

ĐIỀU CHỈNH QUY HOẠCH PHÂN KHU ĐÔ THỊ TRUNG TÂM THÀNH PHỐ QUẢNG NGÃI
- TỶ LỆ 1/2000

BẢNG 1: BẢNG TÍNH TOÁN THỦY LỰC NODE GIỜ DỪNG NƯỚC LỚN NHẤT

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
30	J-1	9.79	<None>	<Collection: 0 items>	0	45.55	36
31	J-2	9.79	<None>	<Collection: 0 items>	0	45.46	36
33	J-3	9.24	<None>	<Collection: 1 item>	1	45.35	36
35	J-4	9.24	<None>	<Collection: 1 item>	0	45.35	36
37	J-5	6.9	<None>	<Collection: 1 item>	1	45.06	38
39	J-6	6.94	<None>	<Collection: 1 item>	0	44.87	38
41	J-7	6.64	<None>	<Collection: 1 item>	1	44.64	38
43	J-8	6.42	<None>	<Collection: 1 item>	1	44.51	38
45	J-9	6.45	<None>	<Collection: 1 item>	0	44.35	38
47	J-10	6.02	<None>	<Collection: 1 item>	1	43.87	38
49	J-11	6.4	<None>	<Collection: 1 item>	0	43.64	37
51	J-12	6.36	<None>	<Collection: 1 item>	1	43.47	37
53	J-13	7.39	<None>	<Collection: 1 item>	1	43.28	36
55	J-14	7.22	<None>	<Collection: 1 item>	2	43.19	36
57	J-15	6.85	<None>	<Collection: 1 item>	1	42.98	36
59	J-16	6.85	<None>	<Collection: 1 item>	1	42.98	36
61	J-17	6.83	<None>	<Collection: 1 item>	2	42.59	36
63	J-18	7.01	<None>	<Collection: 1 item>	1	42.13	35
65	J-19	7.15	<None>	<Collection: 0 items>	0	42.1	35
67	J-20	7.44	<None>	<Collection: 1 item>	1	41.31	34
69	J-21	7.33	<None>	<Collection: 1 item>	1	40.57	33
71	J-22	7.14	<None>	<Collection: 1 item>	1	40.33	33
73	J-23	7.09	<None>	<Collection: 1 item>	116	38.91	32
75	J-24	6.47	<None>	<Collection: 1 item>	1	39.4	33
77	J-25	6.92	<None>	<Collection: 1 item>	1	40.11	33
81	J-27	6.64	<None>	<Collection: 1 item>	1	42.84	36
83	J-28	7.17	<None>	<Collection: 1 item>	1	43.7	36
85	J-29	8	<None>	<Collection: 1 item>	1	44.85	37
87	J-30	8	<None>	<Collection: 1 item>	1	45.47	37
89	J-31	8.1	<None>	<Collection: 1 item>	1	46.09	38
91	J-32	9	<None>	<Collection: 1 item>	0	47.11	38
93	J-33	10.25	<None>	<Collection: 1 item>	0	51.66	41
95	J-34	8.9	<None>	<Collection: 1 item>	1	50.18	41
97	J-35	7.16	<None>	<Collection: 1 item>	2	44.91	38
102	J-38	6.39	<None>	<Collection: 0 items>	0	44.59	38
103	J-39	6.42	<None>	<Collection: 1 item>	0	44.51	38
106	J-40	8.11	<None>	<Collection: 1 item>	1	43.77	36
108	J-41	7.85	<None>	<Collection: 1 item>	116	39.85	32
110	J-42	8.15	<None>	<Collection: 1 item>	2	40.18	32
112	J-43	7.95	<None>	<Collection: 1 item>	1	40.08	32
114	J-44	7.79	<None>	<Collection: 1 item>	1	40.07	32
116	J-45	7.87	<None>	<Collection: 1 item>	0	39.98	32

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
118	J-46	7.13	<None>	<Collection: 1 item>	1	40.07	33
120	J-47	7.1	<None>	<Collection: 1 item>	1	40.07	33
122	J-48	7.09	<None>	<Collection: 1 item>	0	40.06	33
126	J-49	9.24	<None>	<Collection: 0 items>	0	45.42	36
128	J-50	7.82	<None>	<Collection: 1 item>	0	45.92	38
130	J-51	7.9	<None>	<Collection: 1 item>	1	46.68	39
132	J-52	7.9	<None>	<Collection: 1 item>	0	48.27	40
134	J-53	8.56	<None>	<Collection: 1 item>	0	49.63	41
136	J-54	10.88	<None>	<Collection: 1 item>	0	51.94	41
138	J-55	10.13	<None>	<Collection: 2 items>	2	52.82	43
140	J-56	9.76	<None>	<Collection: 2 items>	1	53.07	43
142	J-57	9.36	<None>	<Collection: 1 item>	2	53.26	44
144	J-58	8.51	<None>	<Collection: 1 item>	2	53.43	45
146	J-59	8.64	<None>	<Collection: 1 item>	1	53.49	45
148	J-60	9	<None>	<Collection: 1 item>	1	53.57	44
150	J-61	9	<None>	<Collection: 1 item>	3	51.72	43
152	J-62	8.28	<None>	<Collection: 1 item>	1	50.34	42
154	J-63	8.6	<None>	<Collection: 1 item>	2	48.93	40
156	J-64	7.74	<None>	<Collection: 1 item>	1	48.59	41
158	J-65	8.5	<None>	<Collection: 1 item>	0	48.61	40
160	J-66	8	<None>	<Collection: 1 item>	1	49.03	41
162	J-67	7.3	<None>	<Collection: 1 item>	1	50.67	43
164	J-68	9	<None>	<Collection: 1 item>	1	52.04	43
166	J-69	9.2	<None>	<Collection: 1 item>	1	54.04	45
168	J-70	7.88	<None>	<Collection: 1 item>	1	54.51	47
170	J-71	7.69	<None>	<Collection: 1 item>	1	55.09	47
172	J-72	7.91	<None>	<Collection: 1 item>	1	55.94	48
174	J-73	8.51	<None>	<Collection: 1 item>	0	57.28	49
176	J-74	9.5	<None>	<Collection: 1 item>	1	55.04	45
178	J-75	9	<None>	<Collection: 2 items>	3	54.65	46
180	J-76	9	<None>	<Collection: 2 items>	1	54.19	45
182	J-77	8.95	<None>	<Collection: 2 items>	2	53.49	44
184	J-78	8.16	<None>	<Collection: 2 items>	2	52.35	44
186	J-79	9.45	<None>	<Collection: 2 items>	0	51.84	42
188	J-80	9.05	<None>	<Collection: 1 item>	0	49.52	40
190	J-81	8.56	<None>	<Collection: 1 item>	1	48.27	40
192	J-82	8.82	<None>	<Collection: 1 item>	1	46.21	37
194	J-83	8.56	<None>	<Collection: 2 items>	21	45.08	36
196	J-84	8.42	<None>	<Collection: 2 items>	21	45	37
198	J-85	7.82	<None>	<Collection: 1 item>	0	45.51	38
202	J-86	7.75	<None>	<Collection: 1 item>	1	45.79	38
204	J-87	7.9	<None>	<Collection: 1 item>	0	46.68	39
206	J-88	7.9	<None>	<Collection: 1 item>	0	48.02	40
208	J-89	8.56	<None>	<Collection: 1 item>	1	49.63	41
210	J-90	10.88	<None>	<Collection: 1 item>	1	51.77	41

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
215	J-92	6.9	<None>	<Collection: 1 item>	1	45.22	38
217	J-93	7.02	<None>	<Collection: 1 item>	1	45.73	39
219	J-94	6.39	<None>	<Collection: 1 item>	0	44.59	38
221	J-95	6.45	<None>	<Collection: 1 item>	0	44.45	38
223	J-96	9.24	<None>	<Collection: 1 item>	1	45.38	36
226	J-97	6.94	<None>	<Collection: 1 item>	0	45.04	38
228	J-98	6.42	<None>	<Collection: 1 item>	0	44.58	38
231	J-99	6.45	<None>	<Collection: 1 item>	0	44.38	38
235	J-100	6.02	<None>	<Collection: 1 item>	1	44.13	38
237	J-101	7.39	<None>	<Collection: 1 item>	1	43.61	36
239	J-102	6.85	<None>	<Collection: 1 item>	1	43.03	36
241	J-103	6.85	<None>	<Collection: 1 item>	1	43.02	36
243	J-104	7.01	<None>	<Collection: 1 item>	3	42.14	35
245	J-105	7.44	<None>	<Collection: 1 item>	2	40.31	33
247	J-106	7.09	<None>	<Collection: 1 item>	1	40.11	33
249	J-107	6.92	<None>	<Collection: 1 item>	1	40.74	34
251	J-108	5.96	<None>	<Collection: 1 item>	1	41.54	36
253	J-109	5.96	<None>	<Collection: 1 item>	2	42.07	36
255	J-110	6.64	<None>	<Collection: 1 item>	2	42.88	36
257	J-111	7.17	<None>	<Collection: 1 item>	2	43.75	37
259	J-112	8	<None>	<Collection: 1 item>	2	44.91	37
261	J-113	8.1	<None>	<Collection: 1 item>	2	46.13	38
263	J-114	9	<None>	<Collection: 1 item>	1	47.18	38
267	J-115	9	<None>	<Collection: 1 item>	1	47.35	38
270	J-116	9	<None>	<Collection: 1 item>	3	47.25	38
272	J-117	8.5	<None>	<Collection: 1 item>	31	48.47	40
276	J-118	9.72	<None>	<Collection: 1 item>	1	52.2	42
278	J-119	9.72	<None>	<Collection: 1 item>	1	52.22	42
280	J-120	10.36	<None>	<Collection: 1 item>	2	52.1	42
282	J-121	11.22	<None>	<Collection: 1 item>	0	52.09	41
287	J-122	9.76	<None>	<Collection: 2 items>	2	53.18	43
290	J-123	8.51	<None>	<Collection: 1 item>	1	56.95	48
294	J-124	8.58	<None>	<Collection: 3 items>	7	54.22	46
300	J-125	9.49	<None>	<Collection: 1 item>	2	51.32	42
302	J-126	9.13	<None>	<Collection: 1 item>	1	51.31	42
306	J-127	8.9	<None>	<Collection: 1 item>	2	50.08	41
308	J-128	8.9	<None>	<Collection: 1 item>	0	50.1	41
310	J-129	8.9	<None>	<Collection: 1 item>	0	50.13	41
315	J-130	7.9	<None>	<Collection: 1 item>	1	47.54	40
319	J-131	7.9	<None>	<Collection: 1 item>	1	48.12	40
322	J-132	7.9	<None>	<Collection: 1 item>	1	47.73	40
326	J-133	6.78	<None>	<Collection: 1 item>	2	44.29	37
329	J-134	7.5	<None>	<Collection: 1 item>	1	47.6	40
331	J-135	9.33	<None>	<Collection: 1 item>	0	51.04	42
333	J-136	9.6	<None>	<Collection: 1 item>	0	52.01	42

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
340	J-138	9	<None>	<Collection: 1 item>	1	53.52	44
344	J-139	9.6	<None>	<Collection: 1 item>	0	51.96	42
348	J-140	8.42	<None>	<Collection: 1 item>	0	50.92	42
350	J-141	7.5	<None>	<Collection: 1 item>	1	47.6	40
352	J-142	6.78	<None>	<Collection: 1 item>	1	44.06	37
355	J-143	6	<None>	<Collection: 1 item>	4	42.58	37
357	J-144	7.44	<None>	<Collection: 1 item>	3	43.86	36
359	J-145	6.45	<None>	<Collection: 1 item>	2	45.91	39
361	J-146	7.74	<None>	<Collection: 1 item>	2	47.33	40
363	J-147	7.7	<None>	<Collection: 1 item>	2	48.73	41
365	J-148	7.98	<None>	<Collection: 1 item>	1	50.33	42
368	J-149	9.31	<None>	<Collection: 1 item>	1	51.32	42
371	J-150	8	<None>	<Collection: 1 item>	2	50.39	42
373	J-151	8	<None>	<Collection: 1 item>	2	48.93	41
375	J-152	8	<None>	<Collection: 1 item>	1	47.94	40
377	J-153	8.4	<None>	<Collection: 1 item>	2	46.81	38
379	J-154	8	<None>	<Collection: 1 item>	3	45.05	37
381	J-155	6.57	<None>	<Collection: 1 item>	2	43.83	37
383	J-156	6.01	<None>	<Collection: 1 item>	4	42.93	37
385	J-157	6.42	<None>	<Collection: 1 item>	2	40.49	34
388	J-158	5.9	<None>	<Collection: 1 item>	3	43.55	38
390	J-159	5.94	<None>	<Collection: 1 item>	3	43.26	37
396	J-160	6.43	<None>	<Collection: 1 item>	0	44.32	38
399	J-161	6.56	<None>	<Collection: 1 item>	1	44.21	38
402	J-162	6.35	<None>	<Collection: 1 item>	0	44.57	38
405	J-163	6.35	<None>	<Collection: 1 item>	0	44.58	38
409	J-164	6.39	<None>	<Collection: 1 item>	0	44.58	38
414	J-165	6.35	<None>	<Collection: 1 item>	1	44.6	38
418	J-166	6.35	<None>	<Collection: 1 item>	1	44.58	38
422	J-167	6.43	<None>	<Collection: 1 item>	2	44.58	38
424	J-168	6.43	<None>	<Collection: 1 item>	0	44.58	38
426	J-169	7.4	<None>	<Collection: 1 item>	3	44.72	37
430	J-170	7.61	<None>	<Collection: 1 item>	1	47.54	40
440	J-173	6	<None>	<Collection: 1 item>	0	45.25	39
442	J-174	6	<None>	<Collection: 1 item>	2	45.26	39
445	J-175	6	<None>	<Collection: 1 item>	2	42.49	36
447	J-176	6.3	<None>	<Collection: 1 item>	2	41.96	36
449	J-177	7.25	<None>	<Collection: 1 item>	2	41.5	34
453	J-179	6.8	<None>	<Collection: 1 item>	0	41.46	35
455	J-180	6.85	<None>	<Collection: 1 item>	2	39.85	33
457	J-181	7	<None>	<Collection: 1 item>	2	39.15	32
459	J-182	6.8	<None>	<Collection: 1 item>	1	39.12	32
463	J-183	6.5	<None>	<Collection: 1 item>	2	45.54	39
469	J-185	5.96	<None>	<Collection: 1 item>	2	41.97	36
471	J-186	7.17	<None>	<Collection: 1 item>	1	43.65	36

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
474	J-187	7.2	<None>	<Collection: 1 item>	5	42.68	35
478	J-188	6.58	<None>	<Collection: 1 item>	3	41.54	35
485	J-189	6.3	<None>	<Collection: 1 item>	1	44.04	38
487	J-190	6.45	<None>	<Collection: 1 item>	3	44.56	38
491	J-191	6.4	<None>	<Collection: 1 item>	1	45.55	39
499	J-193	7.17	<None>	<Collection: 1 item>	1	41.29	34
501	J-194	7.17	<None>	<Collection: 1 item>	0	41.21	34
505	J-195	7.95	<None>	<Collection: 1 item>	1	40.1	32
509	J-196	6.12	<None>	<Collection: 1 item>	1	41.64	35
513	J-197	6.12	<None>	<Collection: 1 item>	1	41.7	36
517	J-198	6.08	<None>	<Collection: 1 item>	1	41.94	36
519	J-199	6.73	<None>	<Collection: 1 item>	0	42.52	36
521	J-200	7.8	<None>	<Collection: 1 item>	1	42.3	34
526	J-201	6.33	<None>	<Collection: 1 item>	1	41.72	35
529	J-202	6.33	<None>	<Collection: 1 item>	1	41.67	35
533	J-203	6.92	<None>	<Collection: 1 item>	1	40.77	34
539	J-205	6.36	<None>	<Collection: 1 item>	2	42.37	36
547	J-207	6.43	<None>	<Collection: 1 item>	1	41.73	35
548	J-208	6.43	<None>	<Collection: 1 item>	1	41.72	35
550	J-209	6.29	<None>	<Collection: 1 item>	2	40.71	34
554	J-210	6.73	<None>	<Collection: 1 item>	0	42.43	36
557	J-211	6.36	<None>	<Collection: 1 item>	1	42.3	36
561	J-212	6.08	<None>	<Collection: 1 item>	1	41.79	36
563	J-213	6.12	<None>	<Collection: 1 item>	1	41.6	35
567	J-214	6.12	<None>	<Collection: 1 item>	1	41.56	35
578	J-216	6.57	<None>	<Collection: 1 item>	1	40.75	34
579	J-217	6.57	<None>	<Collection: 1 item>	1	40.72	34
582	J-218	8.11	<None>	<Collection: 1 item>	2	43.45	35
585	J-219	6.03	<None>	<Collection: 1 item>	1	44.01	38
589	J-220	6.08	<None>	<Collection: 1 item>	1	44.28	38
593	J-221	6.6	<None>	<Collection: 1 item>	1	44.37	38
597	J-222	6.08	<None>	<Collection: 1 item>	1	44.33	38
600	J-223	6.2	<None>	<Collection: 1 item>	0	44.45	38
602	J-224	6	<None>	<Collection: 1 item>	2	44.43	38
604	J-225	7.34	<None>	<Collection: 1 item>	1	44.44	37
608	J-226	6.03	<None>	<Collection: 1 item>	2	43.37	37
612	J-227	6.03	<None>	<Collection: 1 item>	2	42.82	37
615	J-228	0	<None>	<Collection: 1 item>	1	43.58	43
620	J-229	6.8	<None>	<Collection: 1 item>	2	44.18	37
624	J-230	6.36	<None>	<Collection: 1 item>	0	43.8	37
628	J-231	7.9	<None>	<Collection: 1 item>	1	45.55	38
631	J-232	7.62	<None>	<Collection: 1 item>	1	45.17	37
634	J-233	7.5	<None>	<Collection: 1 item>	1	47.68	40
637	J-234	7.62	<None>	<Collection: 1 item>	2	47.68	40
639	J-235	7.9	<None>	<Collection: 2 items>	7	45.57	38

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
643	J-236	6.48	<None>	<Collection: 1 item>	3	44.42	38
645	J-237	6.76	<None>	<Collection: 1 item>	3	44.17	37
652	J-238	8.78	<None>	<Collection: 1 item>	2	49.73	41
654	J-239	8.48	<None>	<Collection: 1 item>	2	49.88	41
657	J-240	10.5	<None>	<Collection: 1 item>	2	51.43	41
661	J-241	6.93	<None>	<Collection: 1 item>	1	47.98	41
665	J-242	6.93	<None>	<Collection: 1 item>	1	47.36	40
668	J-243	6.9	<None>	<Collection: 1 item>	1	46.28	39
670	J-244	7.74	<None>	<Collection: 1 item>	0	47.36	40
673	J-245	6.44	<None>	<Collection: 1 item>	0	46.4	40
675	J-246	6.44	<None>	<Collection: 1 item>	1	46.33	40
679	J-247	6.99	<None>	<Collection: 1 item>	1	45.62	39
681	J-248	6.9	<None>	<Collection: 1 item>	1	45.18	38
685	J-249	7.9	<None>	<Collection: 1 item>	0	46.75	39
688	J-250	7.9	<None>	<Collection: 1 item>	0	46.74	39
694	J-251	7.02	<None>	<Collection: 1 item>	1	45.89	39
703	J-253	10	<None>	<Collection: 1 item>	1	53.24	43
707	J-254	9.67	<None>	<Collection: 1 item>	1	52.15	42
712	J-255	7.6	<None>	<Collection: 1 item>	1	49.92	42
715	J-256	7.78	<None>	<Collection: 1 item>	2	49.76	42
719	J-257	8.5	<None>	<Collection: 1 item>	2	48.94	40
723	J-258	9	<None>	<Collection: 1 item>	2	50.97	42
727	J-259	6.47	<None>	<Collection: 1 item>	2	40.36	34
733	J-260	8.01	<None>	<Collection: 1 item>	1	47.55	39
736	J-261	8.96	<None>	<Collection: 1 item>	1	47.49	38
740	J-262	8.74	<None>	<Collection: 1 item>	0	50.37	42
743	J-263	9.04	<None>	<Collection: 1 item>	1	50.33	41
747	J-264	9.04	<None>	<Collection: 1 item>	0	50.39	41
748	J-265	8.74	<None>	<Collection: 1 item>	0	50.41	42
752	J-266	9.11	<None>	<Collection: 1 item>	0	51.19	42
755	J-267	9.4	<None>	<Collection: 1 item>	0	51.2	42
759	J-268	9.11	<None>	<Collection: 1 item>	0	51.23	42
762	J-269	9.4	<None>	<Collection: 1 item>	0	51.24	42
766	J-270	7.74	<None>	<Collection: 1 item>	1	48.1	40
770	J-271	10.69	<None>	<Collection: 1 item>	1	51.64	41
774	J-272	9	<None>	<Collection: 1 item>	1	51.73	43
778	J-273	7.27	<None>	<Collection: 1 item>	2	44.63	37
782	J-274	8.21	<None>	<Collection: 1 item>	1	50.49	42
787	J-275	6	<None>	<Collection: 1 item>	3	43.65	38
790	J-276	6.5	<None>	<Collection: 1 item>	4	43.93	37
798	J-277	6.49	<None>	<Collection: 1 item>	2	45.71	39
800	J-278	7.2	<None>	<Collection: 1 item>	1	46.3	39
804	J-279	6.55	<None>	<Collection: 1 item>	1	40.47	34
807	J-280	6.1	<None>	<Collection: 1 item>	1	40.55	34
811	J-281	6.1	<None>	<Collection: 1 item>	1	41.02	35

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
814	J-282	6.06	<None>	<Collection: 1 item>	2	40.48	34
818	J-283	5.65	<None>	<Collection: 1 item>	4	41.56	36
823	J-284	7.52	<None>	<Collection: 1 item>	1	43.25	36
828	J-285	9.05	<None>	<Collection: 1 item>	0	49.58	40
831	J-286	8.56	<None>	<Collection: 1 item>	0	49.68	41
836	J-287	7.5	<None>	<Collection: 1 item>	1	47.6	40
839	J-288	7.61	<None>	<Collection: 1 item>	2	47.57	40
841	J-289	7.74	<None>	<Collection: 1 item>	1	47.41	40
845	J-290	8.4	<None>	<Collection: 1 item>	2	46.83	38
849	J-291	8.2	<None>	<Collection: 1 item>	0	46.36	38
851	J-292	9.66	<None>	<Collection: 1 item>	1	51.84	42
859	J-295	9.67	<None>	<Collection: 1 item>	0	51.23	41
860	J-296	9.67	<None>	<Collection: 1 item>	1	51.18	41
864	J-297	8.61	<None>	<Collection: 1 item>	1	50.39	42
868	J-298	8.61	<None>	<Collection: 1 item>	1	50.34	42
872	J-299	8.43	<None>	<Collection: 1 item>	1	49.61	41
876	J-300	8.43	<None>	<Collection: 1 item>	0	49.56	41
880	J-301	8.28	<None>	<Collection: 1 item>	1	48.98	41
882	J-302	8.21	<None>	<Collection: 1 item>	1	48.27	40
884	J-303	8.2	<None>	<Collection: 1 item>	1	47.6	39
889	J-304	8.21	<None>	<Collection: 1 item>	0	48.35	40
892	J-305	9	<None>	<Collection: 1 item>	0	48.35	39
896	J-306	8.34	<None>	<Collection: 1 item>	0	49.01	41
901	J-307	8.28	<None>	<Collection: 1 item>	0	48.95	41
906	J-308	8.34	<None>	<Collection: 1 item>	0	48.96	41
911	J-309	9	<None>	<Collection: 1 item>	0	48.98	40
915	J-310	6.84	<None>	<Collection: 1 item>	0	45.39	38
919	J-311	6.53	<None>	<Collection: 1 item>	1	45.77	39
922	J-312	6.67	<None>	<Collection: 1 item>	1	45.41	39
926	J-313	6.8	<None>	<Collection: 1 item>	0	45.01	38
930	J-314	8.01	<None>	<Collection: 1 item>	1	47.33	39
933	J-315	7.45	<None>	<Collection: 1 item>	1	46.69	39
938	J-316	6.35	<None>	<Collection: 1 item>	1	44.62	38
941	J-317	6.39	<None>	<Collection: 1 item>	1	44.6	38
946	J-318	6.64	<None>	<Collection: 1 item>	0	44.61	38
950	J-319	6.45	<None>	<Collection: 1 item>	0	44.36	38
953	J-320	6.2	<None>	<Collection: 1 item>	0	44.07	38
962	J-322	6.01	<None>	<Collection: 1 item>	1	41.93	36
965	J-323	6.3	<None>	<Collection: 1 item>	1	41.56	35
969	J-324	8.9	<None>	<Collection: 2 items>	2	54.19	45
973	J-325	8	<None>	<Collection: 0 items>	0	56	48
976	J-326	8.5	<None>	<Collection: 2 items>	1	55.95	47
980	J-327	8	<None>	<Collection: 2 items>	3	55.73	48
984	J-328	9.63	<None>	<Collection: 1 item>	1	53.24	44
987	J-329	7.97	<None>	<Collection: 2 items>	2	56.28	48

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
991	J-330	9.33	<None>	<Collection: 2 items>	2	53.69	44
995	J-331	7.74	<None>	<Collection: 1 item>	1	53.91	46
1000	J-332	7.76	<None>	<Collection: 1 item>	2	48.74	41
1007	J-334	8.42	<None>	<Collection: 1 item>	0	50.96	42
1010	J-335	7.65	<None>	<Collection: 1 item>	1	49.92	42
1014	J-336	8.19	<None>	<Collection: 1 item>	1	50.83	43
1017	J-337	7.52	<None>	<Collection: 1 item>	1	49.92	42
1023	J-338	6.96	<None>	<Collection: 1 item>	2	45.25	38
1027	J-339	6.35	<None>	<Collection: 1 item>	1	44.52	38
1030	J-340	8.66	<None>	<Collection: 1 item>	1	50.82	42
1033	J-341	8.5	<None>	<Collection: 1 item>	1	50.96	42
1037	J-342	9.31	<None>	<Collection: 1 item>	1	51.52	42
1041	J-343	7.78	<None>	<Collection: 1 item>	1	49.78	42
1042	J-344	7.78	<None>	<Collection: 1 item>	1	49.69	42
1046	J-345	7.82	<None>	<Collection: 1 item>	2	48.66	41
1050	J-346	6.65	<None>	<Collection: 1 item>	2	45.97	39
1054	J-347	8.5	<None>	<Collection: 1 item>	1	49.34	41
1060	J-348	9	<None>	<Collection: 1 item>	1	50.66	42
1065	J-349	8.42	<None>	<Collection: 1 item>	0	50.94	42
1068	J-350	7.98	<None>	<Collection: 1 item>	0	50.38	42
1072	J-351	9.34	<None>	<Collection: 1 item>	0	51.68	42
1075	J-352	8.67	<None>	<Collection: 1 item>	1	50.84	42
1079	J-353	8.45	<None>	<Collection: 1 item>	1	50.33	42
1083	J-354	8.28	<None>	<Collection: 1 item>	1	47.36	39
1087	J-355	7.15	<None>	<Collection: 1 item>	2	44.79	38
1090	J-356	7.54	<None>	<Collection: 1 item>	2	44.78	37
1094	J-357	8.06	<None>	<Collection: 2 items>	8	47.62	39
1097	J-358	8.4	<None>	<Collection: 1 item>	2	48.74	40
1101	J-359	7.95	<None>	<Collection: 1 item>	1	49.25	41
1105	J-360	7.85	<None>	<Collection: 1 item>	1	49.81	42
1107	J-361	7.27	<None>	<Collection: 1 item>	1	49.61	42
1111	J-362	7.96	<None>	<Collection: 1 item>	1	50.71	43
1115	J-363	7.84	<None>	<Collection: 1 item>	1	44.8	37
1119	J-364	8.28	<None>	<Collection: 1 item>	1	45.15	37
1123	J-365	6.35	<None>	<Collection: 1 item>	1	46.37	40
1127	J-366	7.4	<None>	<Collection: 1 item>	1	47.56	40
1130	J-367	6.56	<None>	<Collection: 1 item>	0	46.58	40
1134	J-368	7.63	<None>	<Collection: 1 item>	1	46.85	39
1139	J-369	7.94	<None>	<Collection: 1 item>	1	46.34	38
1143	J-370	6.9	<None>	<Collection: 1 item>	1	45.23	38
1146	J-371	6.8	<None>	<Collection: 1 item>	1	45.08	38
1150	J-372	6.6	<None>	<Collection: 1 item>	2	44.97	38
1152	J-373	6.47	<None>	<Collection: 1 item>	1	44.87	38
1156	J-374	6.83	<None>	<Collection: 1 item>	1	45.34	38
1160	J-375	6.82	<None>	<Collection: 1 item>	1	44.85	38

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
1164	J-376	7.44	<None>	<Collection: 1 item>	1	47.36	40
1167	J-377	7.29	<None>	<Collection: 1 item>	1	46.31	39
1171	J-378	7.4	<None>	<Collection: 1 item>	1	47.01	40
1174	J-379	6	<None>	<Collection: 1 item>	1	46.94	41
1178	J-380	7.65	<None>	<Collection: 1 item>	1	46.89	39
1182	J-381	6.93	<None>	<Collection: 1 item>	1	46.89	40
1186	J-382	7.29	<None>	<Collection: 1 item>	0	46.6	39
1189	J-383	7.11	<None>	<Collection: 1 item>	1	46.52	39
1193	J-384	7	<None>	<Collection: 1 item>	1	46.49	39
1197	J-385	7.56	<None>	<Collection: 1 item>	1	46.52	39
1201	J-386	6.92	<None>	<Collection: 1 item>	2	46.52	40
1205	J-387	7.25	<None>	<Collection: 1 item>	2	46.57	39
1209	J-388	7.96	<None>	<Collection: 1 item>	1	46.31	38
1212	J-389	7.08	<None>	<Collection: 1 item>	1	45.77	39
1216	J-390	6.56	<None>	<Collection: 1 item>	1	46.42	40
1219	J-391	7.05	<None>	<Collection: 1 item>	1	46.1	39
1224	J-392	5.56	<None>	<Collection: 1 item>	1	43.69	38
1229	J-393	6.44	<None>	<Collection: 1 item>	0	44.42	38
1232	J-394	6.31	<None>	<Collection: 1 item>	1	44.25	38
1236	J-395	6.99	<None>	<Collection: 1 item>	2	42.99	36
1240	J-396	6	<None>	<Collection: 1 item>	2	42.29	36
1248	J-398	5.98	<None>	<Collection: 1 item>	2	42.11	36
1249	J-399	5.98	<None>	<Collection: 1 item>	1	42.07	36
1253	J-400	6.35	<None>	<Collection: 1 item>	1	41.98	36
1257	J-401	6.19	<None>	<Collection: 1 item>	2	41.95	36
1261	J-402	6.19	<None>	<Collection: 1 item>	1	41.39	35
1264	J-403	6.5	<None>	<Collection: 1 item>	1	40.83	34
1272	J-405	6.39	<None>	<Collection: 1 item>	1	41.36	35
1273	J-406	6.39	<None>	<Collection: 1 item>	1	41.27	35
1278	J-407	6.29	<None>	<Collection: 1 item>	1	40.59	34
1281	J-408	5.03	<None>	<Collection: 1 item>	2	40.45	35
1285	J-409	6.55	<None>	<Collection: 1 item>	1	40.45	34
1289	J-410	6.01	<None>	<Collection: 1 item>	3	40.37	34
1293	J-411	7.33	<None>	<Collection: 1 item>	2	40.22	33
1297	J-412	6.01	<None>	<Collection: 1 item>	1	41.93	36
1300	J-413	6.03	<None>	<Collection: 1 item>	0	41.56	35
1304	J-414	6.07	<None>	<Collection: 1 item>	1	41.4	35
1307	J-415	6.2	<None>	<Collection: 1 item>	1	40.82	35
1311	J-416	6.3	<None>	<Collection: 1 item>	1	40.84	34
1314	J-417	5.99	<None>	<Collection: 1 item>	2	40.49	34
1318	J-418	6.5	<None>	<Collection: 1 item>	2	44.78	38
1324	J-419	5.76	<None>	<Collection: 1 item>	2	43.04	37
1325	J-420	5.76	<None>	<Collection: 1 item>	2	43.04	37
1329	J-421	6.08	<None>	<Collection: 1 item>	3	44.18	38
1333	J-422	6.96	<None>	<Collection: 1 item>	1	45.08	38

ID	Label	Elevation (m)	Zone	DEMAND COLLECTION	Demand (l/s)	Hydraulic Frade (m)	Pressure (mH2O)
1337	J-423	6.43	<None>	<Collection: 1 item>	1	44.38	38
1341	J-424	8.34	<None>	<Collection: 1 item>	1	48.75	40
1344	J-425	7.82	<None>	<Collection: 1 item>	2	48.71	41
1348	J-426	7.81	<None>	<Collection: 1 item>	2	48.71	41
1352	J-427	8.06	<None>	<Collection: 1 item>	1	48.72	41
1356	J-428	8.74	<None>	<Collection: 1 item>	1	50.37	42
1359	J-429	8.93	<None>	<Collection: 1 item>	2	50.23	41
1363	J-430	8.73	<None>	<Collection: 1 item>	2	50.2	41
1367	J-431	7.92	<None>	<Collection: 1 item>	1	48.5	40
1371	J-432	8.66	<None>	<Collection: 1 item>	1	51.29	43
1375	J-433	9.45	<None>	<Collection: 1 item>	1	51.91	42
1379	J-434	6	<None>	<Collection: 1 item>	60	45.3	39
1383	J-435	7.85	<None>	<Collection: 1 item>	1	39.87	32
1387	J-436	7.87	<None>	<Collection: 0 items>	0	39.78	32
1394	J-437	8.48	<None>	<Collection: 1 item>	1	47.97	39
1404	J-438	8.01	<None>	<Collection: 1 item>	2	50.69	43
1407	J-439	8.4	<None>	<Collection: 1 item>	2	49.88	41
1411	J-440	7.38	<None>	<Collection: 1 item>	1	46.06	39
1414	J-441	7.39	<None>	<Collection: 1 item>	3	46.05	39
1418	J-442	7.2	<None>	<Collection: 1 item>	2	46.39	39
1422	J-443	6.6	<None>	<Collection: 1 item>	1	43.8	37
1425	J-444	6.47	<None>	<Collection: 1 item>	2	43.73	37
1429	J-445	6.92	<None>	<Collection: 1 item>	1	43.73	37
1433	J-446	6.92	<None>	<Collection: 1 item>	1	43.73	37
1437	J-447	6.3	<None>	<Collection: 1 item>	2	43.16	37
1439	J-448	6	<None>	<Collection: 1 item>	1	42.93	37
1444	J-449	6.5	<None>	<Collection: 1 item>	2	42.92	36
1487	J-91	10.13	<None>	<Collection: 1 item>	0	52.82	43
1497	J-452	7.95	<None>	<Collection: 1 item>	58	39.9	32
1501	J-453	0	<None>	<Collection: 1 item>	116	42.23	42
1503	J-454	0	<None>	<Collection: 0 items>	0	42.23	42
1521	J-457	9.01	<None>	<Collection: 0 items>	-	62.80	54
1525	J-458	9.68	<None>	<Collection: 0 items>	0	53.07	43
1530	J-459	9.18	<None>	<Collection: 0 items>	0	53.91	45
1534	J-460	7.52	<None>	<Collection: 1 item>	58	38.88	31
1537	J-461	8.15	<None>	<Collection: 0 items>	0	46.21	38

ĐIỀU CHỈNH QUY HOẠCH PHÂN KHU ĐÔ THỊ TRUNG TÂM THÀNH PHỐ QUẢNG NGÃI - TỶ LỆ 1/2000

BẢNG 2: BẢNG TÍNH TOÁN THỦY LỰC ĐƯỜNG ỐNG GIỜ DỪNG NƯỚC LỚN NHẤT

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
32	P-1	18	J-1	J-2	500	Cast Iron	130	FALSE	0	172	0.88	0.001	TRUE	59
34	P-2	47	J-2	J-3	500	Cast Iron	130	FALSE	0	121	0.62	0.001	TRUE	154
36	P-3	3	J-3	J-4	400	Cast Iron	130	FALSE	0	-19	0.15	0	TRUE	10
38	P-4	81	J-4	J-5	400	Cast Iron	130	FALSE	0	81	0.65	0.001	TRUE	266
40	P-5	58	J-5	J-6	400	Cast Iron	130	FALSE	0	77	0.61	0.001	TRUE	190
42	P-6	82	J-6	J-7	400	Cast Iron	130	FALSE	0	73	0.58	0.001	TRUE	269
44	P-7	47	J-7	J-8	400	Cast Iron	130	FALSE	0	70	0.55	0.001	TRUE	154
48	P-9	68	J-9	J-10	300	Cast Iron	130	FALSE	0	56	0.79	0.002	TRUE	223
50	P-10	49	J-10	J-11	300	Cast Iron	130	FALSE	0	44	0.62	0.001	TRUE	161
52	P-11	38	J-11	J-12	300	Cast Iron	130	FALSE	0	43	0.61	0.001	TRUE	125
54	P-12	57	J-12	J-13	300	Cast Iron	130	FALSE	0	38	0.53	0.001	TRUE	187
56	P-13	33	J-13	J-14	300	Cast Iron	130	FALSE	0	32	0.45	0.001	TRUE	108
58	P-14	121	J-14	J-15	300	Cast Iron	130	FALSE	0	26	0.37	0.001	TRUE	397
60	P-15	10	J-15	J-16	300	Cast Iron	130	FALSE	0	2	0.03	0	TRUE	33
62	P-16	77	J-16	J-17	300	Cast Iron	130	FALSE	0	47	0.66	0.002	TRUE	253
64	P-17	118	J-17	J-18	300	Cast Iron	130	FALSE	0	40	0.57	0.001	TRUE	387
66	P-18	21	J-18	J-19	300	Cast Iron	130	FALSE	0	24	0.33	0	TRUE	69
68	P-19	76	J-19	J-20	200	Cast Iron	130	FALSE	0	24	0.75	0.003	TRUE	249
70	P-20	112	J-20	J-21	200	Cast Iron	130	FALSE	0	18	0.59	0.002	TRUE	367
72	P-21	39	J-21	J-22	200	Cast Iron	130	FALSE	0	18	0.56	0.002	TRUE	128
78	P-24	111	J-24	J-25	300	PVC	150	FALSE	0	-61	0.86	0.002	TRUE	364
82	P-26	118	J-185	J-27	300	PVC	150	FALSE	0	-66	0.93	0.002	TRUE	387
86	P-28	140	J-28	J-29	300	PVC	150	FALSE	0	-69	0.98	0.002	TRUE	459
88	P-29	69	J-29	J-30	300	PVC	150	FALSE	0	-73	1.03	0.003	TRUE	226
90	P-30	68	J-30	J-31	300	PVC	150	FALSE	0	-73	1.04	0.003	TRUE	223
92	P-31	60	J-31	J-32	300	PVC	150	FALSE	0	-103	1.45	0.005	TRUE	197
100	P-35	261	J-35	J-38	150	Cast Iron	130	FALSE	0	3	0.2	0	TRUE	856
113	P-41	127	J-42	J-43	150	PVC	150	FALSE	0	3	0.18	0	TRUE	417
117	P-43	57	J-44	J-45	150	PVC	150	FALSE	0	5	0.26	0	TRUE	187
119	P-44	250	J-45	J-46	150	PVC	150	FALSE	0	-2	0.12	0	TRUE	820
121	P-45	97	J-46	J-47	150	PVC	150	FALSE	0	0	0	0	TRUE	318
123	P-22(1)	86	J-22	J-48	200	PVC	150	FALSE	0	14	0.45	0.001	TRUE	282

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
124	P-22(2)	23	J-48	J-23	200	PVC	150	FALSE	0	63	2.02	0.015	TRUE	75
125	P-46	71	J-47	J-48	150	PVC	150	FALSE	0	1	0.08	0	TRUE	233
127	P-47	43	J-2	J-49	300	PVC	150	FALSE	0	22	0.31	0	TRUE	141
139	P-53	69	J-54	J-55	300	PVC	130	FALSE	0	-76	1.08	0.004	TRUE	226
145	P-56	91	J-57	J-58	150	Cast Iron	130	FALSE	0	-4	0.24	0.001	TRUE	298
147	P-57	68	J-58	J-59	150	PVC	150	FALSE	0	-3	0.19	0	TRUE	223
149	P-58	64	J-59	J-60	150	PVC	150	FALSE	0	-4	0.24	0	TRUE	210
157	P-62	29	J-63	J-64	250	PVC	150	FALSE	0	52	1.06	0.004	TRUE	95
159	P-63	93	J-64	J-65	300	PVC	150	FALSE	0	-10	0.14	0	TRUE	305
161	P-64	31	J-65	J-66	300	PVC	150	FALSE	0	-91	1.28	0.004	TRUE	102
165	P-66	87	J-67	J-68	300	PVC	150	FALSE	0	-99	1.4	0.005	TRUE	285
169	P-68	128	J-69	J-70	300	PVC	150	FALSE	0	-45	0.63	0.001	TRUE	420
171	P-69	85	J-70	J-71	300	PVC	150	FALSE	0	-63	0.89	0.002	TRUE	279
173	P-70	102	J-71	J-72	300	PVC	150	FALSE	0	-70	0.99	0.003	TRUE	335
179	P-73	106	J-74	J-75	150	PVC	150	FALSE	0	7	0.41	0.001	TRUE	348
181	P-74	96	J-75	J-76	150	PVC	150	FALSE	0	8	0.48	0.001	TRUE	315
183	P-75	96	J-76	J-77	150	PVC	150	FALSE	0	10	0.59	0.002	TRUE	315
185	P-76	113	J-77	J-78	150	PVC	150	FALSE	0	12	0.71	0.003	TRUE	371
187	P-77	45	J-78	J-79	150	PVC	150	FALSE	0	13	0.76	0.003	TRUE	148
195	P-81	61	J-82	J-83	150	PVC	150	FALSE	0	17	0.98	0.006	TRUE	200
197	P-82	170	J-83	J-84	150	PVC	150	FALSE	0	2	0.14	0	TRUE	558
199	P-48(1)	47	J-49	J-85	300	PVC	150	FALSE	0	-31	0.44	0.001	TRUE	154
200	P-48(2)	91	J-85	J-50	300	PVC	150	FALSE	0	-50	0.71	0.001	TRUE	298
201	P-83	25	J-84	J-85	150	PVC	150	FALSE	0	-18	1.04	0.006	TRUE	82
218	P-91	57	J-92	J-93	100	Cast Iron	130	FALSE	0	-4	0.45	0.003	TRUE	187
222	P-93	62	J-94	J-95	150	Cast Iron	130	FALSE	0	5	0.27	0.001	TRUE	203
224	P-84(1)	6	J-4	J-96	300	Cast Iron	130	FALSE	0	-47	0.67	0.002	TRUE	20
225	P-84(2)	72	J-96	J-86	300	Cast Iron	130	FALSE	0	-50	0.7	0.002	TRUE	236
230	P-96	65	J-98	J-95	150	Cast Iron	130	FALSE	0	5	0.26	0.001	TRUE	213
232	P-37(1)	35	J-39	J-99	150	Cast Iron	130	FALSE	0	6	0.36	0.001	TRUE	115
233	P-37(2)	6	J-99	J-9	150	PVC	150	FALSE	0	9	0.49	0.002	TRUE	20
234	P-97	9	J-95	J-99	150	Cast Iron	130	FALSE	0	9	0.51	0.002	TRUE	30
236	P-98	67	J-99	J-100	150	Cast Iron	130	FALSE	0	6	0.36	0.001	TRUE	220
240	P-100	151	J-101	J-102	150	Cast Iron	130	FALSE	0	6	0.36	0.001	TRUE	495

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
242	P-101	11	J-102	J-103	150	PVC	150	FALSE	0	4	0.21	0	TRUE	36
244	P-102	195	J-103	J-104	100	Cast Iron	130	FALSE	0	2	0.31	0.001	TRUE	640
246	P-103	87	J-104	J-105	100	Cast Iron	130	FALSE	0	6	0.71	0.006	TRUE	285
254	P-107	96	J-108	J-109	300	PVC	150	FALSE	0	-56	0.79	0.002	TRUE	315
256	P-108	117	J-109	J-110	300	PVC	150	FALSE	0	-63	0.89	0.002	TRUE	384
258	P-109	117	J-110	J-111	300	PVC	150	FALSE	0	-66	0.93	0.002	TRUE	384
260	P-110	140	J-111	J-112	300	PVC	150	FALSE	0	-70	0.99	0.003	TRUE	459
262	P-111	133	J-112	J-113	300	PVC	150	FALSE	0	-74	1.04	0.003	TRUE	436
264	P-32(1)	13	J-32	J-114	250	PVC	150	FALSE	0	-35	0.71	0.002	TRUE	43
268	P-113	18	J-114	J-115	300	PVC	150	FALSE	0	-75	1.06	0.003	TRUE	59
269	P-114	193	J-115	J-64	300	PVC	150	FALSE	0	-61	0.86	0.002	TRUE	633
271	P-115	18	J-32	J-116	300	PVC	150	FALSE	0	-68	0.96	0.002	TRUE	59
273	P-116	283	J-116	J-117	300	PVC	150	FALSE	0	-49	0.69	0.001	TRUE	928
274	P-117	13	J-117	J-65	300	PVC	150	FALSE	0	-80	1.14	0.003	TRUE	43
275	P-118	14	J-116	J-115	200	PVC	150	FALSE	0	-22	0.71	0.002	TRUE	46
279	P-120	11	J-118	J-119	300	PVC	150	FALSE	0	-33	0.46	0.001	TRUE	36
281	P-121	183	J-119	J-120	150	PVC	150	FALSE	0	3	0.16	0	TRUE	600
283	P-89(1)	21	J-90	J-121	300	PVC	150	FALSE	0	-97	1.38	0.005	TRUE	69
288	P-55(1)	7	J-56	J-122	300	PVC	150	FALSE	0	-99	1.4	0.005	TRUE	23
292	P-71(2)	7	J-123	J-73	300	PVC	150	FALSE	0	-176	2.5	0.014	TRUE	23
293	P-124	247	J-122	J-123	300	PVC	150	FALSE	0	-97	1.37	0.005	TRUE	810
298	P-126	98	J-55	J-78	100	PVC	150	FALSE	0	3	0.37	0.001	TRUE	321
303	P-33(1)	33	J-33	J-126	200	PVC	150	FALSE	0	27	0.87	0.003	TRUE	108
305	P-129	77	J-125	J-126	200	PVC	150	FALSE	0	2	0.06	0	TRUE	253
307	P-130	114	J-125	J-127	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	374
309	P-131	10	J-127	J-128	300	PVC	150	FALSE	0	-31	0.44	0.001	TRUE	33
311	P-34(1)	8	J-34	J-129	300	PVC	150	FALSE	0	64	0.9	0.002	TRUE	26
313	P-132	6	J-128	J-129	300	Cast Iron	130	FALSE	0	-45	0.64	0.001	TRUE	20
320	P-87(1)	8	J-88	J-131	300	PVC	150	FALSE	0	-86	1.22	0.004	TRUE	26
324	P-133(1)(2)	8	J-132	J-130	150	Cast Iron	130	FALSE	0	17	0.97	0.007	TRUE	26
335	P-141	17	J-136	J-119	500	PVC	150	FALSE	0	-330	1.68	0.004	TRUE	56
336	P-142	91	J-119	J-60	500	PVC	150	FALSE	0	-367	1.87	0.005	TRUE	298
337	P-143	23	J-60	J-69	500	PVC	150	FALSE	0	-432	2.2	0.006	TRUE	75
341	P-59(1)	9	J-60	J-138	300	PVC	150	FALSE	0	60	0.85	0.002	TRUE	30

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
342	P-59(2)	100	J-138	J-61	250	PVC	150	FALSE	0	66	1.33	0.005	TRUE	328
343	P-145	96	J-138	J-118	300	PVC	150	FALSE	0	92	1.3	0.004	TRUE	315
347	P-146	17	J-118	J-139	300	PVC	150	FALSE	0	92	1.3	0.004	TRUE	56
356	P-151	133	J-104	J-143	200	PVC	150	FALSE	0	-15	0.47	0.001	TRUE	436
362	P-154	101	J-145	J-146	200	PVC	150	FALSE	0	-32	1.01	0.004	TRUE	331
366	P-156	71	J-147	J-148	200	PVC	150	FALSE	0	-41	1.31	0.007	TRUE	233
367	P-157	46	J-148	J-140	200	PVC	150	FALSE	0	-30	0.97	0.004	TRUE	151
369	P-147(1)	64	J-139	J-149	300	PVC	150	FALSE	0	77	1.09	0.003	TRUE	210
372	P-158	59	J-149	J-150	150	PVC	150	FALSE	0	16	0.9	0.005	TRUE	194
374	P-159	82	J-150	J-151	150	PVC	150	FALSE	0	17	0.96	0.005	TRUE	269
376	P-160	58	J-151	J-152	150	PVC	150	FALSE	0	17	0.94	0.005	TRUE	190
380	P-162	128	J-153	J-154	100	PVC	150	FALSE	0	5	0.65	0.004	TRUE	420
382	P-163	128	J-154	J-155	100	PVC	150	FALSE	0	4	0.53	0.003	TRUE	420
387	P-166	83	J-157	J-105	100	Cast Iron	130	FALSE	0	2	0.21	0.001	TRUE	272
389	P-167	96	J-142	J-158	200	Cast Iron	130	FALSE	0	16	0.52	0.002	TRUE	315
392	P-152(2)	103	J-159	J-144	200	PVC	150	FALSE	0	-20	0.63	0.002	TRUE	338
393	P-168	77	J-158	J-159	200	Cast Iron	130	FALSE	0	14	0.43	0.001	TRUE	253
394	P-169	123	J-159	J-156	200	Cast Iron	130	FALSE	0	11	0.36	0.001	TRUE	403
400	P-172(1)	67	J-160	J-161	100	Cast Iron	130	FALSE	0	1	0.18	0.001	TRUE	220
401	P-172(2)	89	J-161	J-100	100	Cast Iron	130	FALSE	0	1	0.13	0	TRUE	292
403	P-171(1)	36	J-39	J-162	100	PVC	150	FALSE	0	-2	0.21	0.001	TRUE	118
406	P-173	8	J-162	J-163	200	Cast Iron	130	FALSE	0	-5	0.17	0	TRUE	26
410	P-36(1)	5	J-38	J-164	150	Cast Iron	130	FALSE	0	5	0.27	0.001	TRUE	16
411	P-36(2)	30	J-164	J-39	150	Cast Iron	130	FALSE	0	5	0.28	0.001	TRUE	98
412	P-176	13	J-163	J-164	200	Cast Iron	130	FALSE	0	-4	0.12	0	TRUE	43
413	P-177	8	J-164	J-94	200	Cast Iron	130	FALSE	0	-4	0.13	0	TRUE	26
415	P-178	63	J-94	J-165	200	Cast Iron	130	FALSE	0	-3	0.1	0	TRUE	207
416	P-179	46	J-165	J-98	150	Cast Iron	130	FALSE	0	2	0.13	0	TRUE	151
419	P-136(1)	16	J-38	J-166	200	Cast Iron	130	FALSE	0	6	0.19	0	TRUE	52
421	P-181	7	J-163	J-166	150	Cast Iron	130	FALSE	0	-2	0.09	0	TRUE	23
423	P-182	96	J-166	J-167	150	Cast Iron	130	FALSE	0	0	0	0	TRUE	315
425	P-183	6	J-167	J-168	150	Cast Iron	130	FALSE	0	2	0.12	0	TRUE	20
429	P-186	12	J-134	J-141	200	PVC	150	FALSE	0	-2	0.07	0	TRUE	39
432	P-188	67	J-170	J-146	100	PVC	150	FALSE	0	2	0.29	0.001	TRUE	220

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
435	P-190	125	J-146	J-153	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	410
436	P-191	79	J-153	J-113	100	PVC	150	FALSE	0	4	0.5	0.003	TRUE	259
437	P-192	12	J-113	J-31	300	PVC	150	FALSE	0	45	0.63	0.001	TRUE	39
444	P-194(2)	65	J-174	J-173	100	PVC	150	FALSE	0	0	0.02	0	TRUE	213
448	P-196	73	J-175	J-176	100	PVC	150	FALSE	0	4	0.46	0.002	TRUE	239
450	P-197	185	J-176	J-177	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	607
454	P-199	85	J-177	J-179	100	PVC	150	FALSE	0	1	0.11	0	TRUE	279
458	P-201	200	J-180	J-181	100	PVC	150	FALSE	0	2	0.31	0.001	TRUE	656
460	P-23(1)	34	J-23	J-182	300	PVC	150	FALSE	0	-60	0.85	0.002	TRUE	112
461	P-23(2)	44	J-182	J-24	300	PVC	150	FALSE	0	-60	0.85	0.002	TRUE	144
462	P-202	76	J-181	J-182	100	PVC	150	FALSE	0	1	0.09	0	TRUE	249
464	P-193(1)	60	J-31	J-183	300	PVC	150	FALSE	0	73	1.03	0.003	TRUE	197
472	P-27(1)	112	J-27	J-186	300	PVC	150	FALSE	0	-65	0.92	0.002	TRUE	367
473	P-27(2)	6	J-186	J-28	300	PVC	150	FALSE	0	-71	1.01	0.003	TRUE	20
475	P-206	60	J-186	J-187	100	PVC	150	FALSE	0	6	0.71	0.005	TRUE	197
476	P-207	80	J-187	J-175	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	262
479	P-205(1)	52	J-185	J-188	100	PVC	150	FALSE	0	4	0.49	0.003	TRUE	171
480	P-205(2)	75	J-188	J-177	100	PVC	150	FALSE	0	1	0.11	0	TRUE	246
481	P-209	241	J-187	J-188	100	PVC	150	FALSE	0	3	0.37	0.001	TRUE	790
482	P-210	19	J-188	J-179	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	62
483	P-211	12	J-28	J-111	100	PVC	150	FALSE	0	-3	0.34	0.001	TRUE	39
484	P-212	87	J-111	J-155	100	PVC	150	FALSE	0	-1	0.14	0	TRUE	285
486	P-213	53	J-155	J-189	100	PVC	150	FALSE	0	-3	0.34	0.001	TRUE	174
488	P-153(1)	85	J-144	J-190	200	PVC	150	FALSE	0	-24	0.76	0.003	TRUE	279
489	P-153(2)	125	J-190	J-145	200	PVC	150	FALSE	0	-28	0.88	0.003	TRUE	410
490	P-214	78	J-189	J-190	100	PVC	150	FALSE	0	-3	0.44	0.002	TRUE	256
500	P-218	99	J-18	J-193	200	PVC	150	FALSE	0	24	0.78	0.003	TRUE	325
502	P-219	9	J-193	J-194	200	PVC	150	FALSE	0	25	0.79	0.003	TRUE	30
506	P-42(1)	9	J-43	J-195	150	PVC	150	FALSE	0	-6	0.36	0.001	TRUE	30
507	P-42(2)	101	J-195	J-44	150	PVC	150	FALSE	0	2	0.12	0	TRUE	331
510	P-222(1)	107	J-16	J-196	150	Cast Iron	130	FALSE	0	12	0.69	0.004	TRUE	351
514	P-221(1)	108	J-15	J-197	300	PVC	150	FALSE	0	85	1.2	0.004	TRUE	354
516	P-224	9	J-196	J-197	100	Cast Iron	130	FALSE	0	-3	0.37	0.002	TRUE	30
523	P-39(2)	208	J-200	J-41	300	PVC	150	FALSE	0	84	1.19	0.004	TRUE	682

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
530	P-230(1)	6	J-201	J-202	150	PVC	150	FALSE	0	11	0.61	0.002	TRUE	20
531	P-230(2)	99	J-202	J-41	150	PVC	150	FALSE	0	17	0.98	0.006	TRUE	325
532	P-231	132	J-202	J-200	150	Cast Iron	130	FALSE	0	-7	0.41	0.001	TRUE	433
541	P-226(2)	61	J-205	J-199	100	PVC	150	FALSE	0	-2	0.26	0.001	TRUE	200
544	P-232(1)	62	J-201	J-207	150	Cast Iron	130	FALSE	0	-1	0.08	0	TRUE	203
549	P-236	6	J-207	J-208	150	PVC	150	FALSE	0	4	0.25	0	TRUE	20
551	P-221(2)(2)(1)	6	J-203	J-209	300	PVC	150	FALSE	0	79	1.11	0.003	TRUE	20
552	P-221(2)(2)(2)	63	J-209	J-43	300	PVC	150	FALSE	0	77	1.09	0.003	TRUE	207
555	P-229(1)	8	J-199	J-210	150	Cast Iron	130	FALSE	0	11	0.65	0.003	TRUE	26
558	P-235(1)	8	J-205	J-211	150	PVC	150	FALSE	0	11	0.65	0.003	TRUE	26
560	P-238	61	J-210	J-211	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	200
564	P-221(2)(1)(1)	9	J-197	J-213	300	PVC	150	FALSE	0	83	1.17	0.003	TRUE	30
565	P-221(2)(1)(2)	81	J-213	J-203	300	PVC	150	FALSE	0	78	1.1	0.003	TRUE	266
568	P-222(2)(1)	9	J-196	J-214	150	PVC	150	FALSE	0	12	0.69	0.003	TRUE	30
570	P-241	9	J-213	J-214	100	Cast Iron	130	FALSE	0	2	0.31	0.001	TRUE	30
572	P-243	130	J-13	J-198	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	426
573	P-244	9	J-198	J-212	100	PVC	150	FALSE	0	6	0.71	0.005	TRUE	30
575	P-232(2)(1)	143	J-207	J-216	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	469
577	P-245	81	J-212	J-216	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	266
580	P-246	5	J-216	J-217	150	PVC	150	FALSE	0	9	0.5	0.002	TRUE	16
581	P-247	69	J-217	J-42	150	PVC	150	FALSE	0	11	0.62	0.002	TRUE	226
583	P-234(1)	51	J-10	J-218	150	PVC	150	FALSE	0	11	0.64	0.003	TRUE	167
584	P-234(2)	101	J-218	J-205	150	PVC	150	FALSE	0	13	0.73	0.003	TRUE	331
586	P-228(1)	62	J-9	J-219	150	Cast Iron	130	FALSE	0	8	0.44	0.002	TRUE	203
588	P-248	65	J-218	J-219	100	Cast Iron	130	FALSE	0	-3	0.44	0.003	TRUE	213
595	P-249(2)	57	J-221	J-220	100	Cast Iron	130	FALSE	0	1	0.17	0	TRUE	187
596	P-250	70	J-8	J-221	150	Cast Iron	130	FALSE	0	5	0.26	0.001	TRUE	230
598	P-227(1)(1)	68	J-7	J-222	100	Cast Iron	130	FALSE	0	2	0.31	0.001	TRUE	223
599	P-227(1)(2)	5	J-222	J-220	100	Cast Iron	130	FALSE	0	4	0.46	0.003	TRUE	16
601	P-251	68	J-222	J-223	100	PVC	150	FALSE	0	-2	0.22	0.001	TRUE	223
603	P-252	32	J-223	J-224	100	PVC	150	FALSE	0	1	0.14	0	TRUE	105
605	P-38(1)	122	J-3	J-225	400	PVC	150	FALSE	0	140	1.11	0.002	TRUE	400
606	P-38(2)	93	J-225	J-40	400	PVC	150	FALSE	0	138	1.1	0.002	TRUE	305
607	P-253	71	J-224	J-225	100	PVC	150	FALSE	0	-1	0.07	0	TRUE	233

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
609	P-227(2)(1)	74	J-220	J-226	100	Cast Iron	130	FALSE	0	4	0.53	0.004	TRUE	243
613	P-227(2)(2)(1)	49	J-226	J-227	100	Cast Iron	130	FALSE	0	4	0.5	0.003	TRUE	161
614	P-227(2)(2)(2)	62	J-227	J-200	100	Cast Iron	130	FALSE	0	3	0.43	0.003	TRUE	203
616	P-39(1)(1)	14	J-40	J-228	350	PVC	150	FALSE	0	136	1.41	0.004	TRUE	46
617	P-39(1)(2)	101	J-228	J-200	350	PVC	150	FALSE	0	132	1.37	0.004	TRUE	331
618	P-255	89	J-227	J-228	100	PVC	150	FALSE	0	-4	0.5	0.003	TRUE	292
625	P-99(1)	86	J-100	J-230	150	Cast Iron	130	FALSE	0	6	0.36	0.001	TRUE	282
626	P-99(2)	59	J-230	J-101	150	Cast Iron	130	FALSE	0	6	0.33	0.001	TRUE	194
630	P-34(2)(2)	66	J-231	J-35	150	Cast Iron	130	FALSE	0	11	0.6	0.003	TRUE	216
635	P-139(1)	5	J-134	J-233	300	PVC	150	FALSE	0	-96	1.36	0.005	TRUE	16
638	P-261	155	J-233	J-234	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	508
641	P-34(2)(1)(2)	6	J-235	J-231	200	Cast Iron	130	FALSE	0	15	0.47	0.001	TRUE	20
644	P-263	114	J-169	J-236	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	374
646	P-136(2)(2)(1)	104	J-229	J-237	150	Cast Iron	130	FALSE	0	0	0.03	0	TRUE	341
647	P-136(2)(2)(2)	96	J-237	J-133	150	Cast Iron	130	FALSE	0	-3	0.19	0	TRUE	315
648	P-264	85	J-236	J-237	100	PVC	150	FALSE	0	2	0.28	0.001	TRUE	279
651	P-267	8	J-53	J-89	300	PVC	150	FALSE	0	-9	0.12	0	TRUE	26
653	P-268	73	J-89	J-238	300	PVC	150	FALSE	0	-26	0.37	0	TRUE	239
655	P-269	84	J-238	J-239	300	PVC	150	FALSE	0	-30	0.42	0.001	TRUE	276
656	P-270	91	J-239	J-127	300	PVC	150	FALSE	0	-34	0.48	0.001	TRUE	298
659	P-128(2)	98	J-240	J-125	200	PVC	150	FALSE	0	8	0.26	0	TRUE	321
663	P-135(2)	70	J-241	J-132	150	PVC	150	FALSE	0	7	0.41	0.001	TRUE	230
666	P-134(1)	71	J-130	J-242	150	PVC	150	FALSE	0	6	0.33	0.001	TRUE	233
678	P-275	8	J-245	J-246	150	PVC	150	FALSE	0	12	0.67	0.003	TRUE	26
680	P-276	103	J-246	J-247	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	338
682	P-94(1)	81	J-96	J-248	100	Cast Iron	130	FALSE	0	2	0.22	0.001	TRUE	266
683	P-94(2)	59	J-248	J-97	100	Cast Iron	130	FALSE	0	2	0.22	0.001	TRUE	194
686	P-50(1)	8	J-51	J-249	300	Cast Iron	130	FALSE	0	-60	0.85	0.003	TRUE	26
689	P-86(1)	8	J-87	J-250	300	PVC	150	FALSE	0	-64	0.91	0.002	TRUE	26
691	P-278	8	J-249	J-250	200	PVC	150	FALSE	0	8	0.25	0	TRUE	26
696	P-133(2)(2)	8	J-251	J-93	150	Cast Iron	130	FALSE	0	16	0.88	0.006	TRUE	26
697	P-281	63	J-243	J-251	150	Cast Iron	130	FALSE	0	8	0.47	0.002	TRUE	207
698	P-282	79	J-120	J-58	150	Cast Iron	130	FALSE	0	-14	0.81	0.005	TRUE	259
699	P-283	46	J-58	J-70	150	Cast Iron	130	FALSE	0	-17	0.97	0.007	TRUE	151

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
705	P-55(2)(2)	93	J-253	J-57	150	Cast Iron	130	FALSE	0	-1	0.08	0	TRUE	305
708	P-122(1)	72	J-120	J-254	150	PVC	150	FALSE	0	-3	0.16	0	TRUE	236
709	P-122(2)	205	J-254	J-121	150	PVC	150	FALSE	0	2	0.1	0	TRUE	672
710	P-287	59	J-57	J-254	100	PVC	150	FALSE	0	6	0.77	0.006	TRUE	194
711	P-288	97	J-67	J-62	100	PVC	150	FALSE	0	2	0.31	0.001	TRUE	318
713	P-65(1)	63	J-66	J-255	300	PVC	150	FALSE	0	-93	1.31	0.004	TRUE	207
714	P-65(2)	51	J-255	J-67	300	PVC	150	FALSE	0	-95	1.35	0.004	TRUE	167
716	P-61(1)	38	J-62	J-256	250	PVC	150	FALSE	0	59	1.21	0.005	TRUE	125
717	P-61(2)	63	J-256	J-63	250	PVC	150	FALSE	0	55	1.13	0.004	TRUE	207
718	P-289	114	J-255	J-256	100	PVC	150	FALSE	0	1	0.19	0	TRUE	374
722	P-290	160	J-256	J-257	100	PVC	150	FALSE	0	3	0.38	0.002	TRUE	525
725	P-119(2)(2)	90	J-258	J-118	200	PVC	150	FALSE	0	-31	1	0.004	TRUE	295
728	P-105(1)	73	J-106	J-259	300	PVC	150	FALSE	0	-43	0.61	0.001	TRUE	239
729	P-105(2)	101	J-259	J-107	300	PVC	150	FALSE	0	-45	0.64	0.001	TRUE	331
731	P-293	171	J-20	J-46	100	PVC	150	FALSE	0	4	0.46	0.002	TRUE	561
732	P-294	68	J-22	J-47	100	PVC	150	FALSE	0	3	0.32	0.001	TRUE	223
734	P-50(2)(1)	77	J-249	J-260	300	Cast Iron	130	FALSE	0	-68	0.97	0.003	TRUE	253
735	P-50(2)(2)	69	J-260	J-52	300	Cast Iron	130	FALSE	0	-68	0.97	0.003	TRUE	226
737	P-80(1)	66	J-81	J-261	150	PVC	150	FALSE	0	14	0.77	0.004	TRUE	216
738	P-80(2)	89	J-261	J-82	150	PVC	150	FALSE	0	15	0.86	0.004	TRUE	292
749	P-52(2)(1)	4	J-262	J-265	300	PVC	130	FALSE	0	-68	0.96	0.003	TRUE	13
754	P-78(1)(2)	80	J-266	J-263	150	PVC	150	FALSE	0	13	0.73	0.003	TRUE	262
756	P-52(2)(2)(1)	75	J-265	J-267	300	PVC	130	FALSE	0	-69	0.97	0.003	TRUE	246
760	P-78(1)(1)(1)	51	J-79	J-268	150	PVC	150	FALSE	0	14	0.77	0.004	TRUE	167
761	P-78(1)(1)(2)	4	J-268	J-266	150	PVC	150	FALSE	0	13	0.76	0.004	TRUE	13
763	P-52(2)(2)(2)(1)	5	J-267	J-269	300	PVC	150	FALSE	0	-70	0.98	0.003	TRUE	16
764	P-52(2)(2)(2)(2)	64	J-269	J-54	300	PVC	130	FALSE	0	-70	0.99	0.003	TRUE	210
767	P-135(1)(1)	111	J-131	J-270	150	PVC	150	FALSE	0	1	0.08	0	TRUE	364
768	P-135(1)(2)	76	J-270	J-241	150	PVC	150	FALSE	0	5	0.26	0	TRUE	249
771	P-128(1)(1)	21	J-90	J-271	200	PVC	150	FALSE	0	20	0.64	0.002	TRUE	69
772	P-128(1)(2)	66	J-271	J-240	200	PVC	150	FALSE	0	14	0.46	0.001	TRUE	216
779	P-184(1)	62	J-168	J-273	100	PVC	150	FALSE	0	-1	0.15	0	TRUE	203
780	P-184(2)	73	J-273	J-169	100	PVC	150	FALSE	0	-1	0.17	0	TRUE	239
788	P-195(1)	128	J-174	J-275	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	420

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
789	P-195(2)	145	J-275	J-175	100	PVC	150	FALSE	0	4	0.48	0.002	TRUE	476
791	P-208(1)	148	J-183	J-276	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	485
792	P-208(2)	145	J-276	J-187	100	PVC	150	FALSE	0	4	0.5	0.003	TRUE	476
793	P-306	83	J-275	J-276	100	PVC	150	FALSE	0	-2	0.31	0.001	TRUE	272
794	P-307	60	J-276	J-29	100	PVC	150	FALSE	0	-5	0.68	0.005	TRUE	197
795	P-308	12	J-29	J-112	100	PVC	150	FALSE	0	-3	0.39	0.002	TRUE	39
796	P-309	84	J-112	J-154	100	PVC	150	FALSE	0	-2	0.2	0	TRUE	276
797	P-310	117	J-154	J-145	100	PVC	150	FALSE	0	-4	0.46	0.002	TRUE	384
801	P-149(1)(1)	97	J-141	J-278	300	PVC	150	FALSE	0	90	1.28	0.004	TRUE	318
802	P-149(1)(2)	64	J-278	J-191	300	PVC	150	FALSE	0	84	1.19	0.004	TRUE	210
803	P-312	41	J-277	J-278	100	PVC	150	FALSE	0	-5	0.67	0.004	TRUE	134
805	P-200(1)	188	J-179	J-279	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	617
806	P-200(2)	68	J-279	J-180	100	PVC	150	FALSE	0	4	0.52	0.003	TRUE	223
808	P-25(1)	67	J-25	J-280	300	PVC	150	FALSE	0	-61	0.87	0.002	TRUE	220
809	P-25(2)	200	J-280	J-185	300	PVC	150	FALSE	0	-64	0.91	0.002	TRUE	656
810	P-313	38	J-279	J-280	100	PVC	150	FALSE	0	-2	0.23	0.001	TRUE	125
812	P-106(1)	67	J-107	J-281	300	PVC	150	FALSE	0	-49	0.69	0.001	TRUE	220
813	P-106(2)	106	J-281	J-108	300	PVC	150	FALSE	0	-53	0.74	0.001	TRUE	348
819	P-165(1)	122	J-156	J-283	100	Cast Iron	130	FALSE	0	4	0.5	0.003	TRUE	400
820	P-165(2)	95	J-283	J-157	100	Cast Iron	130	FALSE	0	4	0.5	0.003	TRUE	312
822	P-316	122	J-283	J-143	100	PVC	150	FALSE	0	-4	0.49	0.003	TRUE	400
825	P-150(2)	40	J-284	J-103	300	PVC	150	FALSE	0	57	0.81	0.002	TRUE	131
827	P-318	78	J-82	J-51	100	PVC	150	FALSE	0	-3	0.42	0.002	TRUE	256
829	P-78(2)(1)	70	J-263	J-285	150	PVC	150	FALSE	0	13	0.73	0.003	TRUE	230
830	P-78(2)(2)	5	J-285	J-80	150	PVC	150	FALSE	0	13	0.76	0.004	TRUE	16
832	P-52(1)(1)	5	J-53	J-286	300	PVC	130	FALSE	0	-65	0.92	0.003	TRUE	16
833	P-52(1)(2)	70	J-286	J-262	300	PVC	130	FALSE	0	-66	0.94	0.003	TRUE	230
835	P-320	17	J-33	J-120	150	Cast Iron	130	FALSE	0	-18	1.01	0.008	TRUE	56
837	P-187(1)	7	J-141	J-287	200	PVC	150	FALSE	0	6	0.18	0	TRUE	23
838	P-187(2)	103	J-287	J-170	100	PVC	150	FALSE	0	1	0.12	0	TRUE	338
840	P-321	99	J-287	J-288	200	Cast Iron	130	FALSE	0	4	0.12	0	TRUE	325
842	P-155(1)	5	J-146	J-289	200	PVC	150	FALSE	0	-34	1.08	0.005	TRUE	16
843	P-155(2)	62	J-289	J-147	200	PVC	150	FALSE	0	-40	1.27	0.007	TRUE	203
844	P-322	67	J-288	J-289	200	Cast Iron	130	FALSE	0	11	0.34	0.001	TRUE	220

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
846	P-161(1)	77	J-152	J-290	150	PVC	150	FALSE	0	15	0.86	0.004	TRUE	253
847	P-161(2)	5	J-290	J-153	150	PVC	150	FALSE	0	8	0.46	0.001	TRUE	16
848	P-323	125	J-289	J-290	200	Cast Iron	130	FALSE	0	15	0.48	0.001	TRUE	410
850	P-324	57	J-290	J-291	200	Cast Iron	130	FALSE	0	21	0.66	0.003	TRUE	187
852	P-127(1)	52	J-79	J-292	150	PVC	150	FALSE	0	-1	0.04	0	TRUE	171
853	P-127(2)	45	J-292	J-54	150	PVC	150	FALSE	0	-6	0.32	0.001	TRUE	148
855	P-299(1)	50	J-268	J-295	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	164
856	P-299(2)	38	J-295	J-269	100	Cast Iron	130	FALSE	0	0	0.05	0	TRUE	125
857	P-325	58	J-292	J-295	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	190
861	P-298(1)	49	J-266	J-296	100	Cast Iron	130	FALSE	0	0	0.02	0	TRUE	161
862	P-298(2)	38	J-296	J-267	100	Cast Iron	130	FALSE	0	-1	0.08	0	TRUE	125
863	P-326	5	J-295	J-296	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	16
865	P-297(1)	41	J-264	J-297	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	134
866	P-297(2)	38	J-297	J-265	100	Cast Iron	130	FALSE	0	-1	0.09	0	TRUE	125
867	P-327	74	J-296	J-297	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	243
869	P-296(1)	37	J-262	J-298	100	Cast Iron	130	FALSE	0	1	0.12	0	TRUE	121
870	P-296(2)	41	J-298	J-263	100	Cast Iron	130	FALSE	0	1	0.07	0	TRUE	134
871	P-328	5	J-297	J-298	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	16
873	P-319(1)	43	J-285	J-299	100	Cast Iron	130	FALSE	0	-1	0.12	0	TRUE	141
874	P-319(2)	37	J-299	J-286	100	Cast Iron	130	FALSE	0	-1	0.18	0.001	TRUE	121
875	P-329	70	J-298	J-299	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	230
877	P-266(1)	43	J-80	J-300	100	Cast Iron	130	FALSE	0	-1	0.13	0	TRUE	141
878	P-266(2)	37	J-300	J-53	100	Cast Iron	130	FALSE	0	-1	0.19	0.001	TRUE	121
879	P-330	5	J-299	J-300	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	16
881	P-331	55	J-300	J-301	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	180
885	P-295(1)	59	J-260	J-303	100	PVC	150	FALSE	0	-1	0.14	0	TRUE	194
886	P-295(2)	41	J-303	J-261	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	134
887	P-333	65	J-302	J-303	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	213
888	P-334	59	J-302	J-52	150	Cast Iron	130	FALSE	0	-1	0.05	0	TRUE	194
891	P-332(2)	7	J-304	J-302	100	PVC	150	FALSE	0	5	0.59	0.003	TRUE	23
893	P-51(1)	7	J-52	J-305	300	Cast Iron	130	FALSE	0	-70	0.99	0.003	TRUE	23
895	P-335	57	J-304	J-305	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	187
898	P-51(2)(2)	54	J-306	J-53	300	Cast Iron	130	FALSE	0	-72	1.02	0.003	TRUE	177
900	P-337	42	J-306	J-301	100	Cast Iron	130	FALSE	0	1	0.11	0	TRUE	138

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
902	P-332(1)(1)	3	J-301	J-307	100	PVC	150	FALSE	0	5	0.6	0.004	TRUE	10
903	P-332(1)(2)	48	J-307	J-304	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	157
907	P-51(2)(1)(1)	56	J-305	J-308	300	Cast Iron	130	FALSE	0	-70	0.99	0.003	TRUE	184
908	P-51(2)(1)(2)	5	J-308	J-306	300	PVC	130	FALSE	0	-71	1	0.003	TRUE	16
909	P-340	43	J-307	J-308	100	Cast Iron	130	FALSE	0	0	0.06	0	TRUE	141
910	P-341	41	J-302	J-81	150	PVC	150	FALSE	0	0	0.02	0	TRUE	134
912	P-79(1)	42	J-80	J-309	150	PVC	150	FALSE	0	14	0.81	0.004	TRUE	138
913	P-79(2)	59	J-309	J-81	150	PVC	150	FALSE	0	14	0.78	0.004	TRUE	194
914	P-342	47	J-301	J-309	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	154
917	P-90(2)(2)	63	J-310	J-92	150	Cast Iron	130	FALSE	0	5	0.3	0.001	TRUE	207
920	P-90(2)(1)(1)	48	J-246	J-311	150	Cast Iron	130	FALSE	0	12	0.66	0.004	TRUE	157
921	P-90(2)(1)(2)	67	J-311	J-310	150	Cast Iron	130	FALSE	0	8	0.45	0.002	TRUE	220
923	P-343(1)	82	J-247	J-312	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	269
925	P-344	56	J-311	J-312	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	184
927	P-95(1)	19	J-97	J-313	100	Cast Iron	130	FALSE	0	1	0.18	0	TRUE	62
931	P-86(2)(1)	73	J-250	J-314	300	PVC	150	FALSE	0	-69	0.98	0.002	TRUE	239
932	P-86(2)(2)	75	J-314	J-88	300	PVC	150	FALSE	0	-74	1.04	0.003	TRUE	246
939	P-180(1)	5	J-165	J-316	150	Cast Iron	130	FALSE	0	-5	0.31	0.001	TRUE	16
942	P-92(1)	101	J-93	J-317	150	Cast Iron	130	FALSE	0	11	0.65	0.003	TRUE	331
943	P-92(2)	5	J-317	J-94	150	Cast Iron	130	FALSE	0	6	0.35	0.001	TRUE	16
944	P-348	63	J-316	J-317	200	Cast Iron	130	FALSE	0	3	0.08	0	TRUE	207
945	P-349	8	J-317	J-38	200	Cast Iron	130	FALSE	0	7	0.23	0	TRUE	26
948	P-95(2)(2)	42	J-318	J-98	150	Cast Iron	130	FALSE	0	3	0.16	0	TRUE	138
949	P-350	61	J-318	J-165	100	Cast Iron	130	FALSE	0	0	0.05	0	TRUE	200
952	P-8(2)	7	J-319	J-9	400	Cast Iron	130	FALSE	0	55	0.44	0.001	TRUE	23
954	P-249(1)(1)	6	J-219	J-320	150	Cast Iron	130	FALSE	0	-10	0.57	0.003	TRUE	20
956	P-351	63	J-319	J-320	150	Cast Iron	130	FALSE	0	7	0.41	0.001	TRUE	207
958	P-164(1)	101	J-155	J-419	100	Cast Iron	130	FALSE	0	3	0.41	0.002	TRUE	331
960	P-352	108	J-419	J-110	100	Cast Iron	130	FALSE	0	1	0.17	0	TRUE	354
961	P-353	12	J-110	J-27	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	39
963	P-170(1)	72	J-156	J-322	100	Cast Iron	130	FALSE	0	4	0.56	0.004	TRUE	236
967	P-315(2)	80	J-323	J-283	100	Cast Iron	130	FALSE	0	0	0.02	0	TRUE	262
968	P-354	108	J-322	J-323	100	Cast Iron	130	FALSE	0	2	0.27	0.001	TRUE	354
970	P-125(1)	26	J-76	J-324	300	Cast Iron	130	FALSE	0	-3	0.04	0	TRUE	85

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
971	P-125(2)	129	J-324	J-124	300	Cast Iron	130	FALSE	0	-9	0.12	0	TRUE	423
972	P-355	100	J-77	J-324	100	PVC	150	FALSE	0	-4	0.45	0.002	TRUE	328
974	P-72(1)	83	J-73	J-325	150	PVC	150	FALSE	0	16	0.89	0.005	TRUE	272
977	P-123(2)(1)	92	J-124	J-326	300	Cast Iron	130	FALSE	0	-94	1.33	0.006	TRUE	302
978	P-123(2)(2)	70	J-326	J-73	300	Cast Iron	130	FALSE	0	-94	1.34	0.006	TRUE	230
979	P-356	107	J-325	J-326	100	PVC	150	FALSE	0	1	0.11	0	TRUE	351
981	P-72(2)(1)	20	J-325	J-327	150	PVC	150	FALSE	0	15	0.84	0.004	TRUE	66
982	P-72(2)(2)	148	J-327	J-74	150	PVC	150	FALSE	0	8	0.47	0.001	TRUE	485
983	P-357	122	J-75	J-327	100	PVC	150	FALSE	0	-4	0.51	0.003	TRUE	400
985	P-55(2)(1)(1)	55	J-122	J-328	150	Cast Iron	130	FALSE	0	-3	0.19	0	TRUE	180
986	P-55(2)(1)(2)	45	J-328	J-253	150	Cast Iron	130	FALSE	0	0	0	0	TRUE	148
988	P-71(1)(1)	39	J-72	J-329	300	PVC	150	FALSE	0	-71	1.01	0.003	TRUE	128
989	P-71(1)(2)	65	J-329	J-123	300	PVC	150	FALSE	0	-79	1.11	0.003	TRUE	213
992	P-358(1)	40	J-328	J-330	100	PVC	150	FALSE	0	-5	0.58	0.003	TRUE	131
993	P-358(2)	136	J-330	J-329	100	PVC	150	FALSE	0	-6	0.77	0.006	TRUE	446
996	P-284(1)	48	J-71	J-331	100	Cast Iron	130	FALSE	0	6	0.77	0.007	TRUE	157
997	P-284(2)	32	J-331	J-57	100	Cast Iron	130	FALSE	0	5	0.69	0.006	TRUE	105
999	P-361	8	J-51	J-87	150	PVC	150	FALSE	0	-1	0.07	0	TRUE	26
1002	P-302(2)(2)	99	J-332	J-234	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	325
1004	P-139(2)(1)	135	J-233	J-343	300	PVC	150	FALSE	0	-98	1.39	0.005	TRUE	443
1005	P-139(2)(2)	69	J-343	J-135	300	PVC	150	FALSE	0	-107	1.51	0.006	TRUE	226
1009	P-305(2)	16	J-334	J-135	300	PVC	150	FALSE	0	-55	0.78	0.002	TRUE	52
1012	P-362(2)	15	J-335	J-343	100	Cast Iron	130	FALSE	0	4	0.46	0.003	TRUE	49
1013	P-363	72	J-334	J-335	100	Cast Iron	130	FALSE	0	5	0.58	0.004	TRUE	236
1016	P-305(1)(2)	28	J-336	J-334	300	PVC	150	FALSE	0	-50	0.71	0.001	TRUE	92
1019	P-362(1)(2)	25	J-337	J-335	100	Cast Iron	130	FALSE	0	0	0.02	0	TRUE	82
1020	P-364	75	J-336	J-337	100	Cast Iron	130	FALSE	0	4	0.52	0.004	TRUE	246
1021	P-365	6	J-103	J-16	300	PVC	150	FALSE	0	57	0.81	0.002	TRUE	20
1022	P-366	7	J-102	J-15	300	PVC	150	FALSE	0	62	0.88	0.002	TRUE	23
1024	P-138(1)	100	J-133	J-338	300	PVC	150	FALSE	0	-76	1.07	0.003	TRUE	328
1026	P-367	94	J-236	J-338	100	PVC	150	FALSE	0	-4	0.51	0.003	TRUE	308
1028	P-171(2)(1)	7	J-162	J-339	100	Cast Iron	130	FALSE	0	3	0.41	0.002	TRUE	23
1029	P-171(2)(2)	82	J-339	J-160	100	Cast Iron	130	FALSE	0	2	0.22	0.001	TRUE	269
1031	P-33(2)(1)	43	J-126	J-340	200	PVC	150	FALSE	0	28	0.91	0.003	TRUE	141

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1032	P-33(2)(2)	56	J-340	J-34	200	PVC	150	FALSE	0	29	0.91	0.003	TRUE	184
1034	P-302(1)(1)	68	J-272	J-341	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	223
1035	P-302(1)(2)	48	J-341	J-274	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	157
1038	P-140(1)	65	J-135	J-342	500	PVC	150	FALSE	0	-250	1.28	0.002	TRUE	213
1039	P-140(2)	65	J-342	J-136	500	PVC	150	FALSE	0	-254	1.29	0.002	TRUE	213
1043	P-148(1)	69	J-140	J-344	300	PVC	150	FALSE	0	105	1.49	0.005	TRUE	226
1044	P-148(2)	132	J-344	J-141	300	PVC	150	FALSE	0	99	1.4	0.005	TRUE	433
1045	P-370	9	J-343	J-344	150	PVC	150	FALSE	0	12	0.68	0.003	TRUE	30
1047	P-371	55	J-344	J-345	150	PVC	150	FALSE	0	18	0.99	0.006	TRUE	180
1048	P-372	61	J-345	J-288	150	PVC	150	FALSE	0	17	0.97	0.005	TRUE	200
1049	P-373	5	J-288	J-170	150	PVC	150	FALSE	0	8	0.47	0.001	TRUE	16
1051	P-311(1)	25	J-145	J-346	100	PVC	150	FALSE	0	-2	0.25	0.001	TRUE	82
1052	P-311(2)	130	J-346	J-277	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	426
1053	P-374	86	J-170	J-346	100	PVC	150	FALSE	0	6	0.76	0.006	TRUE	282
1055	P-32(2)(1)(1)	157	J-114	J-347	250	PVC	150	FALSE	0	-57	1.16	0.004	TRUE	515
1057	P-375	64	J-347	J-151	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	210
1058	P-376	91	J-151	J-147	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	298
1059	P-377	70	J-147	J-345	100	PVC	150	FALSE	0	1	0.15	0	TRUE	230
1061	P-32(2)(1)(2)(1)	82	J-347	J-348	250	PVC	150	FALSE	0	-62	1.26	0.005	TRUE	269
1062	P-32(2)(1)(2)(2)	73	J-348	J-139	250	PVC	150	FALSE	0	-65	1.33	0.005	TRUE	239
1063	P-378	63	J-348	J-150	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	207
1066	P-147(2)(1)	59	J-149	J-349	300	PVC	150	FALSE	0	61	0.86	0.002	TRUE	194
1067	P-147(2)(2)	5	J-349	J-140	300	PVC	150	FALSE	0	49	0.69	0.001	TRUE	16
1069	P-379(1)	51	J-150	J-350	100	PVC	150	FALSE	0	0	0.02	0	TRUE	167
1070	P-379(2)	6	J-350	J-148	150	PVC	150	FALSE	0	12	0.66	0.003	TRUE	20
1071	P-380	47	J-349	J-350	150	Cast Iron	130	FALSE	0	12	0.67	0.004	TRUE	154
1073	P-32(2)(2)(2)(1)	46	J-272	J-351	250	PVC	150	FALSE	0	15	0.3	0	TRUE	151
1074	P-32(2)(2)(2)(2)	26	J-351	J-33	250	PVC	150	FALSE	0	10	0.2	0	TRUE	85
1076	P-368(1)	41	J-340	J-352	100	PVC	150	FALSE	0	-1	0.08	0	TRUE	134
1077	P-368(2)	58	J-352	J-341	100	PVC	150	FALSE	0	-2	0.24	0.001	TRUE	190
1078	P-381	79	J-351	J-352	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	259
1080	P-304(1)	64	J-34	J-353	300	PVC	150	FALSE	0	-36	0.5	0.001	TRUE	210
1081	P-304(2)	56	J-353	J-274	300	PVC	150	FALSE	0	-38	0.54	0.001	TRUE	184
1082	P-382	43	J-352	J-353	100	PVC	150	FALSE	0	5	0.59	0.004	TRUE	141

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1084	P-262(1)	64	J-234	J-354	100	Cast Iron	130	FALSE	0	3	0.32	0.001	TRUE	210
1085	P-262(2)	64	J-354	J-235	100	Cast Iron	130	FALSE	0	6	0.83	0.009	TRUE	210
1088	P-256(1)	151	J-167	J-355	150	Cast Iron	130	FALSE	0	-4	0.21	0	TRUE	495
1089	P-256(2)	49	J-355	J-35	150	Cast Iron	130	FALSE	0	-5	0.29	0.001	TRUE	161
1091	P-303(1)	91	J-232	J-356	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	298
1092	P-303(2)	95	J-356	J-273	100	PVC	150	FALSE	0	2	0.19	0	TRUE	312
1095	P-34(2)(1)(1)(1)	95	J-129	J-357	150	Cast Iron	130	FALSE	0	18	1.03	0.008	TRUE	312
1096	P-34(2)(1)(1)(2)	103	J-357	J-235	150	Cast Iron	130	FALSE	0	16	0.89	0.006	TRUE	338
1098	P-383(1)	82	J-353	J-358	100	PVC	150	FALSE	0	6	0.78	0.006	TRUE	269
1100	P-385	71	J-357	J-358	100	PVC	150	FALSE	0	-5	0.7	0.005	TRUE	233
1102	P-302(2)(1)(1)	68	J-274	J-359	100	PVC	150	FALSE	0	6	0.75	0.006	TRUE	223
1103	P-302(2)(1)(2)	47	J-359	J-332	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	154
1104	P-386	53	J-358	J-359	100	PVC	150	FALSE	0	-4	0.54	0.003	TRUE	174
1106	P-387	64	J-359	J-360	100	PVC	150	FALSE	0	-4	0.51	0.003	TRUE	210
1108	P-362(1)(1)(1)	62	J-332	J-361	100	Cast Iron	130	FALSE	0	-4	0.57	0.004	TRUE	203
1109	P-362(1)(1)(2)	39	J-361	J-337	100	Cast Iron	130	FALSE	0	-3	0.42	0.002	TRUE	128
1110	P-388	54	J-360	J-361	100	PVC	150	FALSE	0	2	0.32	0.001	TRUE	177
1112	P-305(1)(1)(1)	71	J-274	J-362	300	PVC	150	FALSE	0	-41	0.58	0.001	TRUE	233
1113	P-305(1)(1)(2)	32	J-362	J-336	300	PVC	150	FALSE	0	-46	0.64	0.001	TRUE	105
1114	P-389	34	J-360	J-362	100	PVC	150	FALSE	0	-7	0.92	0.008	TRUE	112
1116	P-384(1)	45	J-355	J-363	100	PVC	150	FALSE	0	0	0.06	0	TRUE	148
1117	P-384(2)	54	J-363	J-356	100	PVC	150	FALSE	0	1	0.09	0	TRUE	177
1120	P-259(1)	61	J-231	J-364	100	Cast Iron	130	FALSE	0	3	0.38	0.002	TRUE	200
1121	P-259(2)	69	J-364	J-232	100	Cast Iron	130	FALSE	0	-1	0.07	0	TRUE	226
1122	P-391	95	J-364	J-363	100	PVC	150	FALSE	0	2	0.32	0.001	TRUE	312
1124	P-280(1)	73	J-245	J-365	200	Cast Iron	130	FALSE	0	4	0.13	0	TRUE	239
1128	P-134(2)(2)(1)	57	J-244	J-366	150	PVC	150	FALSE	0	-7	0.39	0.001	TRUE	187
1129	P-134(2)(2)(2)	49	J-366	J-88	150	PVC	150	FALSE	0	-12	0.69	0.003	TRUE	161
1131	P-279(1)	51	J-250	J-367	200	Cast Iron	130	FALSE	0	12	0.4	0.001	TRUE	167
1132	P-279(2)	49	J-367	J-245	200	Cast Iron	130	FALSE	0	13	0.42	0.001	TRUE	161
1135	P-346(1)	51	J-314	J-368	100	PVC	150	FALSE	0	4	0.53	0.003	TRUE	167
1136	P-346(2)	49	J-368	J-315	100	PVC	150	FALSE	0	2	0.3	0.001	TRUE	161
1140	P-49(1)	72	J-50	J-369	300	Cast Iron	130	FALSE	0	-50	0.71	0.002	TRUE	236
1141	P-49(2)	45	J-369	J-51	300	Cast Iron	130	FALSE	0	-57	0.81	0.002	TRUE	148

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1142	P-396	62	J-83	J-369	100	PVC	150	FALSE	0	-6	0.8	0.006	TRUE	203
1144	P-277(1)	42	J-247	J-370	100	PVC	150	FALSE	0	4	0.52	0.003	TRUE	138
1145	P-277(2)	61	J-370	J-248	100	PVC	150	FALSE	0	1	0.14	0	TRUE	200
1147	P-345(1)	63	J-312	J-371	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	207
1148	P-345(2)	64	J-371	J-313	100	PVC	150	FALSE	0	1	0.16	0	TRUE	210
1149	P-397	87	J-370	J-371	100	PVC	150	FALSE	0	2	0.21	0.001	TRUE	285
1151	P-398	47	J-371	J-372	100	PVC	150	FALSE	0	2	0.25	0.001	TRUE	154
1153	P-180(2)(1)	39	J-316	J-373	150	Cast Iron	130	FALSE	0	-9	0.48	0.002	TRUE	128
1154	P-180(2)(2)	61	J-373	J-92	150	Cast Iron	130	FALSE	0	-8	0.46	0.002	TRUE	200
1155	P-399	65	J-372	J-373	100	PVC	150	FALSE	0	2	0.2	0	TRUE	213
1157	P-343(2)(1)	53	J-312	J-374	100	PVC	150	FALSE	0	2	0.19	0	TRUE	174
1158	P-343(2)(2)	20	J-374	J-310	100	PVC	150	FALSE	0	-2	0.27	0.001	TRUE	66
1159	P-400	77	J-374	J-372	100	PVC	150	FALSE	0	3	0.36	0.001	TRUE	253
1161	P-95(2)(1)(1)	41	J-313	J-375	100	Cast Iron	130	FALSE	0	2	0.29	0.001	TRUE	134
1162	P-95(2)(1)(2)	27	J-375	J-318	100	Cast Iron	130	FALSE	0	3	0.44	0.003	TRUE	89
1163	P-401	72	J-372	J-375	100	PVC	150	FALSE	0	2	0.21	0.001	TRUE	236
1165	P-134(2)(1)(1)	74	J-242	J-376	150	PVC	150	FALSE	0	1	0.05	0	TRUE	243
1166	P-134(2)(1)(2)	8	J-376	J-244	150	PVC	150	FALSE	0	-3	0.17	0	TRUE	26
1168	P-280(2)(1)	68	J-365	J-377	200	Cast Iron	130	FALSE	0	6	0.19	0	TRUE	223
1169	P-280(2)(2)	28	J-377	J-243	200	Cast Iron	130	FALSE	0	7	0.23	0	TRUE	92
1172	P-394(1)	46	J-366	J-378	100	PVC	150	FALSE	0	5	0.6	0.004	TRUE	151
1173	P-394(2)	45	J-378	J-368	100	PVC	150	FALSE	0	2	0.31	0.001	TRUE	148
1175	P-274(1)(1)	62	J-244	J-379	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	203
1176	P-274(1)(2)	45	J-379	J-315	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	148
1177	P-403	49	J-378	J-379	100	PVC	150	FALSE	0	2	0.2	0	TRUE	161
1179	P-402(1)	77	J-376	J-380	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	253
1181	P-404	53	J-379	J-380	100	PVC	150	FALSE	0	1	0.14	0	TRUE	174
1183	P-273(1)	47	J-242	J-381	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	154
1185	P-405	56	J-380	J-381	100	PVC	150	FALSE	0	0	0.01	0	TRUE	184
1187	P-395(1)	46	J-368	J-382	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	151
1188	P-395(2)	27	J-382	J-367	100	PVC	150	FALSE	0	1	0.14	0	TRUE	89
1190	P-274(2)(1)	45	J-315	J-383	100	PVC	150	FALSE	0	3	0.32	0.001	TRUE	148
1191	P-274(2)(2)	27	J-383	J-245	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	89
1192	P-406	49	J-382	J-383	100	PVC	150	FALSE	0	2	0.2	0	TRUE	161

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1194	P-392(1)	81	J-315	J-384	100	PVC	150	FALSE	0	2	0.25	0.001	TRUE	266
1195	P-392(2)	32	J-384	J-365	100	PVC	150	FALSE	0	3	0.33	0.001	TRUE	105
1196	P-407	56	J-383	J-384	100	PVC	150	FALSE	0	1	0.1	0	TRUE	184
1198	P-402(2)(1)	59	J-380	J-385	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	194
1199	P-402(2)(2)	93	J-385	J-377	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	305
1200	P-408	57	J-384	J-385	100	PVC	150	FALSE	0	-1	0.1	0	TRUE	187
1202	P-273(2)(1)	64	J-381	J-386	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	210
1203	P-273(2)(2)	113	J-386	J-243	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	371
1204	P-409	32	J-385	J-386	100	PVC	150	FALSE	0	0	0.06	0	TRUE	105
1206	P-133(2)(1)(1)	100	J-130	J-387	150	Cast Iron	130	FALSE	0	11	0.6	0.003	TRUE	328
1207	P-133(2)(1)(2)	118	J-387	J-251	150	Cast Iron	130	FALSE	0	8	0.45	0.002	TRUE	387
1208	P-410	79	J-386	J-387	100	PVC	150	FALSE	0	-1	0.12	0	TRUE	259
1210	P-85(1)	109	J-86	J-388	300	Cast Iron	150	FALSE	0	-51	0.73	0.001	TRUE	358
1211	P-85(2)	70	J-388	J-87	300	PVC	150	FALSE	0	-55	0.78	0.002	TRUE	230
1213	P-347(1)	72	J-86	J-389	100	PVC	150	FALSE	0	1	0.08	0	TRUE	236
1214	P-347(2)	23	J-389	J-247	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	75
1217	P-90(1)(1)	51	J-87	J-390	150	Cast Iron	130	FALSE	0	8	0.43	0.002	TRUE	167
1218	P-90(1)(2)	49	J-390	J-246	150	Cast Iron	130	FALSE	0	4	0.25	0.001	TRUE	161
1220	P-411(1)	57	J-388	J-391	100	PVC	150	FALSE	0	3	0.32	0.001	TRUE	187
1221	P-411(2)	43	J-391	J-389	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	141
1222	P-412	97	J-390	J-391	100	PVC	150	FALSE	0	2	0.3	0.001	TRUE	318
1223	P-413	77	J-5	J-224	100	PVC	150	FALSE	0	4	0.49	0.002	TRUE	253
1225	P-254(1)	40	J-226	J-392	100	PVC	150	FALSE	0	-4	0.49	0.002	TRUE	131
1226	P-254(2)	75	J-392	J-40	100	PVC	150	FALSE	0	-1	0.16	0	TRUE	246
1227	P-414	93	J-224	J-392	100	PVC	150	FALSE	0	4	0.48	0.002	TRUE	305
1228	P-415	69	J-6	J-223	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	226
1230	P-8(1)(1)	40	J-8	J-393	400	Cast Iron	130	FALSE	0	65	0.51	0.001	TRUE	131
1231	P-8(1)(2)	27	J-393	J-319	400	Cast Iron	130	FALSE	0	62	0.5	0.001	TRUE	89
1233	P-249(1)(2)(1)	24	J-320	J-394	100	Cast Iron	130	FALSE	0	-3	0.41	0.002	TRUE	79
1234	P-249(1)(2)(2)	36	J-394	J-221	100	Cast Iron	130	FALSE	0	-2	0.26	0.001	TRUE	118
1235	P-416	67	J-393	J-394	100	Cast Iron	130	FALSE	0	2	0.23	0.001	TRUE	220
1237	P-228(2)(1)	69	J-219	J-395	150	Cast Iron	130	FALSE	0	13	0.76	0.005	TRUE	226
1238	P-228(2)(2)	30	J-395	J-199	150	Cast Iron	130	FALSE	0	14	0.78	0.005	TRUE	98
1239	P-417	126	J-395	J-226	100	PVC	150	FALSE	0	-2	0.28	0.001	TRUE	413

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1241	P-229(2)(1)	18	J-210	J-396	150	Cast Iron	130	FALSE	0	9	0.52	0.002	TRUE	59
1242	P-229(2)(2)	62	J-396	J-201	150	Cast Iron	130	FALSE	0	10	0.59	0.003	TRUE	203
1243	P-418	125	J-227	J-396	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	410
1245	P-226(1)(1)	53	J-198	J-398	100	Cast Iron	130	FALSE	0	-2	0.25	0.001	TRUE	174
1246	P-226(1)(2)	89	J-398	J-205	100	Cast Iron	130	FALSE	0	-2	0.24	0.001	TRUE	292
1247	P-419	138	J-12	J-398	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	453
1250	P-239(1)	90	J-211	J-399	100	Cast Iron	130	FALSE	0	2	0.23	0.001	TRUE	295
1251	P-239(2)	53	J-399	J-212	100	Cast Iron	130	FALSE	0	3	0.33	0.002	TRUE	174
1252	P-420	9	J-398	J-399	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	30
1254	P-235(2)(1)	45	J-211	J-400	150	PVC	150	FALSE	0	10	0.59	0.002	TRUE	148
1255	P-235(2)(2)	35	J-400	J-207	150	PVC	150	FALSE	0	10	0.58	0.002	TRUE	115
1256	P-421	130	J-399	J-400	100	PVC	150	FALSE	0	1	0.13	0	TRUE	426
1258	P-225(1)	69	J-197	J-401	100	Cast Iron	130	FALSE	0	-2	0.27	0.001	TRUE	226
1259	P-225(2)	75	J-401	J-198	100	Cast Iron	130	FALSE	0	0	0.04	0	TRUE	246
1260	P-422	134	J-14	J-401	100	PVC	150	FALSE	0	4	0.53	0.003	TRUE	440
1262	P-240(1)	76	J-212	J-402	100	Cast Iron	130	FALSE	0	3	0.34	0.002	TRUE	249
1263	P-240(2)	68	J-402	J-213	100	Cast Iron	130	FALSE	0	-2	0.25	0.001	TRUE	223
1265	P-232(2)(2)(1)	76	J-216	J-403	100	PVC	150	FALSE	0	-1	0.16	0	TRUE	249
1266	P-232(2)(2)(2)	59	J-403	J-203	100	PVC	150	FALSE	0	1	0.15	0	TRUE	194
1267	P-423	81	J-402	J-403	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	266
1269	P-223(1)	60	J-193	J-405	100	Cast Iron	130	FALSE	0	-1	0.15	0	TRUE	197
1270	P-223(2)	82	J-405	J-196	100	Cast Iron	130	FALSE	0	-2	0.27	0.001	TRUE	269
1271	P-424	95	J-17	J-405	100	PVC	150	FALSE	0	5	0.63	0.004	TRUE	312
1274	P-242(1)	83	J-214	J-406	100	Cast Iron	130	FALSE	0	2	0.27	0.001	TRUE	272
1275	P-242(2)	57	J-406	J-194	100	Cast Iron	130	FALSE	0	1	0.14	0	TRUE	187
1276	P-425	8	J-405	J-406	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	26
1279	P-222(2)(2)(1)	82	J-214	J-407	150	Cast Iron	130	FALSE	0	12	0.67	0.004	TRUE	269
1280	P-222(2)(2)(2)	67	J-407	J-195	150	Cast Iron	130	FALSE	0	9	0.51	0.002	TRUE	220
1282	P-426(1)	81	J-406	J-408	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	266
1283	P-426(2)	58	J-408	J-44	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	190
1284	P-427	92	J-407	J-408	100	PVC	150	FALSE	0	1	0.19	0	TRUE	302
1286	P-220(1)	82	J-194	J-409	200	PVC	150	FALSE	0	25	0.81	0.003	TRUE	269
1287	P-220(2)	52	J-409	J-45	200	PVC	150	FALSE	0	25	0.8	0.003	TRUE	171
1288	P-428	58	J-408	J-409	100	PVC	150	FALSE	0	0	0.05	0	TRUE	190

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1290	P-292(2)(1)	59	J-282	J-410	100	PVC	150	FALSE	0	2	0.22	0.001	TRUE	194
1291	P-292(2)(2)	126	J-410	J-259	100	PVC	150	FALSE	0	0	0.02	0	TRUE	413
1292	P-429	89	J-107	J-410	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	292
1294	P-104(1)	122	J-105	J-411	200	Cast Iron	130	FALSE	0	6	0.18	0	TRUE	400
1295	P-104(2)	138	J-411	J-106	200	Cast Iron	130	FALSE	0	6	0.18	0	TRUE	453
1296	P-430	82	J-410	J-411	100	PVC	150	FALSE	0	2	0.22	0.001	TRUE	269
1298	P-170(2)(1)	4	J-322	J-412	100	Cast Iron	130	FALSE	0	1	0.14	0	TRUE	13
1299	P-170(2)(2)	55	J-412	J-109	100	Cast Iron	130	FALSE	0	-2	0.23	0.001	TRUE	180
1302	P-315(1)(2)	5	J-413	J-323	100	Cast Iron	130	FALSE	0	-1	0.15	0	TRUE	16
1303	P-431	107	J-412	J-413	100	Cast Iron	130	FALSE	0	2	0.27	0.001	TRUE	351
1305	P-315(1)(1)(1)	40	J-108	J-414	100	Cast Iron	130	FALSE	0	2	0.27	0.001	TRUE	131
1306	P-315(1)(1)(2)	26	J-414	J-413	100	Cast Iron	130	FALSE	0	-3	0.35	0.002	TRUE	85
1308	P-314(1)	38	J-281	J-415	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	125
1309	P-314(2)	89	J-415	J-282	100	PVC	150	FALSE	0	3	0.33	0.001	TRUE	292
1312	P-432(1)	58	J-414	J-416	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	190
1313	P-432(2)	47	J-416	J-415	100	PVC	150	FALSE	0	1	0.09	0	TRUE	154
1315	P-292(1)(1)	55	J-157	J-417	100	PVC	150	FALSE	0	0	0.03	0	TRUE	180
1316	P-292(1)(2)	39	J-417	J-282	100	PVC	150	FALSE	0	1	0.09	0	TRUE	128
1317	P-433	136	J-416	J-417	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	446
1319	P-215(1)	76	J-190	J-418	100	PVC	150	FALSE	0	-2	0.28	0.001	TRUE	249
1320	P-215(2)	96	J-418	J-191	100	PVC	150	FALSE	0	-4	0.48	0.002	TRUE	315
1321	P-434	75	J-277	J-418	100	PVC	150	FALSE	0	5	0.61	0.004	TRUE	246
1326	P-164(2)(1)	8	J-419	J-420	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	26
1327	P-164(2)(2)	104	J-420	J-156	100	Cast Iron	130	FALSE	0	1	0.15	0	TRUE	341
1328	P-437	125	J-420	J-144	100	PVC	150	FALSE	0	-3	0.43	0.002	TRUE	410
1330	P-435(1)	62	J-418	J-421	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	203
1331	P-435(2)	111	J-421	J-158	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	364
1332	P-438	77	J-144	J-421	100	PVC	150	FALSE	0	-3	0.34	0.001	TRUE	253
1334	P-149(2)(1)	44	J-191	J-422	300	PVC	150	FALSE	0	80	1.13	0.003	TRUE	144
1335	P-149(2)(2)	111	J-422	J-142	300	PVC	150	FALSE	0	74	1.05	0.003	TRUE	364
1336	P-439	96	J-421	J-422	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	315
1338	P-257(1)	34	J-168	J-423	100	Cast Iron	130	FALSE	0	3	0.35	0.002	TRUE	112
1339	P-257(2)	57	J-423	J-229	100	Cast Iron	130	FALSE	0	2	0.27	0.001	TRUE	187
1340	P-440	124	J-236	J-423	100	PVC	150	FALSE	0	1	0.09	0	TRUE	407

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1342	P-87(2)(1)	49	J-131	J-424	300	PVC	150	FALSE	0	-88	1.25	0.004	TRUE	161
1343	P-87(2)(2)	66	J-424	J-89	300	PVC	150	FALSE	0	-90	1.28	0.004	TRUE	216
1345	P-300(1)	65	J-270	J-425	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	213
1346	P-300(2)	71	J-425	J-238	100	PVC	150	FALSE	0	-5	0.67	0.004	TRUE	233
1347	P-441	88	J-424	J-425	100	PVC	150	FALSE	0	1	0.11	0	TRUE	289
1349	P-272(1)	78	J-239	J-426	100	PVC	150	FALSE	0	5	0.68	0.005	TRUE	256
1350	P-272(2)	87	J-426	J-241	100	PVC	150	FALSE	0	4	0.5	0.003	TRUE	285
1351	P-442	90	J-425	J-426	100	PVC	150	FALSE	0	0	0.03	0	TRUE	295
1353	P-133(1)(1)(1)	95	J-128	J-427	150	Cast Iron	130	FALSE	0	13	0.75	0.004	TRUE	312
1354	P-133(1)(1)(2)	102	J-427	J-132	150	Cast Iron	130	FALSE	0	11	0.6	0.003	TRUE	335
1355	P-443	74	J-426	J-427	150	PVC	150	FALSE	0	-1	0.07	0	TRUE	243
1357	P-88(1)	80	J-89	J-428	300	PVC	150	FALSE	0	-74	1.04	0.003	TRUE	262
1358	P-88(2)	142	J-428	J-90	300	PVC	150	FALSE	0	-77	1.08	0.003	TRUE	466
1360	P-301(1)	76	J-238	J-429	100	PVC	150	FALSE	0	-3	0.44	0.002	TRUE	249
1361	P-301(2)	129	J-429	J-271	100	PVC	150	FALSE	0	-5	0.57	0.003	TRUE	423
1362	P-444	60	J-428	J-429	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	197
1364	P-271(1)	119	J-240	J-430	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	390
1365	P-271(2)	56	J-430	J-239	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	184
1366	P-445	74	J-429	J-430	100	PVC	150	FALSE	0	1	0.1	0	TRUE	243
1368	P-383(2)(1)	38	J-358	J-431	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	125
1369	P-383(2)(2)	85	J-431	J-354	100	PVC	150	FALSE	0	5	0.64	0.004	TRUE	279
1370	P-446	54	J-332	J-431	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	177
1372	P-369(1)	92	J-341	J-432	100	PVC	150	FALSE	0	-2	0.31	0.001	TRUE	302
1373	P-369(2)	46	J-432	J-342	100	PVC	150	FALSE	0	-3	0.38	0.002	TRUE	151
1374	P-447	69	J-362	J-432	100	PVC	150	FALSE	0	-4	0.5	0.003	TRUE	226
1377	P-32(2)(2)(1)(2)	89	J-433	J-272	250	PVC	150	FALSE	0	20	0.41	0.001	TRUE	292
1378	P-448	64	J-432	J-433	100	PVC	150	FALSE	0	-4	0.54	0.003	TRUE	210
1381	P-194(1)(2)	59	J-434	J-174	200	PVC	150	FALSE	0	7	0.22	0	TRUE	194
1384	P-40(1)	14	J-41	J-435	150	PVC	150	FALSE	0	-5	0.28	0.001	TRUE	46
1385	P-40(2)	127	J-435	J-42	150	PVC	150	FALSE	0	-6	0.33	0.001	TRUE	417
1390	P-451	14	J-45	J-436	200	PVC	150	FALSE	0	32	1	0.004	TRUE	46
1391	P-452	31	J-183	J-434	300	PVC	150	FALSE	0	67	0.95	0.002	TRUE	102
1392	P-453	18	J-1	J-2	300	Cast Iron	130	FALSE	0	45	0.63	0.001	TRUE	59
1393	P-454	103	J-66	J-63	100	PVC	150	FALSE	0	1	0.16	0	TRUE	338

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1395	P-119(1)(1)	33	J-115	J-437	200	PVC	150	FALSE	0	-37	1.19	0.006	TRUE	108
1396	P-119(1)(2)	56	J-437	J-257	200	PVC	150	FALSE	0	-36	1.13	0.005	TRUE	184
1397	P-455	188	J-63	J-437	100	PVC	150	FALSE	0	3	0.38	0.002	TRUE	617
1398	P-456	8	J-166	J-339	100	Cast Iron	130	FALSE	0	3	0.41	0.002	TRUE	26
1399	P-457	43	J-339	J-161	100	PVC	150	FALSE	0	4	0.46	0.002	TRUE	141
1400	P-458	51	J-161	J-229	150	PVC	150	FALSE	0	3	0.15	0	TRUE	167
1401	P-459	57	J-68	J-61	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	187
1402	P-291	128	J-61	J-258	100	PVC	150	FALSE	0	3	0.41	0.002	TRUE	420
1405	P-60(1)	62	J-61	J-438	250	PVC	150	FALSE	0	63	1.28	0.005	TRUE	203
1406	P-60(2)	25	J-438	J-62	250	PVC	150	FALSE	0	58	1.18	0.004	TRUE	82
1408	P-119(2)(1)(1)	59	J-257	J-439	200	PVC	150	FALSE	0	-34	1.09	0.005	TRUE	194
1409	P-119(2)(1)(2)	74	J-439	J-258	200	PVC	150	FALSE	0	-33	1.04	0.004	TRUE	243
1410	P-462	148	J-438	J-439	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	485
1412	P-260(1)	73	J-232	J-440	100	PVC	150	FALSE	0	-5	0.61	0.004	TRUE	239
1413	P-260(2)	81	J-440	J-134	100	PVC	150	FALSE	0	-6	0.77	0.006	TRUE	266
1415	P-185(1)	72	J-169	J-441	100	PVC	150	FALSE	0	-6	0.76	0.006	TRUE	236
1416	P-185(2)	89	J-441	J-134	100	PVC	150	FALSE	0	-6	0.74	0.005	TRUE	292
1417	P-463	76	J-440	J-441	100	PVC	150	FALSE	0	0	0.05	0	TRUE	249
1419	P-138(2)(1)	102	J-338	J-442	300	PVC	150	FALSE	0	-82	1.16	0.003	TRUE	335
1420	P-138(2)(2)	100	J-442	J-134	300	PVC	150	FALSE	0	-86	1.21	0.004	TRUE	328
1421	P-464	95	J-441	J-442	100	PVC	150	FALSE	0	-2	0.31	0.001	TRUE	312
1423	P-258(1)	94	J-229	J-443	100	Cast Iron	130	FALSE	0	2	0.29	0.001	TRUE	308
1424	P-258(2)	24	J-443	J-230	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	79
1426	P-265(1)	82	J-237	J-444	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	269
1427	P-265(2)	59	J-444	J-101	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	194
1428	P-465	91	J-443	J-444	100	PVC	150	FALSE	0	1	0.13	0	TRUE	298
1430	P-137(1)	65	J-133	J-445	300	PVC	150	FALSE	0	71	1	0.003	TRUE	213
1431	P-137(2)	110	J-445	J-102	300	PVC	150	FALSE	0	60	0.85	0.002	TRUE	361
1432	P-466	102	J-444	J-445	100	Cast Iron	130	FALSE	0	0	0	0	TRUE	335
1434	P-150(1)(1)	59	J-142	J-446	300	PVC	150	FALSE	0	56	0.8	0.002	TRUE	194
1435	P-150(1)(2)	74	J-446	J-284	300	PVC	150	FALSE	0	61	0.86	0.002	TRUE	243
1436	P-467	10	J-445	J-446	250	PVC	150	FALSE	0	9	0.18	0	TRUE	33
1438	P-468	97	J-446	J-447	100	PVC	150	FALSE	0	3	0.41	0.002	TRUE	318
1440	P-152(1)(1)	61	J-143	J-448	200	PVC	150	FALSE	0	-20	0.63	0.002	TRUE	200

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1441	P-152(1)(2)	61	J-448	J-159	200	PVC	150	FALSE	0	-19	0.6	0.002	TRUE	200
1442	P-469	78	J-447	J-448	100	PVC	150	FALSE	0	2	0.28	0.001	TRUE	256
1443	P-470	60	J-158	J-447	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	197
1445	P-317(1)	79	J-143	J-449	100	PVC	150	FALSE	0	-3	0.35	0.001	TRUE	259
1446	P-317(2)	97	J-449	J-284	100	PVC	150	FALSE	0	-2	0.3	0.001	TRUE	318
1447	P-471	65	J-447	J-449	100	PVC	150	FALSE	0	2	0.32	0.001	TRUE	213
1472	P-474(1)	4	R-5	PMP-7	500	Cast Iron	130	FALSE	0	217	1.1	0.002	TRUE	13
1473	P-474(2)	8	PMP-7	J-1	500	Cast Iron	130	FALSE	0	217	1.1	0.002	TRUE	26
1477	P-475(1)	27	R-6	PMP-8	800	PVC	150	FALSE	0	876	1.74	0.002	TRUE	56
1488	P-54(1)	8	J-55	J-91	300	PVC	150	FALSE	0	-12	0.17	0	TRUE	26
1489	P-54(2)	13	J-91	J-56	300	PVC	150	FALSE	0	-108	1.53	0.006	TRUE	43
1490	P-476	49	J-121	J-91	300	PVC	150	FALSE	0	-96	1.36	0.005	TRUE	161
1494	P-477	134	J-209	J-217	100	Cast Iron	130	FALSE	0	0	0.05	0	TRUE	440
1495	P-478	143	J-217	J-208	100	Cast Iron	130	FALSE	0	-3	0.39	0.002	TRUE	469
1498	P-450(2)(1)	166	J-436	J-452	300	PVC	150	FALSE	0	-19	0.27	0	TRUE	546
1500	P-479	14	J-43	J-452	300	PVC	150	FALSE	0	86	1.22	0.004	TRUE	46
1502	P-480	354	J-2	J-453	300	PVC	150	FALSE	0	73	1.04	0.003	TRUE	1,161
1504	P-481	258	J-453	J-454	300	PVC	150	FALSE	0	0	0	0	TRUE	846
1505	P-482	21	J-200	J-453	300	PVC	150	FALSE	0	42	0.6	0.001	TRUE	69
1506	P-483	279	J-41	J-452	300	PVC	150	FALSE	0	-9	0.13	0	TRUE	915
1507	P-484	10	J-135	J-140	300	PVC	150	FALSE	0	88	1.24	0.004	TRUE	32
1510	P-486	6	J-104	J-18	250	PVC	150	FALSE	0	9	0.18	0	TRUE	16
1516	P-489	13	J-106	J-48	300	PVC	150	FALSE	0	48	0.68	0.001	TRUE	43
1517	P-490	11	J-139	J-136	300	PVC	150	FALSE	0	-51	0.72	0.001	TRUE	36
1518	P-491	35	J-136	J-433	250	PVC	150	FALSE	0	25	0.51	0.001	TRUE	114
1519	P-492	12	J-109	J-185	100	PVC	150	FALSE	0	4	0.5	0.003	TRUE	39
1522	P-475(2)(1)	24	PMP-8	J-457	800	PVC	150	FALSE	0	876	1.74	0.002	TRUE	78
1523	P-475(2)(2)	596	J-457	J-69	600	PVC	150	FALSE	0	589	2.08	0.004	TRUE	1,949
1524	P-493	351	J-457	J-73	450	PVC	150	FALSE	0	287	1.8	0.005	TRUE	1,148
1526	P-123(1)(1)	6	J-56	J-458	300	Cast Iron	130	FALSE	0	-10	0.14	0	TRUE	20
1527	P-123(1)(2)	85	J-458	J-124	300	Cast Iron	130	FALSE	0	-79	1.11	0.004	TRUE	278
1528	P-494	31	J-458	J-55	300	PVC	150	FALSE	0	69	0.97	0.002	TRUE	101
1529	P-495	15	J-49	J-4	300	PVC	150	FALSE	0	53	0.75	0.002	TRUE	49
1531	P-67(1)	110	J-68	J-459	300	PVC	150	FALSE	0	-103	1.45	0.005	TRUE	360

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined)
1532	P-67(2)	9	J-459	J-69	400	PVC	150	FALSE	0	-201	1.6	0.004	TRUE	29
1533	P-496	25	J-138	J-459	300	PVC	150	FALSE	0	-98	1.39	0.005	TRUE	82
1535	P-450(1)(1)	241	J-23	J-460	300	PVC	150	FALSE	0	8	0.11	0	TRUE	788
1536	P-450(1)(2)	200	J-460	J-436	300	PVC	150	FALSE	0	-50	0.71	0.001	TRUE	654
1538	P-112(1)	4	J-113	J-461	300	PVC	150	FALSE	0	-116	1.64	0.006	TRUE	13
1539	P-112(2)	65	J-461	J-114	300	PVC	150	FALSE	0	-96	1.35	0.005	TRUE	213
1540	P-497	24	J-291	J-461	200	PVC	150	FALSE	0	20	0.65	0.002	TRUE	78

ĐIỀU CHỈNH QUY HOẠCH PHÂN KHU ĐÔ THỊ TRUNG TÂM THÀNH PHỐ QUẢNG NGÃI
- TỶ LỆ 1/2000

BẢNG 3: BẢNG TÍNH TOÁN THỦY LỰC NODE
GIỜ DÙNG NƯỚC LỚN NHẤT + CỐ CHÁY

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
30	J-1	9.79	<None>	<Collection: 0 items>	0	33.27	23
31	J-2	9.79	<None>	<Collection: 0 items>	0	33.17	23
33	J-3	9.24	<None>	<Collection: 0 items>	1	33.04	24
35	J-4	9.24	<None>	<Collection: 1 item>	0	33.04	24
37	J-5	6.9	<None>	<Collection: 1 item>	1	32.71	26
39	J-6	6.94	<None>	<Collection: 1 item>	0	32.5	26
41	J-7	6.64	<None>	<Collection: 1 item>	1	32.22	26
43	J-8	6.42	<None>	<Collection: 1 item>	1	32.08	26
45	J-9	6.45	<None>	<Collection: 1 item>	0	31.88	25
47	J-10	6.02	<None>	<Collection: 1 item>	1	31.3	25
49	J-11	6.4	<None>	<Collection: 1 item>	0	31.02	25
51	J-12	6.36	<None>	<Collection: 1 item>	1	30.8	24
53	J-13	7.39	<None>	<Collection: 1 item>	1	30.55	23
55	J-14	7.22	<None>	<Collection: 1 item>	2	30.44	23
57	J-15	6.85	<None>	<Collection: 1 item>	1	30.15	23
59	J-16	6.85	<None>	<Collection: 1 item>	1	30.15	23
61	J-17	6.83	<None>	<Collection: 1 item>	2	29.64	23
63	J-18	7.01	<None>	<Collection: 1 item>	1	29.05	22
65	J-19	7.15	<None>	<Collection: 0 items>	0	29	22
67	J-20	7.44	<None>	<Collection: 1 item>	1	27.92	20
69	J-21	7.33	<None>	<Collection: 1 item>	1	26.85	19
71	J-22	7.14	<None>	<Collection: 1 item>	1	26.5	19
73	J-23	7.09	<None>	<Collection: 2 items>	156	24.44	17
75	J-24	6.47	<None>	<Collection: 1 item>	1	25.03	19
77	J-25	6.92	<None>	<Collection: 1 item>	1	25.88	19
81	J-27	6.64	<None>	<Collection: 1 item>	1	29.1	22
83	J-28	7.17	<None>	<Collection: 1 item>	1	30.05	23
85	J-29	8	<None>	<Collection: 1 item>	1	31.28	23
87	J-30	8	<None>	<Collection: 1 item>	1	31.95	24
89	J-31	8.1	<None>	<Collection: 1 item>	1	32.63	24
91	J-32	9	<None>	<Collection: 1 item>	0	34.02	25
93	J-33	10.25	<None>	<Collection: 1 item>	0	39.99	30
95	J-34	8.9	<None>	<Collection: 1 item>	1	38.34	29
97	J-35	7.16	<None>	<Collection: 1 item>	2	32.54	25
102	J-38	6.39	<None>	<Collection: 0 items>	0	32.15	26
103	J-39	6.42	<None>	<Collection: 1 item>	0	32.05	26
106	J-40	8.11	<None>	<Collection: 1 item>	1	31.3	23
108	J-41	7.85	<None>	<Collection: 1 item>	116	26.63	19
110	J-42	8.15	<None>	<Collection: 1 item>	2	26.98	19
112	J-43	7.95	<None>	<Collection: 1 item>	1	26.82	19
114	J-44	7.79	<None>	<Collection: 1 item>	1	26.66	19
116	J-45	7.87	<None>	<Collection: 1 item>	0	26.44	19
118	J-46	7.13	<None>	<Collection: 1 item>	1	26.38	19
120	J-47	7.1	<None>	<Collection: 1 item>	1	26.24	19
122	J-48	7.09	<None>	<Collection: 1 item>	0	26.07	19
126	J-49	9.24	<None>	<Collection: 0 items>	0	33.13	24
128	J-50	7.82	<None>	<Collection: 1 item>	0	33.68	26
130	J-51	7.9	<None>	<Collection: 1 item>	1	34.51	27
132	J-52	7.9	<None>	<Collection: 1 item>	0	36.23	28

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
134	J-53	8.56	<None>	<Collection: 1 item>	0	37.69	29
136	J-54	10.88	<None>	<Collection: 1 item>	0	40.09	29
138	J-55	10.13	<None>	<Collection: 2 items>	2	41.02	31
140	J-56	9.76	<None>	<Collection: 2 items>	1	41.28	31
142	J-57	9.36	<None>	<Collection: 1 item>	2	41.71	32
144	J-58	8.51	<None>	<Collection: 1 item>	2	42.01	33
146	J-59	8.64	<None>	<Collection: 1 item>	1	42.12	33
148	J-60	9	<None>	<Collection: 1 item>	1	42.26	33
150	J-61	9	<None>	<Collection: 1 item>	3	39.96	31
152	J-62	8.28	<None>	<Collection: 1 item>	1	38.22	30
154	J-63	8.6	<None>	<Collection: 1 item>	2	36.45	28
156	J-64	7.74	<None>	<Collection: 1 item>	1	36.01	28
158	J-65	8.5	<None>	<Collection: 1 item>	0	36.05	27
160	J-66	8	<None>	<Collection: 1 item>	1	36.57	29
162	J-67	7.3	<None>	<Collection: 1 item>	1	38.63	31
164	J-68	9	<None>	<Collection: 1 item>	1	40.33	31
166	J-69	9.2	<None>	<Collection: 1 item>	1	42.81	34
168	J-70	7.88	<None>	<Collection: 1 item>	1	43.29	35
170	J-71	7.69	<None>	<Collection: 1 item>	1	43.92	36
172	J-72	7.91	<None>	<Collection: 1 item>	1	44.84	37
174	J-73	8.51	<None>	<Collection: 1 item>	0	46.3	38
176	J-74	9.5	<None>	<Collection: 2 items>	41	37.92	28
178	J-75	9	<None>	<Collection: 2 items>	3	40.23	31
180	J-76	9	<None>	<Collection: 2 items>	1	41.82	33
182	J-77	8.95	<None>	<Collection: 2 items>	2	41.27	32
184	J-78	8.16	<None>	<Collection: 2 items>	2	40.38	32
186	J-79	9.45	<None>	<Collection: 2 items>	0	39.94	30
188	J-80	9.05	<None>	<Collection: 1 item>	0	37.57	28
190	J-81	8.56	<None>	<Collection: 1 item>	1	36.23	28
192	J-82	8.82	<None>	<Collection: 1 item>	1	34.05	25
194	J-83	8.56	<None>	<Collection: 2 items>	21	32.86	24
196	J-84	8.42	<None>	<Collection: 2 items>	21	32.75	24
198	J-85	7.82	<None>	<Collection: 1 item>	0	33.23	25
202	J-86	7.75	<None>	<Collection: 1 item>	1	33.54	26
204	J-87	7.9	<None>	<Collection: 1 item>	0	34.51	27
206	J-88	7.9	<None>	<Collection: 1 item>	0	35.97	28
208	J-89	8.56	<None>	<Collection: 1 item>	1	37.69	29
210	J-90	10.88	<None>	<Collection: 1 item>	1	39.96	29
215	J-92	6.9	<None>	<Collection: 1 item>	1	32.89	26
217	J-93	7.02	<None>	<Collection: 1 item>	1	33.46	26
219	J-94	6.39	<None>	<Collection: 1 item>	0	32.14	26
221	J-95	6.45	<None>	<Collection: 1 item>	0	31.97	25
223	J-96	9.24	<None>	<Collection: 1 item>	1	33.08	24
226	J-97	6.94	<None>	<Collection: 1 item>	0	32.71	26
228	J-98	6.42	<None>	<Collection: 1 item>	0	32.13	26
231	J-99	6.45	<None>	<Collection: 1 item>	0	31.89	25
235	J-100	6.02	<None>	<Collection: 1 item>	1	31.57	25
237	J-101	7.39	<None>	<Collection: 1 item>	1	30.91	23
239	J-102	6.85	<None>	<Collection: 1 item>	1	30.2	23
241	J-103	6.85	<None>	<Collection: 1 item>	1	30.19	23
243	J-104	7.01	<None>	<Collection: 1 item>	3	29.05	22
245	J-105	7.44	<None>	<Collection: 1 item>	2	26.43	19
247	J-106	7.09	<None>	<Collection: 1 item>	1	26.14	19

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
249	J-107	6.92	<None>	<Collection: 1 item>	1	26.85	20
251	J-108	5.96	<None>	<Collection: 1 item>	1	27.75	22
253	J-109	5.96	<None>	<Collection: 1 item>	2	28.31	22
255	J-110	6.64	<None>	<Collection: 1 item>	2	29.19	23
257	J-111	7.17	<None>	<Collection: 1 item>	2	30.15	23
259	J-112	8	<None>	<Collection: 1 item>	2	31.4	23
261	J-113	8.1	<None>	<Collection: 1 item>	2	32.72	25
263	J-114	9	<None>	<Collection: 1 item>	1	34.12	25
267	J-115	9	<None>	<Collection: 1 item>	1	34.35	25
270	J-116	9	<None>	<Collection: 1 item>	3	34.21	25
272	J-117	8.5	<None>	<Collection: 1 item>	31	35.88	27
276	J-118	9.72	<None>	<Collection: 1 item>	1	40.63	31
278	J-119	9.72	<None>	<Collection: 1 item>	1	40.66	31
280	J-120	10.36	<None>	<Collection: 1 item>	2	40.46	30
282	J-121	11.22	<None>	<Collection: 1 item>	0	40.29	29
287	J-122	9.76	<None>	<Collection: 2 items>	2	41.42	32
290	J-123	8.51	<None>	<Collection: 1 item>	1	45.93	37
294	J-124	8.58	<None>	<Collection: 3 items>	7	42.19	34
300	J-125	9.49	<None>	<Collection: 1 item>	2	39.57	30
302	J-126	9.13	<None>	<Collection: 1 item>	1	39.57	30
306	J-127	8.9	<None>	<Collection: 1 item>	2	38.22	29
308	J-128	8.9	<None>	<Collection: 1 item>	0	38.24	29
310	J-129	8.9	<None>	<Collection: 1 item>	0	38.27	29
315	J-130	7.9	<None>	<Collection: 1 item>	1	35.46	28
319	J-131	7.9	<None>	<Collection: 1 item>	1	36.07	28
322	J-132	7.9	<None>	<Collection: 1 item>	1	35.66	28
326	J-133	6.78	<None>	<Collection: 1 item>	2	31.64	25
329	J-134	7.5	<None>	<Collection: 1 item>	1	35.36	28
331	J-135	9.33	<None>	<Collection: 1 item>	0	39.3	30
333	J-136	9.6	<None>	<Collection: 1 item>	0	40.42	31
340	J-138	9	<None>	<Collection: 1 item>	1	42.19	33
344	J-139	9.6	<None>	<Collection: 1 item>	0	40.35	31
348	J-140	8.42	<None>	<Collection: 1 item>	0	39.16	31
350	J-141	7.5	<None>	<Collection: 1 item>	1	35.36	28
352	J-142	6.78	<None>	<Collection: 1 item>	1	31.35	25
355	J-143	6	<None>	<Collection: 1 item>	4	29.55	23
357	J-144	7.44	<None>	<Collection: 1 item>	3	30.97	23
359	J-145	6.45	<None>	<Collection: 1 item>	2	33.26	27
361	J-146	7.74	<None>	<Collection: 1 item>	2	34.85	27
363	J-147	7.7	<None>	<Collection: 1 item>	2	36.52	29
365	J-148	7.98	<None>	<Collection: 1 item>	1	38.44	30
368	J-149	9.31	<None>	<Collection: 1 item>	1	39.61	30
371	J-150	8	<None>	<Collection: 1 item>	2	38.48	30
373	J-151	8	<None>	<Collection: 1 item>	2	36.65	29
375	J-152	8	<None>	<Collection: 1 item>	1	35.38	27
377	J-153	8.4	<None>	<Collection: 1 item>	2	33.88	25
379	J-154	8	<None>	<Collection: 1 item>	3	31.83	24
381	J-155	6.57	<None>	<Collection: 1 item>	2	30.49	24
383	J-156	6.01	<None>	<Collection: 1 item>	4	29.81	24
385	J-157	6.42	<None>	<Collection: 1 item>	2	26.67	20
388	J-158	5.9	<None>	<Collection: 1 item>	3	30.69	25
390	J-159	5.94	<None>	<Collection: 1 item>	3	30.3	24
396	J-160	6.43	<None>	<Collection: 1 item>	0	31.8	25

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
399	J-161	6.56	<None>	<Collection: 1 item>	1	31.65	25
402	J-162	6.35	<None>	<Collection: 1 item>	0	32.13	26
405	J-163	6.35	<None>	<Collection: 1 item>	0	32.14	26
409	J-164	6.39	<None>	<Collection: 1 item>	0	32.14	26
414	J-165	6.35	<None>	<Collection: 1 item>	1	32.16	26
418	J-166	6.35	<None>	<Collection: 1 item>	1	32.14	26
422	J-167	6.43	<None>	<Collection: 1 item>	2	32.14	26
424	J-168	6.43	<None>	<Collection: 1 item>	0	32.13	26
426	J-169	7.4	<None>	<Collection: 1 item>	3	32.29	25
430	J-170	7.61	<None>	<Collection: 1 item>	1	35.21	28
440	J-173	6	<None>	<Collection: 1 item>	0	29.4	23
442	J-174	6	<None>	<Collection: 2 items>	42	29.4	23
445	J-175	6	<None>	<Collection: 1 item>	2	28.36	22
447	J-176	6.3	<None>	<Collection: 1 item>	2	27.89	22
449	J-177	7.25	<None>	<Collection: 1 item>	2	27.52	20
453	J-179	6.8	<None>	<Collection: 1 item>	0	27.48	21
455	J-180	6.85	<None>	<Collection: 1 item>	2	25.62	19
457	J-181	7	<None>	<Collection: 1 item>	2	24.76	18
459	J-182	6.8	<None>	<Collection: 1 item>	1	24.7	18
463	J-183	6.5	<None>	<Collection: 1 item>	2	31.46	25
469	J-185	5.96	<None>	<Collection: 1 item>	2	28.1	22
471	J-186	7.17	<None>	<Collection: 1 item>	1	29.99	23
474	J-187	7.2	<None>	<Collection: 1 item>	5	28.7	21
478	J-188	6.58	<None>	<Collection: 1 item>	3	27.57	21
485	J-189	6.3	<None>	<Collection: 1 item>	1	30.89	25
487	J-190	6.45	<None>	<Collection: 1 item>	3	31.74	25
491	J-191	6.4	<None>	<Collection: 1 item>	1	33.03	27
499	J-193	7.17	<None>	<Collection: 1 item>	1	28.07	21
501	J-194	7.17	<None>	<Collection: 1 item>	0	27.97	21
505	J-195	7.95	<None>	<Collection: 1 item>	1	26.83	19
509	J-196	6.12	<None>	<Collection: 1 item>	1	28.61	22
513	J-197	6.12	<None>	<Collection: 1 item>	1	28.69	23
517	J-198	6.08	<None>	<Collection: 1 item>	1	29.05	23
519	J-199	6.73	<None>	<Collection: 1 item>	0	29.82	23
521	J-200	7.8	<None>	<Collection: 1 item>	1	29.67	22
526	J-201	6.33	<None>	<Collection: 1 item>	1	28.89	23
529	J-202	6.33	<None>	<Collection: 1 item>	1	28.84	22
533	J-203	6.92	<None>	<Collection: 1 item>	1	27.63	21
539	J-205	6.36	<None>	<Collection: 1 item>	2	29.63	23
547	J-207	6.43	<None>	<Collection: 1 item>	1	28.9	22
548	J-208	6.43	<None>	<Collection: 1 item>	1	28.89	22
550	J-209	6.29	<None>	<Collection: 1 item>	2	27.55	21
554	J-210	6.73	<None>	<Collection: 1 item>	0	29.72	23
557	J-211	6.36	<None>	<Collection: 1 item>	1	29.55	23
561	J-212	6.08	<None>	<Collection: 1 item>	1	28.89	23
563	J-213	6.12	<None>	<Collection: 1 item>	1	28.57	22
567	J-214	6.12	<None>	<Collection: 1 item>	1	28.51	22
578	J-216	6.57	<None>	<Collection: 1 item>	1	27.65	21
579	J-217	6.57	<None>	<Collection: 1 item>	1	27.62	21
582	J-218	8.11	<None>	<Collection: 1 item>	2	30.84	23
585	J-219	6.03	<None>	<Collection: 1 item>	1	31.51	25
589	J-220	6.08	<None>	<Collection: 1 item>	1	31.84	26
593	J-221	6.6	<None>	<Collection: 1 item>	1	31.93	25

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
597	J-222	6.08	<None>	<Collection: 1 item>	1	31.89	26
600	J-223	6.2	<None>	<Collection: 1 item>	0	32.05	26
602	J-224	6	<None>	<Collection: 1 item>	2	32.02	26
604	J-225	7.34	<None>	<Collection: 1 item>	1	32.04	25
608	J-226	6.03	<None>	<Collection: 1 item>	2	30.84	25
612	J-227	6.03	<None>	<Collection: 1 item>	2	30.23	24
615	J-228	0	<None>	<Collection: 1 item>	1	31.09	31
620	J-229	6.8	<None>	<Collection: 1 item>	2	31.6	25
624	J-230	6.36	<None>	<Collection: 1 item>	0	31.15	25
628	J-231	7.9	<None>	<Collection: 1 item>	1	33.28	25
631	J-232	7.62	<None>	<Collection: 1 item>	1	32.82	25
634	J-233	7.5	<None>	<Collection: 1 item>	1	35.44	28
637	J-234	7.62	<None>	<Collection: 1 item>	2	35.48	28
639	J-235	7.9	<None>	<Collection: 2 items>	7	33.31	25
643	J-236	6.48	<None>	<Collection: 1 item>	3	31.91	25
645	J-237	6.76	<None>	<Collection: 1 item>	3	31.58	25
652	J-238	8.78	<None>	<Collection: 1 item>	2	37.81	29
654	J-239	8.48	<None>	<Collection: 1 item>	2	37.98	29
657	J-240	10.5	<None>	<Collection: 1 item>	2	39.66	29
661	J-241	6.93	<None>	<Collection: 1 item>	1	35.93	29
665	J-242	6.93	<None>	<Collection: 1 item>	1	35.27	28
668	J-243	6.9	<None>	<Collection: 1 item>	1	34.08	27
670	J-244	7.74	<None>	<Collection: 1 item>	0	35.27	27
673	J-245	6.44	<None>	<Collection: 1 item>	0	34.21	28
675	J-246	6.44	<None>	<Collection: 1 item>	1	34.13	28
679	J-247	6.99	<None>	<Collection: 1 item>	1	33.35	26
681	J-248	6.9	<None>	<Collection: 1 item>	1	32.87	26
685	J-249	7.9	<None>	<Collection: 1 item>	0	34.58	27
688	J-250	7.9	<None>	<Collection: 1 item>	0	34.58	27
694	J-251	7.02	<None>	<Collection: 1 item>	1	33.64	27
703	J-253	10	<None>	<Collection: 1 item>	1	41.61	32
707	J-254	9.67	<None>	<Collection: 1 item>	1	40.48	31
712	J-255	7.6	<None>	<Collection: 1 item>	1	37.69	30
715	J-256	7.78	<None>	<Collection: 1 item>	2	37.5	30
719	J-257	8.5	<None>	<Collection: 1 item>	2	36.44	28
723	J-258	9	<None>	<Collection: 1 item>	2	39.07	30
727	J-259	6.47	<None>	<Collection: 1 item>	2	26.43	20
733	J-260	8.01	<None>	<Collection: 1 item>	1	35.46	27
736	J-261	8.96	<None>	<Collection: 1 item>	1	35.4	26
740	J-262	8.74	<None>	<Collection: 1 item>	0	38.45	30
743	J-263	9.04	<None>	<Collection: 1 item>	1	38.41	29
747	J-264	9.04	<None>	<Collection: 1 item>	0	38.48	29
748	J-265	8.74	<None>	<Collection: 1 item>	0	38.5	30
752	J-266	9.11	<None>	<Collection: 1 item>	0	39.29	30
755	J-267	9.4	<None>	<Collection: 1 item>	0	39.31	30
759	J-268	9.11	<None>	<Collection: 1 item>	0	39.34	30
762	J-269	9.4	<None>	<Collection: 1 item>	0	39.35	30
766	J-270	7.74	<None>	<Collection: 1 item>	1	36.05	28
770	J-271	10.69	<None>	<Collection: 1 item>	1	39.84	29
774	J-272	9	<None>	<Collection: 1 item>	1	40.07	31
778	J-273	7.27	<None>	<Collection: 1 item>	2	32.21	25
782	J-274	8.21	<None>	<Collection: 1 item>	1	38.68	30
787	J-275	6	<None>	<Collection: 1 item>	3	29.04	23

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
790	J-276	6.5	<None>	<Collection: 1 item>	4	29.83	23
798	J-277	6.49	<None>	<Collection: 1 item>	2	33.16	27
800	J-278	7.2	<None>	<Collection: 1 item>	1	33.88	27
804	J-279	6.55	<None>	<Collection: 1 item>	1	26.33	20
807	J-280	6.1	<None>	<Collection: 1 item>	1	26.41	20
811	J-281	6.1	<None>	<Collection: 1 item>	1	27.17	21
814	J-282	6.06	<None>	<Collection: 1 item>	2	26.63	21
818	J-283	5.65	<None>	<Collection: 1 item>	4	28.04	22
823	J-284	7.52	<None>	<Collection: 1 item>	1	30.45	23
828	J-285	9.05	<None>	<Collection: 1 item>	0	37.63	29
831	J-286	8.56	<None>	<Collection: 1 item>	0	37.74	29
836	J-287	7.5	<None>	<Collection: 1 item>	1	35.35	28
839	J-288	7.61	<None>	<Collection: 1 item>	2	35.23	28
841	J-289	7.74	<None>	<Collection: 1 item>	1	34.94	27
845	J-290	8.4	<None>	<Collection: 1 item>	2	33.91	25
849	J-291	8.2	<None>	<Collection: 1 item>	0	33.09	25
851	J-292	9.66	<None>	<Collection: 1 item>	1	39.95	30
859	J-295	9.67	<None>	<Collection: 1 item>	0	39.34	30
860	J-296	9.67	<None>	<Collection: 1 item>	1	39.29	30
864	J-297	8.61	<None>	<Collection: 1 item>	1	38.48	30
868	J-298	8.61	<None>	<Collection: 1 item>	1	38.42	30
872	J-299	8.43	<None>	<Collection: 1 item>	1	37.67	29
876	J-300	8.43	<None>	<Collection: 1 item>	0	37.61	29
880	J-301	8.28	<None>	<Collection: 1 item>	1	37	29
882	J-302	8.21	<None>	<Collection: 1 item>	1	36.23	28
884	J-303	8.2	<None>	<Collection: 1 item>	1	35.51	27
889	J-304	8.21	<None>	<Collection: 1 item>	0	36.31	28
892	J-305	9	<None>	<Collection: 1 item>	0	36.31	27
896	J-306	8.34	<None>	<Collection: 1 item>	0	37.03	29
901	J-307	8.28	<None>	<Collection: 1 item>	0	36.96	29
906	J-308	8.34	<None>	<Collection: 1 item>	0	36.97	29
911	J-309	9	<None>	<Collection: 1 item>	0	36.99	28
915	J-310	6.84	<None>	<Collection: 1 item>	0	33.09	26
919	J-311	6.53	<None>	<Collection: 1 item>	1	33.51	27
922	J-312	6.67	<None>	<Collection: 1 item>	1	33.12	26
926	J-313	6.8	<None>	<Collection: 1 item>	0	32.67	26
930	J-314	8.01	<None>	<Collection: 1 item>	1	35.22	27
933	J-315	7.45	<None>	<Collection: 1 item>	1	34.53	27
938	J-316	6.35	<None>	<Collection: 1 item>	1	32.18	26
941	J-317	6.39	<None>	<Collection: 1 item>	1	32.16	26
946	J-318	6.64	<None>	<Collection: 1 item>	0	32.18	25
950	J-319	6.45	<None>	<Collection: 1 item>	0	31.9	25
953	J-320	6.2	<None>	<Collection: 1 item>	0	31.57	25
962	J-322	6.01	<None>	<Collection: 1 item>	1	28.31	22
965	J-323	6.3	<None>	<Collection: 1 item>	1	27.94	22
969	J-324	8.9	<None>	<Collection: 2 items>	2	41.87	33
973	J-325	8	<None>	<Collection: 0 items>	0	43.19	35
976	J-326	8.5	<None>	<Collection: 2 items>	1	44.42	36
980	J-327	8	<None>	<Collection: 2 items>	3	42.16	34
984	J-328	9.63	<None>	<Collection: 1 item>	1	41.59	32
987	J-329	7.97	<None>	<Collection: 2 items>	2	45.2	37
991	J-330	9.33	<None>	<Collection: 2 items>	2	42.15	33
995	J-331	7.74	<None>	<Collection: 1 item>	1	42.51	35

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
1000	J-332	7.76	<None>	<Collection: 1 item>	2	36.75	29
1007	J-334	8.42	<None>	<Collection: 1 item>	0	39.21	31
1010	J-335	7.65	<None>	<Collection: 1 item>	1	38.04	30
1014	J-336	8.19	<None>	<Collection: 1 item>	1	39.07	31
1017	J-337	7.52	<None>	<Collection: 1 item>	1	38.04	30
1023	J-338	6.96	<None>	<Collection: 1 item>	2	32.74	26
1027	J-339	6.35	<None>	<Collection: 1 item>	1	32.06	26
1030	J-340	8.66	<None>	<Collection: 1 item>	1	39.04	30
1033	J-341	8.5	<None>	<Collection: 1 item>	1	39.22	31
1037	J-342	9.31	<None>	<Collection: 1 item>	1	39.85	30
1041	J-343	7.78	<None>	<Collection: 1 item>	1	37.85	30
1042	J-344	7.78	<None>	<Collection: 1 item>	1	37.75	30
1046	J-345	7.82	<None>	<Collection: 1 item>	2	36.5	29
1050	J-346	6.65	<None>	<Collection: 1 item>	2	33.37	27
1054	J-347	8.5	<None>	<Collection: 1 item>	1	37	28
1060	J-348	9	<None>	<Collection: 1 item>	1	38.7	30
1065	J-349	8.42	<None>	<Collection: 1 item>	0	39.18	31
1068	J-350	7.98	<None>	<Collection: 1 item>	0	38.49	30
1072	J-351	9.34	<None>	<Collection: 1 item>	0	40	31
1075	J-352	8.67	<None>	<Collection: 1 item>	1	39.06	30
1079	J-353	8.45	<None>	<Collection: 1 item>	1	38.51	30
1083	J-354	8.28	<None>	<Collection: 1 item>	1	35.21	27
1087	J-355	7.15	<None>	<Collection: 1 item>	2	32.4	25
1090	J-356	7.54	<None>	<Collection: 1 item>	2	32.39	25
1094	J-357	8.06	<None>	<Collection: 2 items>	8	35.59	27
1097	J-358	8.4	<None>	<Collection: 1 item>	2	36.78	28
1101	J-359	7.95	<None>	<Collection: 1 item>	1	37.33	29
1105	J-360	7.85	<None>	<Collection: 1 item>	1	37.94	30
1107	J-361	7.27	<None>	<Collection: 1 item>	1	37.72	30
1111	J-362	7.96	<None>	<Collection: 1 item>	1	38.93	31
1115	J-363	7.84	<None>	<Collection: 1 item>	1	32.41	25
1119	J-364	8.28	<None>	<Collection: 1 item>	1	32.8	24
1123	J-365	6.35	<None>	<Collection: 1 item>	1	34.18	28
1127	J-366	7.4	<None>	<Collection: 1 item>	1	35.47	28
1130	J-367	6.56	<None>	<Collection: 1 item>	0	34.4	28
1134	J-368	7.63	<None>	<Collection: 1 item>	1	34.71	27
1139	J-369	7.94	<None>	<Collection: 1 item>	1	34.14	26
1143	J-370	6.9	<None>	<Collection: 1 item>	1	32.92	26
1146	J-371	6.8	<None>	<Collection: 1 item>	1	32.75	26
1150	J-372	6.6	<None>	<Collection: 1 item>	2	32.62	26
1152	J-373	6.47	<None>	<Collection: 1 item>	1	32.48	26
1156	J-374	6.83	<None>	<Collection: 1 item>	1	33.03	26
1160	J-375	6.82	<None>	<Collection: 1 item>	1	32.47	26
1164	J-376	7.44	<None>	<Collection: 1 item>	1	35.26	28
1167	J-377	7.29	<None>	<Collection: 1 item>	1	34.11	27
1171	J-378	7.4	<None>	<Collection: 1 item>	1	34.89	27
1174	J-379	6	<None>	<Collection: 1 item>	1	34.81	29
1178	J-380	7.65	<None>	<Collection: 1 item>	1	34.76	27
1182	J-381	6.93	<None>	<Collection: 1 item>	1	34.76	28
1186	J-382	7.29	<None>	<Collection: 1 item>	0	34.43	27
1189	J-383	7.11	<None>	<Collection: 1 item>	1	34.35	27
1193	J-384	7	<None>	<Collection: 1 item>	1	34.32	27
1197	J-385	7.56	<None>	<Collection: 1 item>	1	34.35	27

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
1201	J-386	6.92	<None>	<Collection: 1 item>	2	34.35	27
1205	J-387	7.25	<None>	<Collection: 1 item>	2	34.4	27
1209	J-388	7.96	<None>	<Collection: 1 item>	1	34.11	26
1212	J-389	7.08	<None>	<Collection: 1 item>	1	33.52	26
1216	J-390	6.56	<None>	<Collection: 1 item>	1	34.23	28
1219	J-391	7.05	<None>	<Collection: 1 item>	1	33.88	27
1224	J-392	5.56	<None>	<Collection: 1 item>	1	31.21	26
1229	J-393	6.44	<None>	<Collection: 1 item>	0	31.97	25
1232	J-394	6.31	<None>	<Collection: 1 item>	1	31.78	25
1236	J-395	6.99	<None>	<Collection: 1 item>	2	30.37	23
1240	J-396	6	<None>	<Collection: 1 item>	2	29.57	24
1248	J-398	5.98	<None>	<Collection: 1 item>	2	29.29	23
1249	J-399	5.98	<None>	<Collection: 1 item>	1	29.26	23
1253	J-400	6.35	<None>	<Collection: 1 item>	1	29.18	23
1257	J-401	6.19	<None>	<Collection: 1 item>	2	29.05	23
1261	J-402	6.19	<None>	<Collection: 1 item>	1	28.37	22
1264	J-403	6.5	<None>	<Collection: 1 item>	1	27.72	21
1272	J-405	6.39	<None>	<Collection: 1 item>	1	28.19	22
1273	J-406	6.39	<None>	<Collection: 1 item>	1	28.09	22
1278	J-407	6.29	<None>	<Collection: 1 item>	1	27.36	21
1281	J-408	5.03	<None>	<Collection: 1 item>	2	27.11	22
1285	J-409	6.55	<None>	<Collection: 1 item>	1	27.05	20
1289	J-410	6.01	<None>	<Collection: 1 item>	3	26.46	20
1293	J-411	7.33	<None>	<Collection: 1 item>	2	26.3	19
1297	J-412	6.01	<None>	<Collection: 1 item>	1	28.29	22
1300	J-413	6.03	<None>	<Collection: 1 item>	0	27.93	22
1304	J-414	6.07	<None>	<Collection: 1 item>	1	27.67	22
1307	J-415	6.2	<None>	<Collection: 1 item>	1	26.99	21
1311	J-416	6.3	<None>	<Collection: 1 item>	1	27.02	21
1314	J-417	5.99	<None>	<Collection: 1 item>	2	26.66	21
1318	J-418	6.5	<None>	<Collection: 1 item>	2	32.08	26
1324	J-419	5.76	<None>	<Collection: 1 item>	2	29.81	24
1325	J-420	5.76	<None>	<Collection: 1 item>	2	29.82	24
1329	J-421	6.08	<None>	<Collection: 1 item>	3	31.41	25
1333	J-422	6.96	<None>	<Collection: 1 item>	1	32.5	25
1337	J-423	6.43	<None>	<Collection: 1 item>	1	31.87	25
1341	J-424	8.34	<None>	<Collection: 1 item>	1	36.75	28
1344	J-425	7.82	<None>	<Collection: 1 item>	2	36.72	29
1348	J-426	7.81	<None>	<Collection: 1 item>	2	36.73	29
1352	J-427	8.06	<None>	<Collection: 1 item>	1	36.74	29
1356	J-428	8.74	<None>	<Collection: 1 item>	1	38.47	30
1359	J-429	8.93	<None>	<Collection: 1 item>	2	38.35	29
1363	J-430	8.73	<None>	<Collection: 1 item>	2	38.32	30
1367	J-431	7.92	<None>	<Collection: 1 item>	1	36.49	29
1371	J-432	8.66	<None>	<Collection: 1 item>	1	39.59	31
1375	J-433	9.45	<None>	<Collection: 1 item>	1	40.29	31
1379	J-434	6	<None>	<Collection: 1 item>	60	30.92	25
1383	J-435	7.85	<None>	<Collection: 1 item>	1	26.66	19
1387	J-436	7.87	<None>	<Collection: 0 items>	0	26.22	18
1394	J-437	8.48	<None>	<Collection: 1 item>	1	35.17	27
1404	J-438	8.01	<None>	<Collection: 1 item>	2	38.67	31
1407	J-439	8.4	<None>	<Collection: 1 item>	2	37.66	29
1411	J-440	7.38	<None>	<Collection: 1 item>	1	33.72	26

ID	LABEL	ELEVATION (M)	ZONE	DEMAND COLLECTION	DEMAND (l/s)	HYDRAULIC GRADE (m)	PRESSURE (mH2O)
1414	J-441	7.39	<None>	<Collection: 1 item>	3	33.7	26
1418	J-442	7.2	<None>	<Collection: 1 item>	2	34.01	27
1422	J-443	6.6	<None>	<Collection: 1 item>	1	31.15	25
1425	J-444	6.47	<None>	<Collection: 1 item>	2	31.04	25
1429	J-445	6.92	<None>	<Collection: 1 item>	1	31	24
1433	J-446	6.92	<None>	<Collection: 1 item>	1	30.99	24
1437	J-447	6.3	<None>	<Collection: 1 item>	2	30.27	24
1439	J-448	6	<None>	<Collection: 1 item>	1	29.95	24
1444	J-449	6.5	<None>	<Collection: 1 item>	2	30.01	23
1487	J-91	10.13	<None>	<Collection: 1 item>	0	41.03	31
1497	J-452	7.95	<None>	<Collection: 1 item>	58	26.63	19
1501	J-453	0	<None>	<Collection: 1 item>	116	29.62	30
1503	J-454	0	<None>	<Collection: 0 items>	0	29.62	30
1521	J-457	9.01	<None>	<Collection: 0 items>	0	53.44	44
1525	J-458	9.68	<None>	<Collection: 0 items>	0	41.28	32
1530	J-459	9.18	<None>	<Collection: 0 items>	0	42.65	33
1534	J-460	7.52	<None>	<Collection: 1 item>	58	24.53	17
1537	J-461	8.15	<None>	<Collection: 0 items>	0	32.83	25

ĐIỀU CHỈNH QUY HOẠCH PHÂN KHU ĐÔ THỊ TRUNG TÂM THÀNH PHỐ QUẢNG NGÃI - TỶ LỆ 1/2000
BẢNG 4: BẢNG TÍNH TOÁN THỦY LỰC ĐƯỜNG ỐNG GIÒ DỪNG NƯỚC LỚN NHẤT + CỎ CHÁY

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
32	P-1	18	J-1	J-2	500	Cast Iron	130	FALSE	0	182	0.93	0.002	TRUE	59
34	P-2	47	J-2	J-3	500	Cast Iron	130	FALSE	0	129	0.66	0.001	TRUE	154
36	P-3	3	J-3	J-4	400	Cast Iron	130	FALSE	0	-19	0.15	0	TRUE	10
38	P-4	81	J-4	J-5	400	Cast Iron	130	FALSE	0	88	0.7	0.001	TRUE	266
40	P-5	58	J-5	J-6	400	Cast Iron	130	FALSE	0	83	0.66	0.001	TRUE	190
42	P-6	82	J-6	J-7	400	Cast Iron	130	FALSE	0	79	0.63	0.001	TRUE	269
44	P-7	47	J-7	J-8	400	Cast Iron	130	FALSE	0	76	0.6	0.001	TRUE	154
48	P-9	68	J-9	J-10	300	Cast Iron	130	FALSE	0	62	0.88	0.003	TRUE	223
50	P-10	49	J-10	J-11	300	Cast Iron	130	FALSE	0	49	0.7	0.002	TRUE	161
52	P-11	38	J-11	J-12	300	Cast Iron	130	FALSE	0	49	0.69	0.002	TRUE	125
54	P-12	57	J-12	J-13	300	Cast Iron	130	FALSE	0	43	0.61	0.001	TRUE	187
56	P-13	33	J-13	J-14	300	Cast Iron	130	FALSE	0	37	0.53	0.001	TRUE	108
58	P-14	121	J-14	J-15	300	Cast Iron	130	FALSE	0	31	0.44	0.001	TRUE	397
60	P-15	10	J-15	J-16	300	Cast Iron	130	FALSE	0	6	0.08	0	TRUE	33
62	P-16	77	J-16	J-17	300	Cast Iron	130	FALSE	0	53	0.75	0.002	TRUE	253
64	P-17	118	J-17	J-18	300	Cast Iron	130	FALSE	0	46	0.65	0.002	TRUE	387
66	P-18	21	J-18	J-19	300	Cast Iron	130	FALSE	0	28	0.4	0.001	TRUE	69
68	P-19	76	J-19	J-20	200	Cast Iron	130	FALSE	0	28	0.89	0.004	TRUE	249
70	P-20	112	J-20	J-21	200	Cast Iron	130	FALSE	0	22	0.71	0.003	TRUE	367
72	P-21	39	J-21	J-22	200	Cast Iron	130	FALSE	0	22	0.69	0.003	TRUE	128
78	P-24	111	J-24	J-25	300	PVC	150	FALSE	0	-67	0.95	0.002	TRUE	364
82	P-26	118	J-185	J-27	300	PVC	150	FALSE	0	-71	1	0.003	TRUE	387
86	P-28	140	J-28	J-29	300	PVC	150	FALSE	0	-72	1.02	0.003	TRUE	459
88	P-29	69	J-29	J-30	300	PVC	150	FALSE	0	-76	1.08	0.003	TRUE	226
90	P-30	68	J-30	J-31	300	PVC	150	FALSE	0	-77	1.08	0.003	TRUE	223
92	P-31	60	J-31	J-32	300	PVC	150	FALSE	0	-122	1.72	0.007	TRUE	197
100	P-35	261	J-35	J-38	150	Cast Iron	130	FALSE	0	4	0.22	0	TRUE	856
113	P-41	127	J-42	J-43	150	PVC	150	FALSE	0	4	0.23	0	TRUE	417
117	P-43	57	J-44	J-45	150	PVC	150	FALSE	0	8	0.42	0.001	TRUE	187
119	P-44	250	J-45	J-46	150	PVC	150	FALSE	0	2	0.1	0	TRUE	820
121	P-45	97	J-46	J-47	150	PVC	150	FALSE	0	4	0.24	0	TRUE	318
123	P-22(1)	86	J-22	J-48	200	PVC	150	FALSE	0	18	0.58	0.002	TRUE	282
124	P-22(2)	23	J-48	J-23	200	PVC	150	FALSE	0	77	2.44	0.022	TRUE	75

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
125	P-46	71	J-47	J-48	150	PVC	150	FALSE	0	6	0.33	0.001	TRUE	233
127	P-47	43	J-2	J-49	300	PVC	150	FALSE	0	23	0.32	0	TRUE	141
139	P-53	69	J-54	J-55	300	PVC	130	FALSE	0	-79	1.12	0.004	TRUE	226
145	P-56	91	J-57	J-58	150	Cast Iron	130	FALSE	0	-6	0.34	0.001	TRUE	298
147	P-57	68	J-58	J-59	150	PVC	150	FALSE	0	-5	0.26	0	TRUE	223
149	P-58	64	J-59	J-60	150	PVC	150	FALSE	0	-6	0.31	0.001	TRUE	210
157	P-62	29	J-63	J-64	250	PVC	150	FALSE	0	59	1.21	0.005	TRUE	95
159	P-63	93	J-64	J-65	300	PVC	150	FALSE	0	-13	0.18	0	TRUE	305
161	P-64	31	J-65	J-66	300	PVC	150	FALSE	0	-103	1.45	0.005	TRUE	102
165	P-66	87	J-67	J-68	300	PVC	150	FALSE	0	-111	1.57	0.006	TRUE	285
169	P-68	128	J-69	J-70	300	PVC	150	FALSE	0	-46	0.64	0.001	TRUE	420
171	P-69	85	J-70	J-71	300	PVC	150	FALSE	0	-65	0.92	0.002	TRUE	279
173	P-70	102	J-71	J-72	300	PVC	150	FALSE	0	-73	1.03	0.003	TRUE	335
179	P-73	106	J-74	J-75	150	PVC	150	FALSE	0	-19	1.07	0.007	TRUE	348
181	P-74	96	J-75	J-76	150	PVC	150	FALSE	0	-16	0.92	0.005	TRUE	315
183	P-75	96	J-76	J-77	150	PVC	150	FALSE	0	9	0.52	0.002	TRUE	315
185	P-76	113	J-77	J-78	150	PVC	150	FALSE	0	11	0.62	0.002	TRUE	371
187	P-77	45	J-78	J-79	150	PVC	150	FALSE	0	12	0.7	0.003	TRUE	148
195	P-81	61	J-82	J-83	150	PVC	150	FALSE	0	18	1.01	0.006	TRUE	200
197	P-82	170	J-83	J-84	150	PVC	150	FALSE	0	3	0.17	0	TRUE	558
199	P-48(1)	47	J-49	J-85	300	PVC	150	FALSE	0	-34	0.49	0.001	TRUE	154
200	P-48(2)	91	J-85	J-50	300	PVC	150	FALSE	0	-52	0.74	0.001	TRUE	298
201	P-83	25	J-84	J-85	150	PVC	150	FALSE	0	-18	1.01	0.006	TRUE	82
218	P-91	57	J-92	J-93	100	Cast Iron	130	FALSE	0	-4	0.47	0.003	TRUE	187
222	P-93	62	J-94	J-95	150	Cast Iron	130	FALSE	0	5	0.31	0.001	TRUE	203
224	P-84(1)	6	J-4	J-96	300	Cast Iron	130	FALSE	0	-50	0.71	0.002	TRUE	20
225	P-84(2)	72	J-96	J-86	300	Cast Iron	130	FALSE	0	-53	0.74	0.002	TRUE	236
230	P-96	65	J-98	J-95	150	Cast Iron	130	FALSE	0	5	0.29	0.001	TRUE	213
232	P-37(1)	35	J-39	J-99	150	Cast Iron	130	FALSE	0	7	0.4	0.001	TRUE	115
233	P-37(2)	6	J-99	J-9	150	PVC	150	FALSE	0	10	0.2	0	TRUE	20
234	P-97	9	J-95	J-99	150	Cast Iron	130	FALSE	0	10	0.58	0.003	TRUE	30
236	P-98	67	J-99	J-100	150	Cast Iron	130	FALSE	0	7	0.41	0.001	TRUE	220
240	P-100	151	J-101	J-102	150	Cast Iron	130	FALSE	0	7	0.41	0.001	TRUE	495
242	P-101	11	J-102	J-103	150	PVC	150	FALSE	0	4	0.24	0	TRUE	36
244	P-102	195	J-103	J-104	100	Cast Iron	130	FALSE	0	3	0.35	0.002	TRUE	640
246	P-103	87	J-104	J-105	100	Cast Iron	130	FALSE	0	7	0.86	0.009	TRUE	2852

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
254	P-107	96	J-108	J-109	300	PVC	150	FALSE	0	-58	0.82	0.002	TRUE	315
256	P-108	117	J-109	J-110	300	PVC	150	FALSE	0	-66	0.94	0.002	TRUE	384
258	P-109	117	J-110	J-111	300	PVC	150	FALSE	0	-69	0.98	0.002	TRUE	384
260	P-110	140	J-111	J-112	300	PVC	150	FALSE	0	-73	1.03	0.003	TRUE	459
262	P-111	133	J-112	J-113	300	PVC	150	FALSE	0	-77	1.08	0.003	TRUE	436
264	P-32(1)	13	J-32	J-114	250	PVC	150	FALSE	0	-41	0.84	0.002	TRUE	43
268	P-113	18	J-114	J-115	300	PVC	150	FALSE	0	-88	1.24	0.004	TRUE	59
269	P-114	193	J-115	J-64	300	PVC	150	FALSE	0	-71	1.01	0.003	TRUE	633
271	P-115	18	J-32	J-116	300	PVC	150	FALSE	0	-80	1.14	0.003	TRUE	59
273	P-116	283	J-116	J-117	300	PVC	150	FALSE	0	-58	0.82	0.002	TRUE	928
274	P-117	13	J-117	J-65	300	PVC	150	FALSE	0	-89	1.26	0.004	TRUE	43
275	P-118	14	J-116	J-115	200	PVC	150	FALSE	0	-26	0.83	0.003	TRUE	46
279	P-120	11	J-118	J-119	300	PVC	150	FALSE	0	-37	0.53	0.001	TRUE	36
281	P-121	183	J-119	J-120	150	PVC	150	FALSE	0	4	0.21	0	TRUE	600
283	P-89(1)	21	J-90	J-121	300	PVC	150	FALSE	0	-99	1.4	0.005	TRUE	69
288	P-55(1)	7	J-56	J-122	300	PVC	150	FALSE	0	-111	1.57	0.006	TRUE	23
292	P-71(2)	7	J-123	J-73	300	PVC	150	FALSE	0	-190	2.69	0.016	TRUE	23
293	P-124	247	J-122	J-123	300	PVC	150	FALSE	0	-107	1.51	0.006	TRUE	810
298	P-126	98	J-55	J-78	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	321
303	P-33(1)	33	J-33	J-126	200	PVC	150	FALSE	0	30	0.95	0.004	TRUE	108
305	P-129	77	J-125	J-126	200	PVC	150	FALSE	0	1	0.02	0	TRUE	253
307	P-130	114	J-125	J-127	100	PVC	150	FALSE	0	5	0.6	0.004	TRUE	374
309	P-131	10	J-127	J-128	300	PVC	150	FALSE	0	-34	0.48	0.001	TRUE	33
311	P-34(1)	8	J-34	J-129	300	PVC	150	FALSE	0	68	0.96	0.002	TRUE	26
313	P-132	6	J-128	J-129	300	Cast Iron	130	FALSE	0	-48	0.68	0.002	TRUE	20
320	P-87(1)	8	J-88	J-131	300	PVC	150	FALSE	0	-90	1.27	0.004	TRUE	26
324	P-133(1)(2)	8	J-132	J-130	150	Cast Iron	130	FALSE	0	18	1.02	0.008	TRUE	26
335	P-141	17	J-136	J-119	500	PVC	150	FALSE	0	-359	1.83	0.004	TRUE	56
336	P-142	91	J-119	J-60	500	PVC	150	FALSE	0	-401	2.04	0.005	TRUE	298
337	P-143	23	J-60	J-69	500	PVC	150	FALSE	0	-475	2.42	0.007	TRUE	75
341	P-59(1)	9	J-60	J-138	300	PVC	150	FALSE	0	67	0.95	0.002	TRUE	30
342	P-59(2)	100	J-138	J-61	250	PVC	150	FALSE	0	74	1.5	0.007	TRUE	328
343	P-145	96	J-138	J-118	300	PVC	150	FALSE	0	100	1.42	0.005	TRUE	315
347	P-146	17	J-118	J-139	300	PVC	150	FALSE	0	101	1.43	0.005	TRUE	56
356	P-151	133	J-104	J-143	200	PVC	150	FALSE	0	-16	0.5	0.001	TRUE	436
362	P-154	101	J-145	J-146	200	PVC	150	FALSE	0	-34	1.08	0.005	TRUE	331

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
366	P-156	71	J-147	J-148	200	PVC	150	FALSE	0	-45	1.44	0.008	TRUE	233
367	P-157	46	J-148	J-140	200	PVC	150	FALSE	0	-34	1.08	0.005	TRUE	151
369	P-147(1)	64	J-139	J-149	300	PVC	150	FALSE	0	83	1.18	0.004	TRUE	210
372	P-158	59	J-149	J-150	150	PVC	150	FALSE	0	18	1	0.006	TRUE	194
374	P-159	82	J-150	J-151	150	PVC	150	FALSE	0	19	1.09	0.007	TRUE	269
376	P-160	58	J-151	J-152	150	PVC	150	FALSE	0	19	1.08	0.007	TRUE	190
380	P-162	128	J-153	J-154	100	PVC	150	FALSE	0	6	0.71	0.005	TRUE	420
382	P-163	128	J-154	J-155	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	420
387	P-166	83	J-157	J-105	100	Cast Iron	130	FALSE	0	2	0.24	0.001	TRUE	272
389	P-167	96	J-142	J-158	200	Cast Iron	130	FALSE	0	19	0.59	0.002	TRUE	315
392	P-152(2)	103	J-159	J-144	200	PVC	150	FALSE	0	-21	0.67	0.002	TRUE	338
393	P-168	77	J-158	J-159	200	Cast Iron	130	FALSE	0	16	0.51	0.002	TRUE	253
394	P-169	123	J-159	J-156	200	Cast Iron	130	FALSE	0	14	0.44	0.001	TRUE	403
400	P-172(1)	67	J-160	J-161	100	Cast Iron	130	FALSE	0	2	0.21	0.001	TRUE	220
401	P-172(2)	89	J-161	J-100	100	Cast Iron	130	FALSE	0	1	0.13	0	TRUE	292
403	P-171(1)	36	J-39	J-162	100	PVC	150	FALSE	0	-2	0.24	0.001	TRUE	118
406	P-173	8	J-162	J-163	200	Cast Iron	130	FALSE	0	-6	0.19	0	TRUE	26
410	P-36(1)	5	J-38	J-164	150	Cast Iron	130	FALSE	0	5	0.3	0.001	TRUE	16
411	P-36(2)	30	J-164	J-39	150	Cast Iron	130	FALSE	0	6	0.32	0.001	TRUE	98
412	P-176	13	J-163	J-164	200	Cast Iron	130	FALSE	0	-4	0.13	0	TRUE	43
413	P-177	8	J-164	J-94	200	Cast Iron	130	FALSE	0	-4	0.14	0	TRUE	26
415	P-178	63	J-94	J-165	200	Cast Iron	130	FALSE	0	-3	0.11	0	TRUE	207
416	P-179	46	J-165	J-98	150	Cast Iron	130	FALSE	0	2	0.14	0	TRUE	151
419	P-136(1)	16	J-38	J-166	200	Cast Iron	130	FALSE	0	7	0.21	0	TRUE	52
421	P-181	7	J-163	J-166	150	Cast Iron	130	FALSE	0	-2	0.1	0	TRUE	23
423	P-182	96	J-166	J-167	150	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	315
425	P-183	6	J-167	J-168	150	Cast Iron	130	FALSE	0	2	0.13	0	TRUE	20
429	P-186	12	J-134	J-141	200	PVC	150	FALSE	0	1	0.02	0	TRUE	39
432	P-188	67	J-170	J-146	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	220
435	P-190	125	J-146	J-153	100	PVC	150	FALSE	0	4	0.48	0.002	TRUE	410
436	P-191	79	J-153	J-113	100	PVC	150	FALSE	0	5	0.68	0.005	TRUE	259
437	P-192	12	J-113	J-31	300	PVC	150	FALSE	0	66	0.94	0.002	TRUE	39
444	P-194(2)	65	J-174	J-173	100	PVC	150	FALSE	0	0	0.02	0	TRUE	213
448	P-196	73	J-175	J-176	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	239
450	P-197	185	J-176	J-177	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	607
454	P-199	85	J-177	J-179	100	PVC	150	FALSE	0	1	0.1	0	TRUE	2794

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
458	P-201	200	J-180	J-181	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	656
460	P-23(1)	34	J-23	J-182	300	PVC	150	FALSE	0	-67	0.94	0.002	TRUE	112
461	P-23(2)	44	J-182	J-24	300	PVC	150	FALSE	0	-66	0.94	0.002	TRUE	144
462	P-202	76	J-181	J-182	100	PVC	150	FALSE	0	1	0.13	0	TRUE	249
464	P-193(1)	60	J-31	J-183	300	PVC	150	FALSE	0	110	1.56	0.006	TRUE	197
472	P-27(1)	112	J-27	J-186	300	PVC	150	FALSE	0	-68	0.96	0.002	TRUE	367
473	P-27(2)	6	J-186	J-28	300	PVC	150	FALSE	0	-75	1.07	0.003	TRUE	20
475	P-206	60	J-186	J-187	100	PVC	150	FALSE	0	6	0.82	0.007	TRUE	197
476	P-207	80	J-187	J-175	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	262
479	P-205(1)	52	J-185	J-188	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	171
480	P-205(2)	75	J-188	J-177	100	PVC	150	FALSE	0	1	0.13	0	TRUE	246
481	P-209	241	J-187	J-188	100	PVC	150	FALSE	0	3	0.36	0.001	TRUE	790
482	P-210	19	J-188	J-179	100	PVC	150	FALSE	0	3	0.37	0.002	TRUE	62
483	P-211	12	J-28	J-111	100	PVC	150	FALSE	0	-4	0.51	0.003	TRUE	39
484	P-212	87	J-111	J-155	100	PVC	150	FALSE	0	-3	0.33	0.001	TRUE	285
486	P-213	53	J-155	J-189	100	PVC	150	FALSE	0	-4	0.47	0.002	TRUE	174
488	P-153(1)	85	J-144	J-190	200	PVC	150	FALSE	0	-25	0.8	0.003	TRUE	279
489	P-153(2)	125	J-190	J-145	200	PVC	150	FALSE	0	-30	0.94	0.004	TRUE	410
490	P-214	78	J-189	J-190	100	PVC	150	FALSE	0	-4	0.57	0.003	TRUE	256
500	P-218	99	J-18	J-193	200	PVC	150	FALSE	0	26	0.84	0.003	TRUE	325
502	P-219	9	J-193	J-194	200	PVC	150	FALSE	0	27	0.87	0.003	TRUE	30
506	P-42(1)	9	J-43	J-195	150	PVC	150	FALSE	0	-4	0.24	0	TRUE	30
507	P-42(2)	101	J-195	J-44	150	PVC	150	FALSE	0	5	0.27	0.001	TRUE	331
510	P-222(1)	107	J-16	J-196	150	Cast Iron	130	FALSE	0	13	0.74	0.004	TRUE	351
514	P-221(1)	108	J-15	J-197	300	PVC	150	FALSE	0	91	1.28	0.004	TRUE	354
516	P-224	9	J-196	J-197	100	Cast Iron	130	FALSE	0	-3	0.44	0.003	TRUE	30
523	P-39(2)	208	J-200	J-41	300	PVC	150	FALSE	0	95	1.34	0.004	TRUE	682
530	P-230(1)	6	J-201	J-202	150	PVC	150	FALSE	0	12	0.65	0.003	TRUE	20
531	P-230(2)	99	J-202	J-41	150	PVC	150	FALSE	0	19	1.09	0.007	TRUE	325
532	P-231	132	J-202	J-200	150	Cast Iron	130	FALSE	0	-8	0.48	0.002	TRUE	433
541	P-226(2)	61	J-205	J-199	100	PVC	150	FALSE	0	-2	0.29	0.001	TRUE	200
544	P-232(1)	62	J-201	J-207	150	Cast Iron	130	FALSE	0	-1	0.07	0	TRUE	203
549	P-236	6	J-207	J-208	150	PVC	150	FALSE	0	5	0.28	0.001	TRUE	20
551	P-221(2)(2)(1)	6	J-203	J-209	300	PVC	150	FALSE	0	85	1.2	0.004	TRUE	20
552	P-221(2)(2)(2)	63	J-209	J-43	300	PVC	150	FALSE	0	84	1.19	0.004	TRUE	207
555	P-229(1)	8	J-199	J-210	150	Cast Iron	130	FALSE	0	12	0.7	0.004	TRUE	265

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
558	P-235(1)	8	J-205	J-211	150	PVC	150	FALSE	0	12	0.69	0.003	TRUE	26
560	P-238	61	J-210	J-211	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	200
564	P-221(2)(1)(1)	9	J-197	J-213	300	PVC	150	FALSE	0	89	1.26	0.004	TRUE	30
565	P-221(2)(1)(2)	81	J-213	J-203	300	PVC	150	FALSE	0	84	1.18	0.004	TRUE	266
568	P-222(2)(1)	9	J-196	J-214	150	PVC	150	FALSE	0	13	0.75	0.003	TRUE	30
570	P-241	9	J-213	J-214	100	Cast Iron	130	FALSE	0	3	0.38	0.002	TRUE	30
572	P-243	130	J-13	J-198	100	PVC	150	FALSE	0	5	0.59	0.004	TRUE	426
573	P-244	9	J-198	J-212	100	PVC	150	FALSE	0	6	0.76	0.006	TRUE	30
575	P-232(2)(1)	143	J-207	J-216	100	PVC	150	FALSE	0	4	0.51	0.003	TRUE	469
577	P-245	81	J-212	J-216	100	PVC	150	FALSE	0	5	0.69	0.005	TRUE	266
580	P-246	5	J-216	J-217	150	PVC	150	FALSE	0	10	0.55	0.002	TRUE	16
581	P-247	69	J-217	J-42	150	PVC	150	FALSE	0	12	0.68	0.003	TRUE	226
583	P-234(1)	51	J-10	J-218	150	PVC	150	FALSE	0	12	0.66	0.003	TRUE	167
584	P-234(2)	101	J-218	J-205	150	PVC	150	FALSE	0	14	0.78	0.004	TRUE	331
586	P-228(1)	62	J-9	J-219	150	Cast Iron	130	FALSE	0	8	0.47	0.002	TRUE	203
588	P-248	65	J-218	J-219	100	Cast Iron	130	FALSE	0	-4	0.48	0.003	TRUE	213
595	P-249(2)	57	J-221	J-220	100	Cast Iron	130	FALSE	0	1	0.17	0	TRUE	187
596	P-250	70	J-8	J-221	150	Cast Iron	130	FALSE	0	5	0.27	0.001	TRUE	230
598	P-227(1)(1)	68	J-7	J-222	100	Cast Iron	130	FALSE	0	3	0.32	0.001	TRUE	223
599	P-227(1)(2)	5	J-222	J-220	100	Cast Iron	130	FALSE	0	4	0.49	0.003	TRUE	16
601	P-251	68	J-222	J-223	100	PVC	150	FALSE	0	-2	0.24	0.001	TRUE	223
603	P-252	32	J-223	J-224	100	PVC	150	FALSE	0	1	0.13	0	TRUE	105
605	P-38(1)	122	J-3	J-225	400	PVC	150	FALSE	0	148	1.17	0.002	TRUE	400
606	P-38(2)	93	J-225	J-40	400	PVC	150	FALSE	0	146	1.16	0.002	TRUE	305
607	P-253	71	J-224	J-225	100	PVC	150	FALSE	0	-1	0.08	0	TRUE	233
609	P-227(2)(1)	74	J-220	J-226	100	Cast Iron	130	FALSE	0	4	0.56	0.004	TRUE	243
613	P-227(2)(2)(1)	49	J-226	J-227	100	Cast Iron	130	FALSE	0	4	0.53	0.004	TRUE	161
614	P-227(2)(2)(2)	62	J-227	J-200	100	Cast Iron	130	FALSE	0	4	0.45	0.003	TRUE	203
616	P-39(1)(1)	14	J-40	J-228	350	PVC	150	FALSE	0	144	1.49	0.005	TRUE	46
617	P-39(1)(2)	101	J-228	J-200	350	PVC	150	FALSE	0	139	1.44	0.004	TRUE	331
618	P-255	89	J-227	J-228	100	PVC	150	FALSE	0	-4	0.54	0.003	TRUE	292
625	P-99(1)	86	J-100	J-230	150	Cast Iron	130	FALSE	0	7	0.41	0.001	TRUE	282
626	P-99(2)	59	J-230	J-101	150	Cast Iron	130	FALSE	0	7	0.38	0.001	TRUE	194
630	P-34(2)(2)	66	J-231	J-35	150	Cast Iron	130	FALSE	0	11	0.65	0.003	TRUE	216
635	P-139(1)	5	J-134	J-233	300	PVC	150	FALSE	0	-104	1.48	0.005	TRUE	16
638	P-261	155	J-233	J-234	100	Cast Iron	130	FALSE	0	-1	0.07	0	TRUE	5086

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
641	P-34(2)(1)(2)	6	J-235	J-231	200	Cast Iron	130	FALSE	0	16	0.51	0.002	TRUE	20
644	P-263	114	J-169	J-236	100	PVC	150	FALSE	0	2	0.3	0.001	TRUE	374
646	P-136(2)(2)(1)	104	J-229	J-237	150	Cast Iron	130	FALSE	0	1	0.08	0	TRUE	341
647	P-136(2)(2)(2)	96	J-237	J-133	150	Cast Iron	130	FALSE	0	-2	0.14	0	TRUE	315
648	P-264	85	J-236	J-237	100	PVC	150	FALSE	0	3	0.32	0.001	TRUE	279
651	P-267	8	J-53	J-89	300	PVC	150	FALSE	0	-11	0.15	0	TRUE	26
653	P-268	73	J-89	J-238	300	PVC	150	FALSE	0	-29	0.41	0	TRUE	239
655	P-269	84	J-238	J-239	300	PVC	150	FALSE	0	-33	0.46	0.001	TRUE	276
656	P-270	91	J-239	J-127	300	PVC	150	FALSE	0	-37	0.53	0.001	TRUE	298
659	P-128(2)	98	J-240	J-125	200	PVC	150	FALSE	0	7	0.22	0	TRUE	321
663	P-135(2)	70	J-241	J-132	150	PVC	150	FALSE	0	7	0.42	0.001	TRUE	230
666	P-134(1)	71	J-130	J-242	150	PVC	150	FALSE	0	6	0.34	0.001	TRUE	233
678	P-275	8	J-245	J-246	150	PVC	150	FALSE	0	12	0.7	0.003	TRUE	26
680	P-276	103	J-246	J-247	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	338
682	P-94(1)	81	J-96	J-248	100	Cast Iron	130	FALSE	0	2	0.23	0.001	TRUE	266
683	P-94(2)	59	J-248	J-97	100	Cast Iron	130	FALSE	0	2	0.23	0.001	TRUE	194
686	P-50(1)	8	J-51	J-249	300	Cast Iron	130	FALSE	0	-63	0.89	0.003	TRUE	26
689	P-86(1)	8	J-87	J-250	300	PVC	150	FALSE	0	-67	0.95	0.002	TRUE	26
691	P-278	8	J-249	J-250	200	PVC	150	FALSE	0	8	0.26	0	TRUE	26
696	P-133(2)(2)	8	J-251	J-93	150	Cast Iron	130	FALSE	0	17	0.94	0.007	TRUE	26
697	P-281	63	J-243	J-251	150	Cast Iron	130	FALSE	0	9	0.5	0.002	TRUE	207
698	P-282	79	J-120	J-58	150	Cast Iron	130	FALSE	0	-16	0.88	0.006	TRUE	259
699	P-283	46	J-58	J-70	150	Cast Iron	130	FALSE	0	-19	1.06	0.008	TRUE	151
705	P-55(2)(2)	93	J-253	J-57	150	Cast Iron	130	FALSE	0	-3	0.19	0	TRUE	305
708	P-122(1)	72	J-120	J-254	150	PVC	150	FALSE	0	-2	0.09	0	TRUE	236
709	P-122(2)	205	J-254	J-121	150	PVC	150	FALSE	0	3	0.19	0	TRUE	672
710	P-287	59	J-57	J-254	100	PVC	150	FALSE	0	6	0.81	0.006	TRUE	194
711	P-288	97	J-67	J-62	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	318
713	P-65(1)	63	J-66	J-255	300	PVC	150	FALSE	0	-105	1.48	0.005	TRUE	207
714	P-65(2)	51	J-255	J-67	300	PVC	150	FALSE	0	-107	1.52	0.006	TRUE	167
716	P-61(1)	38	J-62	J-256	250	PVC	150	FALSE	0	67	1.37	0.006	TRUE	125
717	P-61(2)	63	J-256	J-63	250	PVC	150	FALSE	0	63	1.29	0.005	TRUE	207
718	P-289	114	J-255	J-256	100	PVC	150	FALSE	0	2	0.2	0	TRUE	374
722	P-290	160	J-256	J-257	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	525
725	P-119(2)(2)	90	J-258	J-118	200	PVC	150	FALSE	0	-36	1.14	0.005	TRUE	295
728	P-105(1)	73	J-106	J-259	300	PVC	150	FALSE	0	-47	0.66	0.001	TRUE	2397

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
729	P-105(2)	101	J-259	J-107	300	PVC	150	FALSE	0	-48	0.68	0.001	TRUE	331
731	P-293	171	J-20	J-46	100	PVC	150	FALSE	0	4	0.52	0.003	TRUE	561
732	P-294	68	J-22	J-47	100	PVC	150	FALSE	0	3	0.32	0.001	TRUE	223
734	P-50(2)(1)	77	J-249	J-260	300	Cast Iron	130	FALSE	0	-71	1.01	0.003	TRUE	253
735	P-50(2)(2)	69	J-260	J-52	300	Cast Iron	130	FALSE	0	-71	1.01	0.003	TRUE	226
737	P-80(1)	66	J-81	J-261	150	PVC	150	FALSE	0	14	0.8	0.004	TRUE	216
738	P-80(2)	89	J-261	J-82	150	PVC	150	FALSE	0	16	0.88	0.005	TRUE	292
749	P-52(2)(1)	4	J-262	J-265	300	PVC	130	FALSE	0	-69	0.98	0.003	TRUE	13
754	P-78(1)(2)	80	J-266	J-263	150	PVC	150	FALSE	0	13	0.75	0.003	TRUE	262
756	P-52(2)(2)(1)	75	J-265	J-267	300	PVC	130	FALSE	0	-70	0.99	0.003	TRUE	246
760	P-78(1)(1)(1)	51	J-79	J-268	150	PVC	150	FALSE	0	14	0.77	0.004	TRUE	167
761	P-78(1)(1)(2)	4	J-268	J-266	150	PVC	150	FALSE	0	14	0.77	0.004	TRUE	13
763	P-52(2)(2)(2)(1)	5	J-267	J-269	300	PVC	150	FALSE	0	-71	1	0.003	TRUE	16
764	P-52(2)(2)(2)(2)	64	J-269	J-54	300	PVC	130	FALSE	0	-72	1.02	0.003	TRUE	210
767	P-135(1)(1)	111	J-131	J-270	150	PVC	150	FALSE	0	1	0.08	0	TRUE	364
768	P-135(1)(2)	76	J-270	J-241	150	PVC	150	FALSE	0	5	0.26	0	TRUE	249
771	P-128(1)(1)	21	J-90	J-271	200	PVC	150	FALSE	0	19	0.61	0.002	TRUE	69
772	P-128(1)(2)	66	J-271	J-240	200	PVC	150	FALSE	0	13	0.43	0.001	TRUE	216
779	P-184(1)	62	J-168	J-273	100	PVC	150	FALSE	0	-1	0.17	0	TRUE	203
780	P-184(2)	73	J-273	J-169	100	PVC	150	FALSE	0	-1	0.16	0	TRUE	239
788	P-195(1)	128	J-174	J-275	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	420
789	P-195(2)	145	J-275	J-175	100	PVC	150	FALSE	0	3	0.36	0.001	TRUE	476
791	P-208(1)	148	J-183	J-276	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	485
792	P-208(2)	145	J-276	J-187	100	PVC	150	FALSE	0	4	0.48	0.002	TRUE	476
793	P-306	83	J-275	J-276	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	272
794	P-307	60	J-276	J-29	100	PVC	150	FALSE	0	-7	0.88	0.007	TRUE	197
795	P-308	12	J-29	J-112	100	PVC	150	FALSE	0	-4	0.56	0.003	TRUE	39
796	P-309	84	J-112	J-154	100	PVC	150	FALSE	0	-3	0.38	0.002	TRUE	276
797	P-310	117	J-154	J-145	100	PVC	150	FALSE	0	-5	0.61	0.004	TRUE	384
801	P-149(1)(1)	97	J-141	J-278	300	PVC	150	FALSE	0	97	1.37	0.005	TRUE	318
802	P-149(1)(2)	64	J-278	J-191	300	PVC	150	FALSE	0	90	1.27	0.004	TRUE	210
803	P-312	41	J-277	J-278	100	PVC	150	FALSE	0	-6	0.74	0.005	TRUE	134
805	P-200(1)	188	J-179	J-279	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	617
806	P-200(2)	68	J-279	J-180	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	223
808	P-25(1)	67	J-25	J-280	300	PVC	150	FALSE	0	-68	0.96	0.002	TRUE	220
809	P-25(2)	200	J-280	J-185	300	PVC	150	FALSE	0	-70	1	0.003	TRUE	6568

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
810	P-313	38	J-279	J-280	100	PVC	150	FALSE	0	-2	0.24	0.001	TRUE	125
812	P-106(1)	67	J-107	J-281	300	PVC	150	FALSE	0	-52	0.73	0.001	TRUE	220
813	P-106(2)	106	J-281	J-108	300	PVC	150	FALSE	0	-55	0.79	0.002	TRUE	348
819	P-165(1)	122	J-156	J-283	100	Cast Iron	130	FALSE	0	5	0.58	0.004	TRUE	400
820	P-165(2)	95	J-283	J-157	100	Cast Iron	130	FALSE	0	5	0.58	0.004	TRUE	312
822	P-316	122	J-283	J-143	100	PVC	150	FALSE	0	-5	0.61	0.004	TRUE	400
825	P-150(2)	40	J-284	J-103	300	PVC	150	FALSE	0	61	0.86	0.002	TRUE	131
827	P-318	78	J-82	J-51	100	PVC	150	FALSE	0	-3	0.41	0.002	TRUE	256
829	P-78(2)(1)	70	J-263	J-285	150	PVC	150	FALSE	0	13	0.75	0.003	TRUE	230
830	P-78(2)(2)	5	J-285	J-80	150	PVC	150	FALSE	0	14	0.78	0.004	TRUE	16
832	P-52(1)(1)	5	J-53	J-286	300	PVC	130	FALSE	0	-66	0.93	0.003	TRUE	16
833	P-52(1)(2)	70	J-286	J-262	300	PVC	130	FALSE	0	-68	0.96	0.003	TRUE	230
835	P-320	17	J-33	J-120	150	Cast Iron	130	FALSE	0	-19	1.06	0.008	TRUE	56
837	P-187(1)	7	J-141	J-287	200	PVC	150	FALSE	0	10	0.3	0	TRUE	23
838	P-187(2)	103	J-287	J-170	100	PVC	150	FALSE	0	1	0.19	0	TRUE	338
840	P-321	99	J-287	J-288	200	Cast Iron	130	FALSE	0	7	0.23	0	TRUE	325
842	P-155(1)	5	J-146	J-289	200	PVC	150	FALSE	0	-36	1.16	0.005	TRUE	16
843	P-155(2)	62	J-289	J-147	200	PVC	150	FALSE	0	-44	1.4	0.008	TRUE	203
844	P-322	67	J-288	J-289	200	Cast Iron	130	FALSE	0	15	0.47	0.001	TRUE	220
846	P-161(1)	77	J-152	J-290	150	PVC	150	FALSE	0	18	1	0.006	TRUE	253
847	P-161(2)	5	J-290	J-153	150	PVC	150	FALSE	0	9	0.5	0.002	TRUE	16
848	P-323	125	J-289	J-290	200	Cast Iron	130	FALSE	0	21	0.66	0.003	TRUE	410
850	P-324	57	J-290	J-291	200	Cast Iron	130	FALSE	0	28	0.89	0.004	TRUE	187
852	P-127(1)	52	J-79	J-292	150	PVC	150	FALSE	0	-2	0.09	0	TRUE	171
853	P-127(2)	45	J-292	J-54	150	PVC	150	FALSE	0	-7	0.37	0.001	TRUE	148
855	P-299(1)	50	J-268	J-295	100	Cast Iron	130	FALSE	0	0	0.03	0	TRUE	164
856	P-299(2)	38	J-295	J-269	100	Cast Iron	130	FALSE	0	-1	0.08	0	TRUE	125
857	P-325	58	J-292	J-295	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	190
861	P-298(1)	49	J-266	J-296	100	Cast Iron	130	FALSE	0	0	0	0	TRUE	161
862	P-298(2)	38	J-296	J-267	100	Cast Iron	130	FALSE	0	-1	0.1	0	TRUE	125
863	P-326	5	J-295	J-296	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	16
865	P-297(1)	41	J-264	J-297	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	134
866	P-297(2)	38	J-297	J-265	100	Cast Iron	130	FALSE	0	-1	0.1	0	TRUE	125
867	P-327	74	J-296	J-297	100	PVC	150	FALSE	0	5	0.57	0.003	TRUE	243
869	P-296(1)	37	J-262	J-298	100	Cast Iron	130	FALSE	0	1	0.13	0	TRUE	121
870	P-296(2)	41	J-298	J-263	100	Cast Iron	130	FALSE	0	1	0.08	0	TRUE	1349

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
871	P-328	5	J-297	J-298	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	16
873	P-319(1)	43	J-285	J-299	100	Cast Iron	130	FALSE	0	-1	0.13	0	TRUE	141
874	P-319(2)	37	J-299	J-286	100	Cast Iron	130	FALSE	0	-2	0.2	0.001	TRUE	121
875	P-329	70	J-298	J-299	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	230
877	P-266(1)	43	J-80	J-300	100	Cast Iron	130	FALSE	0	-1	0.14	0	TRUE	141
878	P-266(2)	37	J-300	J-53	100	Cast Iron	130	FALSE	0	-2	0.2	0.001	TRUE	121
879	P-330	5	J-299	J-300	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	16
881	P-331	55	J-300	J-301	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	180
885	P-295(1)	59	J-260	J-303	100	PVC	150	FALSE	0	-1	0.15	0	TRUE	194
886	P-295(2)	41	J-303	J-261	100	PVC	150	FALSE	0	2	0.28	0.001	TRUE	134
887	P-333	65	J-302	J-303	100	PVC	150	FALSE	0	5	0.57	0.003	TRUE	213
888	P-334	59	J-302	J-52	150	Cast Iron	130	FALSE	0	-1	0.04	0	TRUE	194
891	P-332(2)	7	J-304	J-302	100	PVC	150	FALSE	0	5	0.61	0.004	TRUE	23
893	P-51(1)	7	J-52	J-305	300	Cast Iron	130	FALSE	0	-72	1.02	0.004	TRUE	23
895	P-335	57	J-304	J-305	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	187
898	P-51(2)(2)	54	J-306	J-53	300	Cast Iron	130	FALSE	0	-75	1.06	0.004	TRUE	177
900	P-337	42	J-306	J-301	100	Cast Iron	130	FALSE	0	1	0.12	0	TRUE	138
902	P-332(1)(1)	3	J-301	J-307	100	PVC	150	FALSE	0	5	0.61	0.004	TRUE	10
903	P-332(1)(2)	48	J-307	J-304	100	PVC	150	FALSE	0	5	0.64	0.004	TRUE	157
907	P-51(2)(1)(1)	56	J-305	J-308	300	Cast Iron	130	FALSE	0	-73	1.03	0.004	TRUE	184
908	P-51(2)(1)(2)	5	J-308	J-306	300	PVC	130	FALSE	0	-74	1.04	0.004	TRUE	16
909	P-340	43	J-307	J-308	100	Cast Iron	130	FALSE	0	-1	0.07	0	TRUE	141
910	P-341	41	J-302	J-81	150	PVC	150	FALSE	0	0	0.02	0	TRUE	134
912	P-79(1)	42	J-80	J-309	150	PVC	150	FALSE	0	15	0.83	0.004	TRUE	138
913	P-79(2)	59	J-309	J-81	150	PVC	150	FALSE	0	14	0.81	0.004	TRUE	194
914	P-342	47	J-301	J-309	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	154
917	P-90(2)(2)	63	J-310	J-92	150	Cast Iron	130	FALSE	0	6	0.33	0.001	TRUE	207
920	P-90(2)(1)(1)	48	J-246	J-311	150	Cast Iron	130	FALSE	0	12	0.7	0.004	TRUE	157
921	P-90(2)(1)(2)	67	J-311	J-310	150	Cast Iron	130	FALSE	0	8	0.47	0.002	TRUE	220
923	P-343(1)	82	J-247	J-312	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	269
925	P-344	56	J-311	J-312	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	184
927	P-95(1)	19	J-97	J-313	100	Cast Iron	130	FALSE	0	2	0.2	0.001	TRUE	62
931	P-86(2)(1)	73	J-250	J-314	300	PVC	150	FALSE	0	-72	1.02	0.003	TRUE	239
932	P-86(2)(2)	75	J-314	J-88	300	PVC	150	FALSE	0	-77	1.09	0.003	TRUE	246
939	P-180(1)	5	J-165	J-316	150	Cast Iron	130	FALSE	0	-6	0.34	0.001	TRUE	16
942	P-92(1)	101	J-93	J-317	150	Cast Iron	130	FALSE	0	12	0.7	0.004	TRUE	3310

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
943	P-92(2)	5	J-317	J-94	150	Cast Iron	130	FALSE	0	7	0.38	0.001	TRUE	16
944	P-348	63	J-316	J-317	200	Cast Iron	130	FALSE	0	3	0.09	0	TRUE	207
945	P-349	8	J-317	J-38	200	Cast Iron	130	FALSE	0	8	0.25	0	TRUE	26
948	P-95(2)(2)	42	J-318	J-98	150	Cast Iron	130	FALSE	0	3	0.18	0	TRUE	138
949	P-350	61	J-318	J-165	100	Cast Iron	130	FALSE	0	0	0.06	0	TRUE	200
952	P-8(2)	7	J-319	J-9	400	Cast Iron	130	FALSE	0	61	0.48	0.001	TRUE	23
954	P-249(1)(1)	6	J-219	J-320	150	Cast Iron	130	FALSE	0	-11	0.61	0.003	TRUE	20
956	P-351	63	J-319	J-320	150	Cast Iron	130	FALSE	0	8	0.43	0.002	TRUE	207
958	P-164(1)	101	J-155	J-419	100	Cast Iron	130	FALSE	0	3	0.39	0.002	TRUE	331
960	P-352	108	J-419	J-110	100	Cast Iron	130	FALSE	0	3	0.35	0.002	TRUE	354
961	P-353	12	J-110	J-27	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	39
963	P-170(1)	72	J-156	J-322	100	Cast Iron	130	FALSE	0	6	0.71	0.006	TRUE	236
967	P-315(2)	80	J-323	J-283	100	Cast Iron	130	FALSE	0	-1	0.15	0	TRUE	262
968	P-354	108	J-322	J-323	100	Cast Iron	130	FALSE	0	2	0.26	0.001	TRUE	354
970	P-125(1)	26	J-76	J-324	300	Cast Iron	130	FALSE	0	-26	0.37	0.001	TRUE	85
971	P-125(2)	129	J-324	J-124	300	Cast Iron	130	FALSE	0	-32	0.45	0.001	TRUE	423
972	P-355	100	J-77	J-324	100	PVC	150	FALSE	0	-3	0.41	0.002	TRUE	328
974	P-72(1)	83	J-73	J-325	150	PVC	150	FALSE	0	25	1.44	0.011	TRUE	272
977	P-123(2)(1)	92	J-124	J-326	300	Cast Iron	130	FALSE	0	-108	1.53	0.007	TRUE	302
978	P-123(2)(2)	70	J-326	J-73	300	Cast Iron	130	FALSE	0	-114	1.61	0.008	TRUE	230
979	P-356	107	J-325	J-326	100	PVC	150	FALSE	0	-5	0.59	0.004	TRUE	351
981	P-72(2)(1)	20	J-325	J-327	150	PVC	150	FALSE	0	30	1.7	0.016	TRUE	66
982	P-72(2)(2)	148	J-327	J-74	150	PVC	150	FALSE	0	22	1.25	0.009	TRUE	485
983	P-357	122	J-75	J-327	100	PVC	150	FALSE	0	-5	0.7	0.005	TRUE	400
985	P-55(2)(1)(1)	55	J-122	J-328	150	Cast Iron	130	FALSE	0	-6	0.33	0.001	TRUE	180
986	P-55(2)(1)(2)	45	J-328	J-253	150	Cast Iron	130	FALSE	0	-2	0.11	0	TRUE	148
988	P-71(1)(1)	39	J-72	J-329	300	PVC	150	FALSE	0	-74	1.05	0.003	TRUE	128
989	P-71(1)(2)	65	J-329	J-123	300	PVC	150	FALSE	0	-82	1.16	0.003	TRUE	213
992	P-358(1)	40	J-328	J-330	100	PVC	150	FALSE	0	-5	0.65	0.004	TRUE	131
993	P-358(2)	136	J-330	J-329	100	PVC	150	FALSE	0	-7	0.85	0.007	TRUE	446
996	P-284(1)	48	J-71	J-331	100	Cast Iron	130	FALSE	0	7	0.85	0.009	TRUE	157
997	P-284(2)	32	J-331	J-57	100	Cast Iron	130	FALSE	0	6	0.77	0.008	TRUE	105
999	P-361	8	J-51	J-87	150	PVC	150	FALSE	0	-1	0.06	0	TRUE	26
1002	P-302(2)(2)	99	J-332	J-234	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	325
1004	P-139(2)(1)	135	J-233	J-343	300	PVC	150	FALSE	0	-105	1.49	0.005	TRUE	443
1005	P-139(2)(2)	69	J-343	J-135	300	PVC	150	FALSE	0	-115	1.63	0.006	TRUE	2261

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1009	P-305(2)	16	J-334	J-135	300	PVC	150	FALSE	0	-59	0.83	0.002	TRUE	52
1012	P-362(2)	15	J-335	J-343	100	Cast Iron	130	FALSE	0	4	0.53	0.004	TRUE	49
1013	P-363	72	J-334	J-335	100	Cast Iron	130	FALSE	0	5	0.62	0.005	TRUE	236
1016	P-305(1)(2)	28	J-336	J-334	300	PVC	150	FALSE	0	-53	0.75	0.002	TRUE	92
1019	P-362(1)(2)	25	J-337	J-335	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	82
1020	P-364	75	J-336	J-337	100	Cast Iron	130	FALSE	0	4	0.56	0.004	TRUE	246
1021	P-365	6	J-103	J-16	300	PVC	150	FALSE	0	61	0.87	0.002	TRUE	20
1022	P-366	7	J-102	J-15	300	PVC	150	FALSE	0	67	0.94	0.002	TRUE	23
1024	P-138(1)	100	J-133	J-338	300	PVC	150	FALSE	0	-81	1.15	0.003	TRUE	328
1026	P-367	94	J-236	J-338	100	PVC	150	FALSE	0	-4	0.51	0.003	TRUE	308
1028	P-171(2)(1)	7	J-162	J-339	100	Cast Iron	130	FALSE	0	4	0.46	0.003	TRUE	23
1029	P-171(2)(2)	82	J-339	J-160	100	Cast Iron	130	FALSE	0	2	0.25	0.001	TRUE	269
1031	P-33(2)(1)	43	J-126	J-340	200	PVC	150	FALSE	0	30	0.95	0.004	TRUE	141
1032	P-33(2)(2)	56	J-340	J-34	200	PVC	150	FALSE	0	30	0.96	0.004	TRUE	184
1034	P-302(1)(1)	68	J-272	J-341	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	223
1035	P-302(1)(2)	48	J-341	J-274	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	157
1038	P-140(1)	65	J-135	J-342	500	PVC	150	FALSE	0	-270	1.38	0.003	TRUE	213
1039	P-140(2)	65	J-342	J-136	500	PVC	150	FALSE	0	-274	1.4	0.003	TRUE	213
1043	P-148(1)	69	J-140	J-344	300	PVC	150	FALSE	0	113	1.61	0.006	TRUE	226
1044	P-148(2)	132	J-344	J-141	300	PVC	150	FALSE	0	106	1.5	0.006	TRUE	433
1045	P-370	9	J-343	J-344	150	PVC	150	FALSE	0	13	0.76	0.003	TRUE	30
1047	P-371	55	J-344	J-345	150	PVC	150	FALSE	0	19	1.1	0.007	TRUE	180
1048	P-372	61	J-345	J-288	150	PVC	150	FALSE	0	19	1.05	0.006	TRUE	200
1049	P-373	5	J-288	J-170	150	PVC	150	FALSE	0	9	0.51	0.002	TRUE	16
1051	P-311(1)	25	J-145	J-346	100	PVC	150	FALSE	0	-3	0.35	0.001	TRUE	82
1052	P-311(2)	130	J-346	J-277	100	PVC	150	FALSE	0	2	0.2	0	TRUE	426
1053	P-374	86	J-170	J-346	100	PVC	150	FALSE	0	6	0.82	0.007	TRUE	282
1055	P-32(2)(1)(1)	157	J-114	J-347	250	PVC	150	FALSE	0	-66	1.35	0.006	TRUE	515
1057	P-375	64	J-347	J-151	100	PVC	150	FALSE	0	3	0.4	0.002	TRUE	210
1058	P-376	91	J-151	J-147	100	PVC	150	FALSE	0	1	0.18	0	TRUE	298
1059	P-377	70	J-147	J-345	100	PVC	150	FALSE	0	1	0.09	0	TRUE	230
1061	P-32(2)(1)(2)(1)	82	J-347	J-348	250	PVC	150	FALSE	0	-71	1.44	0.006	TRUE	269
1062	P-32(2)(1)(2)(2)	73	J-348	J-139	250	PVC	150	FALSE	0	-74	1.51	0.007	TRUE	239
1063	P-378	63	J-348	J-150	100	PVC	150	FALSE	0	2	0.31	0.001	TRUE	207
1066	P-147(2)(1)	59	J-149	J-349	300	PVC	150	FALSE	0	65	0.92	0.002	TRUE	194
1067	P-147(2)(2)	5	J-349	J-140	300	PVC	150	FALSE	0	52	0.73	0.001	TRUE	162

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1069	P-379(1)	51	J-150	J-350	100	PVC	150	FALSE	0	-1	0.08	0	TRUE	167
1070	P-379(2)	6	J-350	J-148	150	PVC	150	FALSE	0	12	0.69	0.003	TRUE	20
1071	P-380	47	J-349	J-350	150	Cast Iron	130	FALSE	0	13	0.75	0.004	TRUE	154
1073	P-32(2)(2)(2)(1)	46	J-272	J-351	250	PVC	150	FALSE	0	17	0.34	0	TRUE	151
1074	P-32(2)(2)(2)(2)	26	J-351	J-33	250	PVC	150	FALSE	0	12	0.23	0	TRUE	85
1076	P-368(1)	41	J-340	J-352	100	PVC	150	FALSE	0	-1	0.11	0	TRUE	134
1077	P-368(2)	58	J-352	J-341	100	PVC	150	FALSE	0	-2	0.27	0.001	TRUE	190
1078	P-381	79	J-351	J-352	100	PVC	150	FALSE	0	5	0.6	0.004	TRUE	259
1080	P-304(1)	64	J-34	J-353	300	PVC	150	FALSE	0	-38	0.54	0.001	TRUE	210
1081	P-304(2)	56	J-353	J-274	300	PVC	150	FALSE	0	-41	0.58	0.001	TRUE	184
1082	P-382	43	J-352	J-353	100	PVC	150	FALSE	0	5	0.63	0.004	TRUE	141
1084	P-262(1)	64	J-234	J-354	100	Cast Iron	130	FALSE	0	2	0.3	0.001	TRUE	210
1085	P-262(2)	64	J-354	J-235	100	Cast Iron	130	FALSE	0	7	0.85	0.009	TRUE	210
1088	P-256(1)	151	J-167	J-355	150	Cast Iron	130	FALSE	0	-4	0.24	0.001	TRUE	495
1089	P-256(2)	49	J-355	J-35	150	Cast Iron	130	FALSE	0	-5	0.31	0.001	TRUE	161
1091	P-303(1)	91	J-232	J-356	100	PVC	150	FALSE	0	3	0.37	0.001	TRUE	298
1092	P-303(2)	95	J-356	J-273	100	PVC	150	FALSE	0	2	0.22	0.001	TRUE	312
1095	P-34(2)(1)(1)(1)	95	J-129	J-357	150	Cast Iron	130	FALSE	0	19	1.07	0.009	TRUE	312
1096	P-34(2)(1)(1)(2)	103	J-357	J-235	150	Cast Iron	130	FALSE	0	17	0.94	0.007	TRUE	338
1098	P-383(1)	82	J-353	J-358	100	PVC	150	FALSE	0	6	0.82	0.006	TRUE	269
1100	P-385	71	J-357	J-358	100	PVC	150	FALSE	0	-6	0.72	0.005	TRUE	233
1102	P-302(2)(1)(1)	68	J-274	J-359	100	PVC	150	FALSE	0	6	0.79	0.006	TRUE	223
1103	P-302(2)(1)(2)	47	J-359	J-332	100	PVC	150	FALSE	0	5	0.61	0.004	TRUE	154
1104	P-386	53	J-358	J-359	100	PVC	150	FALSE	0	-4	0.56	0.003	TRUE	174
1106	P-387	64	J-359	J-360	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	210
1108	P-362(1)(1)(1)	62	J-332	J-361	100	Cast Iron	130	FALSE	0	-5	0.6	0.005	TRUE	203
1109	P-362(1)(1)(2)	39	J-361	J-337	100	Cast Iron	130	FALSE	0	-3	0.42	0.002	TRUE	128
1110	P-388	54	J-360	J-361	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	177
1112	P-305(1)(1)(1)	71	J-274	J-362	300	PVC	150	FALSE	0	-44	0.62	0.001	TRUE	233
1113	P-305(1)(1)(2)	32	J-362	J-336	300	PVC	150	FALSE	0	-48	0.68	0.001	TRUE	105
1114	P-389	34	J-360	J-362	100	PVC	150	FALSE	0	-8	0.97	0.009	TRUE	112
1116	P-384(1)	45	J-355	J-363	100	PVC	150	FALSE	0	-1	0.07	0	TRUE	148
1117	P-384(2)	54	J-363	J-356	100	PVC	150	FALSE	0	1	0.1	0	TRUE	177
1120	P-259(1)	61	J-231	J-364	100	Cast Iron	130	FALSE	0	3	0.41	0.002	TRUE	200
1121	P-259(2)	69	J-364	J-232	100	Cast Iron	130	FALSE	0	0	0.06	0	TRUE	226
1122	P-391	95	J-364	J-363	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	312

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1124	P-280(1)	73	J-245	J-365	200	Cast Iron	130	FALSE	0	4	0.13	0	TRUE	239
1128	P-134(2)(2)(1)	57	J-244	J-366	150	PVC	150	FALSE	0	-7	0.4	0.001	TRUE	187
1129	P-134(2)(2)(2)	49	J-366	J-88	150	PVC	150	FALSE	0	-13	0.71	0.003	TRUE	161
1131	P-279(1)	51	J-250	J-367	200	Cast Iron	130	FALSE	0	13	0.41	0.001	TRUE	167
1132	P-279(2)	49	J-367	J-245	200	Cast Iron	130	FALSE	0	14	0.44	0.001	TRUE	161
1135	P-346(1)	51	J-314	J-368	100	PVC	150	FALSE	0	4	0.54	0.003	TRUE	167
1136	P-346(2)	49	J-368	J-315	100	PVC	150	FALSE	0	2	0.32	0.001	TRUE	161
1140	P-49(1)	72	J-50	J-369	300	Cast Iron	130	FALSE	0	-53	0.75	0.002	TRUE	236
1141	P-49(2)	45	J-369	J-51	300	Cast Iron	130	FALSE	0	-60	0.85	0.002	TRUE	148
1142	P-396	62	J-83	J-369	100	PVC	150	FALSE	0	-6	0.81	0.006	TRUE	203
1144	P-277(1)	42	J-247	J-370	100	PVC	150	FALSE	0	4	0.55	0.003	TRUE	138
1145	P-277(2)	61	J-370	J-248	100	PVC	150	FALSE	0	1	0.15	0	TRUE	200
1147	P-345(1)	63	J-312	J-371	100	PVC	150	FALSE	0	3	0.41	0.002	TRUE	207
1148	P-345(2)	64	J-371	J-313	100	PVC	150	FALSE	0	1	0.18	0	TRUE	210
1149	P-397	87	J-370	J-371	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	285
1151	P-398	47	J-371	J-372	100	PVC	150	FALSE	0	2	0.28	0.001	TRUE	154
1153	P-180(2)(1)	39	J-316	J-373	150	Cast Iron	130	FALSE	0	-9	0.53	0.002	TRUE	128
1154	P-180(2)(2)	61	J-373	J-92	150	Cast Iron	130	FALSE	0	-9	0.49	0.002	TRUE	200
1155	P-399	65	J-372	J-373	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	213
1157	P-343(2)(1)	53	J-312	J-374	100	PVC	150	FALSE	0	2	0.21	0.001	TRUE	174
1158	P-343(2)(2)	20	J-374	J-310	100	PVC	150	FALSE	0	-2	0.28	0.001	TRUE	66
1159	P-400	77	J-374	J-372	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	253
1161	P-95(2)(1)(1)	41	J-313	J-375	100	Cast Iron	130	FALSE	0	3	0.32	0.002	TRUE	134
1162	P-95(2)(1)(2)	27	J-375	J-318	100	Cast Iron	130	FALSE	0	4	0.49	0.003	TRUE	89
1163	P-401	72	J-372	J-375	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	236
1165	P-134(2)(1)(1)	74	J-242	J-376	150	PVC	150	FALSE	0	1	0.05	0	TRUE	243
1166	P-134(2)(1)(2)	8	J-376	J-244	150	PVC	150	FALSE	0	-3	0.17	0	TRUE	26
1168	P-280(2)(1)	68	J-365	J-377	200	Cast Iron	130	FALSE	0	6	0.2	0	TRUE	223
1169	P-280(2)(2)	28	J-377	J-243	200	Cast Iron	130	FALSE	0	8	0.25	0	TRUE	92
1172	P-394(1)	46	J-366	J-378	100	PVC	150	FALSE	0	5	0.62	0.004	TRUE	151
1173	P-394(2)	45	J-378	J-368	100	PVC	150	FALSE	0	3	0.33	0.001	TRUE	148
1175	P-274(1)(1)	62	J-244	J-379	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	203
1176	P-274(1)(2)	45	J-379	J-315	100	PVC	150	FALSE	0	3	0.41	0.002	TRUE	148
1177	P-403	49	J-378	J-379	100	PVC	150	FALSE	0	2	0.21	0	TRUE	161
1179	P-402(1)	77	J-376	J-380	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	253
1181	P-404	53	J-379	J-380	100	PVC	150	FALSE	0	1	0.15	0	TRUE	174

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1183	P-273(1)	47	J-242	J-381	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	154
1185	P-405	56	J-380	J-381	100	PVC	150	FALSE	0	0	0.01	0	TRUE	184
1187	P-395(1)	46	J-368	J-382	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	151
1188	P-395(2)	27	J-382	J-367	100	PVC	150	FALSE	0	1	0.16	0	TRUE	89
1190	P-274(2)(1)	45	J-315	J-383	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	148
1191	P-274(2)(2)	27	J-383	J-245	100	PVC	150	FALSE	0	3	0.38	0.002	TRUE	89
1192	P-406	49	J-382	J-383	100	PVC	150	FALSE	0	2	0.21	0.001	TRUE	161
1194	P-392(1)	81	J-315	J-384	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	266
1195	P-392(2)	32	J-384	J-365	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	105
1196	P-407	56	J-383	J-384	100	PVC	150	FALSE	0	1	0.1	0	TRUE	184
1198	P-402(2)(1)	59	J-380	J-385	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	194
1199	P-402(2)(2)	93	J-385	J-377	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	305
1200	P-408	57	J-384	J-385	100	PVC	150	FALSE	0	-1	0.11	0	TRUE	187
1202	P-273(2)(1)	64	J-381	J-386	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	210
1203	P-273(2)(2)	113	J-386	J-243	100	PVC	150	FALSE	0	2	0.26	0.001	TRUE	371
1204	P-409	32	J-385	J-386	100	PVC	150	FALSE	0	-1	0.07	0	TRUE	105
1206	P-133(2)(1)(1)	100	J-130	J-387	150	Cast Iron	130	FALSE	0	11	0.63	0.003	TRUE	328
1207	P-133(2)(1)(2)	118	J-387	J-251	150	Cast Iron	130	FALSE	0	9	0.48	0.002	TRUE	387
1208	P-410	79	J-386	J-387	100	PVC	150	FALSE	0	-1	0.12	0	TRUE	259
1210	P-85(1)	109	J-86	J-388	300	Cast Iron	150	FALSE	0	-54	0.77	0.002	TRUE	358
1211	P-85(2)	70	J-388	J-87	300	PVC	150	FALSE	0	-58	0.82	0.002	TRUE	230
1213	P-347(1)	72	J-86	J-389	100	PVC	150	FALSE	0	1	0.08	0	TRUE	236
1214	P-347(2)	23	J-389	J-247	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	75
1217	P-90(1)(1)	51	J-87	J-390	150	Cast Iron	130	FALSE	0	8	0.45	0.002	TRUE	167
1218	P-90(1)(2)	49	J-390	J-246	150	Cast Iron	130	FALSE	0	5	0.26	0.001	TRUE	161
1220	P-411(1)	57	J-388	J-391	100	PVC	150	FALSE	0	3	0.33	0.001	TRUE	187
1221	P-411(2)	43	J-391	J-389	100	PVC	150	FALSE	0	4	0.5	0.003	TRUE	141
1222	P-412	97	J-390	J-391	100	PVC	150	FALSE	0	2	0.31	0.001	TRUE	318
1223	P-413	77	J-5	J-224	100	PVC	150	FALSE	0	4	0.51	0.003	TRUE	253
1225	P-254(1)	40	J-226	J-392	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	131
1226	P-254(2)	75	J-392	J-40	100	PVC	150	FALSE	0	-1	0.17	0	TRUE	246
1227	P-414	93	J-224	J-392	100	PVC	150	FALSE	0	4	0.51	0.003	TRUE	305
1228	P-415	69	J-6	J-223	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	226
1230	P-8(1)(1)	40	J-8	J-393	400	Cast Iron	130	FALSE	0	71	0.56	0.001	TRUE	131
1231	P-8(1)(2)	27	J-393	J-319	400	Cast Iron	130	FALSE	0	68	0.54	0.001	TRUE	89
1233	P-249(1)(2)(1)	24	J-320	J-394	100	Cast Iron	130	FALSE	0	-3	0.44	0.003	TRUE	795

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1234	P-249(1)(2)(2)	36	J-394	J-221	100	Cast Iron	130	FALSE	0	-2	0.29	0.001	TRUE	118
1235	P-416	67	J-393	J-394	100	Cast Iron	130	FALSE	0	2	0.24	0.001	TRUE	220
1237	P-228(2)(1)	69	J-219	J-395	150	Cast Iron	130	FALSE	0	14	0.8	0.005	TRUE	226
1238	P-228(2)(2)	30	J-395	J-199	150	Cast Iron	130	FALSE	0	15	0.85	0.006	TRUE	98
1239	P-417	126	J-395	J-226	100	PVC	150	FALSE	0	-3	0.32	0.001	TRUE	413
1241	P-229(2)(1)	18	J-210	J-396	150	Cast Iron	130	FALSE	0	10	0.55	0.003	TRUE	59
1242	P-229(2)(2)	62	J-396	J-201	150	Cast Iron	130	FALSE	0	11	0.64	0.003	TRUE	203
1243	P-418	125	J-227	J-396	100	PVC	150	FALSE	0	3	0.39	0.002	TRUE	410
1245	P-226(1)(1)	53	J-198	J-398	100	Cast Iron	130	FALSE	0	-2	0.31	0.001	TRUE	174
1246	P-226(1)(2)	89	J-398	J-205	100	Cast Iron	130	FALSE	0	-2	0.28	0.001	TRUE	292
1247	P-419	138	J-12	J-398	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	453
1250	P-239(1)	90	J-211	J-399	100	Cast Iron	130	FALSE	0	2	0.26	0.001	TRUE	295
1251	P-239(2)	53	J-399	J-212	100	Cast Iron	130	FALSE	0	3	0.39	0.002	TRUE	174
1252	P-420	9	J-398	J-399	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	30
1254	P-235(2)(1)	45	J-211	J-400	150	PVC	150	FALSE	0	11	0.64	0.003	TRUE	148
1255	P-235(2)(2)	35	J-400	J-207	150	PVC	150	FALSE	0	11	0.62	0.002	TRUE	115
1256	P-421	130	J-399	J-400	100	PVC	150	FALSE	0	1	0.12	0	TRUE	426
1258	P-225(1)	69	J-197	J-401	100	Cast Iron	130	FALSE	0	-3	0.34	0.002	TRUE	226
1259	P-225(2)	75	J-401	J-198	100	Cast Iron	130	FALSE	0	0	0.01	0	TRUE	246
1260	P-422	134	J-14	J-401	100	PVC	150	FALSE	0	4	0.56	0.003	TRUE	440
1262	P-240(1)	76	J-212	J-402	100	Cast Iron	130	FALSE	0	3	0.38	0.002	TRUE	249
1263	P-240(2)	68	J-402	J-213	100	Cast Iron	130	FALSE	0	-2	0.24	0.001	TRUE	223
1265	P-232(2)(2)(1)	76	J-216	J-403	100	PVC	150	FALSE	0	-1	0.15	0	TRUE	249
1266	P-232(2)(2)(2)	59	J-403	J-203	100	PVC	150	FALSE	0	2	0.2	0	TRUE	194
1267	P-423	81	J-402	J-403	100	PVC	150	FALSE	0	4	0.48	0.002	TRUE	266
1269	P-223(1)	60	J-193	J-405	100	Cast Iron	130	FALSE	0	-2	0.2	0.001	TRUE	197
1270	P-223(2)	82	J-405	J-196	100	Cast Iron	130	FALSE	0	-3	0.33	0.002	TRUE	269
1271	P-424	95	J-17	J-405	100	PVC	150	FALSE	0	5	0.68	0.005	TRUE	312
1274	P-242(1)	83	J-214	J-406	100	Cast Iron	130	FALSE	0	3	0.33	0.002	TRUE	272
1275	P-242(2)	57	J-406	J-194	100	Cast Iron	130	FALSE	0	2	0.2	0.001	TRUE	187
1276	P-425	8	J-405	J-406	100	PVC	150	FALSE	0	5	0.63	0.004	TRUE	26
1279	P-222(2)(2)(1)	82	J-214	J-407	150	Cast Iron	130	FALSE	0	13	0.73	0.004	TRUE	269
1280	P-222(2)(2)(2)	67	J-407	J-195	150	Cast Iron	130	FALSE	0	10	0.54	0.002	TRUE	220
1282	P-426(1)	81	J-406	J-408	100	PVC	150	FALSE	0	5	0.61	0.004	TRUE	266
1283	P-426(2)	58	J-408	J-44	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	190
1284	P-427	92	J-407	J-408	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	302

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1286	P-220(1)	82	J-194	J-409	200	PVC	150	FALSE	0	28	0.9	0.003	TRUE	269
1287	P-220(2)	52	J-409	J-45	200	PVC	150	FALSE	0	29	0.92	0.004	TRUE	171
1288	P-428	58	J-408	J-409	100	PVC	150	FALSE	0	1	0.16	0	TRUE	190
1290	P-292(2)(1)	59	J-282	J-410	100	PVC	150	FALSE	0	2	0.28	0.001	TRUE	194
1291	P-292(2)(2)	126	J-410	J-259	100	PVC	150	FALSE	0	1	0.08	0	TRUE	413
1292	P-429	89	J-107	J-410	100	PVC	150	FALSE	0	3	0.35	0.001	TRUE	292
1294	P-104(1)	122	J-105	J-411	200	Cast Iron	130	FALSE	0	7	0.22	0	TRUE	400
1295	P-104(2)	138	J-411	J-106	200	Cast Iron	130	FALSE	0	7	0.23	0	TRUE	453
1296	P-430	82	J-410	J-411	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	269
1298	P-170(2)(1)	4	J-322	J-412	100	Cast Iron	130	FALSE	0	2	0.29	0.001	TRUE	13
1299	P-170(2)(2)	55	J-412	J-109	100	Cast Iron	130	FALSE	0	-1	0.08	0	TRUE	180
1302	P-315(1)(2)	5	J-413	J-323	100	Cast Iron	130	FALSE	0	-2	0.27	0.001	TRUE	16
1303	P-431	107	J-412	J-413	100	Cast Iron	130	FALSE	0	2	0.26	0.001	TRUE	351
1305	P-315(1)(1)(1)	40	J-108	J-414	100	Cast Iron	130	FALSE	0	2	0.19	0.001	TRUE	131
1306	P-315(1)(1)(2)	26	J-414	J-413	100	Cast Iron	130	FALSE	0	-4	0.47	0.003	TRUE	85
1308	P-314(1)	38	J-281	J-415	100	PVC	150	FALSE	0	3	0.36	0.001	TRUE	125
1309	P-314(2)	89	J-415	J-282	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	292
1312	P-432(1)	58	J-414	J-416	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	190
1313	P-432(2)	47	J-416	J-415	100	PVC	150	FALSE	0	1	0.12	0	TRUE	154
1315	P-292(1)(1)	55	J-157	J-417	100	PVC	150	FALSE	0	1	0.07	0	TRUE	180
1316	P-292(1)(2)	39	J-417	J-282	100	PVC	150	FALSE	0	1	0.13	0	TRUE	128
1317	P-433	136	J-416	J-417	100	PVC	150	FALSE	0	2	0.27	0.001	TRUE	446
1319	P-215(1)	76	J-190	J-418	100	PVC	150	FALSE	0	-3	0.35	0.001	TRUE	249
1320	P-215(2)	96	J-418	J-191	100	PVC	150	FALSE	0	-4	0.54	0.003	TRUE	315
1321	P-434	75	J-277	J-418	100	PVC	150	FALSE	0	5	0.66	0.004	TRUE	246
1326	P-164(2)(1)	8	J-419	J-420	100	Cast Iron	130	FALSE	0	-2	0.19	0.001	TRUE	26
1327	P-164(2)(2)	104	J-420	J-156	100	Cast Iron	130	FALSE	0	0	0.03	0	TRUE	341
1328	P-437	125	J-420	J-144	100	PVC	150	FALSE	0	-4	0.52	0.003	TRUE	410
1330	P-435(1)	62	J-418	J-421	100	PVC	150	FALSE	0	4	0.57	0.003	TRUE	203
1331	P-435(2)	111	J-421	J-158	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	364
1332	P-438	77	J-144	J-421	100	PVC	150	FALSE	0	-3	0.41	0.002	TRUE	253
1334	P-149(2)(1)	44	J-191	J-422	300	PVC	150	FALSE	0	85	1.2	0.004	TRUE	144
1335	P-149(2)(2)	111	J-422	J-142	300	PVC	150	FALSE	0	79	1.12	0.003	TRUE	364
1336	P-439	96	J-421	J-422	100	PVC	150	FALSE	0	-5	0.59	0.003	TRUE	315
1338	P-257(1)	34	J-168	J-423	100	Cast Iron	130	FALSE	0	3	0.41	0.002	TRUE	112
1339	P-257(2)	57	J-423	J-229	100	Cast Iron	130	FALSE	0	2	0.32	0.001	TRUE	181

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1340	P-440	124	J-236	J-423	100	PVC	150	FALSE	0	1	0.07	0	TRUE	407
1342	P-87(2)(1)	49	J-131	J-424	300	PVC	150	FALSE	0	-92	1.3	0.004	TRUE	161
1343	P-87(2)(2)	66	J-424	J-89	300	PVC	150	FALSE	0	-94	1.32	0.004	TRUE	216
1345	P-300(1)	65	J-270	J-425	100	PVC	150	FALSE	0	-4	0.55	0.003	TRUE	213
1346	P-300(2)	71	J-425	J-238	100	PVC	150	FALSE	0	-5	0.69	0.005	TRUE	233
1347	P-441	88	J-424	J-425	100	PVC	150	FALSE	0	1	0.09	0	TRUE	289
1349	P-272(1)	78	J-239	J-426	100	PVC	150	FALSE	0	6	0.71	0.005	TRUE	256
1350	P-272(2)	87	J-426	J-241	100	PVC	150	FALSE	0	4	0.52	0.003	TRUE	285
1351	P-442	90	J-425	J-426	100	PVC	150	FALSE	0	0	0.05	0	TRUE	295
1353	P-133(1)(1)(1)	95	J-128	J-427	150	Cast Iron	130	FALSE	0	14	0.78	0.005	TRUE	312
1354	P-133(1)(1)(2)	102	J-427	J-132	150	Cast Iron	130	FALSE	0	11	0.63	0.003	TRUE	335
1355	P-443	74	J-426	J-427	150	PVC	150	FALSE	0	-1	0.07	0	TRUE	243
1357	P-88(1)	80	J-89	J-428	300	PVC	150	FALSE	0	-76	1.08	0.003	TRUE	262
1358	P-88(2)	142	J-428	J-90	300	PVC	150	FALSE	0	-79	1.12	0.003	TRUE	466
1360	P-301(1)	76	J-238	J-429	100	PVC	150	FALSE	0	-4	0.45	0.002	TRUE	249
1361	P-301(2)	129	J-429	J-271	100	PVC	150	FALSE	0	-5	0.59	0.004	TRUE	423
1362	P-444	60	J-428	J-429	100	PVC	150	FALSE	0	2	0.23	0.001	TRUE	197
1364	P-271(1)	119	J-240	J-430	100	PVC	150	FALSE	0	5	0.58	0.003	TRUE	390
1365	P-271(2)	56	J-430	J-239	100	PVC	150	FALSE	0	3	0.42	0.002	TRUE	184
1366	P-445	74	J-429	J-430	100	PVC	150	FALSE	0	1	0.09	0	TRUE	243
1368	P-383(2)(1)	38	J-358	J-431	100	PVC	150	FALSE	0	4	0.47	0.002	TRUE	125
1369	P-383(2)(2)	85	J-431	J-354	100	PVC	150	FALSE	0	5	0.68	0.005	TRUE	279
1370	P-446	54	J-332	J-431	100	PVC	150	FALSE	0	3	0.37	0.001	TRUE	177
1372	P-369(1)	92	J-341	J-432	100	PVC	150	FALSE	0	-3	0.34	0.001	TRUE	302
1373	P-369(2)	46	J-432	J-342	100	PVC	150	FALSE	0	-3	0.4	0.002	TRUE	151
1374	P-447	69	J-362	J-432	100	PVC	150	FALSE	0	-4	0.53	0.003	TRUE	226
1377	P-32(2)(2)(1)(2)	89	J-433	J-272	250	PVC	150	FALSE	0	22	0.46	0.001	TRUE	292
1378	P-448	64	J-432	J-433	100	PVC	150	FALSE	0	-5	0.57	0.003	TRUE	210
1381	P-194(1)(2)	59	J-434	J-174	200	PVC	150	FALSE	0	44	1.41	0.008	TRUE	194
1384	P-40(1)	14	J-41	J-435	150	PVC	150	FALSE	0	-5	0.29	0.001	TRUE	46
1385	P-40(2)	127	J-435	J-42	150	PVC	150	FALSE	0	-6	0.33	0.001	TRUE	417
1390	P-451	14	J-45	J-436	200	PVC	150	FALSE	0	34	1.09	0.005	TRUE	46
1391	P-452	31	J-183	J-434	300	PVC	150	FALSE	0	104	1.47	0.005	TRUE	102
1392	P-453	18	J-1	J-2	300	Cast Iron	130	FALSE	0	47	0.67	0.002	TRUE	59
1393	P-454	103	J-66	J-63	100	PVC	150	FALSE	0	1	0.18	0	TRUE	338
1395	P-119(1)(1)	33	J-115	J-437	200	PVC	150	FALSE	0	-44	1.39	0.008	TRUE	1088

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1396	P-119(1)(2)	56	J-437	J-257	200	PVC	150	FALSE	0	-41	1.31	0.007	TRUE	184
1397	P-455	188	J-63	J-437	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	617
1398	P-456	8	J-166	J-339	100	Cast Iron	130	FALSE	0	4	0.46	0.003	TRUE	26
1399	P-457	43	J-339	J-161	100	PVC	150	FALSE	0	4	0.53	0.003	TRUE	141
1400	P-458	51	J-161	J-229	150	PVC	150	FALSE	0	3	0.2	0	TRUE	167
1401	P-459	57	J-68	J-61	100	PVC	150	FALSE	0	3	0.43	0.002	TRUE	187
1402	P-291	128	J-61	J-258	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	420
1405	P-60(1)	62	J-61	J-438	250	PVC	150	FALSE	0	71	1.44	0.006	TRUE	203
1406	P-60(2)	25	J-438	J-62	250	PVC	150	FALSE	0	66	1.33	0.005	TRUE	82
1408	P-119(2)(1)(1)	59	J-257	J-439	200	PVC	150	FALSE	0	-39	1.25	0.006	TRUE	194
1409	P-119(2)(1)(2)	74	J-439	J-258	200	PVC	150	FALSE	0	-38	1.19	0.006	TRUE	243
1410	P-462	148	J-438	J-439	100	PVC	150	FALSE	0	3	0.45	0.002	TRUE	485
1412	P-260(1)	73	J-232	J-440	100	PVC	150	FALSE	0	-5	0.61	0.004	TRUE	239
1413	P-260(2)	81	J-440	J-134	100	PVC	150	FALSE	0	-6	0.8	0.006	TRUE	266
1415	P-185(1)	72	J-169	J-441	100	PVC	150	FALSE	0	-6	0.79	0.006	TRUE	236
1416	P-185(2)	89	J-441	J-134	100	PVC	150	FALSE	0	-6	0.76	0.006	TRUE	292
1417	P-463	76	J-440	J-441	100	PVC	150	FALSE	0	1	0.07	0	TRUE	249
1419	P-138(2)(1)	102	J-338	J-442	300	PVC	150	FALSE	0	-87	1.23	0.004	TRUE	335
1420	P-138(2)(2)	100	J-442	J-134	300	PVC	150	FALSE	0	-91	1.28	0.004	TRUE	328
1421	P-464	95	J-441	J-442	100	PVC	150	FALSE	0	-2	0.29	0.001	TRUE	312
1423	P-258(1)	94	J-229	J-443	100	Cast Iron	130	FALSE	0	3	0.32	0.001	TRUE	308
1424	P-258(2)	24	J-443	J-230	100	Cast Iron	130	FALSE	0	0	0.02	0	TRUE	79
1426	P-265(1)	82	J-237	J-444	100	PVC	150	FALSE	0	3	0.44	0.002	TRUE	269
1427	P-265(2)	59	J-444	J-101	100	PVC	150	FALSE	0	2	0.24	0.001	TRUE	194
1428	P-465	91	J-443	J-444	100	PVC	150	FALSE	0	1	0.18	0	TRUE	298
1430	P-137(1)	65	J-133	J-445	300	PVC	150	FALSE	0	77	1.09	0.003	TRUE	213
1431	P-137(2)	110	J-445	J-102	300	PVC	150	FALSE	0	65	0.92	0.002	TRUE	361
1432	P-466	102	J-444	J-445	100	Cast Iron	130	FALSE	0	1	0.09	0	TRUE	335
1434	P-150(1)(1)	59	J-142	J-446	300	PVC	150	FALSE	0	59	0.83	0.002	TRUE	194
1435	P-150(1)(2)	74	J-446	J-284	300	PVC	150	FALSE	0	65	0.92	0.002	TRUE	243
1436	P-467	10	J-445	J-446	250	PVC	150	FALSE	0	11	0.23	0	TRUE	33
1438	P-468	97	J-446	J-447	100	PVC	150	FALSE	0	4	0.46	0.002	TRUE	318
1440	P-152(1)(1)	61	J-143	J-448	200	PVC	150	FALSE	0	-21	0.67	0.002	TRUE	200
1441	P-152(1)(2)	61	J-448	J-159	200	PVC	150	FALSE	0	-20	0.63	0.002	TRUE	200
1442	P-469	78	J-447	J-448	100	PVC	150	FALSE	0	3	0.34	0.001	TRUE	256
1443	P-470	60	J-158	J-447	100	PVC	150	FALSE	0	4	0.45	0.002	TRUE	197

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1445	P-317(1)	79	J-143	J-449	100	PVC	150	FALSE	0	-3	0.41	0.002	TRUE	259
1446	P-317(2)	97	J-449	J-284	100	PVC	150	FALSE	0	-3	0.35	0.001	TRUE	318
1447	P-471	65	J-447	J-449	100	PVC	150	FALSE	0	3	0.33	0.001	TRUE	213
1472	P-474(1)	4	R-5	PMP-7	500	Cast Iron	130	FALSE	0	229	1.17	0.002	TRUE	13
1473	P-474(2)	8	PMP-7	J-1	500	Cast Iron	130	FALSE	0	229	1.17	0.002	TRUE	26
1477	P-475(1)	27	R-6	PMP-8	800	PVC	150	FALSE	0	983	1.96	0.003	TRUE	56
1488	P-54(1)	8	J-55	J-91	300	PVC	150	FALSE	0	-14	0.2	0	TRUE	26
1489	P-54(2)	13	J-91	J-56	300	PVC	150	FALSE	0	-110	1.56	0.006	TRUE	43
1490	P-476	49	J-121	J-91	300	PVC	150	FALSE	0	-96	1.36	0.005	TRUE	161
1494	P-477	134	J-209	J-217	100	Cast Iron	130	FALSE	0	-1	0.1	0	TRUE	440
1495	P-478	143	J-217	J-208	100	Cast Iron	130	FALSE	0	-4	0.45	0.003	TRUE	469
1498	P-450(2)(1)	166	J-436	J-452	300	PVC	150	FALSE	0	-36	0.51	0.001	TRUE	546
1500	P-479	14	J-43	J-452	300	PVC	150	FALSE	0	91	1.29	0.004	TRUE	46
1502	P-480	354	J-2	J-453	300	PVC	150	FALSE	0	77	1.09	0.003	TRUE	1,161
1504	P-481	258	J-453	J-454	300	PVC	150	FALSE	0	0	0	0	TRUE	846
1505	P-482	21	J-200	J-453	300	PVC	150	FALSE	0	38	0.54	0.001	TRUE	69
1506	P-483	279	J-41	J-452	300	PVC	150	FALSE	0	3	0.04	0	TRUE	915
1507	P-484	10	J-135	J-140	300	PVC	150	FALSE	0	96	1.36	0.005	TRUE	32
1510	P-486	6	J-104	J-18	250	PVC	150	FALSE	0	9	0.18	0	TRUE	16
1516	P-489	13	J-106	J-48	300	PVC	150	FALSE	0	53	0.75	0.002	TRUE	43
1517	P-490	11	J-139	J-136	300	PVC	150	FALSE	0	-57	0.81	0.002	TRUE	36
1518	P-491	35	J-136	J-433	250	PVC	150	FALSE	0	28	0.56	0.001	TRUE	114
1519	P-492	12	J-109	J-185	100	PVC	150	FALSE	0	6	0.74	0.005	TRUE	39
1522	P-475(2)(1)	24	PMP-8	J-457	800	PVC	150	FALSE	0	983	1.96	0.003	TRUE	78
1523	P-475(2)(2)	596	J-457	J-69	600	PVC	150	FALSE	0	654	2.31	0.005	TRUE	1,949
1524	P-493	351	J-457	J-73	450	PVC	150	FALSE	0	329	2.07	0.006	TRUE	1,148
1526	P-123(1)(1)	6	J-56	J-458	300	Cast Iron	130	FALSE	0	0	0	0	TRUE	20
1527	P-123(1)(2)	85	J-458	J-124	300	Cast Iron	130	FALSE	0	-69	0.98	0.003	TRUE	278
1528	P-494	31	J-458	J-55	300	PVC	150	FALSE	0	70	0.99	0.003	TRUE	101
1529	P-495	15	J-49	J-4	300	PVC	150	FALSE	0	57	0.81	0.002	TRUE	49
1531	P-67(1)	110	J-68	J-459	300	PVC	150	FALSE	0	-116	1.64	0.006	TRUE	360
1532	P-67(2)	9	J-459	J-69	400	PVC	150	FALSE	0	-223	1.78	0.005	TRUE	29
1533	P-496	25	J-138	J-459	300	PVC	150	FALSE	0	-108	1.52	0.006	TRUE	82
1535	P-450(1)(1)	241	J-23	J-460	300	PVC	150	FALSE	0	-13	0.18	0	TRUE	788
1536	P-450(1)(2)	200	J-460	J-436	300	PVC	150	FALSE	0	-71	1	0.003	TRUE	654
1538	P-112(1)	4	J-113	J-461	300	PVC	150	FALSE	0	-139	1.97	0.009	TRUE	120

ID	LABEL	LENGTH (m)	START NODE	STOP NODE	DIAMETER (mm)	MATERIAL	HAZEN- WILLIAMS	HAS CHECK VALVE	MINOR LOSS COEFFICIENT (Local)	Flow (l/s)	Velocity (m/s)	Headloss Gradient (ft/ft)	Has User Defined Length	Length (User Defined) (m)
1539	P-112(2)	65	J-461	J-114	300	PVC	150	FALSE	0	-112	1.58	0.006	TRUE	213
1540	P-497	24	J-291	J-461	200	PVC	150	FALSE	0	28	0.88	0.003	TRUE	78