DAVIDSON LANDS WATER MODEL

Kayenta Street

Fernbank Road

Boundary Condition 1

Maygrass Way

Sendero Way

Boundary Condition 2

Taliesin Crescent

Shea Road

Cosanti Drive

Ocala Street

Orvieto Way

Watermain crossing hydro corridor

Painted Sky Way

CON1

CON2

FB02 FB03 FB04 FB05 FB06

J02 J04 J06 J08 J10 J12 J14 J16 J17 J20 J22 J24 J30 J32 J34 J44 J46 J58 J60 J62 J64 J66

K02 K04 K06 K08 K10 K12 K14 K16 K18 K20 K22 K23 K24 K25 K26 K28 K30 K32 K34 K36 K38 K40 K54 K56 K58 K60 K62 K63 K64 K70

Basic Day (Max HGL) - Junction Report

		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	FB01	0.00	112.10	160.60	475.26
2	☐	FB02	0.00	109.50	160.55	500.26
3	☐	FB03	0.00	112.50	160.55	470.86
4	☐	FB04	0.00	108.30	160.55	512.01
5	☐	FB05	0.00	113.50	160.55	461.06
6	☐	FB06	0.00	112.10	160.60	475.24
7	☐	FC02	0.00	109.00	160.60	505.64
8	☐	J02	0.39	108.40	160.55	511.03
9	☐	J04	0.32	107.60	160.55	518.87
10	☐	J06	0.29	107.00	160.55	524.75
11	☐	J08	0.44	107.20	160.55	522.79
12	☐	J10	0.13	106.90	160.55	525.74
13	☐	J12	0.04	106.80	160.55	526.74
14	☐	J14	0.29	106.70	160.56	527.78
15	☐	J16	0.22	106.30	160.56	531.75
16	☐	J17	0.04	106.50	160.57	529.81
17	☐	J18	0.19	106.80	160.57	526.89
18	☐	J20	0.25	108.00	160.55	514.95
19	☐	J22	0.23	109.80	160.55	497.31
20	☐	J24	0.17	111.60	160.55	479.67
21	☐	J30	0.14	112.50	160.55	470.86
22	☐	J32	0.15	109.60	160.55	499.27
23	☐	J34	0.21	108.50	160.55	510.05
24	☐	J44	0.21	105.80	160.57	536.67
25	☐	J46	0.22	106.00	160.57	534.70
26	☐	J58	0.27	106.80	160.55	526.70
27	☐	J60	1.67	107.00	160.55	524.74
28	☐	J62	0.22	107.30	160.55	521.80
29	☐	J64	0.15	107.80	160.55	516.91
30	☐	J66	0.15	108.30	160.55	512.01
31	☐	K02	0.10	113.40	160.55	462.03
32	☐	K04	0.13	111.85	160.55	477.22
33	☐	K06	0.11	113.10	160.55	464.98
34	☐	K08	0.20	107.40	160.55	520.83
35	☐	K10	0.18	107.30	160.55	521.81
36	☐	K12	0.22	106.95	160.55	525.24
37	☐	K14	0.15	107.30	160.55	521.81
38	☐	K16	0.13	106.85	160.55	526.22
39	☐	K18	0.19	107.05	160.55	524.26
40	☐	K20	0.07	106.90	160.55	525.73
41	☐	K22	0.08	106.95	160.55	525.26
42	☐	K23	0.00	106.95	160.56	525.33
43	☐	K24	0.15	106.90	160.56	525.82
44	☐	K25	0.00	107.05	160.56	524.35
45	☐	K26	0.18	107.25	160.56	522.39
46	☐	K28	0.06	106.75	160.56	527.30
47	☐	K30	0.08	107.15	160.56	523.39
48	☐	K32	0.12	107.25	160.56	522.41
49	☐	K34	0.15	108.25	160.56	512.62
50	☐	K36	0.17	107.60	160.56	518.99

Basic Day (Max HGL) - Junction Report

		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
51	☐	K38	0.17	107.45	160.56	520.45
52	☐	K40	0.19	107.75	160.56	517.51
53	☐	K50	0.00	106.95	160.55	525.23
54	☐	K52	0.00	107.10	160.55	523.76
55	☐	K54	0.09	107.15	160.55	523.27
56	☐	K56	0.19	107.05	160.55	524.25
57	☐	K58	0.19	107.25	160.55	522.29
58	☐	K60	0.20	107.15	160.55	523.27
59	☐	K62	0.13	106.80	160.55	526.70
60	☐	K63	0.13	107.08	160.55	523.98
61	☐	K64	0.00	107.50	160.55	519.84
62	☐	K70	1.50	107.50	160.55	519.84

Peak Hour - Junction Report

		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	FB01	0.00	112.10	153.40	404.67
2	☐	FB02	0.00	109.50	152.35	419.90
3	☐	FB03	0.00	112.50	152.36	390.57
4	☐	FB04	0.00	108.30	152.35	431.65
5	☐	FB05	0.00	113.50	152.36	380.84
6	☐	FB06	0.00	112.10	153.35	404.19
7	☐	FC02	0.00	109.00	153.30	434.07
8	☐	J02	2.14	108.40	152.34	430.54
9	☐	J04	1.74	107.60	152.33	438.33
10	☐	J06	1.62	107.00	152.33	444.20
11	☐	J08	2.44	107.20	152.33	442.25
12	☐	J10	0.69	106.90	152.34	445.30
13	☐	J12	0.23	106.80	152.39	446.72
14	☐	J14	1.59	106.70	152.50	448.78
15	☐	J16	1.21	106.30	152.59	453.57
16	☐	J17	0.23	106.50	152.64	452.10
17	☐	J18	1.06	106.80	152.66	449.41
18	☐	J20	1.38	108.00	152.33	434.41
19	☐	J22	1.25	109.80	152.33	416.79
20	☐	J24	0.95	111.60	152.34	399.18
21	☐	J30	0.75	112.50	152.35	390.50
22	☐	J32	0.84	109.60	152.34	418.83
23	☐	J34	1.16	108.50	152.34	429.58
24	☐	J44	1.14	105.80	152.64	458.98
25	☐	J46	1.21	106.00	152.62	456.79
26	☐	J58	1.50	106.80	152.33	446.13
27	☐	J60	4.75	107.00	152.33	444.17
28	☐	J62	1.20	107.30	152.34	441.32
29	☐	J64	0.84	107.80	152.34	436.45
30	☐	J66	0.84	108.30	152.34	431.59
31	☐	K02	0.57	113.40	152.34	381.56
32	☐	K04	0.72	111.85	152.34	396.78
33	☐	K06	0.59	113.10	152.35	384.59
34	☐	K08	1.08	107.40	152.33	440.25
35	☐	K10	0.96	107.30	152.33	441.23
36	☐	K12	1.20	106.95	152.33	444.66
37	☐	K14	0.84	107.30	152.33	441.24
38	☐	K16	0.72	106.85	152.33	445.66
39	☐	K18	1.02	107.05	152.32	443.63
40	☐	K20	0.36	106.90	152.33	445.14
41	☐	K22	0.42	106.95	152.36	444.94
42	☐	K23	0.00	106.95	152.50	446.31
43	☐	K24	0.84	106.90	152.49	446.79
44	☐	K25	0.00	107.05	152.49	445.31
45	☐	K26	0.96	107.25	152.49	443.35
46	☐	K28	0.30	106.75	152.51	448.41
47	☐	K30	0.45	107.15	152.52	444.63
48	☐	K32	0.68	107.25	152.53	443.68
49	☐	K34	0.83	108.25	152.54	434.02
50	☐	K36	0.91	107.60	152.56	440.53

Peak Hour - Junction Report

		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
51	☐	K38	0.91	107.45	152.54	441.82
52	☐	K40	1.06	107.75	152.53	438.83
53	☐	K50	0.00	106.95	152.30	444.42
54	☐	K52	0.00	107.10	152.30	442.95
55	☐	K54	0.48	107.15	152.30	442.45
56	☐	K56	1.02	107.05	152.30	443.41
57	☐	K58	1.02	107.25	152.30	441.44
58	☐	K60	1.08	107.15	152.30	442.42
59	☐	K62	0.72	106.80	152.30	445.86
60	☐	K63	0.72	107.08	152.30	443.16
61	☐	K64	0.00	107.50	152.30	439.05
62	☐	K70	8.24	107.50	152.29	438.90

Max Day + Fire - Fireflow Design Report

		ID	Total Demand (L/s)	Available Flow at Hydrant (L/s)	Critical Node ID	Critical Node Pressure (kPa)	Critical Node Head (m)	Design Flow (L/s)	Design Pressure (kPa)	Design Fire Node Pressure (kPa)
1	☐	J02	167.64	215.14	K02	121.99	125.85	201.83	139.96	161.37
2	☐	J04	167.46	226.23	K02	107.94	124.41	202.78	139.96	176.47
3	☐	J06	167.40	240.91	K02	92.68	122.86	206.41	139.96	190.72
4	☐	J08	167.78	243.59	K02	105.14	124.13	216.53	139.96	179.42
5	☐	J10	166.98	255.04	K02	118.30	125.47	236.23	139.96	166.68
6	☐	J12	166.77	263.88	K02	123.90	126.04	249.04	139.96	160.54
7	☐	J14	167.39	287.49	K02	133.10	126.98	280.26	139.96	149.34
8	☐	J16	167.22	299.94	J16	139.96	120.58	299.94	139.96	139.96
9	☐	J17	166.77	314.72	K34	127.65	121.28	304.11	139.96	152.60
10	☐	J18	167.15	320.11	K34	130.52	121.57	311.76	139.96	149.65
11	☐	J20	167.30	210.85	K02	117.11	125.35	194.63	139.96	166.88
12	☐	J22	167.24	194.62	K02	128.19	126.48	186.48	139.96	153.53
13	☐	J24	167.10	186.43	K02	132.02	126.87	181.08	139.96	148.40
14	☐	J30	167.01	194.68	K02	134.82	127.16	191.00	139.96	145.25
15	☐	J32	167.05	202.45	K02	113.00	124.93	184.41	139.96	168.59
16	☐	J34	167.20	200.92	K02	112.68	124.90	182.86	139.96	170.57
17	☐	J44	167.19	252.61	J44	139.96	120.08	252.61	139.96	139.98
18	☐	J46	167.22	232.02	J46	139.96	120.28	232.02	139.96	139.97
19	☐	J58	167.35	183.92	J58	139.96	121.08	183.92	139.96	139.96
20	☐	J60	202.59	194.07	J60	139.96	121.28	194.07	139.96	139.96
21	☐	J62	167.22	206.73	K02	130.97	126.77	200.03	139.96	151.94
22	☐	J64	167.05	193.98	J64	139.96	122.08	193.98	139.96	139.97
23	☐	J66	167.05	213.80	K02	120.28	125.67	199.39	139.96	163.29
24	☐	K02	166.93	165.13	K02	139.96	127.68	165.13	139.96	139.96
25	☐	K04	167.00	183.38	K02	131.84	126.85	178.01	139.96	148.47
26	☐	K06	166.94	174.97	K06	139.96	127.38	174.97	139.96	139.96
27	☐	K08	167.16	190.81	K08	139.96	121.68	190.81	139.96	139.97
28	☐	K10	167.11	181.65	K10	139.96	121.58	181.65	139.96	139.96
29	☐	K12	167.22	184.89	K12	139.96	121.23	184.89	139.96	139.96
30	☐	K14	167.05	196.44	K14	139.96	121.58	196.44	139.96	139.97
31	☐	K16	167.00	231.72	K16	139.96	121.13	231.72	139.96	140.00
32	☐	K18	167.13	222.28	K18	139.96	121.33	222.28	139.96	139.99
33	☐	K20	166.83	217.37	K20	139.96	121.18	217.37	139.96	139.98
34	☐	K22	166.86	221.84	K22	139.96	121.23	221.84	139.96	139.98
35	☐	K23	166.67	194.45	K25	138.98	121.23	193.94	139.96	140.95
36	☐	K25	166.67	138.85	K25	139.96	121.33	138.85	139.96	139.96
37	☐	K28	166.81	250.66	K28	139.96	121.03	250.66	139.96	139.99
38	☐	K30	166.88	234.75	K30	139.96	121.43	234.75	139.96	139.98
39	☐	K32	166.98	198.66	K32	139.96	121.53	198.66	139.96	139.96
40	☐	K34	167.05	193.31	K34	139.96	122.53	193.31	139.96	139.96
41	☐	K36	167.08	233.95	K36	139.96	121.88	233.95	139.96	139.98

Max Day + Fire - Fireflow Design Report

		ID	Total Demand (L/s)	Available Flow at Hydrant (L/s)	Critical Node ID	Critical Node Pressure (kPa)	Critical Node Head (m)	Design Flow (L/s)	Design Pressure (kPa)	Design Fire Node Pressure (kPa)
42	☐	K38	167.08	214.67	K38	139.96	121.73	214.67	139.96	139.97
43	☐	K40	167.15	189.83	K40	139.96	122.03	189.83	139.96	139.96
44	☐	K50	166.67	202.48	K50	139.96	121.23	202.48	139.96	139.97
45	☐	K52	166.67	197.31	K52	139.96	121.38	197.31	139.96	139.97
46	☐	K54	166.89	175.09	K54	139.96	121.43	175.09	139.96	139.96
47	☐	K56	167.13	161.54	K56	139.96	121.33	161.54	139.96	139.96
48	☐	K58	167.13	155.71	K58	139.96	121.53	155.71	139.96	139.96
49	☐	K60	167.16	158.57	K60	139.96	121.43	158.57	139.96	139.96
50	☐	K62	167.00	167.33	K62	139.96	121.08	167.33	139.96	139.98

Peak Hour - Pipe Report

		ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status	Flow Reversal Count
1	☐	103	J32	J30	106.22	250.00	110.00	-4.89	0.10	0.01	0.08	Open	0
2	☐	107	J34	J32	72.74	250.00	110.00	-3.51	0.07	0.00	0.04	Open	0
3	☐	109	J34	J24	118.40	250.00	110.00	2.35	0.05	0.00	0.02	Open	0
4	☐	11	FB01	CON1	1.00	204.00	110.00	-23.08	0.71	0.00	3.80	Open	0
5	☐	111	FB03	FB02	112.95	393.00	120.00	14.19	0.12	0.01	0.05	Open	0
6	☐	113	J30	FB03	29.25	250.00	110.00	-8.89	0.18	0.01	0.24	Open	0
7	☐	115	FB02	FB04	84.88	393.00	120.00	7.77	0.06	0.00	0.02	Open	0
8	☐	117	FB04	J66	30.21	250.00	110.00	7.77	0.16	0.01	0.19	Open	0
9	☐	13	FB01	FB06	12.80	204.00	110.00	23.08	0.71	0.05	3.79	Open	0
10	☐	147	J16	J14	79.87	250.00	110.00	20.42	0.42	0.09	1.12	Open	0
11	☐	15	J02	FB02	107.72	250.00	110.00	-6.42	0.13	0.01	0.13	Open	0
12	☐	151	J17	J18	12.68	250.00	110.00	-28.18	0.57	0.03	2.04	Open	0
13	☐	155	FB06	FB05	259.27	204.00	110.00	23.08	0.71	0.98	3.79	Open	0
14	☐	157	FB05	FB03	58.79	393.00	120.00	23.08	0.19	0.01	0.13	Open	0
15	☐	17	J02	J04	88.93	250.00	110.00	4.28	0.09	0.01	0.06	Open	0
16	☐	19	J04	J06	78.25	250.00	110.00	1.18	0.02	0.00	0.01	Open	0
17	☐	21	J06	J08	73.99	250.00	110.00	-1.67	0.03	0.00	0.01	Open	0
18	☐	23	J08	J10	85.83	250.00	110.00	-6.28	0.13	0.01	0.13	Open	0
19	☐	25	J10	J12	77.00	250.00	110.00	-14.43	0.29	0.05	0.59	Open	0
20	☐	27	J12	J14	78.16	250.00	110.00	-23.00	0.47	0.11	1.40	Open	0
21	☐	31	J16	J17	62.52	250.00	110.00	-16.84	0.34	0.05	0.79	Open	0
22	☐	33	J18	FC02	194.10	250.00	110.00	-36.38	0.74	0.64	3.27	Open	0
23	☐	37	CON2	FC02	1.00	250.00	110.00	36.38	0.74	0.00	3.27	Open	0
24	☐	49	J58	J60	67.38	204.00	110.00	-0.14	0.00	0.00	0.00	Open	0
25	☐	51	J04	J58	196.34	204.00	110.00	1.36	0.04	0.00	0.02	Open	0
26	☐	63	J60	J62	117.34	250.00	110.00	-4.89	0.10	0.01	0.08	Open	0
27	☐	65	J62	J66	120.94	250.00	110.00	-4.17	0.09	0.01	0.06	Open	0
28	☐	67	J66	J64	64.37	204.00	110.00	2.75	0.08	0.00	0.07	Open	0
29	☐	69	J64	J62	64.06	204.00	110.00	1.91	0.06	0.00	0.04	Open	0
30	☐	71	J44	J18	146.85	250.00	110.00	-7.14	0.15	0.02	0.16	Open	0
31	☐	73	J44	J46	72.90	204.00	110.00	6.00	0.18	0.02	0.31	Open	0
32	☐	75	J46	J16	138.46	204.00	110.00	4.79	0.15	0.03	0.21	Open	0
33	☐	91	J06	J20	111.00	250.00	110.00	-0.68	0.01	0.00	0.00	Open	0
34	☐	93	J22	J20	122.21	250.00	110.00	2.06	0.04	0.00	0.02	Open	0
35	☐	95	J22	J24	77.30	250.00	110.00	-3.31	0.07	0.00	0.04	Open	0

Peak Hour - Pipe Report

		ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status	Flow Reversal Count
36	☐	P11	J24	K02	65.29	204.00	110.00	-1.92	0.06	0.00	0.04	Open	0
37	☐	P13	K02	K04	47.09	204.00	110.00	-2.49	0.08	0.00	0.06	Open	0
38	☐	P15	J32	K04	55.19	204.00	110.00	0.54	0.02	0.00	0.00	Open	0
39	☐	P17	K04	K06	79.46	204.00	110.00	-2.66	0.08	0.01	0.07	Open	0
40	☐	P19	K06	J30	31.29	204.00	110.00	-3.25	0.10	0.00	0.10	Open	0
41	☐	P21	K08	J06	85.31	204.00	110.00	-1.91	0.06	0.00	0.04	Open	0
42	☐	P23	K08	K10	72.09	204.00	110.00	0.83	0.03	0.00	0.01	Open	0
43	☐	P25	K10	K12	73.40	204.00	110.00	-0.13	0.00	0.00	0.00	Open	0
44	☐	P27	K12	K14	69.77	204.00	110.00	-1.33	0.04	0.00	0.02	Open	0
45	☐	P29	K14	J08	67.75	204.00	110.00	-2.17	0.07	0.00	0.05	Open	0
46	☐	P31	J10	K16	73.75	250.00	110.00	7.46	0.15	0.01	0.17	Open	0
47	☐	P33	K16	K18	51.49	250.00	110.00	6.74	0.14	0.01	0.14	Open	0
48	☐	P35	K18	K20	69.01	204.00	110.00	-2.47	0.08	0.00	0.06	Open	0
49	☐	P37	K22	K20	56.68	204.00	110.00	7.92	0.24	0.03	0.52	Open	0
50	☐	P39	K22	J12	55.34	204.00	110.00	-8.34	0.26	0.03	0.58	Open	0
51	☐	P41	K26	K25	39.85	204.00	110.00	-0.96	0.03	0.00	0.01	Open	0
52	☐	P43	K24	K23	39.59	204.00	110.00	-1.80	0.06	0.00	0.03	Open	0
53	☐	P45	J14	K28	39.46	204.00	110.00	-5.97	0.18	0.01	0.31	Open	0
54	☐	P47	K28	K30	44.15	204.00	110.00	-6.27	0.19	0.01	0.34	Open	0
55	☐	P49	K30	K32	75.30	204.00	110.00	-2.06	0.06	0.00	0.04	Open	0
56	☐	P51	K32	K40	64.40	204.00	110.00	-2.74	0.08	0.00	0.07	Open	0
57	☐	P53	K34	K40	64.77	204.00	110.00	3.80	0.12	0.01	0.13	Open	0
58	☐	P55	K34	K36	76.92	204.00	110.00	-4.63	0.14	0.01	0.19	Open	0
59	☐	P57	K38	K36	68.73	204.00	110.00	-5.57	0.17	0.02	0.27	Open	0
60	☐	P59	K38	K30	65.80	204.00	110.00	4.66	0.14	0.01	0.20	Open	0
61	☐	P61	K36	J17	81.68	204.00	110.00	-11.11	0.34	0.08	0.98	Open	0
62	☐	P63	K50	K18	92.99	250.00	110.00	-8.19	0.17	0.02	0.21	Open	0
63	☐	P65	K52	K50	50.97	250.00	110.00	0.05	0.00	0.00	0.00	Open	0
64	☐	P67	K54	K64	41.53	204.00	110.00	-2.38	0.07	0.00	0.06	Open	0
65	☐	P69	K56	K54	70.11	204.00	110.00	-1.90	0.06	0.00	0.04	Open	0
66	☐	P71	K58	K56	89.53	204.00	110.00	-0.88	0.03	0.00	0.01	Open	0
67	☐	P73	K58	K60	65.32	204.00	110.00	-0.14	0.00	0.00	0.00	Open	0
68	☐	P75	K60	K62	57.81	204.00	110.00	-1.22	0.04	0.00	0.02	Open	0
69	☐	P77	K62	K63	73.08	204.00	110.00	-1.94	0.06	0.00	0.04	Open	0
70	☐	P79	K50	K70	62.72	250.00	110.00	8.24	0.17	0.01	0.21	Open	0

Peak Hour - Pipe Report

		ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status	Flow Reversal Count
71	☐	P83	K23	J14	52.99	204.00	110.00	-1.80	0.06	0.00	0.03	Open	0
72	☐	P85	K25	K24	50.93	204.00	110.00	-0.96	0.03	0.00	0.01	Open	0
73	☐	P91	K63	K52	7.56	204.00	110.00	-2.66	0.08	0.00	0.07	Open	0
74	☐	P95	K64	K52	20.47	204.00	110.00	2.70	0.08	0.00	0.07	Open	0
75	☐	P97	K20	K64	95.27	204.00	110.00	5.09	0.16	0.02	0.23	Open	0