55-01	CIRCULAR	Pipe	39.01	0.00279	0.600	0	0	0.46	0.62	0.63	0.62	R 243 190.11

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-55-02	JUNC-55-01	RECT_OPEN	Rectangular channel / Overflow conduit	43.59	0.0025	0.500	10	0	0.00	0.60	2.00	3.06	n/a
JUNC-55-03	JUNC-55-02	CIRCULAR	Pipe	19.87	0.1189	0.600	0	0	0.46	1.05	2.03	2.04	R 127 690.52
JUNC-55-03	JUNC-55-02	RECT_OPEN	Rectangular channel / Overflow conduit	23.99	0.09826	0.500	10	0	0.00	0.00	0.41	1.48	n/a
JUNC-55-04	JUNC-55-03	TRAPEZOIDAL	Channel	119.62	0.06602	1.000	0.6	3	0.46	1.07	2.87	3.57	R 318 721.92
JUNC-56-01	JUNC-17-10	RECT_OPEN	Rectangular channel / Overflow conduit	11.99	0.00834	0.250	10	0	0.00	0.00	0.44	0.68	n/a
JUNC-56-01	JUNC-17-10	CIRCULAR	Pipe	10.83	0.00923	0.450	0	0	0.39	0.47	0.68	0.68	n/a
JUNC-56-02	JUNC-56-01	RECT_OPEN	Rectangular channel / Overflow conduit	38.96	0.0107	0.250	10	0	0.00	0.04	0.50	0.73	n/a
JUNC-56-02	JUNC-56-01	CIRCULAR	Pipe	37.59	0.01109	0.450	0	0	0.37	0.44	0.44	0.44	n/a
JUNC-56-03	JUNC-56-02	RECT_OPEN	Rectangular channel / Overflow conduit	17.57	0.05626	0.250	10	0	0.00	0.00	0.14	0.33	n/a
JUNC-56-03	JUNC-56-02	CIRCULAR	Pipe	15.73	0.06287	0.450	0	0	0.37	0.50	0.71	0.71	n/a
JUNC-56-04	JUNC-56-03	RECT_OPEN	Rectangular channel / Overflow conduit	48.33	0.0248	0.250	10	0	0.00	0.00	0.38	0.57	n/a
JUNC-56-04	JUNC-56-03	CIRCULAR	Pipe	46	0.02605	0.450	0	0	0.37	0.51	0.54	0.54	n/a
JUNC-56-05	JUNC-56-04	CIRCULAR	Pipe	21.66	0.04751	0.450	0	0	0.37	0.53	0.62	0.62	n/a
JUNC-56-05	JUNC-56-04	RECT_OPEN	Rectangular channel / Overflow conduit	24	0.04287	0.250	10	0	0.00	0.00	0.26	0.44	n/a
JUNC-56-06	JUNC-56-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.54	0.03646	0.250	10	0	0.00	0.16	0.66	0.84	n/a
JUNC-56-06	JUNC-56-05	CIRCULAR	Pipe	7.55	0.05093	0.300	0	0	0.37	0.37	0.37	0.37	n/a
JUNC-57-01	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	106.19	0.01126	0.250	15	0	0.00	0.00	4.08	4.75	n/a
JUNC-57-01	JUNC-17-04	RECT_CLOSED	Closed Channel	105.67	0.01132	0.500	0.5	0	0.37	0.43	0.49	0.49	n/a
JUNC-57-02	JUNC-20-02	RECT_CLOSED	Closed Channel	106.77	0.01796	0.500	0.5	0	0.55	0.67	0.69	0.69	n/a
JUNC-57-02	JUNC-20-02	RECT_OPEN	Rectangular channel / Overflow conduit	107.07	0.01791	0.250	15	0	0.00	0.00	4.90	6.22	n/a
JUNC-57-03	JUNC-57-02	RECT_CLOSED	Closed Channel	67.9	0.01228	0.500	0.5	0	0.54	0.67	0.68	0.68	n/a
JUNC-57-03	JUNC-57-02	RECT_OPEN	Rectangular channel / Overflow conduit	69.1	0.01207	0.250	15	0	0.00	0.14	4.98	6.30	n/a
JUNC-57-04	JUNC-23-03	RECT_OPEN	Rectangular channel / Overflow conduit	6.83	0.04323	0.250	10	0	0.00	0.56	4.17	5.89	n/a
JUNC-57-04	JUNC-23-03	RECT_CLOSED	Closed Channel	6.47	0.04564	1.000	0.5	0	2.04	2.64	2.69	2.55	R 80 853.24
JUNC-57-05	JUNC-57-04	RECT_CLOSED	Closed Channel	7.58	0.03009	1.000	0.5	0	2.04	2.43	2.43	2.37	R 92 403.70
JUNC-57-05	JUNC-57-04	RECT_OPEN	Rectangular channel / Overflow conduit	8.12	0.02809	0.250	10	0	0.00	0.80	3.81	5.35	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-57-06	JUNC-57-05	RECT_CLOSED	Closed Channel	0.71	0.04512	1.000	0.5	0	2.04	2.47	2.50	2.45	R 11 550.46
JUNC-57-06	JUNC-57-05	RECT_OPEN	Rectangular channel / Overflow conduit	0.92	0.0348	0.250	10	0	0.00	0.70	3.68	5.14	n/a
JUNC-57-07	JUNC-57-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.03	0.02193	0.250	10	0	0.00	0.95	3.95	5.38	n/a
JUNC-57-07	JUNC-63-02	RECT_OPEN	Rectangular channel / Overflow conduit	8.03	-0.00062	0.250	5	0	0.00	0.10	0.61	0.89	n/a
JUNC-57-07	JUNC-57-06	RECT_CLOSED	Closed Channel	7.43	0.02666	1.000	0.5	0	2.04	2.16	2.16	2.16	R 92 403.70
JUNC-57-08	JUNC-57-07	RECT_OPEN	Rectangular channel / Overflow conduit	172.17	0.03144	0.250	10	0	0.00	1.00	4.52	6.28	n/a
JUNC-57-08	JUNC-23-11	RECT_CLOSED	Closed Channel	200.33	0.00365	0.500	0.5	0	0.29	0.33	0.32	0.32	n/a
JUNC-57-08	JUNC-57-07	RECT_CLOSED	Closed Channel	170.59	0.03173	1.000	0.5	0	2.05	2.24	2.24	2.26	R 2 031 101.12
JUNC-58-01	JUNC-41-02	RECT_OPEN	Rectangular channel / Overflow conduit	12.31	-0.01812	0.500	15	0	0.00	0.00	0.00	0.15	n/a
JUNC-58-01	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	189.55	0.00355	0.500	15	0	0.00	0.00	0.04	0.66	n/a
JUNC-58-01	JUNC-17-04	RECT_CLOSED	Closed Channel	187.54	0.00183	0.900	0.9	0	0.72	0.89	1.18	1.39	R 2 233 570.98
JUNC-59-01	JUNC-57-08	RECT_OPEN	Rectangular channel / Overflow conduit	61.71	0.03118	0.250	10	0	0.00	1.07	3.68	5.74	n/a
JUNC-59-01	JUNC-57-08	RECT_CLOSED	Closed Channel	60.38	0.03186	1.000	0.5	0	2.20	2.22	2.23	2.24	R 732 564.22
JUNC-59-02	JUNC-59-01	RECT_OPEN	Rectangular channel / Overflow conduit	10.44	0.03124	0.250	10	0	0.00	0.82	3.03	5.06	n/a
JUNC-59-02	JUNC-59-01	CIRCULAR	Pipe	9.58	0.03405	0.750	0	0	1.95	2.07	2.09	2.14	R 86 099.64
JUNC-59-03	JUNC-59-02	RECT_OPEN	Rectangular channel / Overflow conduit	5.03	0.02565	0.250	10	0	0.00	0.89	3.10	5.09	n/a
JUNC-59-03	JUNC-59-02	CIRCULAR	Pipe	4.25	0.03037	0.750	0	0	1.95	2.01	2.01	2.05	R 39 993.82
JUNC-59-04	JUNC-59-03	CIRCULAR	Pipe	2.66	0.02482	0.750	0	0	1.95	1.98	1.98	1.98	R 23 996.29
JUNC-59-04	JUNC-59-03	RECT_OPEN	Rectangular channel / Overflow conduit	3.39	0.01947	0.250	10	0	0.00	0.99	3.18	5.11	n/a
JUNC-59-05	JUNC-59-04	CIRCULAR	Pipe	28.43	0.03185	0.750	0	0	1.95	1.98	1.98	1.98	R 238 076.15
JUNC-59-05	JUNC-59-04	RECT_OPEN	Rectangular channel / Overflow conduit	29.53	0.03066	0.250	10	0	0.00	0.91	3.14	5.09	n/a
JUNC-59-06	JUNC-59-05	CIRCULAR	Pipe	35.73	0.03167	0.750	0	0	1.98	2.00	2.01	2.00	R 294 067.49
JUNC-59-06	JUNC-59-05	RECT_OPEN	Rectangular channel / Overflow conduit	37.56	0.03013	0.250	10	0	0.00	0.90	3.13	5.04	n/a
JUNC-59-07	JUNC-59-06	CIRCULAR	Pipe	7.61	0.02984	0.750	0	0	1.98	2.07	2.07	2.05	R 63 990.11
JUNC-59-07	JUNC-59-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.16	0.02479	0.250	10	0	0.00	0.94	3.15	5.02	n/a
JUNC-59-08	JUNC-59-07	CIRCULAR	Pipe	8.15	0.0318	0.750	0	0	1.99	2.10	2.10	2.07	R 71 988.87

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-59-08	JUNC-59-07	RECT_OPEN	Rectangular channel / Overflow conduit	10.55	0.02456	0.250	10	0	0.00	0.90	3.13	4.97	n/a
JUNC-59-09	JUNC-59-08	CIRCULAR	Pipe	58.04	0.02765	0.750	0	0	1.76	1.85	1.85	1.85	R 492 569.06
JUNC-59-09	JUNC-59-08	RECT_OPEN	Rectangular channel / Overflow conduit	58.64	0.02736	0.250	10	0	0.00	0.76	2.66	4.46	n/a
JUNC-59-10	JUNC-59-09	CIRCULAR	Pipe	20.61	0.02776	0.750	0	0	1.76	1.95	1.96	1.98	R 174 086.04
JUNC-59-10	JUNC-59-09	RECT_OPEN	Rectangular channel / Overflow conduit	21.08	0.02714	0.250	10	0	0.00	0.75	2.66	4.41	n/a
JUNC-59-11	JUNC-59-10	RECT_OPEN	Rectangular channel / Overflow conduit	3.83	0.01802	0.250	10	0	0.00	0.77	2.60	4.27	n/a
JUNC-59-11	JUNC-59-10	CIRCULAR	Pipe	2.83	0.02439	0.750	0	0	1.76	2.01	2.04	2.02	R 23 996.29
JUNC-59-12	JUNC-59-11	RECT_OPEN	Rectangular channel / Overflow conduit	73.26	0.02745	0.250	10	0	0.00	0.76	2.68	4.42	n/a
JUNC-59-12	JUNC-59-11	CIRCULAR	Pipe	72.32	0.0278	0.750	0	0	1.76	1.97	1.97	1.98	R 610 663.75
JUNC-59-13	JUNC-59-12	RECT_OPEN	Rectangular channel / Overflow conduit	10.96	0.02382	0.250	10	0	0.00	0.19	1.45	2.95	n/a
JUNC-59-13	JUNC-59-12	CIRCULAR	Pipe	9.35	0.02793	0.750	0	0	1.23	1.75	1.80	1.80	R 86 099.64
JUNC-59-14	JUNC-59-13	RECT_OPEN	Rectangular channel / Overflow conduit	10.62	0.02449	0.250	10	0	0.00	0.08	1.34	2.82	n/a
JUNC-59-14	JUNC-59-13	CIRCULAR	Pipe	8.96	0.02903	0.750	0	0	1.23	1.86	1.88	1.91	R 71 988.87
JUNC-59-15	JUNC-59-14	CIRCULAR	Pipe	68.42	0.07607	0.750	0	0	1.23	1.96	3.19	3.19	R 578 668.69
JUNC-59-15	JUNC-59-14	RECT_OPEN	Rectangular channel / Overflow conduit	69.96	0.07439	0.250	10	0	0.00	0.00	0.18	1.65	n/a
JUNC-59-16	JUNC-59-15	RECT_OPEN	Rectangular channel / Overflow conduit	12.14	0.07268	0.250	10	0	0.00	0.00	0.00	1.37	n/a
JUNC-59-16	JUNC-59-15	CIRCULAR	Pipe	9.57	0.09235	0.750	0	0	1.23	1.96	3.29	3.40	R 79 987.64
JUNC-59-17	JUNC-59-16	RECT_OPEN	Rectangular channel / Overflow conduit	77.19	0.08194	0.250	10	0	1.27	2.01	4.04	4.92	n/a
JUNC-59-18	JUNC-59-17	RECT_OPEN	Rectangular channel / Overflow conduit	119.84	0.077	0.250	10	0	0.52	0.75	1.25	1.51	n/a
JUNC-59-19	JUNC-59-18	RECT_OPEN	Rectangular channel / Overflow conduit	81.46	0.09148	0.250	7.5	0	0.26	0.49	0.98	1.24	n/a
JUNC-59-19	JUNC-59-18	TRIANGULAR	Channel	80.88	0.09214	0.300	0.6	0	0.27	0.27	0.28	0.29	n/a
JUNC-60-01	STOR-21-04	PARABOLIC	Natural Channel	112.93	0.01441	3.000	10	0	0.42	1.37	15.42	19.05	n/a
JUNC-6-01	JUNC-1-06	PARABOLIC	Natural Channel	281.33	0.0113	1.000	10	0	1.10	2.18	5.17	6.43	n/a
JUNC-6-02	JUNC-6-01	PARABOLIC	Natural Channel	98.49	0.13022	1.000	10	0	0.61	1.35	3.22	3.94	n/a
JUNC-6-03	JUNC-6-02	CIRCULAR	Pipe	14.17	0.11602	0.300	0	0	0.35	0.36	0.39	0.39	n/a
JUNC-6-03	JUNC-6-02	RECT_OPEN	Rectangular channel / Overflow conduit	15.06	0.10908	0.500	10	0	0.27	0.99	2.84	3.57	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-6-04	JUNC-6-03	CIRCULAR	Pipe	3.63	0.12042	0.300	0	0	0.37	0.39	0.36	0.35	n/a
JUNC-6-04	JUNC-6-03	RECT_OPEN	Rectangular channel / Overflow conduit	4.06	0.10751	0.500	10	0	0.28	1.02	2.89	3.61	n/a
JUNC-6-05	JUNC-6-04	RECT_OPEN	Rectangular channel / Overflow conduit	155.75	0.01749	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-61-01	JUNC-21-03	RECT_OPEN	Rectangular channel / Overflow conduit	6.5	0.01139	0.500	10	0	0.00	0.46	2.06	2.90	n/a
JUNC-61-01	JUNC-21-03	CIRCULAR	Pipe	5.46	0.0718	0.400	0	0	0.84	1.02	0.93	0.84	n/a
JUNC-62-01	JUNC-21-06	PARABOLIC	Natural Channel	41.43	0.014	1.500	5	0	2.51	5.13	15.64	20.77	n/a
JUNC-62-02	JUNC-62-01	CIRCULAR	Pipe	21.36	0.05406	0.825	0	0	2.51	3.77	3.77	3.77	R 193 797.89
JUNC-62-02	JUNC-62-01	RECT_OPEN	Rectangular channel / Overflow conduit	26.05	0.0443	0.500	10	0	0.00	1.36	12.18	17.48	n/a
JUNC-62-03	JUNC-62-02	CIRCULAR	Pipe	74.76	0.02785	0.825	0	0	2.51	2.57	2.57	2.57	R 666 592.27
JUNC-62-03	JUNC-62-02	RECT_OPEN	Rectangular channel / Overflow conduit	78.49	0.02652	0.500	10	0	0.00	2.71	13.19	18.35	n/a
JUNC-62-04	JUNC-62-03	CIRCULAR	Pipe	17.22	0.05461	0.825	0	0	2.35	3.31	3.35	3.33	R 159 673.19
JUNC-62-04	JUNC-62-03	RECT_OPEN	Rectangular channel / Overflow conduit	19.42	0.04841	0.500	10	0	0.00	1.66	11.93	17.00	n/a
JUNC-62-05	JUNC-62-04	CIRCULAR	Pipe	44.98	0.05243	0.825	0	0	2.35	3.35	3.36	3.37	R 396 126.96
JUNC-62-05	JUNC-62-04	RECT_OPEN	Rectangular channel / Overflow conduit	49.11	0.04801	0.500	10	0	0.00	1.65	11.88	16.92	n/a
JUNC-62-06	JUNC-62-05	CIRCULAR	Pipe	29.14	0.05285	0.825	0	0	2.35	3.48	3.46	3.46	R 262 047.31
JUNC-62-06	JUNC-62-05	RECT_OPEN	Rectangular channel / Overflow conduit	34.33	0.04485	0.500	10	0	0.00	1.64	11.83	16.85	n/a
JUNC-62-07	JUNC-62-06	TRAPEZOIDAL	Channel	119.62	0.03204	1.500	0.6	3	2.36	4.98	15.12	20.12	R 417 979.68
JUNC-63-01	JUNC-23-04	RECT_OPEN	Rectangular channel / Overflow conduit	12.88	0.03286	0.250	5	0	0.00	0.00	0.41	0.71	n/a
JUNC-63-01	JUNC-23-04	RECT_CLOSED	Culvert	12.41	0.03411	0.300	0.3	0	0.00	0.10	0.22	0.22	n/a
JUNC-63-02	JUNC-63-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.06	0.01265	0.250	5	0	0.00	0.00	0.56	0.84	n/a
JUNC-63-02	JUNC-63-01	CIRCULAR	Pipe	4.31	0.01485	0.200	0	0	0.00	0.10	0.11	0.10	n/a
JUNC-64-01	JUNC-23-08	RECT_OPEN	Rectangular channel / Overflow conduit	200.5	0.00319	0.250	15	0	0.00	0.00	0.01	0.26	n/a
JUNC-64-01	JUNC-23-08	RECT_CLOSED	Closed Channel	199.53	0.00321	0.900	0.9	0	0.67	0.76	1.06	1.09	R 2 381 826.53
JUNC-64-02	JUNC-64-01	RECT_OPEN	Rectangular channel / Overflow conduit	18.05	0.02111	0.250	10	0	0.00	0.00	0.35	0.69	n/a
JUNC-64-02	JUNC-64-01	RECT_CLOSED	Closed Channel	16.43	0.0232	0.500	0.5	0	0.63	0.77	0.89	0.88	n/a
JUNC-64-03	JUNC-64-02	RECT_OPEN	Rectangular channel / Overflow conduit	234.13	0.02106	0.500	10	0	0.00	0.00	0.43	0.75	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-64-03	JUNC-64-02	RECT_CLOSED	Closed Channel	232.83	0.02118	0.500	0.5	0	0.65	0.79	0.81	0.81	n/a
JUNC-64-04	JUNC-64-03	RECT_OPEN	Rectangular channel / Overflow conduit	15.47	0.01636	0.250	10	0	0.00	0.00	0.84	1.19	n/a
JUNC-64-04	JUNC-64-03	CIRCULAR	Pipe	14.07	0.01798	0.525	0	0	0.67	0.79	0.85	0.86	R 89 594.37
JUNC-64-05	JUNC-64-04	RECT_OPEN	Rectangular channel / Overflow conduit	12.83	0.01871	0.250	10	0	0.00	0.00	0.85	1.20	n/a
JUNC-64-05	JUNC-64-04	CIRCULAR	Pipe	11.29	0.02126	0.525	0	0	0.65	0.79	0.85	0.85	R 66 785.90
JUNC-64-06	JUNC-64-05	RECT_OPEN	Rectangular channel / Overflow conduit	56.62	0.0194	0.250	10	0	0.00	0.00	0.54	0.80	n/a
JUNC-64-06	JUNC-64-05	CIRCULAR	Pipe	55.25	0.01988	0.525	0	0	0.49	0.60	0.60	0.60	R 338 421.53
JUNC-64-07	JUNC-64-06	CIRCULAR	Pipe	9.22	0.01931	0.525	0	0	0.49	0.60	0.63	0.63	R 61 766.92
JUNC-64-07	JUNC-64-06	RECT_OPEN	Rectangular channel / Overflow conduit	10.11	0.01761	0.250	10	0	0.00	0.00	0.55	0.80	n/a
JUNC-64-08	JUNC-64-07	RECT_OPEN	Rectangular channel / Overflow conduit	6.66	0.01457	0.250	10	0	0.00	0.00	0.54	0.79	n/a
JUNC-64-08	JUNC-64-07	CIRCULAR	Pipe	4.91	0.01976	0.525	0	0	0.49	0.61	0.64	0.64	R 27 827.46
JUNC-64-09	JUNC-64-08	RECT_OPEN	Rectangular channel / Overflow conduit	61.59	0.01944	0.250	10	0	0.00	0.00	0.56	0.81	n/a
JUNC-64-09	JUNC-64-08	CIRCULAR	Pipe	60.56	0.01977	0.525	0	0	0.49	0.65	0.65	0.65	R 360 136.99
JUNC-64-10	JUNC-64-09	RECT_OPEN	Rectangular channel / Overflow conduit	20.51	0.01058	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-64-10	JUNC-64-09	CIRCULAR	Pipe	17.5	0.0124	0.525	0	0	0.14	0.19	0.32	0.38	R 106 290.85
JUNC-64-11	JUNC-64-10	RECT_OPEN	Rectangular channel / Overflow conduit	77.6	0.01182	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-64-11	JUNC-64-10	CIRCULAR	Pipe	76.01	0.01207	0.525	0	0	0.15	0.21	0.32	0.38	R 449 731.37
JUNC-65-01	JUNC-23-11	RECT_CLOSED	Closed Channel	108.07	0.00404	1.000	0.5	0	0.26	0.50	0.71	0.72	R 1 280 315.97
JUNC-65-01	JUNC-23-11	RECT_OPEN	Rectangular channel / Overflow conduit	111.07	0.00393	0.250	5	0	0.00	0.00	0.30	0.55	n/a
JUNC-66-01	JUNC-23-15	RECT_CLOSED	Closed Channel	15.58	0.04575	0.200	0.2	0	0.11	0.11	0.11	0.11	n/a
JUNC-66-01	JUNC-23-15	RECT_OPEN	Rectangular channel / Overflow conduit	16.57	0.01883	0.250	10	0	0.44	0.70	1.32	1.61	n/a
JUNC-67-01	JUNC-26-01	PARABOLIC	Natural Channel	58.38	0.03975	1.000	5	0	0.11	0.17	0.29	0.35	n/a
JUNC-67-02	JUNC-67-01	CIRCULAR	Pipe	20.09	0.00762	0.300	0	0	0.11	0.17	0.19	0.20	n/a
JUNC-67-02	JUNC-67-01	RECT_OPEN	Rectangular channel / Overflow conduit	21.59	0.00709	0.250	10	0	0.00	0.00	0.10	0.16	n/a
JUNC-68-01	JUNC-26-01	PARABOLIC	Natural Channel	66.75	0.07178	1.000	5	0	1.03	1.90	5.10	6.71	n/a
JUNC-68-02	JUNC-68-01	CIRCULAR	Pipe	6.51	0.07703	0.300	0	0	0.14	0.21	0.40	0.39	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-68-02	JUNC-68-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.11	0.05497	0.250	10	0	0.00	0.00	0.00	0.12	n/a
JUNC-68-03	JUNC-68-02	CIRCULAR	Pipe	13.89	0.01174	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-68-03	JUNC-68-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.01	0.01018	0.250	10	0	0.00	0.00	0.28	0.39	n/a
JUNC-69-01	JUNC-26-02	PARABOLIC	Natural Channel	49.29	0.08556	1.000	5	0	0.14	0.21	0.42	0.52	n/a
JUNC-69-02	JUNC-69-01	CIRCULAR	Pipe	6.51	0.02797	0.300	0	0	0.14	0.21	0.34	0.35	n/a
JUNC-69-02	JUNC-69-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.17	0.01985	0.250	10	0	0.00	0.00	0.08	0.17	n/a
JUNC-69-03	JUNC-69-02	CIRCULAR	Pipe	13.89	0.0085	0.300	0	0	0.14	0.21	0.22	0.22	n/a
JUNC-69-03	JUNC-69-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.03	0.00736	0.250	10	0	0.00	0.00	0.32	0.42	n/a
JUNC-70-01	JUNC-27-05	CIRCULAR	Pipe	6.04	0.02667	0.450	0	0	0.39	0.63	0.78	0.74	R 30 459.64
JUNC-70-01	JUNC-27-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.28	0.01945	0.500	10	0	0.00	0.00	1.11	2.91	n/a
JUNC-70-02	JUNC-70-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.01	0.02906	0.500	10	0	0.00	0.00	0.63	0.88	n/a
JUNC-70-02	JUNC-70-01	CIRCULAR	Pipe	12.21	0.03335	0.450	0	0	0.39	0.63	0.65	0.64	R 65 995.89
JUNC-7-01	JUNC-1-07	PARABOLIC	Natural Channel	8.18	0.02336	1.000	10	0	5.94	9.92	7.36	9.12	n/a
JUNC-7-02	JUNC-7-01	PARABOLIC	Natural Channel	311.47	0.0234	1.000	10	0	1.30	2.68	7.08	9.12	n/a
JUNC-7-03	JUNC-7-02	PARABOLIC	Natural Channel	127.66	0.06137	1.000	5	0	0.88	1.93	5.66	7.38	n/a
JUNC-7-04	JUNC-7-03	PARABOLIC	Natural Channel	657.89	0.22252	1.000	5	0	0.88	1.97	5.81	7.57	n/a
JUNC-71-01	JUNC-27-02	CIRCULAR	Pipe	59.21	0.02833	0.450	0	0	0.30	0.46	0.47	0.47	R 325 238.42
JUNC-71-01	JUNC-27-02	RECT_OPEN	Rectangular channel / Overflow conduit	60.94	0.02753	0.250	10	0	0.00	0.15	1.36	1.93	n/a
JUNC-71-02	JUNC-71-01	CIRCULAR	Pipe	7.65	0.02681	0.450	0	0	0.30	0.49	0.52	0.50	R 40 612.86
JUNC-71-02	JUNC-71-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.02	0.02273	0.250	10	0	0.00	0.14	1.33	1.88	n/a
JUNC-71-03	JUNC-71-02	CIRCULAR	Pipe	106.24	0.00513	0.450	0	0	0.29	0.31	0.31	0.31	R 584 480.96
JUNC-71-03	JUNC-71-02	RECT_OPEN	Rectangular channel / Overflow conduit	107.51	0.00507	0.250	10	0	0.01	0.40	1.59	2.14	n/a
JUNC-71-04	JUNC-71-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.16	0.0272	0.250	10	0	0.00	0.21	1.48	2.04	n/a
JUNC-71-04	JUNC-71-03	CIRCULAR	Pipe	13.32	0.02892	0.450	0	0	0.34	0.49	0.48	0.48	R 71 072.50
JUNC-71-05	JUNC-71-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.53	0.01472	0.250	10	0	0.00	0.09	0.82	1.16	n/a
JUNC-71-05	JUNC-71-04	CIRCULAR	Pipe	10.24	0.01514	0.450	0	0	0.22	0.34	0.34	0.34	R 55 842.68

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-72-01	JUNC-27-10	RECT_OPEN	Rectangular channel / Overflow conduit	75.37	0.01246	0.250	10	0	0.19	1.04	3.06	3.96	n/a
JUNC-72-01	JUNC-27-10	CIRCULAR	Pipe	73.41	0.01279	0.675	0	0	1.14	1.15	1.15	1.15	R 517 912.89
JUNC-72-02	JUNC-72-01	RECT_OPEN	Rectangular channel / Overflow conduit	169.66	0.01576	0.250	10	0	0.43	0.92	2.16	2.73	n/a
JUNC-72-02	JUNC-72-01	CIRCULAR	Pipe	167.52	0.01596	0.500	0	0	0.54	0.54	0.54	0.54	R 988 510.60
JUNC-72-03	JUNC-72-02	CIRCULAR	Pipe	18.92	0.02162	0.675	0	0	1.05	1.21	1.21	1.20	R 132 220.36
JUNC-72-03	JUNC-72-02	RECT_OPEN	Rectangular channel / Overflow conduit	21.21	0.01929	0.250	10	0	0.00	0.33	1.53	2.12	n/a
JUNC-72-04	JUNC-72-03	CIRCULAR	Pipe	13.5	0.01608	0.675	0	0	1.05	1.15	1.13	1.13	R 99 033.95
JUNC-72-04	JUNC-72-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.65	0.01481	0.250	10	0	0.00	0.44	1.63	2.22	n/a
JUNC-73-01	JUNC-27-15	RECT_CLOSED	Culvert	9.61	0.08217	0.300	0.6	0	0.00	0.00	0.07	0.08	n/a
JUNC-74-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	71.16	0.0058	0.500	10	0	0.00	0.00	0.26	0.77	n/a
JUNC-74-01	JUNC-29-02	CIRCULAR	Pipe	70.11	0.01855	0.600	0	0	0.23	0.39	0.45	0.43	n/a
JUNC-75-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	125.82	0.04113	0.500	15	0	0.05	2.81	24.19	33.01	n/a
JUNC-75-02	JUNC-29-06	CIRCULAR	Pipe	2.52	0.04966	0.750	0	0	1.90	3.08	3.09	3.08	n/a
JUNC-75-02	JUNC-29-06	RECT_OPEN	Rectangular channel / Overflow conduit	2.94	0.04256	0.500	10	0	0.00	1.26	8.26	11.47	n/a
JUNC-75-03	JUNC-75-02	CIRCULAR	Pipe	35.17	0.07522	0.750	0	0	1.87	3.04	3.08	3.07	n/a
JUNC-75-03	JUNC-75-02	RECT_OPEN	Rectangular channel / Overflow conduit	36.1	0.04542	0.500	10	0	0.00	0.82	7.40	10.47	n/a
JUNC-75-04	JUNC-75-03	CIRCULAR	Pipe	30.96	0.06028	0.750	0	0	1.87	2.92	2.93	2.93	n/a
JUNC-75-04	JUNC-75-03	RECT_OPEN	Rectangular channel / Overflow conduit	33.16	0.03207	0.500	10	0	0.00	1.13	7.66	10.67	n/a
JUNC-75-05	JUNC-75-04	TRAPEZOIDAL	Trapezoidal Channel	163.36	0.00627	1.500	1.5	3	1.48	2.99	8.50	11.24	n/a
JUNC-75-06	JUNC-75-05	TRAPEZOIDAL	Trapezoidal Channel	85.43	0.01153	1.500	1.5	3	0.21	0.30	0.48	0.57	n/a
JUNC-75-07	JUNC-75-06	TRAPEZOIDAL	Trapezoidal Channel	33.89	0.05793	0.300	0.3	4	0.22	0.31	0.50	0.60	n/a
JUNC-76-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	22.02	0.00663	0.500	10	0	0.05	0.26	0.81	0.86	n/a
JUNC-76-01	JUNC-29-02	CIRCULAR	Pipe	21.31	0.06801	0.300	0	0	0.23	0.24	0.19	0.16	n/a
JUNC-77-01	JUNC-29-10	CIRCULAR	Pipe	123.66	0.06721	0.675	0	0	1.56	2.10	2.17	2.18	R 864 307.01
JUNC-77-01	JUNC-29-10	RECT_OPEN	Rectangular channel / Overflow conduit	124.74	0.05695	0.500	10	0	0.00	1.33	7.04	9.47	n/a
JUNC-77-02	JUNC-77-01	CIRCULAR	Pipe	10.06	0.00626	0.675	0	0	1.56	2.05	2.06	2.06	R 73 010.11

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-77-02	JUNC-77-01	RECT_OPEN	Rectangular channel / Overflow conduit	11.83	0.00533	0.500	10	0	0.00	2.22	7.62	9.96	n/a
JUNC-77-03	JUNC-77-02	TRAPEZOIDAL	Trapezoidal Channel	59.99	0.05037	0.500	0.5	3	1.31	2.94	5.04	5.04	n/a
JUNC-77-03	JUNC-77-02	RECT_OPEN	Rectangular channel / Overflow conduit	62.89	0.04804	0.500	10	0	0.00	0.00	3.08	5.35	n/a
JUNC-77-04	JUNC-77-03	CIRCULAR	Pipe	9.58	0.10315	0.500	0	0	0.95	1.55	1.57	1.57	n/a
JUNC-77-04	JUNC-77-03	RECT_OPEN	Rectangular channel / Overflow conduit	10.06	0.09818	0.250	10	0	0.00	0.43	4.39	6.01	n/a
JUNC-78-01	JUNC-31-02	RECT_OPEN	Rectangular channel / Overflow conduit	42.85	0.04642	0.250	10	0	0.00	0.00	0.00	0.73	n/a
JUNC-78-01	JUNC-31-02	CIRCULAR	Pipe	40.87	0.04868	0.500	0	0	0.52	0.75	0.94	0.98	n/a
JUNC-78-02	JUNC-78-01	PARABOLIC	Natural Channel	29.13	0.03813	1.000	5	0	0.42	0.58	1.34	2.39	n/a
JUNC-78-03	JUNC-78-02	RECT_OPEN	Rectangular channel / Overflow conduit	22.17	0.0231	0.250	10	0	0.05	0.08	0.12	0.15	n/a
JUNC-78-03	JUNC-78-02	CIRCULAR	Pipe	21.82	0.02347	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-04	JUNC-78-03	PARABOLIC	Natural Channel	49.59	0.06322	1.000	5	0	0.06	0.08	0.13	0.15	n/a
JUNC-78-05	JUNC-78-04	RECT_OPEN	Rectangular channel / Overflow conduit	7.8	0.08557	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-05	JUNC-78-04	CIRCULAR	Pipe	7.37	0.0906	0.300	0	0	0.06	0.08	0.13	0.15	n/a
JUNC-78-06	JUNC-78-05	RECT_OPEN	Rectangular channel / Overflow conduit	12.47	0.09676	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-06	JUNC-78-05	CIRCULAR	Pipe	11.97	0.10084	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-79-01	JUNC-32-03	PARABOLIC	Natural Channel	124.29	0.01127	1.000	10	0	1.50	3.02	7.83	10.00	n/a
JUNC-79-02	JUNC-79-01	PARABOLIC	Natural Channel	87.17	0.01693	1.000	10	0	0.50	0.85	1.61	1.95	n/a
JUNC-79-03	JUNC-79-02	PARABOLIC	Natural Channel	134.13	0.1281	1.000	5	0	0.10	0.17	0.29	0.34	n/a
JUNC-79-04	JUNC-79-03	RECT_OPEN	Rectangular channel / Overflow conduit	8.58	0.08209	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-79-04	JUNC-79-03	CIRCULAR	Pipe	6.16	0.11471	0.300	0	0	0.10	0.18	0.29	0.34	n/a
JUNC-80-01	JUNC-34-02	PARABOLIC	Natural Channel	57.23	0.02193	1.500	10	0	0.89	1.10	1.46	1.52	n/a
JUNC-80-02	JUNC-80-01	CIRCULAR	Pipe	13.62	0.03931	0.525	0	0	0.43	0.67	1.10	1.10	R 84 028.88
JUNC-80-02	JUNC-80-01	RECT_OPEN	Rectangular channel / Overflow conduit	15.43	0.03469	0.250	5	0	0.00	0.00	0.04	0.39	n/a
JUNC-8-01	JUNC-1-08	PARABOLIC	Natural Channel	5.69	0.08004	2.000	10	0	14.01	13.52	18.77	22.51	n/a
JUNC-8-02	JUNC-8-01	CIRCULAR	Pipe	53.71	0.0194	0.600	0	0	1.00	1.09	1.07	1.08	R 348 904.00
JUNC-8-02	JUNC-8-01	RECT_OPEN	Rectangular channel / Overflow conduit	56.71	0.01838	2.000	20	0	0.32	0.99	6.65	8.66	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-8-03	JUNC-8-02	CIRCULAR	Pipe	107.92	0.06332	0.600	0	0	1.21	1.61	1.61	1.61	R 697 808.00
JUNC-8-03	JUNC-8-02	RECT_OPEN	Rectangular channel / Overflow conduit	110.36	0.06192	0.500	10	0	0.00	0.35	5.82	7.55	n/a
JUNC-8-04	JUNC-8-03	RECT_OPEN	Rectangular channel / Overflow conduit	27.96	0.09166	0.500	10	0	0.00	0.02	5.50	7.21	n/a
JUNC-8-04	JUNC-8-03	CIRCULAR	Pipe	26.86	0.09544	0.600	0	0	1.21	1.88	1.89	1.90	R 170 243.00
JUNC-8-05	JUNC-8-04	CIRCULAR	Pipe	14.44	0.02799	0.600	0	0	1.05	1.53	1.53	1.53	R 97 295.89
JUNC-8-05	JUNC-8-04	RECT_OPEN	Rectangular channel / Overflow conduit	17.48	0.02312	0.500	10	0	0.00	0.72	5.79	7.34	n/a
JUNC-8-06	JUNC-8-05	CIRCULAR	Pipe	61.53	0.06678	0.600	0	0	0.81	1.54	1.61	1.61	R 397 535.41
JUNC-8-06	JUNC-8-05	RECT_OPEN	Rectangular channel / Overflow conduit	65.41	0.06281	0.500	10	0	0.00	0.00	4.35	5.66	n/a
JUNC-8-07	JUNC-8-06	RECT_OPEN	Rectangular channel / Overflow conduit	86.2	0.02486	0.250	10	0	0.32	1.25	4.22	5.00	n/a
JUNC-8-08	JUNC-8-07	CIRCULAR	Pipe	25.33	0.00217	0.300	0	0	0.15	0.16	0.19	0.19	n/a
JUNC-8-08	JUNC-8-07	RECT_OPEN	Rectangular channel / Overflow conduit	30.68	0.00179	0.500	10	0	0.17	1.10	4.02	4.80	n/a
JUNC-8-10	JUNC-8-09	CIRCULAR	Pipe	23.9	0.00218	0.300	0	0	0.14	0.15	0.15	0.14	n/a
JUNC-8-09	JUNC-8-08	RECT_OPEN	Rectangular channel / Overflow conduit	51.04	0.00278	0.250	10	0	0.29	1.08	3.51	4.18	n/a
JUNC-8-10	JUNC-8-09	RECT_OPEN	Rectangular channel / Overflow conduit	29.06	0.00179	0.500	10	0	0.25	1.04	3.48	4.19	n/a
JUNC-81-01	JUNC-34-02	PARABOLIC	Natural Channel	105.04	0.04672	1.000	5	0	0.20	0.34	0.63	0.75	n/a
JUNC-81-02	JUNC-81-01	RECT_OPEN	Rectangular channel / Overflow conduit	33.78	0.06482	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-81-02	JUNC-81-01	CIRCULAR	Pipe	30.97	0.07073	0.675	0	0	0.14	0.20	0.32	0.38	n/a
JUNC-8-11	JUNC-8-10	RECT_OPEN	Rectangular channel / Overflow conduit	75.21	0.07115	0.300	10	0	0.66	1.33	2.93	3.57	n/a
JUNC-8-12	JUNC-8-11	RECT_OPEN	Rectangular channel / Overflow conduit	30.85	0.09304	0.250	10	0	0.08	0.52	1.65	2.10	n/a
JUNC-8-12	JUNC-8-11	CIRCULAR	Pipe	28.62	0.10036	0.300	0	0	0.27	0.28	0.29	0.29	n/a
JUNC-82-01	JUNC-34-03	PARABOLIC	Natural Channel	35.99	0.0537	1.000	10	0	1.36	1.95	4.21	5.86	n/a
JUNC-82-02	JUNC-82-01	CIRCULAR	Pipe	15.51	0.07032	0.750	0	0	1.36	1.95	3.86	3.95	n/a
JUNC-82-02	JUNC-82-01	RECT_OPEN	Rectangular channel / Overflow conduit	17.48	0.06236	0.500	10	0	0.00	0.00	0.35	1.90	n/a
JUNC-82-03	JUNC-82-02	CIRCULAR	Pipe	50.49	0.01079	0.750	0	0	1.18	1.70	1.76	1.75	n/a
JUNC-82-03	JUNC-82-02	RECT_OPEN	Rectangular channel / Overflow conduit	51.33	0.00199	0.500	10	0	0.00	0.05	2.99	4.47	n/a
JUNC-82-04	JUNC-82-03	CIRCULAR	Pipe	52.62	0.00602	0.750	0	0	0.99	1.66	1.80	1.80	R 444 576.47

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-82-04	JUNC-82-03	RECT_OPEN	Rectangular channel / Overflow conduit	53.17	0.02655	0.250	10	0	0.00	0.00	2.12	3.28	n/a
JUNC-82-05	JUNC-82-04	CIRCULAR	Pipe	44.67	0.06652	0.450	0	0	0.40	0.54	0.67	0.66	R 242 977.32
JUNC-82-05	JUNC-82-04	RECT_OPEN	Rectangular channel / Overflow conduit	45.47	0.05427	0.250	10	0	0.00	0.00	0.16	0.37	n/a
JUNC-82-06	JUNC-82-05	CIRCULAR	Pipe	50.08	0.06479	0.450	0	0	0.09	0.12	0.19	0.23	n/a
JUNC-82-06	JUNC-82-05	RECT_OPEN	Rectangular channel / Overflow conduit	51.58	0.04674	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-82-07	JUNC-82-06	CIRCULAR	Pipe	13.58	0.09535	0.450	0	0	0.09	0.12	0.19	0.23	R 77 184.50
JUNC-82-07	JUNC-82-06	RECT_OPEN	Rectangular channel / Overflow conduit	14.98	0.08637	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-83-01	JUNC-34-04	PARABOLIC	Natural Channel	21.94	0.02033	1.000	10	0	0.25	0.41	1.08	1.20	n/a
JUNC-83-02	JUNC-83-01	CIRCULAR	Pipe	31.13	0.01571	0.450	0	0	0.25	0.41	0.54	0.54	R 174 675.43
JUNC-83-02	JUNC-83-01	RECT_OPEN	Rectangular channel / Overflow conduit	32.15	0.01521	0.250	7.5	0	0.00	0.00	0.21	0.39	n/a
JUNC-83-03	JUNC-83-02	CIRCULAR	Pipe	10.31	0.01038	0.450	0	0	0.25	0.42	0.49	0.51	R 61 954.68
JUNC-83-03	JUNC-83-02	RECT_OPEN	Rectangular channel / Overflow conduit	10.82	0.00989	0.250	7.5	0	0.00	0.00	0.44	0.59	n/a
JUNC-84-01	JUNC-34-05	PARABOLIC	Natural Channel	152.45	0.1059	1.000	5	0	0.16	0.39	0.93	1.13	n/a
JUNC-85-01	JUNC-34-07	PARABOLIC	Natural Channel	472.44	0.04356	1.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-86-01	JUNC-34-07	PARABOLIC	Natural Channel	88.37	0.00498	1.500	10	0	6.07	10.92	30.59	43.69	n/a
JUNC-86-02	JUNC-86-01	CIRCULAR	Pipe	17.92	0.00084	0.750	0	0	3.49	3.51	3.51	3.51	n/a
JUNC-86-02	JUNC-86-01	RECT_OPEN	Rectangular channel / Overflow conduit	20.97	0.04128	1.000	10	0	2.49	7.51	27.53	39.16	n/a
JUNC-86-03	JUNC-86-02	CIRCULAR	Pipe	99.86	0.09332	0.675	0	0	2.67	2.67	2.67	2.67	n/a
JUNC-86-03	JUNC-86-02	RECT_OPEN	Rectangular channel / Overflow conduit	101.69	0.0925	0.500	15	0	3.33	8.25	27.85	39.45	n/a
JUNC-86-04	JUNC-86-03	CIRCULAR	Pipe	24.87	0.01769	0.675	0	0	0.48	0.42	0.47	0.47	n/a
JUNC-86-04	JUNC-86-03	RECT_OPEN	Rectangular channel / Overflow conduit	27.07	0.00148	0.500	15	0	0.75	1.94	6.23	8.17	n/a
JUNC-86-05	JUNC-86-04	CIRCULAR	Pipe	85.08	0.03004	0.375	0	0	0.33	0.32	0.32	0.35	n/a
JUNC-86-05	JUNC-86-04	RECT_OPEN	Rectangular channel / Overflow conduit	87.08	0.02549	0.500	10	0	0.78	2.04	6.34	8.24	n/a
JUNC-86-06	JUNC-86-05	CIRCULAR	Pipe	65.94	0.00443	0.375	0	0	0.27	0.27	0.27	0.27	n/a
JUNC-86-06	JUNC-86-05	RECT_OPEN	Rectangular channel / Overflow conduit	68.11	0.00335	0.500	10	0	0.81	1.97	6.07	7.87	n/a
JUNC-86-07	JUNC-86-06	CIRCULAR	Pipe	26.99	0.14817	0.300	0	0	0.34	0.34	0.34	0.34	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-86-07	JUNC-86-06	RECT_OPEN	Rectangular channel / Overflow conduit	27.76	0.12179	0.500	10	0	0.59	1.78	5.94	7.76	n/a
JUNC-87-01	JUNC-35-01	PARABOLIC	Natural Channel	78.22	0.00736	1.000	10	0	0.42	0.71	1.37	1.67	n/a
JUNC-87-02	JUNC-87-01	CIRCULAR	Pipe	21.18	0.04069	0.600	0	0	0.29	0.48	0.81	0.97	n/a
JUNC-87-02	JUNC-87-01	RECT_OPEN	Rectangular channel / Overflow conduit	24.42	0.03528	0.250	7.5	0	0.00	0.00	0.00	0.00	n/a
JUNC-87-03	JUNC-87-02	CIRCULAR	Pipe	18.77	0.07318	0.300	0	0	0.29	0.32	0.33	0.33	R 85 699.90
JUNC-87-03	JUNC-87-02	RECT_OPEN	Rectangular channel / Overflow conduit	21.28	0.06451	0.250	7.5	0	0.00	0.16	0.49	0.65	n/a
JUNC-87-04	JUNC-87-03	CIRCULAR	Pipe	27.75	0.07986	0.300	0	0	0.29	0.30	0.30	0.30	R 123 399.44
JUNC-87-04	JUNC-87-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.18	0.07339	0.250	7.5	0	0.00	0.21	0.54	0.70	n/a
JUNC-87-05	JUNC-87-04	CIRCULAR	Pipe	9.62	0.08366	0.300	0	0	0.31	0.33	0.32	0.32	R 41 888.37
JUNC-87-05	JUNC-87-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.46	0.0769	0.250	7.5	0	0.02	0.21	0.54	0.71	n/a
JUNC-88-01	JUNC-35-02	PARABOLIC	Natural Channel	105.25	0.002	1.000	5	0	0.23	0.32	0.52	0.60	n/a
JUNC-88-02	JUNC-88-01	CIRCULAR	Pipe	27.06	0.01416	0.450	0	0	0.24	0.34	0.54	0.54	R 148 257.00
JUNC-88-02	JUNC-88-01	RECT_OPEN	Rectangular channel / Overflow conduit	28.72	0.01334	0.250	10	0	0.00	0.00	0.00	0.08	n/a
JUNC-88-03	JUNC-88-02	CIRCULAR	Pipe	9.7	0.03755	0.450	0	0	0.24	0.35	0.55	0.56	R 50 766.07
JUNC-88-03	JUNC-88-02	RECT_OPEN	Rectangular channel / Overflow conduit	12.15	0.02997	0.250	10	0	0.00	0.00	0.00	0.10	n/a
JUNC-89-01	JUNC-35-03	PARABOLIC	Natural Channel	26.26	0.01017	1.000	5	0	0.27	0.37	0.65	0.78	n/a
JUNC-89-02	JUNC-89-01	CIRCULAR	Pipe	12.19	0.09851	0.300	0	0	0.27	0.37	0.38	0.38	n/a
JUNC-89-02	JUNC-89-01	RECT_OPEN	Rectangular channel / Overflow conduit	13.52	0.08873	0.250	10	0	0.00	0.00	0.27	0.40	n/a
JUNC-89-03	JUNC-89-02	CIRCULAR	Pipe	10.31	0.02765	0.300	0	0	0.27	0.30	0.30	0.30	n/a
JUNC-89-03	JUNC-89-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.12	0.02564	0.250	10	0	0.00	0.21	0.48	0.61	n/a
JUNC-90-01	JUNC-35-04	PARABOLIC	Natural Channel	42.58	0.0393	0.300	3	0	0.15	0.25	0.42	0.50	n/a
JUNC-90-02	JUNC-90-01	CIRCULAR	Pipe	5.27	0.07746	0.450	0	0	0.15	0.25	0.43	0.51	n/a
JUNC-90-02	JUNC-90-01	RECT_OPEN	Rectangular channel / Overflow conduit	7.15	0.05702	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-90-03	JUNC-90-02	CIRCULAR	Pipe	10.31	0.06874	0.450	0	0	0.15	0.25	0.43	0.51	n/a
JUNC-90-03	JUNC-90-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.67	0.06069	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-9-01	JUNC-1-10	RECT_OPEN	Rectangular channel / Overflow conduit	55.42	0.0888	0.300	10	0	0.91	1.40	3.00	3.65	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-9-02	JUNC-9-01	CIRCULAR	Pipe	37.67	0.04664	0.525	0	0	0.85	0.87	0.90	0.91	R 223 712.68
JUNC-9-02	JUNC-9-01	RECT_OPEN	Rectangular channel / Overflow conduit	38.93	0.04513	0.250	10	0	0.05	0.53	2.11	2.75	n/a
JUNC-9-03	JUNC-9-02	CIRCULAR	Pipe	48.11	0.07948	0.525	0	0	0.92	1.21	1.21	1.22	R 287 785.60
JUNC-9-03	JUNC-9-02	RECT_OPEN	Rectangular channel / Overflow conduit	49.63	0.07704	0.250	10	0	0.00	0.21	1.80	2.45	n/a
JUNC-9-04	JUNC-9-03	CIRCULAR	Pipe	23.27	0.05341	0.525	0	0	0.92	1.18	1.18	1.18	R 139 683.80
JUNC-9-04	JUNC-9-03	RECT_OPEN	Rectangular channel / Overflow conduit	23.97	0.05184	0.250	10	0	0.00	0.42	2.01	2.66	n/a
JUNC-9-05	JUNC-9-04	RECT_OPEN	Rectangular channel / Overflow conduit	154.05	0.01747	0.250	10	0	0.00	0.25	1.05	1.39	n/a
JUNC-9-05	JUNC-9-04	CIRCULAR	Pipe	152.42	0.01766	0.525	0	0	0.60	0.63	0.62	0.62	R 898 916.22
JUNC-9-06	JUNC-9-05	RECT_OPEN	Rectangular channel / Overflow conduit	21.9	0.03587	0.250	10	0	0.00	0.43	1.14	1.49	n/a
JUNC-9-06	JUNC-9-05	CIRCULAR	Pipe	20.11	0.03907	0.450	0	0	0.68	0.70	0.68	0.68	R 112 720.75
JUNC-91-01	JUNC-35-10	PARABOLIC	Natural Channel	44.7	0.05217	0.300	3	0	0.07	0.10	0.16	0.19	n/a
JUNC-91-02	JUNC-91-01	CIRCULAR	Pipe	10.74	0.06597	0.300	0	0	0.08	0.10	0.17	0.20	n/a
JUNC-91-03	JUNC-91-02	CIRCULAR	Pipe	9.69	0.06702	0.300	0	0	0.08	0.10	0.17	0.20	n/a
JUNC-92-01	JUNC-35-06	CIRCULAR	Pipe	111.95	0.04232	0.450	0	0	0.31	0.49	0.51	0.52	R 609 863.99
JUNC-92-01	JUNC-35-06	RECT_OPEN	Rectangular channel / Overflow conduit	114.08	0.04153	0.250	10	0	0.00	0.00	0.39	0.59	n/a
JUNC-92-02	JUNC-92-01	CIRCULAR	Pipe	12.94	0.04246	0.450	0	0	0.32	0.54	0.66	0.67	R 72 107.89
JUNC-92-02	JUNC-92-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.56	0.03773	0.250	10	0	0.00	0.00	0.41	0.61	n/a
JUNC-93-01	JUNC-36-03	RECT_OPEN	Rectangular channel / Overflow conduit	263.38	0.04208	0.500	10	0	0.98	1.67	3.34	4.07	n/a
JUNC-93-02	JUNC-93-01	CIRCULAR	Pipe	5.13	0.09793	0.300	0	0	0.14	0.21	0.32	0.38	n/a
JUNC-93-02	JUNC-93-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.89	0.0852	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-93-03	JUNC-93-02	CIRCULAR	Pipe	15.63	0.10167	0.300	0	0	0.14	0.21	0.32	0.35	n/a
JUNC-93-03	JUNC-93-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.01	0.09924	0.250	10	0	0.00	0.00	0.00	0.05	n/a
JUNC-94-01	JUNC-36-07	RECT_OPEN	Rectangular channel / Overflow conduit	98.13	0.02949	0.250	10	0	0.21	0.33	0.58	0.70	n/a
JUNC-94-02	JUNC-94-01	RECT_OPEN	Rectangular channel / Overflow conduit	221.76	0.05833	0.250	10	0	0.23	0.37	0.63	0.76	n/a
JUNC-95-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	97.29	0.00544	0.300	0.5	0	0.23	0.31	0.35	0.35	n/a
JUNC-95-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	98.94	0.00535	0.250	10	0	0.00	0.00	0.35	0.56	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-95-02	JUNC-95-01	RECT_CLOSED	Closed Channel	87.25	0.00538	0.500	0.5	0	0.24	0.37	0.43	0.42	n/a
JUNC-95-02	JUNC-95-01	RECT_OPEN	Rectangular channel / Overflow conduit	88.56	0.0053	0.250	10	0	0.00	0.00	0.32	0.53	n/a
JUNC-95-03	JUNC-95-02	RECT_CLOSED	Closed Channel	11.54	0.01395	0.500	0.5	0	0.24	0.38	0.58	0.58	n/a
JUNC-95-03	JUNC-95-02	RECT_OPEN	Rectangular channel / Overflow conduit	13.11	0.01228	0.250	10	0	0.00	0.00	0.23	0.44	n/a
JUNC-96-01	JUNC-59-17	RECT_OPEN	Rectangular channel / Overflow conduit	92.1	0.06326	0.250	10	0	0.77	1.31	2.86	3.49	n/a
JUNC-96-02	JUNC-96-01	RECT_OPEN	Rectangular channel / Overflow conduit	36.34	0.09202	0.250	10	0	0.54	1.07	2.60	3.22	n/a
JUNC-96-02	JUNC-96-01	TRIANGULAR	Channel	31.29	0.09082	0.300	0.6	0	0.24	0.25	0.27	0.28	n/a
JUNC-96-03	JUNC-96-02	RECT_OPEN	Rectangular channel / Overflow conduit	9.65	0.12352	0.250	10	0	0.55	1.08	2.64	3.27	n/a
JUNC-96-03	JUNC-96-02	CIRCULAR	Pipe	7.84	0.15264	0.250	0	0	0.23	0.23	0.23	0.23	n/a
JUNC-96-04	JUNC-96-03	RECT_OPEN	Rectangular channel / Overflow conduit	131.34	0.09627	0.250	10	0	0.00	0.00	0.36	0.53	n/a
JUNC-96-04	JUNC-96-03	TRIANGULAR	Channel	128.65	0.0983	0.300	0.6	0	0.38	0.45	0.45	0.45	n/a
JUNC-97-01	JUNC-64-09	RECT_OPEN	Rectangular channel / Overflow conduit	5.85	0.02497	0.250	10	0	0.22	0.40	0.83	1.02	n/a
JUNC-97-01	JUNC-64-09	CIRCULAR	Pipe	5.4	0.02705	0.200	0	0	0.14	0.14	0.14	0.14	n/a
JUNC-98-01	JUNC-75-01	RECT_OPEN	Rectangular channel / Overflow conduit	48.83	0.01006	0.300	10	0	0.06	0.09	0.14	0.16	n/a
JUNC-98-02	JUNC-98-01	CIRCULAR	Pipe	15.31	0.0366	0.300	0	0	0.03	0.04	0.07	0.08	n/a
JUNC-98-02	JUNC-98-01	CIRCULAR	Pipe	13.23	0.04237	0.300	0	0	0.03	0.05	0.07	0.09	n/a
JUNC-99-01	JUNC-78-02	RECT_OPEN	Rectangular channel / Overflow conduit	6.83	0.04646	0.250	10	0	0.01	0.14	0.44	0.59	n/a
JUNC-99-01	JUNC-78-02	CIRCULAR	Pipe	6.62	0.04794	0.300	0	0	0.37	0.37	0.39	0.39	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
J1	J2	CIRCULAR	Proposed Pipe	75.72	0.01	0.900	0	0	1.51	2.15	2.28	2.27	R 731 459.20
J2	J3	CIRCULAR	Proposed Pipe	79.1	0.01	0.900	0	0	1.51	2.14	2.38	2.35	R 731 459.20
J3	J4	CIRCULAR	Proposed Pipe	56.18	0.01	0.900	0	0	1.49	2.19	2.84	2.87	R 548 594.40
J4	J5	TRAPEZOIDAL	Proposed Trapezoidal Channel	156.28	0.00462	0.900	0.9	3	1.50	2.15	3.94	4.99	R 424 962.56
J1	J2	RECT_OPEN	Rectangular channel / Overflow conduit	79.18	0.00956	0.250	10	0	0.00	0.00	2.30	3.30	n/a
J2	J3	RECT_OPEN	Rectangular channel / Overflow conduit	84.69	0.00934	0.250	10	0	0.00	0.00	2.19	3.23	n/a
J3	J4	RECT_OPEN	Rectangular channel / Overflow conduit	60.33	0.00932	0.250	10	0	0.00	0.00	1.18	2.22	n/a
JUNC-100-01	JUNC-79-02	PARABOLIC	Overland Channel	98.3	0.06835	1.000	10	0	0.43	0.74	1.39	1.68	n/a
JUNC-100-02	JUNC-100-01	PARABOLIC	Overland Channel	98.39	0.12102	1.000	10	0	0.35	0.58	1.11	1.35	n/a
JUNC-100-03	JUNC-100-02	PARABOLIC	Overland Channel	26.83	0.0518	1.000	5	0	0.35	0.59	1.12	1.35	n/a
JUNC-100-04	JUNC-100-03	RECT_OPEN	Rectangular channel / Overflow conduit	62.98	0.0071	0.250	10	0	0.09	0.31	0.83	1.07	n/a
JUNC-100-04	JUNC-100-03	CIRCULAR	Pipe	60.39	0.0074	0.400	0	0	0.26	0.27	0.28	0.29	n/a
JUNC-10-01	JUNC-1-11	PARABOLIC	Overland Channel	23.84	0.46833	1.000	10	0	0.43	0.99	2.82	3.56	n/a
JUNC-10-02	JUNC-10-01	CIRCULAR	Pipe	16.6	0.00096	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-101-01	JUNC-82-03	CIRCULAR	Pipe	21.42	0.11	0.300	0	0	0.21	0.29	0.30	0.30	n/a
JUNC-101-01	JUNC-82-03	RECT_OPEN	Rectangular channel / Overflow conduit	22.43	0.09426	0.250	10	0	0.00	0.00	0.20	0.30	n/a
JUNC-1-02	OUT-1-01	PARABOLIC	Natural Channel	125.42	0.01278	5.000	300	0	435.33	690.50	1634.23	2262.75	n/a
JUNC-102-01	JUNC-82-04	RECT_OPEN	Rectangular channel / Overflow conduit	121.27	0.08982	0.250	10	0	0.00	0.00	1.93	2.77	n/a
JUNC-102-01	JUNC-82-04	CIRCULAR	Pipe	119.91	0.10247	0.525	0	0	0.62	1.18	1.38	1.38	R 709 143.00
JUNC-102-02	JUNC-102-01	RECT_OPEN	Rectangular channel / Overflow conduit	61.64	0.05508	0.250	10	0	0.00	0.00	1.70	2.42	n/a
JUNC-102-02	JUNC-102-01	CIRCULAR	Pipe	59.49	0.0319	0.525	0	0	0.43	0.90	1.07	1.08	R 333 929.50
JUNC-102-03	JUNC-102-02	CIRCULAR	Pipe	24.8	0.05452	0.525	0	0	0.43	0.93	0.99	0.97	R 139 137.29
JUNC-102-03	JUNC-102-02	RECT_OPEN	Rectangular channel / Overflow conduit	25.83	0.01433	0.250	10	0	0.00	0.00	2.19	2.91	n/a
JUNC-102-04	JUNC-102-03	CIRCULAR	Pipe	8.5	0.12208	0.525	0	0	0.43	0.98	1.48	1.47	R 55 654.92
JUNC-102-04	JUNC-102-03	RECT_OPEN	Rectangular channel / Overflow conduit	9.31	0.11132	0.250	10	0	0.00	0.00	1.32	2.04	n/a
JUNC-102-05	JUNC-102-04	PARABOLIC	Natural Channel	31.62	0.18194	1.000	5	0	0.43	0.99	2.76	3.48	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-102-06	JUNC-102-05	PARABOLIC	Natural Channel	77.16	0.01154	1.000	5	0	0.00	0.00	0.00	0.00	n/a
JUNC-1-03	JUNC-1-02	PARABOLIC	Natural Channel	43.16	0.01045	5.000	75	0	263.30	415.29	980.64	1356.37	n/a
JUNC-103-01	JUNC-82-05	CIRCULAR	Pipe	13.26	0.14556	0.450	0	0	0.31	0.44	0.71	0.81	R 76 149.11
JUNC-103-01	JUNC-82-05	RECT_OPEN	Rectangular channel / Overflow conduit	15.01	0.07214	0.250	10	0	0.00	0.00	0.00	0.03	n/a
JUNC-1-04	JUNC-1-03	PARABOLIC	Natural Channel	351.31	0.00965	5.000	75	0	263.09	414.93	979.77	1355.20	n/a
JUNC-104-01	JUNC-96-03	RECT_OPEN	Rectangular channel / Overflow conduit	43.91	0.05874	0.250	10	0	0.08	0.52	1.73	2.20	n/a
JUNC-104-01	JUNC-96-03	TRIANGULAR	Channel	43.52	0.05927	0.300	0.6	0	0.35	0.35	0.35	0.35	n/a
JUNC-104-02	JUNC-104-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.93	0.08544	0.250	10	0	0.06	0.36	1.33	1.68	n/a
JUNC-104-02	JUNC-104-01	CIRCULAR	Pipe	13.1	0.09748	0.250	0	0	0.20	0.20	0.20	0.20	n/a
JUNC-104-03	JUNC-104-02	RECT_OPEN	Rectangular channel / Overflow conduit	129.64	0.12055	0.250	10	0	0.00	0.00	0.98	1.34	n/a
JUNC-104-03	JUNC-104-02	TRIANGULAR	Channel	127.01	0.12309	0.300	0.6	0	0.25	0.54	0.54	0.54	n/a
JUNC-1-05	JUNC-1-04	PARABOLIC	Natural Channel	103.59	0.00965	5.000	75	0	263.00	414.77	979.50	1354.83	n/a
JUNC-105-01	JUNC-100-01	PARABOLIC	Natural Channel	13.92	0.0658	1.000	5	0	0.10	0.19	0.32	0.38	n/a
JUNC-105-02	JUNC-105-01	RECT_OPEN	Rectangular channel / Overflow conduit	21.58	0.04253	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-105-02	JUNC-105-01	CIRCULAR	Pipe	20.1	0.04567	0.400	0	0	0.10	0.19	0.32	0.38	n/a
JUNC-1-06	JUNC-1-05	PARABOLIC	Natural Channel	268.37	0.00965	5.000	75	0	262.56	414.04	977.86	1352.66	n/a
JUNC-1-07	JUNC-1-06	PARABOLIC	Natural Channel	493.78	0.00965	5.000	75	0	262.42	413.77	977.13	1351.50	n/a
JUNC-1-08	JUNC-1-07	PARABOLIC	Natural Channel	37.75	0.00964	5.000	75	0	262.30	413.58	976.68	1350.86	n/a
JUNC-1-09	JUNC-1-08	PARABOLIC	Natural Channel	13.09	0.08719	5.000	75	0	262.11	413.35	976.28	1350.37	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	3 No. off Box Culvert	17.63	0.00925	1.200	1.2	0	42.98	46.01	48.82	49.21	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	5 No. off Box Culvert	20.64	0.0079	0.600	0.6	0	10.43	11.16	11.84	11.94	n/a
JUNC-1-10	JUNC-1-09	RECT_CLOSED	9 No. off Box Culvert	17.1	0.00953	1.200	1.2	0	130.92	140.14	148.70	149.91	n/a
JUNC-1-10	JUNC-1-09	PARABOLIC	Natural Channel	15.62	0.01044	3.400	75	0	77.78	216.04	766.92	1139.31	n/a
JUNC-11-01	JUNC-1-15	PARABOLIC	Natural Channel	331.75	0.03607	1.500	15	0	3.27	5.77	14.37	18.55	n/a
JUNC-11-02	JUNC-11-01	PARABOLIC	Natural Channel	134.13	0.03603	1.500	15	0	2.43	4.18	10.51	13.93	n/a
JUNC-11-03	JUNC-11-02	PARABOLIC	Natural Channel	151.07	0.03606	1.500	15	0	2.17	3.86	9.75	13.12	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-11-04	JUNC-11-03	PARABOLIC	Natural Channel	122.77	0.03606	1.500	15	0	2.02	3.70	9.36	12.77	n/a
JUNC-11-05	JUNC-11-04	PARABOLIC	Natural Channel	117.53	0.03049	1.500	15	0	0.96	1.69	3.88	5.51	n/a
JUNC-11-06	JUNC-11-05	CIRCULAR	Pipe	6.44	0.03107	0.600	0	0	0.91	1.63	2.16	2.22	R 60 789.26
JUNC-11-06	JUNC-11-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.77	0.02281	0.500	10	0	0.00	0.00	1.62	3.17	n/a
JUNC-11-07	JUNC-11-06	CIRCULAR	Pipe	26.68	0.0075	0.450	0	0	0.31	0.43	0.43	0.43	R 152 298.21
JUNC-11-07	JUNC-11-06	RECT_OPEN	Rectangular channel / Overflow conduit	30.35	0.00659	0.500	10	0	0.00	0.07	0.93	1.23	n/a
JUNC-11-08	JUNC-11-07	CIRCULAR	Pipe	49.38	0.00403	0.450	0	0	0.31	0.32	0.31	0.31	R 253 830.35
JUNC-11-08	JUNC-11-07	RECT_OPEN	Rectangular channel / Overflow conduit	54.41	0.00366	0.500	10	0	0.00	0.31	1.00	1.27	n/a
JUNC-11-09	JUNC-11-08	CIRCULAR	Pipe	50.4	0.00421	0.450	0	0	0.30	0.30	0.29	0.29	R 253 830.35
JUNC-11-09	JUNC-11-08	RECT_OPEN	Rectangular channel / Overflow conduit	54.38	0.0039	0.500	10	0	0.08	0.39	1.07	1.33	n/a
JUNC-1-11	JUNC-1-10	PARABOLIC	Natural Channel	594.32	0.01045	5.000	75	0	262.04	413.20	975.90	1349.87	n/a
JUNC-11-10	JUNC-11-09	CIRCULAR	Pipe	10.23	0.00479	0.450	0	0	0.32	0.34	0.32	0.30	R 60 919.28
JUNC-11-10	JUNC-11-09	RECT_OPEN	Rectangular channel / Overflow conduit	13.69	0.00358	0.500	10	0	0.14	0.43	1.07	1.33	n/a
JUNC-1-12	JUNC-1-11	PARABOLIC	Natural Channel	377.3	0.01045	5.000	75	0	262.07	413.23	975.92	1349.90	n/a
JUNC-1-13	JUNC-1-12	PARABOLIC	Natural Channel	2131.26	0.0059	5.000	75	0	262.31	413.51	976.30	1350.33	n/a
JUNC-1-14	JUNC-1-13	PARABOLIC	Natural Channel	298.65	0.00589	5.000	50	0	259.61	408.62	964.75	1334.92	n/a
JUNC-1-15	JUNC-1-14	PARABOLIC	Natural Channel	135.44	0.00591	5.000	50	0	259.43	408.33	964.13	1334.10	n/a
JUNC-1-16	JUNC-1-15	PARABOLIC	Natural Channel	1903.31	0.00591	5.000	50	0	259.33	408.13	963.57	1333.34	n/a
JUNC-1-17	JUNC-1-16	PARABOLIC	Natural Channel	25332.98	0.05238	5.000	35	0	113.72	173.68	402.59	555.46	n/a
JUNC-12-01	JUNC-1-16	PARABOLIC	Natural Channel	4149.7	0.00337	5.000	50	0	200.95	307.28	690.72	944.72	n/a
JUNC-12-02	JUNC-12-01	PARABOLIC	Natural Channel	33872.33	0.03788	5.000	20	0	240.86	361.10	771.10	1042.13	n/a
JUNC-13-01	JUNC-2-02	PARABOLIC	Natural Channel	392.52	0.0911	1.000	5	0	0.95	2.13	6.22	8.03	n/a
JUNC-13-02	JUNC-13-01	PARABOLIC	Natural Channel	39.97	0.01326	1.000	5	0	0.96	2.19	6.46	8.29	n/a
JUNC-13-03	JUNC-13-02	CIRCULAR	Pipe	26.66	0.03656	0.300	0	0	0.24	0.25	0.25	0.25	n/a
JUNC-13-03	JUNC-13-02	RECT_OPEN	Rectangular channel / Overflow conduit	28.06	0.03473	0.500	10	0	0.71	1.93	6.19	8.04	n/a
JUNC-13-04	JUNC-13-03	CIRCULAR	Pipe	28.84	0.11027	0.300	0	0	0.32	0.32	0.32	0.32	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-13-04	JUNC-13-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.34	0.10476	0.500	10	0	0.64	1.86	6.11	7.96	n/a
JUNC-14-01	JUNC-2-02	PARABOLIC	Natural Channel	29.85	0.23439	1.000	5	0	2.22	3.62	7.40	9.12	n/a
JUNC-14-02	JUNC-14-01	CIRCULAR	Pipe	103.51	0.00483	0.600	0	0	0.70	0.73	0.77	0.78	R 679 571.22
JUNC-14-02	JUNC-14-01	RECT_OPEN	Rectangular channel / Overflow conduit	107.09	0.00934	0.500	10	0	1.04	2.07	4.83	6.11	n/a
JUNC-14-03	JUNC-14-02	CIRCULAR	Pipe	17.66	0.02832	0.600	0	0	1.03	1.03	1.02	1.01	R 121 578.52
JUNC-14-03	JUNC-14-02	RECT_OPEN	Rectangular channel / Overflow conduit	20.39	0.02453	0.500	10	0	0.78	1.84	4.66	5.95	n/a
JUNC-14-04	JUNC-14-03	CIRCULAR	Pipe	13.41	0.03731	0.600	0	0	1.18	1.18	1.18	1.18	R 91 183.89
JUNC-14-04	JUNC-14-03	RECT_OPEN	Rectangular channel / Overflow conduit	17.78	0.02813	0.500	10	0	0.61	1.65	4.45	5.74	n/a
JUNC-14-05	JUNC-14-04	CIRCULAR	Pipe	83.25	0.00601	0.600	0	0	0.66	0.66	0.66	0.66	R 531 271.78
JUNC-14-05	JUNC-14-04	RECT_OPEN	Rectangular channel / Overflow conduit	91.68	0.00545	0.500	10	0	0.80	1.57	3.66	4.64	n/a
JUNC-14-06	JUNC-14-05	CIRCULAR	Pipe	100.5	0.07447	0.600	0	0	1.13	1.68	1.67	1.67	R 649 176.59
JUNC-14-06	JUNC-14-05	RECT_OPEN	Rectangular channel / Overflow conduit	107.5	0.06492	0.500	10	0	0.00	0.08	1.78	2.51	n/a
JUNC-15-01	JUNC-2-03	PARABOLIC	Natural Channel	21.26	0.35492	1.000	5	0	0.20	0.32	0.68	0.84	n/a
JUNC-15-02	JUNC-15-01	CIRCULAR	Pipe	109.02	0.00211	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-02	JUNC-15-01	RECT_OPEN	Rectangular channel / Overflow conduit	113.19	0.00203	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-03	JUNC-15-02	CIRCULAR	Pipe	36.67	0.02895	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-15-03	JUNC-15-02	RECT_OPEN	Rectangular channel / Overflow conduit	41.92	0.02532	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-16-01	JUNC-2-04	PARABOLIC	Natural Channel	22.33	0.32402	1.000	5	0	1.53	2.46	4.88	5.98	n/a
JUNC-16-02	JUNC-16-01	CIRCULAR	Pipe	117.57	0.01276	0.750	0	0	1.27	1.30	1.37	1.39	R 1 001 135.64
JUNC-16-02	JUNC-16-01	RECT_OPEN	Rectangular channel / Overflow conduit	123.17	0.01218	0.250	10	0	0.26	1.16	3.52	4.59	n/a
JUNC-16-03	JUNC-16-02	CIRCULAR	Pipe	27.79	0.01799	0.750	0	0	1.31	1.45	1.45	1.45	R 239 962.91
JUNC-16-03	JUNC-16-02	RECT_OPEN	Rectangular channel / Overflow conduit	32.52	0.01538	0.250	10	0	0.00	0.49	2.22	2.99	n/a
JUNC-16-04	JUNC-16-03	CIRCULAR	Pipe	30.49	0.01916	0.750	0	0	1.31	1.54	1.55	1.55	R 279 956.73
JUNC-16-04	JUNC-16-03	RECT_OPEN	Rectangular channel / Overflow conduit	34.04	0.01716	0.250	10	0	0.00	0.40	2.13	2.90	n/a
JUNC-16-05	JUNC-16-04	CIRCULAR	Pipe	77.92	0.03242	0.750	0	0	1.32	2.01	2.01	2.00	R 660 543.09
JUNC-16-05	JUNC-16-04	RECT_OPEN	Rectangular channel / Overflow conduit	80.79	0.03127	0.250	10	0	0.00	0.00	1.68	2.45	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-17-01	JUNC-2-05	PARABOLIC	Natural Channel	20.63	0.2731	1.000	10	0	2.42	2.87	6.25	8.11	n/a
JUNC-17-02	JUNC-17-01	RECT_CLOSED	Closed Channel	4.08	0.07373	1.200	1.2	0	2.42	2.87	6.25	8.11	R 76 311.93
JUNC-17-02	JUNC-17-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.06	0.05939	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-03	JUNC-17-02	RECT_CLOSED	Closed Channel	9.48	0.0211	1.200	1.2	0	2.42	2.87	6.25	8.11	R 152 623.87
JUNC-17-03	JUNC-17-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.71	0.01708	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-04	JUNC-17-03	RECT_CLOSED	Closed Channel	255.06	0.00198	1.200	1.2	0	2.42	2.87	3.22	3.22	R 4 071 478.58
JUNC-17-04	JUNC-17-03	RECT_OPEN	Rectangular channel / Overflow conduit	258.2	0.00195	1.000	15	0	0.00	0.00	3.21	4.90	n/a
JUNC-17-05	JUNC-17-04	RECT_CLOSED	Closed Channel	10.77	0.02378	0.750	0.75	0	1.50	2.04	2.15	2.12	R 88 331.50
JUNC-17-05	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	15.49	0.01653	0.500	15	0	0.00	0.00	3.33	4.14	n/a
JUNC-17-06	JUNC-17-05	RECT_CLOSED	Closed Channel	17.34	0.00525	0.750	0.75	0	1.50	1.65	1.59	1.58	R 160 602.72
JUNC-17-06	JUNC-17-05	RECT_OPEN	Rectangular channel / Overflow conduit	21.19	0.00429	0.500	10	0	0.00	0.63	1.96	2.54	n/a
JUNC-17-07	JUNC-17-06	RECT_CLOSED	Closed Channel	6.67	0.0054	0.750	0.75	0	1.50	1.66	1.58	1.54	R 56 210.95
JUNC-17-07	JUNC-17-06	RECT_OPEN	Rectangular channel / Overflow conduit	13.15	0.00274	0.250	10	0	0.00	0.76	2.06	2.60	n/a
JUNC-17-08	JUNC-17-07	RECT_OPEN	Rectangular channel / Overflow conduit	38.87	0.02156	0.500	10	0	0.00	0.00	1.30	1.87	n/a
JUNC-17-08	JUNC-17-07	RECT_CLOSED	Closed Channel	34.05	0.02462	0.750	0.75	0	1.52	2.09	2.13	2.13	R 333 429.44
JUNC-17-09	JUNC-20-04	RECT_CLOSED	Closed Channel	201.56	0.00245	0.500	0.5	0	0.14	0.15	0.18	0.19	n/a
JUNC-17-09	JUNC-17-08	RECT_OPEN	Rectangular channel / Overflow conduit	135.03	0.05479	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-09	JUNC-17-08	RECT_CLOSED	Closed Channel	133.56	0.05539	0.750	0.75	0	0.73	0.93	1.35	1.67	R 1 183 729.04
JUNC-17-10	JUNC-17-09	RECT_CLOSED	Closed Channel	43.28	0.04709	0.500	0.5	0	0.60	0.78	1.14	1.13	n/a
JUNC-17-10	JUNC-17-09	RECT_OPEN	Rectangular channel / Overflow conduit	44.38	0.04592	0.250	10	0	0.00	0.00	0.09	0.37	n/a
JUNC-17-11	JUNC-17-10	RECT_CLOSED	Closed Channel	11.65	0.04632	0.500	0.5	0	0.23	0.34	0.47	0.54	n/a
JUNC-17-11	JUNC-17-10	RECT_OPEN	Rectangular channel / Overflow conduit	13.02	0.04143	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-12	JUNC-17-11	RECT_OPEN	Rectangular channel / Overflow conduit	8.77	0.03937	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-17-12	JUNC-17-11	RECT_CLOSED	Closed Channel	6.88	0.05021	0.500	0.5	0	0.23	0.34	0.47	0.54	n/a
JUNC-17-13	JUNC-17-12	RECT_CLOSED	Closed Channel	113.23	0.00506	0.500	0.5	0	0.23	0.34	0.46	0.47	n/a
JUNC-17-13	JUNC-17-12	RECT_OPEN	Rectangular channel / Overflow conduit	119.34	0.0048	0.250	10	0	0.00	0.00	0.01	0.07	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-18-01	JUNC-60-01	CIRCULAR	Pipe	91.79	0.00801	0.600	0	0	0.49	0.49	0.48	0.48	R 586 015.18
JUNC-18-01	JUNC-60-01	RECT_OPEN	Rectangular channel / Overflow conduit	94.47	0.00778	1.000	15	0	0.00	0.06	14.62	18.55	n/a
JUNC-18-01	JUNC-2-06	RECT_OPEN	Rectangular channel / Overflow conduit	283.54	0.0444	0.500	15	0	0.00	0.13	15.72	20.03	n/a
JUNC-18-02	JUNC-18-01	CIRCULAR	Pipe	15.68	0.00523	0.600	0	0	0.50	0.53	0.58	0.58	R 97 262.81
JUNC-18-02	JUNC-18-01	RECT_OPEN	Rectangular channel / Overflow conduit	19.6	0.00418	1.000	15	0	0.00	0.26	0.88	1.32	n/a
JUNC-19-01	JUNC-2-07	PARABOLIC	Natural Channel	8.35	0.24618	1.000	10	0	0.39	0.65	1.61	2.12	n/a
JUNC-19-02	JUNC-19-01	CIRCULAR	Pipe	133.52	0.002	0.500	0	0	0.28	0.29	0.31	0.32	n/a
JUNC-19-02	JUNC-19-01	RECT_OPEN	Rectangular channel / Overflow conduit	134.45	0.00199	0.250	10	0	0.11	0.36	1.30	1.80	n/a
JUNC-19-03	JUNC-19-02	CIRCULAR	Pipe	5.59	0.00197	0.500	0	0	0.37	0.41	0.39	0.36	R 55 654.92
JUNC-19-03	JUNC-19-02	RECT_OPEN	Rectangular channel / Overflow conduit	7.91	0.00139	0.250	10	0	0.21	0.54	1.59	2.14	n/a
JUNC-19-04	JUNC-19-03	CIRCULAR	Pipe	18.5	0.002	0.500	0	0	0.37	0.39	0.35	0.32	R 111 309.83
JUNC-19-04	JUNC-19-03	RECT_OPEN	Rectangular channel / Overflow conduit	20.95	0.00177	0.250	10	0	0.29	0.61	1.67	2.19	n/a
JUNC-20-01	JUNC-2-08	PARABOLIC	Natural Channel	33.52	0.17996	1.000	10	0	2.48	3.46	5.17	6.96	n/a
JUNC-20-02	JUNC-57-01	RECT_CLOSED	Closed Channel	95.03	0.00202	0.500	0.5	0	0.37	0.44	0.44	0.44	n/a
JUNC-20-02	JUNC-20-01	RECT_CLOSED	Closed Channel	252.38	0.00552	1.200	1.2	0	2.48	3.46	4.17	4.16	R 3 930 079.48
JUNC-20-02	JUNC-20-01	RECT_OPEN	Rectangular channel / Overflow conduit	255.38	0.00545	0.500	10	0	0.00	0.00	1.37	3.09	n/a
JUNC-20-02	JUNC-57-01	RECT_OPEN	Rectangular channel / Overflow conduit	95.69	0.00201	0.250	15	0	0.00	0.00	4.25	4.91	n/a
JUNC-20-03	JUNC-20-02	RECT_CLOSED	Closed Channel	16.73	0.04434	1.000	0.5	0	2.33	2.67	2.67	2.67	R 196 357.87
JUNC-20-03	JUNC-20-02	RECT_OPEN	Rectangular channel / Overflow conduit	18.44	0.04022	0.250	10	0	0.00	0.86	4.13	5.71	n/a
JUNC-20-04	JUNC-20-03	RECT_CLOSED	Closed Channel	180.14	0.03325	1.000	0.5	0	2.24	2.20	2.24	2.24	R 2 144 141.74
JUNC-20-04	JUNC-20-03	RECT_OPEN	Rectangular channel / Overflow conduit	182.4	0.03284	0.250	10	0	0.26	1.27	4.43	5.89	n/a
JUNC-20-04	JUNC-57-08	RECT_CLOSED	Closed Channel	202.9	-0.01111	0.500	0.5	0	0.54	0.54	0.54	0.54	n/a
JUNC-20-05	JUNC-20-04	RECT_CLOSED	Closed Channel	52.02	0.04231	1.000	0.5	0	1.38	2.16	2.52	2.52	R 612 848.06
JUNC-20-05	JUNC-20-04	RECT_OPEN	Rectangular channel / Overflow conduit	53.77	0.04093	0.250	10	0	0.00	0.00	2.12	3.13	n/a
JUNC-20-06	JUNC-20-05	RECT_CLOSED	Closed Channel	9.17	0.0464	1.000	0.5	0	1.38	2.16	2.61	2.61	R 115 504.63
JUNC-20-06	JUNC-20-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.69	0.03979	0.250	10	0	0.00	0.00	1.99	2.99	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-20-07	JUNC-20-06	RECT_CLOSED	Closed Channel	7.4	0.04315	1.000	0.5	0	1.14	1.80	2.38	2.38	R 92 403.70
JUNC-20-07	JUNC-20-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.55	0.03342	0.250	10	0	0.00	0.00	1.47	2.33	n/a
JUNC-20-08	JUNC-20-07	CIRCULAR	Pipe	61.89	0.0473	0.525	0	0	1.01	1.02	1.02	1.02	R 365 702.48
JUNC-20-08	JUNC-20-07	RECT_OPEN	Rectangular channel / Overflow conduit	63.49	0.0461	0.250	10	0	0.13	0.82	2.91	3.77	n/a
JUNC-20-09	JUNC-20-08	RECT_OPEN	Rectangular channel / Overflow conduit	15.15	0.03897	0.250	10	0	0.21	0.86	2.91	3.77	n/a
JUNC-20-09	JUNC-20-08	CIRCULAR	Pipe	12.42	0.04756	0.525	0	0	1.06	1.08	1.06	1.06	R 72 351.39
JUNC-2-01	JUNC-1-02	RECT_OPEN	Rectangular channel / Overflow conduit	32.62	0.01208	1.000	20	0	0.00	0.00	0.00	0.00	n/a
JUNC-2-01	JUNC-1-02	RECT_CLOSED	Closed Channel	30.8	0.01279	2.650	6	0	189.55	300.42	713.65	983.84	n/a
JUNC-20-10	JUNC-20-09	RECT_OPEN	Rectangular channel / Overflow conduit	64.53	0.04614	0.250	10	0	0.00	0.58	2.38	3.12	n/a
JUNC-20-10	JUNC-20-09	CIRCULAR	Pipe	62.76	0.04744	0.525	0	0	0.93	0.93	0.94	0.94	R 371 267.97
JUNC-20-11	JUNC-20-10	RECT_OPEN	Rectangular channel / Overflow conduit	23.75	0.04147	0.250	10	0	0.00	0.59	2.38	3.12	n/a
JUNC-20-11	JUNC-20-10	CIRCULAR	Pipe	20.87	0.0472	0.525	0	0	0.98	1.00	0.99	0.99	R 122 987.32
JUNC-20-12	JUNC-20-11	RECT_OPEN	Rectangular channel / Overflow conduit	74.4	0.06652	0.250	10	0	0.00	0.10	1.62	2.23	n/a
JUNC-20-12	JUNC-20-11	CIRCULAR	Pipe	71.87	0.06887	0.525	0	0	0.74	1.15	1.15	1.15	R 421 357.40
JUNC-20-13	JUNC-20-12	RECT_OPEN	Rectangular channel / Overflow conduit	14.87	0.09048	0.250	10	0	0.00	0.00	1.35	1.97	n/a
JUNC-20-13	JUNC-20-12	CIRCULAR	Pipe	12.65	0.10653	0.525	0	0	0.75	1.24	1.40	1.40	R 72 351.39
JUNC-20-14	JUNC-20-13	RECT_OPEN	Rectangular channel / Overflow conduit	10.05	0.05001	0.250	10	0	0.00	0.00	1.44	2.05	n/a
JUNC-20-14	JUNC-20-13	CIRCULAR	Pipe	5.54	0.09099	0.525	0	0	0.75	1.25	1.37	1.36	R 33 392.95
JUNC-20-15	JUNC-20-14	RECT_OPEN	Rectangular channel / Overflow conduit	103.81	0.10414	0.250	10	0	0.00	0.00	1.36	1.97	n/a
JUNC-20-15	JUNC-20-14	CIRCULAR	Pipe	101.57	0.10647	0.525	0	0	0.74	1.29	1.50	1.49	R 594 434.15
JUNC-20-16	JUNC-20-15	RECT_OPEN	Rectangular channel / Overflow conduit	65.65	0.01633	0.250	10	0	0.28	0.64	1.64	2.02	n/a
JUNC-20-17	JUNC-20-16	CIRCULAR	Pipe	13.57	0.10754	0.300	0	0	0.29	0.31	0.31	0.31	n/a
JUNC-20-17	JUNC-20-16	RECT_OPEN	Rectangular channel / Overflow conduit	16.18	0.09004	0.250	10	0	0.00	0.35	1.35	1.74	n/a
JUNC-20-18	JUNC-20-17	CIRCULAR	Pipe	34.01	0.15545	0.300	0	0	0.29	0.38	0.38	0.38	n/a
JUNC-20-18	JUNC-20-17	RECT_OPEN	Rectangular channel / Overflow conduit	35.89	0.14712	0.250	10	0	0.00	0.29	1.29	1.67	n/a
JUNC-20-19	JUNC-20-18	CIRCULAR	Pipe	35.58	0.05032	0.300	0	0	0.25	0.26	0.26	0.26	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-20-19	JUNC-20-18	RECT_OPEN	Rectangular channel / Overflow conduit	36.9	0.04851	0.250	10	0	0.04	0.45	1.45	1.84	n/a
JUNC-2-02	JUNC-2-01	PARABOLIC	Natural Channel	892.86	0.00245	5.000	250	0	188.81	299.23	711.06	982.60	n/a
JUNC-2-03	JUNC-2-02	PARABOLIC	Natural Channel	285.41	0.00246	5.000	250	0	188.77	299.12	710.65	982.17	n/a
JUNC-2-04	JUNC-2-03	PARABOLIC	Natural Channel	93.01	0.00245	5.000	250	0	188.78	299.13	710.63	982.21	n/a
JUNC-2-05	JUNC-2-04	PARABOLIC	Natural Channel	100.95	0.00246	5.000	250	0	188.73	299.06	710.50	982.02	n/a
JUNC-2-06	JUNC-2-05	PARABOLIC	Natural Channel	23.76	0.00244	5.000	250	0	188.57	298.81	710.02	981.43	n/a
JUNC-2-07	JUNC-2-06	PARABOLIC	Natural Channel	89.74	0.00245	5.000	250	0	188.55	298.78	709.96	981.35	n/a
JUNC-2-08	JUNC-2-07	PARABOLIC	Natural Channel	89.37	0.00246	5.000	250	0	188.54	298.76	709.90	981.28	n/a
JUNC-2-09	JUNC-2-08	PARABOLIC	Natural Channel	17.72	0.00243	5.000	250	0	188.43	298.61	709.60	980.90	n/a
JUNC-2-10	JUNC-2-09	PARABOLIC	Natural Channel	172.44	0.00245	5.000	250	0	187.52	297.02	705.98	976.31	n/a
JUNC-21-01	JUNC-2-09	PARABOLIC	Natural Channel	30.18	0.20617	1.500	10	0	11.52	17.30	48.72	73.77	n/a
JUNC-21-02	JUNC-21-01	PARABOLIC	Natural Channel	116.79	0.02439	1.500	10	0	11.40	17.12	48.04	72.79	n/a
JUNC-21-03	JUNC-21-02	RECT_CLOSED	Box Culvert	27.83	0.00999	1.200	2.2	0	11.40	17.12	21.02	21.26	n/a
JUNC-21-03	JUNC-21-02	RECT_OPEN	Rectangular channel / Overflow conduit	28.76	0.00967	0.500	10	0	0.00	0.00	2.03	6.91	n/a
STOR-21-04	JUNC-21-03	RECT_CLOSED	Box Culvert	51.14	0.01001	1.200	2.2	0	10.87	16.71	20.30	20.61	n/a
STOR-21-04	JUNC-21-02	RECT_OPEN	Rectangular channel / Overflow conduit	80.5	0.02348	1.000	20	0	0.00	0.00	25.81	51.35	n/a
JUNC-21-05	STOR-21-04	PARABOLIC	Natural Channel	99.02	0.00366	4.000	20	0	11.29	21.88	65.01	93.53	n/a
JUNC-21-06	JUNC-21-05	PARABOLIC	Natural Channel	241.65	0.03846	2.000	15	0	11.68	22.91	68.72	93.18	n/a
JUNC-21-07	JUNC-21-06	PARABOLIC	Natural Channel	387.4	0.01475	2.000	15	0	9.28	17.83	53.01	72.22	n/a
JUNC-2-11	JUNC-2-10	PARABOLIC	Natural Channel	14.89	0.00248	5.000	250	0	187.50	296.99	705.92	976.22	n/a
JUNC-2-12	JUNC-2-11	PARABOLIC	Natural Channel	15.33	0.00228	3.000	250	0	179.21	289.13	699.23	970.14	n/a
JUNC-2-12	JUNC-2-11	CIRCULAR	6 No. off Pipes	14.18	0.00247	0.600	0	0	9.25	9.23	9.18	9.18	n/a
JUNC-2-13	JUNC-2-12	PARABOLIC	Natural Channel	60.45	0.00245	5.000	250	0	187.34	296.76	705.47	975.65	n/a
JUNC-2-14	JUNC-2-13	PARABOLIC	Natural Channel	117.36	0.00245	5.000	250	0	187.34	296.75	705.45	975.62	n/a
JUNC-2-15	JUNC-2-14	PARABOLIC	Natural Channel	199.48	0.00246	5.000	250	0	187.35	296.75	705.45	975.64	n/a
JUNC-2-16	JUNC-2-15	PARABOLIC	Natural Channel	463.29	0.00708	5.000	250	0	183.03	289.11	688.64	954.65	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-2-17	JUNC-2-16	PARABOLIC	Natural Channel	58.58	0.00708	5.000	250	0	182.85	288.83	723.58	965.43	n/a
JUNC-2-18	JUNC-2-17	RECT_OPEN	Rectangular channel / Overflow conduit	12.18	0.00657	1.000	30	0	0.00	0.00	16.02	17.68	n/a
JUNC-2-18	JUNC-2-17	RECT_CLOSED	Existing Bridge	11.33	0.00706	2.600	7.4	0	182.85	288.82	740.48	1021.59	n/a
JUNC-2-19	JUNC-2-18	PARABOLIC	Natural Channel	648.87	0.00708	5.000	250	0	182.93	289.19	688.18	953.20	n/a
JUNC-2-20	JUNC-2-19	PARABOLIC	Natural Channel	122.05	0.00708	5.000	250	0	182.67	289.25	686.86	952.18	n/a
JUNC-22-01	JUNC-2-10	RECT_OPEN	Rectangular channel / Overflow conduit	15.34	0.39787	1.000	10	0	0.63	1.03	1.98	2.40	n/a
JUNC-22-02	JUNC-22-01	CIRCULAR	Pipe	66.25	0.00755	0.400	0	0	0.23	0.24	0.24	0.25	n/a
JUNC-22-02	JUNC-22-01	RECT_OPEN	Rectangular channel / Overflow conduit	67.73	0.00738	0.250	10	0	0.40	0.80	1.74	2.16	n/a
JUNC-22-03	JUNC-22-02	CIRCULAR	Pipe	65.38	0.04359	0.400	0	0	0.43	0.43	0.43	0.43	n/a
JUNC-22-03	JUNC-22-02	RECT_OPEN	Rectangular channel / Overflow conduit	67.83	0.04201	0.250	10	0	0.12	0.43	1.11	1.43	n/a
JUNC-22-04	JUNC-22-03	CIRCULAR	Pipe	29.15	0.05246	0.300	0	0	0.27	0.27	0.27	0.27	n/a
JUNC-22-04	JUNC-22-03	RECT_OPEN	Rectangular channel / Overflow conduit	32.31	0.04731	0.250	10	0	0.35	0.66	1.33	1.65	n/a
JUNC-2-21	JUNC-2-20	PARABOLIC	Natural Channel	196.99	0.00708	5.000	250	0	182.63	289.40	686.71	951.62	n/a
JUNC-2-22	JUNC-2-21	PARABOLIC	Natural Channel	58.5	0.00708	5.000	250	0	182.36	288.14	685.67	950.23	n/a
JUNC-2-23	JUNC-2-22	PARABOLIC	Natural Channel	144.13	0.00708	5.000	250	0	182.29	287.76	685.48	950.02	n/a
JUNC-2-24	JUNC-2-23	PARABOLIC	Natural Channel	207.63	0.00708	5.000	250	0	182.20	287.66	685.08	949.53	n/a
JUNC-2-25	JUNC-2-24	PARABOLIC	Natural Channel	228.12	0.00708	5.000	250	0	181.84	287.09	683.87	948.11	n/a
JUNC-2-26	JUNC-2-25	PARABOLIC	Natural Channel	272.72	0.00708	5.000	250	0	180.54	284.86	679.24	942.36	n/a
JUNC-2-27	JUNC-2-26	PARABOLIC	Natural Channel	419.94	0.00708	5.000	250	0	180.52	284.81	679.13	942.20	n/a
JUNC-2-28	JUNC-2-27	PARABOLIC	Natural Channel	111.91	0.00709	5.000	250	0	179.54	283.23	675.58	937.75	n/a
JUNC-2-29	JUNC-2-28	PARABOLIC	Natural Channel	275.29	0.00708	5.000	250	0	179.53	283.25	675.54	937.71	n/a
JUNC-2-30	JUNC-2-29	PARABOLIC	Natural Channel	365.55	0.00708	5.000	250	0	178.54	281.92	672.24	933.59	n/a
JUNC-23-01	JUNC-2-12	PARABOLIC	Natural Channel	43.42	0.12532	1.000	5	0	3.72	5.75	7.59	10.39	n/a
JUNC-23-02	JUNC-23-01	RECT_CLOSED	Closed Channel	239.87	0.01677	1.200	1.2	0	3.55	5.46	6.67	6.49	n/a
JUNC-23-02	JUNC-23-01	RECT_OPEN	Rectangular channel / Overflow conduit	242.45	0.0166	0.500	15	0	0.00	0.00	1.04	3.61	n/a
JUNC-23-03	JUNC-23-02	RECT_CLOSED	Closed Channel	17.78	0.01057	1.200	1.2	0	3.55	5.46	6.55	6.57	R 311 359.74

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-23-03	JUNC-57-03	RECT_CLOSED	Closed Channel	29.48	0.00231	0.500	0.5	0	0.54	0.64	0.65	0.64	n/a
JUNC-23-03	JUNC-23-02	RECT_OPEN	Rectangular channel / Overflow conduit	20.14	0.00934	0.500	15	0	0.00	0.00	1.56	4.36	n/a
JUNC-23-03	JUNC-57-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.7	0.00221	0.250	15	0	0.00	0.56	5.14	6.41	n/a
JUNC-23-04	JUNC-23-03	RECT_CLOSED	Closed Channel	10.25	0.02645	0.900	0.9	0	2.43	3.60	3.86	3.89	R 127 055.09
JUNC-23-04	JUNC-23-03	RECT_OPEN	Rectangular channel / Overflow conduit	12.67	0.02139	0.500	15	0	0.00	0.30	4.91	7.35	n/a
JUNC-23-05	JUNC-23-04	RECT_CLOSED	Closed Channel	159.98	0.00153	0.900	0.9	0	1.47	1.54	1.55	1.56	R 1 901 582.03
JUNC-23-05	JUNC-23-04	RECT_OPEN	Rectangular channel / Overflow conduit	162.37	0.00151	0.500	15	0	0.96	2.34	5.83	7.66	n/a
JUNC-23-06	JUNC-23-05	RECT_CLOSED	Closed Channel	8.78	0.00513	0.900	0.9	0	1.66	1.63	1.59	1.51	R 115 504.63
JUNC-23-06	JUNC-23-05	RECT_OPEN	Rectangular channel / Overflow conduit	12.11	0.00372	0.500	15	0	1.25	2.34	4.74	5.90	n/a
JUNC-23-07	JUNC-23-06	RECT_CLOSED	Closed Channel	7.91	0.00569	0.900	0.9	0	1.71	1.69	1.64	1.56	R 92 403.70
JUNC-23-07	JUNC-23-06	RECT_OPEN	Rectangular channel / Overflow conduit	10.7	0.00421	0.500	15	0	1.01	2.10	4.60	5.81	n/a
JUNC-23-08	JUNC-23-07	RECT_OPEN	Rectangular channel / Overflow conduit	15.86	0.00429	0.500	15	0	0.82	1.84	4.28	5.50	n/a
JUNC-23-08	JUNC-23-07	RECT_CLOSED	Closed Channel	12.57	0.00541	0.900	0.9	0	1.72	1.73	1.67	1.62	R 150 156.01
JUNC-23-09	JUNC-23-08	RECT_CLOSED	Closed Channel	4.97	0.02717	1.000	0.5	0	1.84	1.86	1.83	1.77	R 57 752.31
JUNC-23-09	JUNC-23-08	RECT_OPEN	Rectangular channel / Overflow conduit	6.17	0.02189	0.500	10	0	0.35	1.21	3.49	4.71	n/a
JUNC-2-31	JUNC-2-30	PARABOLIC	Natural Channel	347.25	0.00708	5.000	250	0	176.29	277.70	664.14	923.29	n/a
JUNC-23-10	JUNC-23-09	RECT_CLOSED	Closed Channel	12.78	0.0256	1.000	0.5	0	1.91	1.90	1.90	1.88	R 150 156.01
JUNC-23-10	JUNC-23-09	RECT_OPEN	Rectangular channel / Overflow conduit	13.5	0.02423	0.250	10	0	0.16	1.01	3.20	4.39	n/a
JUNC-23-11	JUNC-23-10	RECT_CLOSED	Closed Channel	161.78	0.02656	1.000	0.5	0	2.05	2.03	2.05	2.05	R 1 924 682.95
JUNC-23-11	JUNC-23-10	RECT_OPEN	Rectangular channel / Overflow conduit	163.17	0.02633	0.250	10	0	0.00	0.98	3.11	4.28	n/a
JUNC-23-12	JUNC-23-11	RECT_CLOSED	Closed Channel	44.33	0.02638	1.000	0.5	0	0.97	1.39	1.89	1.89	R 531 994.82
JUNC-23-12	JUNC-23-11	RECT_OPEN	Rectangular channel / Overflow conduit	45.43	0.02574	0.250	10	0	0.00	0.00	0.35	0.84	n/a
JUNC-23-13	JUNC-23-12	RECT_OPEN	Rectangular channel / Overflow conduit	26.77	0.02537	0.250	10	0	0.00	0.00	0.29	0.77	n/a
JUNC-23-13	JUNC-23-12	RECT_CLOSED	Closed Channel	25.7	0.02643	1.000	0.5	0	0.97	1.38	1.99	1.99	R 306 424.03
JUNC-23-14	JUNC-23-13	RECT_OPEN	Rectangular channel / Overflow conduit	14.82	0.02389	0.250	10	0	0.00	0.00	0.61	0.96	n/a
JUNC-23-14	JUNC-23-13	CIRCULAR	Pipe	13.78	0.0257	0.600	0	0	0.72	1.04	1.26	1.27	R 91 216.96

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-23-15	JUNC-23-14	CIRCULAR	Pipe	66.36	0.02665	0.600	0	0	0.72	1.03	1.08	1.08	R 427 930.04
JUNC-23-15	JUNC-23-14	RECT_OPEN	Rectangular channel / Overflow conduit	67.77	0.0261	0.250	10	0	0.00	0.00	0.63	0.98	n/a
JUNC-23-16	JUNC-23-15	CIRCULAR	Pipe	9.18	0.02659	0.600	0	0	0.19	0.27	0.37	0.45	R 66 901.26
JUNC-23-16	JUNC-23-15	RECT_OPEN	Rectangular channel / Overflow conduit	10.27	0.02377	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-23-17	JUNC-23-16	CIRCULAR	Pipe	68.28	0.02628	0.400	0	0	0.19	0.27	0.36	0.36	n/a
JUNC-23-17	JUNC-23-16	RECT_OPEN	Rectangular channel / Overflow conduit	70.1	0.0256	0.250	10	0	0.00	0.00	0.00	0.10	n/a
JUNC-23-18	JUNC-23-17	CIRCULAR	Pipe	13.31	0.02661	0.400	0	0	0.19	0.27	0.36	0.37	n/a
JUNC-23-18	JUNC-23-17	RECT_OPEN	Rectangular channel / Overflow conduit	14.46	0.02449	0.250	10	0	0.00	0.00	0.03	0.14	n/a
JUNC-23-19	JUNC-23-18	CIRCULAR	Pipe	9.66	0.02806	0.400	0	0	0.19	0.27	0.37	0.39	n/a
JUNC-23-19	JUNC-23-18	RECT_OPEN	Rectangular channel / Overflow conduit	11.1	0.02442	0.250	10	0	0.00	0.00	0.03	0.14	n/a
JUNC-2-32	JUNC-2-31	PARABOLIC	Natural Channel	3610.14	0.01262	5.000	250	0	176.93	278.34	664.58	923.61	n/a
JUNC-23-20	JUNC-23-19	RECT_OPEN	Rectangular channel / Overflow conduit	67.57	0.02617	0.250	10	0	0.00	0.00	0.04	0.15	n/a
JUNC-23-20	JUNC-23-19	CIRCULAR	Pipe	66.62	0.02655	0.400	0	0	0.19	0.27	0.38	0.38	n/a
JUNC-2-33	JUNC-2-32	PARABOLIC	Natural Channel	12006.34	0.00119	5.000	200	0	61.21	104.95	287.97	412.90	n/a
JUNC-2-34	JUNC-2-33	PARABOLIC	Natural Channel	16992.02	0.05074	5.000	150	0	0.00	0.00	0.00	0.00	n/a
JUNC-24-01	JUNC-2-13	PARABOLIC	Natural Channel	22.94	0.24463	1.000	5	0	0.34	0.44	0.86	1.07	n/a
JUNC-24-02	JUNC-24-01	CIRCULAR	Pipe	51.52	0	0.500	0	0	0.34	0.41	0.43	0.44	n/a
JUNC-24-02	JUNC-24-01	RECT_OPEN	Rectangular channel / Overflow conduit	52.79	0	0.250	10	0	0.00	0.03	0.42	0.63	n/a
JUNC-25-01	JUNC-2-14	PARABOLIC	Natural Channel	24.59	0.21475	1.000	5	0	0.16	0.27	0.47	0.56	n/a
JUNC-25-02	JUNC-25-01	TRAPEZOIDAL	Trapezoidal Channel	40.79	0.00934	0.300	0.65	4	0.16	0.27	0.47	0.56	n/a
JUNC-26-01	JUNC-2-15	PARABOLIC	Natural Channel	291.45	0.04428	2.000	10	0	7.75	13.49	33.30	44.15	n/a
JUNC-26-02	JUNC-26-01	PARABOLIC	Natural Channel	164.49	0.04428	2.000	10	0	6.84	11.77	29.00	38.52	n/a
JUNC-26-03	J5	PARABOLIC	Natural Channel	43.62	0.04429	2.000	10	0	5.32	9.62	24.90	33.33	n/a
J5	JUNC-26-02	PARABOLIC	Natural Channel	78.49	0.04428	2.000	10	0	6.71	11.59	28.71	38.15	n/a
JUNC-26-04	JUNC-26-03	PARABOLIC	Natural Channel	54.41	0.01176	2.000	10	0	5.32	9.62	24.92	33.35	n/a
JUNC-26-05	JUNC-26-04	PARABOLIC	Natural Channel	478.81	0.03984	2.000	10	0	5.36	9.71	26.07	34.69	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-26-06	JUNC-26-05	PARABOLIC	Natural Channel	82.89	0.00169	2.000	10	0	3.68	6.97	22.03	29.57	n/a
JUNC-26-07	JUNC-26-06	PARABOLIC	Natural Channel	435.21	0.00857	2.000	10	0	3.80	7.09	20.20	27.21	n/a
JUNC-27-01	JUNC-2-19	PARABOLIC	Natural Channel	58.49	0.01715	1.500	15	0	3.17	4.89	10.72	14.26	n/a
JUNC-27-02	JUNC-27-01	CIRCULAR	Pipe	202.84	0.00415	1.200	0	0	2.90	3.08	3.16	3.25	n/a
JUNC-27-02	JUNC-27-01	RECT_OPEN	Rectangular channel / Overflow conduit	203.56	0.00414	1.000	10	0	0.27	1.82	7.57	11.01	n/a
JUNC-27-03	JUNC-27-02	CIRCULAR	Pipe	97.08	0.03454	0.900	0	0	2.72	3.52	3.49	3.48	R 941 078.00
JUNC-27-03	JUNC-27-02	RECT_OPEN	Rectangular channel / Overflow conduit	99.62	0.03366	0.500	10	0	0.00	0.49	4.03	6.44	n/a
JUNC-27-04	JUNC-27-03	CIRCULAR	Pipe	26.47	0.03133	0.900	0	0	2.20	3.14	3.18	3.18	R 252 979.48
JUNC-27-04	JUNC-27-03	RECT_OPEN	Rectangular channel / Overflow conduit	28.59	0.02901	0.500	10	0	0.00	0.02	2.90	4.87	n/a
JUNC-27-05	JUNC-27-04	CIRCULAR	Pipe	16.48	0.03078	0.900	0	0	2.20	3.17	3.23	3.23	R 161 547.08
JUNC-27-05	JUNC-27-04	RECT_OPEN	Rectangular channel / Overflow conduit	18.91	0.02682	0.500	10	0	0.00	0.01	2.88	4.84	n/a
JUNC-27-06	JUNC-27-05	CIRCULAR	Pipe	3.26	0.0313	0.750	0	0	1.92	2.77	2.81	2.80	R 39 993.82
JUNC-27-06	JUNC-27-05	RECT_OPEN	Rectangular channel / Overflow conduit	4.34	0.02351	0.250	10	0	0.00	0.48	2.62	3.03	n/a
JUNC-27-07	JUNC-27-06	TRAPEZOIDAL	Trapezoidal Channel	233.58	0.0221	0.600	0.6	2	1.89	2.92	4.22	4.24	R 434 309.62
JUNC-27-07	JUNC-70-01	RECT_OPEN	Rectangular channel / Overflow conduit	234.56	0.02175	0.250	10	0	0.00	0.00	0.75	2.32	n/a
JUNC-27-08	JUNC-27-07	RECT_OPEN	Rectangular channel / Overflow conduit	4.63	0.02528	0.250	10	0	0.00	0.00	2.87	4.52	n/a
JUNC-27-08	JUNC-27-07	CIRCULAR	Pipe	4.04	0.02897	0.750	0	0	1.89	3.03	4.03	4.02	R 39 993.82
JUNC-27-09	JUNC-27-08	RECT_OPEN	Rectangular channel / Overflow conduit	9.12	0.02973	0.250	10	0	0.00	0.14	3.42	4.93	n/a
JUNC-27-09	JUNC-27-08	CIRCULAR	Pipe	8.31	0.03263	0.750	0	0	1.89	2.80	2.81	2.80	R 79 987.64
JUNC-27-10	JUNC-27-09	RECT_OPEN	Rectangular channel / Overflow conduit	3.44	0.03112	0.250	10	0	0.00	0.56	3.36	4.84	n/a
JUNC-27-10	JUNC-27-09	CIRCULAR	Pipe	2.91	0.03679	0.750	0	0	1.89	2.64	2.64	2.64	R 39 993.82
JUNC-27-11	JUNC-27-10	CIRCULAR	Pipe	20.51	0.03586	0.675	0	0	0.65	1.03	1.49	1.49	R 145 494.93
JUNC-27-11	JUNC-27-10	RECT_OPEN	Rectangular channel / Overflow conduit	21.56	0.03411	0.250	10	0	0.00	0.00	0.28	0.78	n/a
JUNC-27-12	JUNC-27-11	CIRCULAR	Pipe	98.38	0.0191	0.675	0	0	0.66	1.06	1.23	1.23	R 690 482.24
JUNC-27-12	JUNC-27-11	RECT_OPEN	Rectangular channel / Overflow conduit	100.15	0.01877	0.250	10	0	0.00	0.00	0.59	1.07	n/a
JUNC-27-13	JUNC-27-12	CIRCULAR	Pipe	2.87	0.03975	0.675	0	0	0.65	1.05	1.64	1.69	R 33 186.41

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-27-13	JUNC-27-12	RECT_OPEN	Rectangular channel / Overflow conduit	4.63	0.02463	0.250	10	0	0.00	0.00	0.30	0.76	n/a
JUNC-27-14	JUNC-27-13	CIRCULAR	Pipe	9.97	0.03483	0.675	0	0	0.65	1.05	1.58	1.58	R 66 372.82
JUNC-27-14	JUNC-27-13	RECT_OPEN	Rectangular channel / Overflow conduit	11.07	0.03136	0.250	10	0	0.00	0.00	0.32	0.79	n/a
JUNC-27-15	JUNC-27-14	RECT_OPEN	Rectangular channel / Overflow conduit	77.23	0.01466	0.250	10	0	0.00	0.00	0.84	1.31	n/a
JUNC-27-15	JUNC-27-14	CIRCULAR	Pipe	75.8	0.01494	0.675	0	0	0.65	1.04	1.21	1.21	R 525 075.46
JUNC-27-16	JUNC-27-15	RECT_OPEN	Rectangular channel / Overflow conduit	34.43	0.05186	0.250	10	0	0.00	0.00	0.06	0.54	n/a
JUNC-27-16	JUNC-27-15	CIRCULAR	Pipe	32.55	0.05486	0.675	0	0	0.65	1.05	1.94	1.94	R 225 142.32
JUNC-27-17	JUNC-27-16	RECT_OPEN	Rectangular channel / Overflow conduit	7.79	0.04189	0.250	10	0	0.00	0.00	0.08	0.55	n/a
JUNC-27-17	JUNC-27-16	CIRCULAR	Pipe	6.16	0.053	0.675	0	0	0.65	1.05	1.98	1.98	R 46 460.98
JUNC-28-01	JUNC-2-20	PARABOLIC	Natural Channel	55.66	0.02503	1.500	10	0	1.50	1.80	3.34	4.25	n/a
JUNC-28-02	JUNC-28-01	CIRCULAR	Pipe	24.42	0.01163	0.900	0	0	1.50	1.80	3.11	3.19	R 234 693.00
JUNC-28-02	JUNC-28-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.21	0.0094	0.250	10	0	0.00	0.00	0.23	1.06	n/a
JUNC-28-03	JUNC-28-02	RECT_OPEN	Rectangular channel / Overflow conduit	184.37	0.02343	0.250	10	0	0.00	0.09	1.26	1.84	n/a
JUNC-28-03	JUNC-28-02	RECT_OPEN	Rectangular channel / Overflow conduit	179.08	0.02524	0.300	0.9	0	1.02	1.08	1.08	1.08	n/a
JUNC-28-04	JUNC-28-03	RECT_CLOSED	Closed Channel	21.43	0.03474	0.500	0.5	0	1.02	1.08	1.08	1.08	n/a
JUNC-28-04	JUNC-28-03	RECT_OPEN	Rectangular channel / Overflow conduit	23.41	0.0318	0.250	10	0	0.00	0.47	1.64	2.20	n/a
JUNC-28-05	JUNC-28-04	RECT_OPEN	Rectangular channel / Overflow conduit	56.61	0.01235	0.250	10	0	0.00	0.27	1.21	1.67	n/a
JUNC-28-05	JUNC-28-04	CIRCULAR	Pipe	55.7	0.01255	0.675	0	0	0.86	0.94	0.95	0.95	R 392 329.81
JUNC-28-06	JUNC-28-05	RECT_OPEN	Rectangular channel / Overflow conduit	34.6	0.00699	0.250	10	0	0.46	0.97	1.89	2.35	n/a
JUNC-28-06	JUNC-28-05	CIRCULAR	Pipe	29.53	0.0082	0.450	0	0	0.43	0.43	0.43	0.43	R 158 410.21
JUNC-28-07	JUNC-28-06	RECT_OPEN	Rectangular channel / Overflow conduit	59.68	0.00794	0.250	10	0	0.32	0.58	1.18	1.48	n/a
JUNC-28-07	JUNC-28-06	CIRCULAR	Pipe	56.9	0.00833	0.450	0	0	0.26	0.26	0.26	0.27	R 310 008.60
JUNC-28-08	JUNC-28-07	RECT_OPEN	Rectangular channel / Overflow conduit	13.51	0.03392	0.250	10	0	0.00	0.16	0.76	1.06	n/a
JUNC-28-08	JUNC-28-07	CIRCULAR	Pipe	12.05	0.03804	0.300	0	0	0.15	0.18	0.18	0.18	n/a
JUNC-28-08	JUNC-28-07	CIRCULAR	Pipe	12.05	0.03804	0.450	0	0	0.45	0.53	0.53	0.53	R 65 995.89
JUNC-29-01	JUNC-2-21	PARABOLIC	Natural Channel	91.79	0.00048	2.000	15	0	7.54	11.04	34.33	42.11	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-29-02	JUNC-29-01	RECT_OPEN	Rectangular channel / Overflow conduit	48.67	0.01438	1.000	15	0	0.00	2.88	25.18	33.79	n/a
JUNC-29-02	JUNC-29-01	CIRCULAR	Pipe	46.38	0.01509	1.200	0	0	7.56	8.20	8.32	8.20	n/a
JUNC-29-03	JUNC-29-02	CIRCULAR	Pipe	150.86	0.03706	1.200	0	0	7.19	8.09	8.12	8.12	n/a
JUNC-29-03	JUNC-75-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.62	0.04305	0.500	15	0	0.00	2.79	24.25	32.93	n/a
JUNC-29-04	JUNC-29-03	CIRCULAR	Pipe	6.89	0.08037	1.200	0	0	7.33	8.81	9.33	9.47	n/a
JUNC-29-04	JUNC-29-03	RECT_OPEN	Rectangular channel / Overflow conduit	7.95	0.04432	0.500	15	0	0.00	2.04	22.84	31.37	n/a
JUNC-29-05	JUNC-29-04	RECT_OPEN	Rectangular channel / Overflow conduit	11.46	0.04052	0.500	15	0	0.00	2.43	23.67	32.35	n/a
JUNC-29-05	JUNC-29-04	CIRCULAR	Pipe	10.16	0.04572	1.200	0	0	7.25	8.44	8.55	8.52	n/a
JUNC-29-06	JUNC-29-05	CIRCULAR	Pipe	5.15	0.02836	1.200	0	0	7.49	8.66	8.48	8.67	n/a
JUNC-29-06	JUNC-29-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.29	0.01761	0.500	15	0	0.00	3.35	23.73	32.16	n/a
JUNC-29-07	JUNC-29-06	CIRCULAR	Pipe	58.2	0.04186	1.200	0	0	5.21	6.62	6.64	6.62	n/a
JUNC-29-07	JUNC-29-06	RECT_OPEN	Rectangular channel / Overflow conduit	61.15	0.02837	0.500	10	0	0.00	1.04	15.79	21.51	n/a
JUNC-29-08	JUNC-29-07	CIRCULAR	Pipe	318.73	0.04405	1.200	0	0	4.96	7.90	8.27	8.31	n/a
JUNC-29-08	JUNC-29-07	RECT_OPEN	Rectangular channel / Overflow conduit	322.95	0.04347	0.500	15	0	0.00	0.00	13.76	19.27	n/a
JUNC-29-09	JUNC-29-08	CIRCULAR	Pipe	19.71	0.03976	1.200	0	0	4.68	7.65	9.98	9.74	n/a
JUNC-29-09	JUNC-29-08	RECT_OPEN	Rectangular channel / Overflow conduit	24.76	0.03164	0.500	15	0	0.00	0.00	13.62	18.92	n/a
JUNC-29-10	JUNC-29-09	CIRCULAR	Pipe	93.53	0.00679	1.200	0	0	4.68	6.28	6.30	6.30	n/a
JUNC-29-10	JUNC-29-09	RECT_OPEN	Rectangular channel / Overflow conduit	95.9	0.01184	0.500	15	0	0.00	1.37	16.98	22.25	n/a
JUNC-29-11	JUNC-29-10	CIRCULAR	Pipe	79.97	0.01274	1.200	0	0	2.84	4.37	4.34	4.30	n/a
JUNC-29-11	JUNC-29-10	RECT_OPEN	Rectangular channel / Overflow conduit	83.27	0.01224	0.500	10	0	0.00	1.68	8.89	11.59	n/a
JUNC-29-12	JUNC-29-11	RECT_OPEN	Rectangular channel / Overflow conduit	12.81	0.01647	0.500	10	0	0.00	0.25	7.03	9.88	n/a
JUNC-29-12	JUNC-29-11	CIRCULAR	Pipe	7.52	0.02807	1.200	0	0	2.91	5.51	5.82	5.64	n/a
JUNC-29-13	JUNC-29-12	RECT_OPEN	Rectangular channel / Overflow conduit	57.12	0.02886	0.500	10	0	0.00	0.00	2.37	4.32	n/a
JUNC-29-13	JUNC-29-12	CIRCULAR	Pipe	50.29	0.03279	1.200	0	0	2.42	4.64	6.73	6.72	n/a
JUNC-29-14	JUNC-29-13	CIRCULAR	Pipe	71.74	0.04736	1.200	0	0	1.70	3.52	7.39	8.33	n/a
JUNC-29-14	JUNC-29-13	RECT_OPEN	Rectangular channel / Overflow conduit	76.45	0.04444	0.250	10	0	0.00	0.00	0.00	0.59	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-29-15	JUNC-29-14	CIRCULAR	Pipe	162.22	0.04787	1.200	0	0	1.43	2.79	5.97	7.32	n/a
JUNC-29-15	JUNC-29-14	RECT_OPEN	Rectangular channel / Overflow conduit	167.45	0.04637	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-30-01	JUNC-2-22	PARABOLIC	Natural Channel	74.77	0.08283	1.000	10	0	0.74	1.12	2.08	2.53	n/a
JUNC-30-02	JUNC-30-01	RECT_OPEN	Pipe	277.59	0.01	0.500	10	0	0.05	0.07	0.12	0.14	n/a
JUNC-30-03	JUNC-30-02	RECT_OPEN	Pipe	13.84	0.01026	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-30-03	JUNC-30-02	CIRCULAR	Pipe	11.8	0.01203	0.300	0	0	0.07	0.10	0.15	0.18	n/a
JUNC-3-01	JUNC-1-03	RECT_OPEN	Rectangular channel / Overflow conduit	16.62	0.36845	0.300	10	0	1.60	3.28	6.94	9.05	n/a
JUNC-3-02	JUNC-3-01	RECT_CLOSED	Closed Channel	82.31	0.00607	1.200	1.2	0	0.93	1.86	2.64	2.89	R 1 293 532.11
JUNC-3-02	JUNC-3-01	RECT_OPEN	Rectangular channel / Overflow conduit	85.95	0.00582	0.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-3-03	JUNC-3-02	RECT_CLOSED	Closed Channel	138.1	0.00362	1.200	1.2	0	0.92	1.81	2.69	2.90	R 2 186 594.16
JUNC-3-03	JUNC-3-02	RECT_OPEN	Rectangular channel / Overflow conduit	143.66	0.00348	0.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-3-04	JUNC-3-03	RECT_CLOSED	Closed Channel	274.34	0.00182	1.200	1.2	0	0.92	1.53	2.54	2.55	R 4 281 114.38
JUNC-3-04	JUNC-3-03	RECT_OPEN	Rectangular channel / Overflow conduit	278.31	0.0018	0.500	15	0	0.00	0.00	0.00	0.01	n/a
JUNC-3-05	JUNC-3-04	RECT_OPEN	Rectangular channel / Overflow conduit	235.49	0.00085	0.500	15	0	0.00	0.00	0.12	1.48	n/a
JUNC-3-05	JUNC-3-04	RECT_CLOSED	Closed Channel	229.51	0.00218	1.200	1.2	0	0.93	1.57	2.67	2.76	R 3 588 194.97
JUNC-3-06	JUNC-3-05	RECT_CLOSED	Closed Channel	12.95	0.05413	0.500	0.5	0	0.00	0.01	0.02	0.04	n/a
JUNC-3-06	JUNC-3-05	RECT_OPEN	Rectangular channel / Overflow conduit	13.27	0.0908	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-31-01	JUNC-2-23	PARABOLIC	Natural Channel	122.09	0.00499	2.000	15	0	2.50	4.23	9.25	11.61	n/a
JUNC-31-02	JUNC-31-01	RECT_OPEN	Rectangular channel / Overflow conduit	291.33	0.02928	0.500	10	0	2.77	4.65	9.76	12.15	n/a
JUNC-31-03	JUNC-31-02	PARABOLIC	Natural Channel	203.49	0.04027	1.000	10	0	1.49	2.66	6.33	8.00	n/a
JUNC-31-04	JUNC-31-03	RECT_OPEN	Rectangular channel / Overflow conduit	33.35	0.07496	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-31-04	JUNC-31-03	CIRCULAR	Pipe	31.93	0.07832	0.400	0	0	0.21	0.32	0.52	0.62	n/a
JUNC-32-01	JUNC-2-24	PARABOLIC	Natural Channel	158.7	0.00472	1.500	15	0	4.00	7.78	21.49	24.50	n/a
JUNC-32-02	JUNC-32-01	RECT_OPEN	Rectangular channel / Overflow conduit	294.18	0.02343	0.500	10	0	4.19	7.98	21.57	24.53	n/a
JUNC-32-03	JUNC-32-02	PARABOLIC	Natural Channel	544.46	0.03694	1.500	10	0	4.24	8.07	21.87	29.76	n/a
JUNC-32-04	JUNC-32-03	PARABOLIC	Natural Channel	25.74	0.03557	2.000	15	0	0.54	0.78	1.21	1.54	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-32-05	JUNC-32-04	RECT_OPEN	Rectangular channel / Overflow conduit	24.03	0.07696	0.250	10	0	0.00	0.00	0.10	0.41	n/a
JUNC-32-05	JUNC-32-04	CIRCULAR	Pipe	22.83	0.08104	0.500	0	0	0.54	0.79	1.11	1.13	n/a
JUNC-32-06	JUNC-32-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.37	0.02682	0.250	10	0	0.00	0.00	0.52	0.83	n/a
JUNC-32-06	JUNC-32-05	CIRCULAR	Pipe	8.55	0.03253	0.500	0	0	0.54	0.80	1.08	1.08	R 50 089.42
JUNC-32-07	JUNC-32-06	RECT_OPEN	Rectangular channel / Overflow conduit	39.17	0.06013	0.250	10	0	0.00	0.00	0.33	0.61	n/a
JUNC-32-07	JUNC-32-06	CIRCULAR	Pipe	37.36	0.06305	0.500	0	0	0.54	0.78	1.00	1.00	R 217 600.68
JUNC-33-01	JUNC-2-24	PARABOLIC	Natural Channel	159.4	0.00213	2.000	15	0	0.77	1.21	2.26	3.38	n/a
JUNC-33-02	JUNC-33-01	RECT_OPEN	Rectangular channel / Overflow conduit	287.16	0.02508	0.500	10	0	1.13	1.58	3.07	3.75	n/a
JUNC-33-03	JUNC-33-02	PARABOLIC	Natural Channel	282.44	0.04339	1.000	10	0	1.18	1.58	3.19	3.88	n/a
JUNC-33-04	JUNC-33-03	RECT_OPEN	Rectangular channel / Overflow conduit	34.61	0.06532	0.250	10	0	0.00	0.00	1.55	2.22	n/a
JUNC-33-04	JUNC-33-03	CIRCULAR	Pipe	31.93	0.07083	0.600	0	0	1.20	1.59	1.70	1.73	R 200 637.63
JUNC-33-05	JUNC-33-04	PARABOLIC	Natural Channel	54.05	0.06057	1.000	5	0	0.73	1.09	1.82	2.19	n/a
JUNC-33-06	JUNC-33-05	CIRCULAR	Pipe	7.37	0.05994	0.525	0	0	0.74	1.09	1.56	1.58	R 44 523.93
JUNC-33-06	JUNC-33-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.6	0.05135	0.250	10	0	0.00	0.00	0.26	0.62	n/a
JUNC-33-07	JUNC-33-06	RECT_OPEN	Rectangular channel / Overflow conduit	13.46	0.05215	0.250	10	0	0.00	0.00	0.76	1.14	n/a
JUNC-33-07	JUNC-33-06	CIRCULAR	Pipe	11.97	0.05866	0.525	0	0	0.73	1.09	1.28	1.28	R 66 785.90
JUNC-33-08	JUNC-33-07	RECT_OPEN	Rectangular channel / Overflow conduit	59.67	0.05968	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-33-08	JUNC-33-07	CIRCULAR	Pipe	58.02	0.06139	0.525	0	0	0.36	0.49	0.78	0.93	R 343 440.52
JUNC-34-01	JUNC-2-27	PARABOLIC	Natural Channel	155.08	0.01871	2.000	50	0	8.19	15.11	39.10	54.18	n/a
JUNC-34-02	JUNC-34-01	RECT_OPEN	Rectangular channel / Overflow conduit	24.95	0.0004	0.500	30	0	3.00	9.47	32.26	47.07	n/a
JUNC-34-02	JUNC-34-01	CIRCULAR	Pipe	21.8	0.00046	0.750	0	0	4.85	5.13	5.64	5.81	n/a
JUNC-34-03	JUNC-34-02	PARABOLIC	Natural Channel	89.69	0.05526	2.000	15	0	7.54	13.71	36.46	50.65	n/a
JUNC-34-04	JUNC-34-03	PARABOLIC	Natural Channel	145.75	0.02346	2.000	15	0	6.45	11.81	32.67	44.95	n/a
JUNC-34-05	JUNC-34-04	PARABOLIC	Natural Channel	87.59	0.07853	2.000	15	0	6.27	11.51	31.86	43.98	n/a
JUNC-34-06	JUNC-34-05	PARABOLIC	Natural Channel	114.12	0.04408	2.000	15	0	6.11	11.18	31.10	43.09	n/a
JUNC-34-07	JUNC-34-06	PARABOLIC	Natural Channel	52.7	0.02771	2.000	15	0	6.11	11.18	31.07	43.10	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-34-08	JUNC-34-07	PARABOLIC	Natural Channel	93.38	0.0075	1.500	5	0	0.26	0.41	0.72	0.88	n/a
JUNC-34-09	JUNC-34-08	RECT_OPEN	Rectangular channel / Overflow conduit	13.7	0.00445	0.500	10	0	0.00	0.00	0.24	0.41	n/a
JUNC-34-09	JUNC-34-08	CIRCULAR	Pipe	12.32	0.00495	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-34-09	JUNC-34-08	CIRCULAR	Pipe	12.32	0.00495	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-35-01	JUNC-2-29	PARABOLIC	Natural Channel	168.52	0.00766	1.500	30	0	2.59	3.83	6.80	8.55	n/a
JUNC-35-02	JUNC-35-01	PARABOLIC	Natural Channel	182.75	0.00805	1.500	20	0	1.84	2.72	4.85	6.16	n/a
JUNC-35-03	JUNC-35-02	PARABOLIC	Natural Channel	140.85	0.01148	1.500	20	0	1.58	2.20	3.84	4.87	n/a
JUNC-35-04	JUNC-35-03	PARABOLIC	Natural Channel	44.78	0.06562	1.500	20	0	1.37	1.87	3.44	4.31	n/a
JUNC-35-05	JUNC-35-04	PARABOLIC	Natural Channel	37.66	0.06562	1.500	20	0	1.23	1.68	3.10	3.86	n/a
JUNC-35-06	JUNC-35-05	RECT_CLOSED	Culvert	7.8	0.06359	0.400	0.7	0	0.11	0.14	0.25	0.31	n/a
JUNC-35-06	JUNC-35-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.62	0.05752	0.500	10	0	1.13	1.54	2.86	3.56	n/a
JUNC-35-07	JUNC-35-06	RECT_CLOSED	Culvert	9.72	0.06216	0.400	0.7	0	0.92	1.20	1.72	1.74	n/a
JUNC-35-07	JUNC-35-06	RECT_OPEN	Rectangular channel / Overflow conduit	11.29	0.05349	0.500	10	0	0.00	0.00	0.49	1.01	n/a
JUNC-35-08	JUNC-35-07	RECT_CLOSED	Culvert	12.41	0.05625	0.400	0.7	0	0.92	1.20	1.63	1.64	n/a
JUNC-35-08	JUNC-35-07	RECT_OPEN	Rectangular channel / Overflow conduit	13.81	0.05054	0.500	10	0	0.00	0.00	0.90	1.44	n/a
JUNC-35-09	JUNC-35-08	RECT_CLOSED	Culvert	53.39	0.0339	0.400	0.7	0	0.92	1.18	1.18	1.18	n/a
JUNC-35-09	JUNC-35-08	RECT_OPEN	Rectangular channel / Overflow conduit	55.38	0.03268	0.500	10	0	0.00	0.09	1.20	1.74	n/a
JUNC-35-10	JUNC-35-09	RECT_CLOSED	Culvert	39.86	0.05397	0.400	0.7	0	0.92	1.31	1.38	1.39	n/a
JUNC-35-10	JUNC-35-09	RECT_OPEN	Rectangular channel / Overflow conduit	42.59	0.0505	0.500	10	0	0.00	0.00	1.05	1.53	n/a
JUNC-35-11	JUNC-35-10	RECT_CLOSED	Culvert	113.11	0.05325	0.400	0.7	0	0.45	0.65	1.06	1.27	n/a
JUNC-35-12	JUNC-35-11	RECT_CLOSED	Culvert	9.71	0.00886	0.400	0.7	0	0.45	0.74	1.06	1.27	n/a
JUNC-35-12	JUNC-35-11	RECT_OPEN	Rectangular channel / Overflow conduit	13.9	0.00619	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-35-13	JUNC-35-12	RECT_CLOSED	Culvert	53.29	0.07794	0.400	0.7	0	0.18	0.26	0.41	0.49	n/a
JUNC-35-13	JUNC-35-12	RECT_OPEN	Rectangular channel / Overflow conduit	56.75	0.07316	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-36-01	JUNC-2-29	PARABOLIC	Natural Channel	288.72	0.00626	1.500	15	0	1.21	1.91	6.68	10.54	n/a
JUNC-36-02	JUNC-36-01	PARABOLIC	Natural Channel	60.83	0.01675	1.000	15	0	0.96	1.75	6.09	9.55	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-36-03	JUNC-36-02	RECT_OPEN	Rectangular channel / Overflow conduit	30.12	0.00169	0.500	10	0	0.00	0.56	4.75	8.13	n/a
JUNC-36-03	JUNC-36-02	RECT_CLOSED	Box Culvert	27.12	0.00188	0.600	0.6	0	0.96	1.19	1.34	1.42	n/a
JUNC-36-04	JUNC-36-03	PARABOLIC	Natural Channel	284.87	0.04629	1.000	15	0	1.11	1.73	5.52	8.22	n/a
JUNC-36-05	JUNC-36-04	CIRCULAR	Pipe	5.17	0.07487	0.600	0	0	1.11	1.74	2.64	2.71	R 36 473.56
JUNC-36-05	JUNC-36-04	RECT_OPEN	Rectangular channel / Overflow conduit	6.9	0.05603	0.300	10	0	0.00	0.00	3.01	5.68	n/a
JUNC-36-06	JUNC-36-05	CIRCULAR	Pipe	16.66	0.07779	0.600	0	0	1.11	1.74	1.97	1.97	R 109 453.74
JUNC-36-06	JUNC-36-05	RECT_OPEN	Rectangular channel / Overflow conduit	17.9	0.07237	0.300	10	0	0.00	0.00	3.93	6.68	n/a
JUNC-36-07	JUNC-36-06	CIRCULAR	Pipe	5.84	0.06245	0.600	0	0	1.11	1.74	1.87	1.87	R 36 473.56
JUNC-36-07	JUNC-36-06	RECT_OPEN	Rectangular channel / Overflow conduit	6.88	0.05298	0.300	10	0	0.00	0.00	4.08	6.82	n/a
JUNC-36-08	JUNC-36-07	PARABOLIC	Natural Channel	334.32	0.07087	1.000	15	0	0.95	2.01	5.82	7.61	n/a
JUNC-37-01	JUNC-2-30	PARABOLIC	Natural Channel	159.74	0.00182	2.000	20	0	11.89	19.73	49.85	78.19	n/a
JUNC-37-02	JUNC-37-01	RECT_CLOSED	5 No. off Box Culvert	30.78	0.01625	1.200	1.5	0	11.74	19.38	49.18	59.51	n/a
JUNC-37-02	JUNC-37-01	RECT_OPEN	Rectangular channel / Overflow conduit	35.53	0.01407	1.000	20	0	0.00	0.00	0.00	11.09	n/a
JUNC-37-03	JUNC-37-02	PARABOLIC	Natural Channel	144.38	0.00277	2.000	25	0	11.51	19.01	48.30	67.36	n/a
JUNC-37-04	JUNC-37-03	RECT_OPEN	Rectangular channel / Overflow conduit	21.07	0.00475	1.000	10	0	0.00	0.00	4.38	24.62	n/a
JUNC-37-04	JUNC-37-03	CIRCULAR	Pipe	18.18	0.0055	1.650	0	0	11.53	22.60	44.44	47.61	n/a
JUNC-37-05	JUNC-37-04	PARABOLIC	Natural Channel	345.7	0.0533	2.000	10	0	11.86	18.91	48.70	68.32	n/a
JUNC-38-01	JUNC-2-30	PARABOLIC	Natural Channel	260.39	0.00457	2.000	10	0	1.05	2.06	5.52	7.13	n/a
JUNC-39-01	JUNC-2-32	PARABOLIC	Natural Channel	23234.58	0.02059	5.000	50	0	169.26	254.85	566.18	769.22	n/a
JUNC-40-01	JUNC-2-33	PARABOLIC	Natural Channel	12643.82	0.00459	5.000	200	0	185.82	284.94	656.76	903.54	n/a
JUNC-4-01	JUNC-1-04	PARABOLIC	Natural Channel	257.92	0.03269	1.000	10	0	1.24	2.60	6.88	8.72	n/a
JUNC-4-02	JUNC-4-01	PARABOLIC	Natural Channel	274.85	0.06655	1.000	10	0	0.92	2.02	5.60	7.12	n/a
JUNC-4-03	JUNC-4-02	PARABOLIC	Natural Channel	680.2	0.53427	1.000	10	0	0.95	2.15	6.01	7.58	n/a
JUNC-41-01	JUNC-3-05	RECT_OPEN	Rectangular channel / Overflow conduit	274.72	0.00145	0.500	15	0	0.00	0.00	0.25	1.17	n/a
JUNC-41-01	JUNC-3-05	RECT_CLOSED	Closed Channel	271.07	0.00147	1.200	1.2	0	0.69	1.21	2.08	2.07	R 4 235 327.22
JUNC-41-02	JUNC-41-01	RECT_OPEN	Rectangular channel / Overflow conduit	177.95	0.00023	0.500	15	0	0.00	0.00	1.52	2.57	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-41-02	JUNC-58-01	RECT_CLOSED	Closed Channel	11.08	0.00839	0.900	0.9	0	0.71	0.89	1.48	1.55	R 144 717.55
JUNC-41-02	JUNC-41-01	RECT_CLOSED	Closed Channel	173.72	0.00024	1.200	1.2	0	0.73	1.26	1.70	1.86	R 2 711 627.31
JUNC-41-03	JUNC-41-02	RECT_CLOSED	Closed Channel	14.9	0.01913	0.900	0.9	0	1.20	1.70	2.80	2.80	R 179 368.94
JUNC-41-03	JUNC-41-02	RECT_OPEN	Rectangular channel / Overflow conduit	18.58	0.01534	0.500	15	0	0.00	0.00	0.68	2.05	n/a
JUNC-41-04	JUNC-41-03	RECT_CLOSED	Closed Channel	232.87	0.00837	0.900	0.9	0	0.69	0.99	1.67	2.21	R 2 769 103.80
JUNC-41-04	JUNC-41-03	RECT_OPEN	Rectangular channel / Overflow conduit	235.85	0.00826	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-41-05	JUNC-41-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.55	0.05011	0.250	10	0	0.00	0.00	0.28	0.94	n/a
JUNC-41-05	JUNC-41-04	RECT_CLOSED	Closed Channel	10.73	0.04927	0.500	0.5	0	0.70	1.00	1.45	1.46	n/a
STOR-41-06	JUNC-41-05	RECT_CLOSED	Closed Channel	12.89	1.15445	0.500	0.5	0	0.22	0.35	0.66	0.81	n/a
JUNC-42-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	65.93	0.05165	0.250	10	0	0.00	0.13	0.44	0.59	n/a
JUNC-42-01	JUNC-41-05	CIRCULAR	Pipe	65.35	0.05211	0.300	0	0	0.24	0.24	0.24	0.24	n/a
JUNC-42-02	JUNC-42-01	RECT_OPEN	Rectangular channel / Overflow conduit	16.47	0.06572	0.250	10	0	0.00	0.14	0.42	0.55	n/a
JUNC-42-02	JUNC-42-01	CIRCULAR	Pipe	14.08	0.07693	0.300	0	0	0.26	0.29	0.28	0.28	n/a
JUNC-42-03	JUNC-42-02	RECT_OPEN	Rectangular channel / Overflow conduit	65.88	0.05169	0.250	10	0	0.19	0.33	0.61	0.75	n/a
JUNC-42-03	JUNC-42-02	CIRCULAR	Pipe	63.2	0.05389	0.200	0	0	0.09	0.09	0.09	0.09	n/a
JUNC-42-04	JUNC-42-03	RECT_OPEN	Rectangular channel / Overflow conduit	17.5	0.05396	0.250	10	0	0.21	0.35	0.62	0.76	n/a
JUNC-42-04	JUNC-42-03	CIRCULAR	Pipe	15.07	0.0627	0.200	0	0	0.10	0.10	0.10	0.09	n/a
JUNC-43-01	JUNC-5-07	PARABOLIC	Natural Channel	94.22	0.0587	1.000	5	0	0.96	2.14	5.78	7.25	n/a
JUNC-43-02	JUNC-43-01	PARABOLIC	Natural Channel	480.37	0.25123	1.000	5	0	0.97	2.20	5.97	7.46	n/a
JUNC-44-01	JUNC-6-01	PARABOLIC	Natural Channel	146.08	0.07289	1.000	5	0	0.20	0.32	0.56	0.69	n/a
JUNC-44-02	JUNC-44-01	CIRCULAR	Pipe	8.78	0.01891	0.450	0	0	0.20	0.32	0.57	0.69	R 45 689.46
JUNC-44-02	JUNC-44-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.88	0.0168	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-44-03	JUNC-44-02	CIRCULAR	Pipe	44.05	0.0134	0.450	0	0	0.20	0.32	0.47	0.47	R 234 559.32
JUNC-44-03	JUNC-44-02	RECT_OPEN	Rectangular channel / Overflow conduit	46.77	0.01262	0.250	10	0	0.00	0.00	0.10	0.28	n/a
JUNC-45-01	JUNC-7-02	CIRCULAR	Pipe	35.71	0.08383	0.300	0	0	0.18	0.28	0.30	0.30	n/a
JUNC-45-01	JUNC-7-02	RECT_OPEN	Rectangular channel / Overflow conduit	38.28	0.07816	0.250	10	0	0.00	0.00	0.00	0.00	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-45-02	JUNC-45-01	CIRCULAR	Pipe	8.54	0.08047	0.300	0	0	0.18	0.28	0.30	0.30	n/a
JUNC-45-02	JUNC-45-01	RECT_OPEN	Rectangular channel / Overflow conduit	11.4	0.0602	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-45-03	JUNC-45-02	RECT_OPEN	Rectangular channel / Overflow conduit	68.64	0.08164	0.250	10	0	0.11	0.17	0.31	0.38	n/a
JUNC-45-04	JUNC-45-03	CIRCULAR	Pipe	13.42	0.00142	0.300	0	0	0.11	0.17	0.20	0.20	n/a
JUNC-45-04	JUNC-45-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.86	0.00128	0.250	10	0	0.00	0.00	0.11	0.19	n/a
JUNC-46-01	JUNC-8-06	RECT_OPEN	Rectangular channel / Overflow conduit	100.06	0.00999	0.250	10	0	0.40	0.63	1.11	1.37	n/a
JUNC-47-01	JUNC-8-05	RECT_OPEN	Rectangular channel / Overflow conduit	80.55	0.06084	0.250	10	0	0.31	0.48	1.00	1.24	n/a
JUNC-47-02	JUNC-47-01	CIRCULAR	Pipe	53.87	0.00195	0.300	0	0	0.11	0.11	0.11	0.12	n/a
JUNC-47-02	JUNC-47-01	RECT_OPEN	Rectangular channel / Overflow conduit	55.61	0.00189	0.250	10	0	0.21	0.37	0.89	1.13	n/a
JUNC-47-03	JUNC-47-02	CIRCULAR	Pipe	33.1	0.00079	0.300	0	0	0.10	0.10	0.09	0.09	n/a
JUNC-47-03	JUNC-47-02	RECT_OPEN	Rectangular channel / Overflow conduit	34.69	0.00075	0.250	10	0	0.30	0.48	1.00	1.25	n/a
JUNC-47-04	JUNC-47-03	CIRCULAR	Pipe	7.27	0.00344	0.300	0	0	0.08	0.07	0.07	0.07	n/a
JUNC-47-04	JUNC-47-03	RECT_OPEN	Rectangular channel / Overflow conduit	8.25	0.00303	0.250	10	0	0.21	0.34	0.70	0.88	n/a
JUNC-48-01	JUNC-8-10	RECT_OPEN	Rectangular channel / Overflow conduit	97.3	0.03775	0.250	10	0	0.33	0.51	0.85	1.02	n/a
JUNC-48-02	JUNC-48-01	RECT_OPEN	Rectangular channel / Overflow conduit	30.32	0.06355	0.250	10	0	0.10	0.28	0.62	0.79	n/a
JUNC-48-02	JUNC-48-01	CIRCULAR	Pipe	28.61	0.06737	0.300	0	0	0.23	0.24	0.24	0.24	n/a
JUNC-48-03	JUNC-48-02	RECT_OPEN	Rectangular channel / Overflow conduit	19.4	0.05555	0.250	10	0	0.00	0.00	0.18	0.31	n/a
JUNC-48-03	JUNC-48-02	CIRCULAR	Pipe	16.16	0.06673	0.400	0	0	0.27	0.43	0.53	0.53	n/a
JUNC-49-01	JUNC-9-04	RECT_OPEN	Rectangular channel / Overflow conduit	2.54	0.04967	0.250	10	0	0.00	0.43	1.26	1.57	n/a
JUNC-49-01	JUNC-9-04	CIRCULAR	Pipe	1.98	0.06377	0.300	0	0	0.34	0.53	0.52	0.53	n/a
JUNC-49-02	JUNC-49-01	RECT_OPEN	Rectangular channel / Overflow conduit	8.54	0.04243	0.250	10	0	0.02	0.49	1.28	1.58	n/a
JUNC-49-02	JUNC-49-01	CIRCULAR	Pipe	7.89	0.04593	0.300	0	0	0.32	0.33	0.33	0.33	n/a
JUNC-50-01	JUNC-11-01	PARABOLIC	Natural Channel	76.13	0.03547	1.000	5	0	0.23	0.36	0.61	0.72	n/a
JUNC-50-02	JUNC-50-01	CIRCULAR	Pipe	10.59	0.10185	0.300	0	0	0.23	0.37	0.38	0.39	n/a
JUNC-50-02	JUNC-50-01	RECT_OPEN	Rectangular channel / Overflow conduit	12.68	0.08493	0.500	10	0	0.00	0.00	0.23	0.35	n/a
JUNC-5-01	JUNC-1-05	PARABOLIC	Natural Channel	156.88	0.03545	1.500	20	0	4.35	9.20	26.37	34.70	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-5-02	JUNC-5-01	PARABOLIC	Natural Channel	212.49	0.03545	1.500	20	0	4.12	8.70	25.04	32.97	n/a
JUNC-5-03	JUNC-5-02	RECT_CLOSED	Pipe	6.7	0.07092	0.900	1.2	0	4.12	8.70	15.65	15.68	R 98 279.92
JUNC-5-03	JUNC-5-02	RECT_OPEN	Rectangular channel / Overflow conduit	7.75	0.06128	1.000	20	0	0.00	0.00	9.55	17.68	n/a
JUNC-5-04	JUNC-5-03	RECT_OPEN	Rectangular channel / Overflow conduit	9.45	0.06032	1.000	20	0	0.00	0.00	16.02	24.01	n/a
JUNC-5-04	JUNC-5-03	RECT_CLOSED	Pipe	8.54	0.06678	0.900	1.2	0	4.12	8.70	11.65	11.65	R 126 359.90
JUNC-5-05	JUNC-5-04	RECT_OPEN	Rectangular channel / Overflow conduit	9.89	0.03703	1.000	20	0	0.00	0.00	17.86	25.73	n/a
JUNC-5-05	JUNC-5-04	RECT_CLOSED	Pipe	8.91	0.04111	0.900	1.2	0	4.12	8.70	10.38	10.45	R 126 359.90
JUNC-5-06	JUNC-5-05	PARABOLIC	Natural Channel	57.58	0.04759	1.500	10	0	4.13	8.74	25.06	32.97	n/a
JUNC-5-07	JUNC-5-06	PARABOLIC	Natural Channel	155.75	0.04759	1.500	5	0	4.13	8.74	25.07	32.99	n/a
JUNC-5-08	JUNC-5-07	PARABOLIC	Natural Channel	204.3	0.06196	1.500	5	0	2.75	5.83	17.28	23.12	n/a
JUNC-5-09	JUNC-5-08	PARABOLIC	Natural Channel	862.35	0.20443	1.500	5	0	2.81	5.91	17.79	23.79	n/a
JUNC-51-01	JUNC-11-01	PARABOLIC	Natural Channel	78.37	0.076	1.000	5	0	0.73	1.63	4.12	5.11	n/a
JUNC-51-02	JUNC-51-01	CIRCULAR	Pipe	8.37	0.07091	0.300	0	0	0.37	0.38	0.39	0.39	n/a
JUNC-51-02	JUNC-51-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.89	0.05997	0.500	10	0	0.07	0.63	2.26	2.87	n/a
JUNC-52-01	JUNC-11-02	PARABOLIC	Natural Channel	19.2	0.15344	1.000	5	0	0.34	0.56	0.94	1.13	n/a
JUNC-52-02	JUNC-52-01	CIRCULAR	Pipe	16.97	0.04991	0.450	0	0	0.34	0.56	0.77	0.78	R 92 414.32
JUNC-52-02	JUNC-52-01	RECT_OPEN	Rectangular channel / Overflow conduit	19	0.04457	0.500	10	0	0.00	0.00	0.17	0.35	n/a
JUNC-53-01	JUNC-11-03	PARABOLIC	Natural Channel	13.85	0.65281	1.000	5	0	0.17	0.26	0.45	0.55	n/a
JUNC-53-02	JUNC-53-01	CIRCULAR	Pipe	9.94	0.03624	0.300	0	0	0.17	0.26	0.29	0.29	n/a
JUNC-53-02	JUNC-53-01	RECT_OPEN	Rectangular channel / Overflow conduit	12.48	0.02886	0.500	10	0	0.00	0.00	0.17	0.26	n/a
JUNC-54-01	JUNC-11-04	PARABOLIC	Natural Channel	8.66	0.58683	1.000	5	0	1.09	2.16	6.08	8.04	n/a
JUNC-54-02	JUNC-54-01	CIRCULAR	Pipe	11.44	0.00131	0.300	0	0	0.24	0.25	0.26	0.26	n/a
JUNC-54-02	JUNC-54-01	RECT_OPEN	Rectangular channel / Overflow conduit	13.31	0.00113	0.500	10	0	0.02	0.17	0.50	0.66	n/a
JUNC-55-01	JUNC-11-06	CIRCULAR	Pipe	68.17	0.00971	0.600	0	0	0.61	0.81	0.81	0.81	R 440 087.89
JUNC-55-01	JUNC-11-06	RECT_OPEN	Rectangular channel / Overflow conduit	72.25	0.00916	0.500	10	0	0.00	0.40	2.09	3.32	n/a
JUNC-55-02	JUNC-55-01	CIRCULAR	Pipe	39.01	0.00279	0.600	0	0	0.46	0.62	0.63	0.62	R 243 190.11

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-55-02	JUNC-55-01	RECT_OPEN	Rectangular channel / Overflow conduit	43.59	0.0025	0.500	10	0	0.00	0.60	2.00	3.06	n/a
JUNC-55-03	JUNC-55-02	CIRCULAR	Pipe	19.87	0.1189	0.600	0	0	0.46	1.05	2.03	2.04	R 127 690.52
JUNC-55-03	JUNC-55-02	RECT_OPEN	Rectangular channel / Overflow conduit	23.99	0.09826	0.500	10	0	0.00	0.00	0.41	1.48	n/a
JUNC-55-04	JUNC-55-03	TRAPEZOIDAL	Channel	119.62	0.06602	1.000	0.6	3	0.46	1.07	2.87	3.57	R 318 721.92
JUNC-56-01	JUNC-17-10	RECT_OPEN	Rectangular channel / Overflow conduit	11.99	0.00834	0.250	10	0	0.00	0.00	0.44	0.68	n/a
JUNC-56-01	JUNC-17-10	CIRCULAR	Pipe	10.83	0.00923	0.450	0	0	0.39	0.47	0.68	0.68	n/a
JUNC-56-02	JUNC-56-01	RECT_OPEN	Rectangular channel / Overflow conduit	38.96	0.0107	0.250	10	0	0.00	0.04	0.50	0.73	n/a
JUNC-56-02	JUNC-56-01	CIRCULAR	Pipe	37.59	0.01109	0.450	0	0	0.37	0.44	0.44	0.44	n/a
JUNC-56-03	JUNC-56-02	RECT_OPEN	Rectangular channel / Overflow conduit	17.57	0.05626	0.250	10	0	0.00	0.00	0.14	0.33	n/a
JUNC-56-03	JUNC-56-02	CIRCULAR	Pipe	15.73	0.06287	0.450	0	0	0.37	0.50	0.71	0.71	n/a
JUNC-56-04	JUNC-56-03	RECT_OPEN	Rectangular channel / Overflow conduit	48.33	0.0248	0.250	10	0	0.00	0.00	0.38	0.57	n/a
JUNC-56-04	JUNC-56-03	CIRCULAR	Pipe	46	0.02605	0.450	0	0	0.37	0.51	0.54	0.54	n/a
JUNC-56-05	JUNC-56-04	CIRCULAR	Pipe	21.66	0.04751	0.450	0	0	0.37	0.53	0.62	0.62	n/a
JUNC-56-05	JUNC-56-04	RECT_OPEN	Rectangular channel / Overflow conduit	24	0.04287	0.250	10	0	0.00	0.00	0.26	0.44	n/a
JUNC-56-06	JUNC-56-05	RECT_OPEN	Rectangular channel / Overflow conduit	10.54	0.03646	0.250	10	0	0.00	0.16	0.66	0.84	n/a
JUNC-56-06	JUNC-56-05	CIRCULAR	Pipe	7.55	0.05093	0.300	0	0	0.37	0.37	0.37	0.37	n/a
JUNC-57-01	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	106.19	0.01126	0.250	15	0	0.00	0.00	4.08	4.75	n/a
JUNC-57-01	JUNC-17-04	RECT_CLOSED	Closed Channel	105.67	0.01132	0.500	0.5	0	0.37	0.43	0.49	0.49	n/a
JUNC-57-02	JUNC-20-02	RECT_CLOSED	Closed Channel	106.77	0.01796	0.500	0.5	0	0.55	0.67	0.69	0.69	n/a
JUNC-57-02	JUNC-20-02	RECT_OPEN	Rectangular channel / Overflow conduit	107.07	0.01791	0.250	15	0	0.00	0.00	4.90	6.22	n/a
JUNC-57-03	JUNC-57-02	RECT_CLOSED	Closed Channel	67.9	0.01228	0.500	0.5	0	0.54	0.67	0.68	0.68	n/a
JUNC-57-03	JUNC-57-02	RECT_OPEN	Rectangular channel / Overflow conduit	69.1	0.01207	0.250	15	0	0.00	0.14	4.98	6.30	n/a
JUNC-57-04	JUNC-23-03	RECT_OPEN	Rectangular channel / Overflow conduit	6.83	0.04323	0.250	10	0	0.00	0.56	4.17	5.89	n/a
JUNC-57-04	JUNC-23-03	RECT_CLOSED	Closed Channel	6.47	0.04564	1.000	0.5	0	2.04	2.64	2.69	2.55	R 80 853.24
JUNC-57-05	JUNC-57-04	RECT_CLOSED	Closed Channel	7.58	0.03009	1.000	0.5	0	2.04	2.43	2.43	2.37	R 92 403.70
JUNC-57-05	JUNC-57-04	RECT_OPEN	Rectangular channel / Overflow conduit	8.12	0.02809	0.250	10	0	0.00	0.80	3.81	5.35	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-57-06	JUNC-57-05	RECT_CLOSED	Closed Channel	0.71	0.04512	1.000	0.5	0	2.04	2.47	2.50	2.45	R 11 550.46
JUNC-57-06	JUNC-57-05	RECT_OPEN	Rectangular channel / Overflow conduit	0.92	0.0348	0.250	10	0	0.00	0.70	3.68	5.14	n/a
JUNC-57-07	JUNC-57-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.03	0.02193	0.250	10	0	0.00	0.95	3.95	5.38	n/a
JUNC-57-07	JUNC-63-02	RECT_OPEN	Rectangular channel / Overflow conduit	8.03	-0.00062	0.250	5	0	0.00	0.10	0.61	0.89	n/a
JUNC-57-07	JUNC-57-06	RECT_CLOSED	Closed Channel	7.43	0.02666	1.000	0.5	0	2.04	2.16	2.16	2.16	R 92 403.70
JUNC-57-08	JUNC-57-07	RECT_OPEN	Rectangular channel / Overflow conduit	172.17	0.03144	0.250	10	0	0.00	1.00	4.52	6.28	n/a
JUNC-57-08	JUNC-23-11	RECT_CLOSED	Closed Channel	200.33	0.00365	0.500	0.5	0	0.29	0.33	0.32	0.32	n/a
JUNC-57-08	JUNC-57-07	RECT_CLOSED	Closed Channel	170.59	0.03173	1.000	0.5	0	2.05	2.24	2.24	2.26	R 2 031 101.12
JUNC-58-01	JUNC-41-02	RECT_OPEN	Rectangular channel / Overflow conduit	12.31	-0.01812	0.500	15	0	0.00	0.00	0.00	0.15	n/a
JUNC-58-01	JUNC-17-04	RECT_OPEN	Rectangular channel / Overflow conduit	189.55	0.00355	0.500	15	0	0.00	0.00	0.04	0.66	n/a
JUNC-58-01	JUNC-17-04	RECT_CLOSED	Closed Channel	187.54	0.00183	0.900	0.9	0	0.72	0.89	1.18	1.39	R 2 233 570.98
JUNC-59-01	JUNC-57-08	RECT_OPEN	Rectangular channel / Overflow conduit	61.71	0.03118	0.250	10	0	0.00	1.07	3.68	5.74	n/a
JUNC-59-01	JUNC-57-08	RECT_CLOSED	Closed Channel	60.38	0.03186	1.000	0.5	0	2.20	2.22	2.23	2.24	R 732 564.22
JUNC-59-02	JUNC-59-01	RECT_OPEN	Rectangular channel / Overflow conduit	10.44	0.03124	0.250	10	0	0.00	0.82	3.03	5.06	n/a
JUNC-59-02	JUNC-59-01	CIRCULAR	Pipe	9.58	0.03405	0.750	0	0	1.95	2.07	2.09	2.14	R 86 099.64
JUNC-59-03	JUNC-59-02	RECT_OPEN	Rectangular channel / Overflow conduit	5.03	0.02565	0.250	10	0	0.00	0.89	3.10	5.09	n/a
JUNC-59-03	JUNC-59-02	CIRCULAR	Pipe	4.25	0.03037	0.750	0	0	1.95	2.01	2.01	2.05	R 39 993.82
JUNC-59-04	JUNC-59-03	CIRCULAR	Pipe	2.66	0.02482	0.750	0	0	1.95	1.98	1.98	1.98	R 23 996.29
JUNC-59-04	JUNC-59-03	RECT_OPEN	Rectangular channel / Overflow conduit	3.39	0.01947	0.250	10	0	0.00	0.99	3.18	5.11	n/a
JUNC-59-05	JUNC-59-04	CIRCULAR	Pipe	28.43	0.03185	0.750	0	0	1.95	1.98	1.98	1.98	R 238 076.15
JUNC-59-05	JUNC-59-04	RECT_OPEN	Rectangular channel / Overflow conduit	29.53	0.03066	0.250	10	0	0.00	0.91	3.14	5.09	n/a
JUNC-59-06	JUNC-59-05	CIRCULAR	Pipe	35.73	0.03167	0.750	0	0	1.98	2.00	2.01	2.00	R 294 067.49
JUNC-59-06	JUNC-59-05	RECT_OPEN	Rectangular channel / Overflow conduit	37.56	0.03013	0.250	10	0	0.00	0.90	3.13	5.04	n/a
JUNC-59-07	JUNC-59-06	CIRCULAR	Pipe	7.61	0.02984	0.750	0	0	1.98	2.07	2.07	2.05	R 63 990.11
JUNC-59-07	JUNC-59-06	RECT_OPEN	Rectangular channel / Overflow conduit	9.16	0.02479	0.250	10	0	0.00	0.94	3.15	5.02	n/a
JUNC-59-08	JUNC-59-07	CIRCULAR	Pipe	8.15	0.0318	0.750	0	0	1.99	2.10	2.10	2.07	R 71 988.87

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-59-08	JUNC-59-07	RECT_OPEN	Rectangular channel / Overflow conduit	10.55	0.02456	0.250	10	0	0.00	0.90	3.13	4.97	n/a
JUNC-59-09	JUNC-59-08	CIRCULAR	Pipe	58.04	0.02765	0.750	0	0	1.76	1.85	1.85	1.85	R 492 569.06
JUNC-59-09	JUNC-59-08	RECT_OPEN	Rectangular channel / Overflow conduit	58.64	0.02736	0.250	10	0	0.00	0.76	2.66	4.46	n/a
JUNC-59-10	JUNC-59-09	CIRCULAR	Pipe	20.61	0.02776	0.750	0	0	1.76	1.95	1.96	1.98	R 174 086.04
JUNC-59-10	JUNC-59-09	RECT_OPEN	Rectangular channel / Overflow conduit	21.08	0.02714	0.250	10	0	0.00	0.75	2.66	4.41	n/a
JUNC-59-11	JUNC-59-10	RECT_OPEN	Rectangular channel / Overflow conduit	3.83	0.01802	0.250	10	0	0.00	0.77	2.60	4.27	n/a
JUNC-59-11	JUNC-59-10	CIRCULAR	Pipe	2.83	0.02439	0.750	0	0	1.76	2.01	2.04	2.02	R 23 996.29
JUNC-59-12	JUNC-59-11	RECT_OPEN	Rectangular channel / Overflow conduit	73.26	0.02745	0.250	10	0	0.00	0.76	2.68	4.42	n/a
JUNC-59-12	JUNC-59-11	CIRCULAR	Pipe	72.32	0.0278	0.750	0	0	1.76	1.97	1.97	1.98	R 610 663.75
JUNC-59-13	JUNC-59-12	RECT_OPEN	Rectangular channel / Overflow conduit	10.96	0.02382	0.250	10	0	0.00	0.19	1.45	2.95	n/a
JUNC-59-13	JUNC-59-12	CIRCULAR	Pipe	9.35	0.02793	0.750	0	0	1.23	1.75	1.80	1.80	R 86 099.64
JUNC-59-14	JUNC-59-13	RECT_OPEN	Rectangular channel / Overflow conduit	10.62	0.02449	0.250	10	0	0.00	0.08	1.34	2.82	n/a
JUNC-59-14	JUNC-59-13	CIRCULAR	Pipe	8.96	0.02903	0.750	0	0	1.23	1.86	1.88	1.91	R 71 988.87
JUNC-59-15	JUNC-59-14	CIRCULAR	Pipe	68.42	0.07607	0.750	0	0	1.23	1.96	3.19	3.19	R 578 668.69
JUNC-59-15	JUNC-59-14	RECT_OPEN	Rectangular channel / Overflow conduit	69.96	0.07439	0.250	10	0	0.00	0.00	0.18	1.65	n/a
JUNC-59-16	JUNC-59-15	RECT_OPEN	Rectangular channel / Overflow conduit	12.14	0.07268	0.250	10	0	0.00	0.00	0.00	1.37	n/a
JUNC-59-16	JUNC-59-15	CIRCULAR	Pipe	9.57	0.09235	0.750	0	0	1.23	1.96	3.29	3.40	R 79 987.64
JUNC-59-17	JUNC-59-16	RECT_OPEN	Rectangular channel / Overflow conduit	77.19	0.08194	0.250	10	0	1.27	2.01	4.04	4.92	n/a
JUNC-59-18	JUNC-59-17	RECT_OPEN	Rectangular channel / Overflow conduit	119.84	0.077	0.250	10	0	0.52	0.75	1.25	1.51	n/a
JUNC-59-19	JUNC-59-18	RECT_OPEN	Rectangular channel / Overflow conduit	81.46	0.09148	0.250	7.5	0	0.26	0.49	0.98	1.24	n/a
JUNC-59-19	JUNC-59-18	TRIANGULAR	Channel	80.88	0.09214	0.300	0.6	0	0.27	0.27	0.28	0.29	n/a
JUNC-60-01	STOR-21-04	PARABOLIC	Natural Channel	112.93	0.01441	3.000	10	0	0.42	1.37	15.42	19.05	n/a
JUNC-6-01	JUNC-1-06	PARABOLIC	Natural Channel	281.33	0.0113	1.000	10	0	1.10	2.18	5.17	6.43	n/a
JUNC-6-02	JUNC-6-01	PARABOLIC	Natural Channel	98.49	0.13022	1.000	10	0	0.61	1.35	3.22	3.94	n/a
JUNC-6-03	JUNC-6-02	CIRCULAR	Pipe	14.17	0.11602	0.300	0	0	0.35	0.36	0.39	0.39	n/a
JUNC-6-03	JUNC-6-02	RECT_OPEN	Rectangular channel / Overflow conduit	15.06	0.10908	0.500	10	0	0.27	0.99	2.84	3.57	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-6-04	JUNC-6-03	CIRCULAR	Pipe	3.63	0.12042	0.300	0	0	0.37	0.39	0.36	0.35	n/a
JUNC-6-04	JUNC-6-03	RECT_OPEN	Rectangular channel / Overflow conduit	4.06	0.10751	0.500	10	0	0.28	1.02	2.89	3.61	n/a
JUNC-6-05	JUNC-6-04	RECT_OPEN	Rectangular channel / Overflow conduit	155.75	0.01749	0.500	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-61-01	JUNC-21-03	RECT_OPEN	Rectangular channel / Overflow conduit	6.5	0.01139	0.500	10	0	0.00	0.46	2.06	2.90	n/a
JUNC-61-01	JUNC-21-03	CIRCULAR	Pipe	5.46	0.0718	0.400	0	0	0.84	1.02	0.93	0.84	n/a
JUNC-62-01	JUNC-21-06	PARABOLIC	Natural Channel	41.43	0.014	1.500	5	0	2.51	5.13	15.64	20.77	n/a
JUNC-62-02	JUNC-62-01	CIRCULAR	Pipe	21.36	0.05406	0.825	0	0	2.51	3.77	3.77	3.77	R 193 797.89
JUNC-62-02	JUNC-62-01	RECT_OPEN	Rectangular channel / Overflow conduit	26.05	0.0443	0.500	10	0	0.00	1.36	12.18	17.48	n/a
JUNC-62-03	JUNC-62-02	CIRCULAR	Pipe	74.76	0.02785	0.825	0	0	2.51	2.57	2.57	2.57	R 666 592.27
JUNC-62-03	JUNC-62-02	RECT_OPEN	Rectangular channel / Overflow conduit	78.49	0.02652	0.500	10	0	0.00	2.71	13.19	18.35	n/a
JUNC-62-04	JUNC-62-03	CIRCULAR	Pipe	17.22	0.05461	0.825	0	0	2.35	3.31	3.35	3.33	R 159 673.19
JUNC-62-04	JUNC-62-03	RECT_OPEN	Rectangular channel / Overflow conduit	19.42	0.04841	0.500	10	0	0.00	1.66	11.93	17.00	n/a
JUNC-62-05	JUNC-62-04	CIRCULAR	Pipe	44.98	0.05243	0.825	0	0	2.35	3.35	3.36	3.37	R 396 126.96
JUNC-62-05	JUNC-62-04	RECT_OPEN	Rectangular channel / Overflow conduit	49.11	0.04801	0.500	10	0	0.00	1.65	11.88	16.92	n/a
JUNC-62-06	JUNC-62-05	CIRCULAR	Pipe	29.14	0.05285	0.825	0	0	2.35	3.48	3.46	3.46	R 262 047.31
JUNC-62-06	JUNC-62-05	RECT_OPEN	Rectangular channel / Overflow conduit	34.33	0.04485	0.500	10	0	0.00	1.64	11.83	16.85	n/a
JUNC-62-07	JUNC-62-06	TRAPEZOIDAL	Channel	119.62	0.03204	1.500	0.6	3	2.36	4.98	15.12	20.12	R 417 979.68
JUNC-63-01	JUNC-23-04	RECT_OPEN	Rectangular channel / Overflow conduit	12.88	0.03286	0.250	5	0	0.00	0.00	0.41	0.71	n/a
JUNC-63-01	JUNC-23-04	RECT_CLOSED	Culvert	12.41	0.03411	0.300	0.3	0	0.00	0.10	0.22	0.22	n/a
JUNC-63-02	JUNC-63-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.06	0.01265	0.250	5	0	0.00	0.00	0.56	0.84	n/a
JUNC-63-02	JUNC-63-01	CIRCULAR	Pipe	4.31	0.01485	0.200	0	0	0.00	0.10	0.11	0.10	n/a
JUNC-64-01	JUNC-23-08	RECT_OPEN	Rectangular channel / Overflow conduit	200.5	0.00319	0.250	15	0	0.00	0.00	0.01	0.26	n/a
JUNC-64-01	JUNC-23-08	RECT_CLOSED	Closed Channel	199.53	0.00321	0.900	0.9	0	0.67	0.76	1.06	1.09	R 2 381 826.53
JUNC-64-02	JUNC-64-01	RECT_OPEN	Rectangular channel / Overflow conduit	18.05	0.02111	0.250	10	0	0.00	0.00	0.35	0.69	n/a
JUNC-64-02	JUNC-64-01	RECT_CLOSED	Closed Channel	16.43	0.0232	0.500	0.5	0	0.63	0.77	0.89	0.88	n/a
JUNC-64-03	JUNC-64-02	RECT_OPEN	Rectangular channel / Overflow conduit	234.13	0.02106	0.500	10	0	0.00	0.00	0.43	0.75	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-64-03	JUNC-64-02	RECT_CLOSED	Closed Channel	232.83	0.02118	0.500	0.5	0	0.65	0.79	0.81	0.81	n/a
JUNC-64-04	JUNC-64-03	RECT_OPEN	Rectangular channel / Overflow conduit	15.47	0.01636	0.250	10	0	0.00	0.00	0.84	1.19	n/a
JUNC-64-04	JUNC-64-03	CIRCULAR	Pipe	14.07	0.01798	0.525	0	0	0.67	0.79	0.85	0.86	R 89 594.37
JUNC-64-05	JUNC-64-04	RECT_OPEN	Rectangular channel / Overflow conduit	12.83	0.01871	0.250	10	0	0.00	0.00	0.85	1.20	n/a
JUNC-64-05	JUNC-64-04	CIRCULAR	Pipe	11.29	0.02126	0.525	0	0	0.65	0.79	0.85	0.85	R 66 785.90
JUNC-64-06	JUNC-64-05	RECT_OPEN	Rectangular channel / Overflow conduit	56.62	0.0194	0.250	10	0	0.00	0.00	0.54	0.80	n/a
JUNC-64-06	JUNC-64-05	CIRCULAR	Pipe	55.25	0.01988	0.525	0	0	0.49	0.60	0.60	0.60	R 338 421.53
JUNC-64-07	JUNC-64-06	CIRCULAR	Pipe	9.22	0.01931	0.525	0	0	0.49	0.60	0.63	0.63	R 61 766.92
JUNC-64-07	JUNC-64-06	RECT_OPEN	Rectangular channel / Overflow conduit	10.11	0.01761	0.250	10	0	0.00	0.00	0.55	0.80	n/a
JUNC-64-08	JUNC-64-07	RECT_OPEN	Rectangular channel / Overflow conduit	6.66	0.01457	0.250	10	0	0.00	0.00	0.54	0.79	n/a
JUNC-64-08	JUNC-64-07	CIRCULAR	Pipe	4.91	0.01976	0.525	0	0	0.49	0.61	0.64	0.64	R 27 827.46
JUNC-64-09	JUNC-64-08	RECT_OPEN	Rectangular channel / Overflow conduit	61.59	0.01944	0.250	10	0	0.00	0.00	0.56	0.81	n/a
JUNC-64-09	JUNC-64-08	CIRCULAR	Pipe	60.56	0.01977	0.525	0	0	0.49	0.65	0.65	0.65	R 360 136.99
JUNC-64-10	JUNC-64-09	RECT_OPEN	Rectangular channel / Overflow conduit	20.51	0.01058	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-64-10	JUNC-64-09	CIRCULAR	Pipe	17.5	0.0124	0.525	0	0	0.14	0.19	0.32	0.38	R 106 290.85
JUNC-64-11	JUNC-64-10	RECT_OPEN	Rectangular channel / Overflow conduit	77.6	0.01182	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-64-11	JUNC-64-10	CIRCULAR	Pipe	76.01	0.01207	0.525	0	0	0.15	0.21	0.32	0.38	R 449 731.37
JUNC-65-01	JUNC-23-11	RECT_CLOSED	Closed Channel	108.07	0.00404	1.000	0.5	0	0.26	0.50	0.71	0.72	R 1 280 315.97
JUNC-65-01	JUNC-23-11	RECT_OPEN	Rectangular channel / Overflow conduit	111.07	0.00393	0.250	5	0	0.00	0.00	0.30	0.55	n/a
JUNC-66-01	JUNC-23-15	RECT_CLOSED	Closed Channel	15.58	0.04575	0.200	0.2	0	0.11	0.11	0.11	0.11	n/a
JUNC-66-01	JUNC-23-15	RECT_OPEN	Rectangular channel / Overflow conduit	16.57	0.01883	0.250	10	0	0.44	0.70	1.32	1.61	n/a
JUNC-67-01	JUNC-26-01	PARABOLIC	Natural Channel	58.38	0.03975	1.000	5	0	0.11	0.17	0.29	0.35	n/a
JUNC-67-02	JUNC-67-01	CIRCULAR	Pipe	20.09	0.00762	0.300	0	0	0.11	0.17	0.19	0.20	n/a
JUNC-67-02	JUNC-67-01	RECT_OPEN	Rectangular channel / Overflow conduit	21.59	0.00709	0.250	10	0	0.00	0.00	0.10	0.16	n/a
JUNC-68-01	JUNC-26-01	PARABOLIC	Natural Channel	66.75	0.07178	1.000	5	0	1.03	1.90	5.10	6.71	n/a
JUNC-68-02	JUNC-68-01	CIRCULAR	Pipe	6.51	0.07703	0.300	0	0	0.14	0.21	0.40	0.39	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-68-02	JUNC-68-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.11	0.05497	0.250	10	0	0.00	0.00	0.00	0.12	n/a
JUNC-68-03	JUNC-68-02	CIRCULAR	Pipe	13.89	0.01174	0.300	0	0	0.14	0.21	0.25	0.25	n/a
JUNC-68-03	JUNC-68-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.01	0.01018	0.250	10	0	0.00	0.00	0.28	0.39	n/a
JUNC-69-01	JUNC-26-02	PARABOLIC	Natural Channel	49.29	0.08556	1.000	5	0	0.14	0.21	0.42	0.52	n/a
JUNC-69-02	JUNC-69-01	CIRCULAR	Pipe	6.51	0.02797	0.300	0	0	0.14	0.21	0.34	0.35	n/a
JUNC-69-02	JUNC-69-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.17	0.01985	0.250	10	0	0.00	0.00	0.08	0.17	n/a
JUNC-69-03	JUNC-69-02	CIRCULAR	Pipe	13.89	0.0085	0.300	0	0	0.14	0.21	0.22	0.22	n/a
JUNC-69-03	JUNC-69-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.03	0.00736	0.250	10	0	0.00	0.00	0.32	0.42	n/a
JUNC-70-01	JUNC-27-05	CIRCULAR	Pipe	6.04	0.02667	0.450	0	0	0.39	0.63	0.78	0.74	R 30 459.64
JUNC-70-01	JUNC-27-05	RECT_OPEN	Rectangular channel / Overflow conduit	8.28	0.01945	0.500	10	0	0.00	0.00	1.11	2.91	n/a
JUNC-70-02	JUNC-70-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.01	0.02906	0.500	10	0	0.00	0.00	0.63	0.88	n/a
JUNC-70-02	JUNC-70-01	CIRCULAR	Pipe	12.21	0.03335	0.450	0	0	0.39	0.63	0.65	0.64	R 65 995.89
JUNC-7-01	JUNC-1-07	PARABOLIC	Natural Channel	8.18	0.02336	1.000	10	0	5.94	9.92	7.36	9.12	n/a
JUNC-7-02	JUNC-7-01	PARABOLIC	Natural Channel	311.47	0.0234	1.000	10	0	1.30	2.68	7.08	9.12	n/a
JUNC-7-03	JUNC-7-02	PARABOLIC	Natural Channel	127.66	0.06137	1.000	5	0	0.88	1.93	5.66	7.38	n/a
JUNC-7-04	JUNC-7-03	PARABOLIC	Natural Channel	657.89	0.22252	1.000	5	0	0.88	1.97	5.81	7.57	n/a
JUNC-71-01	JUNC-27-02	CIRCULAR	Pipe	59.21	0.02833	0.450	0	0	0.30	0.46	0.47	0.47	R 325 238.42
JUNC-71-01	JUNC-27-02	RECT_OPEN	Rectangular channel / Overflow conduit	60.94	0.02753	0.250	10	0	0.00	0.15	1.36	1.93	n/a
JUNC-71-02	JUNC-71-01	CIRCULAR	Pipe	7.65	0.02681	0.450	0	0	0.30	0.49	0.52	0.50	R 40 612.86
JUNC-71-02	JUNC-71-01	RECT_OPEN	Rectangular channel / Overflow conduit	9.02	0.02273	0.250	10	0	0.00	0.14	1.33	1.88	n/a
JUNC-71-03	JUNC-71-02	CIRCULAR	Pipe	106.24	0.00513	0.450	0	0	0.29	0.31	0.31	0.31	R 584 480.96
JUNC-71-03	JUNC-71-02	RECT_OPEN	Rectangular channel / Overflow conduit	107.51	0.00507	0.250	10	0	0.01	0.40	1.59	2.14	n/a
JUNC-71-04	JUNC-71-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.16	0.0272	0.250	10	0	0.00	0.21	1.48	2.04	n/a
JUNC-71-04	JUNC-71-03	CIRCULAR	Pipe	13.32	0.02892	0.450	0	0	0.34	0.49	0.48	0.48	R 71 072.50
JUNC-71-05	JUNC-71-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.53	0.01472	0.250	10	0	0.00	0.09	0.82	1.16	n/a
JUNC-71-05	JUNC-71-04	CIRCULAR	Pipe	10.24	0.01514	0.450	0	0	0.22	0.34	0.34	0.34	R 55 842.68

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-72-01	JUNC-27-10	RECT_OPEN	Rectangular channel / Overflow conduit	75.37	0.01246	0.250	10	0	0.19	1.04	3.06	3.96	n/a
JUNC-72-01	JUNC-27-10	CIRCULAR	Pipe	73.41	0.01279	0.675	0	0	1.14	1.15	1.15	1.15	R 517 912.89
JUNC-72-02	JUNC-72-01	RECT_OPEN	Rectangular channel / Overflow conduit	169.66	0.01576	0.250	10	0	0.43	0.92	2.16	2.73	n/a
JUNC-72-02	JUNC-72-01	CIRCULAR	Pipe	167.52	0.01596	0.500	0	0	0.54	0.54	0.54	0.54	R 988 510.60
JUNC-72-03	JUNC-72-02	CIRCULAR	Pipe	18.92	0.02162	0.675	0	0	1.05	1.21	1.21	1.20	R 132 220.36
JUNC-72-03	JUNC-72-02	RECT_OPEN	Rectangular channel / Overflow conduit	21.21	0.01929	0.250	10	0	0.00	0.33	1.53	2.12	n/a
JUNC-72-04	JUNC-72-03	CIRCULAR	Pipe	13.5	0.01608	0.675	0	0	1.05	1.15	1.13	1.13	R 99 033.95
JUNC-72-04	JUNC-72-03	RECT_OPEN	Rectangular channel / Overflow conduit	14.65	0.01481	0.250	10	0	0.00	0.44	1.63	2.22	n/a
JUNC-73-01	JUNC-27-15	RECT_CLOSED	Culvert	9.61	0.08217	0.300	0.6	0	0.00	0.00	0.07	0.08	n/a
JUNC-74-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	71.16	0.0058	0.500	10	0	0.00	0.00	0.26	0.77	n/a
JUNC-74-01	JUNC-29-02	CIRCULAR	Pipe	70.11	0.01855	0.600	0	0	0.23	0.39	0.45	0.43	n/a
JUNC-75-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	125.82	0.04113	0.500	15	0	0.05	2.81	24.19	33.01	n/a
JUNC-75-02	JUNC-29-06	CIRCULAR	Pipe	2.52	0.04966	0.750	0	0	1.90	3.08	3.09	3.08	n/a
JUNC-75-02	JUNC-29-06	RECT_OPEN	Rectangular channel / Overflow conduit	2.94	0.04256	0.500	10	0	0.00	1.26	8.26	11.47	n/a
JUNC-75-03	JUNC-75-02	CIRCULAR	Pipe	35.17	0.07522	0.750	0	0	1.87	3.04	3.08	3.07	n/a
JUNC-75-03	JUNC-75-02	RECT_OPEN	Rectangular channel / Overflow conduit	36.1	0.04542	0.500	10	0	0.00	0.82	7.40	10.47	n/a
JUNC-75-04	JUNC-75-03	CIRCULAR	Pipe	30.96	0.06028	0.750	0	0	1.87	2.92	2.93	2.93	n/a
JUNC-75-04	JUNC-75-03	RECT_OPEN	Rectangular channel / Overflow conduit	33.16	0.03207	0.500	10	0	0.00	1.13	7.66	10.67	n/a
JUNC-75-05	JUNC-75-04	TRAPEZOIDAL	Trapezoidal Channel	163.36	0.00627	1.500	1.5	3	1.48	2.99	8.50	11.24	n/a
JUNC-75-06	JUNC-75-05	TRAPEZOIDAL	Trapezoidal Channel	85.43	0.01153	1.500	1.5	3	0.21	0.30	0.48	0.57	n/a
JUNC-75-07	JUNC-75-06	TRAPEZOIDAL	Trapezoidal Channel	33.89	0.05793	0.300	0.3	4	0.22	0.31	0.50	0.60	n/a
JUNC-76-01	JUNC-29-02	RECT_OPEN	Rectangular channel / Overflow conduit	22.02	0.00663	0.500	10	0	0.05	0.26	0.81	0.86	n/a
JUNC-76-01	JUNC-29-02	CIRCULAR	Pipe	21.31	0.06801	0.300	0	0	0.23	0.24	0.19	0.16	n/a
JUNC-77-01	JUNC-29-10	CIRCULAR	Pipe	123.66	0.06721	0.675	0	0	1.56	2.10	2.17	2.18	R 864 307.01
JUNC-77-01	JUNC-29-10	RECT_OPEN	Rectangular channel / Overflow conduit	124.74	0.05695	0.500	10	0	0.00	1.33	7.04	9.47	n/a
JUNC-77-02	JUNC-77-01	CIRCULAR	Pipe	10.06	0.00626	0.675	0	0	1.56	2.05	2.06	2.06	R 73 010.11

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-77-02	JUNC-77-01	RECT_OPEN	Rectangular channel / Overflow conduit	11.83	0.00533	0.500	10	0	0.00	2.22	7.62	9.96	n/a
JUNC-77-03	JUNC-77-02	TRAPEZOIDAL	Trapezoidal Channel	59.99	0.05037	0.500	0.5	3	1.31	2.94	5.04	5.04	n/a
JUNC-77-03	JUNC-77-02	RECT_OPEN	Rectangular channel / Overflow conduit	62.89	0.04804	0.500	10	0	0.00	0.00	3.08	5.35	n/a
JUNC-77-04	JUNC-77-03	CIRCULAR	Pipe	9.58	0.10315	0.500	0	0	0.95	1.55	1.57	1.57	n/a
JUNC-77-04	JUNC-77-03	RECT_OPEN	Rectangular channel / Overflow conduit	10.06	0.09818	0.250	10	0	0.00	0.43	4.39	6.01	n/a
JUNC-78-01	JUNC-31-02	RECT_OPEN	Rectangular channel / Overflow conduit	42.85	0.04642	0.250	10	0	0.00	0.00	0.00	0.73	n/a
JUNC-78-01	JUNC-31-02	CIRCULAR	Pipe	40.87	0.04868	0.500	0	0	0.52	0.75	0.94	0.98	n/a
JUNC-78-02	JUNC-78-01	PARABOLIC	Natural Channel	29.13	0.03813	1.000	5	0	0.42	0.58	1.34	2.39	n/a
JUNC-78-03	JUNC-78-02	RECT_OPEN	Rectangular channel / Overflow conduit	22.17	0.0231	0.250	10	0	0.05	0.08	0.12	0.15	n/a
JUNC-78-03	JUNC-78-02	CIRCULAR	Pipe	21.82	0.02347	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-04	JUNC-78-03	PARABOLIC	Natural Channel	49.59	0.06322	1.000	5	0	0.06	0.08	0.13	0.15	n/a
JUNC-78-05	JUNC-78-04	RECT_OPEN	Rectangular channel / Overflow conduit	7.8	0.08557	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-05	JUNC-78-04	CIRCULAR	Pipe	7.37	0.0906	0.300	0	0	0.06	0.08	0.13	0.15	n/a
JUNC-78-06	JUNC-78-05	RECT_OPEN	Rectangular channel / Overflow conduit	12.47	0.09676	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-78-06	JUNC-78-05	CIRCULAR	Pipe	11.97	0.10084	0.300	0	0	0.00	0.00	0.00	0.00	n/a
JUNC-79-01	JUNC-32-03	PARABOLIC	Natural Channel	124.29	0.01127	1.000	10	0	1.50	3.02	7.83	10.00	n/a
JUNC-79-02	JUNC-79-01	PARABOLIC	Natural Channel	87.17	0.01693	1.000	10	0	0.50	0.85	1.61	1.95	n/a
JUNC-79-03	JUNC-79-02	PARABOLIC	Natural Channel	134.13	0.1281	1.000	5	0	0.10	0.17	0.29	0.34	n/a
JUNC-79-04	JUNC-79-03	RECT_OPEN	Rectangular channel / Overflow conduit	8.58	0.08209	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-79-04	JUNC-79-03	CIRCULAR	Pipe	6.16	0.11471	0.300	0	0	0.10	0.18	0.29	0.34	n/a
JUNC-80-01	JUNC-34-02	PARABOLIC	Natural Channel	57.23	0.02193	1.500	10	0	0.89	1.10	1.46	1.52	n/a
JUNC-80-02	JUNC-80-01	CIRCULAR	Pipe	13.62	0.03931	0.525	0	0	0.43	0.67	1.10	1.10	R 84 028.88
JUNC-80-02	JUNC-80-01	RECT_OPEN	Rectangular channel / Overflow conduit	15.43	0.03469	0.250	5	0	0.00	0.00	0.04	0.39	n/a
JUNC-8-01	JUNC-1-08	PARABOLIC	Natural Channel	5.69	0.08004	2.000	10	0	14.01	13.52	18.77	22.51	n/a
JUNC-8-02	JUNC-8-01	CIRCULAR	Pipe	53.71	0.0194	0.600	0	0	1.00	1.09	1.07	1.08	R 348 904.00
JUNC-8-02	JUNC-8-01	RECT_OPEN	Rectangular channel / Overflow conduit	56.71	0.01838	2.000	20	0	0.32	0.99	6.65	8.66	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-8-03	JUNC-8-02	CIRCULAR	Pipe	107.92	0.06332	0.600	0	0	1.21	1.61	1.61	1.61	R 697 808.00
JUNC-8-03	JUNC-8-02	RECT_OPEN	Rectangular channel / Overflow conduit	110.36	0.06192	0.500	10	0	0.00	0.35	5.82	7.55	n/a
JUNC-8-04	JUNC-8-03	RECT_OPEN	Rectangular channel / Overflow conduit	27.96	0.09166	0.500	10	0	0.00	0.02	5.50	7.21	n/a
JUNC-8-04	JUNC-8-03	CIRCULAR	Pipe	26.86	0.09544	0.600	0	0	1.21	1.88	1.89	1.90	R 170 243.00
JUNC-8-05	JUNC-8-04	CIRCULAR	Pipe	14.44	0.02799	0.600	0	0	1.05	1.53	1.53	1.53	R 97 295.89
JUNC-8-05	JUNC-8-04	RECT_OPEN	Rectangular channel / Overflow conduit	17.48	0.02312	0.500	10	0	0.00	0.72	5.79	7.34	n/a
JUNC-8-06	JUNC-8-05	CIRCULAR	Pipe	61.53	0.06678	0.600	0	0	0.81	1.54	1.61	1.61	R 397 535.41
JUNC-8-06	JUNC-8-05	RECT_OPEN	Rectangular channel / Overflow conduit	65.41	0.06281	0.500	10	0	0.00	0.00	4.35	5.66	n/a
JUNC-8-07	JUNC-8-06	RECT_OPEN	Rectangular channel / Overflow conduit	86.2	0.02486	0.250	10	0	0.32	1.25	4.22	5.00	n/a
JUNC-8-08	JUNC-8-07	CIRCULAR	Pipe	25.33	0.00217	0.300	0	0	0.15	0.16	0.19	0.19	n/a
JUNC-8-08	JUNC-8-07	RECT_OPEN	Rectangular channel / Overflow conduit	30.68	0.00179	0.500	10	0	0.17	1.10	4.02	4.80	n/a
JUNC-8-10	JUNC-8-09	CIRCULAR	Pipe	23.9	0.00218	0.300	0	0	0.14	0.15	0.15	0.14	n/a
JUNC-8-09	JUNC-8-08	RECT_OPEN	Rectangular channel / Overflow conduit	51.04	0.00278	0.250	10	0	0.29	1.08	3.51	4.18	n/a
JUNC-8-10	JUNC-8-09	RECT_OPEN	Rectangular channel / Overflow conduit	29.06	0.00179	0.500	10	0	0.25	1.04	3.48	4.19	n/a
JUNC-81-01	JUNC-34-02	PARABOLIC	Natural Channel	105.04	0.04672	1.000	5	0	0.20	0.34	0.63	0.75	n/a
JUNC-81-02	JUNC-81-01	RECT_OPEN	Rectangular channel / Overflow conduit	33.78	0.06482	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-81-02	JUNC-81-01	CIRCULAR	Pipe	30.97	0.07073	0.675	0	0	0.14	0.20	0.32	0.38	n/a
JUNC-8-11	JUNC-8-10	RECT_OPEN	Rectangular channel / Overflow conduit	75.21	0.07115	0.300	10	0	0.66	1.33	2.93	3.57	n/a
JUNC-8-12	JUNC-8-11	RECT_OPEN	Rectangular channel / Overflow conduit	30.85	0.09304	0.250	10	0	0.08	0.52	1.65	2.10	n/a
JUNC-8-12	JUNC-8-11	CIRCULAR	Pipe	28.62	0.10036	0.300	0	0	0.27	0.28	0.29	0.29	n/a
JUNC-82-01	JUNC-34-03	PARABOLIC	Natural Channel	35.99	0.0537	1.000	10	0	1.36	1.95	4.21	5.86	n/a
JUNC-82-02	JUNC-82-01	CIRCULAR	Pipe	15.51	0.07032	0.750	0	0	1.36	1.95	3.86	3.95	n/a
JUNC-82-02	JUNC-82-01	RECT_OPEN	Rectangular channel / Overflow conduit	17.48	0.06236	0.500	10	0	0.00	0.00	0.35	1.90	n/a
JUNC-82-03	JUNC-82-02	CIRCULAR	Pipe	50.49	0.01079	0.750	0	0	1.18	1.70	1.76	1.75	n/a
JUNC-82-03	JUNC-82-02	RECT_OPEN	Rectangular channel / Overflow conduit	51.33	0.00199	0.500	10	0	0.00	0.05	2.99	4.47	n/a
JUNC-82-04	JUNC-82-03	CIRCULAR	Pipe	52.62	0.00602	0.750	0	0	0.99	1.66	1.80	1.80	R 444 576.47

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-82-04	JUNC-82-03	RECT_OPEN	Rectangular channel / Overflow conduit	53.17	0.02655	0.250	10	0	0.00	0.00	2.12	3.28	n/a
JUNC-82-05	JUNC-82-04	CIRCULAR	Pipe	44.67	0.06652	0.450	0	0	0.40	0.54	0.67	0.66	R 242 977.32
JUNC-82-05	JUNC-82-04	RECT_OPEN	Rectangular channel / Overflow conduit	45.47	0.05427	0.250	10	0	0.00	0.00	0.16	0.37	n/a
JUNC-82-06	JUNC-82-05	CIRCULAR	Pipe	50.08	0.06479	0.450	0	0	0.09	0.12	0.19	0.23	n/a
JUNC-82-06	JUNC-82-05	RECT_OPEN	Rectangular channel / Overflow conduit	51.58	0.04674	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-82-07	JUNC-82-06	CIRCULAR	Pipe	13.58	0.09535	0.450	0	0	0.09	0.12	0.19	0.23	R 77 184.50
JUNC-82-07	JUNC-82-06	RECT_OPEN	Rectangular channel / Overflow conduit	14.98	0.08637	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-83-01	JUNC-34-04	PARABOLIC	Natural Channel	21.94	0.02033	1.000	10	0	0.25	0.41	1.08	1.20	n/a
JUNC-83-02	JUNC-83-01	CIRCULAR	Pipe	31.13	0.01571	0.450	0	0	0.25	0.41	0.54	0.54	R 174 675.43
JUNC-83-02	JUNC-83-01	RECT_OPEN	Rectangular channel / Overflow conduit	32.15	0.01521	0.250	7.5	0	0.00	0.00	0.21	0.39	n/a
JUNC-83-03	JUNC-83-02	CIRCULAR	Pipe	10.31	0.01038	0.450	0	0	0.25	0.42	0.49	0.51	R 61 954.68
JUNC-83-03	JUNC-83-02	RECT_OPEN	Rectangular channel / Overflow conduit	10.82	0.00989	0.250	7.5	0	0.00	0.00	0.44	0.59	n/a
JUNC-84-01	JUNC-34-05	PARABOLIC	Natural Channel	152.45	0.1059	1.000	5	0	0.16	0.39	0.93	1.13	n/a
JUNC-85-01	JUNC-34-07	PARABOLIC	Natural Channel	472.44	0.04356	1.500	15	0	0.00	0.00	0.00	0.00	n/a
JUNC-86-01	JUNC-34-07	PARABOLIC	Natural Channel	88.37	0.00498	1.500	10	0	6.07	10.92	30.59	43.69	n/a
JUNC-86-02	JUNC-86-01	CIRCULAR	Pipe	17.92	0.00084	0.750	0	0	3.49	3.51	3.51	3.51	n/a
JUNC-86-02	JUNC-86-01	RECT_OPEN	Rectangular channel / Overflow conduit	20.97	0.04128	1.000	10	0	2.49	7.51	27.53	39.16	n/a
JUNC-86-03	JUNC-86-02	CIRCULAR	Pipe	99.86	0.09332	0.675	0	0	2.67	2.67	2.67	2.67	n/a
JUNC-86-03	JUNC-86-02	RECT_OPEN	Rectangular channel / Overflow conduit	101.69	0.0925	0.500	15	0	3.33	8.25	27.85	39.45	n/a
JUNC-86-04	JUNC-86-03	CIRCULAR	Pipe	24.87	0.01769	0.675	0	0	0.48	0.42	0.47	0.47	n/a
JUNC-86-04	JUNC-86-03	RECT_OPEN	Rectangular channel / Overflow conduit	27.07	0.00148	0.500	15	0	0.75	1.94	6.23	8.17	n/a
JUNC-86-05	JUNC-86-04	CIRCULAR	Pipe	85.08	0.03004	0.375	0	0	0.33	0.32	0.32	0.35	n/a
JUNC-86-05	JUNC-86-04	RECT_OPEN	Rectangular channel / Overflow conduit	87.08	0.02549	0.500	10	0	0.78	2.04	6.34	8.24	n/a
JUNC-86-06	JUNC-86-05	CIRCULAR	Pipe	65.94	0.00443	0.375	0	0	0.27	0.27	0.27	0.27	n/a
JUNC-86-06	JUNC-86-05	RECT_OPEN	Rectangular channel / Overflow conduit	68.11	0.00335	0.500	10	0	0.81	1.97	6.07	7.87	n/a
JUNC-86-07	JUNC-86-06	CIRCULAR	Pipe	26.99	0.14817	0.300	0	0	0.34	0.34	0.34	0.34	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-86-07	JUNC-86-06	RECT_OPEN	Rectangular channel / Overflow conduit	27.76	0.12179	0.500	10	0	0.59	1.78	5.94	7.76	n/a
JUNC-87-01	JUNC-35-01	PARABOLIC	Natural Channel	78.22	0.00736	1.000	10	0	0.42	0.71	1.37	1.67	n/a
JUNC-87-02	JUNC-87-01	CIRCULAR	Pipe	21.18	0.04069	0.600	0	0	0.29	0.48	0.81	0.97	n/a
JUNC-87-02	JUNC-87-01	RECT_OPEN	Rectangular channel / Overflow conduit	24.42	0.03528	0.250	7.5	0	0.00	0.00	0.00	0.00	n/a
JUNC-87-03	JUNC-87-02	CIRCULAR	Pipe	18.77	0.07318	0.300	0	0	0.29	0.32	0.33	0.33	R 85 699.90
JUNC-87-03	JUNC-87-02	RECT_OPEN	Rectangular channel / Overflow conduit	21.28	0.06451	0.250	7.5	0	0.00	0.16	0.49	0.65	n/a
JUNC-87-04	JUNC-87-03	CIRCULAR	Pipe	27.75	0.07986	0.300	0	0	0.29	0.30	0.30	0.30	R 123 399.44
JUNC-87-04	JUNC-87-03	RECT_OPEN	Rectangular channel / Overflow conduit	30.18	0.07339	0.250	7.5	0	0.00	0.21	0.54	0.70	n/a
JUNC-87-05	JUNC-87-04	CIRCULAR	Pipe	9.62	0.08366	0.300	0	0	0.31	0.33	0.32	0.32	R 41 888.37
JUNC-87-05	JUNC-87-04	RECT_OPEN	Rectangular channel / Overflow conduit	10.46	0.0769	0.250	7.5	0	0.02	0.21	0.54	0.71	n/a
JUNC-88-01	JUNC-35-02	PARABOLIC	Natural Channel	105.25	0.002	1.000	5	0	0.23	0.32	0.52	0.60	n/a
JUNC-88-02	JUNC-88-01	CIRCULAR	Pipe	27.06	0.01416	0.450	0	0	0.24	0.34	0.54	0.54	R 148 257.00
JUNC-88-02	JUNC-88-01	RECT_OPEN	Rectangular channel / Overflow conduit	28.72	0.01334	0.250	10	0	0.00	0.00	0.00	0.08	n/a
JUNC-88-03	JUNC-88-02	CIRCULAR	Pipe	9.7	0.03755	0.450	0	0	0.24	0.35	0.55	0.56	R 50 766.07
JUNC-88-03	JUNC-88-02	RECT_OPEN	Rectangular channel / Overflow conduit	12.15	0.02997	0.250	10	0	0.00	0.00	0.00	0.10	n/a
JUNC-89-01	JUNC-35-03	PARABOLIC	Natural Channel	26.26	0.01017	1.000	5	0	0.27	0.37	0.65	0.78	n/a
JUNC-89-02	JUNC-89-01	CIRCULAR	Pipe	12.19	0.09851	0.300	0	0	0.27	0.37	0.38	0.38	n/a
JUNC-89-02	JUNC-89-01	RECT_OPEN	Rectangular channel / Overflow conduit	13.52	0.08873	0.250	10	0	0.00	0.00	0.27	0.40	n/a
JUNC-89-03	JUNC-89-02	CIRCULAR	Pipe	10.31	0.02765	0.300	0	0	0.27	0.30	0.30	0.30	n/a
JUNC-89-03	JUNC-89-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.12	0.02564	0.250	10	0	0.00	0.21	0.48	0.61	n/a
JUNC-90-01	JUNC-35-04	PARABOLIC	Natural Channel	42.58	0.0393	0.300	3	0	0.15	0.25	0.42	0.50	n/a
JUNC-90-02	JUNC-90-01	CIRCULAR	Pipe	5.27	0.07746	0.450	0	0	0.15	0.25	0.43	0.51	n/a
JUNC-90-02	JUNC-90-01	RECT_OPEN	Rectangular channel / Overflow conduit	7.15	0.05702	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-90-03	JUNC-90-02	CIRCULAR	Pipe	10.31	0.06874	0.450	0	0	0.15	0.25	0.43	0.51	n/a
JUNC-90-03	JUNC-90-02	RECT_OPEN	Rectangular channel / Overflow conduit	11.67	0.06069	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-9-01	JUNC-1-10	RECT_OPEN	Rectangular channel / Overflow conduit	55.42	0.0888	0.300	10	0	0.91	1.40	3.00	3.65	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m³/s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-9-02	JUNC-9-01	CIRCULAR	Pipe	37.67	0.04664	0.525	0	0	0.85	0.87	0.90	0.91	R 223 712.68
JUNC-9-02	JUNC-9-01	RECT_OPEN	Rectangular channel / Overflow conduit	38.93	0.04513	0.250	10	0	0.05	0.53	2.11	2.75	n/a
JUNC-9-03	JUNC-9-02	CIRCULAR	Pipe	48.11	0.07948	0.525	0	0	0.92	1.21	1.21	1.22	R 287 785.60
JUNC-9-03	JUNC-9-02	RECT_OPEN	Rectangular channel / Overflow conduit	49.63	0.07704	0.250	10	0	0.00	0.21	1.80	2.45	n/a
JUNC-9-04	JUNC-9-03	CIRCULAR	Pipe	23.27	0.05341	0.525	0	0	0.92	1.18	1.18	1.18	R 139 683.80
JUNC-9-04	JUNC-9-03	RECT_OPEN	Rectangular channel / Overflow conduit	23.97	0.05184	0.250	10	0	0.00	0.42	2.01	2.66	n/a
JUNC-9-05	JUNC-9-04	RECT_OPEN	Rectangular channel / Overflow conduit	154.05	0.01747	0.250	10	0	0.00	0.25	1.05	1.39	n/a
JUNC-9-05	JUNC-9-04	CIRCULAR	Pipe	152.42	0.01766	0.525	0	0	0.60	0.63	0.62	0.62	R 898 916.22
JUNC-9-06	JUNC-9-05	RECT_OPEN	Rectangular channel / Overflow conduit	21.9	0.03587	0.250	10	0	0.00	0.43	1.14	1.49	n/a
JUNC-9-06	JUNC-9-05	CIRCULAR	Pipe	20.11	0.03907	0.450	0	0	0.68	0.70	0.68	0.68	R 112 720.75
JUNC-91-01	JUNC-35-10	PARABOLIC	Natural Channel	44.7	0.05217	0.300	3	0	0.07	0.10	0.16	0.19	n/a
JUNC-91-02	JUNC-91-01	CIRCULAR	Pipe	10.74	0.06597	0.300	0	0	0.08	0.10	0.17	0.20	n/a
JUNC-91-03	JUNC-91-02	CIRCULAR	Pipe	9.69	0.06702	0.300	0	0	0.08	0.10	0.17	0.20	n/a
JUNC-92-01	JUNC-35-06	CIRCULAR	Pipe	111.95	0.04232	0.450	0	0	0.31	0.49	0.51	0.52	R 609 863.99
JUNC-92-01	JUNC-35-06	RECT_OPEN	Rectangular channel / Overflow conduit	114.08	0.04153	0.250	10	0	0.00	0.00	0.39	0.59	n/a
JUNC-92-02	JUNC-92-01	CIRCULAR	Pipe	12.94	0.04246	0.450	0	0	0.32	0.54	0.66	0.67	R 72 107.89
JUNC-92-02	JUNC-92-01	RECT_OPEN	Rectangular channel / Overflow conduit	14.56	0.03773	0.250	10	0	0.00	0.00	0.41	0.61	n/a
JUNC-93-01	JUNC-36-03	RECT_OPEN	Rectangular channel / Overflow conduit	263.38	0.04208	0.500	10	0	0.98	1.67	3.34	4.07	n/a
JUNC-93-02	JUNC-93-01	CIRCULAR	Pipe	5.13	0.09793	0.300	0	0	0.14	0.21	0.32	0.38	n/a
JUNC-93-02	JUNC-93-01	RECT_OPEN	Rectangular channel / Overflow conduit	5.89	0.0852	0.250	10	0	0.00	0.00	0.00	0.00	n/a
JUNC-93-03	JUNC-93-02	CIRCULAR	Pipe	15.63	0.10167	0.300	0	0	0.14	0.21	0.32	0.35	n/a
JUNC-93-03	JUNC-93-02	RECT_OPEN	Rectangular channel / Overflow conduit	16.01	0.09924	0.250	10	0	0.00	0.00	0.00	0.05	n/a
JUNC-94-01	JUNC-36-07	RECT_OPEN	Rectangular channel / Overflow conduit	98.13	0.02949	0.250	10	0	0.21	0.33	0.58	0.70	n/a
JUNC-94-02	JUNC-94-01	RECT_OPEN	Rectangular channel / Overflow conduit	221.76	0.05833	0.250	10	0	0.23	0.37	0.63	0.76	n/a
JUNC-95-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	97.29	0.00544	0.300	0.5	0	0.23	0.31	0.35	0.35	n/a
JUNC-95-01	JUNC-41-05	RECT_OPEN	Rectangular channel / Overflow conduit	98.94	0.00535	0.250	10	0	0.00	0.00	0.35	0.56	n/a

Table 7.1: Montagu Proposed Remedial and Future Stormwater Drainage System Details

Node Reference		Conduit Description	Conduit Description	Conduit Details					Peak Flow Rates (m ³ /s)				Capital Upgrade Cost (Rand)
Upstream Node	Downstream Node			Length (m)	Slope (m/m)	Depth / Diameter (m)	Width (m)	Side Slopes (vert : horizontal)	1 in 5yr	1 in 10yr	1 in 50 yr	1 in 100yr	
JUNC-95-02	JUNC-95-01	RECT_CLOSED	Closed Channel	87.25	0.00538	0.500	0.5	0	0.24	0.37	0.43	0.42	n/a
JUNC-95-02	JUNC-95-01	RECT_OPEN	Rectangular channel / Overflow conduit	88.56	0.0053	0.250	10	0	0.00	0.00	0.32	0.53	n/a
JUNC-95-03	JUNC-95-02	RECT_CLOSED	Closed Channel	11.54	0.01395	0.500	0.5	0	0.24	0.38	0.58	0.58	n/a
JUNC-95-03	JUNC-95-02	RECT_OPEN	Rectangular channel / Overflow conduit	13.11	0.01228	0.250	10	0	0.00	0.00	0.23	0.44	n/a
JUNC-96-01	JUNC-59-17	RECT_OPEN	Rectangular channel / Overflow conduit	92.1	0.06326	0.250	10	0	0.77	1.31	2.86	3.49	n/a
JUNC-96-02	JUNC-96-01	RECT_OPEN	Rectangular channel / Overflow conduit	36.34	0.09202	0.250	10	0	0.54	1.07	2.60	3.22	n/a
JUNC-96-02	JUNC-96-01	TRIANGULAR	Channel	31.29	0.09082	0.300	0.6	0	0.24	0.25	0.27	0.28	n/a
JUNC-96-03	JUNC-96-02	RECT_OPEN	Rectangular channel / Overflow conduit	9.65	0.12352	0.250	10	0	0.55	1.08	2.64	3.27	n/a
JUNC-96-03	JUNC-96-02	CIRCULAR	Pipe	7.84	0.15264	0.250	0	0	0.23	0.23	0.23	0.23	n/a
JUNC-96-04	JUNC-96-03	RECT_OPEN	Rectangular channel / Overflow conduit	131.34	0.09627	0.250	10	0	0.00	0.00	0.36	0.53	n/a
JUNC-96-04	JUNC-96-03	TRIANGULAR	Channel	128.65	0.0983	0.300	0.6	0	0.38	0.45	0.45	0.45	n/a
JUNC-97-01	JUNC-64-09	RECT_OPEN	Rectangular channel / Overflow conduit	5.85	0.02497	0.250	10	0	0.22	0.40	0.83	1.02	n/a
JUNC-97-01	JUNC-64-09	CIRCULAR	Pipe	5.4	0.02705	0.200	0	0	0.14	0.14	0.14	0.14	n/a
JUNC-98-01	JUNC-75-01	RECT_OPEN	Rectangular channel / Overflow conduit	48.83	0.01006	0.300	10	0	0.06	0.09	0.14	0.16	n/a
JUNC-98-02	JUNC-98-01	CIRCULAR	Pipe	15.31	0.0366	0.300	0	0	0.03	0.04	0.07	0.08	n/a
JUNC-98-02	JUNC-98-01	CIRCULAR	Pipe	13.23	0.04237	0.300	0	0	0.03	0.05	0.07	0.09	n/a
JUNC-99-01	JUNC-78-02	RECT_OPEN	Rectangular channel / Overflow conduit	6.83	0.04646	0.250	10	0	0.01	0.14	0.44	0.59	n/a
JUNC-99-01	JUNC-78-02	CIRCULAR	Pipe	6.62	0.04794	0.300	0	0	0.37	0.37	0.39	0.39	n/a