ASSIGNMENT ON EPANET

Water Distribution Network of Shahjalal International Airport

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202330044
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1. Network Layout

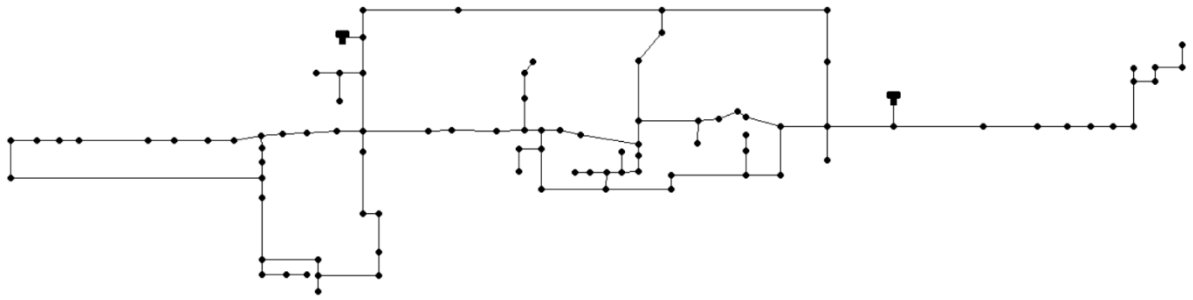


Figure 1 Full network without node or link IDs

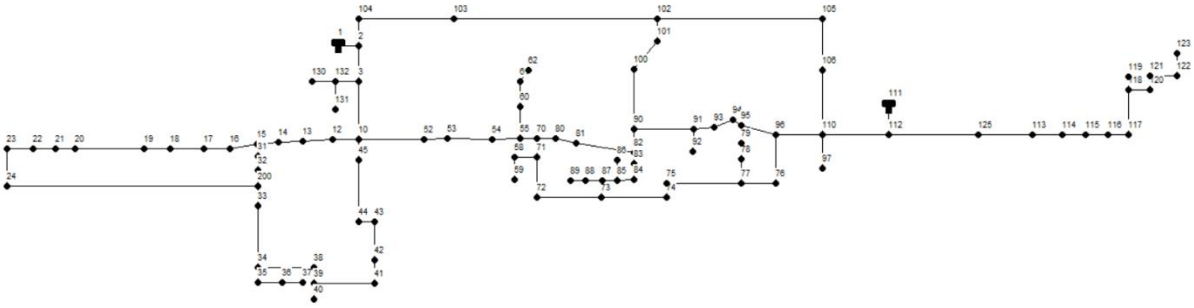


Figure 2 Full network showing node IDs

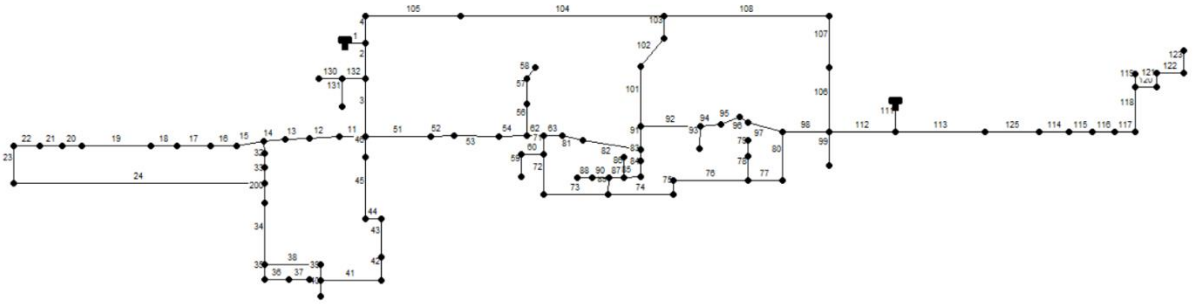


Figure 3 Full network showing pipe IDs

2. Nodal Pressure (24 Hours)

Hour	Node 2 (m)	Node 122 (m)
0:00	9.99	9.91
1:00	9.92	9.9
2:00	9.86	9.87
3:00	9.81	9.82
4:00	9.74	9.73
5:00	9.63	9.52
6:00	9.45	9.09
7:00	9.19	8.57
8:00	8.92	8.36
9:00	8.68	8.43
10:00	8.49	8.54
11:00	8.32	8.59
12:00	8.18	8.58
13:00	8.06	8.53
14:00	7.94	8.44
15:00	7.82	8.24
16:00	7.63	7.85
17:00	7.4	7.45
18:00	7.18	7.37
19:00	6.99	7.48
20:00	6.84	7.52
21:00	6.72	7.52
22:00	6.63	7.57
23:00	6.57	7.59
24:00	6.54	7.56

3. Pipe Discharge and Velocity (24 Hours)

Hour	Pipe 1 Flow (LPS)	Pipe 1 Velocity (m/s)	Pipe 122 Flow (LPS)	Pipe 122 Velocity (m/s)
0:00	39.47	0.24	0.45	0.05
1:00	29.78	0.18	0.37	0.04
2:00	28.82	0.18	0.37	0.04
3:00	33.83	0.21	0.43	0.05
4:00	44.88	0.28	0.56	0.07
5:00	70.46	0.43	0.85	0.1
6:00	109.87	0.68	1.29	0.15
7:00	143.22	0.88	1.68	0.2
8:00	147.7	0.91	1.75	0.2
9:00	128.63	0.79	1.57	0.18
10:00	104.5	0.64	1.34	0.16
11:00	84.9	0.52	1.16	0.13
12:00	72.19	0.45	1.04	0.12
13:00	64.47	0.4	0.97	0.11
14:00	61.84	0.38	0.95	0.11
15:00	75.63	0.47	1.09	0.13
16:00	106.54	0.66	1.4	0.16
17:00	128.92	0.79	1.65	0.19
18:00	122.27	0.75	1.6	0.19
19:00	97.37	0.6	1.36	0.16
20:00	77.08	0.48	1.17	0.14
21:00	60.56	0.37	1.01	0.12
22:00	36.44	0.22	0.78	0.09
23:00	15.34	0.09	0.57	0.07
24:00	4.03	0.02	0.45	0.05

4. First 12 Hours Node Pressure Profile

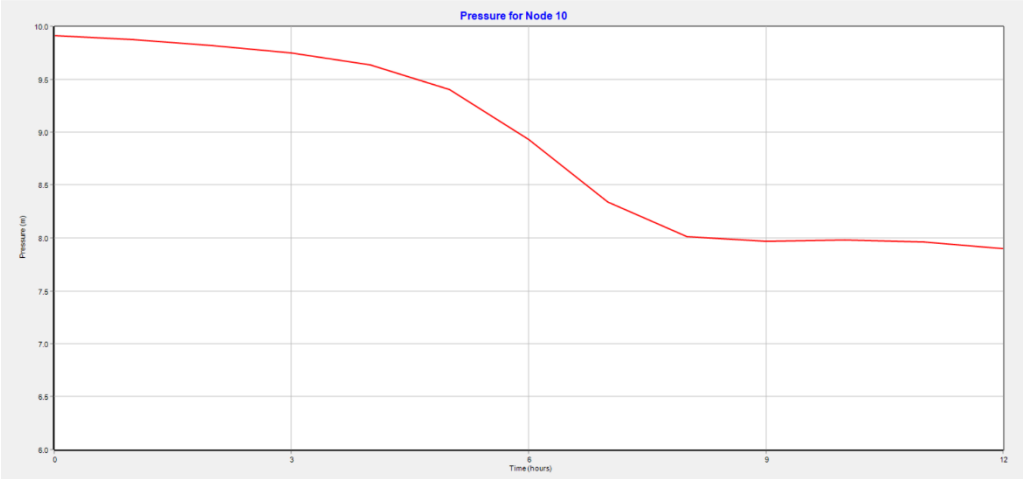


Figure 4 First 12 hours pressure on Node 10

5. Last 06 Hours Pipe Discharge & Velocity

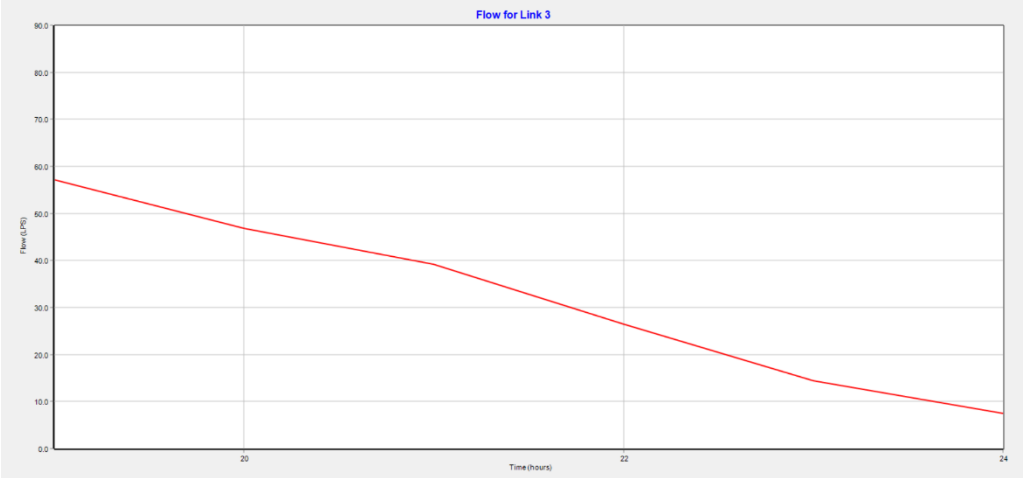


Figure 5 Last 06 hours discharge of Pipe 3

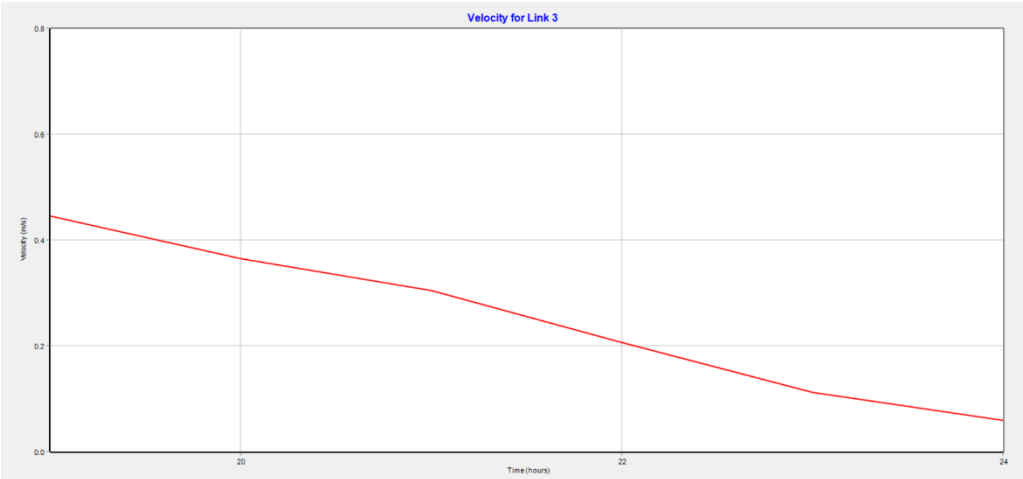


Figure 6 Last 06 hours velocity of Pipe 3