

Recycling of Treated Waste Water

Sr No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Net Water Demand				Design of Pipe Line				Length of pipe						No of Stucc Valves				
					Previous		Total		Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d
					Self	KLD	KLD	Total															
				Litres					20 HRS	Mtr	Mtr	Mtr	Mtr	m	m	m	m	m	No.	No.	No.	No.	No.
1	2	3	4	5	6	7	8		9	10	11	12	13	18	19	20	21	22	23	24	25	26	27
152	B21-B29	48	100	9661	9.66	0.00	9.66	0.00	20.13	0.0001	0.003	2.910	22.09	48	0	0	0	0	1	0	0	0	0
153	85B21-	75	100	22242	22.24	0.00	22.24	0.00	46.34	0.0003	0.020	2.927	22.07	75	0	0	0	0	1	0	0	0	0
154	X-X'	81	300	0	0.00	987.88	987.88	2058.09	0.0014	0.117	0.284	24.72	24.72	0	0	0	0	81	0	0	0	0	1
155	SECTOR 82-	17	250	0	0.00	987.88	987.88	2058.09	0.0035	0.059	0.344	24.66	24.66	0	0	0	17	0	0	0	0	1	0
156	82D25-D21	63	250	0	0.00	987.88	987.88	2058.09	0.0035	0.220	0.564	24.44	24.44	0	0	0	63	0	0	0	0	1	0
157	D21- D17	16	150	721	0.72	112.80	113.52	236.50	0.0008	0.012	0.577	24.42	24.42	0	16	0	0	0	0	1	0	0	0
158	D17-D41	79	100	6316	6.32	0.00	6.32	13.16	0.0000	0.002	0.579	24.42	24.42	79	0	0	0	0	1	0	0	0	0
159	D17-D19	57	150	3492	3.49	102.99	106.48	221.84	0.0007	0.039	0.616	24.38	24.38	0	57	0	0	0	0	1	0	0	0
160	D19- D16	42	150	2094	2.09	100.90	102.99	214.57	0.0006	0.027	0.642	24.36	24.36	0	42	0	0	0	0	1	0	0	0
161	D16- D18	46	100	3527	3.53	0.00	3.53	7.35	0.0000	0.000	0.643	24.36	24.36	46	0	0	0	0	1	0	0	0	0
162	D16- D15	59	150	2128	2.13	95.24	97.37	202.86	0.0006	0.034	0.676	24.32	24.32	0	59	0	0	0	0	1	0	0	0
163	D15- D11	73	150	39188	39.19	56.06	95.24	198.42	0.0006	0.040	0.717	24.28	24.28	0	73	0	0	0	0	1	0	0	0
164	D11-D10	90	100	6221	6.22	1.29	7.51	15.64	0.0000	0.003	0.720	24.28	24.28	90	0	0	0	0	1	0	0	0	0
165	D10-D14	10	100	1287	1.29	0.00	1.29	2.68	0.0000	0.000	0.720	24.28	24.28	10	0	0	0	0	1	0	0	0	0
166	D11-D7	53	100	3947	3.95	44.60	48.55	101.14	0.0011	0.061	0.778	24.22	24.22	53	0	0	0	0	1	0	0	0	0
167	D7-D8	139	100	16441	16.44	0.00	16.44	34.25	0.0002	0.021	0.799	24.20	24.20	139	0	0	0	0	1	0	0	0	0
168	D7-D6	53	100	4454	4.45	23.70	28.16	58.66	0.0004	0.022	0.800	24.20	24.20	53	0	0	0	0	1	0	0	0	0
169	D6-D5	16	100	2042	2.04	0.00	2.04	4.26	0.0000	0.000	0.800	24.20	24.20	16	0	0	0	0	1	0	0	0	0
170	D6-D2	77	100	3630	3.63	18.03	21.66	45.13	0.0003	0.020	0.819	24.18	24.18	77	0	0	0	0	1	0	0	0	0
171	D2- D3	56	100	18031	18.03	0.00	18.03	37.57	0.0002	0.010	0.830	24.17	24.17	56	0	0	0	0	1	0	0	0	0
172	D21-D33	65	250	1922	1.92	872.44	874.36	1821.58	0.0028	0.181	0.746	24.25	24.25	0	0	0	65	0	0	0	0	1	0
173	D33-D34	54	100	4239	4.24	0.00	4.24	8.83	0.0000	0.001	0.747	24.25	24.25	54	0	0	0	0	1	0	0	0	0
174	D33-D32	68	250	2909	2.91	865.29	868.20	1808.75	0.0028	0.187	0.933	24.07	24.07	0	0	0	68	0	0	0	0	1	0
175	D32-D31	16	100	1939	1.94	0.00	1.94	4.04	0.0000	0.000	0.933	24.07	24.07	16	0	0	0	0	1	0	0	0	0
176	D32- D29	65	250	4119	4.12	859.23	863.35	1798.64	0.0027	0.177	1.110	23.89	23.89	0	0	0	65	0	0	0	0	1	0
177	D29- D25	76	100	4325	4.33	0.00	4.33	9.01	0.0000	0.001	1.111	23.89	23.89	76	0	0	0	0	1	0	0	0	0
178	D29-D28	103	250	9276	9.28	845.63	854.90	1781.05	0.0027	0.276	1.386	23.61	23.61	0	0	0	103	0	0	0	0	1	0
179	D28-D27	219	250	53903	53.90	791.73	845.63	1761.73	0.0026	0.575	1.961	23.04	23.04	0	0	0	219	0	0	0	0	1	0
180	D27-	48	250	1648	1.65	790.08	791.73	1649.43	0.0023	0.111	2.072	22.93	22.93	0	0	0	48	0	0	0	0	1	0
181	82D26-C16	27	100	927	0.93	83.27	84.19	175.40	0.0032	0.086	2.158	22.84	22.84	27	0	0	0	0	1	0	0	0	0

DESIGN OF TYPICAL WATER MAIN

Sr No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Design of Pipe Line										Length of pipe										No of Sluice Valves				
					Net Water Demand				Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d						
					Self	Previous	Total	20 HRS																Mtr	Mtr	Mtr	m	m	m
1	2	3	4	5	6	7	8	9	10	11	12	13	18	19	20	21	22	23	24	25	26	27							
182	C16-82C52	215	100	22187	22.19	27.58	49.76	103.67	0.0012	0.258	2.416	22.58	215	0	0	0	0	1	0	0	0	0							
183	C52-C53	60	100	2781	2.78	15.88	18.66	38.87	0.0002	0.012	2.428	22.57	60	0	0	0	0	1	0	0	0	0							
184	C53-C53	140	100	15875	15.88	0.00	15.88	33.07	0.0001	0.020	2.448	22.55	140	0	0	0	0	1	0	0	0	0							
185	C52-C38	39	100	824	0.82	8.10	8.92	18.59	0.0000	0.002	2.418	22.58	39	0	0	0	0	1	0	0	0	0							
186	C38-C40	8	100	8097	8.10	0.00	8.10	16.87	0.0000	0.000	2.418	22.58	8	0	0	0	0	1	0	0	0	0							
187	C16-C18	30	100	1982	1.98	31.52	33.50	69.80	0.0006	0.017	2.175	22.82	30	0	0	0	0	1	0	0	0	0							
188	C18-C20	82	100	2781	2.78	28.74	31.52	65.67	0.0005	0.042	2.218	22.78	82	0	0	0	0	1	0	0	0	0							
189	82C20-	81	100	4635	4.63	24.10	28.74	59.87	0.0004	0.035	2.253	22.75	81	0	0	0	0	1	0	0	0	0							
190	82C54-	95	100	24104	24.10	0.00	24.10	50.22	0.0003	0.030	2.283	22.72	95	0	0	0	0	1	0	0	0	0							
191	D26- D23	150	250	4944	4.94	700.94	705.89	1470.60	0.0019	0.282	2.354	22.65	0	0	0	150	0	0	0	0	1	0							
192	D23- D24	59	100	6119	6.12	0.00	6.12	12.75	0.0000	0.001	2.354	22.65	59	0	0	0	0	1	0	0	0	0							
193	D23-D20	69	250	2369	2.37	692.45	694.82	1447.55	0.0018	0.126	2.480	22.52	0	0	0	69	0	0	0	0	1	0							
194	82D20-	40	250	1751	1.75	387.83	389.58	811.63	0.0006	0.025	2.505	22.50	0	0	0	40	0	0	0	0	0	0							
195	F30-F31	6	100	1365	1.36	0.00	1.36	2.84	0.0000	0.000	2.505	22.50	6	0	0	0	0	1	0	0	0	0							
196	F30-C8	72	250	2094	2.09	384.37	386.47	805.14	0.0006	0.044	2.549	22.45	0	0	0	72	0	0	0	0	1	0							
197	C8-F29	45	100	5166	5.17	0.00	5.17	10.76	0.0000	0.001	2.550	22.45	45	0	0	0	0	1	0	0	0	0							
198	C8-C48	38	250	1536	1.54	377.67	379.21	790.01	0.0006	0.023	2.572	22.43	0	0	0	38	0	0	0	0	1	0							
199	C48-C33	147	150	13872	13.87	143.01	156.88	326.84	0.0014	0.205	2.777	22.22	0	147	0	0	0	0	1	0	0	0							
200	C33-C50	92	150	2266	2.27	140.75	143.01	297.94	0.0012	0.108	2.885	22.11	0	92	0	0	0	0	1	0	0	0							
201	C50-C51	105	100	6256	6.26	0.00	6.26	13.03	0.0000	0.003	2.888	22.11	105	0	0	0	0	1	0	0	0	0							
202	C50-C35	69	150	9447	9.45	36.11	45.56	94.91	0.0001	0.010	2.895	22.11	0	69	0	0	0	0	1	0	0	0							
203	C35-C12	165	100	19093	19.09	0.00	19.09	39.78	0.0002	0.034	2.928	22.07	165	0	0	0	0	1	0	0	0	0							
204	C35-C36	75	100	2060	2.06	14.96	17.02	35.46	0.0002	0.012	2.907	22.09	75	0	0	0	0	1	0	0	0	0							
205	C36-C14	162	100	14959	14.96	0.00	14.96	31.16	0.0001	0.021	2.928	22.07	162	0	0	0	0	1	0	0	0	0							
206	C50-C34	76	150	14630	14.63	74.30	88.93	185.28	0.0005	0.037	2.922	22.08	0	76	0	0	0	0	1	0	0	0							

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					Net Water Demand			Total Water Demand	Head Loss per M	Total Head Loss	Mtr	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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				Litres	KLD	KLD	KLD	LPM	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr	Mtr</

Recycling of Treated Waste Water

S.No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Proposed Water Supply	Design of Pipe Line										Length of pipe										No of Stice Valves																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
					Net Water Demand				Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Trenching Head	110 mm o/d	150 mm o/d	210 mm o/d	260 mm o/d	310 mm od	110 mm o/d	150 mm o/d	210 mm o/d	260mm o/d	310 mm o/d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
					Self	Previous	Total	20 HRS																Mtr	Mtr	Mtr	m	m	m	m	m	No.	No.	No.	No.	No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Recycling of Treated Waste Water

Sr No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Design of Pipe Line										Length of pipe							No of Sluice Valves				
					Net Water Demand			Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260 mm o/d	310 mm o/d				
					Self	Previous	Total																			
								KLD	KLD	KLD	LPM	Mtr	Mtr	Mtr	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	18	19	20	21	22	23	24	25	26	27				
270	F21-F22	10	100	884	0.88	0.00	0.88	1.84	0.0000	0.000	2.749	22.25	10	0	0	0	0	1	0	0	0	0				
271	F6- F5	90	200	13844	13.84	187.24	201.08	418.92	0.0005	0.049	2.797	22.20	0	0	90	0	0	0	0	1	0	0				
272	F5-F20	19	100	1467	1.47	6.06	7.53	15.68	0.0000	0.001	2.798	22.20	19	0	0	0	0	1	0	0	0	0				
273	F20-F21	81	100	6059	6.06	0.00	6.06	12.62	0.0000	0.002	2.800	22.20	81	0	0	0	0	1	0	0	0	0				
274	F5- F4	26	150	2832	2.83	176.88	179.71	374.40	0.0018	0.047	2.844	22.16	0	26	0	0	0	0	1	0	0	0				
275	F4-F3	6	150	815	0.82	176.07	176.88	368.50	0.0017	0.010	2.854	22.15	0	6	0	0	0	0	1	0	0	0				
276	F3-F12	53	100	4379	4.38	0.00	4.38	9.12	0.0000	0.001	2.855	22.15	53	0	0	0	0	1	0	0	0	0				
277	F3-F15	145	100	18999	19.00	0.00	19.00	39.58	0.0002	0.029	2.883	22.12	145	0	0	0	0	1	0	0	0	0				
278	F3-F2	54	150	3201	3.20	149.49	152.69	318.10	0.0013	0.072	2.926	22.07	0	54	0	0	0	0	1	0	0	0				
279	F2-F14	175	150	15455	15.45	29.79	45.24	94.26	0.0001	0.024	2.950	22.05	0	175	0	0	0	0	1	0	0	0				
280	F14-F15	54	150	3476	3.48	26.31	29.79	62.06	0.0001	0.003	2.954	22.05	0	54	0	0	0	0	1	0	0	0				
281	F15-F16	52	100	3407	3.41	22.91	26.31	54.82	0.0004	0.019	2.973	22.03	52	0	0	0	0	1	0	0	0	0				
282	F16-F18	13	100	1167	1.17	21.74	22.91	47.72	0.0003	0.004	2.976	22.02	13	0	0	0	0	1	0	0	0	0				
283	F18-F19	24	100	2643	2.64	0.00	2.64	5.51	0.0000	0.000	2.977	22.02	24	0	0	0	0	1	0	0	0	0				
284	F18-F11	102	100	19096	19.10	0.00	19.10	39.78	0.0002	0.021	2.997	22.00	102	0	0	0	0	1	0	0	0	0				
285	F2- F1	57	100	4891	4.89	99.35	104.24	217.17	0.0047	0.269	3.194	21.81	57	0	0	0	0	1	0	0	0	0				
286	F1-F9	168	100	22860	22.86	0.00	22.86	47.63	0.0003	0.048	3.242	21.76	168	0	0	0	0	1	0	0	0	0				
287	F1- B7	55	100	5303	5.30	71.19	76.49	159.36	0.0027	0.146	3.341	21.66	55	0	0	0	0	1	0	0	0	0				
288	B7- B8	59	100	7731	7.73	8.00	15.73	32.76	0.0001	0.008	3.349	21.65	59	0	0	0	0	1	0	0	0	0				
289	B8-F33	22	100	7995	8.00	0.00	8.00	16.66	0.0000	0.001	3.350	21.65	22	0	0	0	0	1	0	0	0	0				
290	B7- B5	196	100	27057	27.06	28.41	55.46	115.55	0.0015	0.287	3.628	21.37	196	0	0	0	0	1	0	0	0	0				
291	B5-F9	38	100	6316	6.32	0.00	6.32	13.16	0.0000	0.001	3.629	21.37	38	0	0	0	0	1	0	0	0	0				
292	B5-E6	64	100	5378	5.38	16.71	22.09	46.02	0.0003	0.017	3.645	21.36	64	0	0	0	0	1	0	0	0	0				
293	E6- E7	70	100	16712	16.71	0.00	16.71	34.82	0.0002	0.011	3.656	21.34	70	0	0	0	0	1	0	0	0	0				
	-	13732		1481891.3	1481.89								8755	1730	1541	1570	136	128	30	21	21	2				
294	STP 3-82E	15	250	0	0.00	966.79	966.79	2014.15	0.0034	0.050	0.050	24.95	0	0	0	15	0	0	0	1	0	0				
295	82E-82E19	49	200	13371	13.37	611.23	624.60	1301.26	0.0044	0.218	0.268	24.73	0	0	49	0	0	0	0	1	0	0				
296	E19-E14	190	200	21195	21.20	590.04	611.23	1273.40	0.0043	0.810	1.078	23.92	0	0	190	0	0	0	0	1	0	0				

Recycling of Treated Waste Water

Sr No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Design of Pipe Line							Length of pipe							No of Sticue Valves				
					Net Water Demand				Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d
					Self	Previous	Total	20 HRS															
				Litres	KLD	KLD	KLD	LPM	Mtr	Mtr	Mtr	m	m	m	m	m	m	No.	No.	No.	No.	No.	
1	2	3	4	5	6	7	8	9	10	11	12	13	18	19	20	21	22	23	24	25	26	27	
	SECTOR																						
325	82E10-	73	200	2506	2.51	302.69	305.19	635.82	0.0012	0.086	2.008	22.99	0	0	73	0	0	0	0	0	0	0	
326	A1-A'55	137	100	75571	75.57	0.00	75.57	157.44	0.0026	0.356	2.094	22.91	137	0	0	0	0	1	0	0	0	0	
	-																						
327	A1-A'7	38	100	1922	1.92	66.06	67.98	141.63	0.0021	0.081	2.089	22.91	38	0	0	0	0	1	0	0	0	0	
328	A7-A64	253	100	8720	8.72	57.34	66.06	137.63	0.0020	0.513	2.602	22.40	253	0	0	0	0	1	0	0	0	0	
329	A64-A43	91	100	43653	43.65	13.69	57.34	119.46	0.0016	0.142	2.743	22.26	91	0	0	0	0	1	0	0	0	0	
330	A43-A62	15	100	378	0.38	13.31	13.69	28.52	0.0001	0.002	2.745	22.25	15	0	0	0	0	1	0	0	0	0	
331	A62-A44	76	100	4256	4.26	0.00	4.26	8.87	0.0000	0.001	2.746	22.25	76	0	0	0	0	1	0	0	0	0	
332	A62-A63	71	100	2403	2.40	6.65	9.05	18.86	0.0001	0.004	2.749	22.25	71	0	0	0	0	1	0	0	0	0	
333	A63-A46	47	100	6650	6.65	0.00	6.65	13.85	0.0000	0.001	2.750	22.25	47	0	0	0	0	1	0	0	0	0	
	-																						
334	A1-A2	57	150	2935	2.93	156.20	159.13	331.53	0.0014	0.082	2.089	22.91	0	57	0	0	0	0	1	0	0	0	
335	A2-A3	22	150	206	0.21	155.99	156.20	325.42	0.0014	0.030	2.120	22.88	0	22	0	0	0	0	1	0	0	0	
336	A3-A'58	49	150	5090	5.09	150.90	155.99	324.99	0.0014	0.068	2.188	22.81	0	49	0	0	0	0	1	0	0	0	
337	A'58-A9	103	150	8830	8.83	142.07	150.90	314.38	0.0013	0.134	2.321	22.68	0	103	0	0	0	0	1	0	0	0	
338	A9-A10	56	150	6462	6.46	135.61	142.07	295.99	0.0012	0.065	2.386	22.61	0	56	0	0	0	0	1	0	0	0	
	-																						
339	A10-A'22	98	100	11296	11.30	32.85	44.15	91.98	0.0010	0.094	2.480	22.52	98	0	0	0	0	1	0	0	0	0	
340	A'22-A23	102	100	3527	3.53	29.33	32.85	68.44	0.0006	0.057	2.537	22.46	102	0	0	0	0	1	0	0	0	0	
341	A23-A24	85	100	5123	5.12	24.20	29.33	61.10	0.0005	0.038	2.575	22.42	85	0	0	0	0	1	0	0	0	0	
342	A24-A25	61	100	7803	7.80	16.40	24.20	50.42	0.0003	0.019	2.595	22.41	61	0	0	0	0	1	0	0	0	0	
343	A25-A'26	101	100	8109	8.11	8.29	16.40	34.16	0.0002	0.016	2.610	22.39	101	0	0	0	0	1	0	0	0	0	
344	A26-A27	73	100	2506	2.51	5.78	8.29	17.27	0.0000	0.003	2.613	22.39	73	0	0	0	0	1	0	0	0	0	
345	A27-A28	91	100	5784	5.78	0.00	5.78	12.05	0.0000	0.002	2.615	22.38	91	0	0	0	0	0	0	0	0	0	
	-																						
346	A10-A14	95	150	6573	6.57	84.89	91.46	190.55	0.0005	0.049	2.435	22.56	0	95	0	0	0	0	1	0	0	0	
347	A14-A'59	13	100	2437	2.44	0.00	2.44	5.08	0.0000	0.000	2.435	22.56	13	0	0	0	0	1	0	0	0	0	
348	A14-A15	43	150	1365	1.36	81.09	82.45	171.77	0.0004	0.018	2.453	22.55	0	43	0	0	0	0	1	0	0	0	
	-																						
349	A15-A20	26	100	1802	1.80	1.66	3.47	7.22	0.0000	0.000	2.454	22.55	26	0	0	0	0	1	0	0	0	0	
350	A20-A21	11	100	1665	1.66	0.00	1.66	3.47	0.0000	0.000	2.454	22.55	11	0	0	0	0	0	0	0	0	0	
	-																						
351	A15-A16	84	100	6153	6.15	71.47	77.62	161.71	0.0027	0.229	2.683	22.32	84	0	0	0	0	1	0	0	0	0	
352	A16-A20	59	100	6341	6.34	0.00	6.34	13.21	0.0000	0.002	2.684	22.32	59	0	0	0	0	1	0	0	0	0	
353	A16-A17	24	100	2858	2.86	62.27	65.13	135.68	0.0020	0.047	2.730	22.27	24	0	0	0	0	0	0	0	0	0	
354	A17-A5	60	100	6799	6.80	55.47	62.27	129.73	0.0018	0.109	2.839	22.16	60	0	0	0	0	1	0	0	0	0	
355	A5-A'60	123	100	13453	13.45	0.00	13.45	28.03	0.0001	0.013	2.852	22.15	123	0	0	0	0	1	0	0	0	0	

Recycling of Treated Waste Water

Sr No.	Name of Water Pipe line	Length of Water Pipe line	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Design of Pipe Line					Length of pipe							No of Sluice Valves					
					Net Water Demand			Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm od	310 mm od	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d
					Self	Previous	Total															
		m	mm	Litres	KLD	KLD	20 HRS	Mtr	Mtr	Mtr	m	m	m	m	m	m	No.	No.	No.	No.	No.	
1	2	3	4	5	6	7	8	9	10	11	12	13	18	19	20	21	22	23	24	25	26	27
356	A5-A6	60	100	2437	2.44	39.58	42.02	87.53	0.0009	0.053	2.892	22.11	60	0	0	0	0	1	0	0	0	0
357	A6-A32	38	100	9002	9.00	30.58	39.58	82.46	0.0008	0.030	2.921	22.08	38	0	0	0	0	1	0	0	0	0
358	A32-A31	50	100	3913	3.91	1.97	5.89	12.26	0.0000	0.001	2.923	22.08	50	0	0	0	0	0	0	0	0	0
359	A31-A49	11	100	1974	1.97	0.00	1.97	4.11	0.0000	0.000	2.923	22.08	11	0	0	0	0	1	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
360	A32-A35	72	100	4385	4.39	20.31	24.69	51.44	0.0003	0.024	2.945	22.05	72	0	0	0	0	1	0	0	0	0
361	A35-A33	50	100	4438	4.44	11.10	15.53	32.36	0.0001	0.007	2.952	22.05	50	0	0	0	0	0	0	0	0	0
362	A33-A34	14	100	2377	2.38	0.00	2.38	4.95	0.0000	0.000	2.952	22.05	14	0	0	0	0	1	0	0	0	0
363	A33-A31'	67	100	8718	8.72	0.00	8.72	18.16	0.0000	0.003	2.955	22.04	67	0	0	0	0	1	0	0	0	0
364	A35-A36	50	100	3742	3.74	1.03	4.77	9.94	0.0000	0.001	2.946	22.05	50	0	0	0	0	1	0	0	0	0
365	A36-A37	7	100	1030	1.03	0.00	1.03	2.15	0.0000	0.000	2.946	22.05	7	0	0	0	0	1	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
366	82E-82E24	13	200	0	0.00	342.19	342.19	712.89	0.0015	0.019	0.069	24.93	0	0	13	0	0	0	0	1	0	0
SECTOR 83-																						
367	82E24-	98	200	0	0.00	342.19	342.19	712.89	0.0015	0.143	0.212	24.79	0	0	98	0	0	0	0	0	0	0
368	83A29-A34	107	200	18875	18.87	323.31	342.19	712.89	0.0015	0.156	0.368	24.63	0	0	107	0	0	0	0	1	0	0
369	A34-A31	69	150	1991	1.99	321.32	323.31	673.57	0.0053	0.367	0.735	24.26	0	69	0	0	0	0	1	0	0	0
370	A31-A32	50	100	10470	10.47	0.00	10.47	21.81	0.0001	0.003	0.739	24.26	50	0	0	0	0	1	0	0	0	0
371	A31-A28	57	150	3188	3.19	307.66	310.85	647.61	0.0049	0.282	1.017	23.98	0	57	0	0	0	0	0	0	0	0
372	A28-A35	17	150	3188	3.19	304.48	307.66	640.97	0.0049	0.083	1.100	23.90	0	17	0	0	0	0	1	0	0	0
373	A35-A21	181	150	0	0.00	304.48	304.48	634.32	0.0048	0.862	1.962	23.04	0	181	0	0	0	0	1	0	0	0
374	A21-A17	97	150	4928	4.93	299.55	304.48	634.32	0.0048	0.462	2.424	22.58	0	97	0	0	0	0	1	0	0	0
375	A17-E23	19	150	1133	1.13	298.42	299.55	624.06	0.0046	0.088	2.512	22.49	0	19	0	0	0	0	1	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
376	E23-E22	83	150	2575	2.57	87.99	90.56	188.67	0.0005	0.042	2.554	22.45	0	83	0	0	0	0	1	0	0	0
377	E22-E21	44	100	30865	30.86	57.12	87.99	183.31	0.0034	0.152	2.706	22.29	44	0	0	0	0	1	0	0	0	0
378	E21-E27	175	100	9508	9.51	47.62	57.12	119.01	0.0015	0.271	2.976	22.02	175	0	0	0	0	1	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
379	E27-E26	68	100	2429	2.43	13.51	15.93	33.20	0.0001	0.010	2.986	22.01	68	0	0	0	0	1	0	0	0	0
380	E26-E28	83	100	13505	13.51	0.00	13.51	28.14	0.0001	0.009	2.995	22.00	83	0	0	0	0	1	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
381	E27-E29	85	100	7723	7.72	4.51	12.23	25.48	0.0001	0.008	2.984	22.02	85	0	0	0	0	1	0	0	0	0
382	E29-E30	34	100	4505	4.51	0.00	4.51	9.39	0.0000	0.000	2.984	22.02	34	0	0	0	0	1	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
383	E27-E33	88	100	19453	19.45	0.00	19.45	40.53	0.0002	0.019	2.995	22.01	88	0	0	0	0	1	0	0	0	0

FOR VATIKA LIMITED

Authorised Signatory

Recycling of Treated Waste Water

Sr No.	Name of Water Pipe line	Length of Water Pipe	Outer Diameter of Water Pipe line	Net Water Demand to meet from Recycled Water Supply	Design of Pipe Line										Length of pipe						No of Stiff Valves										
					Net Water Demand			Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	110 mm o/d	160 mm o/d	210 mm o/d	260 mm o/d	310 mm o/d	110 mm o/d	160 mm o/d	210 mm o/d	260mm o/d	310 mm o/d									
					Self	Previous	Total																								
								KLD	KLD	KLD	20 HRS	Mtr	Mtr	Mtr	Mtr	m	m	m	m	m	m	No.	No.	No.	No.	No.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
384	E23-E25	45	150	1030	1.03	206.82	207.85	433.02	0.0023	0.106	2.618	22.38	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
385	E25-A14	109	150	3493	3.49	203.33	206.82	430.88	0.0023	0.254	2.871	22.13	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
386	A14-A59	100	100	11756	11.76	5.19	16.95	35.31	0.0002	0.016	2.888	22.11	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
387	A59-A60	78	100	5192	5.19	0.00	5.19	10.82	0.0000	0.001	2.889	22.11	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
388	A14-A11	53	100	5972	5.97	180.41	186.38	388.29	0.0138	0.733	3.604	21.40	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
389	A11-A11	17	100	0	0.00	0.00	0.00	0.00	0.0000	0.000	3.604	21.40	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	A11-A10	176	100	14314	14.31	166.09	180.41	375.85	0.0130	2.292	5.896	19.10	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391	A10-A13	35	100	4720	4.72	0.00	4.72	9.83	0.0000	0.001	5.897	19.10	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
392	A10-A7	56	100	4857	4.86	74.34	79.19	164.99	0.0028	0.159	6.055	18.95	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
393	A7-A7	112	100	10349	10.35	0.00	10.35	21.56	0.0001	0.007	6.062	18.94	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
394	A7-A20	53	100	5441	5.44	0.00	5.44	11.33	0.0000	0.001	6.056	18.94	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
395	A7-A4	53	100	4960	4.96	53.59	58.55	121.98	0.0016	0.086	6.141	18.86	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
396	A4-A8	45	100	3141	3.14	0.00	3.14	6.54	0.0000	0.000	6.141	18.86	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
397	A4-A4	41	100	13905	13.91	0.00	13.91	28.97	0.0001	0.005	6.145	18.85	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
398	A4-A5	193	100	18400	18.40	18.14	36.54	76.13	0.0007	0.131	6.271	18.73	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
399	A5-A2	40	100	18142	18.14	0.00	18.14	37.80	0.0002	0.007	6.279	18.72	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	A10-A9	174	100	15832	15.83	66.35	82.18	171.21	0.0030	0.528	6.424	18.58	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
401	A9-A6	56	100	12540	12.54	19.27	31.81	66.27	0.0005	0.029	6.454	18.55	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
402	A6-A20	53	100	3501	3.50	0.00	3.50	7.29	0.0000	0.000	6.454	18.55	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
403	A6-A3	53	100	12643	12.64	3.13	15.77	32.85	0.0001	0.008	6.461	18.54	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
404	A3-A3	46	100	3126	3.13	0.00	3.13	6.51	0.0000	0.000	6.462	18.54	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	A9-A12	53	100	12643	12.64	21.89	34.54	71.95	0.0006	0.032	6.457	18.54	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
406	A12-A19	64	100	4891	4.89	0.00	4.89	10.19	0.0000	0.001	6.458	18.54	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
407	A12-A15	53	100	12540	12.54	4.46	17.00	35.42	0.0002	0.009	6.465	18.53	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
408	A15-A16	48	100	2317	2.32	0.00	2.32	4.83	0.0000	0.000	6.466	18.53	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
409	83A15-	23	100	2145	2.15	0.00	2.15	4.47	0.0000	0.000	6.465	18.53	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		8647		966791.76								6323	1236	1073	15	1636	136	285	63	36	24	2									
		29378		3134559.5								20557	4115	2934	1636	136	285	63	36	24	2										

For VATIKA LIMITED

Authorised Signatory

DESIGN STATEMENT OF DRAINAGE

For VATIKA LIMITED


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Abstract of Storm Water Drainage				
Size	Length	Avg Depth	Manhole	Vent Shaft
400	21966	-10.81	1123	30
500	2692	47.45	136	
600	1769	2.39	88	
700	1046	17.75	55	
800	240	78.97	13	
900	254	231.98	15	
1000	207	2.96	10	
1100	439	3.14	22	
1200	125	3.52	7	

For Ky Consultants Pvt. Ltd.

[Signature]

(Director)

For VATIKA LIMITED

[Signature]

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Design Statement of Storm Water Drainage

Sr. No	Line No.	Length	Quantity Storm water accumulated	Quantity of Waste Water generated			Discharge		Velocity	Flow	Size of Storm line	Slope	Length of Storm line	Fall	Formation Level			Invert Level			
				Self	Branch	Total	MLD	Cum.							M/sec	Cum.	mm	Upper end	Lower end	Upper end	Lower end
			L	KLD	KLD	KLD	8	9	10	11	12	13	M	M	M	M	M	M	M		
1	2	3	4	5	6	7							14	15	16	17	18	19	20		
1	83E30-	28	67472	67	0	67	0.07	0.0008	0.63	0.079	400	700	OK	0.04	233.148	0.000	231.748	231.708			
2	E34-E29	50	295805	296	0	296	0.30	0.0034	0.63	0.079	400	700	OK	0.07	0.000	0.000	-1.400	-1.471			
3	E29-E27	71	595719	596	363	959	0.96	0.0111	0.63	0.079	400	700	OK	0.10	0.000	0.000	-1.471	-1.573			
4	E33-E27	87	924440	924	0	924	0.92	0.0107	0.63	0.079	400	700	OK	0.12	233.260	0.000	231.860	231.735			
5	E28-E26	81	1057020	1057	0	1057	1.06	0.0122	0.63	0.079	400	700	OK	0.12	233.217	233.116	231.817	231.701			
6	E26-E27	68	366410	366	1057	1423	1.42	0.0165	0.63	0.079	400	700	OK	0.10	233.116	0.000	231.701	231.604			
7	E27-E21	158	1024843	1025	3307	4332	4.33	0.0501	0.63	0.079	400	700	OK	0.23	0.000	0.000	-1.573	-1.799	-1.899		
8	E20-E21	36	3971377	3971	0	3971	3.97	0.0460	0.63	0.079	400	700	OK	0.05	0.000	0.000	-1.400	-1.451			
9	E22-E21	36	202440	202	8303	8506	8.51	0.0984	0.68	0.134	500	800	OK	0.05	0.000	233.279	-1.899	-1.944			
10	A22-E22	78	173660	174	8506	8679	8.68	0.1005	0.68	0.134	500	800	OK	0.10	233.279	233.519	-1.944	-2.041			
11	A21-A22	76	638639	639	0	639	0.64	0.0074	0.63	0.079	400	700	OK	0.11	0.000	233.519	-1.400	-1.509			
12	A22-E23	26	76410	76	9318	9394	9.39	0.1087	0.68	0.134	500	800	OK	0.26	0.03	233.519	233.889	-2.041	-2.074		
13	E25-E23	29	203009	203	9394	9597	9.60	0.1111	0.68	0.134	500	800	OK	0.29	233.889	0.000	-2.074	-2.110			
14	A14-E25	86	599704	600	9597	10197	10.20	0.1180	0.68	0.134	500	800	OK	0.11	0.000	0.000	-2.110	-2.217	-2.317		
15	A60-A59	100	747475	747	0	747	0.75	0.0087	0.63	0.079	400	700	OK	0.14	234.566	234.341	233.166	233.023			
16	A59-A14	131	927142	927	747	1675	1.67	0.0194	0.63	0.079	400	700	OK	0.19	234.341	0.000	233.023	232.836			
17	A11-A14	56	329989	330	11872	12202	12.20	0.1412	0.72	0.205	600	900	OK	0.06	0.000	0.000	-2.317	-2.380			
18	A10-A11	181	1092695	1093	12202	13294	13.29	0.1539	0.72	0.205	600	900	OK	0.20	0.000	0.000	-2.380	-2.581	-2.681		
19	A13-A10	40	272806	273	0	273	0.27	0.0032	0.63	0.079	400	700	OK	0.06	234.898	0.000	233.498	233.441			
20	83A2-83A5	44	2124709	2125	0	2125	2.12	0.0246	0.63	0.079	400	700	OK	0.06	0.000	0.000	-1.400	-1.463			
21	A5-A4	199	1836355	1836	2125	3961	3.96	0.0458	0.63	0.079	400	700	OK	0.28	0.000	235.160	-1.463	-1.747			
22	A8-A4	53	454447	454	0	454	0.45	0.0053	0.63	0.079	400	700	OK	0.08	235.528	235.160	234.128	234.052			
23	A4-A4	25	1647413	1647	0	1647	1.65	0.0191	0.63	0.079	400	700	OK	0.25	235.544	235.160	234.144	234.108			
24	A4-A7	56	311778	312	6063	6375	6.37	0.0738	0.63	0.079	400	700	OK	0.56	235.160	0.000	-1.747	-1.827			
25	A20-A7	62	389723	390	0	390	0.39	0.0045	0.63	0.079	400	700	OK	0.62	235.143	0.000	233.743	233.654			
26	A7-A7	92	547120	547	0	547	0.55	0.0063	0.63	0.079	400	700	OK	0.92	235.150	0.000	233.750	233.619	233.519		
27	A7-A10	53	295076	295	7312	7607	7.61	0.0880	0.68	0.134	500	800	OK	0.53	0.000	0.000	-1.827	-1.893			
28	A9-A10	181	1007712	1008	21174	22181	22.18	0.2567	0.76	0.293	700	1000	OK	0.18	0.000	0.000	-2.681	-2.862	-2.962		

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Design Statement of Storm Water Drainage

Sr. No	Line No.	Length	Quantity Storm water accumulated	Quantity of Waste Water generated			Discharge		Velocity	Flow	Size of Storm line	Slope	Length of Storm line	Fall	Formation Level		Invert Level	
				Self	Branch	Total	MLD	Cum.							Upper end	Lower end	Upper end	Lower end
1	2	3	L	KLD	KLD	KLD	8	9	M/sec	Cu.m.	mm		M	M	M	M	M	M
29	A3-A3	32	394174	394	0	394	0.39	0.0046	0.63	0.079	400	700	14	15	16	17	18	19
30	A3-A6	56	932403	932	394	1327	1.33	0.0154	0.63	0.079	400	700	32	0.05	235.821	0.000	234.421	234.375
31	A20-A6	41	457930	458	0	458	0.46	0.0053	0.63	0.079	400	700	56	0.08	0.000	0.000	234.375	234.295
32	A6-A9	53	915701	916	1785	2700	2.70	0.0313	0.63	0.079	400	700	41	0.06	235.531	0.000	234.131	234.073
33	A18-A15	25	183726	184	0	184	0.18	0.0021	0.63	0.079	400	700	53	0.08	0.000	0.000	234.073	233.997
34	A16-A15	32	254055	254	0	254	0.25	0.0029	0.63	0.079	400	700	25	0.04	234.679	234.985	233.279	233.244
35	A15-A12	53	915701	916	438	1353	1.35	0.0157	0.63	0.079	400	700	32	0.05	234.664	234.985	233.264	233.218
36	A19-A12	51	409908	410	0	410	0.41	0.0047	0.63	0.079	400	700	53	0.08	234.985	235.242	233.218	233.143
37	A12-A9	56	932403	932	1763	2696	2.70	0.0312	0.63	0.079	400	700	51	0.07	234.967	235.242	233.567	233.494
38	83A9-OUTFALL	30	0	0	27577	27577	27.58	0.3192	0.79	0.399	800	1100	56	0.08	235.242	0.000	233.143	233.063
39	82A31'	66	428695	429	0	429	0.43	0.0050	0.63	0.079	400	700	66	0.09	237.546	237.479	236.146	236.052
40	A34-A33	12	139187	139	0	139	0.14	0.0016	0.63	0.079	400	700	12	0.02	237.484	237.479	236.084	236.067
41	A33-A35	50	382070	382	568	950	0.95	0.0110	0.63	0.079	400	700	50	0.07	237.479	237.441	236.052	235.980
42	A37-A36	14	69464	69	0	69	0.07	0.0008	0.63	0.079	400	700	14	0.02	236.644	236.774	235.244	235.224
43	A36-A35	50	302654	303	69	372	0.37	0.0043	0.63	0.079	400	700	50	0.07	236.774	237.441	235.224	235.153
44	A35-A32	55	318854	319	1322	1641	1.64	0.0190	0.63	0.079	400	700	55	0.08	237.441	236.811	235.153	235.074
45	A49-A31	26	204451	204	0	204	0.20	0.0024	0.63	0.079	400	700	26	0.04	237.816	237.546	236.416	236.379
46	A31-A32	55	306211	306	204	511	0.51	0.0059	0.63	0.079	400	700	55	0.08	237.546	236.811	236.379	236.300
47	A32-A6	44	330455	330	2152	2482	2.48	0.0287	0.63	0.079	400	700	44	0.06	236.811	236.501	235.074	235.011
48	A37-A37	84	249005	249	0	249	0.25	0.0029	0.63	0.079	400	700	84	0.12	237.043	236.646	235.643	235.523
49	A37-A6	12	30101	30	249	279	0.28	0.0032	0.63	0.079	400	700	12	0.02	236.646	236.501	235.523	235.505
50	A6-A5	71	164398	164	2761	2926	2.93	0.0339	0.63	0.079	400	700	71	0.10	236.501	236.327	235.011	234.910
51	A61-A5	25	540044	540	0	540	0.54	0.0063	0.63	0.079	400	700	25	0.04	236.199	236.327	234.799	234.764
52	A17-A5	71	601359	601	3466	4067	4.07	0.0471	0.63	0.079	400	700	71	0.10	236.327	236.357	234.764	234.662

Design Statement of Storm Water Drainage

Sr. No	Line No.	Length	Quantity Storm water accumulated	Quantity of Waste Water generated			Discharge		Velocity	Flow	Size of Storm line	Slope	Length of Storm line	Fall	Formation Level		Invert Level			
				Self	Branch	Total	MLD	Cum.							M/sec	Cu.m.	mm	Upper end	Lower end	Upper end
													KLD							
1	2	3	4	5	6	7														
53	A16-A17	36	217131	217	4067	4284	4.28	0.0496	0.63	0.079	400	700	OK	0.05	236.357	236.371	234.662	234.611		
54	A20-A15'	13	128052	128	0	128	0.13	0.0015	0.63	0.079	400	700	OK	0.02	236.125	236.149	234.725	234.706		
55	A21-A20	7	105782	106	0	106	0.11	0.0012	0.63	0.079	400	700	OK	0.01	236.174	236.149	234.774	234.764		
56	A20-A16	71	414004	414	234	648	0.65	0.0075	0.63	0.079	400	700	OK	0.10	236.149	236.371	234.706	234.605		
57	A15-A16	78	423128	423	4932	5355	5.36	0.0620	0.63	0.079	400	700	OK	0.11	236.371	236.125	234.605	234.493		
58	A15-A14	27	139187	139	5355	5494	5.49	0.0636	0.63	0.079	400	700	OK	0.04	236.125	236.011	234.493	234.455		
59	A4-A14	51	901056	901	0	901	0.90	0.0104	0.63	0.079	400	700	OK	0.07	235.999	236.011	234.493	234.420		
60	A14-A10	99	573449	573	6395	6969	6.97	0.0807	0.68	0.134	500	800	OK	0.12	236.011	236.045	234.355	234.231		
61	A28-A27	76	615364	615	0	615	0.62	0.0071	0.63	0.079	400	700	OK	0.11	236.180	236.161	234.780	234.671		
62	A27-A26	73	169029	169	615	784	0.78	0.0091	0.63	0.079	400	700	OK	0.10	236.161	236.147	234.671	234.567		
63	A26-A25	79	411993	412	784	1196	1.20	0.0138	0.63	0.079	400	700	OK	0.11	236.147	236.129	234.567	234.454		
64	A25-A24	64	1333626	1334	1196	2530	2.53	0.0293	0.63	0.079	400	700	OK	0.09	236.129	236.117	234.454	234.362		
65	A24-A23	102	423791	424	2530	2954	2.95	0.0342	0.63	0.079	400	700	OK	0.15	236.117	236.097	234.362	234.217		
66	A23-A22	86	526359	526	2954	3480	3.48	0.0403	0.63	0.079	400	700	OK	0.12	236.097	236.070	234.217	234.094		
67	A22-A10	90	1382262	1382	3480	4862	4.86	0.0563	0.63	0.079	400	700	OK	0.13	236.070	236.045	234.094	233.965		
68	A10-A9	67	373020	373	11831	12204	12.20	0.1413	0.72	0.205	600	900	OK	0.07	236.045	235.218	233.865	233.791		
69	A8-A9	20	100214	100	0	100	0.10	0.0012	0.63	0.079	400	700	OK	0.03	235.221	235.218	233.821	233.793		
70	A9-A58	97	528909	529	12304	12833	12.83	0.1485	0.72	0.205	600	900	OK	0.11	235.218	235.369	233.791	233.683		
71	A58-A3	71	480926	481	12833	13314	13.31	0.1541	0.72	0.205	600	900	OK	0.08	235.369	235.464	233.683	233.604		
72	A3-A2	7	13893	14	13314	13328	13.33	0.1543	0.72	0.205	600	900	OK	0.01	235.464	235.402	233.604	233.596		
73	A2-A1	56	311778	312	13328	13640	13.64	0.1579	0.72	0.205	600	900	OK	0.06	235.402	235.153	233.596	233.534		
74	82A55-A1	116	4294417	4294	0	4294	4.29	0.0497	0.63	0.079	400	700	OK	0.17	235.878	235.153	234.478	234.312		
82A46-		39	228266	228	0	228	0.23	0.0026	0.63	0.079	400	700	OK	0.06	235.248	235.236	233.848	233.792		
82A45-		10	111349	111	0	111	0.11	0.0013	0.63	0.079	400	700	OK	0.01	235.241	235.236	233.841	233.827		
82A63-		70	259206	259	340	599	0.60	0.0069	0.63	0.079	400	700	OK	0.10	235.236	235.222	233.792	233.692		
82A44-		63	361885	362	0	362	0.36	0.0042	0.63	0.079	400	700	OK	0.09	235.239	235.222	233.839	233.749		
82A62-		11	25470	25	961	986	0.99	0.0114	0.63	0.079	400	700	OK	0.11	235.222	235.220	233.692	233.676		
82A64-		84	2303161	2303	0	2303	2.30	0.0267	0.63	0.079	400	700	OK	0.12	235.203	235.220	233.803	233.683		
82A43-		30	0	0	3289	3289	3.29	0.0381	0.63	0.079	400	700	OK	0.04	235.220	233.676	233.634			

Design Statement of Storm Water Drainage

Sr. No	Line No.	Length	Quantity Storm water accumulated	Quantity of Waste Water generated			Discharge		Velocity	Flow	Size of Storm line	Slope	Length of Storm line	Fall	Formation Level			Invert Level		
				Self	Branch	Total	MLD	Cum.							Upper end	Lower end	Upper end	Upper end	Lower end	Lower end
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
75	82A7-A1	55	190368	190	3289	3480	3.48	0.0403	0.63	0.079	400	700	OK	0.08	235.161	235.153	233.761	233.682		
76	82A1-OUTFALL	30	169029	169	21414	21583	21.58	0.2498	0.76	0.293	700	1000	OK	0.03	235.153	235.153	233.434	233.404		
77	82B24-	41	427615	428	0	428	0.43	0.0049	0.63	0.079	400	700	OK	0.06	234.833	234.842	233.433	233.375		
78	B23- B3	225	1296177	1296	428	1724	1.72	0.0200	0.63	0.079	400	700	OK	0.32	234.842	234.019	233.375	233.053		
79	B24- B4	172	1174736	1175	0	1175	1.17	0.0136	0.63	0.079	400	700	OK	0.25	234.833	233.783	233.433	233.188		
80	B4-B3	54	300643	301	1175	1475	1.48	0.0171	0.63	0.079	400	700	OK	0.08	233.783	234.019	233.188	233.110		
81	B3-B2	57	317346	317	3199	3517	3.52	0.0407	0.63	0.079	400	700	OK	0.08	234.019	234.299	233.053	232.972		
82	B6-B2	55	501270	501	0	501	0.50	0.0058	0.63	0.079	400	700	OK	0.08	234.592	234.299	233.192	233.114		
83	B2-E3	68	378588	379	4018	4396	4.40	0.0509	0.63	0.079	400	700	OK	0.10	234.299	234.216	232.972	232.875		
84	E4- E5	43	314536	315	0	315	0.31	0.0036	0.63	0.079	400	700	OK	0.06	233.618	233.933	232.218	232.157		
85	E3- E4	55	317346	317	315	632	0.63	0.0073	0.63	0.079	400	700	OK	0.08	233.933	234.216	232.157	232.078	231.978	
86	82B17-	19	319283	319	0	319	0.32	0.0037	0.63	0.079	400	700	OK	0.03	235.406	235.401	234.006	233.979		
87	B16-B15	119	1636168	1636	319	1955	1.96	0.0226	0.63	0.079	400	700	OK	0.17	235.401	235.377	233.979	233.809		
88	B15-E1	209	1024414	1024	1955	2980	2.98	0.0345	0.63	0.079	400	700	OK	0.30	235.377	234.705	233.809	233.510		
89	E1-E2	54	279545	280	2980	3259	3.26	0.0377	0.63	0.079	400	700	OK	0.08	234.705	234.485	233.510	233.433		
90	B1-E2	106	690758	691	0	691	0.69	0.0080	0.63	0.079	400	700	OK	0.15	234.633	234.485	233.233	233.082		
91	E2-E3	54	116917	117	3950	4067	4.07	0.0471	0.63	0.079	400	700	OK	0.08	234.485	234.216	233.082	233.004		
92	E3- E12	127	707068	707	9095	9802	9.80	0.1135	0.68	0.134	500	800	OK	0.16	234.216	234.052	231.978	231.820	231.720	
93	E12- E14	44	317346	317	0	317	0.32	0.0037	0.63	0.079	400	700	OK	0.06	233.765	234.052	232.365	232.302		
94	82E10-	239	2892948	2893	0	2893	2.89	0.0335	0.63	0.079	400	700	OK	0.34	234.614	234.274	233.214	233.872		
95	E16-E17	70	321348	321	2893	3214	3.21	0.0372	0.63	0.079	400	700	OK	0.10	234.274	234.300	232.872	233.772		
96	E17-E11	144	901390	901	3214	4116	4.12	0.0476	0.63	0.079	400	700	OK	0.21	234.300	234.347	232.772	232.567		
97	E27-E11	14	33405	33	0	33	0.03	0.0004	0.63	0.079	400	700	OK	0.02	234.321	234.347	233.121	233.101		
98	E11-E11	90	590617	591	0	591	0.59	0.0068	0.63	0.079	400	700	OK	0.13	234.445	234.347	233.045	232.917		

Sheet No:-4

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Design Statement of Storm Water Drainage

Sr. No	Line No.	Length	Quantity Storm water accumulated	Quantity of Waste Water generated			Discharge			Velocity	Flow	Size of Storm line	Slope	Length of Storm line	Fall	Formation Level		Invert Level	
				Self	Branch	Total	MLD	Cu.m.	M/sec							Upper end	Lower end	Upper end	Lower end
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
99	E11- E12	55	300643	301	4740	5040	5.04	0.0583	0.63	0.079	400	700	OK	55	0.08	234.347	234.052	232.567	232.488
100	E18- E12	130	695933	696	15160	15856	15.86	0.1835	0.72	0.205	600	900	OK	130	0.14	234.052	233.835	231.720	231.575
101	E18-E19	88	738817	739	15856	16595	16.59	0.1921	0.72	0.205	600	900	OK	88	0.10	233.835	233.405	231.575	231.477
102	E5-E15	81	695933	696	0	696	0.70	0.0081	0.63	0.079	400	700	OK	81	0.12	233.618	233.462	232.218	232.103
103	E20-E15	133	937811	938	0	938	0.94	0.0109	0.63	0.079	400	700	OK	133	0.19	233.197	233.462	231.797	231.607
104	E15-E14	54	300643	301	1634	1934	1.93	0.0224	0.63	0.079	400	700	OK	54	0.08	233.462	233.765	231.607	231.530
105	E4-E14	84	701501	702	0	702	0.70	0.0081	0.63	0.079	400	700	OK	84	0.12	233.933	233.765	232.533	232.413
106	E14-E19	180	974307	974	2636	3610	3.61	0.0418	0.63	0.079	400	700	OK	180	0.26	233.765	233.405	231.530	231.273
107	82E19-	70	1229601	1230	20205	21435	21.43	0.2481	0.76	0.293	700	1000	OK	70	0.07	233.405	233.319	231.173	231.103
108	82E26-	64	0	0	0	0	0.00	0.0000	0.63	0.079	400	700	OK	64	0.09	233.142	233.319	231.742	231.651
109	82E24- OUTFALL	30	0	0	21435	21435	21.43	0.2481	0.76	0.293	700	1000	OK	30	0.03	233.319	233.319	231.103	231.073
110	83A35-	62	373989	374	0	374	0.37	0.0043	0.63	0.079	400	700	OK	62	0.09	231.809	231.766	230.409	230.321
111	A32-A31	55	829518	830	0	830	0.83	0.0096	0.63	0.079	400	700	OK	55	0.08	231.849	231.766	230.449	230.371
112	A31-A34	61	207140	207	1204	1411	1.41	0.0163	0.63	0.079	400	700	OK	61	0.09	231.766	0.000	230.321	230.234
113	A33-A34	73	2168077	2168	0	2168	2.17	0.0251	0.63	0.079	400	700	OK	73	0.10	231.754	0.000	230.354	230.250
114	83A34-	135	0	0	3579	3579	3.58	0.0414	0.63	0.079	400	700	OK	135	0.19	0.000	231.767	230.234	230.041
115	83A29- OUTFALL	30	0	0	3579	3579	3.58	0.0414	0.63	0.079	400	700	OK	30	0.04	231.767	231.767	230.041	229.998
116	82B21-	109	666477	666	0	666	0.67	0.0077	0.63	0.079	400	700	OK	109	0.16	235.012	234.893	233.612	233.456
117	B22-B27	58	131981	132	666	798	0.80	0.0092	0.63	0.079	400	700	OK	58	0.08	234.893	234.834	233.456	233.374
118	B28- B27	81	513715	514	0	514	0.51	0.0059	0.63	0.079	400	700	OK	81	0.12	234.857	234.834	233.457	233.341
119	B27- B26	47	273811	274	1312	1586	1.59	0.0184	0.63	0.079	400	700	OK	47	0.07	234.834	234.660	233.341	233.274
120	B34- B26	113	1053575	1054	0	1054	1.05	0.0122	0.63	0.079	400	700	OK	113	0.16	234.820	234.660	233.420	233.258
121	B26-B25	10	25470	25	2640	2665	2.67	0.0308	0.63	0.079	400	700	OK	10	0.01	234.660	234.632	233.258	233.244
122	B23- B25	62	389723	390	0	390	0.39	0.0045	0.63	0.079	400	700	OK	62	0.09	234.842	234.632	233.442	233.354