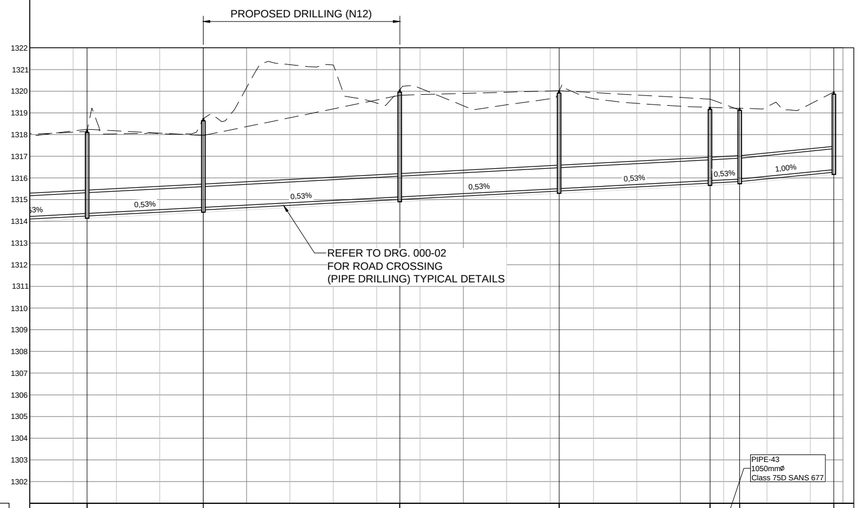


SCALES:
Horizontal 1:1000
Vertical 1:100

DATUM 1301.000

REFERENCE	E-38 mmø SANS 677 SMH- 43	PIPE-39 1050mmø Class 75D SANS 677	SMH- 44	PIPE-40 1050mmø Class 75D SANS 677	SMH- 45	PIPE-41 1050mmø Class 75D SANS 677	SMH- 46	PIPE-42 1050mmø Class 75D SANS 677	SMH- 47	SMH- 48	PIPE-44 1050mmø Class 75D SANS 677	SMH- 49
DISTANCE (m)	3326.48	3380.07		3470.69		3544.16		3613.72	3627.38		3670.80	
GROUND LEVELS (m)	1318.191	1318.736		1320.059		1320.014		1319.256	1319.214		1319.966	
PIPE INVERT LEVEL	1314.360 1314.360	1314.643 1314.643		1315.122 1315.122		1315.510 1315.510		1315.878 1315.878	1315.950 1315.950		1316.384 1316.384	
TRENCH LEVEL	1314.140	1314.423		1314.902		1315.290		1315.658	1315.730		1316.164	
DEPTH TO TRENCH	4.051	4.313		5.157		4.724		3.599	3.484		3.802	
SLOPE / LENGTH	0.53% 1:189.3 89.44m	0.53% 1:189.3 53.59m		0.53% 1:189.3 90.61m		0.53% 1:189.3 73.47m		0.53% 1:189.3 69.56m	0.53% 1:189.3 13.66m	1.00% 1:100.0 43.42m		
HYDRAULICS DESIGN Q(l/s)	240.00	240.00		240.00		240.00		241.04	260.19	250.67		
HYDRAULICS DESIGN V(m/s)	1.65	1.65		1.65		1.65		1.66	1.74	2.14		
HYDRAULICS MAX. (0.80) Q(l/s)	1693.37	1693.37		1693.37		1693.37		1693.37	1693.37	2329.62		
HYDRAULICS MAX. (0.80) V(m/s)	2.50	2.50		2.50		2.50		2.50	2.50	2.50		

STRUCTURE LIST-PROPOSED OUTFALL SEWER
Lo 27 WGS 84

STRUCTURE NAME	Y-COORD. (m)	X-COORD. (m)	N.G.L (m)	SUMP ELEVATION SUMP DEPTH	INVERT ELEVATION	MATERIAL
SMH- 1	32653.144	2972409.506	1305.520	1302.459 3.061	PIPE-2a-INV IN 1302.529 PIPE-1-INV OUT 1302.529	Concrete Concrete
SMH- 1A	32740.649	2972401.071	1305.382	1301.930 3.452	PIPE-1-INV IN 1302.000	Concrete
SMH- 2	32576.011	2972422.748	1305.829	1302.931 2.898	PIPE-2-INV IN 1303.001 PIPE-2a-INV OUT 1303.001	Concrete Concrete
SMH- 3	32499.269	2972433.740	1306.532	1303.398 3.134	PIPE-3a-INV IN 1303.468 PIPE-2-INV OUT 1303.468	Concrete Concrete
SMH- 4	32419.392	2972445.279	1307.314	1303.884 3.430	PIPE-3-INV IN 1303.954 PIPE-3a-INV OUT 1303.954	Concrete Concrete
SMH- 5	32332.760	2972457.822	1307.744	1304.411 3.333	PIPE-4-INV IN 1304.481 PIPE-3-INV OUT 1304.481	Concrete Concrete
SMH- 6	32281.626	2972462.965	1308.423	1304.721 3.702	PIPE-5-INV IN 1304.791 PIPE-4-INV OUT 1304.791	Concrete Concrete
SMH- 7	32196.743	2972462.942	1308.643	1305.232 3.411	PIPE-6a-INV IN 1305.302 PIPE-5-INV OUT 1305.302	Concrete Concrete
SMH- 8	32129.151	2972467.710	1309.395	1305.640 3.755	PIPE-6-INV IN 1305.710 PIPE-6a-INV OUT 1305.710	Concrete Concrete
SMH- 9	32099.200	2972469.223	1309.394	1305.705 3.689	PIPE-7-INV IN 1305.822 PIPE-6-INV OUT 1305.822	Concrete Concrete
SMH- 10	32048.900	2972502.955	1310.004	1305.931 4.073	PIPE-8a-INV IN 1306.048 PIPE-7-INV OUT 1306.048	Concrete Concrete
SMH- 11	32021.700	2972521.336	1310.260	1306.054 4.206	PIPE-8b-INV IN 1306.171 PIPE-8a-INV OUT 1306.171	Concrete Concrete
SMH- 12	31932.100	2972519.074	1310.106	1306.388 3.718	PIPE-8-INV IN 1306.505 PIPE-8b-INV OUT 1306.505	Concrete Concrete
SMH- 13	31845.900	2972512.672	1311.568	1306.711 4.857	PIPE-9-INV IN 1306.828 PIPE-8-INV OUT 1306.828	Concrete Concrete
SMH- 14	31762.600	2972502.707	1310.800	1307.024 3.776	PIPE-10-INV IN 1307.141 PIPE-9-INV OUT 1307.141	Concrete Concrete
SMH- 15	31720.630	2972438.916	1310.127	1307.309 2.818	PIPE-11-INV IN 1307.426 PIPE-10-INV OUT 1307.426	Concrete Concrete
SMH- 16	31646.552	2972439.472	1309.124	1307.577 1.547	PIPE-12-INV IN 1307.647 PIPE-11-INV OUT 1307.647	Concrete Concrete
SMH- 17	31578.916	2972441.836	1309.344	1307.780 1.564	PIPE-13-INV IN 1307.850 PIPE-12-INV OUT 1307.850	Concrete Concrete
SMH- 18	31503.576	2972443.726	1310.293	1308.005 2.288	PIPE-14-INV IN 1308.075 PIPE-13-INV OUT 1308.075	Concrete Concrete
SMH- 19	31436.685	2972436.412	1310.436	1308.206 2.229	PIPE-15-INV IN 1308.276 PIPE-14-INV OUT 1308.276	Concrete Concrete
SMH- 20	31367.943	2972428.984	1311.231	1308.413 2.817	PIPE-16-INV IN 1308.483 PIPE-15-INV OUT 1308.483	Concrete Concrete
SMH- 21	31301.106	2972421.755	1311.925	1308.614 3.311	PIPE-17-INV IN 1308.684 PIPE-16-INV OUT 1308.684	Concrete Concrete
SMH- 22	31226.700	2972401.122	1312.153	1308.845 3.308	PIPE-18-INV IN 1308.915 PIPE-17-INV OUT 1308.915	Concrete Concrete
SMH- 23	31153.131	2972360.775	1312.385	1309.096 3.289	PIPE-19-INV IN 1309.166 PIPE-18-INV OUT 1309.166	Concrete Concrete
SMH- 24	31078.997	2972319.518	1312.368	1309.350 3.019	PIPE-20-INV IN 1309.420 PIPE-19-INV OUT 1309.420	Concrete Concrete
SMH- 25	31016.878	2972266.025	1312.943	1309.595 3.349	PIPE-21a-INV IN 1309.665 PIPE-20-INV OUT 1309.665	Concrete Concrete
SMH- 26	30953.065	2972210.964	1312.989	1309.847 3.142	PIPE-21-INV IN 1309.917 PIPE-21a-INV OUT 1309.917	Concrete Concrete
SMH- 27	30889.809	2972156.392	1313.425	1310.097 3.328	PIPE-22-INV IN 1310.167 PIPE-21-INV OUT 1310.167	Concrete Concrete
SMH- 28	30826.221	2972101.294	1314.118	1310.348 3.770	PIPE-23-INV IN 1310.418 PIPE-22-INV OUT 1310.418	Concrete Concrete
SMH- 29	30759.032	2972049.857	1313.988	1310.601 3.387	PIPE-24-INV IN 1310.671 PIPE-23-INV OUT 1310.671	Concrete Concrete
SMH- 30	30693.731	2971999.437	1314.045	1310.848 3.197	PIPE-25-INV IN 1310.918 PIPE-24-INV OUT 1310.918	Concrete Concrete
SMH- 31	30624.612	2971937.677	1314.216	1311.125 3.091	PIPE-26-INV IN 1311.195 PIPE-25-INV OUT 1311.195	Concrete Concrete
SMH- 32	30566.628	2971885.784	1314.020	1311.358 2.662	PIPE-27-INV IN 1311.428 PIPE-26-INV OUT 1311.428	Concrete Concrete
SMH- 33	30507.422	2971833.262	1314.327	1311.594 2.733	PIPE-28-INV IN 1311.664 PIPE-27-INV OUT 1311.664	Concrete Concrete
SMH- 34	30453.702	2971768.670	1314.619	1311.846 2.773	PIPE-29-INV IN 1311.916 PIPE-28-INV OUT 1311.916	Concrete Concrete
SMH- 35	30400.785	2971705.259	1314.897	1312.093 2.805	PIPE-30-INV IN 1312.163 PIPE-29-INV OUT 1312.163	Concrete Concrete
SMH- 36	30383.494	2971624.736	1315.596	1312.339 3.257	PIPE-31-INV IN 1312.409 PIPE-30-INV OUT 1312.409	Concrete Concrete
SMH- 37	30366.043	2971542.396	1316.084	1312.591 3.493	PIPE-32-INV IN 1312.661 PIPE-31-INV OUT 1312.661	Concrete Concrete
SMH- 38	30349.438	2971463.714	1316.705	1312.831 3.874	PIPE-33-INV IN 1312.901 PIPE-32-INV OUT 1312.901	Concrete Concrete
SMH- 39	30330.818	2971377.989	1317.155	1313.093 4.062	PIPE-34-INV IN 1313.163 PIPE-33-INV OUT 1313.163	Concrete Concrete
SMH- 40	30313.559	2971296.602	1316.992	1313.342 3.650	PIPE-35-INV IN 1313.412 PIPE-34-INV OUT 1313.412	Concrete Concrete
SMH- 41	30292.730	2971215.213	1317.466	1313.546 3.920	PIPE-36-INV IN 1313.663 PIPE-35-INV OUT 1313.663	Concrete Concrete
SMH- 41A	30277.396	2971140.789	1317.818	1313.773 4.045	PIPE-37-INV IN 1313.890 PIPE-36-INV OUT 1313.890	Concrete Concrete
SMH- 42	30269.637	2971103.129	1318.494	1313.977 4.517	PIPE-38-INV IN 1314.094 PIPE-37-INV OUT 1314.094	Concrete Concrete
SMH- 43	30259.224	2971053.773	1318.191	1314.290 3.901	PIPE-39-INV IN 1314.360 PIPE-38-INV OUT 1314.360	Concrete Concrete
SMH- 44	30226.299	2971011.491	1318.736	1314.573 4.163	PIPE-40-INV IN 1314.643 PIPE-39-INV OUT 1314.643	Concrete Concrete
SMH- 45	30216.970	2970921.359	1320.059	1315.052 5.007	PIPE-41-INV IN 1315.122 PIPE-40-INV OUT 1315.122	Concrete Concrete
SMH- 46	30163.555	2970870.911	1320.014	1315.440 4.574	PIPE-42-INV IN 1315.510 PIPE-41-INV OUT 1315.510	Concrete Concrete
SMH- 47	30112.796	2970823.347	1319.256	1315.808 3.449	PIPE-43-INV IN 1315.878 PIPE-42-INV OUT 1315.878	Concrete Concrete
SMH- 48	30103.046	2970813.778	1319.214	1315.880 3.334	PIPE-44-INV IN 1315.950 PIPE-43-INV OUT 1315.950	Concrete Concrete
SMH-49	30071.368	2970784.081	1319.966	1316.314 3.652	PIPE-44-INV OUT 1316.384	Concrete

NOTE: RIM/COVER LEVEL TO BE 750mm MINIMUM ABOVE NOMINAL GROUND LEVEL
REFER TO DRG. CIV 134-01 FOR MANHOLE STRUCTURE DETAIL

PIPE LIST-PROPOSED OUTFALL SEWER

PIPE NAME	START INVERT LEVEL	END INVERT LEVEL	3D LENGTH TO INSIDE EDGES	SLOPE	DIAMETER AND CLASS
PIPE-1	1302.529	1302.000	86.419	0.602%	1 050mm Class 100D
PIPE-2	1303.468	1303.001	76.034	0.602%	1 050mm Class 75D
PIPE-2a	1303.001	1302.529	76.770	0.603%	1 050mm Class 75D
PIPE-3	1304.481	1303.954	86.044	0.602%	1 050mm Class 75D
PIPE-3a	1303.954	1303.468	79.215	0.602%	1 050mm Class 75D
PIPE-4	1304.791	1304.481	49.900	0.602%	1 050mm Class 75D
PIPE-5	1305.302	1304.791	83.392	0.602%	1 050mm Class 75D
PIPE-6	1305.822	1305.710	28.494	0.373%	1 050mm Class 75D
PIPE-6a	1305.710	1305.302	66.268	0.602%	1 050mm Class 75D
PIPE-7	1306.048	1305.822	59.068	0.373%	1 050mm Class 75D
PIPE-8	1306.828	1306.505	84.942	0.373%	1 050mm Class 75D
PIPE-8a	1306.171	1306.048	31.333	0.373%	1 050mm Class 75D
PIPE-8b	1306.505	1306.171	88.134	0.373%	1 050mm Class 75D
PIPE-9	1307.141	1306.828	82.399	0.373%	1 050mm Class 75D
PIPE-10	1307.426	1307.141	74.864	0.373%	1 050mm Class 75D
PIPE-11	1307.647	1307.426	72.584	0.299%	1 050mm Class 75D
PIPE-12	1307.850	1307.647	66.181	0.299%	1 050mm Class 75D
PIPE-13	1308.075	1307.850	73.868	0.299%	1 050mm Class 75D
PIPE-14	1308.276	1308.075	65.794	0.299%	1 050mm Class 75D
PIPE-15	1308.483	1308.276	67.646	0.299%	1 050mm Class 75D
PIPE-16	1308.684	1308.483	65.731	0.299%	1 050mm Class 75D
PIPE-17	1308.915	1308.684	75.718	0.299%	1 050mm Class 75D
PIPE-18	1309.166	1308.915	82.410	0.299%	1 050mm Class 75D
PIPE-19	1309.420	1309.166	83.345	0.299%	1 050mm Class 75D
PIPE-20	1309.665	1309.420	80.481	0.299%	1 050mm Class 75D
PIPE-21	1310.167	1309.917	82.047	0.299%	1 050mm Class 75D
PIPE-21a	1309.917	1309.665	82.788	0.299%	1 050mm Class 75D
PIPE-22	1310.418	1310.167	82.642	0.299%	1 050mm Class 75D
PIPE-23	1310.671	1310.418	83.121	0.299%	1 050mm Class 75D
PIPE-24	1310.918	1310.671	81.005	0.299%	1 050mm Class 75D
PIPE-25	1311.195	1310.918	91.196	0.299%	1 050mm Class 75D
PIPE-26	1311.428	1311.195	76.318	0.299%	1 050mm Class 75D
PIPE-27	1311.664	1311.428	77.649	0.299%	1 050mm Class 75D
PIPE-28	1311.916	1311.664	82.516	0.300%	1 050mm Class 75D
PIPE-29	1312.163	1311.916	81.094	0.299%	1 050mm Class 75D
PIPE-30	1312.409	1312.163	80.862	0.299%	1 050mm Class 75D
PIPE-31	1312.661	1312.409	82.673	0.299%	1 050mm Class 75D
PIPE-32	1312.901	1312.661	78.919	0.299%	1 050mm Class 75D
PIPE-33	1313.163	1312.901	86.228	0.299%	1 050mm Class 75D
PIPE-34	1313.412	1313.163	81.701	0.299%	1 050mm Class 75D
PIPE-35	1313.663	1313.412	82.516	0.299%	1 050mm Class 75D
PIPE-36	1313.890	1313.663	74.491	0.299%	1 050mm Class 75D
PIPE-37	1314.094	1313.890	36.958	0.528%	1 050mm Class 75D
PIPE-38	1314.360	1314.094	48.949	0.528%	1 050mm Class 75D
PIPE-39	1314.643	1314.360	52.096	0.528%	1 050mm Class 75D
PIPE-40	1315.122	1314.643	89.121	0.528%	1 050mm Class 75D
PIPE-41	1315.510	1315.122	71.980	0.528%	1 050mm Class 75D
PIPE-42	1315.878	1315.510	68.069	0.528%	1 050mm Class 75D
PIPE-43	1315.950	1315.878	12.168	0.528%	1 050mm Class 75D
PIPE-44	1316.384	1315.950	41.935	1.000%	1 050mm Class 75D

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4. ALL WATERPROOFING AND EARTH PROOFING DETAILS TO BE IN ACCORDANCE WITH THE ARCHITECT'S SPECIFICATION AND INSTRUCTIONS.

REV	DATE	COMMENTS	BY
2	11/09/2017	CHANNAGES, SOP TABLE AND PIPE DATA TABLE AMENDED	T.M.
1	08/08/2017	PROFILE AMENDED	T.M.
0	26/06/2017	ISSUED FOR CONSTRUCTION	T.M.

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Project:
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Drawing Title:
PROPOSED OUTFALL SEWERLINE
LONG SECTION
SHEET 3

Consultant's Signature:
2MC Consulting

Drawn:	Checked:	Designed:	Scale:
J. Mkhatshane	J. MUSHWANA	T. MALAKA	AS SHOWN

Job Number:	Discipline:	Dwg Number:	Rev:	Dwg Size:
201502-NW-Bld	CIV	133-03	2	A0