

LAMPIRAN

Lampiran 1. Kebutuhan Air Tiap Node Kota Muara Teweh Tahun 2021

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
1	0	0	0	0	0	0.000	0.000	0.000
2	12	60	7200	1440	8640	0.100	0.021	0.121
3	9	45	5400	1080	6480	0.075	0.016	0.091
4	11	55	6600	1320	7920	0.092	0.020	0.111
5	14	70	8400	1680	10080	0.117	0.025	0.142
6	13	65	7800	1560	9360	0.108	0.023	0.131
7	12	60	7200	1440	8640	0.100	0.021	0.121
8	10	50	6000	1200	7200	0.083	0.018	0.101
9	8	40	4800	960	5760	0.067	0.014	0.081
10	15	75	9000	1800	10800	0.125	0.027	0.152
11	10	50	6000	1200	7200	0.083	0.018	0.101
12	13	65	7800	1560	9360	0.108	0.023	0.131
13	14	70	8400	1680	10080	0.117	0.025	0.142
14	11	55	6600	1320	7920	0.092	0.020	0.111
15	13	65	7800	1560	9360	0.108	0.023	0.131
16	10	50	6000	1200	7200	0.083	0.018	0.101
17	0	0	0	0	0	0.000	0.000	0.000
18	0	0	0	0	0	0.000	0.000	0.000
19	13	65	7800	1560	9360	0.108	0.023	0.131
20	15	75	9000	1800	10800	0.125	0.027	0.152

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
21	13	65	7800	1560	9360	0.108	0.023	0.131
22	10	50	6000	1200	7200	0.083	0.018	0.101
23	9	45	5400	1080	6480	0.075	0.016	0.091
24	7	35	4200	840	5040	0.058	0.012	0.071
25	13	65	7800	1560	9360	0.108	0.023	0.131
26	14	70	8400	1680	10080	0.117	0.025	0.142
27	10	50	6000	1200	7200	0.083	0.018	0.101
28	11	55	6600	1320	7920	0.092	0.020	0.111
29	10	50	6000	1200	7200	0.083	0.018	0.101
30	9	45	5400	1080	6480	0.075	0.016	0.091
31	7	35	4200	840	5040	0.058	0.012	0.071
32	13	65	7800	1560	9360	0.108	0.023	0.131
33	11	55	6600	1320	7920	0.092	0.020	0.111
34	14	70	8400	1680	10080	0.117	0.025	0.142
35	15	75	9000	1800	10800	0.125	0.027	0.152
36	11	55	6600	1320	7920	0.092	0.020	0.111
37	10	50	6000	1200	7200	0.083	0.018	0.101
38	11	55	6600	1320	7920	0.092	0.020	0.111
39	11	55	6600	1320	7920	0.092	0.020	0.111
40	12	60	7200	1440	8640	0.100	0.021	0.121
41	13	65	7800	1560	9360	0.108	0.023	0.131
42	10	50	6000	1200	7200	0.083	0.018	0.101
43	11	55	6600	1320	7920	0.092	0.020	0.111

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air
					kebutuhan	kebutuhan		Rata-rata
			L/jiwa	L/jiwa	L/hari	L/det		L/det
44	12	60	7200	1440	8640	0.100	0.021	0.121
45	13	65	7800	1560	9360	0.108	0.023	0.131
46	12	60	7200	1440	8640	0.100	0.021	0.121
47	12	60	7200	1440	8640	0.100	0.021	0.121
48	10	50	6000	1200	7200	0.083	0.018	0.101
49	13	65	7800	1560	9360	0.108	0.023	0.131
50	12	60	7200	1440	8640	0.100	0.021	0.121
51	15	75	9000	1800	10800	0.125	0.027	0.152
52	14	70	8400	1680	10080	0.117	0.025	0.142
53	12	60	7200	1440	8640	0.100	0.021	0.121
54	13	65	7800	1560	9360	0.108	0.023	0.131
55	12	60	7200	1440	8640	0.100	0.021	0.121
56	12	60	7200	1440	8640	0.100	0.021	0.121
57	11	55	6600	1320	7920	0.092	0.020	0.111
58	10	50	6000	1200	7200	0.083	0.018	0.101
59	13	65	7800	1560	9360	0.108	0.023	0.131
60	12	60	7200	1440	8640	0.100	0.021	0.121
61	13	65	7800	1560	9360	0.108	0.023	0.131
62	7	35	4200	840	5040	0.058	0.012	0.071
63	8	40	4800	960	5760	0.067	0.014	0.081
64	7	35	4200	840	5040	0.058	0.012	0.071
65	7	35	4200	840	5040	0.058	0.012	0.071
66	9	45	5400	1080	6480	0.075	0.016	0.091

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air
					kebutuhan	kebutuhan		Rata-rata
			L/jiwa	L/jiwa	L/hari	L/det		L/det
67	10	50	6000	1200	7200	0.083	0.018	0.101
68	8	40	4800	960	5760	0.067	0.014	0.081
69	8	40	4800	960	5760	0.067	0.014	0.081
70	14	70	8400	1680	10080	0.117	0.025	0.142
71	0	0	0	0	0	0.000	0.000	0.000
72	0	0	0	0	0	0.000	0.000	0.000
73	12	60	7200	1440	8640	0.100	0.021	0.121
74	13	65	7800	1560	9360	0.108	0.023	0.131
75	8	40	4800	960	5760	0.067	0.014	0.081
76	9	45	5400	1080	6480	0.075	0.016	0.091
77	7	35	4200	840	5040	0.058	0.012	0.071
78	9	45	5400	1080	6480	0.075	0.016	0.091
79	10	50	6000	1200	7200	0.083	0.018	0.101
80	10	50	6000	1200	7200	0.083	0.018	0.101
81	13	65	7800	1560	9360	0.108	0.023	0.131
82	11	55	6600	1320	7920	0.092	0.020	0.111
83	10	50	6000	1200	7200	0.083	0.018	0.101
84	8	40	4800	960	5760	0.067	0.014	0.081
85	9	45	5400	1080	6480	0.075	0.016	0.091
86	10	50	6000	1200	7200	0.083	0.018	0.101
87	14	70	8400	1680	10080	0.117	0.025	0.142
88	11	55	6600	1320	7920	0.092	0.020	0.111
89	11	55	6600	1320	7920	0.092	0.020	0.111

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
90	12	60	7200	1440	8640	0.100	0.021	0.121
91	13	65	7800	1560	9360	0.108	0.023	0.131
92	15	75	9000	1800	10800	0.125	0.027	0.152
93	17	85	10200	2040	12240	0.142	0.030	0.172
94	12	60	7200	1440	8640	0.100	0.021	0.121
95	15	75	9000	1800	10800	0.125	0.027	0.152
96	14	70	8400	1680	10080	0.117	0.025	0.142
97	17	85	10200	2040	12240	0.142	0.030	0.172
98	12	60	7200	1440	8640	0.100	0.021	0.121
99	15	75	9000	1800	10800	0.125	0.027	0.152
100	11	55	6600	1320	7920	0.092	0.020	0.111
101	13	65	7800	1560	9360	0.108	0.023	0.131
102	10	50	6000	1200	7200	0.083	0.018	0.101
103	14	70	8400	1680	10080	0.117	0.025	0.142
104	10	50	6000	1200	7200	0.083	0.018	0.101
105	7	35	4200	840	5040	0.058	0.012	0.071
106	9	45	5400	1080	6480	0.075	0.016	0.091
107	11	55	6600	1320	7920	0.092	0.020	0.111
108	12	60	7200	1440	8640	0.100	0.021	0.121
109	14	70	8400	1680	10080	0.117	0.025	0.142
110	13	65	7800	1560	9360	0.108	0.023	0.131
111	16	80	9600	1920	11520	0.133	0.028	0.162
112	15	75	9000	1800	10800	0.125	0.027	0.152

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
113	13	65	7800	1560	9360	0.108	0.023	0.131
114	12	60	7200	1440	8640	0.100	0.021	0.121
115	10	50	6000	1200	7200	0.083	0.018	0.101
116	9	45	5400	1080	6480	0.075	0.016	0.091
117	9	45	5400	1080	6480	0.075	0.016	0.091
118	7	35	4200	840	5040	0.058	0.012	0.071
119	8	40	4800	960	5760	0.067	0.014	0.081
120	11	55	6600	1320	7920	0.092	0.020	0.111
121	14	70	8400	1680	10080	0.117	0.025	0.142
122	15	75	9000	1800	10800	0.125	0.027	0.152
123	12	60	7200	1440	8640	0.100	0.021	0.121
124	12	60	7200	1440	8640	0.100	0.021	0.121
125	13	65	7800	1560	9360	0.108	0.023	0.131
126	14	70	8400	1680	10080	0.117	0.025	0.142
127	11	55	6600	1320	7920	0.092	0.020	0.111
128	17	85	10200	2040	12240	0.142	0.030	0.172
129	12	60	7200	1440	8640	0.100	0.021	0.121
130	13	65	7800	1560	9360	0.108	0.023	0.131
131	17	85	10200	2040	12240	0.142	0.030	0.172
132	9	45	5400	1080	6480	0.075	0.016	0.091
133	10	50	6000	1200	7200	0.083	0.018	0.101
134	12	60	7200	1440	8640	0.100	0.021	0.121
135	11	55	6600	1320	7920	0.092	0.020	0.111

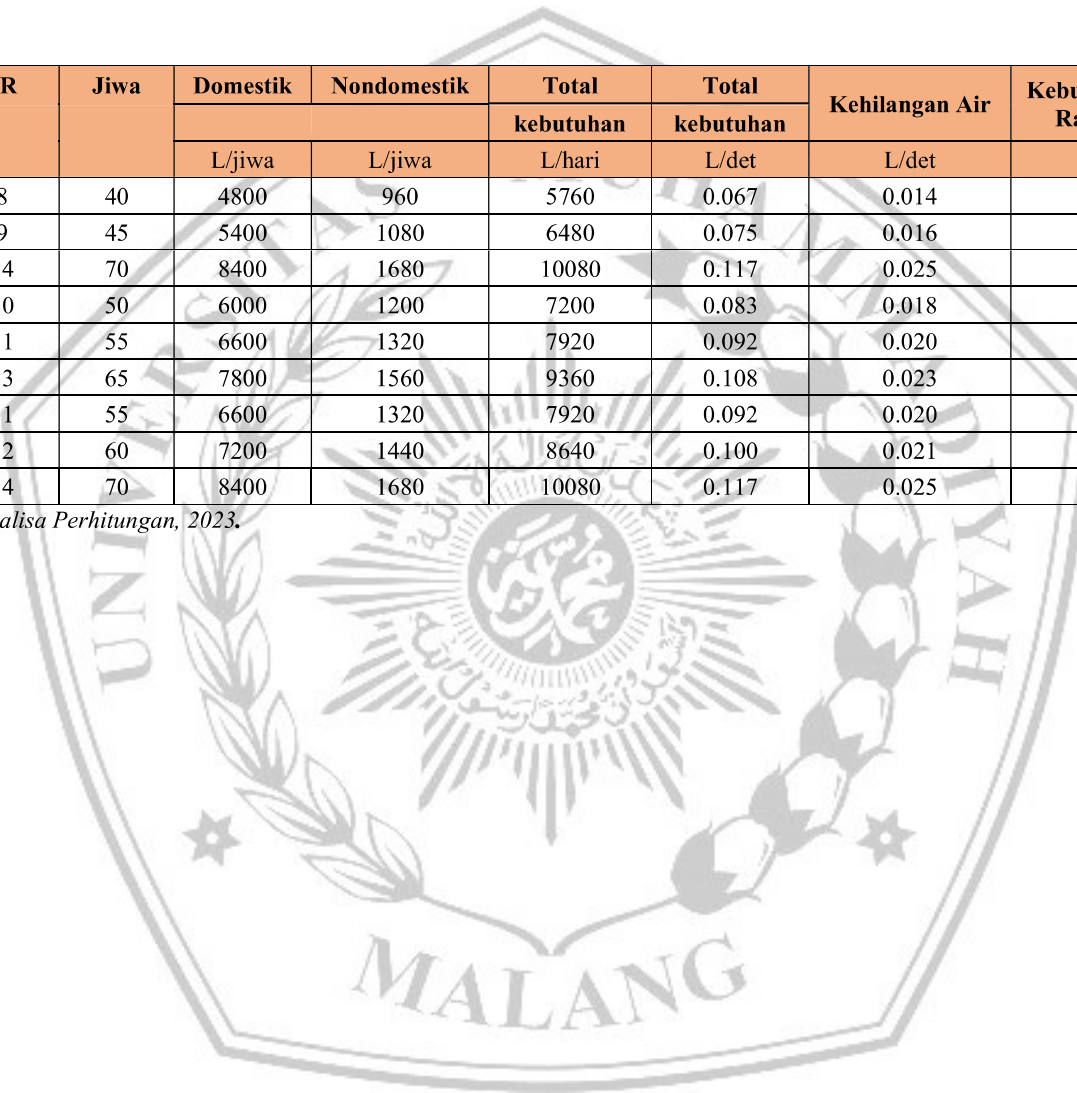
Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air
					kebutuhan	kebutuhan		Rata-rata
			L/jiwa	L/jiwa	L/hari	L/det		L/det
136	14	70	8400	1680	10080	0.117	0.025	0.142
137	16	80	9600	1920	11520	0.133	0.028	0.162
138	10	50	6000	1200	7200	0.083	0.018	0.101
139	15	75	9000	1800	10800	0.125	0.027	0.152
140	8	40	4800	960	5760	0.067	0.014	0.081
141	10	50	6000	1200	7200	0.083	0.018	0.101
142	7	35	4200	840	5040	0.058	0.012	0.071
143	13	65	7800	1560	9360	0.108	0.023	0.131
144	14	70	8400	1680	10080	0.117	0.025	0.142
145	13	65	7800	1560	9360	0.108	0.023	0.131
146	11	55	6600	1320	7920	0.092	0.020	0.111
147	10	50	6000	1200	7200	0.083	0.018	0.101
148	14	70	8400	1680	10080	0.117	0.025	0.142
149	13	65	7800	1560	9360	0.108	0.023	0.131
150	15	75	9000	1800	10800	0.125	0.027	0.152
151	12	60	7200	1440	8640	0.100	0.021	0.121
152	17	85	10200	2040	12240	0.142	0.030	0.172
153	14	70	8400	1680	10080	0.117	0.025	0.142
154	11	55	6600	1320	7920	0.092	0.020	0.111
155	14	70	8400	1680	10080	0.117	0.025	0.142
156	13	65	7800	1560	9360	0.108	0.023	0.131
157	12	60	7200	1440	8640	0.100	0.021	0.121
158	14	70	8400	1680	10080	0.117	0.025	0.142

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air
					kebutuhan	kebutuhan		Rata-rata
			L/jiwa	L/jiwa	L/hari	L/det		L/det
159	18	90	10800	2160	12960	0.150	0.032	0.182
160	16	80	9600	1920	11520	0.133	0.028	0.162
161	12	60	7200	1440	8640	0.100	0.021	0.121
162	14	70	8400	1680	10080	0.117	0.025	0.142
163	14	70	8400	1680	10080	0.117	0.025	0.142
164	11	55	6600	1320	7920	0.092	0.020	0.111
165	10	50	6000	1200	7200	0.083	0.018	0.101
166	15	75	9000	1800	10800	0.125	0.027	0.152
167	17	85	10200	2040	12240	0.142	0.030	0.172
168	11	55	6600	1320	7920	0.092	0.020	0.111
169	13	65	7800	1560	9360	0.108	0.023	0.131
170	12	60	7200	1440	8640	0.100	0.021	0.121
171	11	55	6600	1320	7920	0.092	0.020	0.111
172	14	70	8400	1680	10080	0.117	0.025	0.142
173	17	85	10200	2040	12240	0.142	0.030	0.172
174	14	70	8400	1680	10080	0.117	0.025	0.142
175	10	50	6000	1200	7200	0.083	0.018	0.101
176	9	45	5400	1080	6480	0.075	0.016	0.091
177	7	35	4200	840	5040	0.058	0.012	0.071
178	11	55	6600	1320	7920	0.092	0.020	0.111
179	12	60	7200	1440	8640	0.100	0.021	0.121
180	11	55	6600	1320	7920	0.092	0.020	0.111
181	13	65	7800	1560	9360	0.108	0.023	0.131

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
182	10	50	6000	1200	7200	0.083	0.018	0.101
183	14	70	8400	1680	10080	0.117	0.025	0.142
184	8	40	4800	960	5760	0.067	0.014	0.081
185	10	50	6000	1200	7200	0.083	0.018	0.101
186	13	65	7800	1560	9360	0.108	0.023	0.131
187	10	50	6000	1200	7200	0.083	0.018	0.101
188	11	55	6600	1320	7920	0.092	0.020	0.111
189	12	60	7200	1440	8640	0.100	0.021	0.121
190	16	80	9600	1920	11520	0.133	0.028	0.162
191	14	70	8400	1680	10080	0.117	0.025	0.142
192	17	85	10200	2040	12240	0.142	0.030	0.172
193	12	60	7200	1440	8640	0.100	0.021	0.121
194	13	65	7800	1560	9360	0.108	0.023	0.131
195	14	70	8400	1680	10080	0.117	0.025	0.142
196	12	60	7200	1440	8640	0.100	0.021	0.121
197	20	100	12000	2400	14400	0.167	0.036	0.202
198	14	70	8400	1680	10080	0.117	0.025	0.142
199	11	55	6600	1320	7920	0.092	0.020	0.111
200	12	60	7200	1440	8640	0.100	0.021	0.121
201	13	65	7800	1560	9360	0.108	0.023	0.131
202	14	70	8400	1680	10080	0.117	0.025	0.142
203	11	55	6600	1320	7920	0.092	0.020	0.111
204	10	50	6000	1200	7200	0.083	0.018	0.101

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
205	8	40	4800	960	5760	0.067	0.014	0.081
206	9	45	5400	1080	6480	0.075	0.016	0.091
207	14	70	8400	1680	10080	0.117	0.025	0.142
208	10	50	6000	1200	7200	0.083	0.018	0.101
209	11	55	6600	1320	7920	0.092	0.020	0.111
210	13	65	7800	1560	9360	0.108	0.023	0.131
211	11	55	6600	1320	7920	0.092	0.020	0.111
212	12	60	7200	1440	8640	0.100	0.021	0.121
213	14	70	8400	1680	10080	0.117	0.025	0.142

Sumber: Hasil Analisa Perhitungan, 2023.



Lampiran 2. Rekapitulasi Data Pipa Jaringan Distribusi Air Bersih Kota Muara Teweh Tahun 2021 (Existing)

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
1		49					
	1		101.6	11	0.00001	Hazen William	Pipa PVC
2		47					
	2		101.6	13	0.00001	Hazen William	Pipa PVC
3		43					
	3		101.6	75	0.00001	Hazen William	Pipa PVC
4		37					
	4		101.6	204	0.00001	Hazen William	Pipa PVC
5		35					
	5		200	275	0.00001	Hazen William	Pipa PVC
6		34					
	6		83	358	0.00001	Hazen William	Pipa PVC
7		33					
	7		200	80	0.00001	Hazen William	Pipa PVC
8		33					
	8		83	176	0.00001	Hazen William	Pipa PVC
9		32					
	9		200	136	0.00001	Hazen William	Pipa PVC
10		32					
	10		200	209	0.00001	Hazen William	Pipa PVC
11		33					
	11		200	163	0.00001	Hazen William	Pipa PVC
12		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	12		83	97	0.00001	Hazen William	Pipa PVC
13		32					
	13		200	83	0.00001	Hazen William	Pipa PVC
14		33					
	14		83	298	0.00001	Hazen William	Pipa PVC
15		34					
	15		101.6	330	0.00001	Hazen William	Pipa PVC
16		37					
	16		101.6	276	0.00001	Hazen William	Pipa PVC
17		47					
	17		101.6	12	0.00001	Hazen William	Pipa PVC
18		47					
	18		200	10	0.00001	Hazen William	Pipa PVC
19		46					
	19		102	322	0.00001	Hazen William	Pipa PVC
20		44					
	20		101.6	501	0.00001	Hazen William	Pipa PVC
21		30					
	21		200	365	0.00001	Hazen William	Pipa PVC
22		27					
	22		101.6	161	0.00001	Hazen William	Pipa PVC
23		27					
	23		200	174	0.00001	Hazen William	Pipa PVC
24		26					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	24		101.6	387	0.00001	Hazen William	Pipa PVC
25		26					
	25		58.2	220	0.00001	Hazen William	Pipa PVC
26		26					
	26		200	86	0.00001	Hazen William	Pipa PVC
27		26					
	27		200	70	0.00001	Hazen William	Pipa PVC
28		26					
	28		58.2	110	0.00001	Hazen William	Pipa PVC
29		27					
	29		58.2	195	0.00001	Hazen William	Pipa PVC
30		27					
	30		58.2	173	0.00001	Hazen William	Pipa PVC
31		28					
	31		200	88	0.00001	Hazen William	Pipa PVC
32		28					
	32		58.2	94	0.00001	Hazen William	Pipa PVC
33		27					
	33		58.2	65	0.00001	Hazen William	Pipa PVC
34		27					
	34		200	92	0.00001	Hazen William	Pipa PVC
35		28					
	35		58.2	173	0.00001	Hazen William	Pipa PVC
36		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	36		200	188	0.00001	Hazen William	Pipa PVC
37		29					
	37		200	201	0.00001	Hazen William	Pipa PVC
38		28					
	38		58.2	240	0.00001	Hazen William	Pipa PVC
39		28					
	339		58.2	87	0.00001	Hazen William	Pipa PVC
40		28					
	40		200	190	0.00001	Hazen William	Pipa PVC
41		29					
	41		58.2	295	0.00001	Hazen William	Pipa PVC
42		30					
	42		200	90	0.00001	Hazen William	Pipa PVC
43		30					
	43		58.2	100	0.00001	Hazen William	Pipa PVC
44		29					
	44		200	250	0.00001	Hazen William	Pipa PVC
45		29					
	45		58.2	80	0.00001	Hazen William	Pipa PVC
46		30					
	46		200	120	0.00001	Hazen William	Pipa PVC
47		32					
	47		58.2	190	0.00001	Hazen William	Pipa PVC
48		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	48		200	180	0.00001	Hazen William	Pipa PVC
49		34					
	49		200	147	0.00001	Hazen William	Pipa PVC
50		32					
	50		58.2	49	0.00001	Hazen William	Pipa PVC
51		28					
	51		83	208	0.00001	Hazen William	Pipa PVC
52		35					
	52		58.2	372	0.00001	Hazen William	Pipa PVC
53		36					
	53		83	140	0.00001	Hazen William	Pipa PVC
54		36					
	54		200	60	0.00001	Hazen William	Pipa PVC
55		37					
	55		58.2	47	0.00001	Hazen William	Pipa PVC
56		37					
	56		200	92	0.00001	Hazen William	Pipa PVC
57		38					
	57		200	83	0.00001	Hazen William	Pipa PVC
58		36					
	58		58.2	66	0.00001	Hazen William	Pipa PVC
59		34					
	59		58.2	264	0.00001	Hazen William	Pipa PVC
60		35					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	60		200	199	0.00001	Hazen William	Pipa PVC
61		37					
	61		200	279	0.00001	Hazen William	Pipa PVC
62		37					
	62		83	136	0.00001	Hazen William	Pipa PVC
63		37					
	63		200	230	0.00001	Hazen William	Pipa PVC
64		38					
	64		200	131	0.00001	Hazen William	Pipa PVC
65		37					
	65		83	158	0.00001	Hazen William	Pipa PVC
66		39					
	66		200	175	0.00001	Hazen William	Pipa PVC
67		40					
	67		200	87	0.00001	Hazen William	Pipa PVC
68		43					
	68		83	163	0.00001	Hazen William	Pipa PVC
69		45					
	69		58.2	247	0.00001	Hazen William	Pipa PVC
70		47					
	70		83	106	0.00001	Hazen William	Pipa PVC
71		49					
	71		58.2	10	0.00001	Hazen William	Pipa PVC
72		49					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	72		58.2	13	0.00001	Hazen William	Pipa PVC
73		47					
	73		31.8	432	0.00001	Hazen William	Pipa PVC
74		45					
	74		58.2	149	0.00001	Hazen William	Pipa PVC
75		42					
	75		58.2	257	0.00001	Hazen William	Pipa PVC
76		43					
	76		200	407	0.00001	Hazen William	Pipa PVC
77		33					
	77		83	214	0.00001	Hazen William	Pipa PVC
78		32					
	78		83	241	0.00001	Hazen William	Pipa PVC
79		32					
	79		83	239	0.00001	Hazen William	Pipa PVC
80		31					
	80		101.6	86	0.00001	Hazen William	Pipa PVC
81		31					
	81		83	89	0.00001	Hazen William	Pipa PVC
82		31					
	82		83	324	0.00001	Hazen William	Pipa PVC
83		31					
	83		101.6	83	0.00001	Hazen William	Pipa PVC
84		30					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	84		200	104	0.00001	Hazen William	Pipa PVC
85		30					
	85		83	54	0.00001	Hazen William	Pipa PVC
86		30					
	86		200	212	0.00001	Hazen William	Pipa PVC
87		30					
	87		200	92	0.00001	Hazen William	Pipa PVC
88		30					
	88		83	109	0.00001	Hazen William	Pipa PVC
89		29					
	89		83	90	0.00001	Hazen William	Pipa PVC
90		29					
	90		200	247	0.00001	Hazen William	Pipa PVC
91		29					
	91		200	254	0.00001	Hazen William	Pipa PVC
92		30					
	92		58.2	269	0.00001	Hazen William	Pipa PVC
93		31					
	93		200	107	0.00001	Hazen William	Pipa PVC
94		31					
	94		58.2	265	0.00001	Hazen William	Pipa PVC
95		31					
	95		58.2	129	0.00001	Hazen William	Pipa PVC
96		34					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	96		200	137	0.00001	Hazen William	Pipa PVC
97		44					
	97		58.2	149	0.00001	Hazen William	Pipa PVC
98		44					
	98		58.2	97	0.00001	Hazen William	Pipa PVC
99		44					
	99		200	123	0.00001	Hazen William	Pipa PVC
100		39					
	100		31.8	127	0.00001	Hazen William	Pipa PVC
101		39					
	101		58.2	272	0.00001	Hazen William	Pipa PVC
102		39					
	102		31.8	131	0.00001	Hazen William	Pipa PVC
103		43					
	103		58.2	94	0.00001	Hazen William	Pipa PVC
104		43					
	104		200	144	0.00001	Hazen William	Pipa PVC
105		44					
	105		200	235	0.00001	Hazen William	Pipa PVC
106		43					
	106		58.2	172	0.00001	Hazen William	Pipa PVC
107		44					
	107		200	116	0.00001	Hazen William	Pipa PVC
108		43					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	108		58.2	161	0.00001	Hazen William	Pipa PVC
109		42					
	109		58.2	187	0.00001	Hazen William	Pipa PVC
110		40					
	110		31.8	114	0.00001	Hazen William	Pipa PVC
111		39					
	111		31.8	172	0.00001	Hazen William	Pipa PVC
112		39					
	112		83	162	0.00001	Hazen William	Pipa PVC
113		43					
	113		200	252	0.00001	Hazen William	Pipa PVC
114		43					
	114		58.2	158	0.00001	Hazen William	Pipa PVC
115		33					
	115		83	143	0.00001	Hazen William	Pipa PVC
116		34					
	116		58.2	165	0.00001	Hazen William	Pipa PVC
117		32					
	117		83	199	0.00001	Hazen William	Pipa PVC
118		32					
	118		83	189	0.00001	Hazen William	Pipa PVC
119		32					
	119		200	337	0.00001	Hazen William	Pipa PVC
120		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	120		83	181	0.00001	Hazen William	Pipa PVC
121		31					
	121		200	143	0.00001	Hazen William	Pipa PVC
122		31					
	122		31.8	184	0.00001	Hazen William	Pipa PVC
123		31					
	123		31.8	179	0.00001	Hazen William	Pipa PVC
124		30					
	124		31.8	97	0.00001	Hazen William	Pipa PVC
125		30					
	125		200	209	0.00001	Hazen William	Pipa PVC
126		30					
	126		83	81	0.00001	Hazen William	Pipa PVC
127		30					
	127		200	377	0.00001	Hazen William	Pipa PVC
128		30					
	128		83	85	0.00001	Hazen William	Pipa PVC
129		29					
	129		83	105	0.00001	Hazen William	Pipa PVC
130		30					
	130		200	109	0.00001	Hazen William	Pipa PVC
131		29					
	131		83	113	0.00001	Hazen William	Pipa PVC
132		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	132		58.2	105	0.00001	Hazen William	Pipa PVC
133		29					
	133		58.2	217	0.00001	Hazen William	Pipa PVC
134		28					
	134		58.2	282	0.00001	Hazen William	Pipa PVC
135		28					
	135		83	117	0.00001	Hazen William	Pipa PVC
136		28					
	136		58.2	112	0.00001	Hazen William	Pipa PVC
137		28					
	137		58.2	159	0.00001	Hazen William	Pipa PVC
138		29					
	138		58.2	87	0.00001	Hazen William	Pipa PVC
139		30					
	139		58.2	257	0.00001	Hazen William	Pipa PVC
140		30					
	140		83	68	0.00001	Hazen William	Pipa PVC
141		31					
	141		58.2	237	0.00001	Hazen William	Pipa PVC
142		30					
	142		83	201	0.00001	Hazen William	Pipa PVC
143		29					
	143		58.2	305	0.00001	Hazen William	Pipa PVC
144		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	144		58.2	207	0.00001	Hazen William	Pipa PVC
145		29					
	145		83	134	0.00001	Hazen William	Pipa PVC
146		29					
	146		58.2	47	0.00001	Hazen William	Pipa PVC
147		28					
	147		31.8	69	0.00001	Hazen William	Pipa PVC
148		28					
	148		58.2	194	0.00001	Hazen William	Pipa PVC
149		28					
	149		31.8	343	0.00001	Hazen William	Pipa PVC
150		28					
	150		31.8	87	0.00001	Hazen William	Pipa PVC
151		29					
	151		31.8	175	0.00001	Hazen William	Pipa PVC
152		29					
	152		58.2	158	0.00001	Hazen William	Pipa PVC
153		28					
	153		31.8	184	0.00001	Hazen William	Pipa PVC
154		28					
	154		58.2	151	0.00001	Hazen William	Pipa PVC
155		28					
	155		58.2	177	0.00001	Hazen William	Pipa PVC
156		28					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	156		31.8	127	0.00001	Hazen William	Pipa PVC
157		29					
	157		31.8	116	0.00001	Hazen William	Pipa PVC
158		29					
	158		31.8	442	0.00001	Hazen William	Pipa PVC
159		29					
	159		31.8	474	0.00001	Hazen William	Pipa PVC
160		29					
	160		200	314	0.00001	Hazen William	Pipa PVC
161		30					
	161		200	198	0.00001	Hazen William	Pipa PVC
162		29					
	162		31.8	133	0.00001	Hazen William	Pipa PVC
163		28					
	163		58.2	407	0.00001	Hazen William	Pipa PVC
164		28					
	164		31.8	84	0.00001	Hazen William	Pipa PVC
165		28					
	165		58.2	166	0.00001	Hazen William	Pipa PVC
166		28					
	166		31.8	189	0.00001	Hazen William	Pipa PVC
167		28					
	167		58.2	217	0.00001	Hazen William	Pipa PVC
168		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	168		31.8	122	0.00001	Hazen William	Pipa PVC
169		29					
	169		58.2	203	0.00001	Hazen William	Pipa PVC
170		29					
	170		58.2	192	0.00001	Hazen William	Pipa PVC
171		29					
	171		31.8	53	0.00001	Hazen William	Pipa PVC
172		28					
	172		58.2	157	0.00001	Hazen William	Pipa PVC
173		28					
	173		58.2	213	0.00001	Hazen William	Pipa PVC
174		29					
	174		58.2	178	0.00001	Hazen William	Pipa PVC
175		29					
	175		31.8	182	0.00001	Hazen William	Pipa PVC
176		28					
	176		31.8	127	0.00001	Hazen William	Pipa PVC
177		27					
	177		31.8	113	0.00001	Hazen William	Pipa PVC
178		29					
	178		31.8	51	0.00001	Hazen William	Pipa PVC
179		29					
	179		200	146	0.00001	Hazen William	Pipa PVC
180		28					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	180		31.8	249	0.00001	Hazen William	Pipa PVC
181		27					
	181		31.8	254	0.00001	Hazen William	Pipa PVC
182		26					
	182		200	257	0.00001	Hazen William	Pipa PVC
183		26					
	183		31.8	195	0.00001	Hazen William	Pipa PVC
184		27					
	184		200	205	0.00001	Hazen William	Pipa PVC
185		26					
	185		31.8	219	0.00001	Hazen William	Pipa PVC
186		25					
	186		31.8	247	0.00001	Hazen William	Pipa PVC
187		28					
	187		31.8	271	0.00001	Hazen William	Pipa PVC
188		28					
	188		31.8	129	0.00001	Hazen William	Pipa PVC
189		27					
	189		22.3	190	0.00001	Hazen William	Pipa PVC
190		26					
	190		22.3	121	0.00001	Hazen William	Pipa PVC
191		28					
	191		200	301	0.00001	Hazen William	Pipa PVC
192		27					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	192		31.8	177	0.00001	Hazen William	Pipa PVC
193		26					
	193		200	150	0.00001	Hazen William	Pipa PVC
194		26					
	194		31.8	192	0.00001	Hazen William	Pipa PVC
195		27					
	195		200	197	0.00001	Hazen William	Pipa PVC
196		25					
	196		200	214	0.00001	Hazen William	Pipa PVC
197		28					
	197		200	77	0.00001	Hazen William	Pipa PVC
198		27	.				
	198		31.8	217	0.00001	Hazen William	Pipa PVC
199		25					
	199		200	141	0.00001	Hazen William	Pipa PVC
200		27					
	200		31.8	129	0.00001	Hazen William	Pipa PVC
201		29					
	201		200	164	0.00001	Hazen William	Pipa PVC
202		27					
	202		31.8	134	0.00001	Hazen William	Pipa PVC
203		26					
	203		200	50	0.00001	Hazen William	Pipa PVC
204		30					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	204		200	172	0.00001	Hazen William	Pipa PVC
205		28					
	205		31.8	133	0.00001	Hazen William	Pipa PVC
206		27					
	206		200	114	0.00001	Hazen William	Pipa PVC
207		25					
	207		31.8	299	0.00001	Hazen William	Pipa PVC
208		29					
	208		31.8	167	0.00001	Hazen William	Pipa PVC
209		29					
	209		200	259	0.00001	Hazen William	Pipa PVC
210		27					
	210		200	87	0.00001	Hazen William	Pipa PVC
211		26					
	211		200	172	0.00001	Hazen William	Pipa PVC
212		26					
	212		31.8	79	0.00001	Hazen William	Pipa PVC
213		26					
	213		22.3	84	0.00001	Hazen William	Pipa PVC
214		41					
	214		58.2	1000	0.00001	Hazen William	Pipa PVC
215		37					
	215		58.2	1000	0.00001	Hazen William	Pipa PVC
216		38					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	216		58.2	1000	0.00001	Hazen William	Pipa PVC
217		38					
	217		58.2	1000	0.00001	Hazen William	Pipa PVC
218		39					
	218		58.2	1000	0.00001	Hazen William	Pipa PVC
219		39					
	219		58.2	1000	0.00001	Hazen William	Pipa PVC
220		37					
	220		58.2	1000	0.00001	Hazen William	Pipa PVC
221		36					
	221		58.2	1000	0.00001	Hazen William	Pipa PVC
222		35					
	222		58.2	1000	0.00001	Hazen William	Pipa PVC
223		34					
	223		58.2	1000	0.00001	Hazen William	Pipa PVC
224		33					
	224		58.2	1000	0.00001	Hazen William	Pipa PVC
225		33					
	225		58.2	1000	0.00001	Hazen William	Pipa PVC
226		36					
	226		58.2	1000	0.00001	Hazen William	Pipa PVC
227		35					
	227		58.2	1000	0.00001	Hazen William	Pipa PVC
228		34					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	228		58.2	1000	0.00001	Hazen William	Pipa PVC
229		34					
	229		58.2	1000	0.00001	Hazen William	Pipa PVC
230		33					
	230		58.2	1000	0.00001	Hazen William	Pipa PVC
231		32					
	231		58.2	1000	0.00001	Hazen William	Pipa PVC
232		32					
	232		58.2	1000	0.00001	Hazen William	Pipa PVC
233		33					
	233		58.2	1000	0.00001	Hazen William	Pipa PVC
234		33					
	234		58.2	1000	0.00001	Hazen William	Pipa PVC
235		32					
	235		58.2	1000	0.00001	Hazen William	Pipa PVC
236		32					
	236		58.2	1000	0.00001	Hazen William	Pipa PVC
237		31					
	237		58.2	1000	0.00001	Hazen William	HDPE PN 16

Sumber: Hasil Analisa Perhitungan, 2023.

Lampiran 3. Kebutuhan Air Tiap Node Kota Muara Teweh Tahun 2032 (Pengembangan)

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
1	0	0	0	0	0	0.000	0.000	0.000
2	12	60	7200	1440	8640	0.100	0.021	0.121
3	9	45	5400	1080	6480	0.075	0.016	0.091
4	11	55	6600	1320	7920	0.092	0.020	0.111
5	14	70	8400	1680	10080	0.117	0.025	0.142
6	13	65	7800	1560	9360	0.108	0.023	0.131
7	12	60	7200	1440	8640	0.100	0.021	0.121
8	10	50	6000	1200	7200	0.083	0.018	0.101
9	8	40	4800	960	5760	0.067	0.014	0.081
10	15	75	9000	1800	10800	0.125	0.027	0.152
11	10	50	6000	1200	7200	0.083	0.018	0.101
12	13	65	7800	1560	9360	0.108	0.023	0.131
13	14	70	8400	1680	10080	0.117	0.025	0.142
14	11	55	6600	1320	7920	0.092	0.020	0.111
15	13	65	7800	1560	9360	0.108	0.023	0.131
16	10	50	6000	1200	7200	0.083	0.018	0.101
17	0	0	0	0	0	0.000	0.000	0.000
18	0	0	0	0	0	0.000	0.000	0.000
19	13	65	7800	1560	9360	0.108	0.023	0.131
20	15	75	9000	1800	10800	0.125	0.027	0.152
21	13	65	7800	1560	9360	0.108	0.023	0.131

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
22	10	50	6000	1200	7200	0.083	0.018	0.101
23	9	45	5400	1080	6480	0.075	0.016	0.091
24	7	35	4200	840	5040	0.058	0.012	0.071
25	13	65	7800	1560	9360	0.108	0.023	0.131
26	14	70	8400	1680	10080	0.117	0.025	0.142
27	10	50	6000	1200	7200	0.083	0.018	0.101
28	11	55	6600	1320	7920	0.092	0.020	0.111
29	10	50	6000	1200	7200	0.083	0.018	0.101
30	9	45	5400	1080	6480	0.075	0.016	0.091
31	7	35	4200	840	5040	0.058	0.012	0.071
32	13	65	7800	1560	9360	0.108	0.023	0.131
33	11	55	6600	1320	7920	0.092	0.020	0.111
34	14	70	8400	1680	10080	0.117	0.025	0.142
35	15	75	9000	1800	10800	0.125	0.027	0.152
36	11	55	6600	1320	7920	0.092	0.020	0.111
37	10	50	6000	1200	7200	0.083	0.018	0.101
38	11	55	6600	1320	7920	0.092	0.020	0.111
39	11	55	6600	1320	7920	0.092	0.020	0.111
40	12	60	7200	1440	8640	0.100	0.021	0.121
41	13	65	7800	1560	9360	0.108	0.023	0.131
42	10	50	6000	1200	7200	0.083	0.018	0.101
43	11	55	6600	1320	7920	0.092	0.020	0.111

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
44	12	60	7200	1440	8640	0.100	0.021	0.121
45	13	65	7800	1560	9360	0.108	0.023	0.131
46	12	60	7200	1440	8640	0.100	0.021	0.121
47	12	60	7200	1440	8640	0.100	0.021	0.121
48	10	50	6000	1200	7200	0.083	0.018	0.101
49	13	65	7800	1560	9360	0.108	0.023	0.131
50	12	60	7200	1440	8640	0.100	0.021	0.121
51	15	75	9000	1800	10800	0.125	0.027	0.152
52	14	70	8400	1680	10080	0.117	0.025	0.142
53	12	60	7200	1440	8640	0.100	0.021	0.121
54	13	65	7800	1560	9360	0.108	0.023	0.131
55	12	60	7200	1440	8640	0.100	0.021	0.121
56	12	60	7200	1440	8640	0.100	0.021	0.121
57	11	55	6600	1320	7920	0.092	0.020	0.111
58	10	50	6000	1200	7200	0.083	0.018	0.101
59	13	65	7800	1560	9360	0.108	0.023	0.131
60	12	60	7200	1440	8640	0.100	0.021	0.121
61	13	65	7800	1560	9360	0.108	0.023	0.131
62	7	35	4200	840	5040	0.058	0.012	0.071
63	8	40	4800	960	5760	0.067	0.014	0.081
64	7	35	4200	840	5040	0.058	0.012	0.071
65	7	35	4200	840	5040	0.058	0.012	0.071

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
66	9	45	5400	1080	6480	0.075	0.016	0.091
67	10	50	6000	1200	7200	0.083	0.018	0.101
68	8	40	4800	960	5760	0.067	0.014	0.081
69	8	40	4800	960	5760	0.067	0.014	0.081
70	14	70	8400	1680	10080	0.117	0.025	0.142
71	0	0	0	0	0	0.000	0.000	0.000
72	0	0	0	0	0	0.000	0.000	0.000
73	12	60	7200	1440	8640	0.100	0.021	0.121
74	13	65	7800	1560	9360	0.108	0.023	0.131
75	8	40	4800	960	5760	0.067	0.014	0.081
76	9	45	5400	1080	6480	0.075	0.016	0.091
77	7	35	4200	840	5040	0.058	0.012	0.071
78	9	45	5400	1080	6480	0.075	0.016	0.091
79	10	50	6000	1200	7200	0.083	0.018	0.101
80	10	50	6000	1200	7200	0.083	0.018	0.101
81	13	65	7800	1560	9360	0.108	0.023	0.131
82	11	55	6600	1320	7920	0.092	0.020	0.111
83	10	50	6000	1200	7200	0.083	0.018	0.101
84	8	40	4800	960	5760	0.067	0.014	0.081
85	9	45	5400	1080	6480	0.075	0.016	0.091
86	10	50	6000	1200	7200	0.083	0.018	0.101
87	14	70	8400	1680	10080	0.117	0.025	0.142

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
88	11	55	6600	1320	7920	0.092	0.020	0.111
89	11	55	6600	1320	7920	0.092	0.020	0.111
90	12	60	7200	1440	8640	0.100	0.021	0.121
91	13	65	7800	1560	9360	0.108	0.023	0.131
92	15	75	9000	1800	10800	0.125	0.027	0.152
93	17	85	10200	2040	12240	0.142	0.030	0.172
94	12	60	7200	1440	8640	0.100	0.021	0.121
95	15	75	9000	1800	10800	0.125	0.027	0.152
96	14	70	8400	1680	10080	0.117	0.025	0.142
97	17	85	10200	2040	12240	0.142	0.030	0.172
98	12	60	7200	1440	8640	0.100	0.021	0.121
99	15	75	9000	1800	10800	0.125	0.027	0.152
100	11	55	6600	1320	7920	0.092	0.020	0.111
101	13	65	7800	1560	9360	0.108	0.023	0.131
102	10	50	6000	1200	7200	0.083	0.018	0.101
103	14	70	8400	1680	10080	0.117	0.025	0.142
104	10	50	6000	1200	7200	0.083	0.018	0.101
105	7	35	4200	840	5040	0.058	0.012	0.071
106	9	45	5400	1080	6480	0.075	0.016	0.091
107	11	55	6600	1320	7920	0.092	0.020	0.111
108	12	60	7200	1440	8640	0.100	0.021	0.121
109	14	70	8400	1680	10080	0.117	0.025	0.142

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
110	13	65	7800	1560	9360	0.108	0.023	0.131
111	16	80	9600	1920	11520	0.133	0.028	0.162
112	15	75	9000	1800	10800	0.125	0.027	0.152
113	13	65	7800	1560	9360	0.108	0.023	0.131
114	12	60	7200	1440	8640	0.100	0.021	0.121
115	10	50	6000	1200	7200	0.083	0.018	0.101
116	9	45	5400	1080	6480	0.075	0.016	0.091
117	9	45	5400	1080	6480	0.075	0.016	0.091
118	7	35	4200	840	5040	0.058	0.012	0.071
119	8	40	4800	960	5760	0.067	0.014	0.081
120	11	55	6600	1320	7920	0.092	0.020	0.111
121	14	70	8400	1680	10080	0.117	0.025	0.142
122	15	75	9000	1800	10800	0.125	0.027	0.152
123	12	60	7200	1440	8640	0.100	0.021	0.121
124	12	60	7200	1440	8640	0.100	0.021	0.121
125	13	65	7800	1560	9360	0.108	0.023	0.131
126	14	70	8400	1680	10080	0.117	0.025	0.142
127	11	55	6600	1320	7920	0.092	0.020	0.111
128	17	85	10200	2040	12240	0.142	0.030	0.172
129	12	60	7200	1440	8640	0.100	0.021	0.121
130	13	65	7800	1560	9360	0.108	0.023	0.131
131	17	85	10200	2040	12240	0.142	0.030	0.172

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
132	9	45	5400	1080	6480	0.075	0.016	0.091
133	10	50	6000	1200	7200	0.083	0.018	0.101
134	12	60	7200	1440	8640	0.100	0.021	0.121
135	11	55	6600	1320	7920	0.092	0.020	0.111
136	14	70	8400	1680	10080	0.117	0.025	0.142
137	16	80	9600	1920	11520	0.133	0.028	0.162
138	10	50	6000	1200	7200	0.083	0.018	0.101
139	15	75	9000	1800	10800	0.125	0.027	0.152
140	8	40	4800	960	5760	0.067	0.014	0.081
141	10	50	6000	1200	7200	0.083	0.018	0.101
142	7	35	4200	840	5040	0.058	0.012	0.071
143	13	65	7800	1560	9360	0.108	0.023	0.131
144	14	70	8400	1680	10080	0.117	0.025	0.142
145	13	65	7800	1560	9360	0.108	0.023	0.131
146	11	55	6600	1320	7920	0.092	0.020	0.111
147	10	50	6000	1200	7200	0.083	0.018	0.101
148	14	70	8400	1680	10080	0.117	0.025	0.142
149	13	65	7800	1560	9360	0.108	0.023	0.131
150	15	75	9000	1800	10800	0.125	0.027	0.152
151	12	60	7200	1440	8640	0.100	0.021	0.121
152	17	85	10200	2040	12240	0.142	0.030	0.172
153	14	70	8400	1680	10080	0.117	0.025	0.142

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
154	11	55	6600	1320	7920	0.092	0.020	0.111
155	14	70	8400	1680	10080	0.117	0.025	0.142
156	13	65	7800	1560	9360	0.108	0.023	0.131
157	12	60	7200	1440	8640	0.100	0.021	0.121
158	14	70	8400	1680	10080	0.117	0.025	0.142
159	18	90	10800	2160	12960	0.150	0.032	0.182
160	16	80	9600	1920	11520	0.133	0.028	0.162
161	12	60	7200	1440	8640	0.100	0.021	0.121
162	14	70	8400	1680	10080	0.117	0.025	0.142
163	14	70	8400	1680	10080	0.117	0.025	0.142
164	11	55	6600	1320	7920	0.092	0.020	0.111
165	10	50	6000	1200	7200	0.083	0.018	0.101
166	15	75	9000	1800	10800	0.125	0.027	0.152
167	17	85	10200	2040	12240	0.142	0.030	0.172
168	11	55	6600	1320	7920	0.092	0.020	0.111
169	13	65	7800	1560	9360	0.108	0.023	0.131
170	12	60	7200	1440	8640	0.100	0.021	0.121
171	11	55	6600	1320	7920	0.092	0.020	0.111
172	14	70	8400	1680	10080	0.117	0.025	0.142
173	17	85	10200	2040	12240	0.142	0.030	0.172
174	14	70	8400	1680	10080	0.117	0.025	0.142
175	10	50	6000	1200	7200	0.083	0.018	0.101

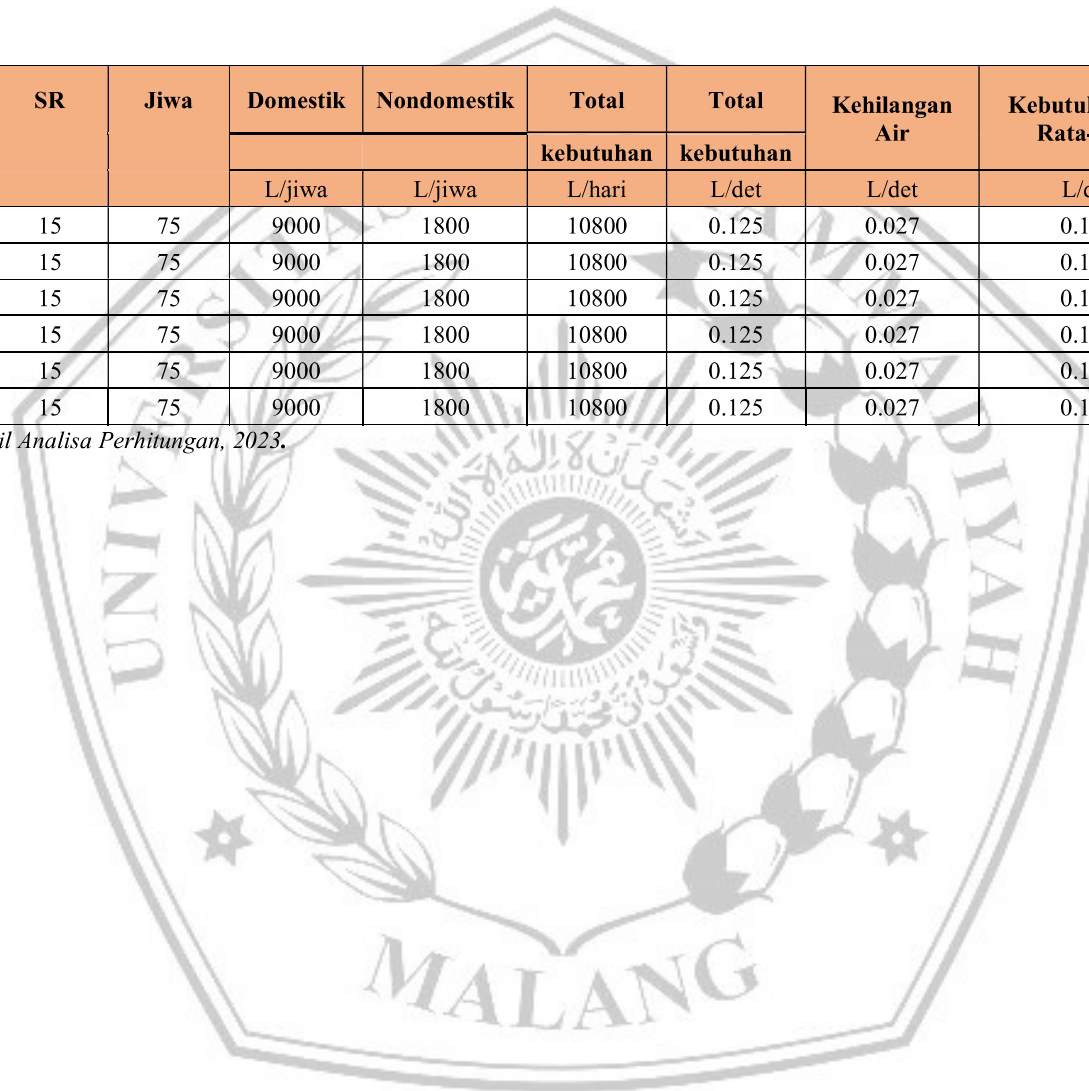
Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
176	9	45	5400	1080	6480	0.075	0.016	0.091
177	7	35	4200	840	5040	0.058	0.012	0.071
178	11	55	6600	1320	7920	0.092	0.020	0.111
179	12	60	7200	1440	8640	0.100	0.021	0.121
180	11	55	6600	1320	7920	0.092	0.020	0.111
181	13	65	7800	1560	9360	0.108	0.023	0.131
182	10	50	6000	1200	7200	0.083	0.018	0.101
183	14	70	8400	1680	10080	0.117	0.025	0.142
184	8	40	4800	960	5760	0.067	0.014	0.081
185	10	50	6000	1200	7200	0.083	0.018	0.101
186	13	65	7800	1560	9360	0.108	0.023	0.131
187	10	50	6000	1200	7200	0.083	0.018	0.101
188	11	55	6600	1320	7920	0.092	0.020	0.111
189	12	60	7200	1440	8640	0.100	0.021	0.121
190	16	80	9600	1920	11520	0.133	0.028	0.162
191	14	70	8400	1680	10080	0.117	0.025	0.142
192	17	85	10200	2040	12240	0.142	0.030	0.172
193	12	60	7200	1440	8640	0.100	0.021	0.121
194	13	65	7800	1560	9360	0.108	0.023	0.131
195	14	70	8400	1680	10080	0.117	0.025	0.142
196	12	60	7200	1440	8640	0.100	0.021	0.121
197	20	100	12000	2400	14400	0.167	0.036	0.202

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
198	14	70	8400	1680	10080	0.117	0.025	0.142
199	11	55	6600	1320	7920	0.092	0.020	0.111
200	12	60	7200	1440	8640	0.100	0.021	0.121
201	13	65	7800	1560	9360	0.108	0.023	0.131
202	14	70	8400	1680	10080	0.117	0.025	0.142
203	11	55	6600	1320	7920	0.092	0.020	0.111
204	10	50	6000	1200	7200	0.083	0.018	0.101
205	8	40	4800	960	5760	0.067	0.014	0.081
206	9	45	5400	1080	6480	0.075	0.016	0.091
207	14	70	8400	1680	10080	0.117	0.025	0.142
208	10	50	6000	1200	7200	0.083	0.018	0.101
209	11	55	6600	1320	7920	0.092	0.020	0.111
210	13	65	7800	1560	9360	0.108	0.023	0.131
211	11	55	6600	1320	7920	0.092	0.020	0.111
212	12	60	7200	1440	8640	0.100	0.021	0.121
213	14	70	8400	1680	10080	0.117	0.025	0.142
214	15	75	9000	1800	10800	0.125	0.027	0.152
215	15	75	9000	1800	10800	0.125	0.027	0.152
216	15	75	9000	1800	10800	0.125	0.027	0.152
217	15	75	9000	1800	10800	0.125	0.027	0.152
218	15	75	9000	1800	10800	0.125	0.027	0.152
219	15	75	9000	1800	10800	0.125	0.027	0.152

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
220	15	75	9000	1800	10800	0.125	0.027	0.152
221	15	75	9000	1800	10800	0.125	0.027	0.152
222	15	75	9000	1800	10800	0.125	0.027	0.152
223	15	75	9000	1800	10800	0.125	0.027	0.152
224	15	75	9000	1800	10800	0.125	0.027	0.152
225	15	75	9000	1800	10800	0.125	0.027	0.152
226	15	75	9000	1800	10800	0.125	0.027	0.152
227	15	75	9000	1800	10800	0.125	0.027	0.152
228	15	75	9000	1800	10800	0.125	0.027	0.152
229	15	75	9000	1800	10800	0.125	0.027	0.152
230	15	75	9000	1800	10800	0.125	0.027	0.152
231	15	75	9000	1800	10800	0.125	0.027	0.152
232	15	75	9000	1800	10800	0.125	0.027	0.152
233	15	75	9000	1800	10800	0.125	0.027	0.152
234	15	75	9000	1800	10800	0.125	0.027	0.152
235	15	75	9000	1800	10800	0.125	0.027	0.152
236	15	75	9000	1800	10800	0.125	0.027	0.152
237	15	75	9000	1800	10800	0.125	0.027	0.152
238	15	75	9000	1800	10800	0.125	0.027	0.152
239	15	75	9000	1800	10800	0.125	0.027	0.152
240	15	75	9000	1800	10800	0.125	0.027	0.152
241	15	75	9000	1800	10800	0.125	0.027	0.152

Node	SR	Jiwa	Domestik	Nondomestik	Total	Total	Kehilangan Air	Kebutuhan Air Rata-rata
					kebutuhan	kebutuhan		
			L/jiwa	L/jiwa	L/hari	L/det		
242	15	75	9000	1800	10800	0.125	0.027	0.152
243	15	75	9000	1800	10800	0.125	0.027	0.152
244	15	75	9000	1800	10800	0.125	0.027	0.152
245	15	75	9000	1800	10800	0.125	0.027	0.152
246	15	75	9000	1800	10800	0.125	0.027	0.152
247	15	75	9000	1800	10800	0.125	0.027	0.152

Sumber: Hasil Analisa Perhitungan, 2023.



Lampiran 4. Rekapitulasi Data Pipa Jaringan Distribusi Air Bersih Kota Muara Teweh Tahun 2032 (Pengembangan)

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
1		49					
	1		101.6	11	0.00001	Hazen William	Pipa PVC
2		47					
	2		101.6	13	0.00001	Hazen William	Pipa PVC
3		43					
	3		101.6	75	0.00001	Hazen William	Pipa PVC
4		37					
	4		101.6	204	0.00001	Hazen William	Pipa PVC
5		35					
	5		200	275	0.00001	Hazen William	Pipa PVC
6		34					
	6		83	358	0.00001	Hazen William	Pipa PVC
7		33					
	7		200	80	0.00001	Hazen William	Pipa PVC
8		33					
	8		83	176	0.00001	Hazen William	Pipa PVC
9		32					
	9		200	136	0.00001	Hazen William	Pipa PVC
10		32					
	10		200	209	0.00001	Hazen William	Pipa PVC
11		33					
	11		200	163	0.00001	Hazen William	Pipa PVC
12		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	12		83	97	0.00001	Hazen William	Pipa PVC
13		32					
	13		200	83	0.00001	Hazen William	Pipa PVC
14		33					
	14		83	298	0.00001	Hazen William	Pipa PVC
15		34					
	15		101.6	330	0.00001	Hazen William	Pipa PVC
16		37					
	16		101.6	276	0.00001	Hazen William	Pipa PVC
17		47					
	17		101.6	12	0.00001	Hazen William	Pipa PVC
18		47					
	18		200	10	0.00001	Hazen William	Pipa PVC
19		46					
	19		102	322	0.00001	Hazen William	Pipa PVC
20		44					
	20		101.6	501	0.00001	Hazen William	Pipa PVC
21		30					
	21		200	365	0.00001	Hazen William	Pipa PVC
22		27					
	22		101.6	161	0.00001	Hazen William	Pipa PVC
23		27					
	23		200	174	0.00001	Hazen William	Pipa PVC
24		26					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	24		101.6	387	0.00001	Hazen William	Pipa PVC
25		26					
	25		58.2	220	0.00001	Hazen William	Pipa PVC
26		26					
	26		200	86	0.00001	Hazen William	Pipa PVC
27		26					
	27		200	70	0.00001	Hazen William	Pipa PVC
28		26					
	28		58.2	110	0.00001	Hazen William	Pipa PVC
29		27					
	29		58.2	195	0.00001	Hazen William	Pipa PVC
30		27					
	30		58.2	173	0.00001	Hazen William	Pipa PVC
31		28					
	31		200	88	0.00001	Hazen William	Pipa PVC
32		28					
	32		58.2	94	0.00001	Hazen William	Pipa PVC
33		27					
	33		58.2	65	0.00001	Hazen William	Pipa PVC
34		27					
	34		200	92	0.00001	Hazen William	Pipa PVC
35		28					
	35		58.2	173	0.00001	Hazen William	Pipa PVC
36		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	36		200	188	0.00001	Hazen William	Pipa PVC
37		29					
	37		200	201	0.00001	Hazen William	Pipa PVC
38		28					
	38		58.2	240	0.00001	Hazen William	Pipa PVC
39		28					
	339		58.2	87	0.00001	Hazen William	Pipa PVC
40		28					
	40		200	190	0.00001	Hazen William	Pipa PVC
41		29					
	41		58.2	295	0.00001	Hazen William	Pipa PVC
42		30					
	42		200	90	0.00001	Hazen William	Pipa PVC
43		30					
	43		58.2	100	0.00001	Hazen William	Pipa PVC
44		29					
	44		200	250	0.00001	Hazen William	Pipa PVC
45		29					
	45		58.2	80	0.00001	Hazen William	Pipa PVC
46		30					
	46		200	120	0.00001	Hazen William	Pipa PVC
47		32					
	47		58.2	190	0.00001	Hazen William	Pipa PVC
48		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	48		200	180	0.00001	Hazen William	Pipa PVC
49		34					
	49		200	147	0.00001	Hazen William	Pipa PVC
50		32					
	50		58.2	49	0.00001	Hazen William	Pipa PVC
51		28					
	51		83	208	0.00001	Hazen William	Pipa PVC
52		35					
	52		58.2	372	0.00001	Hazen William	Pipa PVC
53		36					
	53		83	140	0.00001	Hazen William	Pipa PVC
54		36					
	54		200	60	0.00001	Hazen William	Pipa PVC
55		37					
	55		58.2	47	0.00001	Hazen William	Pipa PVC
56		37					
	56		200	92	0.00001	Hazen William	Pipa PVC
57		38					
	57		200	83	0.00001	Hazen William	Pipa PVC
58		36					
	58		58.2	66	0.00001	Hazen William	Pipa PVC
59		34					
	59		58.2	264	0.00001	Hazen William	Pipa PVC
60		35					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	60		200	199	0.00001	Hazen William	Pipa PVC
61		37					
	61		200	279	0.00001	Hazen William	Pipa PVC
62		37					
	62		83	136	0.00001	Hazen William	Pipa PVC
63		37					
	63		200	230	0.00001	Hazen William	Pipa PVC
64		38					
	64		200	131	0.00001	Hazen William	Pipa PVC
65		37					
	65		83	158	0.00001	Hazen William	Pipa PVC
66		39					
	66		200	175	0.00001	Hazen William	Pipa PVC
67		40					
	67		200	87	0.00001	Hazen William	Pipa PVC
68		43					
	68		83	163	0.00001	Hazen William	Pipa PVC
69		45					
	69		58.2	247	0.00001	Hazen William	Pipa PVC
70		47					
	70		83	106	0.00001	Hazen William	Pipa PVC
71		49					
	71		58.2	10	0.00001	Hazen William	Pipa PVC
72		49					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	72		58.2	13	0.00001	Hazen William	Pipa PVC
73		47					
	73		31.8	432	0.00001	Hazen William	Pipa PVC
74		45					
	74		58.2	149	0.00001	Hazen William	Pipa PVC
75		42					
	75		58.2	257	0.00001	Hazen William	Pipa PVC
76		43					
	76		200	407	0.00001	Hazen William	Pipa PVC
77		33					
	77		83	214	0.00001	Hazen William	Pipa PVC
78		32					
	78		83	241	0.00001	Hazen William	Pipa PVC
79		32					
	79		83	239	0.00001	Hazen William	Pipa PVC
80		31					
	80		101.6	86	0.00001	Hazen William	Pipa PVC
81		31					
	81		83	89	0.00001	Hazen William	Pipa PVC
82		31					
	82		83	324	0.00001	Hazen William	Pipa PVC
83		31					
	83		101.6	83	0.00001	Hazen William	Pipa PVC
84		30					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	84		200	104	0.00001	Hazen William	Pipa PVC
85		30					
	85		83	54	0.00001	Hazen William	Pipa PVC
86		30					
	86		200	212	0.00001	Hazen William	Pipa PVC
87		30					
	87		200	92	0.00001	Hazen William	Pipa PVC
88		30					
	88		83	109	0.00001	Hazen William	Pipa PVC
89		29					
	89		83	90	0.00001	Hazen William	Pipa PVC
90		29					
	90		200	247	0.00001	Hazen William	Pipa PVC
91		29					
	91		200	254	0.00001	Hazen William	Pipa PVC
92		30					
	92		58.2	269	0.00001	Hazen William	Pipa PVC
93		31					
	93		200	107	0.00001	Hazen William	Pipa PVC
94		31					
	94		58.2	265	0.00001	Hazen William	Pipa PVC
95		31					
	95		58.2	129	0.00001	Hazen William	Pipa PVC
96		34					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	96		200	137	0.00001	Hazen William	Pipa PVC
97		44					
	97		58.2	149	0.00001	Hazen William	Pipa PVC
98		44					
	98		58.2	97	0.00001	Hazen William	Pipa PVC
99		44					
	99		200	123	0.00001	Hazen William	Pipa PVC
100		39					
	100		31.8	127	0.00001	Hazen William	Pipa PVC
101		39					
	101		58.2	272	0.00001	Hazen William	Pipa PVC
102		39					
	102		31.8	131	0.00001	Hazen William	Pipa PVC
103		43					
	103		58.2	94	0.00001	Hazen William	Pipa PVC
104		43					
	104		200	144	0.00001	Hazen William	Pipa PVC
105		44					
	105		200	235	0.00001	Hazen William	Pipa PVC
106		43					
	106		58.2	172	0.00001	Hazen William	Pipa PVC
107		44					
	107		200	116	0.00001	Hazen William	Pipa PVC
108		43					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	108		58.2	161	0.00001	Hazen William	Pipa PVC
109		42					
	109		58.2	187	0.00001	Hazen William	Pipa PVC
110		40					
	110		31.8	114	0.00001	Hazen William	Pipa PVC
111		39					
	111		31.8	172	0.00001	Hazen William	Pipa PVC
112		39					
	112		83	162	0.00001	Hazen William	Pipa PVC
113		43					
	113		200	252	0.00001	Hazen William	Pipa PVC
114		43					
	114		58.2	158	0.00001	Hazen William	Pipa PVC
115		33					
	115		83	143	0.00001	Hazen William	Pipa PVC
116		34					
	116		58.2	165	0.00001	Hazen William	Pipa PVC
117		32					
	117		83	199	0.00001	Hazen William	Pipa PVC
118		32					
	118		83	189	0.00001	Hazen William	Pipa PVC
119		32					
	119		200	337	0.00001	Hazen William	Pipa PVC
120		32					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	120		83	181	0.00001	Hazen William	Pipa PVC
121		31					
	121		200	143	0.00001	Hazen William	Pipa PVC
122		31					
	122		31.8	184	0.00001	Hazen William	Pipa PVC
123		31					
	123		31.8	179	0.00001	Hazen William	Pipa PVC
124		30					
	124		31.8	97	0.00001	Hazen William	Pipa PVC
125		30					
	125		200	209	0.00001	Hazen William	Pipa PVC
126		30					
	126		83	81	0.00001	Hazen William	Pipa PVC
127		30					
	127		200	377	0.00001	Hazen William	Pipa PVC
128		30					
	128		83	85	0.00001	Hazen William	Pipa PVC
129		29					
	129		83	105	0.00001	Hazen William	Pipa PVC
130		30					
	130		200	109	0.00001	Hazen William	Pipa PVC
131		29					
	131		83	113	0.00001	Hazen William	Pipa PVC
132		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	132		58.2	105	0.00001	Hazen William	Pipa PVC
133		29					
	133		58.2	217	0.00001	Hazen William	Pipa PVC
134		28					
	134		58.2	282	0.00001	Hazen William	Pipa PVC
135		28					
	135		83	117	0.00001	Hazen William	Pipa PVC
136		28					
	136		58.2	112	0.00001	Hazen William	Pipa PVC
137		28					
	137		58.2	159	0.00001	Hazen William	Pipa PVC
138		29					
	138		58.2	87	0.00001	Hazen William	Pipa PVC
139		30					
	139		58.2	257	0.00001	Hazen William	Pipa PVC
140		30					
	140		83	68	0.00001	Hazen William	Pipa PVC
141		31					
	141		58.2	237	0.00001	Hazen William	Pipa PVC
142		30					
	142		83	201	0.00001	Hazen William	Pipa PVC
143		29					
	143		58.2	305	0.00001	Hazen William	Pipa PVC
144		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	144		58.2	207	0.00001	Hazen William	Pipa PVC
145		29					
	145		83	134	0.00001	Hazen William	Pipa PVC
146		29					
	146		58.2	47	0.00001	Hazen William	Pipa PVC
147		28					
	147		31.8	69	0.00001	Hazen William	Pipa PVC
148		28					
	148		58.2	194	0.00001	Hazen William	Pipa PVC
149		28					
	149		31.8	343	0.00001	Hazen William	Pipa PVC
150		28					
	150		31.8	87	0.00001	Hazen William	Pipa PVC
151		29					
	151		31.8	175	0.00001	Hazen William	Pipa PVC
152		29					
	152		58.2	158	0.00001	Hazen William	Pipa PVC
153		28					
	153		31.8	184	0.00001	Hazen William	Pipa PVC
154		28					
	154		58.2	151	0.00001	Hazen William	Pipa PVC
155		28					
	155		58.2	177	0.00001	Hazen William	Pipa PVC
156		28					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	156		31.8	127	0.00001	Hazen William	Pipa PVC
157		29					
	157		31.8	116	0.00001	Hazen William	Pipa PVC
158		29					
	158		31.8	442	0.00001	Hazen William	Pipa PVC
159		29					
	159		31.8	474	0.00001	Hazen William	Pipa PVC
160		29					
	160		200	314	0.00001	Hazen William	Pipa PVC
161		30					
	161		200	198	0.00001	Hazen William	Pipa PVC
162		29					
	162		31.8	133	0.00001	Hazen William	Pipa PVC
163		28					
	163		58.2	407	0.00001	Hazen William	Pipa PVC
164		28					
	164		31.8	84	0.00001	Hazen William	Pipa PVC
165		28					
	165		58.2	166	0.00001	Hazen William	Pipa PVC
166		28					
	166		31.8	189	0.00001	Hazen William	Pipa PVC
167		28					
	167		58.2	217	0.00001	Hazen William	Pipa PVC
168		29					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	168		31.8	122	0.00001	Hazen William	Pipa PVC
169		29					
	169		58.2	203	0.00001	Hazen William	Pipa PVC
170		29					
	170		58.2	192	0.00001	Hazen William	Pipa PVC
171		29					
	171		31.8	53	0.00001	Hazen William	Pipa PVC
172		28					
	172		58.2	157	0.00001	Hazen William	Pipa PVC
173		28					
	173		58.2	213	0.00001	Hazen William	Pipa PVC
174		29					
	174		58.2	178	0.00001	Hazen William	Pipa PVC
175		29					
	175		31.8	182	0.00001	Hazen William	Pipa PVC
176		28					
	176		31.8	127	0.00001	Hazen William	Pipa PVC
177		27					
	177		31.8	113	0.00001	Hazen William	Pipa PVC
178		29					
	178		31.8	51	0.00001	Hazen William	Pipa PVC
179		29					
	179		200	146	0.00001	Hazen William	Pipa PVC
180		28					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	180		31.8	249	0.00001	Hazen William	Pipa PVC
181		27					
	181		31.8	254	0.00001	Hazen William	Pipa PVC
182		26					
	182		200	257	0.00001	Hazen William	Pipa PVC
183		26					
	183		31.8	195	0.00001	Hazen William	Pipa PVC
184		27					
	184		200	205	0.00001	Hazen William	Pipa PVC
185		26					
	185		31.8	219	0.00001	Hazen William	Pipa PVC
186		25					
	186		31.8	247	0.00001	Hazen William	Pipa PVC
187		28					
	187		31.8	271	0.00001	Hazen William	Pipa PVC
188		28					
	188		31.8	129	0.00001	Hazen William	Pipa PVC
189		27					
	189		22.3	190	0.00001	Hazen William	Pipa PVC
190		26					
	190		22.3	121	0.00001	Hazen William	Pipa PVC
191		28					
	191		200	301	0.00001	Hazen William	Pipa PVC
192		27					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	192		31.8	177	0.00001	Hazen William	Pipa PVC
193		26					
	193		200	150	0.00001	Hazen William	Pipa PVC
194		26					
	194		31.8	192	0.00001	Hazen William	Pipa PVC
195		27					
	195		200	197	0.00001	Hazen William	Pipa PVC
196		25					
	196		200	214	0.00001	Hazen William	Pipa PVC
197		28					
	197		200	77	0.00001	Hazen William	Pipa PVC
198		27	.				
	198		31.8	217	0.00001	Hazen William	Pipa PVC
199		25					
	199		200	141	0.00001	Hazen William	Pipa PVC
200		27					
	200		31.8	129	0.00001	Hazen William	Pipa PVC
201		29					
	201		200	164	0.00001	Hazen William	Pipa PVC
202		27					
	202		31.8	134	0.00001	Hazen William	Pipa PVC
203		26					
	203		200	50	0.00001	Hazen William	Pipa PVC
204		30					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	204		200	172	0.00001	Hazen William	Pipa PVC
205		28					
	205		31.8	133	0.00001	Hazen William	Pipa PVC
206		27					
	206		200	114	0.00001	Hazen William	Pipa PVC
207		25					
	207		31.8	299	0.00001	Hazen William	Pipa PVC
208		29					
	208		31.8	167	0.00001	Hazen William	Pipa PVC
209		29					
	209		200	259	0.00001	Hazen William	Pipa PVC
210		27					
	210		200	87	0.00001	Hazen William	Pipa PVC
211		26					
	211		200	172	0.00001	Hazen William	Pipa PVC
212		26					
	212		31.8	79	0.00001	Hazen William	Pipa PVC
213		26					
	213		22.3	84	0.00001	Hazen William	Pipa PVC
214		41					
	214		58.2	1000	0.00001	Hazen William	Pipa PVC
215		37					
	215		58.2	1000	0.00001	Hazen William	Pipa PVC
216		38					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	216		58.2	1000	0.00001	Hazen William	Pipa PVC
217		38					
	217		58.2	1000	0.00001	Hazen William	Pipa PVC
218		39					
	218		58.2	1000	0.00001	Hazen William	Pipa PVC
219		39					
	219		58.2	1000	0.00001	Hazen William	Pipa PVC
220		37					
	220		58.2	1000	0.00001	Hazen William	Pipa PVC
221		36					
	221		58.2	1000	0.00001	Hazen William	Pipa PVC
222		35					
	222		58.2	1000	0.00001	Hazen William	Pipa PVC
223		34					
	223		58.2	1000	0.00001	Hazen William	Pipa PVC
224		33					
	224		58.2	1000	0.00001	Hazen William	Pipa PVC
225		33					
	225		58.2	1000	0.00001	Hazen William	Pipa PVC
226		36					
	226		58.2	1000	0.00001	Hazen William	Pipa PVC
227		35					
	227		58.2	1000	0.00001	Hazen William	Pipa PVC
228		34					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	228		58.2	1000	0.00001	Hazen William	Pipa PVC
229		34					
	229		58.2	1000	0.00001	Hazen William	Pipa PVC
230		33					
	230		58.2	1000	0.00001	Hazen William	Pipa PVC
231		32					
	231		58.2	1000	0.00001	Hazen William	Pipa PVC
232		32					
	232		58.2	1000	0.00001	Hazen William	Pipa PVC
233		33					
	233		58.2	1000	0.00001	Hazen William	Pipa PVC
234		33					
	234		58.2	1000	0.00001	Hazen William	Pipa PVC
235		32					
	235		58.2	1000	0.00001	Hazen William	Pipa PVC
236		32					
	236		58.2	1000	0.00001	Hazen William	Pipa PVC
237		31					
	237		58.2	1000	0.00001	Hazen William	HDPE PN 16
238		31					
	238		101.6	101	0.00001	Hazen William	HDPE PN 16
239		31					
	239		58.2	60	0.00001	Hazen William	HDPE PN 16
240		30					

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	240		58.2	55	0.00001	Hazen William	HDPE PN 16
241		32					
	241		58.2	54	0.00001	Hazen William	HDPE PN 16
242		32					
	242		58.2	69	0.00001	Hazen William	HDPE PN 16
243		32					
	243		58.2	53	0.00001	Hazen William	HDPE PN 16
244		31					
	244		58.2	51	0.00001	Hazen William	HDPE PN 16
245		31					
	245		101.6	64	0.00001	Hazen William	HDPE PN 16
246		40					
	246		58.2	67	0.00001	Hazen William	HDPE PN 16
247		31					
	247		58.2	60	0.00001	Hazen William	HDPE PN 16
	248		58.2	59	0.00001	Hazen William	HDPE PN 16
	249		58.2	62	0.00001	Hazen William	HDPE PN 16
	250		58.2	52	0.00001	Hazen William	HDPE PN 16
	251		58.2	53	0.00001	Hazen William	HDPE PN 16

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	252		101.6	78	0.00001	Hazen William	HDPE PN 16
	253		58.2	65	0.00001	Hazen William	HDPE PN 16
	254		58.2	58	0.00001	Hazen William	HDPE PN 16
	255		58.2	60	0.00001	Hazen William	HDPE PN 16
	256		58.2	55	0.00001	Hazen William	HDPE PN 16
	257		58.2	62	0.00001	Hazen William	HDPE PN 16
	258		58.2	42	0.00001	Hazen William	HDPE PN 16
	259		58.2	55	0.00001	Hazen William	HDPE PN 16
	260		101.6	67	0.00001	Hazen William	HDPE PN 16
	261		101.6	66	0.00001	Hazen William	HDPE PN 16
	262		58.2	61	0.00001	Hazen William	HDPE PN 16
	263		58.2	59	0.00001	Hazen William	HDPE PN 16

Node	NO.Pipa	Elevasi	Diameter (mm)	Panjang Pipa (m)	Viskositas	Metode Perhitungan	Keterangan
	264		58.2	70	0.00001	Hazen William	HDPE PN 16
	265		58.2	56	0.00001	Hazen William	HDPE PN 16
	266		58.2	58	0.00001	Hazen William	HDPE PN 16
	267		58.2	65	0.00001	Hazen William	HDPE PN 16
	268		101.6	64	0.00001	Hazen William	HDPE PN 16
	269		58.2	58	0.00001	Hazen William	HDPE PN 16

Sumber: Hasil Analisa Perhitungan, 2023.

Lampiran 5. Output Hasil Simulasi Tahun 2021
Energi Absolute dan Relative Kota Muara Teweh Tahun 2021

Node	Ground Elevation		Demand	Absolute Energy		Relative Energy	
	(m)			(m)		(m)	
June 2	47		0.12	70.99		23.99	
June 3	43		0.09	70.91		27.91	
June 4	37		0.11	70.72		33.72	
June 5	35		0.14	70.46		35.46	
June 6	34		0.13	70.13		36.13	
June 7	33		0.12	70.09		37.09	
June 8	33		0.1	70.02		37.02	
June 9	32		0.08	69.97		37.97	
June 10	32		0.15	69.89		37.89	
June 11	33		0.1	69.89		36.89	
June 12	32		0.13	69.85		37.85	
June 13	32		0.14	69.82		37.82	
June 14	33		0.11	56.91		23.91	
June 15	34		0.13	56.91		22.91	
June 16	37		0.1	56.91		19.91	
June 17	47		0	65.71		18.71	
June 18	47		0	64.45		17.45	
June 19	46		0.13	56.29		10.29	
June 20	44		0.15	55.41		11.41	
June 21	30		0.13	54.82		24.82	
June 22	27		0.1	54.59		27.59	
June 23	27		0.09	54.39		27.39	
June 24	26		0.07	54		28	
June 25	26		0.13	53.78		27.78	
June 26	26		0.14	53.78		27.78	
June 27	26		0.1	53.77		27.77	
June 28	26		0.11	53.77		27.77	
June 29	27		0.1	53.67		26.67	
June 30	27		0.09	53.58		26.58	
June 31	28		0.07	53.54		25.54	
June 32	28		0.13	53.48		25.48	
June 33	27		0.11	53.46		26.46	
June 34	27		0.14	53.28		26.28	
June 35	28		0.15	53.52		25.52	

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)		l/s	
June 36	29	0.11	53.51	24.51
June 37	29	0.11	66.02	37.02
June 38	28	0.11	66.02	38.02
June 39	28	0.11	66.01	38.01
June 40	28	0.12	66.01	38.01
June 41	29	0.13	66.01	37.01
June 42	30	0.1	66.01	36.01
June 43	30	0.11	66.01	36.01
June 44	29	0.12	66.01	37.01
June 45	29	0.13	66.01	37.01
June 46	30	0.12	66.01	36.01
June 47	32	0.12	66.02	34.02
June 48	32	0.1	66.02	34.02
June 49	34	0.13	66.03	32.03
June 50	32	0.12	66.01	34.01
June 51	28	0.15	65.99	37.99
June 52	35	0.14	66.05	31.05
June 53	36	0.12	66.06	30.06
June 54	36	0.13	66.07	30.07
June 55	37	0.12	66.04	29.04
June 56	37	0.12	66.02	29.02
June 57	38	0.11	66.01	28.01
June 58	36	0.1	66.07	30.07
June 59	34	0.13	66.11	32.11
June 60	35	0.12	66.14	31.14
June 61	37	0.13	66.18	29.18
June 62	37	0.07	66.21	29.21
June 63	37	0.08	66.24	29.24
June 64	38	0.07	66.27	28.27
June 65	37	0.07	66.29	29.29
June 66	39	0.09	66.31	27.31
June 67	40	0.1	66.33	26.33
June 68	43	0.08	66.36	23.36
June 69	45	0.08	66.4	21.4
June 70	47	0.14	66.45	19.45
June 71	49	0	98.47	49.47
June 72	49	0	100.66	51.66

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
June 73	47	0.12	66.43	19.43
June 74	45	0.13	66.43	21.43
June 75	42	0.08	66.42	24.42
June 76	43	0.09	66.42	23.42
June 77	33	0.07	69.32	36.32
June 78	32	0.09	68.55	36.55
June 79	32	0.1	68.28	36.28
June 80	31	0.1	68.02	37.02
June 81	31	0.13	67.1	36.1
June 82	31	0.11	67.1	36.1
June 83	31	0.1	66.85	35.85
June 84	30	0.08	66.74	36.74
June 85	30	0.09	66.37	36.37
June 86	30	0.1	66.33	36.33
June 87	30	0.14	66.28	36.28
June 88	30	0.11	66.26	36.26
June 89	29	0.11	66.26	37.26
June 90	29	0.12	66.18	37.18
June 91	29	0.13	66.04	37.04
June 92	30	0.15	65.84	35.84
June 93	31	0.17	63.79	32.79
June 94	31	0.12	63.56	32.56
June 95	31	0.15	63.5	32.5
June 96	34	0.14	66.05	32.05
June 97	44	0.17	66.39	22.39
June 98	44	0.12	66.32	22.32
June 99	44	0.15	66.29	22.29
June 100	39	0.11	66.27	27.27
June 101	39	0.13	66.27	27.27
June 102	39	0.1	66.29	27.29
June 103	43	0.14	66.37	23.37
June 104	43	0.1	66.35	23.35
June 105	44	0.07	66.35	22.35
June 106	43	0.09	66.37	23.37
June 107	44	0.11	66.35	22.35
June 108	43	0.12	66.36	23.36
June 109	42	0.14	66.59	24.59

<i>Node</i>	<i>Ground Elevation</i>		<i>Demand</i>	<i>Absolute Energy</i>		<i>Relative Energy</i>
	<i>(m)</i>	<i>(m)</i>		<i>(m)</i>	<i>(m)</i>	
June 110	40	0.13	66.33	26.33		
June 111	39	0.16	66.32	27.32		
June 112	39	0.15	66.29	27.29		
June 113	43	0.13	66.27	23.27		
June 114	43	0.12	66.27	23.27		
June 115	33	0.1	66.27	33.27		
June 116	34	0.09	66.26	32.26		
June 117	32	0.09	69.76	37.76		
June 118	32	0.07	69.71	37.71		
June 119	32	0.08	69.65	37.65		
June 120	32	0.11	69.6	37.6		
June 121	31	0.14	69.56	38.56		
June 122	31	0.15	69.5	38.5		
June 123	31	0.12	69.28	38.28		
June 124	30	0.12	69.57	39.57		
June 125	30	0.13	69.51	39.51		
June 126	30	0.14	69.49	39.49		
June 127	30	0.11	69.4	39.4		
June 128	30	0.17	67.95	37.95		
June 129	29	0.12	66.25	37.25		
June 130	30	0.13	66.25	36.25		
June 131	29	0.17	66.22	37.22		
June 132	29	0.09	66.21	37.21		
June 133	29	0.1	66.15	37.15		
June 134	28	0.12	66.13	38.13		
June 135	28	0.11	66.07	38.07		
June 136	28	0.14	66.03	38.03		
June 137	28	0.16	66.02	38.02		
June 138	29	0.1	66.02	37.02		
June 139	30	0.15	66.03	36.03		
June 140	30	0.08	66.02	36.02		
June 141	31	0.1	66.01	35.01		
June 142	30	0.07	66.01	36.01		
June 143	29	0.13	66	37		
June 144	29	0.14	66	37		
June 145	29	0.13	66.07	37.07		
June 146	29	0.14	66.09	37.09		

<i>Node</i>	<i>Ground Elevation</i>		<i>Demand</i>	<i>Absolute Energy</i>		<i>Relative Energy</i>
	<i>(m)</i>	<i>(m)</i>		<i>(m)</i>	<i>(m)</i>	
June 147	28	0.13	66.1	38.1		
June 148	28	0.11	66.09	38.09		
June 149	28	0.1	66.14	38.14		
June 150	28	0.14	66.12	38.12		
June 151	29	0.13	66.19	37.19		
June 152	29	0.15	66.11	37.11		
June 153	28	0.12	66.08	38.08		
June 154	28	0.17	65.99	37.99		
June 155	28	0.14	65.97	37.97		
June 156	28	0.11	66.04	38.04		
June 157	29	0.14	66.03	37.03		
June 158	29	0.13	66.02	37.02		
June 159	29	0.18	66.04	37.04		
June 160	29	0.16	66.02	37.02		
June 161	30	0.12	66.01	36.01		
June 162	29	0.14	66.01	37.01		
June 163	28	0.14	66.02	38.02		
June 164	28	0.11	66.01	38.01		
June 165	28	0.1	66.02	38.02		
June 166	28	0.15	66.02	38.02		
June 167	28	0.17	66.02	38.02		
June 168	29	0.11	66.02	37.02		
June 169	29	0.13	66.03	37.03		
June 170	29	0.12	66.03	37.03		
June 171	29	0.11	66.01	37.01		
June 172	28	0.14	66	38		
June 173	28	0.17	65.98	37.98		
June 174	29	0.14	66.05	37.05		
June 175	29	0.1	66.08	37.08		
June 176	28	0.09	66.05	38.05		
June 177	27	0.07	66.04	39.04		
June 178	29	0.11	66.2	37.2		
June 179	29	0.12	66.19	37.19		
June 180	28	0.11	66.18	38.18		
June 181	27	0.13	53.51	26.51		
June 182	26	0.1	53.46	27.46		
June 183	26	0.14	53.21	27.21		

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)		l/s	(m)
June 184	27	0.08	53.46	26.46
June 185	26	0.1	53.39	27.39
June 186	25	0.13	53.11	28.11
June 187	28	0.1	65.97	37.97
June 188	28	0.11	65.96	37.96
June 189	27	0.12	65.9	38.9
June 190	26	0.16	65.71	39.71
June 191	28	0.14	66	38
June 192	27	0.17	65.23	38.23
June 193	26	0.12	64.94	38.94
June 194	26	0.13	64.85	38.85
June 195	27	0.14	65.7	38.7
June 196	25	0.12	65.62	40.62
June 197	28	0.2	65.86	37.86
June 198	27	0.14	65.56	38.56
June 199	25	0.11	65.5	40.5
June 200	27	0.12	66	39
June 201	29	0.13	65.9	36.9
June 202	27	0.14	65.85	38.85
June 203	26	0.11	65.84	39.84
June 204	30	0.1	63.13	33.13
June 205	28	0.08	62.69	34.69
June 206	27	0.09	57.91	30.91
June 207	25	0.14	55.99	30.99
June 208	29	0.1	62.26	33.26
June 209	29	0.11	61.72	32.72
June 210	27	0.13	61.45	34.45
June 211	26	0.11	60.24	34.24
June 212	26	0.12	54.53	28.53
June 213	26	0.14	54.43	28.43
Resvr R1	30	-69.82	30	0
Resvr R2	30	-74.41	30	0
Resvr R3	30	-75.46	30	0
Resvr R4	30	-34.16	30	0
Resvr R5	30	-37.96	30	0
Tank T1	61	57.27	71	10
Tank T2	47	146.5	57	10

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
Tank T3	57	63	67	10

Sumber: Hasil Analisa Perhitungan, 2023.



Debit Dan Kehilangan Energi Kota Muara Teweh 2021

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 2	238	2	13	200	130	12.55	0.01255	0.99	0.00099
Pipe 3	2	3	75	200	130	12.43	0.01243	0.97	0.00097
Pipe 4	3	4	204	200	130	12.34	0.01234	0.96	0.00096
Pipe 5	4	5	275	200	130	12.23	0.01223	0.94	0.00094
Pipe 6	5	6	358	200	130	12.08	0.01208	0.92	0.00092
Pipe 7	6	7	80	200	130	7.88	0.00788	0.42	0.00042
Pipe 8	7	8	176	200	130	7.76	0.00776	0.41	0.00041
Pipe 9	8	9	136	200	130	7.66	0.00766	0.4	0.0004
Pipe 10	9	10	209	200	130	7.57	0.00757	0.39	0.00039
Pipe 11	10	11	163	101.6	130	0.1	0.0001	0	0
Pipe 12	10	12	97	200	130	7.32	0.00732	0.37	0.00037
Pipe 13	12	13	83	200	130	7.19	0.00719	0.35	0.00035
Pipe 15	14	15	330	101.6	130	0.11	0.00011	0	0
Pipe 16	15	16	276	101.6	130	0.24	0.00024	0.02	0.00002
Pipe 17	16	17	12	101.6	130	74.41	0.07441	725.56	0.72556
Pipe 18	17	18	10	101.6	130	75.46	0.07546	744.66	0.74466
Pipe 19	16	19	322	101.6	130	3.02	0.00302	1.92	0.00192
Pipe 20	19	20	501	101.6	130	2.89	0.00289	1.77	0.00177
Pipe 21	20	21	365	101.6	130	2.74	0.00274	1.6	0.0016
Pipe 22	21	22	161	101.6	130	2.61	0.00261	1.46	0.00146
Pipe 23	22	23	174	101.6	130	2.24	0.00224	1.11	0.00111

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 24	23	24	387	101.6	130	2.15	0.00215	1.03	0.00103
Pipe 25	24	25	220	101.6	130	2.08	0.00208	0.96	0.00096
Pipe 26	25	26	86	83	130	0.35	0.00035	0.1	0.0001
Pipe 27	26	27	70	83	130	0.21	0.00021	0.04	0.00004
Pipe 28	27	28	110	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 29	25	29	195	101.6	130	1.6	0.0016	0.59	0.00059
Pipe 30	29	30	173	101.6	130	1.5	0.0015	0.52	0.00052
Pipe 31	30	31	88	101.6	130	1.4	0.0014	0.47	0.00047
Pipe 32	31	32	94	58.2	130	0.38	0.00038	0.64	0.00064
Pipe 33	32	33	65	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 34	33	34	92	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 35	31	35	173	101.6	130	0.58	0.00058	0.09	0.00009
Pipe 36	35	36	188	101.6	130	0.42	0.00042	0.05	0.00005
Pipe 37	36	37	201	83	130	0	0	0	0
Pipe 38	37	38	240	200	130	1.66	0.00166	0.02	0.00002
Pipe 39	38	39	87	200	130	0.98	0.00098	0.01	0.00001
Pipe 40	39	40	190	200	130	0.87	0.00087	0.01	0.00001
Pipe 41	40	41	295	200	130	0.53	0.00053	0	0
Pipe 42	41	42	90	200	130	0.06	0.00006	0	0
Pipe 43	42	43	100	200	130	0.16	0.00016	0	0
Pipe 44	43	44	250	200	130	0.1	0.0001	0	0
Pipe 45	44	45	80	200	130	0.34	0.00034	0	0
Pipe 46	45	46	120	200	130	0.59	0.00059	0	0

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 47	46	47	190	200	130	1.09	0.00109	0.01	0.00001
Pipe 48	47	48	180	200	130	2.21	0.00221	0.04	0.00004
Pipe 49	48	49	147	200	130	2.31	0.00231	0.04	0.00004
Pipe 50	49	50	49	58.2	130	0.27	0.00027	0.34	0.00034
Pipe 51	50	51	208	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 52	49	52	372	200	130	2.72	0.00272	0.06	0.00006
Pipe 53	52	53	140	200	130	2.86	0.00286	0.06	0.00006
Pipe 54	53	54	60	200	130	3.76	0.00376	0.11	0.00011
Pipe 55	54	55	47	58.2	130	0.35	0.00035	0.54	0.00054
Pipe 56	55	56	92	58.2	130	0.23	0.00023	0.25	0.00025
Pipe 57	56	57	83	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 58	54	58	66	200	130	4.24	0.00424	0.13	0.00013
Pipe 59	58	59	264	200	130	4.35	0.00435	0.14	0.00014
Pipe 60	59	60	199	200	130	4.48	0.00448	0.15	0.00015
Pipe 61	60	61	279	200	130	4.6	0.0046	0.15	0.00015
Pipe 62	61	62	136	200	130	4.73	0.00473	0.16	0.00016
Pipe 63	62	63	230	200	130	4.8	0.0048	0.17	0.00017
Pipe 64	63	64	131	200	130	4.88	0.00488	0.17	0.00017
Pipe 65	64	65	158	200	130	4.36	0.00436	0.14	0.00014
Pipe 66	65	66	175	200	130	4.44	0.00444	0.14	0.00014
Pipe 67	66	67	87	200	130	4.53	0.00453	0.15	0.00015
Pipe 68	67	68	163	200	130	4.88	0.00488	0.17	0.00017
Pipe 69	68	69	247	200	130	4.96	0.00496	0.18	0.00018

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 70	69	70	106	200	130	8.55	0.00855	0.49	0.00049
Pipe 71	70	71	10	200	130	37.96	0.03796	3147.34	3.14734
Pipe 72	70	72	13	200	130	34.16	0.03416	2589.48	2.58948
Pipe 73	70	73	432	101.6	130	0.42	0.00042	0.05	0.00005
Pipe 74	73	74	149	101.6	130	0.3	0.0003	0.03	0.00003
Pipe 75	74	75	257	101.6	130	0.17	0.00017	0.01	0.00001
Pipe 76	75	76	407	101.6	130	0.09	0.00009	0	0
Pipe 78	6	78	241	101.6	130	4.08	0.00408	3.35	0.00335
Pipe 79	77	78	239	101.6	130	4.01	0.00401	3.24	0.00324
Pipe 80	78	79	86	101.6	130	3.91	0.00391	3.1	0.0031
Pipe 81	79	80	89	101.6	130	3.81	0.00381	2.96	0.00296
Pipe 82	80	81	324	101.6	130	3.71	0.00371	2.81	0.00281
Pipe 83	81	82	83	83	130	0.11	0.00011	0.01	0.00001
Pipe 84	81	83	104	101.6	130	3.47	0.00347	2.48	0.00248
Pipe 85	83	84	54	83	130	1.77	0.00177	1.91	0.00191
Pipe 86	84	85	212	83	130	1.69	0.00169	1.75	0.00175
Pipe 87	85	86	92	83	130	0.85	0.00085	0.49	0.00049
Pipe 88	86	87	109	83	130	0.75	0.00075	0.39	0.00039
Pipe 89	87	88	90	83	130	0.61	0.00061	0.27	0.00027
Pipe 90	88	130	247	200	130	1.52	0.00152	0.02	0.00002
Pipe 91	88	89	254	200	130	1.02	0.00102	0.01	0.00001
Pipe 92	89	133	269	101.6	130	1.29	0.00129	0.4	0.0004
Pipe 93	89	113	107	200	130	3.06	0.00306	0.07	0.00007

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 94	89	90	265	83	130	0.64	0.00064	0.29	0.00029
Pipe 95	90	91	129	58.2	130	0.52	0.00052	1.12	0.00112
Pipe 96	91	96	137	83	130	0.21	0.00021	0.04	0.00004
Pipe 97	96	53	149	83	130	0.35	0.00035	0.09	0.00009
Pipe 98	69	97	97	200	130	3.51	0.00351	0.09	0.00009
Pipe 99	97	98	123	58.2	130	0.36	0.00036	0.57	0.00057
Pipe 100	98	99	127	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 101	99	100	272	58.2	130	0.09	0.00009	0.04	0.00004
Pipe 102	100	101	131	58.2	130	0.02	0.00002	0	0
Pipe 103	101	102	94	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 104	102	67	144	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 105	97	103	235	200	130	2.97	0.00297	0.07	0.00007
Pipe 106	103	104	172	58.2	130	0.17	0.00017	0.14	0.00014
Pipe 107	104	105	116	58.2	130	0.07	0.00007	0.03	0.00003
Pipe 108	103	106	161	200	130	2.66	0.00266	0.06	0.00006
Pipe 109	106	107	187	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 110	106	108	114	200	130	2.46	0.00246	0.05	0.00005
Pipe 111	108	109	172	83	130	1.46	0.00146	1.33	0.00133
Pipe 112	109	83	162	83	130	1.6	0.0016	1.59	0.00159
Pipe 113	108	110	252	200	130	3.8	0.0038	0.11	0.00011
Pipe 114	110	111	158	200	130	3.66	0.00366	0.1	0.0001
Pipe 115	111	85	143	83	130	0.74	0.00074	0.38	0.00038
Pipe 116	111	112	165	200	130	4.25	0.00425	0.13	0.00013

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 117	112	113	199	200	130	4.1	0.0041	0.12	0.00012
Pipe 118	113	114	189	200	130	0.9	0.0009	0.01	0.00001
Pipe 119	64	114	337	200	130	0.59	0.00059	0	0
Pipe 120	13	117	181	200	130	7.05	0.00705	0.34	0.00034
Pipe 121	117	118	143	200	130	6.96	0.00696	0.33	0.00033
Pipe 122	118	119	184	200	130	6.89	0.00689	0.33	0.00033
Pipe 123	119	120	179	200	130	6.81	0.00681	0.32	0.00032
Pipe 124	120	124	97	200	130	6.28	0.00628	0.28	0.00028
Pipe 125	124	125	209	200	130	6.16	0.00616	0.27	0.00027
Pipe 126	125	126	81	200	130	6.03	0.00603	0.25	0.00025
Pipe 127	126	127	377	200	130	5.89	0.00589	0.24	0.00024
Pipe 128	127	128	85	83	130	5.77	0.00577	17.08	0.01708
Pipe 129	128	129	105	83	130	5.6	0.0056	16.15	0.01615
Pipe 130	129	130	109	200	130	1.39	0.00139	0.02	0.00002
Pipe 131	129	131	113	200	130	6.55	0.00655	0.3	0.0003
Pipe 132	129	132	105	58.2	130	0.32	0.00032	0.44	0.00044
Pipe 133	132	133	217	58.2	130	0.23	0.00023	0.24	0.00024
Pipe 134	133	146	282	101.6	130	0.94	0.00094	0.22	0.00022
Pipe 135	133	134	117	83	130	0.48	0.00048	0.17	0.00017
Pipe 136	134	135	112	58.2	130	0.36	0.00036	0.57	0.00057
Pipe 137	135	136	159	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 138	136	137	87	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 139	137	138	257	58.2	130	0.05	0.00005	0.02	0.00002

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 140	138	139	68	83	130	0.16	0.00016	0.02	0.00002
Pipe 141	139	53	237	83	130	0.43	0.00043	0.14	0.00014
Pipe 142	139	140	201	83	130	0.13	0.00013	0.01	0.00001
Pipe 143	140	141	305	83	130	0.21	0.00021	0.04	0.00004
Pipe 144	141	47	207	83	130	0.13	0.00013	0.01	0.00001
Pipe 145	141	142	134	83	130	0.23	0.00023	0.04	0.00004
Pipe 146	142	143	47	58.2	130	0.16	0.00016	0.13	0.00013
Pipe 147	143	144	69	58.2	130	0.03	0.00003	0.01	0.00001
Pipe 148	144	45	194	58.2	130	0.11	0.00011	0.07	0.00007
Pipe 149	140	145	343	58.2	130	0.16	0.00016	0.13	0.00013
Pipe 150	145	46	87	101.6	130	1.09	0.00109	0.29	0.00029
Pipe 151	145	159	175	101.6	130	0.8	0.0008	0.16	0.00016
Pipe 152	146	147	158	83	130	0.3	0.0003	0.07	0.00007
Pipe 153	147	148	184	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 154	147	149	151	83	130	0.54	0.00054	0.21	0.00021
Pipe 155	149	150	177	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 156	149	151	127	83	130	0.78	0.00078	0.42	0.00042
Pipe 157	151	131	116	200	130	6.04	0.00604	0.26	0.00026
Pipe 158	151	152	442	200	130	5.12	0.00512	0.19	0.00019
Pipe 159	152	156	474	101.6	130	0.75	0.00075	0.15	0.00015
Pipe 160	156	157	314	83	130	0.09	0.00009	0.01	0.00001
Pipe 161	157	158	198	58.2	130	0.13	0.00013	0.09	0.00009
Pipe 162	157	159	133	83	130	0.18	0.00018	0.03	0.00003

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 163	159	160	407	101.6	130	0.44	0.00044	0.05	0.00005
Pipe 164	160	161	84	101.6	130	0.28	0.00028	0.02	0.00002
Pipe 165	161	43	166	101.6	130	0.17	0.00017	0.01	0.00001
Pipe 166	161	162	189	101.6	130	0.01	0.00001	0	0
Pipe 167	162	163	217	101.6	130	0.15	0.00015	0.01	0.00001
Pipe 168	163	165	122	101.6	130	0.37	0.00037	0.04	0.00004
Pipe 169	165	156	203	101.6	130	0.55	0.00055	0.08	0.00008
Pipe 170	165	166	192	101.6	130	0.08	0.00008	0	0
Pipe 171	166	167	53	101.6	130	0.08	0.00008	0	0
Pipe 172	167	164	157	58.2	130	0.08	0.00008	0.04	0.00004
Pipe 173	163	164	213	58.2	130	0.03	0.00003	0	0
Pipe 174	163	40	178	58.2	130	0.05	0.00005	0.01	0.00001
Pipe 175	164	39	182	58.2	130	0	0	0	0
Pipe 176	167	168	127	101.6	130	0.33	0.00033	0.03	0.00003
Pipe 177	168	169	113	101.6	130	0.44	0.00044	0.05	0.00005
Pipe 178	169	170	51	200	130	2.81	0.00281	0.06	0.00006
Pipe 179	170	30	146	200	130	2.26	0.00226	0.04	0.00004
Pipe 180	169	174	249	200	130	3.38	0.00338	0.09	0.00009
Pipe 181	174	175	254	200	130	3.68	0.00368	0.1	0.0001
Pipe 182	175	152	257	200	130	3.78	0.00378	0.11	0.00011
Pipe 183	152	153	195	83	130	0.44	0.00044	0.14	0.00014
Pipe 184	153	154	205	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 185	154	155	219	58.2	130	0.14	0.00014	0.1	0.0001

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 186	174	176	247	83	130	0.16	0.00016	0.02	0.00002
Pipe 187	176	177	271	58.2	130	0.07	0.00007	0.03	0.00003
Pipe 188	170	171	129	83	130	0.42	0.00042	0.14	0.00014
Pipe 189	171	173	190	58.2	130	0.17	0.00017	0.14	0.00014
Pipe 190	171	172	121	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 191	120	121	301	83	130	0.41	0.00041	0.13	0.00013
Pipe 192	121	122	177	58.2	130	0.27	0.00027	0.34	0.00034
Pipe 193	122	123	150	31.8	130	0.12	0.00012	1.42	0.00142
Pipe 194	131	178	192	83	130	0.34	0.00034	0.09	0.00009
Pipe 195	178	179	197	83	130	0.23	0.00023	0.04	0.00004
Pipe 196	179	180	214	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 197	114	115	77	83	130	0.19	0.00019	0.03	0.00003
Pipe 198	115	116	217	58.2	130	0.09	0.00009	0.04	0.00004
Pipe 199	91	92	141	58.2	130	0.6	0.0006	1.44	0.00144
Pipe 200	92	93	129	200	130	0.44	0.00044	15.87	0.01587
Pipe 201	93	94	164	31.8	130	0.12	0.00012	1.42	0.00142
Pipe 202	93	95	134	31.8	130	0.15	0.00015	2.17	0.00217
Pipe 203	31	181	50	58.2	130	0.37	0.00037	0.61	0.00061
Pipe 204	181	182	172	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 205	182	183	133	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 206	36	184	114	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 207	184	185	299	58.2	130	0.23	0.00023	0.25	0.00025
Pipe 208	185	186	167	31.8	130	0.13	0.00013	1.65	0.00165

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 209	37	187	259	83	130	0.5	0.0005	0.18	0.00018
Pipe 210	187	188	87	83	130	0.39	0.00039	0.12	0.00012
Pipe 211	188	189	172	58.2	130	0.28	0.00028	0.36	0.00036
Pipe 212	189	190	79	31.8	130	0.16	0.00016	2.44	0.00244
Pipe 213	38	191	84	83	130	0.57	0.00057	0.23	0.00023
Pipe 214	191	192	1000	58.2	130	0.42	0.00042	0.76	0.00076
Pipe 215	192	193	1000	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 216	193	194	1000	58.2	130	0.13	0.00013	0.09	0.00009
Pipe 217	40	195	1000	58.2	130	0.26	0.00026	0.32	0.00032
Pipe 218	195	196	1000	58.2	130	0.12	0.00012	0.07	0.00007
Pipe 219	41	197	1000	83	130	0.45	0.00045	0.15	0.00015
Pipe 220	197	198	1000	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 221	198	199	1000	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 222	44	200	1000	83	130	0.12	0.00012	0.01	0.00001
Pipe 223	46	201	1000	83	130	0.38	0.00038	0.11	0.00011
Pipe 224	201	202	1000	83	130	0.25	0.00025	0.05	0.00005
Pipe 225	202	203	1000	83	130	0.11	0.00011	0.01	0.00001
Pipe 226	47	204	1000	58.2	130	0.87	0.00087	2.88	0.00288
Pipe 227	204	205	1000	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 228	205	206	1000	31.8	130	0.23	0.00023	4.79	0.00479
Pipe 229	206	207	1000	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 230	204	208	1000	58.2	130	0.45	0.00045	0.87	0.00087
Pipe 231	208	209	1000	58.2	130	0.35	0.00035	0.54	0.00054

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 232	209	210	1000	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 233	210	211	1000	31.8	130	0.11	0.00011	1.21	0.00121
Pipe 234	22	212	1000	83	130	0.26	0.00026	0.06	0.00006
Pipe 235	212	213	1000	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 236	T2	16	1000	200	130	3.36	0.00336	0.09	0.00009
Pipe 237	T3	70	1000	200	130	9.12	0.00912	0.55	0.00055

Sumber: Hasil Analisa Perhitungan, 2023.



Lampiran 6. Output Hasil Simulasi Tahun 2032(Pengembangan)

Energi Absolute dan Relative Kota Muara Teweh Tahun 2032

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
June 2	47	0.12	70.98	23.98
June 3	43	0.09	70.84	27.84
June 4	37	0.11	70.64	33.64
June 5	35	0.14	70.38	35.38
June 6	34	0.13	70.06	36.06
June 7	33	0.12	70.02	37.02
June 8	33	0.1	69.95	36.95
June 9	32	0.08	69.9	37.9
June 10	32	0.15	69.82	37.82
June 11	33	0.1	69.82	36.82
June 12	32	0.13	69.78	37.78
June 13	32	0.14	69.76	37.76
June 14	33	0.11	56.91	23.91
June 15	34	0.13	56.91	22.91
June 16	37	0.1	56.91	19.91
June 17	47	0	65.71	18.71
June 18	47	0	64.45	17.45
June 19	46	0.13	56.29	10.29
June 20	44	0.15	55.41	11.41
June 21	30	0.13	54.82	24.82
June 22	27	0.1	54.59	27.59
June 23	27	0.09	54.39	27.39
June 24	26	0.07	54	28
June 25	26	0.13	53.78	27.78
June 26	26	0.14	53.78	27.78
June 27	26	0.1	53.77	27.77
June 28	26	0.11	53.77	27.77
June 29	27	0.1	53.67	26.67
June 30	27	0.09	53.58	26.58
June 31	28	0.07	53.54	25.54
June 32	28	0.13	53.48	25.48
June 33	27	0.11	53.46	26.46
June 34	27	0.14	53.28	26.28
June 35	28	0.15	53.52	25.52

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
June 36	29	0.11	53.51	24.51
June 37	29	0.11	66.01	37.01
June 38	28	0.11	66	38
June 39	28	0.11	66	38
June 40	28	0.12	66	38
June 41	29	0.13	66	37
June 42	30	0.1	66	36
June 43	30	0.11	66	36
June 44	29	0.12	66	37
June 45	29	0.13	66	37
June 46	30	0.12	66	36
June 47	32	0.12	66	34
June 48	32	0.1	66.01	34.01
June 49	34	0.13	66.02	32.02
June 50	32	0.12	66	34
June 51	28	0.15	65.98	37.98
June 52	35	0.14	66.04	31.04
June 53	36	0.12	66.05	30.05
June 54	36	0.13	66.05	30.05
June 55	37	0.12	66.03	29.03
June 56	37	0.12	66.01	29.01
June 57	38	0.11	66	28
June 58	36	0.1	66.06	30.06
June 59	34	0.13	66.1	32.1
June 60	35	0.12	66.13	31.13
June 61	37	0.13	66.17	29.17
June 62	37	0.07	66.19	29.19
June 63	37	0.08	66.23	29.23
June 64	38	0.07	66.26	28.26
June 65	37	0.07	66.28	29.28
June 66	39	0.09	66.3	27.3
June 67	40	0.1	66.32	26.32
June 68	43	0.08	66.35	23.35
June 69	45	0.08	66.39	21.39
June 70	47	0.14	66.44	19.44
June 71	49	0	98.47	49.47
June 72	49	0	100.66	51.66

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)			
June 73	47	0.12	66.42	19.42
June 74	45	0.13	66.42	21.42
June 75	42	0.08	66.41	24.41
June 76	43	0.09	66.41	23.41
June 77	33	0.07	69.26	36.26
June 78	32	0.09	68.5	36.5
June 79	32	0.1	68.24	36.24
June 80	31	0.1	67.98	36.98
June 81	31	0.13	67.08	36.08
June 82	31	0.11	67.08	36.08
June 83	31	0.1	66.83	35.83
June 84	30	0.08	66.72	36.72
June 85	30	0.09	66.36	36.36
June 86	30	0.1	66.31	36.31
June 87	30	0.14	66.27	36.27
June 88	30	0.11	66.25	36.25
June 89	29	0.11	66.25	37.25
June 90	29	0.12	66.17	37.17
June 91	29	0.13	66.03	37.03
June 92	30	0.15	65.83	35.83
June 93	31	0.17	63.78	32.78
June 94	31	0.12	63.55	32.55
June 95	31	0.15	63.49	32.49
June 96	34	0.14	66.03	32.03
June 97	44	0.17	66.38	22.38
June 98	44	0.12	66.31	22.31
June 99	44	0.15	66.28	22.28
June 100	39	0.11	66.26	27.26
June 101	39	0.13	66.26	27.26
June 102	39	0.1	66.27	27.27
June 103	43	0.14	66.36	23.36
June 104	43	0.1	66.34	23.34
June 105	44	0.07	66.34	22.34
June 106	43	0.09	66.35	23.35
June 107	44	0.11	66.34	22.34
June 108	43	0.12	66.35	23.35
June 109	42	0.14	66.57	24.57

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
June 110	40	0.13	66.32	26.32
June 111	39	0.16	66.31	27.31
June 112	39	0.15	66.28	27.28
June 113	43	0.13	66.26	23.26
June 114	43	0.12	66.26	23.26
June 115	33	0.1	66.25	33.25
June 116	34	0.09	66.24	32.24
June 117	32	0.09	69.69	37.69
June 118	32	0.07	69.65	37.65
June 119	32	0.08	69.59	37.59
June 120	32	0.11	69.53	37.53
June 121	31	0.14	69.49	38.49
June 122	31	0.15	69.43	38.43
June 123	31	0.12	69.22	38.22
June 124	30	0.12	69.51	39.51
June 125	30	0.13	69.45	39.45
June 126	30	0.14	69.43	39.43
June 127	30	0.11	69.34	39.34
June 128	30	0.17	67.91	37.91
June 129	29	0.12	66.24	37.24
June 130	30	0.13	66.24	36.24
June 131	29	0.17	66.21	37.21
June 132	29	0.09	66.19	37.19
June 133	29	0.1	66.14	37.14
June 134	28	0.12	66.12	38.12
June 135	28	0.11	66.06	38.06
June 136	28	0.14	66.01	38.01
June 137	28	0.16	66.01	38.01
June 138	29	0.1	66.01	37.01
June 139	30	0.15	66.01	36.01
June 140	30	0.08	66.01	36.01
June 141	31	0.1	66	35
June 142	30	0.07	65.99	35.99
June 143	29	0.13	65.99	36.99
June 144	29	0.14	65.99	36.99
June 145	29	0.13	66.05	37.05
June 146	29	0.14	66.08	37.08

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)			
Junc 147	28	0.13	66.09	38.09
Junc 148	28	0.11	66.08	38.08
Junc 149	28	0.1	66.12	38.12
Junc 150	28	0.14	66.11	38.11
Junc 151	29	0.13	66.18	37.18
Junc 152	29	0.15	66.09	37.09
Junc 153	28	0.12	66.07	38.07
Junc 154	28	0.17	65.98	37.98
Junc 155	28	0.14	65.95	37.95
Junc 156	28	0.11	66.03	38.03
Junc 157	29	0.14	66.02	37.02
Junc 158	29	0.13	66.01	37.01
Junc 159	29	0.18	66.03	37.03
Junc 160	29	0.16	66	37
Junc 161	30	0.12	66	36
Junc 162	29	0.14	66	37
Junc 163	28	0.14	66	38
Junc 164	28	0.11	66	38
Junc 165	28	0.1	66.01	38.01
Junc 166	28	0.15	66.01	38.01
Junc 167	28	0.17	66.01	38.01
Junc 168	29	0.11	66.01	37.01
Junc 169	29	0.13	66.02	37.02
Junc 170	29	0.12	66.02	37.02
Junc 171	29	0.11	66	37
Junc 172	28	0.14	65.99	37.99
Junc 173	28	0.17	65.97	37.97
Junc 174	29	0.14	66.04	37.04
Junc 175	29	0.1	66.07	37.07
Junc 176	28	0.09	66.03	38.03
Junc 177	27	0.07	66.03	39.03
Junc 178	29	0.11	66.19	37.19
Junc 179	29	0.12	66.18	37.18
Junc 180	28	0.11	66.17	38.17
Junc 181	27	0.13	53.51	26.51
Junc 182	26	0.1	53.46	27.46
Junc 183	26	0.14	53.21	27.21

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)	l/s	(m)	(m)
June 184	27	0.08	53.46	26.46
June 185	26	0.1	53.39	27.39
June 186	25	0.13	53.11	28.11
June 187	28	0.1	65.96	37.96
June 188	28	0.11	65.95	37.95
June 189	27	0.12	65.89	38.89
June 190	26	0.16	65.7	39.7
June 191	28	0.14	65.98	37.98
June 192	27	0.17	65.22	38.22
June 193	26	0.12	64.93	38.93
June 194	26	0.13	64.84	38.84
June 195	27	0.14	65.69	38.69
June 196	25	0.12	65.61	40.61
June 197	28	0.2	65.85	37.85
June 198	27	0.14	65.55	38.55
June 199	25	0.11	65.49	40.49
June 200	27	0.12	65.99	38.99
June 201	29	0.13	65.89	36.89
June 202	27	0.14	65.84	38.84
June 203	26	0.11	65.83	39.83
June 204	30	0.1	63.12	33.12
June 205	28	0.08	62.68	34.68
June 206	27	0.09	57.89	30.89
June 207	25	0.14	55.98	30.98
June 208	29	0.1	62.25	33.25
June 209	29	0.11	61.71	32.71
June 210	27	0.13	61.44	34.44
June 211	26	0.11	60.23	34.23
June 212	26	0.12	54.53	28.53
June 213	26	0.14	54.43	28.43
June 214	41	0.15	70.5	29.5
June 246	40	0.15	70.31	30.31
June 248	40	0.15	70.25	30.25
June 217	38	0.15	70.25	32.25
June 218	39	0.15	70.25	31.25
June 215	37	0.15	70.31	33.31
June 216	38	0.15	70.31	32.31

Node	Ground Elevation	Demand	Absolute Energy	Relative Energy
	(m)			
June 219	39	0.15	70.27	31.27
June 220	37	0.15	70.06	33.06
June 221	36	0.15	70.05	34.05
June 222	35	0.15	70.05	35.05
June 223	34	0.15	70	36
June 225	33	0.15	70	37
June 224	33	0.15	70	37
June 226	36	0.15	70.1	34.1
June 227	35	0.15	69.9	34.9
June 228	34	0.15	69.89	35.89
June 229	34	0.15	69.89	35.89
June 230	33	0.15	69.85	36.85
June 232	32	0.15	69.84	37.84
June 231	32	0.15	69.84	37.84
June 233	33	0.15	70.04	37.04
June 234	33	0.15	70.02	37.02
June 235	32	0.15	70.01	38.01
June 236	32	0.15	70.01	38.01
June 237	31	0.15	69.91	38.91
June 238	31	0.15	69.91	38.91
June 239	31	0.15	69.91	38.91
June 240	30	0.15	69.91	39.91
June 241	32	0.15	70.02	38.02
June 243	32	0.15	70.02	38.02
June 242	32	0.15	70.02	38.02
June 247	31	0.15	69.96	38.96
June 244	31	0.15	69.96	38.96
June 245	31	0.15	69.96	38.96
Resvr R1	30	-69.82	30	0
Resvr R2	30	-74.41	30	0
Resvr R3	30	-75.46	30	0
Resvr R4	30	-34.16	30	0
Resvr R5	30	-37.96	30	0
Tank T1	61	52.03	71	10
Tank T2	47	146.5	57	10
Tank T3	57	62.92	67	10

Sumber: Hasil Analisa Perhitungan, 2023.

Debit Dan Kehilangan Energi Kota Muara Teweh 2032 (Pengembangan)

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>		<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 2	238	2	13	200	130	17.79	0.01779	1.89	0.00189
Pipe 3	2	3	75	200	130	17.67	0.01767	1.87	0.00187
Pipe 4	3	4	204	200	130	12.26	0.01226	0.95	0.00095
Pipe 5	4	5	275	200	130	12.15	0.01215	0.93	0.00093
Pipe 6	5	6	358	200	130	12.01	0.01201	0.91	0.00091
Pipe 7	6	7	80	200	130	7.83	0.00783	0.41	0.00041
Pipe 8	7	8	176	200	130	7.71	0.00771	0.4	0.0004
Pipe 9	8	9	136	200	130	7.61	0.00761	0.39	0.00039
Pipe 10	9	10	209	200	130	7.53	0.00753	0.38	0.00038
Pipe 11	10	11	163	101.6	130	0.1	0.0001	0	0
Pipe 12	10	12	97	200	130	7.27	0.00727	0.36	0.00036
Pipe 13	12	13	83	200	130	7.14	0.00714	0.35	0.00035
Pipe 15	14	15	330	101.6	130	0.11	0.00011	0	0
Pipe 16	15	16	276	101.6	130	0.24	0.00024	0.02	0.00002
Pipe 17	16	17	12	101.6	130	74.41	0.07441	725.56	0.72556
Pipe 18	17	18	10	101.6	130	75.46	0.07546	744.66	0.74466
Pipe 19	16	19	322	101.6	130	3.02	0.00302	1.92	0.00192
Pipe 20	19	20	501	101.6	130	2.89	0.00289	1.77	0.00177
Pipe 21	20	21	365	101.6	130	2.74	0.00274	1.6	0.0016
Pipe 22	21	22	161	101.6	130	2.61	0.00261	1.46	0.00146
Pipe 23	22	23	174	101.6	130	2.24	0.00224	1.11	0.00111

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 24	23	24	387	101.6	130	2.15	0.00215	1.03	0.00103
Pipe 25	24	25	220	101.6	130	2.08	0.00208	0.96	0.00096
Pipe 26	25	26	86	83	130	0.35	0.00035	0.1	0.0001
Pipe 27	26	27	70	83	130	0.21	0.00021	0.04	0.00004
Pipe 28	27	28	110	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 29	25	29	195	101.6	130	1.6	0.0016	0.59	0.00059
Pipe 30	29	30	173	101.6	130	1.5	0.0015	0.52	0.00052
Pipe 31	30	31	88	101.6	130	1.4	0.0014	0.47	0.00047
Pipe 32	31	32	94	58.2	130	0.38	0.00038	0.64	0.00064
Pipe 33	32	33	65	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 34	33	34	92	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 35	31	35	173	101.6	130	0.58	0.00058	0.09	0.00009
Pipe 36	35	36	188	101.6	130	0.42	0.00042	0.05	0.00005
Pipe 37	36	37	201	83	130	0	0	0	0
Pipe 38	37	38	240	200	130	1.65	0.00165	0.02	0.00002
Pipe 39	38	39	87	200	130	0.98	0.00098	0.01	0.00001
Pipe 40	39	40	190	200	130	0.86	0.00086	0.01	0.00001
Pipe 41	40	41	295	200	130	0.53	0.00053	0	0
Pipe 42	41	42	90	200	130	0.06	0.00006	0	0
Pipe 43	42	43	100	200	130	0.16	0.00016	0	0
Pipe 44	43	44	250	200	130	0.11	0.00011	0	0
Pipe 45	44	45	80	200	130	0.35	0.00035	0	0
Pipe 46	45	46	120	200	130	0.59	0.00059	0	0
Pipe 47	46	47	190	200	130	1.1	0.0011	0.01	0.00001

Pipe Number	Start Node	End Node	Length	Diameter	Roughness	Debit (Flow)		HF	
			(m)	(mm)	(C)	(l/s)	(m ³ /s)	(km)	(m)
Pipe 48	47	48	180	200	130	2.21	0.00221	0.04	0.00004
Pipe 49	48	49	147	200	130	2.32	0.00232	0.04	0.00004
Pipe 50	49	50	49	58.2	130	0.27	0.00027	0.34	0.00034
Pipe 51	50	51	208	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 52	49	52	372	200	130	2.72	0.00272	0.06	0.00006
Pipe 53	52	53	140	200	130	2.86	0.00286	0.06	0.00006
Pipe 54	53	54	60	200	130	3.77	0.00377	0.11	0.00011
Pipe 55	54	55	47	58.2	130	0.35	0.00035	0.54	0.00054
Pipe 56	55	56	92	58.2	130	0.23	0.00023	0.25	0.00025
Pipe 57	56	57	83	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 58	54	58	66	200	130	4.25	0.00425	0.13	0.00013
Pipe 59	58	59	264	200	130	4.35	0.00435	0.14	0.00014
Pipe 60	59	60	199	200	130	4.48	0.00448	0.15	0.00015
Pipe 61	60	61	279	200	130	4.6	0.0046	0.15	0.00015
Pipe 62	61	62	136	200	130	4.73	0.00473	0.16	0.00016
Pipe 63	62	63	230	200	130	4.8	0.0048	0.17	0.00017
Pipe 64	63	64	131	200	130	4.89	0.00489	0.17	0.00017
Pipe 65	64	65	158	200	130	4.4	0.0044	0.14	0.00014
Pipe 66	65	66	175	200	130	4.47	0.00447	0.15	0.00015
Pipe 67	66	67	87	200	130	4.56	0.00456	0.15	0.00015
Pipe 68	67	68	163	200	130	4.91	0.00491	0.17	0.00017
Pipe 69	68	69	247	200	130	5	0.005	0.18	0.00018
Pipe 70	69	70	106	200	130	8.63	0.00863	0.5	0.0005
Pipe 71	70	71	10	200	130	37.96	0.03796	3147.34	3.14734

Pipe Number	Start Node	End Node	Length	Diameter	Roughness	Debit (Flow)		HF	
			(m)	(mm)	(C)	(l/s)	(m ³ /s)	(km)	(m)
Pipe 72	70	72	13	200	130	34.16	0.03416	2589.48	2.58948
Pipe 73	70	73	432	101.6	130	0.42	0.00042	0.05	0.00005
Pipe 74	73	74	149	101.6	130	0.3	0.0003	0.03	0.00003
Pipe 75	74	75	257	101.6	130	0.17	0.00017	0.01	0.00001
Pipe 76	75	76	407	101.6	130	0.09	0.00009	0	0
Pipe 78	6	78	241	101.6	130	4.04	0.00404	3.3	0.0033
Pipe 79	77	78	239	101.6	130	3.97	0.00397	3.19	0.00319
Pipe 80	78	79	86	101.6	130	3.88	0.00388	3.06	0.00306
Pipe 81	79	80	89	101.6	130	3.78	0.00378	2.91	0.00291
Pipe 82	80	81	324	101.6	130	3.68	0.00368	2.77	0.00277
Pipe 83	81	82	83	83	130	0.11	0.00011	0.01	0.00001
Pipe 84	81	83	104	101.6	130	3.44	0.00344	2.44	0.00244
Pipe 85	83	84	54	83	130	1.75	0.00175	1.88	0.00188
Pipe 86	84	85	212	83	130	1.67	0.00167	1.72	0.00172
Pipe 87	85	86	92	83	130	0.85	0.00085	0.49	0.00049
Pipe 88	86	87	109	83	130	0.75	0.00075	0.39	0.00039
Pipe 89	87	88	90	83	130	0.61	0.00061	0.26	0.00026
Pipe 90	88	130	247	200	130	1.56	0.00156	0.02	0.00002
Pipe 91	88	89	254	200	130	1.06	0.00106	0.01	0.00001
Pipe 92	89	133	269	101.6	130	1.29	0.00129	0.4	0.0004
Pipe 93	89	113	107	200	130	3.11	0.00311	0.07	0.00007
Pipe 94	89	90	265	83	130	0.64	0.00064	0.29	0.00029
Pipe 95	90	91	129	58.2	130	0.52	0.00052	1.12	0.00112
Pipe 96	91	96	137	83	130	0.21	0.00021	0.04	0.00004

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 97	96	53	149	83	130	0.35	0.00035	0.09	0.00009
Pipe 98	69	97	97	200	130	3.55	0.00355	0.1	0.0001
Pipe 99	97	98	123	58.2	130	0.36	0.00036	0.57	0.00057
Pipe 100	98	99	127	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 101	99	100	272	58.2	130	0.09	0.00009	0.04	0.00004
Pipe 102	100	101	131	58.2	130	0.02	0.00002	0	0
Pipe 103	101	102	94	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 104	102	67	144	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 105	97	103	235	200	130	3.02	0.00302	0.07	0.00007
Pipe 106	103	104	172	58.2	130	0.17	0.00017	0.14	0.00014
Pipe 107	104	105	116	58.2	130	0.07	0.00007	0.03	0.00003
Pipe 108	103	106	161	200	130	2.7	0.0027	0.06	0.00006
Pipe 109	106	107	187	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 110	106	108	114	200	130	2.5	0.0025	0.05	0.00005
Pipe 111	108	109	172	83	130	1.44	0.00144	1.31	0.00131
Pipe 112	109	83	162	83	130	1.58	0.00158	1.55	0.00155
Pipe 113	108	110	252	200	130	3.82	0.00382	0.11	0.00011
Pipe 114	110	111	158	200	130	3.69	0.00369	0.1	0.0001
Pipe 115	111	85	143	83	130	0.73	0.00073	0.37	0.00037
Pipe 116	111	112	165	200	130	4.26	0.00426	0.13	0.00013
Pipe 117	112	113	199	200	130	4.11	0.00411	0.13	0.00013
Pipe 118	113	114	189	200	130	0.87	0.00087	0.01	0.00001
Pipe 119	64	114	337	200	130	0.56	0.00056	0	0
Pipe 120	13	117	181	200	130	7	0.007	0.34	0.00034

Pipe Number	Start Node	End Node	Length	Diameter	Roughness	Debit (Flow)		HF	
			(m)	(mm)	(C)	(l/s)	(m ³ /s)	(km)	(m)
Pipe 121	117	118	143	200	130	6.91	0.00691	0.33	0.00033
Pipe 122	118	119	184	200	130	6.84	0.00684	0.32	0.00032
Pipe 123	119	120	179	200	130	6.76	0.00676	0.32	0.00032
Pipe 124	120	124	97	200	130	6.23	0.00623	0.27	0.00027
Pipe 125	124	125	209	200	130	6.11	0.00611	0.26	0.00026
Pipe 126	125	126	81	200	130	5.98	0.00598	0.25	0.00025
Pipe 127	126	127	377	200	130	5.84	0.00584	0.24	0.00024
Pipe 128	127	128	85	83	130	5.73	0.00573	16.83	0.01683
Pipe 129	128	129	105	83	130	5.56	0.00556	15.9	0.0159
Pipe 130	129	130	109	200	130	1.43	0.00143	0.02	0.00002
Pipe 131	129	131	113	200	130	6.55	0.00655	0.3	0.0003
Pipe 132	129	132	105	58.2	130	0.32	0.00032	0.44	0.00044
Pipe 133	132	133	217	58.2	130	0.23	0.00023	0.24	0.00024
Pipe 134	133	146	282	101.6	130	0.94	0.00094	0.22	0.00022
Pipe 135	133	134	117	83	130	0.48	0.00048	0.17	0.00017
Pipe 136	134	135	112	58.2	130	0.36	0.00036	0.57	0.00057
Pipe 137	135	136	159	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 138	136	137	87	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 139	137	138	257	58.2	130	0.05	0.00005	0.02	0.00002
Pipe 140	138	139	68	83	130	0.16	0.00016	0.02	0.00002
Pipe 141	139	53	237	83	130	0.43	0.00043	0.14	0.00014
Pipe 142	139	140	201	83	130	0.13	0.00013	0.01	0.00001
Pipe 143	140	141	305	83	130	0.21	0.00021	0.04	0.00004
Pipe 144	141	47	207	83	130	0.13	0.00013	0.01	0.00001

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 145	141	142	134	83	130	0.23	0.00023	0.04	0.00004
Pipe 146	142	143	47	58.2	130	0.16	0.00016	0.13	0.00013
Pipe 147	143	144	69	58.2	130	0.03	0.00003	0.01	0.00001
Pipe 148	144	45	194	58.2	130	0.11	0.00011	0.07	0.00007
Pipe 149	140	145	343	58.2	130	0.16	0.00016	0.13	0.00013
Pipe 150	145	46	87	101.6	130	1.09	0.00109	0.29	0.00029
Pipe 151	145	159	175	101.6	130	0.8	0.0008	0.16	0.00016
Pipe 152	146	147	158	83	130	0.3	0.0003	0.07	0.00007
Pipe 153	147	148	184	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 154	147	149	151	83	130	0.54	0.00054	0.21	0.00021
Pipe 155	149	150	177	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 156	149	151	127	83	130	0.78	0.00078	0.42	0.00042
Pipe 157	151	131	116	200	130	6.03	0.00603	0.26	0.00026
Pipe 158	151	152	442	200	130	5.12	0.00512	0.19	0.00019
Pipe 159	152	156	474	101.6	130	0.75	0.00075	0.15	0.00015
Pipe 160	156	157	314	83	130	0.09	0.00009	0.01	0.00001
Pipe 161	157	158	198	58.2	130	0.13	0.00013	0.09	0.00009
Pipe 162	157	159	133	83	130	0.18	0.00018	0.03	0.00003
Pipe 163	159	160	407	101.6	130	0.44	0.00044	0.05	0.00005
Pipe 164	160	161	84	101.6	130	0.28	0.00028	0.02	0.00002
Pipe 165	161	43	166	101.6	130	0.17	0.00017	0.01	0.00001
Pipe 166	161	162	189	101.6	130	0.01	0.00001	0	0
Pipe 167	162	163	217	101.6	130	0.15	0.00015	0.01	0.00001
Pipe 168	163	165	122	101.6	130	0.37	0.00037	0.04	0.00004

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 169	165	156	203	101.6	130	0.54	0.00054	0.08	0.00008
Pipe 170	165	166	192	101.6	130	0.08	0.00008	0	0
Pipe 171	166	167	53	101.6	130	0.08	0.00008	0	0
Pipe 172	167	164	157	58.2	130	0.08	0.00008	0.03	0.00003
Pipe 173	163	164	213	58.2	130	0.03	0.00003	0	0
Pipe 174	163	40	178	58.2	130	0.05	0.00005	0.01	0.00001
Pipe 175	164	39	182	58.2	130	0	0	0	0
Pipe 176	167	168	127	101.6	130	0.33	0.00033	0.03	0.00003
Pipe 177	168	169	113	101.6	130	0.44	0.00044	0.05	0.00005
Pipe 178	169	170	51	200	130	2.81	0.00281	0.06	0.00006
Pipe 179	170	30	146	200	130	2.26	0.00226	0.04	0.00004
Pipe 180	169	174	249	200	130	3.38	0.00338	0.09	0.00009
Pipe 181	174	175	254	200	130	3.68	0.00368	0.1	0.0001
Pipe 182	175	152	257	200	130	3.78	0.00378	0.11	0.00011
Pipe 183	152	153	195	83	130	0.44	0.00044	0.14	0.00014
Pipe 184	153	154	205	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 185	154	155	219	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 186	174	176	247	83	130	0.16	0.00016	0.02	0.00002
Pipe 187	176	177	271	58.2	130	0.07	0.00007	0.03	0.00003
Pipe 188	170	171	129	83	130	0.42	0.00042	0.14	0.00014
Pipe 189	171	173	190	58.2	130	0.17	0.00017	0.14	0.00014
Pipe 190	171	172	121	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 191	120	121	301	83	130	0.41	0.00041	0.13	0.00013
Pipe 192	121	122	177	58.2	130	0.27	0.00027	0.34	0.00034

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 193	122	123	150	31.8	130	0.12	0.00012	1.42	0.00142
Pipe 194	131	178	192	83	130	0.34	0.00034	0.09	0.00009
Pipe 195	178	179	197	83	130	0.23	0.00023	0.04	0.00004
Pipe 196	179	180	214	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 197	114	115	77	83	130	0.19	0.00019	0.03	0.00003
Pipe 198	115	116	217	58.2	130	0.09	0.00009	0.04	0.00004
Pipe 199	91	92	141	58.2	130	0.6	0.0006	1.44	0.00144
Pipe 200	92	93	129	200	130	0.44	0.00044	15.87	0.01587
Pipe 201	93	94	164	31.8	130	0.12	0.00012	1.42	0.00142
Pipe 202	93	95	134	31.8	130	0.15	0.00015	2.17	0.00217
Pipe 203	31	181	50	58.2	130	0.37	0.00037	0.61	0.00061
Pipe 204	181	182	172	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 205	182	183	133	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 206	36	184	114	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 207	184	185	299	58.2	130	0.23	0.00023	0.25	0.00025
Pipe 208	185	186	167	31.8	130	0.13	0.00013	1.65	0.00165
Pipe 209	37	187	259	83	130	0.5	0.0005	0.18	0.00018
Pipe 210	187	188	87	83	130	0.39	0.00039	0.12	0.00012
Pipe 211	188	189	172	58.2	130	0.28	0.00028	0.36	0.00036
Pipe 212	189	190	79	31.8	130	0.16	0.00016	2.44	0.00244
Pipe 213	38	191	84	83	130	0.57	0.00057	0.23	0.00023
Pipe 214	191	192	1000	58.2	130	0.42	0.00042	0.76	0.00076
Pipe 215	192	193	1000	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 216	193	194	1000	58.2	130	0.13	0.00013	0.09	0.00009

Pipe Number	Start Node	End Node	Length	Diameter	Roughness	Debit (Flow)		HF	
			(m)	(mm)	(C)	(l/s)	(m ³ /s)	(km)	(m)
Pipe 217	40	195	1000	58.2	130	0.26	0.00026	0.32	0.00032
Pipe 218	195	196	1000	58.2	130	0.12	0.00012	0.07	0.00007
Pipe 219	41	197	1000	83	130	0.45	0.00045	0.15	0.00015
Pipe 220	197	198	1000	58.2	130	0.25	0.00025	0.29	0.00029
Pipe 221	198	199	1000	58.2	130	0.11	0.00011	0.06	0.00006
Pipe 222	44	200	1000	83	130	0.12	0.00012	0.01	0.00001
Pipe 223	46	201	1000	83	130	0.38	0.00038	0.11	0.00011
Pipe 224	201	202	1000	83	130	0.25	0.00025	0.05	0.00005
Pipe 225	202	203	1000	83	130	0.11	0.00011	0.01	0.00001
Pipe 226	47	204	1000	58.2	130	0.87	0.00087	2.88	0.00288
Pipe 227	204	205	1000	58.2	130	0.31	0.00031	0.44	0.00044
Pipe 228	205	206	1000	31.8	130	0.23	0.00023	4.79	0.00479
Pipe 229	206	207	1000	31.8	130	0.14	0.00014	1.91	0.00191
Pipe 230	204	208	1000	58.2	130	0.45	0.00045	0.87	0.00087
Pipe 231	208	209	1000	58.2	130	0.35	0.00035	0.54	0.00054
Pipe 232	209	210	1000	58.2	130	0.24	0.00024	0.27	0.00027
Pipe 233	210	211	1000	31.8	130	0.11	0.00011	1.21	0.00121
Pipe 234	22	212	1000	83	130	0.26	0.00026	0.06	0.00006
Pipe 235	212	213	1000	58.2	130	0.14	0.00014	0.1	0.0001
Pipe 236	0	0	1000	200	130	3.36	0.00336	0.09	0.00009
Pipe 237	0	0	1000	200	130	9.2	0.0092	0.56	0.00056
Pipe 238	3	214	59	101	130	5.32	0.00532	5.64	0.00564
Pipe 239	214	246	60	58.2	130	0.91	0.00091	3.15	0.00315
Pipe 241	246	216	54	58.2	130	0.15	0.00015	0.11	0.00011

<i>Pipe Number</i>	<i>Start Node</i>	<i>End Node</i>	<i>Length</i>	<i>Diameter</i>	<i>Roughness</i>	<i>Debit (Flow)</i>		<i>HF</i>	
			<i>(m)</i>	<i>(mm)</i>	<i>(C)</i>	<i>(l/s)</i>	<i>(m³/s)</i>	<i>(km)</i>	<i>(m)</i>
Pipe 240	246	215	55	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 242	246	248	69	58.2	130	0.46	0.00046	0.87	0.00087
Pipe 244	248	218	51	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 243	248	217	53	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 245	214	219	64	101.6	130	4.26	0.00426	3.63	0.00363
Pipe 246	219	220	67	58.2	130	0.91	0.00091	3.15	0.00315
Pipe 247	220	222	60	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 248	220	221	59	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 249	220	223	62	58.2	130	0.46	0.00046	0.87	0.00087
Pipe 250	223	224	52	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 251	223	225	53	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 252	219	226	78	101.6	130	3.19	0.00319	2.13	0.00213
Pipe 253	226	227	65	58.2	130	0.91	0.00091	3.15	0.00315
Pipe 257	227	229	62	58.2	130	0.46	0.00046	0.87	0.00087
Pipe 255	227	228	60	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 254	230	231	58	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 260	227	230	67	101.6	130	2.13	0.00213	1	0.001
Pipe 261	230	232	66	101.6	130	1.06	0.00106	0.28	0.00028
Pipe 263	247	245	59	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 262	226	233	61	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 264	233	234	70	58.2	130	0.61	0.00061	1.49	0.00149
Pipe 266	234	236	58	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 265	234	235	56	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 267	234	237	65	58.2	130	0.15	0.00015	0.11	0.00011

Pipe Number	Start Node	End Node	Length	Diameter	Roughness	Debit (Flow)		HF	
			(m)	(mm)	(C)	(l/s)	(m ³ /s)	(km)	(m)
Pipe 268	237	239	64	101.6	130	0.91	0.00091	0.21	0.00021
Pipe 270	237	238	60	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 269	237	240	58	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 271	233	241	69	58.2	130	0.46	0.00046	0.87	0.00087
Pipe 272	241	242	59	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 259	241	243	55	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 258	241	247	42	58.2	130	0.15	0.00015	0.11	0.00011
Pipe 256	247	244	55	58.2	130	0.15	0.00015	0.11	0.00011

Sumber: Hasil Analisa Perhitungan