

Design Statement of Water Supply

Sr No.	Name of Road	Length of Pipe	Diameter of Pipe	Total Water Demand	Net Water Demand (Total Water Demand - Total Horizontal Water Demand)	Net Water Demand				Total Water Demand	Head Loss per M	Total Head Loss	Head Loss Progressive	Terminal Head	
						self	previous	total	KLD						LPM
384	A46-A47	52	100	17627	15644	15.64	0.00	15.64	32.59	0.0001	0.007	4.862	25.14		
385	A45-B12	208	250	45499	29315	29.32	737.88	767.20	1598.33	0.0022	0.456	5.264	24.74		
386	B12-B12	24	250	5573	4658	4.66	733.23	737.88	1537.26	0.0020	0.049	5.313	24.69		
387	B12-C10	206	150	39145	51288	31.29	254.99	286.28	596.42	0.0042	0.875	6.188	23.81		
388	C10-C11	64	100	14085	11644	11.64	0.00	11.64	24.26	0.0001	0.005	6.194	23.81		
389	C10-C7	84	100	9454	6250	6.25	237.10	243.35	506.58	0.0227	1.904	8.092	21.91		
390	C7-C8	29	100	11106	10000	10.00	194.25	204.25	425.51	0.0164	0.475	8.567	21.43		
391	C8-C12	120	100	198824	194246	194.25	0.00	194.25	404.68	0.0149	1.792	10.359	19.64		
392	C7-C6	55	100	2348	250	0.25	32.60	32.85	68.44	0.0006	0.031	8.123	21.88		
393	C6-C13	182	100	58295	32603	32.60	0.00	32.60	67.92	0.0005	0.100	8.222	21.78		
394	B12-B13	23	150	877	0	0.00	446.95	446.95	931.14	0.0097	0.223	5.536	24.46		
395	B13-B14	43	150	12126	10486	10.49	436.46	446.95	931.14	0.0097	0.417	5.953	24.05		
396	B14-B17	46	150	17162	15408	15.41	421.05	436.46	909.39	0.0093	0.427	6.380	23.62		
397	B17-B27	8	150	305	0	0.00	421.05	421.05	877.19	0.0087	0.069	6.449	23.55		
398	B27-B19	56	150	14544	12408	12.41	408.64	421.05	877.19	0.0087	0.486	6.935	23.06		
399	B19-B21	40	150	7933	6408	6.41	402.24	408.64	851.34	0.0082	0.329	7.264	22.74		
400	B21-B22	14	150	534	0	0.00	402.24	402.24	837.99	0.0080	0.112	7.376	22.62		
401	B22-B5	87	150	3319	0	0.00	402.24	402.24	837.99	0.0080	0.094	8.070	21.93		
402	B5-B5	223	100	57451	48945	48.95	31.62	80.56	167.84	0.0029	0.652	8.722	21.28		
403	B5-B4	78	100	2975	0	0.00	31.62	31.62	65.87	0.0005	0.040	8.763	21.24		
404	B4-B6	64	100	24400	21959	21.96	0.00	21.96	45.75	0.0003	0.017	8.779	21.22		
405	B4-B3	56	100	4136	2000	2.00	7.66	9.66	20.12	0.0001	0.003	8.766	21.23		
406	B3-B2	18	100	8344	7658	7.66	0.00	7.66	15.95	0.0000	0.001	8.766	21.23		
SECTOR 84															
407	83B5-84D17	72	150	2746	0	0.00	321.68	321.68	670.16	0.0053	0.380	8.449	21.55		
408	84D17-D4	149	100	37221	27538	27.54	0.00	27.54	57.37	0.0004	0.060	8.509	21.49		
409	D17-D18	46	150	6412	4658	4.66	289.48	294.14	612.79	0.0045	0.206	8.655	21.35		
410	D18-D6	30	100	12709	11565	11.57	0.00	11.57	24.09	0.0001	0.002	8.657	21.34		

Design Statement of Water Supply

S.No.	Name of Dist.	Length of Diameter of Pipe	Pipe Size	Length of Diameter of Total Water Demand	Net Water Demand (Gross Water Demand - Total Residual Water Demand)	Design of Pipe Line				Head Loss per 100 m	Total Head Loss	Head Loss per 100 m	Terminal Head
						self	pre-fabric	total	Total Water Demand				
		m	mm	L	L	KLD	KLD	KLD	LPM	m	m	m	m
411	D15-D1	128	100	48800	43918	43.92	0.00	43.92	97.49	0.00110	0.122	0.117	21.12
412	D15-D19	125	100	28801	21880	23.88	0.00	23.88	49.75	0.00093	0.040	0.040	21.21
413	D15-D22	44	150	1678	0	0.00	110.12	110.12	437.74	0.0024	0.105	0.105	21.24
414	D21-D5	37	100	13416	12005	12.01	0.00	12.01	25.03	0.0001	0.003	0.003	21.36
415	D22-D01	186	150	56707	30375	30.38	157.74	198.11	412.13	0.0021	0.257	0.117	21.62
416	D21-D7	22	100	839	0	0.00	167.74	167.74	340.45	0.0014	0.150	0.003	21.62
417	D21-D21	74	100	4323	1500	1.50	57.34	58.84	122.48	0.0016	0.123	0.123	21.62
418	D25-A7	52	100	35797	32688	32.69	25.65	58.34	119.45	0.0016	0.145	0.123	21.62
419	D27-D1	58	100	2251	0	0.00	25.03	25.03	52.19	0.0003	0.020	0.152	21.62
420	D21-D2	33	100	7664	6825	6.83	18.23	25.05	53.19	0.0003	0.007	0.052	21.62
421	D21-D3	50	100	16057	12150	12.15	0.00	12.15	25.31	0.0001	0.004	0.054	21.62
422	D21-D4	30	100	7219	6073	6.08	0.00	6.08	12.56	0.0002	0.001	0.069	21.62
423	D21-D10	90	100	17406	13973	13.97	94.93	108.90	215.88	0.0021	0.460	0.224	21.62
424	D25-D19	142	100	12441	6986	6.99	87.94	94.93	197.77	0.0040	0.567	0.235	21.62
425	D27-D2	108	100	62578	10929	20.96	66.98	87.94	183.21	0.0034	0.372	0.256	21.62
426	D24-D1	61	100	6077	5750	3.75	63.33	66.98	139.33	0.0021	0.127	0.252	21.62
427	D5-D1	37	100	8687	7628	7.66	0.00	7.66	15.95	0.0002	0.004	0.054	21.62
428	D2-A1	62	100	12772	9928	9.97	0.00	9.97	20.54	0.0001	0.004	0.054	21.62
429	D1-A1	43	100	12837	10815	10.82	34.85	45.67	93.14	0.0010	0.084	0.054	21.62
430	D21-D4A11	123	100	13637	17801	17.80	17.05	34.85	72.61	0.0008	0.055	0.055	21.62
431	A11-A12	55	100	16865	4658	4.66	13.39	17.05	35.32	0.0002	0.025	0.055	21.62
432	A12-A12	33	100	9008	6986	6.99	0.00	6.99	14.55	0.0002	0.002	0.053	21.62
433	D4A12-D4A13	38	100	6094	5408	5.41	0.00	5.41	11.37	0.0003	0.000	0.051	21.62
Total Length		51372		326470	265285								
Total Length		56906		9232495	7305186			7306					

Sector 83 VATIKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Road m	Width of Road m	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity cu.m	Earthwork in Filling cu.m	Excavation in Cutting cu.m	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
				m	m			m	m				m	m	m	m
1	2	3	4	5	6	7	8	9	10	14	15	16	17	18	19	20
SECTOR 83																
1	A47-A46	58	24	231.000	230.750	1	300	231.099	230.906	177.16	177.16	0.00				58
2	A46-A45	67	24	230.750	230.250	-1	330	230.906	230.703	488.98	488.98	0.00				67
3	A44-A45	62	24	230.250	230.750	1	230	230.703	230.972							62
4	A57-A44	47	24	230.750	230.750	1	225	230.972	231.181							47
5	A43-A57	8	24	230.750	230.500	1	200	231.181	231.221	110.60	110.60	0.00				8
6	A56-A43	42	24	230.500	231.000	1	225	231.221	231.408	568.88	568.88	0.00				42
7	A42-A56	13	24	231.000	231.250	1	225	231.408	231.465	97.21	97.21	0.00				13
8	E6-A42	37	24	231.250	231.250	1	225	231.465	231.630	264.35	264.35	0.00				37
9	A41-E6	18	24	231.250	231.250	1	150	231.630	231.750	190.05	190.05	0.00				18
10	E7-A41	32	24	231.250	231.500	1	200	231.750	231.910	349.38	349.38	0.00				32
11	A37-E7	23	24	231.500	231.250	1	225	231.910	232.012	323.49	323.49	0.00				23
12	E21-E20	45	24	232.500	232.750	1	250	233.089	233.279	609.59	609.59	0.00				45
13	E23-E21	48	24	232.750	233.000	1	200	233.279	233.519	604.15	604.15	0.00				48
14	A23-E22	74	24	233.000	233.250	1	200	233.519	233.889	1029.08	1029.08	0.00				74
15	E23-A22	13	24	233.250	233.500	1	200	233.889	233.954	170.64	170.64	0.00				13
16	E23-A17	6	24	233.500	233.750	1	125	233.954	234.002	50.89	50.89	0.00				6
17	E23-E25	38	24	233.500	233.750	-1	350	233.954	233.846	250.94	250.94	0.00				38
18	E25-F24	36	24	233.750	233.500	-1	350	233.846	233.772	114.64	114.64	0.00				36
19	A14-A11	55	24	234.250	234.250	1	185	234.341	234.638	316.28	316.28	0.00				55
20	A11-A11	17	24	234.250	234.500	1	200	234.638	234.723	124.75	124.75	0.00				17
21	A5-A2	96	24	235.000	235.500	1	175	235.241	235.790	611.47	611.47	0.00				96

Sector 83 VA IITKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Road	Width of Road	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Cutting	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
		m	m					m	m	cum	cum	cum	m	m	m	m
22	A2-A26	186	24	235.500	235.000	1	215	235.790	236.616	4354.25	4254.25	0.00				186
23	A2-A25	64	24	235.500	236.250	1	115	235.790	236.302	262.16	262.16	0.00				64
24	A25-A24	75	24	236.250	236.250	1	200	236.302	236.677	430.52	430.52	0.00				75
25	A24-A23	179	24	236.250	237.250	1	200	236.677	237.572	1607.48	1607.48	0.00				179
26	A45-A52	53	24	230.250	230.250	-1	200	230.703	230.438	407.14	407.14	0.00				53
27	A33-B12	140	24	230.250	229.750	-1	200	230.438	229.738	294.26	294.26	0.00				140
28	B12-B12	24	24	229.750	229.500	-1	175	229.738	229.600	25.35	25.35	0.00				24
29	B12-C10	211	24	229.500	228.500	-1	220	229.600	228.641	612.18	612.18	0.00				211
30	C10-C7	75	24	228.500	228.000	-1	225	228.641	228.308	404.42	404.42	0.00				75
31	C7-C8	20	24	228.000	228.250	1	300	228.308	228.575	103.84	103.84	0.00				20
32	C8-C9	47	24	228.250	228.500	1	250	228.375	228.563	105.67	105.67	0.00				47
33	C7-C6	63	24	228.000	227.750	-1	350	228.308	228.128	518.63	518.63	0.00				63
34	C6-C5	25	24	227.750	227.750	-1	225	228.128	228.017	193.47	193.47	0.00				25
35	A46-B1	54	12	230.750	230.500	1	1000	230.906	230.933	190.58	190.58	0.00	54			
36	A55-A48	14	12	231.000	231.250	-1	475	232.250	232.260	193.21	193.21	0.00	14			
37	A48-A49	77	12	231.250	231.500	-1	475	232.260	232.098	743.13	743.13	0.00	77			
38	A49-A50	165	12	231.500	231.750	-1	500	232.098	231.768	610.24	610.24	0.00	165			
39	A50-A42	152	12	231.750	231.250	-1	500	231.768	231.464	211.96	211.96	0.00	152			
39	A50-A51	51	12	231.750	231.800	-1	715	231.768	231.698	25.69	0.00	25.69	51			
40	A51-A40	29	15	231.800	232.000	-1	750	231.698	231.639	96.34	0.00	96.34	29			
41	A40-A38	19	18	232.000	232.000	1	100	231.659	231.849	84.07	0.00	84.07		19		
42	A38-A39	20	12	232.000	232.000	1	100	231.849	232.049	12.19	0.00	12.19	20			
43	A38-A36	49	18	232.000	232.250	1	1200	231.849	231.890	225.26	0.00	225.26			49	
44	A36-A37	137	12	232.250	231.250	1	1125	231.890	232.012	320.30	320.30	0.00	137			
45	A38-A22	95	18	232.000	232.500	-1	1000	231.849	231.754	766.61	0.00	766.61				95
46	A32-A33	64	18	232.500	232.750	1	9000	231.754	231.767	995.80	0.00	995.80				64
47	A33-A29	150	12	232.750	233.250	1	5000	231.767	231.797	2192.41	0.00	2192.41	150			

Sector 83 VAHIKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Road	Width of Road	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Cutting	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
		m	m					m	m	cum	cum	cum	m	m	m	m
48	A29-A30	19	12	233.250	233.250	1	5000	231.797	231.801	330.85	0.00	330.85	19			
49	A33-A34	71	18	232.750	232.750	1	5000	231.767	231.781	1247.21	0.00	1247.21			71	
50	A34-A31	63	15	232.750	232.500	-1	4300	231.781	231.767	804.32	0.00	804.32	63			
51	A32-A31	100	18	232.500	232.500	1	8500	231.754	231.766	1331.87	0.00	1331.87			100	
52	A31-A28	55	18	232.500	232.750	1	1400	231.766	231.805	831.01	0.00	831.01				55
53	A28-A27	21	12	232.750	233.000	1	5000	231.805	231.809	269.05	0.00	269.05	21			
54	A28-A35	22	18	232.750	233.000	1	5000	231.805	231.810	422.75	0.00	422.75				22
55	A51-A41	135	15	232.000	231.250	1	2600	231.698	231.750	200.11	200.11	0.00			135	
56	A56-E3	98	12	231.000	230.750	1	5000	231.408	231.427	637.98	637.98	0.00	98			
57	A43-A58	55	15	230.500	231.250	1	700	231.221	231.300	317.89	317.89	0.00			55	
58	A57-E1	53	12	230.750	230.750	1	5000	231.181	231.192	277.51	277.51	0.00	53			
59	A44-A54	101	12	230.750	231.000	1	800	230.972	231.098	194.24	194.24	0.00	101			
60	A44-E1	213	12	230.750	230.000	-1	200	230.972	229.907	165.22	165.22	0.00	213			
61	B12-E1	62	15	229.750	230.000	1	365	229.738	229.907	48.82	0.00	48.82			62	
62	E1-E8	162	12	230.000	238.750	-1	685	229.907	229.671	804.61	804.61	0.00	162			
63	E8-E10	50	12	228.750	229.000	1	265	229.671	229.859	533.99	533.99	0.00	50			
64	E1-E2	49	15	230.000	230.000	-1	3300	229.907	229.893	73.49	0.00	73.49			49	
65	E2-E2	111	12	230.000	230.500	1	5000	229.893	229.915	461.28	0.00	461.28	111			
66	E2-E10	162	12	230.000	229.000	-1	5000	229.893	229.860	731.70	731.70	0.00	162			
67	E2-E3	33	15	230.000	230.250	1	5000	229.893	229.899	113.41	0.00	113.41			33	
68	E10-E11	33	12	229.000	229.250	1	250	229.859	229.991	316.93	316.93	0.00	33			

Sector 83 VATIKA (Gurgaon) Design Statement of Roads

Sr No	Name of Road	Length of Road m	Width of Road m	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling cu.m	Excavation in Cutting cu.m	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
69	E11-E12	61	12	229.250	228.750	1	5000	229.991	230.004	730.11	730.11	0.00	61			
70	E11-E13	38	12	229.250	229.250	1	375	229.991	230.003	361.15	361.15	0.00	38			
71	E13-E13	114	12	230.250	229.250	1	775	230.093	230.240	569.37	569.37	0.00	114			
72	E13-E14	55	12	229.250	229.700	1	115	230.093	230.571	565.48	565.48	0.00	55			
73	E14-E4	118	12	229.250	230.000	-1	700	230.571	230.402	1220.07	1220.07	0.00	118			
74	E4-E4	40	15	230.000	229.500	-1	250	230.402	230.242	343.41	343.41	0.00		40		
75	E4-E6	215	12	230.000	231.250	1	175	230.402	231.631	1010.41	1010.41	0.00	215			
76	E4-E5	49	15	230.000	230.500	1	180	230.402	230.675	212.02	212.02	0.00		49		
77	E5-E7	216	12	230.500	231.500	1	175	230.675	231.909	756.12	756.12	0.00	216			
78	E5-E15	76	12	230.500	230.250	1	2200	230.675	230.709	288.96	288.96	0.00	76			
79	E15-E16	115	12	230.250	230.000	1	825	230.709	230.849	902.26	902.26	0.00	115			
80	E15-E17	114	12	230.250	230.750	1	950	230.709	230.829	368.15	368.15	0.00	114			
81	E21-E31	79	12	232.750	232.750	-1	8000	233.279	233.270	497.22	497.22	0.00	79			
82	E31-E27	82	12	232.750	232.750	-1	8000	233.270	233.259	506.20	506.20	0.00	82			
83	E27-E33	75	12	232.750	232.250	1	9000	233.270	233.285	699.35	699.35	0.00	75			
84	E33-E34	49	12	232.250	232.250	1	5000	233.285	233.294	611.20	611.20	0.00	49			
85	E34-E35	61	12	232.250	232.500	1	5000	233.294	233.307	677.44	677.44	0.00	61			
86	E27-E29	100	12	232.750	232.500	-1	900	233.259	233.148	694.51	694.51	0.00	100			
87	E34-E29	36	12	232.250	232.500	-1	250	233.294	233.150	366.06	366.06	0.00	36			
88	E29-E30	29	12	232.500	232.750	-1	900	233.148	233.116	176.47	176.47	0.00	29			
89	E26-E27	59	12	232.750	233.000	-1	1400	233.259	233.217	257.17	257.17	0.00	59			
90	E26-E28	91	12	233.000	233.000	-1	1400	233.217	233.152	201.66	201.66	0.00	91			
91	E26-E32	82	12	233.000	233.750	1	150	233.217	233.764	113.65	113.65	0.00	82			

Sector 83 VATIKA (Gurgaon) Design Statement of Roads

Sr No	Name of Road	Length of Road	Width of Road	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Curing	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
		m	m					m	m	cu.m	cu.m	cu.m	m	m	m	m
92	E23-A21	82	12	233.500	233.750	1	5000	233.954	233.971	332.23	332.23	0.00	82			
93	E25-A14	98	12	233.750	234.250	1	200	233.846	234.336	106.86	106.86	0.00	98			
94	A14-A59	115	12	234.250	234.500	1	500	234.336	234.566	104.69	104.69	0.00	115			
95	A59-A60	102	12	234.500	234.000	1	5000	234.566	234.586	399.10	399.10	0.00	102			
96	A10-A11	178	15	234.250	235.000	1	700	234.638	234.893	374.86	374.86	0.00	178			
97	A13-A10	52	18	235.000	234.750	1	5000	234.893	234.903	21.29	21.29	0.00			52	
98	A9-A10	177	15	235.000	235.250	1	500	234.893	235.247	147.24	0.00	147.24		177		
99	A12-A9	55	12	235.250	235.000	-1	200	235.247	234.972	10.53	0.00	10.53	55			
100	A12-A19	65	12	235.000	234.750	1	5000	234.972	234.985	80.37	80.37	0.00	65			
101	A15-A12	53	12	235.000	234.750	-1	175	234.972	234.669	34.91	0.00	34.91	53			
102	A15-A16	53	12	234.750	234.500	1	5000	234.669	234.679	31.15	31.15	0.00	53			
103	A18-A15	34	12	234.750	234.500	1	5000	234.669	234.675	19.21	19.21	0.00	34			
104	A9-A6	55	12	235.250	235.500	1	195	235.247	235.529	8.29	8.29	0.00	55			
105	A6-A20	55	12	235.500	235.500	1	5000	235.529	235.540	22.50	22.50	0.00	55			
106	A6-A3	55	12	235.500	236.000	1	190	235.529	235.818	50.60	0.00	50.60	55			
107	A3-A5	55	15	236.000	236.000	1	5000	235.818	235.829	145.56	0.00	145.56			55	
108	A3-A1	36	12	236.000	236.250	1	5000	235.818	235.825	131.04	0.00	131.04	36			
109	A10-A7	55	18	235.000	235.250	1	225	234.893	235.137	109.13	0.00	109.13			55	
110	A7-A20	65	12	235.250	235.500	1	5000	235.137	235.150	180.58	0.00	180.58	65			
111	A7-A7	116	12	235.250	234.750	1	5000	235.137	235.160	206.83	206.83	0.00	116			
112	A7-A4	55	18	235.250	235.500	1	140	235.137	235.530	41.17	0.00	41.17				55
113	A4-A8	71	15	235.500	236.000	1	5000	235.530	235.544	226.91	0.00	226.91			71	
114	A4-A4	30	12	235.500	235.750	1	5000	235.530	235.536	33.18	0.00	33.18	30			

Sector 83 VAUTKA (Gurgaon) Design Statement of Roads

Sr. No.	Name of Road	Length of Road m	Width of Road m	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity cu.m	Earthwork in Filling cu.m	Excavation in Cutting cu.m	Road Length			
				Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	18 M Wide Road	24 M Wide Road
115	A4-A5	194	15	235.500	235.000	-1	675	235.530	235.242	396.17	396.17	0.00	194			
116	C10-C11	81	12	228.500	228.500	1	775	228.641	228.746	188.18	188.18	0.00	81			
117	C6-C13	212	12	227.750	228.750	1	1025	228.128	228.335	47.26	0.00	47.26	212			
118	C8-C12	151	12	228.750	228.750	1	975	228.375	228.530	86.77	0.00	86.77	151			
119	B12-B13	19	15	229.500	229.250	1	175	229.600	229.709	79.72	79.72	0.00		19		
120	B13-B15	37	12	229.250	229.500	1	5000	229.709	229.716	149.94	149.94	0.00	37			
121	B13-B14	43	15	229.250	229.250	-1	190	229.709	229.483	223.07	223.07	0.00		43		
122	B14-B15	55	12	229.250	229.000	1	5000	229.483	229.494	239.70	239.70	0.00	55			
123	B14-B17	54	15	229.250	229.000	-1	250	229.483	229.267	202.25	202.25	0.00		54		
124	B17-B25	55	12	229.000	229.250	1	5000	229.267	229.277	93.49	93.49	0.00	55			
125	B17-B27	11	15	229.000	229.000	1	200	229.267	229.322	48.54	48.54	0.00		11		
126	B27-B18	52	15	229.000	229.250	1	5000	229.322	229.332	157.47	157.47	0.00		52		
127	B27-B19	55	15	229.000	229.000	1	175	229.322	229.636	395.04	395.04	0.00		55		
128	B19-B20	20	12	229.000	229.000	1	5000	229.636	229.640	153.11	153.11	0.00	20			
129	B19-B24	48	12	229.000	229.000	1	5000	229.636	229.646	369.09	369.09	0.00	48			
130	B19-B21	34	15	229.000	229.250	1	200	229.636	229.806	303.95	303.95	0.00		34		
131	B21-B22	19	15	229.250	228.750	1	200	229.806	229.901	243.24	243.24	0.00		19		
132	B22-B5	47	12	228.750	228.750	1	400	229.901	230.018	682.28	682.28	0.00	47			
133	B5-B5	246	12	228.750	228.500	1	375	230.018	230.674	5081.79	5081.79	0.00	246			
134	B5-B4	88	12	228.500	229.000	1	1200	230.674	230.748	2070.97	2070.97	0.00	88			
135	B4-B6	62	12	229.000	229.250	1	5000	230.748	230.760	1211.98	1211.98	0.00	62			
136	B4-B3	59	12	229.000	228.000	1	5000	230.748	230.760	1595.63	1595.63	0.00	59			
137	B3-B2	28	15	228.000	228.500	1	5000	230.760	230.765	1055.21	1055.21	0.00		28		
Total		10065								39330.9	50908.2	-11577.3	5936	1505	637	1987

Sector 84 VALIKA (Gurgaon) Design Statement of road

Sr No.	Name of Road	Length of Road	Width of Road	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Depth		Quantity	Earthwork in Filling	Excavation in Cutting	Length of Roads			
				Upstream Level	Downstream Level			Downstream Level	Upstream Level	upper	down				12 M Wide Road	18 M Wide Road	24 M Wide Road	
																		m
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20
1	A1-A2	53	24	229.250	229.250	-1	275	229.688	229.495	0.44	0.24	0.34	434.10	434.10	0.00			53
2	A3-A4	58	24	228.750	228.500	-1	175	229.230	228.898	0.48	0.40	0.44	611.36	611.36	0.00			58
3	A7-D23	93	24	228.000	227.500	1	300	228.375	228.065	0.37	0.56	0.47	1048.84	1048.84	0.00			93
4	A1-A11	147	12	229.250	230.000	1	5000	229.688	229.717	0.44	-0.28	0.08	136.42	136.42	0.00	147		
5	A11-A12	53	12	230.000	230.000	1	8000	229.717	229.724	-0.28	-0.28	-0.28	177.86	0.00	177.86	53		
6	A12-A13	33	12	230.000	229.750	1	8000	229.724	229.728	-0.28	-0.02	-0.15	59.11	0.00	59.11	33		
7	A12-A12	56	12	230.000	229.750	1	5000	229.724	229.735	-0.28	-0.02	-0.15	97.94	0.00	97.94	56		
8	A2-A2	62	12	229.250	229.500	1	5000	229.495	229.507	0.24	0.01	0.13	93.83	93.83	0.00	62		
9	A2-D1	52	12	229.250	228.750	1	5000	229.495	229.505	0.24	0.76	0.50	312.07	312.07	0.00	52		
10	A2-D2	62	12	229.250	228.750	1	725	229.495	229.580	0.24	0.83	0.54	400.03	400.03	0.00	62		
11	D2-D19	112	12	228.750	228.250	1	725	229.580	229.735	0.83	1.48	1.16	1555.91	1555.91	0.00	112		
12	D19-D18	121	12	228.250	227.750	1	8000	229.735	229.750	1.48	2.00	1.74	2530.07	2530.07	0.00	121		
13	D18-D3	136	12	227.750	228.500	1	5000	229.750	229.777	2.00	1.28	1.64	2674.25	2674.25	0.00	136		
14	D18-D17	49	12	227.750	228.250	-1	5000	229.750	229.740	2.00	1.49	1.75	1026.14	1026.14	0.00	49		
15	D17-D16	32	12	228.250	228.250	1	5000	229.740	229.747	1.49	1.50	1.49	573.48	573.48	0.00	32		
16	D17-D4	164	12	228.250	228.000	1	5000	229.740	229.773	1.49	1.77	1.63	3211.06	3211.06	0.00	164		
17	D19-D20	143	12	228.250	228.000	-1	175	229.735	228.918	1.48	0.92	1.20	2061.50	2061.50	0.00	143		
18	D20-A4	20	12	228.000	228.500	-1	1000	228.918	228.898	0.92	0.40	0.66	157.86	157.86	0.00	20		
19	D20-D7	85	12	228.000	227.750	1	5000	228.918	228.935	0.92	1.18	1.05	1072.29	1072.29	0.00	85		
17	D18-D6	49	12	227.750	227.750	1	5000	229.750	229.760	2.00	2.01	2.00	1178.90	1178.90	0.00	49		
18	D18-D22	45	18	227.750	227.750	-1	125	229.750	229.390	2.00	1.64	1.82	1474.23	1474.23	0.00	45		
19	D22-D5	45	18	227.750	227.500	-1	100	229.390	228.930	1.64	1.43	2.64	2185.95	2185.95	0.00	46		
20	D22-D21	152	18	227.750	227.500	-1	350	229.390	228.956	1.64	1.46	1.55	4235.04	4235.04	0.00	152		
21	D21-D7	28	12	227.500	227.750	-1	1300	228.956	228.934	1.46	1.18	1.32	443.51	443.51	0.00	28		
22	D7-D23	80	12	227.750	227.500	-1	95	228.934	228.092	1.18	0.59	0.89	852.63	852.63	0.00	80		
23	A7-E1	53	12	228.000	227.500	-1	200	228.375	228.110	0.37	0.61	0.49	313.17	313.17	0.00	53		
24	E1-E2	21	12	227.500	227.500	1	5000	228.110	228.114	0.61	0.61	0.61	154.23	154.23	0.00	21		
25	E2-E3	50	12	227.500	227.500	1	5000	228.114	228.124	0.61	0.62	0.62	371.47	371.47	0.00	50		
26	E3-E4	28	12	227.500	227.250	1	5000	228.114	228.120	0.61	0.87	0.74	249.28	249.28	0.00	28		
Total		2083								0.910	0.871	0.928	29023	29358	-335	1636	243	204

Sector 85 VAIKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Width of Road		Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Cutting	Length of Roads		
		m	m	Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	24 M Wide Road
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	B1-B2	22	24	230.750	230.000	-1	100	231.237	231.017	396.93	396.93	0.00			22
2	B2-B3	162	12	230.000	230.000	1	2000	231.017	231.098	2055.32	2055.32	0.00	162		
3	B3-B8	27	12	230.000	230.000	1	5000	231.098	231.103	356.55	356.55	0.00	27		
4	B3-B4	30	12	230.000	230.500	1	2000	231.098	231.113	307.90	307.90	0.00	30		
5	B4-B9	67	12	230.500	230.250	1	5000	231.113	231.126	598.55	598.55	0.00	67		
6	B4-B5	49	15	230.500	230.000	1	1000	231.113	231.162	652.14	652.14	0.00		49	
7	B5-B10	48	12	230.000	230.750	1	5000	231.162	231.171	455.94	455.94	0.00	48		
8	B5-B6	33	15	230.000	230.500	1	1000	231.162	231.195	459.49	459.49	0.00		33	
9	B6-B11	58	12	230.500	230.250	1	5000	231.195	231.206	574.59	574.59	0.00	58		
10	B6-B7	65	15	230.500	229.750	1	5000	231.195	231.208	1049.36	1049.36	0.00		65	
11	B7-B12	48	12	229.750	230.250	1	5000	231.208	231.217	698.44	698.44	0.00	48		
12	B7-B14	52	12	229.750	229.500	1	5000	231.208	231.218	990.89	990.89	0.00	52		
13	B14-B15	42	12	229.500	229.500	1	5000	231.218	231.227	868.07	868.07	0.00	42		
14	B15-B22	103	12	229.500	230.250	1	5000	231.227	231.247	1683.26	1683.26	0.00	103		
15	B15-B35	176	12	229.500	229.500	-1	500	231.227	230.875	3274.79	3274.79	0.00	176		
16	B15-B16	25	12	229.500	229.750	1	175	231.227	231.369	501.90	501.90	0.00	25		
17	B16-B35	178	12	229.750	229.500	-1	300	231.369	230.776	3092.40	3092.40	0.00	178		
18	B16-B17	50	12	229.750	229.750	-1	5000	231.369	231.359	968.65	968.65	0.00	50		
19	B17-B34	166	12	229.750	229.750	-1	300	231.359	230.806	2654.85	2654.85	0.00	166		
20	B17-B18	32	12	229.750	229.750	-1	5000	231.359	231.353	616.79	616.79	0.00	32		
21	B17-B23	84	12	229.750	230.250	1	5000	231.359	231.376	1378.76	1378.76	0.00	84		
22	B18-B33	152	12	229.750	230.000	-1	300	231.353	230.846	2233.83	2233.83	0.00	152		
23	B18-B19	40	12	229.750	230.000	-1	5000	231.353	231.345	707.53	707.53	0.00	40		
24	B19-B31	135	12	230.000	230.000	-1	700	231.345	231.152	2022.72	2022.72	0.00	135		
25	B19-B20	41	12	230.000	230.000	-1	5000	231.345	231.337	659.73	659.73	0.00	41		
26	B20-B30	98	12	230.000	230.000	-1	700	231.337	231.197	1489.78	1489.78	0.00	98		
27	B20-B24	53	12	230.000	230.500	1	5000	231.337	231.347	694.59	694.59	0.00	53		
28	B20-B21	43	12	230.000	230.250	-1	5000	231.337	231.328	623.08	623.08	0.00	43		
29	B21-B29	56	12	230.250	230.250	-1	700	231.328	231.248	697.68	697.68	0.00	56		

Sector 85 VALIKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Road m	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Excavation in Cutting cu.m	Length of Roads		
			Upstream Level	Downstream Level			Upstream Level	Downstream Level		12 M Wide Road	15 M Wide Road	24 M Wide Road
							m	m	cu.m	m	m	m
30	B21-B25	76	230.250	230.500	1	5000	231.328	231.343	876.27	76		
31	B21-B28	56	230.250	230.250	-1	5000	231.328	231.317	720.80	56		
32	B28-B27	24	230.250	230.250	1	3000	231.317	231.325	308.45	24		
33	B27-B26	131	230.250	230.750	-1	6300	231.325	231.304	1280.59	131		
34	B28-B29	49	230.250	230.250	-1	700	231.317	231.247	606.83	49		
35	B29-B30	46	230.250	230.000	-1	900	231.247	231.196	605.25	46		
36	B30-B31	40	230.000	230.000	-1	900	231.196	231.151	563.37	40		
37	B31-B32	22	230.000	230.000	1	110	231.151	231.351	330.39	22		
38	B33-B34	37	230.000	229.750	-1	925	230.846	230.806	422.40	37		
39	B34-B35	37	229.750	229.500	-1	1200	230.806	230.776	517.68	37		
40	B35-B36	39	229.500	229.500	1	400	230.776	230.873	619.76	39		
41	B36-C1	63	229.500	229.000	-1	70	230.873	229.973	886.80	63		
42	C1-C2	35	229.000	229.000	-1	450	229.973	229.895	784.67			35
43	C2-C3	33	229.000	229.000	-1	450	229.895	229.822	679.99			33
44	C3-C4	20	229.000	229.000	-1	450	229.822	229.777	383.85			20
45	C4-C5	18	229.000	229.000	-1	450	229.777	229.737	327.23			18
46	C5-C6	72	229.000	228.750	-1	450	229.737	229.577	1352.10			72
47	C6-C7	102	228.750	228.750	-1	550	229.577	229.392	1798.64			102
48	C7-C8	25	228.750	228.750	1	700	229.392	229.428	395.92			25
49	C8-C9	47	228.750	228.500	1	5000	229.577	229.587	1079.68			47
50	C9-C10	55	228.500	228.250	1	5000	229.587	229.598	1606.92			55

Sector 85 VATIKA (Gurgaon) Design Statement of Roads

Sr No.	Name of Road	Length of Road		Width of Road		Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Cutting	Length of Roads		
		m	m	m	m	Upstream Level	Downstream Level			Upstream Level	Downstream Level	cu.m	cu.m	cu.m	12 M Wide Road	15 M Wide Road	24 M Wide Road
51	C10-C11	42	24	228.250	228.000			1	5000	229.498	229.606	1488.88	1488.88	0.00			42
52	C11-C12	43	24	228.000	228.000			1	6000	229.606	229.613	1661.36	1661.36	0.00			43
53	C2-C15	27	12	229.000	228.750			-1	400	229.895	229.828	319.62	319.62	0.00	27		
54	C15-C19	56	12	228.750	228.750			1	5000	229.828	229.839	728.01	728.01	0.00	56		
55	C15-C16	49	12	228.750	228.500			-1	500	229.828	229.730	678.40	678.40	0.00	49		
56	C16-C18	44	12	228.500	228.750			1	5000	229.730	229.739	585.63	585.63	0.00	44		
57	C16-C17	75	12	228.500	228.000			-1	850	229.730	229.642	1292.06	1292.06	0.00	75		
58	C5-B40	18	12	229.000	229.000			1	120	229.822	229.972	193.73	193.73	0.00	18		
59	B40-B41	138	12	229.000	229.000			1	150	229.972	230.892	2371.24	2371.24	0.00	138		
60	B40-B42	149	15	229.000	229.250			1	5000	229.972	230.002	1926.15	1926.15	0.00	149		
61	C4-C20	105	12	229.000	228.500			1	5000	229.777	229.798	1307.84	1307.84	0.00	105		
62	C5-B37	115	12	229.000	229.000			1	5000	229.737	229.760	1033.57	1033.57	0.00	115		
63	B37-B38	55	12	229.000	229.000			1	5000	229.760	229.771	505.54	505.54	0.00	55		
64	B38-B39	89	12	229.000	229.500			1	5000	229.771	229.789	566.43	566.43	0.00	89		
65	C9-C7	116	12	228.500	228.750			-1	600	229.587	229.394	1204.36	1204.36	0.00	116		
66	C10-C14	97	12	228.250	228.500			1	5000	229.598	229.617	1434.71	1434.71	0.00	97		
67	C10-C17	83	12	228.250	228.000			1	1900	229.598	229.642	1488.73	1488.73	0.00	83		
68	C11-C21	42	12	228.000	228.000			1	5000	229.606	229.615	811.67	811.67	0.00	42		
69	B1-A1	156	12	230.750	230.500			-1	250	231.237	230.613	561.16	561.16	0.00	156		
70	A1-A2	43	12	230.500	230.500			-1	225	230.613	230.422	8.88	8.88	0.00	43		
71	A2-A3	68	12	230.500	230.750			1	275	230.422	230.669	65.04	0.00	65.04	68		
72	A2-A4	47	12	230.500	230.500			-1	225	230.422	230.213	103.09	0.00	103.09	47		
73	A4-A5	97	12	230.500	230.000			1	5000	230.213	230.232	32.05	0.00	32.05	97		
74	A5-A6	55	12	230.000	230.000			1	5000	230.232	230.243	156.86	156.86	0.00	55		
75	A3-A32	128	12	230.750	230.250			1	200	230.669	231.309	750.99	750.99	0.00	128		
												69787.742	69987.933	-200.1905	4289	296	514

Sector 82A VATIKA (Gurgaon)

Sr No.	Name of Road	Length of Road	Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity	Earthwork in Filling	Excavation in Curing	Length of road			
			Upstream Level	Downstream Level			Upstream Level	Downstream Level				12 M Wide Road	15 M Wide Road	24 M Wide Road	
		m	m				m	m	cu.m	cu.m	cu.m	m	m	m	
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	A1-A2	56	24	234.750	235.000	1	225	235.153	235.402	541	541	0	0	0	56
2	A2-A3	14	24	235.000	235.000	1	225	235.402	235.464	146	146	0	0	0	14
3	A59-A60	45	24	235.000	235.750	1	225	235.999	236.199	782	782	0	0	0	45
4	A61-A5	48	24	235.750	236.000	1	375	236.199	236.327	448	448	0	0	0	48
5	A5-A6	65	24	236.000	236.250	1	375	236.327	236.501	451	451	0	0	0	65
6	A4-A14	59	24	235.500	235.500	1	5000	235.999	236.011	716	716	0	0	0	59
7	A14-A10	97	24	235.500	235.750	1	3000	236.011	236.044	937	937	0	0	0	97
8	A10-A22	94	24	235.750	236.250	1	3500	236.044	236.070	129	129	0	0	0	94
9	A6-A37	16	24	236.250	236.500	1	110	236.501	236.646	76	76	0	0	0	16
10	A37-A37	109	24	236.500	236.500	1	275	236.646	237.043	901	901	0	0	0	109
11	A6-A32	39	24	236.250	236.500	1	125	236.501	236.813	264	264	0	0	0	39
12	A32-A31	55	24	236.500	236.750	1	75	236.813	237.546	732	732	0	0	0	55
13	A31-A49	27	24	236.750	236.750	1	100	237.546	237.816	603	603	0	0	0	27
14	A50-A51	39	24	237.750	238.000	1	65	237.816	238.416	226	226	0	0	0	39
15	A1-A55	163	12	234.750	234.250	1	225	235.153	235.878	1986	1986	0	163	0	0
16	A56-A57	262	12	234.750	236.250	1	250	236.701	237.749	5423	5423	0	262	0	0
17	A1-A7	47	12	234.750	234.500	1	6000	235.153	235.161	300	300	0	47	0	0
18	A7-A64	253	12	234.500	235.250	1	6000	235.161	235.203	932	932	0	253	0	0
19	A64-A43	100	12	235.250	235.500	1	6000	235.203	235.220	196	0	196	100	0	0
20	A43-A62	13	12	235.500	235.500	1	5000	235.220	235.222	44	0	44	13	0	0
21	A62-A44	81	12	235.500	236.000	1	5000	235.222	235.239	505	0	505	81	0	0

S.No	Name of Road	Length of Width of Road		Natural Surface Levels		Slope Character	Longitudinal Slope	Formation Levels		Quantity		Earthwork in Filling		Excavation in Cutting		12.5% Wide Road		15 M Wide Road	
		m	m	Upstream Level	Downstream Level			Upstream Level	Downstream Level	cum	m	cum	m	cum	m	m	m	m	m
22	A52-A53	70	12	235.500	235.750	1	5000	235.222	235.235	332		0	332			0	0	0	0
23	A53-A54	25	12	235.750	235.500	1	5000	235.236	235.241	107		0	107			0	0	0	0
24	A54-A55	15	12	235.250	235.250	1	5000	235.218	235.221	6		0	6			0	0	0	0
25	A55-A56	34	12	235.250	235.500	1	5000	235.218	235.225	63		0	63			0	0	0	0
26	A56-A57	62	12	235.250	235.750	1	75	235.218	236.045	98		98				0	0	0	0
27	A57-A58	94	12	236.250	236.750	1	3500	236.070	236.097	463		0	463			0	0	0	0
28	A58-A59	97	12	236.750	237.000	1	5000	236.097	236.117	894		0	894			0	0	0	0
29	A59-A60	82	12	237.000	237.000	1	5000	236.117	236.129	653		0	653			0	0	0	0
30	A60-A61	88	12	237.000	237.500	1	5000	236.129	236.147	1458		0	1458			0	0	0	0
31	A61-A62	73	12	237.500	236.750	1	5000	236.147	236.161	851		0	851			0	0	0	0
32	A62-A63	91	12	236.750	236.500	1	5000	236.161	236.180	500		0	500			0	0	0	0
33	A63-A64	34	12	235.500	235.500	1	300	236.011	236.125	352		332				34	0	0	0
34	A64-A65	90	12	235.500	236.000	1	325	236.125	236.371	478		478				50	0	0	0
35	A65-A66	24	12	235.500	235.750	1	1050	236.125	236.149	147		147				23	0	0	0
36	A66-A67	25	12	235.750	236.250	1	1000	236.149	236.174	48		48				23	0	0	0
37	A67-A68	71	12	235.750	236.000	1	325	236.149	236.375	338		338				33	0	0	0
38	A68-A69	31	12	236.000	236.000	-1	2300	236.371	236.357	140		140				23	0	0	0
39	A69-A70	18	12	236.000	236.250	1	5000	236.357	236.350	50		50				18	0	0	0
40	A70-A71	55	12	235.000	236.000	-1	2200	236.357	236.327	211		211				55	0	0	0
41	A71-A72	81	12	236.750	237.250	-1	1300	237.545	237.479	535		535				81	0	0	0
42	A72-A73	28	12	237.250	237.500	1	5000	237.479	237.484	32		32				32	0	0	0
43	A73-A74	50	12	237.250	236.500	-1	1300	237.479	237.441	351		351				50	0	0	0
44	A74-A75	69	12	236.500	235.500	-1	100	237.441	236.811	473		473				69	0	0	0
45	A75-A76								236.813										
46	A76-A77	50	12	236.500	235.500	-1	75	237.441	236.774	364		364				50	0	0	0
47	A77-A78	35	12	236.500	236.500	-1	300	236.774	236.644	93		93				35	0	0	0
Total		3324							236.646										
										13438.65		20068.53		-6639.879		1352		179	

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line							Sluice Valves						
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
1	1	m	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	WW-LJ	30							30							1
3	U-82D2	27							27							1
4	SECTOR 82-															
5	D2-D6	91	91							1						
6	D6-D5	30	30							1						
7	D6-D7	56	56							1						
8	D7-D8	125	125							1						
9	D7-D11	56	56							1						
10	D11-D10	78	78							1						
11	D10-D14	8	8							1						
12	D11-D15	65	65							1						
13	D15-D16	62	62							1						
14	D16-D18	29	29							1						
15	D16-D19	61	61							1						
16	D19-D17	28	28							1						
17	D17-D41	66	66							1						
18	D17-D21	21	21							1						
19	D21-D33	56	56							1						
20	D33-D34	35	35							1						
21	D33-D32	70	70							1						
22	D32-D31	27	27							1						
23	D32-D29	61	61							1						
24	D29-D25	67	67							1						
25	D29-D28	112	112							1						
26	D28-D27	220	220							1						
27	D27-D26	48	48							1						
28	82D2-D1	31	31						31							1
29	82D1-82F8	67	67						67							1
30	82F8-F7	55												1		

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line										Sluice Valves					
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d		
		m	m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.		
29	F7-F26	87	87								1							
30	F7-F25	21	21								1							
31	F7- F6	136					136							1				
32	F6-F23	54	54								1							
33	F23-F24	117	117								1							
34	F6-F21	56	56								1							
35	F21-F22	11	11								1							
36	P6- F5	61					61							1				
37	F5-F20	28	28								1							
38	F20-F21	88	88								1							
39	F5- F4	53				53								1				
40	F4-F3	9				9								1				
41	F3-F12	44	44								1							
42	F3-F15	170	170															
43	F15-F16	55	55								1							
44	F16-F17	22	22								1							
45	F16-F18	12	12								1							
46	F18-F19	18	18								1							
47	F18-F11	86	86								1							
48	F3-F2	49				49								1				
49	F2-F14	170	170															
50	F14-F15	57	57								1							
51	F2- F1	54				54								1				
52	F1-F9	194	194								1							
53	F9-B5	66	66								1							

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line						Sluice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.
54	F1- B7	66				66									1	
55	B7- B8	65	65													
56	B8-F33	41	41													
57	B7- B5	195				195									1	
58	B5- B4	15	15													
59	B4- B24	211	211													
60	B4-B3	54	54													
61	B3- B23	223	223													
62	B23- B24	55	55													
63	B3-B2	57	57													
64	B5-E6	72				72									1	
65	E6- E7	91	91													
66	E6- E5	6				6									1	
67	E5-E15	125	125													
68	E15-E20	151	151													
69	E20-E19	62	62													
70	E15-E14	54	54													
71	E5- E4	54				54									1	
72	E4-E14	126	126													
73	E14-E19	175	175													
74	E19- E18	88	88													
75	E14- E12	57	57													
76	E4- E3	57		57											1	
77	E3-B2	68	68												1	

Appurtenances of Water Supply

Sr. No.	Name of Road	Length of Pipe m	Length of Pipe Line						Sluice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
78	B2- B6	67	67							1						
79	E3- E2	21	21							1						
80	E2-B36	50	50							1						
81	B36-B1	87	87							1						
82	B36- E1	55	55							1						
83	E1-B15	184	184							1						
84	B15- B16	118	118							1						
85	B16- B17	16	16							1						
86	B16-B18	13	13							1						
87	E3- E12	127				127									1	
88	E12- E18	125	125							1						
89	E12- E11	54			54					1						
90	E11-E11	93	93							1						
91	E11-E17	151			151					1						
92	E11- E27	6	6												1	
93	E17-E16	68			68										1	
94	E16- E10	249			249										1	
SECTOR 82A-															1	
95	82E10-82A1	73			73											
96	A1-A'55	110		110												
97	A1-A7	56	56							1						
98	A7-A64	254	254							1						
99	A64-A43	81	81							1						
100	A43-A62	11	11							1						
101	A62-A44	65	65							1						
102	A62-A63	70	70							1						
103	A63-A'45	20	20							1						
104	A63-A46	41	41							1						
105	A1-A2	56		56											1	
106	A2-A'3	6		6											1	

Sr No.	Name of Road	Length of Pipe Line						Sluice Valves							
		Length of Pipe	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.
107	A3-A58	74		74						1					
108	A58-A9	95		95						1					
109	A9-A8	18	18						1						
110	A9-A10	67		67						1					
111	A10-A22	88	88						1						
112	A22-A23	88	88						1						
113	A23-A24	107	107						1						
114	A24-A25	64	64						1						
115	A25-A26	74	74						1						
116	A26-A27	73	73						1						
117	A27-A28	80	80						1						
118	A10-A14	103		103						1					
119	A14-A59	71	71						1						
120	A59-A60	44	44						1						
121	A14-A15	25		25						1					
122	A15-A16	76	76						1						
123	A15-A20	23		23					1						
124	A20-A21	19	19							1					
125	A20-A16	70		70											
126	A16-A17	39	39						1						
127	A17-A18	11	11						1						
128	A17-A5	74	74						1						
129	A5-A60	97	97						1						
130	A5-A6	71	71						1						
131	A6-A37	13	13						1						
132	A37-A37	42	42						1						
133	A37-A36	30	30						1						
134	A36-A35	50	50						1						

Apparatus of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line							Sluice Valves						
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	
135	A6-A32	43								1						
136	A32-A31	55								1						
137	A32-A35	54								1						
138	A35-A33	49								1						
139	A31-A49	28								1						
140	82A31-82A33	77								1						
141	82A33-82A34	25								1						
142	82F8-F27	48						48							1	
143	F27-F28	149								1						
144	F28-F31	13								1						
145	F28-F36	61								1						
146	F36-F34	41								1						
147	F27- D22	47					47							1		
148	D22-D38	53					53							1		
149	D38-D39	62								1						
150	D39-D40	47								1						
151	D38- D20	180					180							1		
152	82D20-82F30	51			51					1						
153	F30-F31	25														
154	F30-C8	61		61						1						
155	C8-F29	62														
156	C8-C48	30		30						1						
157	C48- C7	26		26						1						
158	C7-C47	63		63						1						
159	C47-C25	125		125						1						
160	C25-C26	69		69						1						
161	C26-C27	51		51						1						
162	C26-C45	29		29						1						
163	C45-C44	38		38						1						
164	C44-C42	57	57													

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe						Sluice Valves							
		100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	No.
165	C42-C43	57							1						
166	C43-C43	36							1						
167	C42-C24	91								1					
168	C24- C22	36								1					
169	C22- C21	64								1					
170	C21-C21	10								1					
171	C21-C1	170													
172	C1-F35	64							1						
173	F35- C2	27							1						
174	C2- C4	61							1						
175	F35-F32	35							1						
176	C1- B11	66								1					
177	B11-B12	124							1						
178	B11-B10	54							1						
179	B10-F32	92							1						
180	B10- B9	56							1						
181	B9- B31	62							1						
182	B31- B33	41							1						
183	B31- B32	7							1						
184	B32- B35	118							1						
185	B32-B25	48							1						
186	B25- B23	70							1						
187	B25- B26	11							1						
188	B26- B34	126							1						
189	B26- B27	47							1						
190	B27- B28	89							1						
191	B27- B22	57							1						
192	82B22-82B21	87							1						

Appurtenances to Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line								Sluice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d		
		m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	No.		
193	82D/20-	69					69							1				
194	D23- D24	75	75							1								
195	D23-D26	144					144							1				
196	D26-82C16	27				27												
197	82C16-82C52	217		217							1							
198	C52-C53	81	81							1								
199	C53-C53	138	138							1								
200	C52-C38	24		24							1							
201	C38-C40	38	38							1								
202	C38-C36	84		84							1							
203	C36-C14	149	149							1								
204	C36-C35	60		60							1							
205	C35-C12	158	158							1								
206	C35-C30	72		72							1							
207	C50-C51	79	79							1								
208	C50-C33	66	66							1								
209	C33-C48	137	137							1								
210	C50-C34	89	89							1								
211	C34-B7	87	87							1								
212	B7-812	100	100							1								
213	C34-C31	56	56							1								
214	C31-C32	35	35							1								
215	C31-C30	59	59							1								
216	C30-C30	10	10							1								
217	82C30-82C49	52	52							1								
218	82C16-82C18	43				43							1					

Superintendence of Water Supply

Sr No.	Name of Road	Length of Pipe					Sluice Valves									
		Length of Pipe	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	No.
219	C18-C20	81				81							1			
220	82C20-82C34	135				135							1			
221	82C34-82C41	63	63							1						
	SECTOR 85-															
222	82C54-85B26	71				71							1			
223	B26-B25	30				30							1			
224	B25-B21	75				75							1			
225	B21-B20	45				45							1			
226	B21-B29	51	51							1						
227	B20-B24	48	48							1						
228	B20-B30	94	94							1						
229	B29-B30	40	40							1						
230	B20-B19	47			47							1				
231	B19-B31	133	133							1						
232	B30-B31	40	40							1						
233	B19-B18	41			41							1				
234	B18-B33	156		156								1				
235	B18-B17	26			26											
236	B17-B23	75	75							1						
237	B17-B34	167	167							1						
238	B33-B34	36		36								1				
239	B17-B16	52		52								1				
240	B16-B35	190	190							1						
241	B34-B35	37		37								1				
242	B16-B15	37		37								1				
243	B16-B22	59	59							1						
244	B15-B36	176	176							1						
245	B35-B36	39		39								1				
246	B36-C1	62		62												

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line								Sluice Valves												
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	m	m	m	No.	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	No.	No.	No.
		m	m	m	m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
247	B15-B14	42		42									1										
248	B14-B7	52		52									1										
249	B7-B12	38	38										1										
250	B7-B6	67		67									1										
251	B6-B11	58	58										1										
252	B6-B5	32		32									1										
253	B5-B10	38	38										1										
254	B5-B4	48		48									1										
255	B4-B9	38	38										1										
256	B4-B3	31		31									1										
257	B3-B8	27	27										1										
258	B3-B2	169		169									1										
259	B2-B1	15	15										1										
260	85B1-85A1	156	156										1										
261	A1-A2	23	23										1										
262	A2-A3	75	75										1										
263	A2-A4	56	56										1										
264	A4-A5	97	97										1										
265	A5-A6	49	49										1										
266	C1-C2	30		30									1										
267	C2-C15	29	29										1										
268	C15-C19	57	57										1										
269	C15-C16	49	49										1										
270	C16-C18	51	51										1										
271	C16-C17	75	75										1										
272	C17-C10	93	93										1										
273	C2-B40	30	30										1										
274	B40-B41	130	130										1										
275	B40-B42	141	141										1										
276	C2-C4	52		52									1										
277	C4-C20	109	109										1										
278	C4-C5	23	23										1										

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line						Splice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d
		m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.	No.	No.
279	C5-B37	128	128							1						
280	B37-B38	28	28							1						
281	B38-B39	94	94							1						
282	C5-C6	78	78							1						
283	C6-C7	98	98							1						
284	C7-C9	111	111							1						
285	C6-C9	45	45							1						
286	C9-C10	95	95							1						
287	C10-C14	77	77							1						
288	C10-C11	58	58							1						
289	C11-C21	60	60							1						
290	85C11-85C12	58	58							1						
	-		14338	2535	1334	1116	465	280	203	203	38	18	18	5	3	5
291	U- 82D3	35							35							1
292	82D3-D13	142							142							1
293	D13-D12	22							22							1
294	82D12-A5	225							225							1
	SECTOR 83-															
295	A5-82A55	83							83						1	
296	A55-A49	77						77							1	
297	A49-A50	160						160								
298	A50-A42	155	155							1						
299	A50-A51	60					60									
	-															
300	A51-A40	26	26							1						
301	A40-A38	41	41							1						
302	A38-A36	17	17							1						
303	A36-A37	155	155							1						
304	A38-A32	80	80							1						

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe						Length of Pipe Line						Sluice Valves					
		100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	No.	No.	No.	No.
		m	m	m	m	m	m	m	m	m	m	m	m	m	m	No.	No.	No.	No.
305	A32-A31	107							1										
306	A31-A28	53							1										
307	A32-A33	82							1										
308	A33-A34	60							1										
309	A34-A31	58							1										
310	A51-A41	140				140													
311	A41-E7	30			30											1			
312	E7-E5	212							1										
313	E5-E4	49							1										
314	E5-E15	63							1										
315	E15-E16	119							1										
316	E15-E17	88							1										
317	E7-83A37	23			23											1			
318	A37-E20	229			229											1			
319	E20-E21	60			60														
320	E21-E27	159							1										
321	E27-E26	56							1										
322	E26-E28	95							1										
323	E27-E29	107							1										
324	E29-E30	7			7				1										
325	E29-E34	34			34				1										
326	E27-E33	90							1										
327	E33-E34	49							1										
328	E34-E35	46							1										
329	E21-E22	32			32											1			

Appointments of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line										Shut-off Valves					
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	No.	No.
330	E22-A22	75			75					1		1						
331	A22-A21	82	82								1							
332	A22-E23	33		33														
333	E23-E25	30		30														
334	E25-A14	87		87														
335	A14-A59	136	136							1								
336	A59-A60	107	107							1								
337	A14-A11	56		56														
338	A11-A10	181		181														
339	A10-A13	49	49							1								
340	A10-A7	53		53														
341	A7-A7	95	95							1								
342	A7-A20	70	70							1								
343	A7-A4	56		56														
344	A4-A8	62	62							1								
345	A4-A4	22	22							1								
346	A4-A5	199	199							1								
347	A5-A2	42	42							1								
348	A10-A9	181	181							1								
349	A9-A6	53	53							1								
350	A6-A20	43	43							1								
351	A6-A3	56	56							1								
352	A3-A3	37	37							1								
353	A9-A12	56	56							1								
354	A12-A19	54	54							1								
355	A12-A15	53	53							1								
356	A15-A16	38	38							1								
357	83A15-83A18	33	33							1								

Valika

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line								Sluice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d		
		m	m	m	m	m	m	m	m	m	m	No.	No.	No.	No.	No.		
358	A41-E6	20				20							1					
359	E6-E4	211		211									1					
360	E4-E14	113		113														
361	E14-E13	56		56														
362	E13-E13	115		115														
363	E13-E11	28		28														
364	E11-E12	47		47														
365	E11-E10	30		30														
366	E10-E2	160		160														
367	E2-E2	113		113														
368	E2-E1	49		49														
369	E10-E8	49		49														
370	E8-E1	160		160														
371	E1-B'12	56		56														
372	E6-A42	37				37							1					
373	A42-A56	13				13							1					
374	A56-E3	83		83										1				
375	A56-A43	40				40												
376	A43-A58	55		55														
377	A43-A57	9				9												
378	A57-A44	49				49												
379	A44-A54	100																
380	A44-E1	209		209														
381	A44-A45	55				55												
382	A45-A46	71																
383	A46-B'1	57																

Appurtenances of Water Supply

Sr No.	Name of Road	Length of Pipe	Length of Pipe Line								Sluice Valves							
			100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d	100 mm i/d	150 mm i/d	200 mm i/d	250 mm i/d	300 mm i/d	350 mm i/d	400 mm i/d		
384	A46-A47	52	52															
385	A45-B12	208				208									1			
386	B12-B12	24				24									1			
387	B12-C10	206		206											1			
388	C10-C11	64	64							1								
389	C10-C7	84	84							1								
390	C7-C8	29	29							1								
391	C8-C12	120	120							1								
392	C7-C6	55	55							1								
393	C6-C13	182	182							1								
394	B12-B13	23		23											1			
395	B13-B14	43		43											1			
396	B14-B17	46		46											1			
397	B17-B27	8		8											1			
398	B27-B19	56		56											1			
399	B19-B21	40		40											1			
400	B21-B22	14		14											1			
401	B22-B'5	87		87											1			
402	B3B5-B5	223	223															
403	B5-B4	78	78															
404	B4-B6	64	64															
405	B4-B3	56	56															
406	B3-B2	18	18															
	SECTOR 84-																	
407	B3B5-B4D17	72		72											1			
408	B4D17-D4	149	149															
409	D17-D18	46		46											1			
410	D18-D6	30	30															

Appurtenances of Water Supply

Sl. No.	Name of Road	Length of Pipe Line					Stake Valves				
		100 mm No.	150 mm No.	200 mm No.	250 mm No.	300 mm No.	350 mm No.	400 mm No.	450 mm No.	500 mm No.	550 mm No.
41	D18-D22	123									
42	D18-D19	123									
43	D18-D23	44	44								
44	D18-D25	37	37								
45	D18-D11	165	165								
46	D21-D25	22	22								
47	D21-D23	74	74								
48	D23-D27	92	92								
49	D27-D31	50	50								
50	D31-D34	22	22								
51	D34-D37	50	50								
52	D37-D41	30	30								
53	D41-D46	20	20								
54	D46-D49	143	143								
55	D49-D52	108	108								
56	D52-D53	61	61								
57	D53-D57	27	27								
58	D57-D61	62	62								
59	D61-D64	33	33								
60	D64-D64.1	153	153								
61	D64.1-D72	53	53								
62	D72-D74	52	52								
63	D74-D74.1	18	18								
Total Length		3132	3132	1558	1558	200	200	237	237	507	507
Total Length		35005	35005	21033	21033	665	665	517	517	710	710

DESIGN STATEMENT OF SEWER

Detail of Area Residential Vatika India Next, Gurgaon							Daily Water Requirement			Anticipated Waste Water Average Value at 75% of water contributing to waste water
Sr.	Description	Size of Plot		Area of each Unit / Plot	Total Area		Water Allowance	Water Requirement	Net Water Requirement	
1	Residential (Plotted)	Width	Depth							
	Category of Plots	m	m	Sq.m.	Sq.m.	Acres	Ltrs./Capit al/ Day	Ltrs./Day	Ltrs./Day	Ltrs./Day
1.11	A	4.50	12.50	56.25	27956	6.91	135	603855	603855	452891
1.12	A1	5.00	10.00	50.00	2600	0.64	135	63180	63180	47385
1.13	B	8.20	18.40	150.88	21576	5.33	172.5	333011	333011	249758
1.14	C	10.54	19.04	200.68	24483	6.05	172.5	284108	284108	213081
1.15	D	8.20	18.40	150.88	54468	13.46	172.5	840679	840679	630509
1.16	E	10.60	19.04	201.82	54291	13.42	172.5	626434	626434	469825
1.17	F	10.60	24.00	254.40	33326	8.24	172.5	305066	305066	228800
1.18	F1	11.40	22.00	250.80	43388	10.72	172.5	402874	402874	302155
1.19	G	12.30	24.00	295.20	63763	15.76	172.5	503010	503010	377258
1.20	H	14.13	23.36	330.07	52481	12.97	172.5	370271	370271	277703
	H1	12.98	25.77	334.49	31442	7.77	172.5	218903	218903	164177
	H2	13.68	25.00	342.00	4788	1.18	172.5	32603	32603	24452
1.22	I	15.80	25.90	409.22	29464	7.28	172.5	167670	167670	125753
1.23	I1	14.50	28.80	417.60	418	0.10	172.5	2329	2329	1747
1.24	J	15.90	25.90	411.81	9060	2.24	172.5	51233	51233	38424
1.25	K	14.40	23.60	339.84	9516	2.35	172.5	65205	65205	48904
1.26	L	11.62	25.91	301.07	1806	0.45	172.5	13973	13973	10479
1.27	M	9.99	20.56	205.39	13967	3.45	172.5	158355	158355	118766
	Sub Total				478793	118.31		5042756	5042756	3782067
2	Area under Group Housing				113311	28.00	172.5	1449000	1449000	1086750
3	Commercial Area			Sqm	Sq.m	Acres				
3.1	Commercial Area				52083	12.87	25000	321750	321750	241313
3.2	Nursing Home	2.21		1127	8943	2.21	5000	40000	40000	30000
4	Community Area			Acres	Sq.m	Acres				
4.1	High School		16.76	5.00	67825	16.76	150000	450000	450000	337500
4.2	Primary School		4.22	1.00	17078	4.22	50000	200000	200000	150000
4.3	Nursery School		1.54	0.20	6232	1.54	10000	60000	60000	45000
4.4	Creche		0.75	0.20	3035	0.75	10000	30000	30000	22500
4.5	Dispensary		2.26	1.25	9146	2.26	25000	56500	56500	42375
4.6	Club / Community		4.11	2.00	16632	4.11	25000	102750	102750	77063
4.7	Religious Building		0.59	0.20	2388	0.59	10000	20000	20000	15000
4.8	Taxi Stand		3.1605	0.50	12790	3.16	5000	30000	30000	22500
4.9	Police Post		1.02	1.02	4128	1.02	25000	25500	25500	19125
4.10	Health Centre		2.63	2.63	10643	2.63	25000	65750	65750	49313
	Sub Total				149896	37.04		1040500	1040500	224438
	Undetermined use				138644	34.26	25000	856500	856500	642375
5	Green Area									
5.1	Organised Green - Area under Green			13.16	53256.2	13.16	25000	329000		
5.2	Incidental Green -			8.6	34762.2	8.59	25000	214750		
	Sub Total				88018	21.750		543750		
6	Area under Master Roads				75676	18.700	10000	187000		
7	Area under Roads				486485	120.214	10000	1202140		
	Total Area / Total Demand				1591850	393.358		10683396	8750506	6006942
	Fire Demand Plotted					550.52		9234396	7301506	4920192

Abstract of Sewer Pipe Line

	STP 1			STP 2			STP 3			Total Length ManHoles
	Length	Average Depth	Manhole	Length	Average Depth	Manhole	Length	Average Depth	Manhole	
200	5018	1.69	254	10688	1.74	535	4962	1.91	253	20558
250	570	2.27	27	920	3.51	47	745	3.41	38	2235
300	544	3.96	48	923	3.09	46	666	3.49	34	2533
350	0	0	0	879	4.80	43	457	3.28	23	1336
400	0	0	0	787	3.94	39	0	0	0	787
450	67	4.22	3	0	0	0	15	4.45	1	82
500	0	0	0	408	4.67	21	0	0	0	408
700	46	4.34	3	94	5.19	5			0	140
	6645		335	14699		736	6845		349	28189
										1042
										112
										123
										66
										39
										4
										21
										8
										1020

W. S. S. S.

Design Statement of Waste Water Collection System

Sr. No	Line No	Length of Sewer Line	Quantity of Waste Water generated			Quantity of Waste Water during peak hours		Discharge		Velocity M/sec	Flow Cum.	Size of sewer line mm.	Slope	Fall	Formation Level				Invert Level				Depth	
			Self	Branch	Total	KLD	Total discharge @ 3 hours Average Flow	MFD	Cum.						Upper end	Lower end	Upper end	Lower end	Upper end	Lower end	Upper end	Lower end		
																							KLD	KLD
1	2	2	4	5	6	7		8	9	10	11	12	13	15	16	17	18	19	20	21	22	23		
1	A1-A2	40	62.63	0.00	62.63	187.88		0.19	0.0032	0.70	0.011	200	0.18	235.790	235.241	234.520	234.408				1.20	0.83	1.03	
2	A2-A3	193	375.25	6.11	381.36	300.48		0.36	0.0035	0.70	0.011	200	0.85	235.241	235.530	234.438	233.531				0.83	2.00	1.47	
3	A3-A4	41	61.08	0.00	61.08	18.33		0.02	0.0002	0.70	0.011	200	0.19	235.530	235.530	234.534	234.158				1.20	1.37	1.29	
4	A4-A5	41	61.08	0.00	61.08	18.33		0.02	0.0002	0.70	0.011	200	0.19	235.530	235.530	234.534	234.158				1.20	1.38	1.29	
5	A5-A6	52	82.01	0.00	82.01	24.60		0.02	0.0003	0.70	0.011	200	0.22	235.530	235.137	233.531	233.294				2.00	1.84	1.92	
6	A6-A7	48	82.01	0.00	82.01	24.60		0.02	0.0003	0.70	0.011	200	0.22	235.137	235.137	233.531	233.294				2.00	1.41	1.30	
7	A7-A8	305	196.98	0.00	196.98	59.10		0.06	0.0007	0.70	0.011	200	0.48	235.137	235.137	233.531	233.294				1.20	1.65	1.43	
8	A8-A9	55	82.01	0.00	82.01	24.60		0.02	0.0003	0.70	0.011	200	0.25	235.137	234.893	233.531	233.294				1.84	1.85	1.85	
9	A9-A10	40	62.63	0.00	62.63	187.88		0.19	0.0032	0.70	0.011	200	0.18	235.829	235.818	234.629	234.447				1.20	1.37	1.29	
10	A10-A11	40	62.63	0.00	62.63	187.88		0.19	0.0032	0.70	0.011	200	0.18	235.818	235.529	234.447	234.206				1.37	1.32	1.35	
11	A11-A12	48	122.17	0.00	122.17	36.7		0.04	0.0004	0.70	0.011	200	0.23	235.529	235.529	234.340	234.121				1.20	1.41	1.30	
12	A12-A13	55	116.06	0.00	116.06	35.1		0.09	0.0030	0.70	0.011	200	0.25	235.529	235.247	234.121	233.867				1.41	1.38	1.36	
13	A13-A14	18	27.53	0.00	27.53	8.2		0.01	0.0001	0.70	0.011	200	0.08	234.629	234.629	233.475	233.294				1.20	1.28	1.24	
14	A14-A15	40	62.63	0.00	62.63	187.88		0.19	0.0032	0.70	0.011	200	0.18	234.629	234.629	233.475	233.294				1.20	1.37	1.29	
15	A15-A16	40	62.63	0.00	62.63	187.88		0.19	0.0032	0.70	0.011	200	0.18	234.629	234.629	233.475	233.294				1.37	1.51	1.64	
16	A16-A17	23	0.00	0.00	0.00	0.0		0.00	0.0000	0.70	0.011	200	0.00	234.629	234.629	233.523	233.419				1.20	1.45	1.33	
17	A17-A18	53	116.06	0.00	116.06	35.1		0.09	0.0030	0.70	0.011	200	0.25	234.629	234.629	233.523	233.419				1.91	2.44	2.18	
18	A18-A19	54	116.06	0.00	116.06	35.1		0.09	0.0030	0.70	0.011	200	0.25	234.629	234.629	233.523	233.419				1.20	1.28	1.24	
19	A19-A20	175	259.70	56.6	316.3	247.7		0.25	0.0029	0.70	0.011	200	0.80	235.247	234.893	232.811	232.016				2.44	2.88	2.65	
20	A20-A21	30	82.01	0.00	82.01	24.60		0.02	0.0003	0.70	0.011	200	0.14	234.893	234.893	233.703	233.294				1.20	1.33	1.28	
21	A21-A22	175	244.92	0.00	244.92	74.5		0.95	0.0109	0.61	0.015	250	0.44	234.893	234.638	231.891	231.553				2.90	3.09	2.99	
22	A22-A23	23	0.00	0.00	0.00	0.0		0.00	0.0000	0.70	0.011	200	0.00	234.638	234.638	233.523	233.419				1.20	1.22	1.21	
23	A23-A24	53	116.06	0.00	116.06	35.1		0.09	0.0030	0.70	0.011	200	0.25	234.638	234.638	233.523	233.419				3.09	2.92	3.00	
24	A24-A25	73	87.88	0.00	87.88	26.4		0.03	0.0003	0.70	0.011	200	0.33	234.638	234.638	233.523	233.419				1.20	1.51	1.36	
25	A25-A26	101	243.94	8.8	252.7	99.5		0.10	0.0012	0.70	0.011	200	0.45	234.638	234.638	233.523	233.419				1.51	1.74	1.63	
26	A26-A27	110	452.38	4.93	457.31	104.2		1.09	0.0127	0.61	0.015	250	0.38	234.638	233.846	231.846	231.446				2.92	2.70	2.81	
27	A27-A28	45	412.50	4.13	416.63	116.6		1.11	0.0128	0.61	0.015	250	0.40	233.846	233.846	231.846	231.446				2.70	2.92	2.81	
28	A28-A29	17	49.80	0.00	49.80	14.9		0.01	0.0002	0.70	0.011	200	0.22	233.116	233.116	231.916	231.781				1.20	1.35	1.28	
29	A29-A30	85	109.53	0.00	109.53	33.3		0.05	0.0006	0.70	0.011	200	0.29	233.116	233.116	231.916	231.781				1.35	1.55	1.45	
30	A30-A31	84	134.37	0.00	134.37	40.3		0.04	0.0005	0.70	0.011	200	0.28	233.116	233.116	231.916	231.781				1.20	1.56	1.38	
31	A31-A32	77	206.28	0.00	206.28	61.9		0.09	0.0011	0.70	0.011	200	0.35	233.116	233.116	231.916	231.781				1.20	1.61	1.41	
32	A32-A33	68	305.43	0.00	305.43	91.9		0.10	0.0012	0.70	0.011	200	0.31	233.116	233.116	231.916	231.781				1.61	1.97	1.79	
33	A33-A34	83	152.47	0.00	152.47	45.8		0.05	0.0006	0.70	0.011	200	0.28	233.116	233.116	231.916	231.781				1.97	2.35	2.16	
34	A34-A35	92	116.24	0.00	116.24	33.3		0.04	0.0004	0.70	0.011	200	0.20	233.116	233.116	231.916	231.781				2.35	2.18	2.27	
35	A35-A36	44	33.31	0.00	33.31	9.9		0.01	0.0001	0.70	0.011	200	0.08	233.116	233.116	231.916	231.781				2.18	3.22	3.00	
36	A36-A37	84	134.37	0.00	134.37	40.3		0.04	0.0005	0.70	0.011	200	0.28	233.116	233.116	231.916	231.781				3.22	3.97	3.60	
37	A37-A38	19	0.00	0.00	0.00	0.0		0.00	0.0000	0.70	0.011	200	0.00	233.116	233.116	231.916	231.781				2.29	1.79	4.12	
38	A38-A39	91	117.33	0.00	117.33	33.3		0.04	0.0004	0.70	0.011	200	0.18	233.116	233.116	231.916	231.781				4.12	4.37	4.27	

Design Statement of Waste Water Collection System

Sr. No	Line No.	Length of Sewer Line	Quantity of Waste Water generated			Quantity of Waste Water flow during peak hours			Discharge			Velocity	Flow	Size of sewer line	Slope	Fall	Formation Level				Invert Level				Depth																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			Self	Branch	Total	KLD	Total discharge @ 3 times Average Flow	MLD	Cum.	M/sec	Cum.						mm	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M

Question: Statement of Waste Water Collection System

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Design Statement of Waste Water Collection System

Sr. No	Line No	Length of Sewer Line	Quantity waste water generation	Quantity of Waste Water generated			Quantity of Waste Water flow during peak hours	Discharge	Velocity	Flow	Size of sewer line	Slope	Fall	Foundation Level		Invert Level		Depth										
				Self	Branch	Total								MLD	Cum.	M/sec	Cum.	mm	M	M	M	M	M	M	M	M	M	M
1	2	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23						
116	C4-C2	34	15163.13	15.16	0.00	15.16	45.49	0.05	0.0005	0.80	0.003	200	220	0.15	233.553	233.811	232.553	232.198	1.20	1.61	1.41							
117	C2-F35	42	11325.00	11.3	15.16	16.29	48.66	0.05	0.0006	0.70	0.011	200	220	0.19	233.811	234.195	232.553	232.008	1.61	2.19	1.90							
118	F35-F32	33	937.50	0.94	16.29	17.23	51.68	0.05	0.0005	0.70	0.011	200	220	0.15	234.195	234.237	232.008	231.658	2.19	2.38	2.28							
119	F32-B10	87	6780.00	6.78	17.23	24.01	72.03	0.07	0.0008	0.70	0.011	200	220	0.40	234.237	234.415	231.658	231.452	2.38	2.95	2.67							
120	B10-B11	66	12301.88	12.30	15.17	165.05	495.15	0.50	0.0057	0.70	0.011	200	220	0.30	234.415	234.430	231.452	231.162	2.95	3.27	3.11							
121	B12-B11	95	44763.75	44.76	0.00	44.76	134.29	0.13	0.0016	0.70	0.011	200	220	0.43	234.563	234.430	233.565	232.912	1.20	1.50	1.35							
122	B11-C1	54	5467.50	5.47	209.81	215.28	645.84	0.65	0.0075	0.70	0.011	200	220	0.25	234.430	234.105	231.162	230.917	3.27	3.19	3.23							
123	C1-C2	158	14260.94	14.26	215.28	249.54	748.62	0.75	0.0087	0.70	0.011	200	220	0.72	234.105	234.319	230.917	230.198	3.19	4.12	3.65							
124	C2-C3	8	1746.56	1.75	0.00	1.75	5.24	0.01	0.0001	0.70	0.011	200	220	0.04	234.319	234.322	233.122	233.083	1.20	1.23	1.21							
125	C3-C2	68	5299.69	5.24	251.29	256.53	769.58	0.77	0.0089	0.70	0.011	200	220	0.31	234.319	234.055	230.198	229.889	4.12	4.17	4.14							
126	C2-C24	29	1875.00	1.88	256.53	258.40	775.21	0.78	0.0090	0.70	0.011	200	220	0.13	234.055	233.746	229.889	229.758	4.17	3.99	4.08							
127	C24-C2	100	12423.75	12.42	258.40	270.83	812.48	0.81	0.0094	0.70	0.011	200	220	0.45	233.746	233.778	229.758	229.303	3.99	4.47	4.23							
128	C43-C43	39	6759.69	6.74	0.00	6.74	20.22	0.02	0.0002	0.70	0.011	200	220	0.18	233.814	233.796	232.614	232.436	1.20	1.36	1.28							
129	C43-C42	54	0.00	0.00	6.74	6.74	20.22	0.02	0.0002	0.70	0.011	200	220	0.25	233.796	233.778	232.436	232.193	1.36	1.59	1.47							
130	C43-C44	78	17653.13	17.65	277.57	295.22	885.55	0.89	0.0103	0.61	0.015	250	400	0.20	233.778	233.598	229.278	229.083	4.50	4.51	4.51							
131	C44-C45	34	562.50	0.56	295.22	295.78	887.34	0.89	0.0103	0.61	0.015	250	400	0.09	233.598	233.495	229.083	228.908	4.51	4.50	4.51							
132	C45-C26	51	1687.50	1.69	295.78	297.47	892.41	0.89	0.0103	0.61	0.015	250	400	0.13	233.495	233.365	228.908	228.871	4.50	4.48	4.49							
133	C47-C26	29	6986.25	6.99	0.00	6.99	20.96	0.02	0.0002	0.70	0.011	200	220	0.16	233.365	233.355	228.165	228.033	1.20	1.32	1.26							
134	C26-C25	65	8732.81	8.73	304.46	313.19	949.56	0.94	0.0109	0.61	0.015	250	400	0.32	233.355	233.321	228.871	228.708	4.48	4.61	4.55							
135	C25-C47	126	3375.00	3.38	313.19	316.56	949.69	0.95	0.0110	0.61	0.015	250	400	0.23	233.321	232.968	228.708	228.393	4.61	4.59	4.60							
136	C47-C7	90	16114.69	16.11	316.56	332.68	998.03	1.00	0.0116	0.68	0.031	250	400	0.04	232.968	233.040	228.393	228.168	4.65	4.82	4.73							
137	C307-430C48	14	1746.56	1.75	332.68	334.42	1003.3	1.00	0.0116	0.68	0.031	250	400	0.04	233.040	232.907	228.168	228.133	4.87	4.77	4.82							
138	C310-430C30	27	1356.88	1.37	0.00	1.37	4.10	0.00	0.0000	0.70	0.011	200	220	0.12	232.907	232.559	231.759	231.636	1.20	1.32	1.26							
139	C49-C30	60	10288.13	10.29	0.00	10.29	30.86	0.05	0.0004	0.70	0.011	200	220	0.27	232.559	232.954	231.773	231.500	1.20	1.45	1.33							
140	C30-C31	55	4100.63	4.10	11.66	15.76	47.27	0.05	0.0005	0.70	0.011	200	220	0.25	232.954	232.726	231.500	231.250	1.45	1.48	1.46							
141	C31-C31	43	6913.13	6.91	0.00	6.91	20.74	0.02	0.0002	0.70	0.011	200	220	0.20	232.726	232.726	231.540	231.344	1.20	1.38	1.29							
142	C31-C34	58	0.00	0.00	22.67	22.67	68.01	0.07	0.0008	0.70	0.011	200	220	0.26	232.726	232.518	231.518	230.987	1.48	1.53	1.50							
143	812-87	85	56240.00	56.25	0.00	56.25	168.75	0.17	0.0020	0.70	0.011	200	220	0.39	232.574	232.540	231.374	230.988	1.20	1.55	1.38							
144	811-87	27	46350.00	46.25	0.00	46.25	168.75	0.17	0.0020	0.70	0.011	200	220	0.12	232.550	232.540	231.374	231.228	1.20	1.31	1.26							
145	B7-430C34	87	37590.00	37.50	112.50	150.00	450.00	0.45	0.0052	0.70	0.011	200	220	0.40	232.500	232.518	230.988	230.592	1.55	1.93	1.74							
146	C34-C30	77	4922.21	4.92	172.67	177.59	532.77	0.53	0.0062	0.70	0.011	200	220	0.35	232.518	232.619	230.592	230.242	1.93	2.38	2.15							
147	C14-C36	154	31565.63	31.57	0.00	31.57	94.70	0.09	0.0011	0.70	0.011	200	220	0.70	232.410	232.259	221.210	220.510	1.20	1.73	1.46							
148	C36-C35	75	0.00	0.00	31.57	31.57	94.70	0.09	0.0011	0.70	0.011	200	220	0.34	232.259	232.216	220.510	220.169	1.73	2.05	1.89							
149	C12-C35	161	43843.13	43.84	0.00	43.84	131.53	0.13	0.0015	0.70	0.011	200	220	0.73	232.216	232.216	221.592	220.660	1.20	2.36	2.41							
150	C35-C30	69	0.00	0.00	75.41	75.41	226.23	0.23	0.0026	0.70	0.011	200	220	0.31	232.216	232.619	220.169	220.855	2.05	2.76	2.41							
151	C51-C30	98	16693.13	16.69	0.00	16.69	50.08	0.05	0.0006	0.70	0.011	200	220	0.45	232.713	232.619	221.513	221.067	1.20	1.55	1.38							
152	C50-C33	93	0.00	0.00	269.69	269.69	809.08	0.81	0.0084	0.70	0.011	200	220	0.42	232.619	232.619	220.855	220.432	2.76	3.50	3.13							

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Design Statement of Waste Water Collection System

Design Statement of Ww-Water Treatment Station																						
St. No	Lane No.	Length of Sewer Line	Quantity waste water generation	Quantity of Waste Water generated		Discharge	Velocity		Flow Cum.	Size of sewer line	Slope	Fall	Formation Level		Invert Level		Depth					
				Self	Branch		MLD	Cum.					M/sec	ft	Upper end	Lower end	Upper end	Lower end	Upper end	Lower end		
151	32C31-32C48	147	7663.13	7.66	269.69	277.36	832.07	0.83	0.0096	0.70	0.011	200	220	0.67	232.934	232.907	232.934	232.907	232.934	232.907	232.934	232.907
152	32C48-32C58	38	1746.56	1.75	611.78	613.53	1840.6	1.84	0.0213	0.61	0.039	300	500	0.08	232.907	232.845	232.907	232.845	232.907	232.845	232.907	232.845
153	32C58-32C68	41	11979.38	11.98	0.00	11.98	35.9	0.04	0.0024	0.70	0.011	200	220	0.19	232.860	232.845	232.860	232.845	232.860	232.845	232.860	232.845
154	32C68-32C78	72	3000.00	3.00	625.51	628.51	1885.5	1.89	0.0218	0.69	0.044	300	500	0.14	232.845	232.733	232.845	232.733	232.845	232.733	232.845	232.733
155	32C78-32C88	6	3434.06	3.43	0.00	3.43	16.30	0.01	0.0021	0.70	0.011	200	220	0.03	232.860	232.733	232.860	232.733	232.860	232.733	232.860	232.733
156	32C88-32C98	40	4500.00	4.50	631.94	636.44	1909.3	1.91	0.0231	0.62	0.030	300	500	0.07	232.733	232.705	232.733	232.705	232.733	232.705	232.733	232.705
157	32C98-32D08	34	8989.69	8.99	0.00	8.99	26.97	0.03	0.0003	0.70	0.011	200	220	0.15	232.406	232.401	232.406	232.401	232.406	232.401	232.406	232.401
158	32D08-32D18	123	5715.21	5.72	8.99	25.70	77.11	0.08	0.0009	0.70	0.011	200	220	0.20	232.401	232.377	232.401	232.377	232.401	232.377	232.401	232.377
159	32D18-32D28	188	5239.69	5.24	25.70	30.94	92.83	0.09	0.0011	0.70	0.011	200	220	0.20	232.377	232.342	232.377	232.342	232.377	232.342	232.377	232.342
160	32D28-32D38	46	0.00	0.00	30.94	30.94	92.83	0.09	0.0011	0.70	0.011	200	220	0.20	232.342	232.318	232.342	232.318	232.342	232.318	232.342	232.318
161	32D38-32D48	89	32573.44	32.57	0.00	32.57	97.72	0.10	0.0011	0.70	0.011	200	220	0.31	232.318	232.294	232.318	232.294	232.318	232.294	232.318	232.294
162	32D48-32D58	45	1125.00	1.13	63.52	64.64	193.93	0.19	0.0022	0.70	0.011	200	220	0.20	232.294	232.270	232.294	232.270	232.294	232.270	232.294	232.270
163	32D58-32D68	29	3493.13	3.49	64.64	68.14	204.41	0.20	0.0024	0.70	0.011	200	220	0.13	232.270	232.246	232.270	232.246	232.270	232.246	232.270	232.246
164	32D68-32D78	137	20558.75	20.56	0.00	20.56	62.88	0.06	0.0007	0.70	0.011	200	220	0.20	232.246	232.222	232.246	232.222	232.246	232.222	232.246	232.222
165	32D78-32D88	54	13972.50	13.97	20.56	34.93	104.79	0.10	0.0012	0.70	0.011	200	220	0.25	232.222	232.198	232.222	232.198	232.222	232.198	232.222	232.198
166	32D88-32D98	29	14480.25	14.48	0.00	14.48	43.46	0.04	0.0005	0.70	0.011	200	220	0.15	232.198	232.174	232.198	232.174	232.198	232.174	232.198	232.174
167	32D98-32E08	208	60056.88	60.06	14.49	82.54	247.63	0.25	0.0029	0.70	0.011	200	220	0.35	232.174	232.150	232.174	232.150	232.174	232.150	232.174	232.150
168	32E08-32E18	55	13972.50	13.97	117.47	131.45	394.34	0.39	0.0046	0.70	0.011	200	220	0.25	232.150	232.126	232.150	232.126	232.150	232.126	232.150	232.126
169	32E18-32E28	46	17933.34	17.93	0.00	17.93	53.80	0.05	0.0005	0.70	0.011	200	220	0.21	232.126	232.102	232.126	232.102	232.126	232.102	232.126	232.102
170	32E28-32E38	81	3495.13	3.49	149.38	152.87	458.62	0.45	0.0053	0.70	0.011	200	220	0.28	232.102	232.078	232.102	232.078	232.102	232.078	232.102	232.078
171	32E38-32E48	55	13225.94	13.23	221.01	233.34	699.71	0.70	0.0081	0.70	0.011	200	220	0.25	232.102	232.078	232.102	232.078	232.102	232.078	232.102	232.078
172	32E48-32E58	54	13225.94	13.23	233.24	245.46	736.39	0.74	0.0085	0.70	0.011	200	220	0.25	232.078	232.054	232.078	232.054	232.078	232.054	232.078	232.054
173	32E58-32E68	19	0.00	0.00	245.46	245.46	736.39	0.74	0.0085	0.70	0.011	200	220	0.09	232.054	232.030	232.054	232.030	232.054	232.030	232.054	232.030
174	32E68-32E78	67	51979.38	51.98	0.00	51.98	161.84	0.16	0.0019	0.70	0.011	200	220	0.30	232.030	232.006	232.030	232.006	232.030	232.006	232.030	232.006
175	32E78-32E88	64	0.00	0.00	289.44	289.44	898.32	0.90	0.0104	0.70	0.011	200	220	0.29	232.006	231.982	232.006	231.982	232.006	231.982	232.006	231.982
176	32E88-32E98	33	13972.50	13.97	0.00	13.97	41.92	0.04	0.0005	0.70	0.011	200	220	0.15	231.982	231.958	231.982	231.958	231.982	231.958	231.982	231.958
177	32E98-32F08	197	17465.53	17.47	313.41	320.88	992.64	0.99	0.0115	0.61	0.015	250	400	0.49	231.958	231.934	231.958	231.934	231.958	231.934	231.958	231.934
178	32F08-32F18	30	10993.13	10.99	0.00	10.99	32.98	0.03	0.0004	0.70	0.011	200	220	0.14	231.934	231.910	231.934	231.910	231.934	231.910	231.934	231.910
179	32F18-32F28	29	20625.00	20.62	10.99	31.62	94.85	0.05	0.0011	0.70	0.011	200	220	0.27	231.910	231.886	231.910	231.886	231.910	231.886	231.910	231.886
180	32F28-32F38	55	10479.38	10.48	362.50	372.98	1118.9	1.12	0.0130	0.61	0.015	250	400	0.14	231.886	231.862	231.886	231.862	231.886	231.862	231.886	231.862
181	32F38-32F48	159	59452.50	59.45	0.00	59.45	178.4	0.18	0.0021	0.70	0.011	200	220	0.72	231.862	231.838	231.862	231.838	231.862	231.838	231.862	231.838
182	32F48-32F58	57	12564.34	12.56	432.43	444.99	1335.0	1.33	0.0155	0.61	0.022	260	500	0.11	231.838	231.814	231.838	231.814	231.838	231.814	231.838	231.814
183	32F58-32F68	18	6985.25	6.99	0.00	6.99	20.96	0.02	0.0002	0.70	0.011	200	220	0.08	231.814	231.790	231.814	231.790	231.814	231.790	231.814	231.790
184	32F68-32F78	13	0.00	0.00	6.99	6.99	20.96	0.02	0.0002	0.70	0.011	200	220	0.06	231.790	231.766	231.790	231.766	231.790	231.766	231.790	231.766
185	32F78-32F88	93	13569.58	13.57	0.00	13.57	40.71	0.04	0.0005	0.70	0.011	200	220	0.42	231.766	231.742	231.766	231.742	231.766	231.742	231.766	231.742
186	32F88-32F98	53	5239.69	5.24	20.56	25.80	77.39	0.08	0.0009	0.70	0.011	200	220	0.24	231.742	231.718	231.742	231.718	231.742	231.718	231.742	231.718
187	32F98-32G08	55	5239.69	5.24	35.80	31.04	93.11	0.05	0.0011	0.70	0.011	200	220	0.25	231.718	231.694	231.718	231.694	231.718	231.694	231.718	231.694
188	32G08-32G18	55	5239.69	5.24	35.80	31.04	93.11	0.05	0.0011	0.70	0.011	200	220	0.25	231.694	231.670	231.694	231.670	231.694	231.670	231.694	231.670
189	32G18-32G28	55	5239.69	5.24	35.80	31.04	93.11	0.05	0.0011	0.70	0.011	200	220	0.25	231.670	231.646	231.670	231.646	231.670	231.646	231.670	231.646

Design Schematic of Waste Water Collection System

Sr. No	Line No	Length of Sewer Line	Quantity of waste water generation		Quantity of Waste Water generated		Quantity of Waste Water during peak hours		Discharge		Velocity	Flow Cum	Size of sewer line	Slope	Fall	Formation Level		Invert Level		Depth	
			Self	Branch	Total	KLD	KLD	Total	MLD	Cum	M/sec	Cum	mm			Upper end	M	Lower end	M	Upper end	Avg
1	2	2	3	4	5	6	7	8	9	10	0.70	0.011	200	220	0.80	233.515	17	230.469	19	231	23
190	F14-F2	176	33184.69	33.18	31.04	64.22	192.66	0.19	0.0022	0.70	0.011	200	220	0.80	0.80	233.515	233.501	230.469	231	231	23.85
191	F2-F3	54	5239.69	5.24	509.21	514.45	1543.4	1.54	0.0179	0.69	0.044	300	300	0.11	0.11	233.801	233.552	230.254	3.44	3.30	3.37
192	F13-F3	147	45410.63	45.41	0.00	45.41	136.2	0.14	0.0016	0.70	0.011	200	220	0.67	0.67	233.266	233.552	231.908	1.20	1.15	1.68
193	F3-F4	6	1746.36	1.75	559.36	561.11	1684.8	1.68	0.0195	0.69	0.044	300	300	0.01	0.01	233.552	233.472	230.242	3.30	3.25	3.26
194	F12-F4	40	5239.69	5.24	0.00	5.24	15.72	0.02	0.0002	0.70	0.011	200	220	0.18	0.18	233.551	233.472	232.351	1.20	1.10	1.25
195	F4-F5	27	3493.13	3.49	566.85	570.34	1711.0	1.71	0.0198	0.69	0.044	300	300	0.05	0.05	233.472	233.364	230.242	3.23	3.18	3.20
196	F21-F20	81	12354.38	12.35	0.00	12.35	37.06	0.04	0.0004	0.70	0.011	200	220	0.37	0.37	233.109	233.321	231.909	1.20	1.16	1.49
197	F20-F5	19	3156.54	3.14	12.35	15.49	46.47	0.05	0.0005	0.70	0.011	200	220	0.66	0.66	233.321	233.364	231.540	1.78	1.91	1.85
198	F5-F6	89	37500.00	37.50	585.83	623.33	1870.0	1.87	0.0216	0.69	0.044	300	300	0.18	0.18	233.364	233.031	230.188	3.18	3.02	3.10
199	F21-F6	43	6988.25	6.99	0.00	6.99	20.96	0.02	0.0002	0.70	0.011	200	220	0.20	0.20	233.109	233.051	231.909	1.20	1.32	1.26
200	F24-F23	98	22705.31	22.71	0.00	22.71	68.12	0.01	0.0008	0.70	0.011	200	220	0.45	0.45	233.271	233.121	231.071	1.20	1.50	1.55
201	F23-F6	59	5239.69	5.24	22.71	27.95	83.84	0.08	0.0010	0.70	0.011	200	220	0.27	0.27	233.121	233.031	231.625	1.50	1.67	1.58
202	F6-F7	129	24198.44	24.19	653.27	677.46	2053.39	2.05	0.0238	0.69	0.044	300	300	0.26	0.26	233.031	232.443	229.752	3.02	2.69	2.86
203	F7-F6	75	24687.81	24.69	0.00	24.69	74.06	0.07	0.0009	0.70	0.011	200	220	0.34	0.34	232.549	232.443	231.249	1.20	1.44	1.32
204	F25-F7	29	8529.30	8.53	0.00	8.53	25.59	0.05	0.0003	0.70	0.011	200	220	0.13	0.13	232.502	232.443	231.302	1.20	1.27	1.24
205	F7-F8	66	0.00	0.00	717.68	717.68	2153.0	2.15	0.0249	0.69	0.044	300	300	0.13	0.13	232.443	232.315	229.752	2.69	2.69	2.69
206	D1-F8	37	9177.19	9.18	0.00	9.18	27.53	0.03	0.0003	0.70	0.011	200	220	0.07	0.07	232.315	232.315	231.011	1.20	1.38	1.29
207	F8-F27	43	3493.13	3.49	706.86	710.35	2191.1	2.19	0.0254	0.69	0.044	300	300	0.09	0.09	232.315	232.380	229.534	2.69	2.85	2.77
208	F24-F26	43	10361.25	10.36	0.00	10.36	31.1	0.03	0.0004	0.70	0.011	200	220	0.20	0.20	232.871	232.861	231.671	1.20	1.39	1.29
209	F26-F28	73	750.00	0.75	10.36	11.11	33.3	0.03	0.0004	0.70	0.011	200	220	0.33	0.33	232.861	232.669	231.476	1.39	1.53	1.46
210	F28-F27	174	43664.06	43.66	11.11	54.78	164.3	0.16	0.0019	0.70	0.011	200	220	0.79	0.79	232.669	232.380	231.144	1.53	2.05	1.78
211	F27-D22	36	12375.00	12.38	785.13	797.50	2392.5	2.39	0.0277	0.69	0.044	300	300	0.07	0.07	232.380	232.846	229.534	2.85	3.38	3.11
212	D22-D38	53	8539.69	8.59	797.50	806.09	2419.5	2.42	0.0280	0.69	0.044	300	300	0.11	0.11	232.846	232.772	229.462	3.38	3.42	3.40
213	D40-D39	40	13291.88	13.29	0.00	13.29	39.88	0.04	0.0005	0.70	0.011	200	220	0.18	0.18	232.794	232.782	231.494	1.20	1.37	1.28
214	D39-D38	62	0.00	0.00	13.29	13.29	39.88	0.04	0.0005	0.70	0.011	200	220	0.28	0.28	232.782	232.772	231.412	1.37	1.64	1.51
215	82D38-	152	31438.13	31.44	819.78	851.22	2553.7	2.55	0.0256	0.69	0.044	300	300	0.30	0.30	232.772	232.705	229.356	3.42	3.65	3.53
216	82D23-82D25	69	1875.00	1.88	1487.7	1489.5	4468.6	4.47	0.0517	0.70	0.061	350	350	0.12	0.12	232.705	232.774	227.796	4.91	5.09	5.00
217	D24-D23	49	9668.13	9.67	0.00	9.67	28.7	0.03	0.0003	0.70	0.061	350	350	0.08	0.08	232.763	232.774	231.593	1.20	1.26	1.23
218	82D23-	150	1312.50	1.31	1489.1	1500.4	4501.3	4.50	0.0521	0.70	0.061	350	350	0.25	0.25	232.774	232.538	227.681	5.09	4.91	5.00
219	83C-82C53	140	33883.75	33.88	0.00	33.88	98.65	0.10	0.0011	0.70	0.011	200	220	0.54	0.54	232.042	231.993	230.842	1.20	1.79	1.49
220	C53-C52	60	0.00	0.00	32.88	32.88	98.65	0.10	0.0011	0.70	0.011	200	220	0.27	0.27	231.993	231.969	230.206	1.79	2.04	1.91
221	C40-C38	8	3054.38	3.05	0.00	3.05	9.16	0.01	0.0001	0.70	0.011	200	220	0.04	0.04	231.772	231.862	230.372	1.20	1.42	1.31
222	C38-C32	40	0.00	0.00	3.05	3.05	9.16	0.01	0.0001	0.70	0.011	200	220	0.18	0.18	231.862	231.969	230.564	1.42	1.62	1.52

Design Statement of Wastewater Collection System

St. No	Line No	Length of Sewer Line	Quantity of waste water generation			Quantity of Wastewater generated			Quantity of Waste Water Flow during peak hours		Discharge		Velocity		Flow		Size of sewer line	Slope	Fall	Formation Level		Invert Level		Depth	
			Self	KLD	4	5	6	Total	KLD	7	MLD	Cum	M/sec	Cum	M	M	mm			Upper end	Lower end	Upper end	Lower end	Upper end	Lower end
223	C53-C16	214	35821.25	39.82	35.94	75.76	75.76	221.28	7	0.23	0.0016	0.70	0.011	200	220	0.37	231.969	231.281	231.933	228.950	2.04	2.32	2.58		
224	C41-C54	89	12138.75	12.14	0.00	12.14	12.14	36.42	36.42	0.04	0.0004	0.70	0.011	200	220	0.40	231.662	231.682	230.482	230.058	1.20	1.82	1.51		
225	C54-C20	81	0.00	0.00	0.00	12.14	12.14	36.42	36.42	0.04	0.0004	0.80	0.023	200	220	0.37	231.882	232.018	230.058	230.638	1.82	2.33	2.08		
226	C20-C18	82	0.00	0.00	0.00	12.14	12.14	36.42	36.42	0.04	0.0004	0.80	0.023	200	220	0.37	232.018	232.191	229.689	229.517	2.23	2.87	2.60		
227	C18-C16	30	3991.88	3.99	12.14	16.13	16.13	48.35	48.35	0.05	0.0005	0.80	0.023	200	220	0.14	232.191	232.281	229.317	229.180	2.87	3.10	2.99		
228	C16-C15	23	0.00	0.00	91.89	91.89	91.89	275.67	275.67	0.28	0.0032	0.70	0.011	200	220	0.13	232.281	232.338	228.960	228.833	3.22	3.50	3.41		
229	R1076-	48	2437.50	2.44	1592.3	1594.7	1594.7	4784.2	4784.2	4.78	0.0554	0.70	0.061	350	600	0.08	232.338	232.318	227.431	227.351	4.91	4.97	4.94		
230	D73-D78	219	0.00	0.00	1594.7	1594.7	1594.7	4784.2	4784.2	4.78	0.0554	0.70	0.061	350	600	0.37	232.318	232.345	227.351	226.986	4.97	5.26	5.11		
231	D78-D29	103	14548.31	14.55	1594.7	1609.3	1609.3	4827.9	4827.9	4.83	0.0559	0.70	0.061	350	600	0.17	232.345	232.365	226.986	226.815	5.26	5.56	5.61		
232	D13-D29	68	14029.51	14.03	0.0	14.0	14.0	42.1	42.1	0.04	0.0005	0.70	0.011	200	220	0.31	232.365	232.375	231.822	231.306	1.20	1.47	1.33		
233	D29-D12	66	6986.25	6.99	1623.3	1630.3	1630.3	4890.9	4890.9	4.89	0.0566	0.70	0.061	350	600	0.11	232.375	232.373	226.815	226.705	5.96	6.02	5.99		
234	D31-D32	10	8335.63	8.35	0.00	8.35	8.35	25.07	25.07	0.03	0.0003	0.70	0.011	200	220	0.05	232.373	232.321	231.421	231.376	1.20	1.35	1.27		
235	D32-D33	70	11496.56	11.50	1638.9	1650.4	1650.4	4951.4	4951.4	4.95	0.0573	0.70	0.061	350	600	0.12	232.321	232.323	226.705	226.588	6.02	6.39	6.41		
236	D34-D33	48	21254.58	21.35	0.00	21.35	21.35	64.06	64.06	0.06	0.0007	0.70	0.011	200	220	0.22	231.595	231.383	230.195	229.977	1.20	1.41	1.30		
237	R1033-	65	582.50	0.56	1671.7	1672.3	1672.3	5016.8	5016.8	5.02	0.0581	0.70	0.061	350	600	0.11	231.383	231.339	226.588	226.480	4.79	4.86	4.83		
238	R1034-R1021	50	8225.53	8.23	0.00	8.23	8.23	24.68	24.68	0.02	0.0003	0.80	0.073	200	220	0.23	232.088	232.128	230.898	230.671	1.20	1.51	1.35		
239	D73-D78	77	3246.56	3.25	8.23	11.47	11.47	34.42	34.42	0.03	0.0004	0.70	0.011	200	220	0.35	232.128	231.618	230.671	230.351	1.51	1.30	1.40		
240	D78-D73	11	8180.63	8.18	0.00	8.18	8.18	24.54	24.54	0.02	0.0003	0.70	0.011	200	220	0.05	231.626	231.618	230.426	230.376	1.20	1.34	1.21		
241	D73-D78	53	16146.03	16.15	19.65	35.80	35.80	107.40	107.40	0.11	0.0012	0.70	0.011	200	220	0.24	231.618	231.542	230.321	230.080	1.30	1.46	1.38		
242	D78-D73	124	42867.50	42.87	0.00	42.87	42.87	128.00	128.00	0.13	0.0015	0.70	0.011	200	220	0.61	231.542	231.542	230.160	229.551	1.20	1.99	1.60		
243	D73-D71	53	6986.25	6.99	78.47	85.45	85.45	256.36	256.36	0.26	0.0030	0.70	0.011	200	220	0.24	231.542	231.401	229.551	229.310	1.99	2.09	2.04		
244	D71-D70	10	7802.63	7.81	0.00	7.81	7.81	23.42	23.42	0.02	0.0003	0.70	0.011	200	220	0.65	231.295	231.291	230.095	230.051	1.20	1.24	1.22		
245	D70-D71	84	12225.94	12.23	7.81	20.03	20.03	60.09	60.09	0.06	0.0007	0.70	0.011	200	220	0.38	231.291	231.401	230.050	229.683	1.24	1.73	1.49		
246	D71-D73	73	10232.81	10.23	105.48	115.71	115.71	347.15	347.15	0.35	0.0040	0.70	0.011	200	220	0.53	231.401	231.380	229.310	228.979	2.09	2.40	2.25		
247	D73-D76	59	6957.50	6.94	115.72	122.65	122.65	367.96	367.96	0.37	0.0043	0.70	0.011	200	220	0.27	231.380	231.362	228.979	228.710	2.40	2.65	2.55		
248	D76-D73	41	8732.81	8.73	0.00	8.73	8.73	26.20	26.20	0.03	0.0003	0.70	0.011	200	220	0.19	231.362	231.362	230.312	230.125	1.20	1.24	1.22		
249	D76-D719	43	2062.50	2.06	131.39	133.45	133.45	400.35	400.35	0.40	0.0046	0.70	0.011	200	220	0.20	231.362	231.351	228.710	228.515	2.65	2.84	2.74		
250	D719-D73	57	8732.81	8.73	133.45	142.18	142.18	426.55	426.55	0.43	0.0049	0.70	0.011	200	220	0.25	231.351	231.343	228.515	228.256	2.84	3.09	2.96		
251	D41-D77	74	16212.50	16.22	0.00	16.22	16.22	48.67	48.67	0.05	0.0006	0.70	0.011	200	220	0.34	231.343	231.343	230.323	229.986	1.20	1.36	1.28		
252	R1017-R1021	16	7875.00	7.88	158.41	166.29	166.29	498.94	498.94	0.50	0.0058	0.70	0.011	200	220	0.07	231.343	231.339	228.256	228.183	3.09	3.16	3.12		
253	R1021-R1024	63	0.00	0.00	1838.6	1838.6	1838.6	5515.7	5515.7	5.52	0.0638	0.71	0.081	400	700	0.09	231.339	231.295	226.455	226.345	4.88	4.93	4.91		
254	R1024-R1025-N	17	0.00	0.00	1838.6	1838.6	1838.6	5515.7	5515.7	5.52	0.0638	0.71	0.081	400	700	0.02	231.295	231.303	226.345	226.240	4.93	4.96	4.95		
255	N-X	81	0.00	0.00	1838.6	1838.6	1838.6	5515.7	5515.7	5.52	0.0638	0.71	0.081	400	700	0.12	231.303	230.469	226.240	226.225	4.96	4.24	4.60		
256	SECTOR 85-	26	1125.00	1.13	0.00	1.13	1.13	3.38	3.38	0.00	0.0000	0.70	0.011	200	220	0.12	229.613	229.606	228.713	228.545	0.90	1.01	0.96		
257	C21-C11	19	7155.00	7.16	0.00	7.16	7.16	21.47	21.47	0.02	0.0002	0.80	0.023	200	220	0.09	229.615	229.606	228.715	228.618	0.90	0.98	0.94		

Design Statement of Waste Water Collection System

Sr. No	Line No.	Length of Sewer Line	Quantity of waste water generation			Quantity of Waste Water generated			Quantity of Waste Water flow during peak hours		Discharge		Velocity	Flow	Slope	Fall	Formation Level		Invert Level		Depth	
			L	3	4	Self	Branch	Total	KLD	7	M.D	Cum.					Upper end	Lower end	Upper end	Lower end	Upper end	Lower end
1	2	1									8	9	10	11	12	13	16	17	18	19	20	21
255	C11-C10	55	2750.00	3.75	8.28	12.03	36.09	0.04	0.0004	0.80	0.0023	200	0.25	229.606	229.598	228.345	1.61	1.25	1.13	1.32	1.43	1.32
256	C17-C10	61	20503.13	20.50	0.00	20.50	61.51	0.06	0.0007	0.70	0.011	200	0.26	229.642	229.598	228.164	1.20	1.43	1.32	1.50	1.44	1.32
260	C14-C10	103	23236.88	23.24	0.00	23.24	69.71	0.07	0.0008	0.61	0.015	250	0.40	229.617	229.598	228.015	1.44	1.57	1.51	1.20	1.89	1.55
261	C10-C9	58	0.00	0.00	53.77	53.77	167.31	0.17	0.0019	0.61	0.015	250	0.40	229.598	229.587	227.684	1.20	1.89	1.55	1.20	2.01	1.85
262	C10-C9	110	15093.63	15.04	0.00	15.04	45.11	0.05	0.0005	0.70	0.011	200	0.26	229.598	229.587	227.684	1.20	1.89	1.55	1.20	2.01	1.85
263	C8-C6	49	0.00	0.00	70.81	70.81	212.42	0.21	0.0025	0.61	0.015	250	0.40	229.587	229.577	227.684	1.20	2.01	1.85	1.20	2.01	1.85
264	C8-C5	65	5672.80	5.67	70.81	76.48	229.44	0.23	0.0027	0.61	0.022	300	0.50	229.577	229.577	227.684	1.20	2.01	1.85	1.20	2.01	1.85
265	B39-B38	92	27590.63	27.59	0.00	27.59	82.77	0.08	0.0010	0.70	0.011	200	0.26	229.789	229.771	228.171	1.20	1.60	1.40	1.20	1.60	1.40
266	B38-B37	27	0.00	0.00	27.59	27.59	82.77	0.08	0.0010	0.70	0.011	200	0.26	229.771	229.760	228.171	1.20	1.60	1.40	1.20	1.60	1.40
267	B37-C5	140	174653.63	17.47	27.59	45.06	135.17	0.14	0.0016	0.70	0.011	200	0.26	229.760	229.757	228.171	1.20	1.60	1.40	1.20	1.60	1.40
268	C5-C4	17	0.00	0.00	121.53	121.53	364.60	0.36	0.0042	0.63	0.029	400	0.70	229.757	229.771	227.342	2.37	2.44	2.40	2.37	2.44	2.40
269	C20-C4	90	30204.38	30.20	0.00	30.20	90.61	0.09	0.0010	0.70	0.011	200	0.26	229.757	229.771	227.342	2.37	2.44	2.40	2.37	2.44	2.40
270	C4-C3	20	1381.00	0.00	151.74	151.74	455.22	0.45	0.0052	0.63	0.039	400	0.70	229.771	229.822	227.342	2.37	2.44	2.40	2.37	2.44	2.40
271	B41-B40	143	46308.75	46.31	0.00	46.31	138.93	0.14	0.0016	0.70	0.011	200	0.26	229.822	229.972	227.342	2.37	2.44	2.40	2.37	2.44	2.40
272	B40-B40	185	54271.88	54.27	0.00	54.27	162.82	0.16	0.0019	0.70	0.011	200	0.26	229.972	229.972	227.342	2.37	2.44	2.40	2.37	2.44	2.40
273	B40-C3	18	0.00	0.00	100.58	100.58	301.74	0.30	0.0035	0.80	0.023	200	0.20	229.972	229.972	227.342	2.37	2.44	2.40	2.37	2.44	2.40
274	C3-C2	33	0.00	0.00	252.32	252.32	756.95	0.75	0.0068	0.63	0.039	400	0.70	229.822	229.895	227.342	2.37	2.44	2.40	2.37	2.44	2.40
275	C17-C16	37	9548.13	9.57	0.00	9.57	28.70	0.03	0.0003	0.70	0.011	200	0.26	229.842	229.790	228.442	1.20	1.46	1.33	1.20	1.46	1.33
276	C18-C16	34	6834.38	6.83	0.00	6.83	20.50	0.02	0.0002	0.70	0.011	200	0.26	229.790	229.790	228.442	1.20	1.46	1.33	1.20	1.46	1.33
277	C16-C15	49	8201.25	8.20	0.00	8.20	24.60	0.07	0.0009	0.70	0.011	200	0.26	229.790	229.828	228.051	1.20	1.46	1.33	1.20	1.46	1.33
278	C19-C15	42	15548.13	15.50	0.00	15.50	46.75	0.05	0.0005	0.70	0.011	200	0.26	229.828	229.828	228.051	1.20	1.46	1.33	1.20	1.46	1.33
279	C15-C3	25	0.00	0.00	40.20	40.20	120.61	0.12	0.0014	0.70	0.011	200	0.26	229.828	229.895	227.342	2.37	2.44	2.40	2.37	2.44	2.40
280	C2-C1	40	750.00	0.75	292.52	293.27	879.82	0.88	0.0102	0.63	0.039	400	0.70	229.895	229.972	227.342	2.37	2.44	2.40	2.37	2.44	2.40
281	C1-B36	67	375.00	0.38	293.27	293.65	880.94	0.88	0.0102	0.71	0.031	400	0.70	229.972	230.873	227.342	2.37	2.44	2.40	2.37	2.44	2.40
282	B36-B15	177	48213.75	48.21	293.65	247.86	1925.5	1.03	0.0119	0.63	0.039	400	0.70	230.873	231.237	227.342	2.37	2.44	2.40	2.37	2.44	2.40
283	B25-B21	75	11643.75	11.64	0.00	11.64	34.9	0.03	0.0004	0.70	0.011	200	0.26	231.237	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
284	B29-B21	45	12808.13	12.81	0.00	12.81	38.4	0.04	0.0004	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
285	B21-B20	48	0.00	0.00	24.45	24.45	73.4	0.07	0.0008	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
286	B21-B20	53	20968.75	20.96	0.00	20.96	62.9	0.06	0.0007	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
287	B20-B20	85	36295.63	36.30	0.00	36.30	108.3	0.11	0.0013	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
288	B20-B19	40	0.00	0.00	81.51	81.51	244.5	0.24	0.0028	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
289	B31-B19	118	42425.63	42.43	0.00	42.43	126.25	0.16	0.0019	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
290	B19-B18	39	0.00	0.00	136.23	136.23	408.7	0.41	0.0047	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
291	B25-B18	57	22123.13	22.12	0.00	22.12	66.4	0.07	0.0008	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
292	B33-B18	152	83925.00	83.92	0.00	83.92	251.9	0.73	0.0085	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
293	B18-B17	42	1575.31	1.58	242.31	243.89	731.7	0.73	0.0085	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
294	B34-B17	145	72191.25	72.19	0.00	72.19	216.6	0.22	0.0025	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
295	B17-B16	49	0.00	0.00	316.08	316.08	948.2	0.95	0.0110	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
296	B22-B16	68	24616.25	24.62	0.00	24.62	76.3	0.08	0.0009	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
297	B35-B16	174	78012.13	78.01	0.00	78.01	234.0	0.23	0.0027	0.70	0.011	200	0.26	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35
298	B16-B15	36	8190.63	8.15	419.21	427.86	1283.6	1.28	0.0149	0.61	0.032	300	0.50	231.328	231.328	229.801	1.20	1.53	1.35	1.20	1.53	1.35

Design Statement of Waste Water Collection System

Sr. No.	Line No.	Length of Sewer Line	Quantity of Waste Water generated			Quantity of Waste Water Flow during peak hours		Discharge		Velocity	Flow Cum.	Size of sewer line	Slope	Fall	Formation Level		Invert Level		Depth					
			Self	Branch	Total	KLD	MLD	Cum.	M/sec						Cum.	mm	Upper end	Lower end	Upper end	Lower end	Upper end	Lower end		
1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
299	B15-B14	45	562.50	0.56	769.72	770.28	2310.8	2.31	0.0267	0.63	0.039	400	700	0.07	231.227	231.218	226.860	226.795	4.37	4.42	4.39			
300	B14-B13	50	1366.875	13.67	770.28	783.95	1351.8	2.35	0.0272	0.63	0.039	400	700	0.07	231.218	231.208	226.795	226.725	4.42	4.48	4.45			
301	B13-B12	45	633.438	6.33	0.00	6.33	20.5	0.02	0.0002	0.79	0.011	200	220	0.21	231.217	231.208	230.017	229.808	1.20	1.40	1.33			
302	B12-B11	54	0.00	0.00	790.78	790.78	2372.4	2.37	0.0275	0.63	0.039	400	700	0.09	231.208	231.195	226.725	226.632	4.48	4.56	4.51			
303	B11-B10	39	10935.00	10.94	0.00	10.94	32.8	0.03	0.0004	0.70	0.011	200	220	0.18	231.206	231.195	230.006	229.829	1.20	1.37	1.28			
304	B10-B9	35	0.00	0.00	801.72	801.72	2405.2	2.41	0.0278	0.71	0.081	400	700	0.05	231.195	231.182	226.632	226.582	4.56	4.58	4.57			
305	B9-B8	47	1366.875	13.67	0.00	13.67	41.0	0.04	0.0005	0.70	0.011	200	700	0.07	231.171	231.162	226.582	226.512	1.20	1.40	1.30			
306	B8-B7	49	0.00	0.00	815.39	815.39	2446.2	2.45	0.0283	0.71	0.081	400	700	0.07	231.162	231.153	226.512	226.471	4.58	4.60	4.59			
307	B7-B6	47	683.438	6.83	0.00	6.83	20.5	0.02	0.0002	0.70	0.011	200	220	0.21	231.156	231.147	226.471	226.397	1.20	1.40	1.30			
308	B6-B5	23	1366.875	13.67	0.00	13.67	12.3	2.47	0.0286	0.71	0.081	400	700	0.04	231.147	231.138	226.397	226.335	4.60	4.63	4.61			
309	B5-B4	10	4100.63	4.10	0.00	4.10	12.3	0.01	0.0001	0.70	0.011	200	220	0.05	231.103	231.098	226.335	226.243	4.70	4.71	4.74			
310	B4-B3	154	40875.00	40.88	827.69	868.56	2605.7	2.61	0.0302	0.69	0.123	500	1000	0.03	231.098	231.017	226.243	226.215	4.77	5.02	4.90			
311	B3-B2	28	0.00	0.00	868.56	868.56	2605.7	2.61	0.0302	0.69	0.123	500	1000	0.03	231.017	231.017	226.243	226.215	5.02	4.55	4.79			
312	B2-B1	156	14896.88	14.90	868.56	883.46	2630.4	2.65	0.0307	0.69	0.123	500	1000	0.15	231.237	230.613	226.215	226.092	4.55	4.41	4.48			
313	A1-A2	50	0.00	0.00	883.46	883.46	2650.4	2.65	0.0307	0.69	0.123	500	1000	0.05	230.613	230.422	226.099	225.989	4.41	4.48	4.45			
314	A5-A3	49	12301.88	12.30	0.00	12.30	36.91	0.04	0.0004	0.70	0.011	200	220	0.22	230.243	230.232	226.043	225.822	1.20	1.41	1.31			
315	A3-A4	97	0.00	0.00	12.30	12.30	36.91	0.04	0.0004	0.70	0.011	200	220	0.44	230.232	230.213	226.043	225.822	1.41	1.83	1.62			
316	A4-A2	37	88750.00	18.75	12.30	31.05	93.16	0.05	0.0011	0.70	0.011	200	220	0.17	230.213	230.422	226.043	226.211	1.83	2.21	2.02			
317	A2-X	20	39280.00	39.00	914.51	953.51	2860.5	2.86	0.0331	0.69	0.123	500	1000	0.02	230.422	230.469	226.009	225.989	4.41	4.48	4.45			
318	X-STEP 2	54	0.00	0.00	2792.1	2792.1	8376.2	8.38	0.0949	0.73	0.255	700	1400	0.04	230.469	231.161	225.839	225.800	INTERNA	4.63	5.36	5.00		
319	STEP 2-HUDA	40	0.00	0.00	2792.1	2792.1	8376.2	8.38	0.0949	0.73	0.255	700	1400	0.03	231.161	231.161	225.800	225.772	226.478	5.36	5.39	5.38		
320	B14-B13	75	24606.25	26.61	0.00	26.61	79.82	0.08	0.0009	0.70	0.011	200	220	0.34	231.890	232.012	230.690	230.349	1.20	1.65	1.43			
321	B13-B12	23	2304.38	2.30	26.61	28.91	86.73	0.09	0.0010	0.70	0.011	200	220	0.10	232.012	231.908	230.349	230.245	1.65	1.65	1.66			
322	B12-B11	32	4100.63	4.10	28.91	33.01	99.03	0.10	0.0011	0.70	0.011	200	220	0.15	231.909	231.790	230.245	230.099	1.66	1.65	1.66			
323	A13-A10	40	4421.25	4.42	0.00	4.42	13.36	0.01	0.0002	0.70	0.011	200	220	0.18	231.849	231.659	230.649	230.467	1.20	1.39	1.20			
324	A10-A11	24	0.00	0.00	4.42	4.42	13.36	0.01	0.0002	0.70	0.011	200	220	0.11	231.659	231.698	230.467	230.358	1.19	1.34	1.27			
325	A11-A12	129	16106.25	16.11	4.42	20.53	61.58	0.06	0.0007	0.70	0.011	200	220	0.59	231.698	231.750	230.358	229.772	1.34	1.98	1.66			
326	A12-A13	17	4100.63	4.10	53.54	57.64	172.92	0.17	0.0009	0.70	0.011	200	220	0.08	231.790	231.631	229.772	229.695	1.98	1.94	1.96			
327	B15-B14	122	20890.31	20.89	0.00	20.89	62.67	0.06	0.0007	0.70	0.011	200	220	0.55	230.877	231.631	229.677	229.122	1.20	2.51	1.85			
328	B14-B13	36	5038.13	5.04	78.53	83.57	250.70	0.23	0.0029	0.70	0.011	200	220	0.16	231.631	231.464	229.122	228.958	2.51	2.51	2.51			
329	A13-A10	25	15000.00	15.00	0.00	15.00	45.00	0.05	0.0005	0.70	0.011	200	220	0.11	232.260	232.098	231.060	230.947	1.20	1.15	1.18			
330	A10-A11	182	20250.00	20.25	15.00	35.25	105.75	0.11	0.0012	0.70	0.011	200	220	0.83	232.098	231.768	230.947	230.119	1.15	1.65	1.40			
331	A11-A12	150	15114.38	15.11	35.25	50.36	151.09	0.15	0.0017	0.70	0.011	200	220	0.68	231.768	231.464	230.119	229.318	1.65	2.03	1.84			
332	A12-A13	13	2733.75	2.73	133.93	136.67	410.00	0.41	0.0047	0.70	0.011	200	220	0.06	231.464	231.408	228.958	228.879	2.51	2.51	2.51			
333	B14-B13	104	16801.88	16.80	0.00	16.80	50.41	0.05	0.0006	0.70	0.011	200	220	0.47	231.408	231.408	228.879	228.755	1.20	1.85	1.43			
334	A13-A14	43	4100.63	4.10	153.47	157.57	472.71	0.47	0.0025	0.70	0.011	200	220	0.20	231.408	231.221	228.879	228.736	2.51	2.52	2.51			
335	A14-A15	27	8358.75	8.36	0.00	8.36	25.08	0.05	0.0003	0.70	0.011	200	220	0.12	231.221	231.221	230.100	229.977	1.20	1.24	1.22			

Design Statement of Waste Water Collection System

Sr. No	Line No	Length of Sewer Line	Quantity waste water generation	Quantity of Waste Water generated			Discharge		Velocity	Flow	Size of sewer line	Slope	Fall	Formation Level		Invert Level		Depth	
				Self	Branch	Total	MLD	Cum.						Upper end	Lower end	Upper end	Lower end	Upper end	Lower end
			L	KLD	KLD	KLD	8	9	M/sec	Cum.	mm			M	M	M	M	M	M
1	2	2	3	4	5	6	7	8	10	11	12	13	15	16	17	18	19	20	21
335	A43-A57	7	375.00	0.38	165.93	165.93	498.91	0.50	0.0058	0.70	0.011	200	0.03	231.221	231.181	228.704	228.672	2.52	2.51
336	A57-A44	47	8763.75	8.76	166.30	175.07	525.20	0.53	0.0061	0.70	0.011	200	0.21	231.181	230.972	228.672	228.458	2.51	2.51
337	A54-A44	72	12676.83	12.68	0.00	12.68	38.03	0.04	0.0004	0.70	0.011	300	0.33	231.098	230.972	228.858	229.571	1.20	1.40
338	A47-A46	34	9854.38	9.83	0.00	9.83	29.50	0.03	0.0003	0.70	0.011	200	0.15	231.099	230.906	229.899	229.744	1.20	1.15
339	B1-A46	30	6405.00	6.41	0.00	6.41	19.27	0.02	0.0002	0.70	0.011	200	0.14	230.933	230.906	229.733	229.596	1.20	1.31
340	A46-A45	62	6482.75	6.48	16.34	22.72	68.17	0.07	0.0008	0.70	0.011	200	0.28	230.906	230.703	229.586	229.314	1.31	1.39
341	A45-A44	67	8201.25	8.20	22.72	30.92	92.77	0.09	0.0011	0.70	0.011	200	0.30	230.703	230.972	229.314	229.010	1.39	1.96
342	B3A44-B3E1	217	35296.88	35.30	218.67	253.96	761.89	0.76	0.0088	0.70	0.011	300	0.99	230.972	229.907	228.458	227.472	2.51	2.44
343	B3E1-B3E15	121	18144.38	18.14	0.00	18.14	54.43	0.05	0.0006	0.70	0.011	200	0.55	230.849	230.709	229.649	229.099	1.20	1.61
344	E1-E15	100	18331.88	18.33	0.00	18.33	55.00	0.05	0.0006	0.70	0.011	200	0.45	230.829	230.709	229.629	229.175	1.20	1.53
345	E15-B3	67	5467.50	5.47	36.48	41.94	125.83	0.13	0.0015	0.70	0.011	200	0.30	230.729	230.675	229.694	228.794	1.61	1.88
346	B7-B3	360	56527.50	56.53	0.00	56.53	169.58	0.17	0.0020	0.70	0.011	200	0.73	230.675	230.625	229.709	229.695	1.20	0.69
347	E3-E4	50	0.00	0.00	98.47	98.47	295.41	0.30	0.0034	0.70	0.011	200	0.23	230.675	230.402	228.734	228.567	1.88	1.84
348	E7-E4	54	20689.31	20.69	0.00	20.69	62.67	0.06	0.0007	0.70	0.011	200	0.25	230.797	230.402	229.597	229.351	1.20	1.05
349	E4-E14	122	37028.75	37.04	119.36	156.40	469.20	0.47	0.0054	0.70	0.011	200	0.55	230.402	230.571	228.567	228.012	1.84	2.56
350	E14-E13	34	2617.79	2.62	155.40	158.02	477.65	0.48	0.0053	0.70	0.011	200	0.25	230.571	230.093	228.012	227.767	2.56	2.33
351	E13-E13	117	26478.75	26.48	0.00	26.48	79.44	0.08	0.0009	0.70	0.011	200	0.53	230.240	230.093	228.040	228.508	1.20	1.58
352	E13-E11	20	4233.75	4.23	185.50	189.73	569.19	0.57	0.0066	0.70	0.011	200	0.09	230.093	229.991	227.767	227.676	1.33	2.32
353	E12-E11	47	12997.50	13.00	0.00	13.00	38.99	0.04	0.0005	0.70	0.011	200	0.21	230.004	229.991	228.804	228.690	1.20	1.40
354	E11-E10	36	0.00	0.00	202.73	202.73	608.18	0.61	0.0070	0.70	0.011	200	0.16	229.991	229.859	227.676	227.512	2.32	2.35
355	E2-E3	109	16801.88	16.80	0.00	16.80	50.41	0.05	0.0006	0.70	0.011	200	0.50	229.915	229.893	228.015	228.519	0.90	1.37
356	E2-E10	163	39238.75	39.24	85.80	125.04	168.27	0.17	0.0019	0.70	0.011	200	0.74	229.893	229.859	228.519	227.778	1.37	1.08
357	E10-E8	49	2921.25	2.92	258.82	261.74	785.22	0.79	0.0091	0.61	0.015	250	0.08	229.859	229.671	227.487	227.365	2.37	2.31
358	B3E1-B3E1	163	34625.63	34.63	261.74	296.37	889.10	0.89	0.0103	0.61	0.015	250	0.41	229.671	229.607	227.365	226.932	2.31	2.95
359	B3E1-B3E12	66	0.00	0.00	550.33	550.33	1651.0	1.65	0.0191	0.69	0.044	300	0.13	229.607	229.738	226.932	226.800	2.97	2.94
360	A52-A53	33	10233.75	10.23	0.00	10.23	30.70	0.03	0.0004	0.70	0.011	200	0.15	230.438	230.438	229.238	229.088	1.20	1.35
361	A53-B12	124	10233.75	10.23	10.23	20.47	61.40	0.06	0.0007	0.70	0.011	200	0.56	230.438	229.738	228.088	228.524	1.35	1.21
362	B12-B3E12	25	2723.75	2.73	570.80	573.53	1720.6	1.72	0.0199	0.69	0.044	300	0.05	229.738	229.600	226.800	226.750	2.94	2.85
363	B3E1-B3E1	46	11643.75	11.64	0.00	11.64	34.93	0.03	0.0004	0.70	0.011	200	0.21	228.124	228.114	227.224	227.015	0.90	1.10
364	B4-E2	18	5821.88	5.82	0.00	5.82	17.47	0.02	0.0002	0.70	0.011	200	0.08	228.124	228.114	227.224	227.138	0.90	0.98
365	E2-E1	20	6384.38	6.38	17.47	23.85	71.55	0.07	0.0008	0.70	0.011	200	0.09	228.114	228.110	227.015	226.924	1.10	1.19
366	E1-A7	48	0.00	0.00	23.85	23.85	71.55	0.07	0.0008	0.61	0.015	250	0.40	228.110	228.110	226.899	226.779	1.21	2.60
367	A7-D23	95	30418.75	30.42	23.85	44.27	132.81	0.14	0.0015	0.61	0.015	250	0.24	228.375	228.092	226.779	226.542	1.60	1.55
368	D23-D7	86	1125.00	1.13	44.27	45.39	136.18	0.14	0.0015	0.61	0.015	250	0.32	228.092	228.934	226.542	226.377	1.55	2.61
369	D7-D7	71	8201.25	8.20	0.00	8.20	24.60	0.02	0.0003	0.70	0.011	200	0.06	228.934	228.934	226.377	226.244	1.20	1.54
370	D7-D21	29	0.00	0.00	53.60	53.60	160.79	0.16	0.0019	0.61	0.015	250	0.00	228.934	228.934	226.377	226.244	1.20	1.54
371	D21-D22	159	29199.38	29.11	53.60	82.70	248.11	0.25	0.0029	0.61	0.022	300	0.90	228.934	229.350	226.377	226.244	2.71	3.46
372	D5-D22	43	10775.63	10.78	0.00	10.78	32.33	0.03	0.0004	0.70	0.011	200	0.20	228.934	229.350	227.230	227.435	1.20	1.85
373	D22-D18	47	0.00	0.00	93.48	93.48	280.44	0.28	0.0022	0.61	0.022	300	0.09	229.350	229.750	225.926	225.832	3.46	3.92

APPENDICES OF WASTE WATER COLLECTION SYSTEM

Sr. No	Line No	Length of Sewer Line	Sewer Pipe Line 200 mm ID			Sewer Pipe Line 250 mm ID			Sewer Pipe Line 300 mm ID			Sewer Pipe Line 350 mm ID			Sewer Pipe Line 400 mm ID			Sewer Pipe Line 450 mm ID			Sewer Pipe Line 500 mm ID			Sewer Pipe Line 700 mm ID		
			Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth
1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	20	21								
1	A3A2-A3A5	40	40	1.02																						
2	A5-A4	193	193	1.42																						
3	A8-A4	41	41	1.29																						
4	A4-A4	41	41	1.29																						
5	A4-A7	52	52	1.92																						
6	A20-A7	48	48	1.30																						
7	A7-A7	105	105	1.43																						
8	A7-A10	56	56	1.85																						
9	A3-A3	40	40	1.29																						
10	A3-A5	53	53	1.35																						
11	A20-A6	48	48	1.30																						
12	A6-A9	56	56	1.39																						
13	A18-A15	18	18	1.24																						
14	A16-A15	40	40	1.29																						
15	A15-A12	53	53	1.64																						
16	A15-A12	58	58	1.33																						
17	A12-A9	54	54	2.18																						
18	A9-A10	175	175	2.66																						
19	A12-A10	30	30	1.26																						
20	A10-A11	175	175	2.99																						
21	A11-A11	23	23	1.21																						
22	A11-A14	53	53	3.00																						
23	A60-A59	73	73	1.36																						
24	A59-A14	101	101	1.63																						
25	A14-E25	110	110	2.81																						
26	E25-E23	45	45	2.81																						
27	E30-E29	27	27	1.28																						
28	E25-E27	85	85	1.60																						
29	E25-E27	84	84	1.58																						
30	E23-E26	77	77	1.41																						
31	E25-E27	68	68	1.79																						
32	E27-E21	83	83	2.16																						
33	E31-E21	92	92	2.57																						
34	E21-E22	44	44	3.00																						
35	E22-A22	84	84	3.60																						
36	A22-E23	19	19	4.05																						
37	E23-A21	91	91	4.17																						

Approximate of Waste Water Collection System

Apparatus of Waste Water Collection System																										
Sr. No	Line No	Length of Sewer Line	Sewer Pipe Line 200 mm I/D			Sewer Pipe Line 250 mm I/D			Sewer Pipe Line 300 mm I/D			Sewer Pipe Line 350 mm I/D			Sewer Pipe Line 400 mm I/D			Sewer Pipe Line 450 mm I/D			Sewer Pipe Line 500 mm I/D			Sewer Pipe Line 700 mm I/D		
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth	
1	2	2	4	5		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
38	A31-A35	181						181	3.47																	
39	A35-A38	17						17	2.59																	
40	A38-A31	57						57	2.54																	
41	A31-A31	44	44	1.31																						
42	A31-A34	69						69	1.49																	
43	A34-A39	108								108	1.70															
44	A39-A34	98								98	2.64															
45	A34-A39	13								13	3.50															
SECTOR 82A-																										
46	A31-A35	60	60	1.30																						
47	A35-A33	6	6	1.21																						
48	A33-A35	50	50	1.50																						
49	A37-A36	7	7	1.28																						
50	A38-A35	50	50	1.81																						
51	A35-A32	71	71	2.10																						
52	A45-A31	5	5	1.08																						
53	A31-A32	50	50	0.70																						
54	A37-A36	40	40	1.88																						
55	A35-A35	61	61	1.87																						
56	A31-A30	2	2	1.19																						
57	A30-A15	25	25	1.23																						
58	A15-A16	85	85	1.59																						
59	A20-A16	50	50	1.42																						
60	A16-A17	23	23	1.96																						
61	A17-A5	61	61	2.12																						
62	A5-A30	81	81	2.37																						
63	A30-A39	84	84	2.53																						
64	A39-A14	69	69	2.74																						
65	A14-A10	95	95	3.24																						
66	A28-A27	84	84	1.28																						
67	A27-A26	73	73	1.72																						
68	A26-A25	101	101	2.10																						
69	A25-A24	60	60	2.45																						
70	A24-A23	86	86	2.77																						
71	A23-A22	102	102	3.17																						
72	A22-A10	98	98	3.60																						
73	A10-A9	56	56	3.52																						
74	A9-A38	103	103	3.55																						
75	A38-A3	50	50	4.02																						

Appurtenances of Waste Water Collection System																										
Sr. No	Line No	Length of Sewer Line	Sewer Pipe Line 200 mm ID			Sewer Pipe Line 250 mm ID			Sewer Pipe Line 300 mm ID			Sewer Pipe Line 350 mm ID			Sewer Pipe Line 400 mm ID			Sewer Pipe Line 450 mm ID			Sewer Pipe Line 500 mm ID			Sewer Pipe Line 700 mm ID		
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth	
1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	20	21								
76	A3-A2	22	22	4.20																						
77	A2-A1	56	56	4.22																						
78	B2A-S5-B2A3	156	156	1.15																						
79	B2A1-B2E10	73	73	4.07																						
80	B2E10-	220	220	4.00																						
81	E16-E17	69	69	4.20																						
82	E17-E11	138					138	4.49																		
83	E27-E11	16	16	1.15																						
84	E11-E11	75	75	1.32																						
85	E11-E12	58					58	4.56																		
86	E18-E12	125	125	1.59																						
87	E3-E12	73	73	1.28																						
88	E12-E14	55					55	4.38																		
89	E4-E14	73	73	1.28																						
90	E5-E15	70	70	1.28																						
91	E20-E15	150	150	1.67																						
92	E15-E14	54	54	2.42																						
93	E14-E19	189																								
94	B2E19-B2E	49																								
95	B2E-STP 3	15																								
	-	6607	4724	1.91	745	3.41	666	3.49	457	3.28	0	15	4.45	15	4.45	0	0									
96	B2A46-B2A63	47	47	1.50																						
97	B2A63-B2A62	71	71	1.56																						
98	B2A44-B2A62	70	70	1.35																						
99	B2A62-B2A43	15	15	1.74																						
100	B2A43-	35	35	1.86																						
	-	238	238	1.56																						
SECTOR 82-																										
101	B2B21-B2B22	95	95	1.36																						
102	B22-B27	60	60	1.62																						
103	B28-B27	92	92	1.40																						
104	B27-B26	49	49	1.75																						
105	B34-B26	102	102	1.35																						
106	B25-B25	5	5	1.77																						
107	B23-B25	82	82	1.28																						
108	B25-B32	51	51	1.80																						
109	B35-B32	95	95	1.34																						
110	B32-B31	5	5	1.83																						
111	B33-B31	45	45	1.30																						
112	B31-B30	40	40	1.84																						
113	B29-B32	95	95	1.30																						
114	B30-B9	34	34	1.51																						
115	B9-B10	56	56	2.18																						

Appurtenances of Waste Water Collection System

Sl. No.	Line No.	Length of Sewer Pipe Line 200 mm i/d			Sewer Pipe Line 250 mm i/d			Sewer Pipe Line 300 mm i/d			Sewer Pipe Line 350 mm i/d			Sewer Pipe Line 400 mm i/d			Sewer Pipe Line 450 mm i/d			Sewer Pipe Line 500 mm i/d			Sewer Pipe Line 700 mm i/d		
		Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth	Length	Avg Depth
1	2	2	4	5	7	6	7	8	9	10	11	12	13	14	15	16	17	20	21						
116	C14-C2	34	1.41																						
117	C2-F35	42	1.90																						
118	F35-F32	33	2.28																						
119	F32-B10	87	2.67																						
120	B10-B11	66	3.11																						
121	B11-B12	95	1.35																						
122	B11-C1	54	3.23																						
123	C1-C21	158	3.65																						
124	C21-C31	8	1.22																						
125	C31-C22	68	4.14																						
126	C22-C24	29	4.08																						
127	C24-C42	100	4.23																						
128	C43-C43	39	1.28																						
129	C43-C42	54	1.47																						
130	C42-C44	78				78	4.31																		
131	C44-C45	34				34	4.51																		
132	C45-C26	51				51	4.49																		
133	C26-C25	29	1.26																						
134	C25-C25	65				65	4.55																		
135	C25-C47	126				126	4.60																		
136	C47-C7	90				90	4.72																		
137	C7-C30C48	14				14	4.82																		
138	C30-C30C30	27				27	1.26																		
139	C48-C30	60	1.32			60																			
140	C30-C31	55	1.46			55																			
141	C32-C31	43	1.39			43																			
142	C31-C34	58	1.50			58																			
143	B12-B7	85	1.38			85																			
144	B7-B7	27	1.26			27																			
145	B7-B30C34	87	1.74			87																			
146	C34-C50	77	2.15			77																			
147	C14-C36	154	1.46			154																			
148	C36-C35	75	1.89			75																			
149	C72-C35	161	1.38			161																			
150	C35-C50	69	2.41			69																			
151	C51-C50	98	1.38			98																			
152	C50-C33	93	3.13			93																			

Approximations of Waste Water Collection																														
Sr No	Line No.	Length of Sewer Line	Sewer Pipe Line 200 mm ID			Sewer Pipe Line 250 mm ID			Sewer Pipe Line 300 mm ID			Sewer Pipe Line 350 mm ID			Sewer Pipe Line 400 mm ID			Sewer Pipe Line 450 mm ID			Sewer Pipe Line 500 mm ID			Sewer Pipe Line 700 mm ID						
			Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	
1	2	2	4	5	3.82	147																								
155	B2C33-B2C48	147	147																											
154	B2C48-B2C78	38																												
155	F29-Q8	41	41	1.29																										
156	O8-F30	72																												
157	F21-F30	6	6	1.25																										
158	B2F30-B2D20	40																												
159	B2B17-B2B16	34	34	1.27																										
160	B16-B15	123	123	1.62																										
161	B15-B17	188	188	1.89																										
162	B37-B36	46	46	2.61																										
163	B1-B36	69	69	1.31																										
164	B36-B72	45	45	2.18																										
165	F2-E3	29	29	2.19																										
166	B24-B4	157	157	1.03																										
167	B4-B3	54	54	1.10																										
168	B24-B23	29	29	1.27																										
169	B23-B3	208	208	1.40																										
170	B3-B2	55	55	1.73																										
171	B6-B2	46	46	1.16																										
172	B2-B3	61	61	2.09																										
173	B3-B4	55	55	2.17																										
174	E4-E3	54	54	2.12																										
175	E3-E6	19	19	2.10																										
176	E7-E6	67	67	1.51																										
177	E6-B5	64	64	2.31																										
178	F9-B5	33	33	1.94																										
179	B5-B7	197	197	2.54																										
180	F33-B8	30	30	1.25																										
181	B8-B7	59	59	1.41																										
182	B7-F1	55																												
183	F9-F1	159	159	1.73																										
184	F1-F2	57																												
185	F10-F18	18	18	1.23																										
186	F18-F16	13	13	1.27																										
187	F11-F16	93	93	1.42																										
188	F16-F15	53	53	1.80																										
189	F15-F14	55	55	2.06																	</									

Appurtenances of Waste Water Collection System

APPENDICES OF WATERWORKS COLLECTION OF DATA																								
St. No.	Line No.	Length of Sewer Line	Sewer Pipe Line 200 mm i/d			Sewer Pipe Line 250 mm i/d			Sewer Pipe Line 300 mm i/d			Sewer Pipe Line 350 mm i/d			Sewer Pipe Line 400 mm i/d			Sewer Pipe Line 500 mm i/d			Sewer Pipe Line 700 mm i/d			
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		
1	3	2	M	4	5	M	6	7	M	8	M	9	M	10	M	11	M	12	M	13	M	14	M	15
130	F14-F2	176	176	2.85																				
131	F2-F3	54							54	3.37														
132	F15-F3	147	147	1.68					6	3.26														
133	F2-F4	6																						
134	F12-F4	40	40	1.25																				
135	F4-F5	27							27	3.20														
136	F21-F20	81	81	1.49																				
137	F20-F5	19	19	1.85																				
138	F2-F6	82																						
139	F71-F6	43	43	1.26					89	3.10														
200	F24-F23	98	98	1.35																				
201	F23-F6	59	59	1.58																				
202	F5-F7	129							129	2.86														
203	F26-F7	75	75	1.32																				
204	F15-F7	29	29	1.24																				
205	F7-F8	66							66	2.69														
206	D1-F8	37																						
207	F8-F27	43							43	2.77														
208	F34-F36	43	43	1.29																				
209	F26-F28	73	73	1.46																				
210	F28-F27	174	174	1.78																				
211	F27-D22	36							36	3.11														
212	D22-D38	53							63	3.40														
213	D40-D39	40	40	1.28																				
214	D39-D38	62	62	1.51																				
215	F2D38-	152							152	3.53														
216	D2D20-D2D21	69																						
217	D24-D23	49							49	5.00														
218	D2D23-	150							150	5.00														
219	C3C33-C3C53	140	140	1.49																				
220	C31-C52	60	60	1.91																				
221	C40-C38	8	8	1.31																				
222	C38-C52	40	40	1.52																				

Appropriateness of Waste Water Collection System

Sr. No	Line No.	Length of Sewer Line	Sewer Pipe Line 200 mm i/d			Sewer Pipe Line 250 mm i/d			Sewer Pipe Line 300 mm i/d			Sewer Pipe Line 350 mm i/d			Sewer Pipe Line 400 mm i/d			Sewer Pipe Line 450 mm i/d			Sewer Pipe Line 500 mm i/d			Sewer Pipe Line 700 mm i/d		
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth	
1	1	2	4	5		6	7		8	9		10	11		12	13		14	15		16	17		18	19	
223	C52-C16	214	214	2.68																						
224	C41-C54	89	89	1.51																						
225	C54-C20	81	81	2.08																						
226	C20-C18	82	82	2.60																						
227	C18-C16	30	30	2.99																						
228	83C16-82D26	28	28	3.41																						
229	83D25	48										48	4.54													
230	D27-D28	219										219	5.11													
231	D28-D29	103										103	5.61													
232	D25-D29	69	69	1.33																						
233	D28-D32	66										66	5.99													
234	D31-D32	10	10	1.27								70	5.41													
235	D32-D33	20																								
236	D34-D33	48	48	1.30								65	4.83													
237	82D33	65																								
238	82D35-82D7	50	50	1.35																						
239	D2-D6	77	77	1.80																						
240	D8-D6	11	11	1.22																						
241	D6-D7	53	53	1.38																						
242	D8-D7	134	134	1.60																						
243	D7-D11	53	53	2.94																						
244	D14-D10	10	10	1.22																						
245	D10-D11	84	84	1.49																						
246	D11-D15	73	73	2.25																						
247	D15-D16	59	59	2.53																						
248	D18-D16	41	41	1.22																						
249	D16-D19	43	43	2.74																						
250	D19-D17	57	57	2.96																						
251	D41-D17	74	74	1.28																						
252	82D17-82D23	16	16	3.12																						
253	82D23-82D25	63																								
254	82D25-N	17																								
255	N-N	81																								
256	85C12-85C11	26	26	0.96																						
257	C31-C11	19	19	0.94																						
	SECTOR 85																									

Appurtenances of Waste Water Collection System

Sr. No	Line No	Length of Sewer Line	Sewer Pipe Line 200 mm ID			Sewer Pipe Line 250 mm ID			Sewer Pipe Line 300 mm ID			Sewer Pipe Line 350 mm ID			Sewer Pipe Line 400 mm ID			Sewer Pipe Line 450 mm ID			Sewer Pipe Line 500 mm ID			Sewer Pipe Line 700 mm ID		
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth	
1	2	2	4	5		6	7		8	9		10	11		12	13		14	15		16	17		18	19	
299	B15-B14	46													46	4.39										
300	B14-B7	50													50	4.45										
301	B12-B7	46	46	1.30																						
302	B7-B6	64													64	4.52										
303	B11-B6	39	39	1.28																						
304	B6-B5	35																								
305	B10-B5	47	47	1.30																						
306	B5-B4	49																								
307	B4-B3	47	47	1.30																						
308	B3-B2	28																								
309	B2-B1	10	10	1.22																						
310	B1-B0	154																								
311	B3-B1	28																								
312	B5B1-A5A1	156																								
313	A1-A2	50																								
314	A6-A5	49	49	1.31																						
315	A5-A4	97	97	1.62																						
316	A4-A2	37	37	2.02																						
317	A2-A1	20																								
318	X-STP 2	54																								
319	STP2-HUDA	40																								
320	STP2-HUDA	14756	10688	1.74		920	3.61		925	3.69		879	4.80		787	3.94										
321	STP2-HUDA	75	75	1.43																						
322	STP2-HUDA	23	23	1.66																						
323	STP2-HUDA	32	32	1.66																						
324	STP2-HUDA	129	129	1.66																						
325	STP2-HUDA	40	40	1.20																						
326	STP2-HUDA	24	24	1.27																						
327	STP2-HUDA	122	122	1.85																						
328	STP2-HUDA	16	16	2.51																						
329	STP2-HUDA	25	25	1.18																						
330	STP2-HUDA	182	182	1.40																						
331	STP2-HUDA	150	150	1.84																						
332	STP2-HUDA	13	13	2.51																						
333	STP2-HUDA	104	104	1.43																						
334	STP2-HUDA	43	43	2.51																						
335	STP2-HUDA	27	27	1.22																						

Aggravation of Waste Water Collection System

Sr. No.	Line No.	Length of Sewer Line	Sewer Pipe Line 200 mm ID			Sewer Pipe Line 250 mm ID			Sewer Pipe Line 300 mm ID			Sewer Pipe Line 350 mm ID			Sewer Pipe Line 400 mm ID			Sewer Pipe Line 450 mm ID			Sewer Pipe Line 500 mm ID			Sewer Pipe Line 700 mm ID		
			Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth		Length	Avg Depth	
			M	M		M	M		M	M		M	M		M	M		M	M		M	M		M	M	
1	2	2	4	3		6	7		8	9		10	11		12	13		14	15		16	17		20	21	
115	A63-A57	7	7	2.51																						
136	A57-A44	47	47	2.51																						
337	A54-A44	72	72	1.30																						
338	A47-A46	34	34	1.18																						
339	B1-A46	30	30	1.25																						
340	A46-A45	62	62	1.35																						
341	A45-A44	67	67	1.68																						
342	B3A44-B3E1	217	217	1.47																						
343	B3E1-B3E15	121	121	1.41																						
344	E17-E15	100	100	1.37																						
345	E15-E5	67	67	1.75																						
346	E7-E5	160	160	0.95																						
347	E5-E4	50	50	1.86																						
348	E5-E4	54	54	1.13																						
349	E4-E14	122	122	2.20																						
350	E14-E13	54	54	2.44																						
351	E13-E13	117	117	1.39																						
352	E13-E11	20	20	2.32																						
353	E12-E11	47	47	1.30																						
354	E11-E10	36	36	2.33																						
355	E2-E2	109	109	1.14																						
356	E2-E10	163	163	1.73																						
357	E10-E8	49	49			49	2.34																			
358	B3E8-B3E1	163	163			163	2.63																			
359	B3E1-B3E12	66	66			66	2.86																			
360	A52-A53	33	33	1.27																						
361	A53-B72	124	124	1.28																						
362	B3E12-B3E12	25	25			25	2.89																			
363	SECTOR 24																									
364	B4E3-B4E2	46	46	1.00																						
365	E4-E3	18	18	0.94																						
366	E3-E1	20	20	1.14																						
367	E4-A7	48	48			48	1.40																			
368	A7-D013	95	95			95	1.57																			
369	D013-D7	86	86			86	2.08																			
370	D013-D7	71	71	1.37																						
371	D7-D21	29	29			29	1.67																			
372	D21-D22	139	139			139	3.59																			
373	D5-D72	43	43	1.53																						
374	D72-D18	47	47			47	3.69																			

Appurtenances of Waste Water Collection System																								
Sr. No	Line No.	Length of Sewer Line	Sewer Pipe Line 200 mm i/d			Sewer Pipe Line 250 mm i/d			Sewer Pipe Line 300 mm i/d			Sewer Pipe Line 350 mm i/d			Sewer Pipe Line 400 mm i/d			Sewer Pipe Line 500 mm i/d			Sewer Pipe Line 700 mm i/d			
			Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	Length	Avg Depth	M	
1	2	2	4	5		6	7		8	9		10	11		12	13		14	15		16	17		
374	A03-A12	3	3	1.20																				
375	A12-A13	53	53	1.31																				
376	A13-A14	54	54	1.55																				
377	A14-A15	141	141	1.97																				
378	A15-A16	53	53	2.30																				
379	A16-A17	30	30	1.26																				
380	B01-A2	52	52	1.31																				
381	A2-D2	62	62	2.51																				
382	D2-D19	116	116	3.04																				
383	D19-D18	129	129	3.57																				
384	D18-D18	145	145	1.52																				
385	D6-D18	42	42	1.29																				
386	D18-D17	53	53	3.97																				
387	D4-B4-D17	132	132	1.48																				
388	B4-D17-B3B5	73	73	4.23																				
389	B3B2-B3B3	20	20	1.27																				
390	B3-B4	54	54	1.45																				
391	B5-B4	62	62	1.33																				
392	B4-B5	86	86	1.72																				
393	B5-B3B5	206	206	2.02																				
394	B3B5-B3B22	84	84	4.45																				
395	B22-B21	35	35	4.52																				
396	B21-B19	18	18	4.51																				
397	B19-B17	53	53	4.34																				
398	B17-B17	14	14	4.22																				
399	B17-B14	55	55	4.37																				
400	B14-B13	39	39	4.69																				
401	B3B13-B3B12	16	16	4.80																				
402	B3B12-B3C10	213	213	4.50																				
403	C11-C10	76	76	1.32																				
404	B3C10-B3C7	67	67	4.22																				
405	C13-C6	215	215	1.59																				
406	B3C6-B3C7	71	71	2.22																				
407	B3C7-B3C8	31	31																					
408	B3C12-B3C8	147	147	1.46																				
409	B3C8-STP1	15	15																					
		28126	28668	2235	2533	1336	787	82	408	15	437	148												