

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS  
Talking Rock Phase 1 Pressure Sewer

August 27, 2002  
A. J. O. J. R. S.

Zone Number	Pumps to Zone	Number of Cores in Zone	Accum Cores in Zone	Gal/Day per Core	Max Flow per Core	Max Sim Ops	Max Flow (GPM)	Pipe Size (Inches)	Max Velocity (FPS)	Length of Main this Zone	Friction Loss Factor (ft/100ft)	Friction Loss this Zone	Accumulated Friction Loss (Feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (Feet)	Total Dynamic Head (ft)
Friction loss calculations were based on a Constant for inside roughness = 1.50																	
1.00	2.00	3	3	235.00	11.00	2	22.00	2.00	2.38	340.00	1.19	4.04	43.43	4,950.00	4,885.00	65.00	108.43
2.00	7.00	11	14	235.00	11.00	4	44.00	3.00	2.19	1,205.00	0.65	7.83	39.39	4,950.00	4,860.00	90.00	129.39
3.00	4.00	3	3	235.00	11.00	2	22.00	2.00	2.38	260.00	1.19	3.09	42.07	4,950.00	4,860.00	90.00	132.07
4.00	6.00	2	5	235.00	11.00	3	33.00	2.50	2.44	80.00	0.99	0.80	38.98	4,950.00	4,865.00	85.00	123.98
5.00	6.00	2	2	235.00	11.00	2	22.00	2.00	2.38	100.00	1.19	1.19	39.37	4,950.00	4,865.00	85.00	124.37
6.00	7.00	6	13	235.00	11.00	4	44.00	3.00	2.19	1,020.00	0.65	6.63	38.19	4,950.00	4,880.00	70.00	108.19
7.00	10.00	1	28	235.00	11.00	5	55.00	3.00	2.74	290.00	0.98	2.85	31.56	4,950.00	4,920.00	30.00	61.56
8.00	9.00	3	3	235.00	11.00	2	22.00	2.00	2.38	100.00	1.19	1.19	34.06	4,950.00	4,900.00	50.00	84.06
9.00	10.00	8	11	235.00	11.00	4	44.00	3.00	2.19	640.00	0.65	4.16	32.87	4,950.00	4,900.00	50.00	82.87
10.00	13.00	1	40	235.00	11.00	6	66.00	3.00	3.29	335.00	1.38	4.61	28.71	4,950.00	4,920.00	30.00	58.71
11.00	12.00	3	3	235.00	11.00	2	22.00	2.00	2.38	190.00	1.19	2.26	29.93	4,950.00	4,890.00	60.00	89.93
12.00	13.00	7	10	235.00	11.00	4	44.00	3.00	2.19	550.00	0.65	3.57	27.67	4,950.00	4,895.00	55.00	82.67
13.00	15.00	4	54	235.00	11.00	7	77.00	4.00	2.32	640.00	0.54	3.45	24.09	4,950.00	4,900.00	50.00	74.09
14.00	15.00	3	3	235.00	11.00	2	22.00	2.00	2.38	345.00	1.19	4.10	24.74	4,950.00	4,920.00	30.00	54.74
15.00	91.00	2	59	235.00	11.00	7	77.00	4.00	2.32	880.00	0.54	4.75	20.64	4,950.00	4,880.00	70.00	90.64
16.00	90.00	2	2	235.00	11.00	2	22.00	2.00	2.38	260.00	1.19	3.09	29.31	4,950.00	4,930.00	20.00	49.31
17.00	90.00	3	37	235.00	11.00	6	66.00	3.00	3.29	570.00	1.38	7.85	34.07	4,950.00	4,920.00	30.00	64.07
18.00	19.00	3	3	235.00	11.00	2	22.00	2.00	2.38	135.00	1.19	1.61	56.67	4,950.00	4,915.00	35.00	91.67
19.00	21.00	4	7	235.00	11.00	3	33.00	2.50	2.44	245.00	0.99	2.44	55.06	4,950.00	4,935.00	15.00	70.06
20.00	21.00	3	3	235.00	11.00	2	22.00	2.00	2.38	290.00	1.19	3.45	56.07	4,950.00	4,905.00	45.00	101.07
21.00	24.00	3	13	235.00	11.00	4	44.00	3.00	2.19	325.00	0.65	2.11	52.63	4,950.00	4,920.00	30.00	82.63
22.00	23.00	3	3	235.00	11.00	2	22.00	2.00	2.38	200.00	1.19	2.38	55.28	4,950.00	4,910.00	40.00	95.28
23.00	24.00	1	4	235.00	11.00	3	33.00	2.50	2.44	240.00	0.99	2.39	52.90	4,950.00	4,935.00	15.00	67.90
24.00	27.00	2	19	235.00	11.00	5	55.00	3.00	2.74	300.00	0.98	2.95	50.51	4,950.00	4,945.00	5.00	55.51
25.00	26.00	3	3	235.00	11.00	2	22.00	2.00	2.38	100.00	1.19	1.19	52.29	4,950.00	4,880.00	70.00	122.29
26.00	27.00	4	7	235.00	11.00	3	33.00	2.50	2.44	355.00	0.99	3.53	51.10	4,950.00	4,885.00	65.00	116.10
27.00	17.00	6	32	235.00	11.00	6	66.00	3.00	3.29	980.00	1.38	13.50	47.57	4,950.00	4,905.00	45.00	92.57
28.00	17.00	2	2	235.00	11.00	2	22.00	2.00	2.38	200.00	1.19	2.38	36.45	4,950.00	4,930.00	20.00	56.45
29.00	32.00	3	3	235.00	11.00	2	22.00	2.00	2.38	270.00	1.19	3.21	18.29	5,000.00	4,950.00	50.00	68.29
30.00	31.00	3	3	235.00	11.00	2	22.00	2.00	2.38	200.00	1.19	2.38	23.11	5,000.00	4,895.00	105.00	128.11
31.00	32.00	8	11	235.00	11.00	4	44.00	3.00	2.19	870.00	0.65	5.65	20.73	5,000.00	4,910.00	90.00	110.73
32.00	35.00	2	16	235.00	11.00	4	44.00	3.00	2.19	270.00	0.65	1.75	15.08	5,000.00	4,975.00	25.00	40.08
33.00	34.00	3	3	235.00	11.00	2	22.00	2.00	2.38	150.00	1.19	1.78	20.17	5,000.00	4,935.00	65.00	85.17
34.00	35.00	7	10	235.00	11.00	4	44.00	3.00	2.19	780.00	0.65	5.07	18.39	5,000.00	4,965.00	35.00	53.39
35.00	38.00	4	30	235.00	11.00	5	55.00	3.00	2.74	655.00	0.98	6.44	13.32	5,000.00	4,980.00	20.00	33.32
36.00	37.00	3	3	235.00	11.00	2	22.00	2.00	2.38	155.00	1.19	1.84	14.61	5,000.00	4,955.00	45.00	59.61
37.00	38.00	9	12	235.00	11.00	4	44.00	3.00	2.19	905.00	0.65	5.88	12.77	5,000.00	4,935.00	65.00	77.77