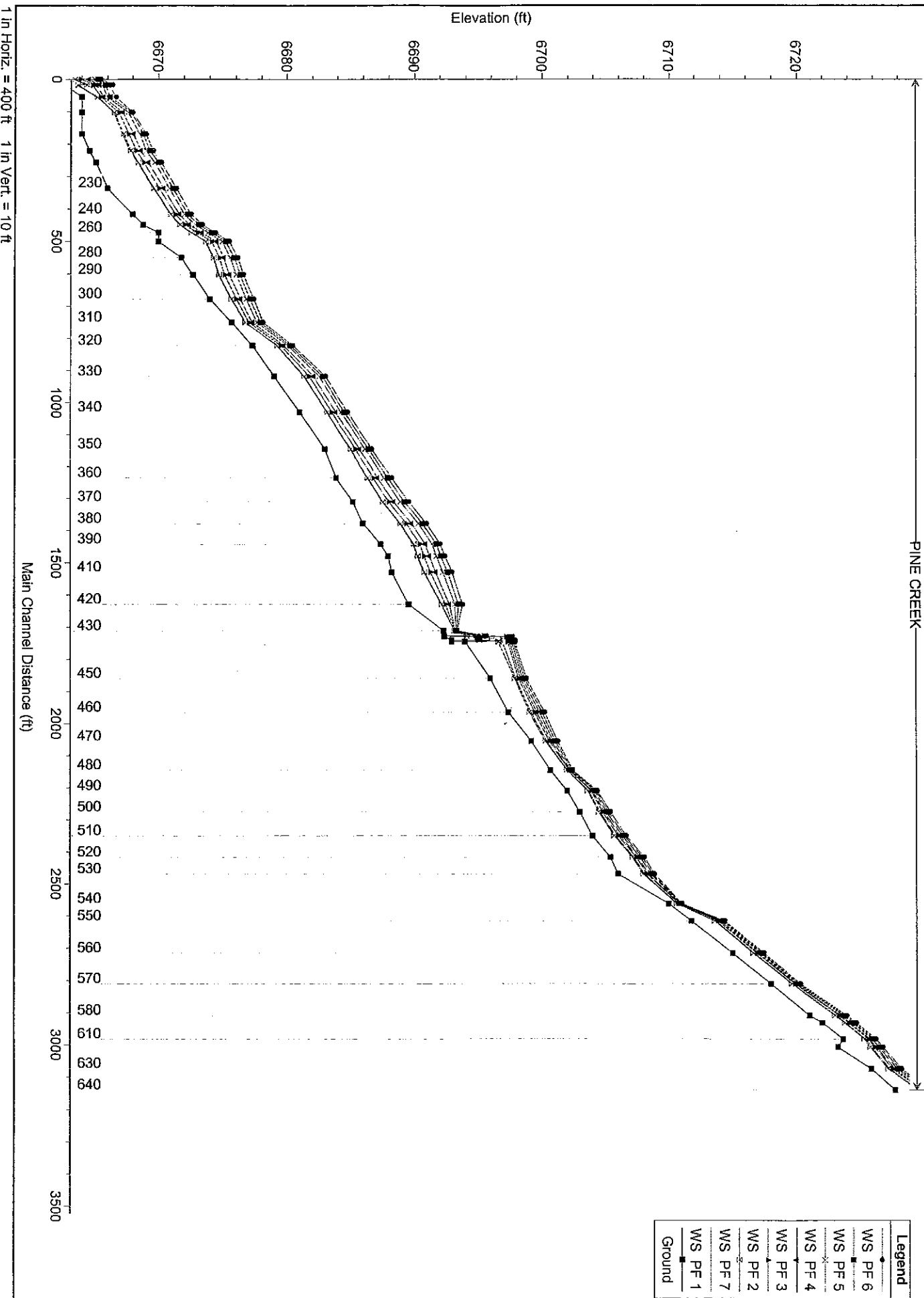


Account	Balance	Account	Balance	Account	Balance	Account	Balance
PINE CREEK	210	PINE CREEK	.045	PINE CREEK	.12	PINE CREEK	.045
PINE CREEK	200	PINE CREEK	.0375	PINE CREEK	.12	PINE CREEK	.045
PINE CREEK	190	PINE CREEK	.0375	PINE CREEK	.09	PINE CREEK	.045
PINE CREEK	185	PINE CREEK	.015	PINE CREEK	.035	PINE CREEK	.06
PINE CREEK	181	PINE CREEK	.015	PINE CREEK	.35	PINE CREEK	.035
PINE CREEK	179	PINE CREEK	.015	PINE CREEK	.035	PINE CREEK	.015
PINE CREEK	173	PINE CREEK	.015	PINE CREEK	.035	PINE CREEK	.015
PINE CREEK	.035	PINE CREEK	.015	PINE CREEK	.035	PINE CREEK	.015

PCCCTO.rep

PINE CREEK CHANNEL - CHD TO OUTFALL Plan 14 2/14/2003
 Geom: PCXSECT02IMPVOVHN Flow: FLOW DATA 2/2003
 PINE CREEK



Legend	
WS PF 6	—●—
WS PF 5	—■—
WS PF 4	—x—
WS PF 3	—▲—
WS PF 2	—◆—
WS PF 7	—□—
WS PF 1	—
Ground	—■—

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Ch W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Fronda # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PINE CREEK	640	248.00	6727.70	6729.59	6729.01	6729.17	0.026830	3.40	72.89	53.50	0.51
PINE CREEK	640	313.00	6727.70	6729.78	6729.19	6730.04	0.029309	3.77	83.05	56.01	0.55
PINE CREEK	640	354.00	6727.70	6729.89	6729.29	6730.14	0.030198	3.95	89.54	57.55	0.56
PINE CREEK	640	413.00	6727.70	6730.04	6729.43	6730.31	0.031533	4.21	98.05	59.46	0.58
PINE CREEK	640	470.00	6727.70	6730.17	6729.55	6730.47	0.032227	4.44	105.94	61.03	0.59
PINE CREEK	640	531.00	6727.70	6730.30	6729.68	6730.64	0.032745	4.65	114.18	62.63	0.61
PINE CREEK	640	222.00	6727.70	6729.51	6728.93	6729.67	0.025615	3.24	68.62	52.41	0.50
PINE CREEK	630	248.00	6725.80	6727.25	6727.52	6727.52	0.045035	4.19	59.44	48.44	0.65
PINE CREEK	630	313.00	6725.80	6727.50	6727.80	6727.80	0.038510	4.37	72.06	49.65	0.62
PINE CREEK	630	354.00	6725.80	6727.65	6727.97	6727.97	0.035823	4.48	79.56	50.36	0.60
PINE CREEK	630	413.00	6725.80	6727.85	6728.19	6728.19	0.033110	4.64	89.76	51.31	0.59
PINE CREEK	630	470.00	6725.80	6728.03	6728.39	6728.39	0.031224	4.78	99.11	52.17	0.58
PINE CREEK	630	531.00	6725.80	6728.21	6728.60	6728.60	0.029742	4.93	108.56	53.07	0.58
PINE CREEK	630	222.00	6725.80	6727.13	6727.40	6727.40	0.049174	4.13	54.03	47.91	0.66
PINE CREEK	620	248.00	6723.20	6725.82	6725.93	6725.93	0.013960	2.59	95.59	48.73	0.33
PINE CREEK	620	313.00	6723.20	6726.07	6726.20	6726.20	0.015480	2.90	107.77	50.04	0.35
PINE CREEK	620	354.00	6723.20	6726.21	6726.36	6726.36	0.016404	3.09	114.73	50.78	0.36
PINE CREEK	620	413.00	6723.20	6726.39	6726.56	6726.56	0.017633	3.33	124.15	51.76	0.38
PINE CREEK	620	470.00	6723.20	6726.56	6726.75	6726.75	0.018708	3.54	132.74	52.64	0.39
PINE CREEK	620	531.00	6723.20	6726.72	6726.94	6726.94	0.019828	3.76	141.31	53.50	0.41
PINE CREEK	620	222.00	6723.20	6725.72	6725.81	6725.81	0.013237	2.45	90.43	48.16	0.32
PINE CREEK	610	248.00	6723.60	6725.36	6725.47	6725.47	0.026427	2.58	96.15	68.71	0.38
PINE CREEK	610	313.00	6723.60	6725.58	6725.71	6725.71	0.026416	2.80	111.68	70.79	0.38
PINE CREEK	610	354.00	6723.60	6725.71	6725.84	6725.84	0.026827	2.93	120.32	71.92	0.39
PINE CREEK	610	413.00	6723.60	6725.87	6726.02	6726.02	0.027260	3.11	132.28	73.46	0.40
PINE CREEK	610	470.00	6723.60	6726.02	6726.19	6726.19	0.027501	3.26	143.43	74.80	0.41
PINE CREEK	610	531.00	6723.60	6726.17	6726.35	6726.35	0.027727	3.42	154.53	75.73	0.41
PINE CREEK	610	222.00	6723.60	6725.26	6725.36	6725.36	0.026572	2.48	89.41	67.79	0.37
PINE CREEK	590	248.00	6722.00	6723.83	6723.96	6723.96	0.035068	2.80	88.68	66.77	0.43
PINE CREEK	590	313.00	6722.00	6724.06	6724.20	6724.20	0.034826	3.01	104.15	70.56	0.43
PINE CREEK	590	354.00	6722.00	6724.18	6724.34	6724.34	0.034027	3.14	113.05	71.75	0.44
PINE CREEK	590	413.00	6722.00	6724.35	6724.52	6724.52	0.033194	3.31	125.27	73.35	0.44
PINE CREEK	590	470.00	6722.00	6724.50	6724.69	6724.69	0.032825	3.47	136.26	74.76	0.44
PINE CREEK	590	531.00	6722.00	6724.66	6724.88	6724.88	0.032130	3.62	148.13	76.25	0.44
PINE CREEK	590	222.00	6722.00	6723.73	6723.85	6723.85	0.034930	2.70	82.09	64.82	0.42
PINE CREEK	580	248.00	6721.00	6723.06	6723.19	6723.19	0.031145	2.94	86.24	61.39	0.41
PINE CREEK	580	313.00	6721.00	6723.29	6723.45	6723.45	0.030593	3.19	100.62	63.42	0.42
PINE CREEK	580	354.00	6721.00	6723.42	6723.59	6723.59	0.030443	3.34	109.06	64.59	0.42
PINE CREEK	580	413.00	6721.00	6723.60	6723.79	6723.79	0.030589	3.55	120.25	66.10	0.43
PINE CREEK	580	470.00	6721.00	6723.74	6723.95	6723.95	0.031328	3.75	129.74	67.35	0.44
PINE CREEK	580	531.00	6721.00	6723.89	6724.12	6724.12	0.031566	3.93	140.10	68.70	0.45
PINE CREEK	580	222.00	6718.00	6719.62	6719.72	6719.72	0.037474	2.51	88.55	82.45	0.43
PINE CREEK	570	248.00	6718.00	6719.69	6719.80	6719.80	0.039003	2.63	94.20	83.98	0.44
PINE CREEK	570	313.00	6718.00	6719.85	6719.98	6719.98	0.041463	2.89	108.19	87.65	0.46
PINE CREEK	570	354.00	6718.00	6719.95	6720.09	6720.09	0.042407	3.03	116.86	89.85	0.47
PINE CREEK	570	413.00	6718.00	6720.07	6720.23	6720.23	0.043364	3.23	127.99	91.23	0.48
PINE CREEK	570	470.00	6718.00	6720.19	6720.37	6720.37	0.042955	3.39	138.75	91.61	0.48
PINE CREEK	570	531.00	6718.00	6720.30	6720.50	6720.50	0.043500	3.57	148.79	91.97	0.49
PINE CREEK	570	222.00	6715.00	6716.61	6716.70	6716.70	0.027201	2.35	94.68	88.55	0.40
PINE CREEK	560	248.00	6715.00	6716.70	6716.79	6716.79	0.026080	2.43	102.56	88.92	0.39
PINE CREEK	560	313.00	6715.00	6716.90	6717.01	6717.01	0.024548	2.62	120.32	89.75	0.39
PINE CREEK	560	354.00	6715.00	6717.02	6717.13	6717.13	0.023862	2.72	130.77	90.24	0.39
PINE CREEK	560	413.00	6715.00	6717.17	6717.30	6717.30	0.023164	2.87	144.92	90.89	0.39
PINE CREEK	560	470.00	6715.00	6717.31	6717.45	6717.45	0.022982	3.02	157.17	91.45	0.40
PINE CREEK	560	531.00	6715.00	6717.46	6717.61	6717.61	0.022315	3.14	170.83	92.07	0.40
PINE CREEK	550	222.00	6711.80	6713.67	6713.74	6713.74	0.035728	2.15	115.61	84.65	0.32
PINE CREEK	550	313.00	6711.80	6713.87	6713.96	6713.96	0.038756	2.37	132.60	86.32	0.33
PINE CREEK	550	354.00	6711.80	6714.00	6714.09	6714.09	0.039604	2.47	143.54	87.38	0.34
PINE CREEK	550	413.00	6711.80	6714.13	6714.24	6714.24	0.042032	2.66	155.57	87.93	0.35

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PINE CREEK	550	470.00	6711.80	6714.27	6713.26	6714.39	0.043593	2.82	167.11	88.44	0.36
PINE CREEK	550	531.00	6711.80	6714.39	6713.35	6714.53	0.045603	3.00	178.15	88.92	0.37
PINE CREEK	550	222.00	6711.80	6713.60	6712.83	6713.56	0.033547	2.04	109.19	84.01	0.31
PINE CREEK	540	248.00	6710.00	6710.67	6710.67	6710.95	0.076922	4.26	58.15	102.22	0.99
PINE CREEK	540	313.00	6710.00	6710.77	6710.77	6711.09	0.076256	4.55	68.77	106.94	1.00
PINE CREEK	540	354.00	6710.00	6710.83	6710.83	6711.18	0.076078	4.73	74.79	109.53	1.01
PINE CREEK	540	413.00	6710.00	6710.91	6710.91	6711.29	0.073324	4.91	84.10	113.41	1.00
PINE CREEK	540	470.00	6710.00	6710.98	6710.98	6711.39	0.071930	5.08	92.48	116.80	1.00
PINE CREEK	540	531.00	6710.00	6711.06	6711.06	6711.49	0.069644	5.27	100.74	117.75	1.00
PINE CREEK	540	222.00	6710.00	6710.62	6710.62	6710.89	0.086035	4.23	52.48	99.61	1.02
PINE CREEK	530	248.00	6708.00	6707.40	6707.40	6708.22	0.012633	2.99	82.87	62.61	0.46
PINE CREEK	530	313.00	6708.00	6708.29	6707.58	6708.46	0.012261	3.26	96.40	64.26	0.46
PINE CREEK	530	354.00	6708.00	6708.41	6707.68	6708.59	0.012263	3.42	104.02	65.17	0.47
PINE CREEK	530	413.00	6708.00	6708.58	6707.81	6708.78	0.012060	3.61	115.11	66.48	0.47
PINE CREEK	530	470.00	6708.00	6708.73	6707.94	6708.95	0.011925	3.79	125.29	67.65	0.47
PINE CREEK	530	531.00	6708.00	6708.88	6708.05	6709.12	0.011839	3.97	135.65	68.83	0.48
PINE CREEK	530	222.00	6708.00	6707.99	6707.32	6708.12	0.012599	2.87	77.49	61.81	0.45
PINE CREEK	520	248.00	6705.40	6707.24	6707.34	6707.34	0.023510	2.47	100.51	69.77	0.36
PINE CREEK	520	313.00	6705.40	6707.47	6707.58	6707.58	0.023521	2.69	116.27	71.17	0.37
PINE CREEK	520	354.00	6705.40	6707.60	6707.72	6707.72	0.023578	2.82	125.53	71.98	0.38
PINE CREEK	520	413.00	6705.40	6707.77	6707.91	6707.91	0.023577	2.99	138.35	73.08	0.38
PINE CREEK	520	470.00	6705.40	6707.93	6708.08	6708.08	0.023601	3.13	150.10	74.08	0.39
PINE CREEK	520	531.00	6705.40	6708.09	6708.26	6708.26	0.023508	3.28	162.03	74.89	0.39
PINE CREEK	520	222.00	6705.40	6707.15	6707.23	6707.23	0.023457	2.37	93.86	69.17	0.36
PINE CREEK	510	248.00	6704.00	6705.78	6705.87	6705.87	0.020618	2.34	107.11	73.22	0.34
PINE CREEK	510	313.00	6704.00	6706.01	6706.11	6706.11	0.020547	2.56	123.57	73.95	0.34
PINE CREEK	510	354.00	6704.00	6706.14	6706.25	6706.25	0.020441	2.68	133.42	74.39	0.35
PINE CREEK	510	413.00	6704.00	6706.32	6706.44	6706.44	0.020364	2.84	146.76	74.97	0.35
PINE CREEK	510	470.00	6704.00	6706.48	6706.62	6706.62	0.020330	2.99	158.92	75.50	0.35
PINE CREEK	510	531.00	6704.00	6706.64	6706.79	6706.79	0.020335	3.14	171.24	76.03	0.36
PINE CREEK	510	222.00	6704.00	6705.68	6705.76	6705.76	0.020721	2.24	99.98	72.90	0.33
PINE CREEK	500	248.00	6703.00	6704.59	6704.65	6704.65	0.013200	1.94	129.65	86.70	0.27
PINE CREEK	500	313.00	6703.00	6704.81	6704.88	6704.88	0.013615	2.14	148.39	88.14	0.28
PINE CREEK	500	354.00	6703.00	6704.93	6705.01	6705.01	0.013837	2.26	159.42	88.98	0.29
PINE CREEK	500	413.00	6703.00	6705.10	6705.19	6705.19	0.014181	2.42	174.19	90.08	0.29
PINE CREEK	500	470.00	6703.00	6705.25	6705.35	6705.35	0.014462	2.55	187.73	91.09	0.30
PINE CREEK	500	531.00	6703.00	6705.39	6705.51	6705.51	0.014817	2.70	201.14	92.07	0.31
PINE CREEK	490	248.00	6702.00	6703.70	6703.76	6703.76	0.013736	1.99	123.00	94.89	0.31
PINE CREEK	490	313.00	6702.00	6703.90	6703.98	6703.98	0.013745	2.17	142.09	96.29	0.31
PINE CREEK	490	354.00	6702.00	6704.01	6704.09	6704.09	0.013925	2.28	152.76	97.06	0.32
PINE CREEK	490	413.00	6702.00	6704.15	6704.25	6704.25	0.014329	2.45	166.23	97.96	0.33
PINE CREEK	490	470.00	6702.00	6704.28	6704.38	6704.38	0.014904	2.60	177.66	98.71	0.34
PINE CREEK	490	531.00	6702.00	6704.38	6704.51	6704.51	0.015370	2.76	189.56	99.49	0.35
PINE CREEK	480	248.00	6700.70	6701.99	6702.26	6702.26	0.038107	4.15	53.53	82.26	0.91
PINE CREEK	480	313.00	6700.70	6702.43	6702.43	6702.96	0.040174	5.84	91.00	87.08	1.01
PINE CREEK	480	354.00	6700.70	6702.35	6702.35	6702.83	0.041041	5.61	83.72	86.28	1.00
PINE CREEK	480	413.00	6700.70	6702.25	6702.25	6702.71	0.044376	5.44	75.88	85.41	1.02
PINE CREEK	480	470.00	6700.70	6702.43	6702.43	6702.96	0.044074	5.84	91.00	87.08	1.01
PINE CREEK	470	248.00	6699.20	6700.40	6700.50	6700.50	0.011520	2.63	95.17	87.38	0.43
PINE CREEK	470	313.00	6699.20	6700.61	6700.73	6700.73	0.010176	2.76	114.32	89.65	0.41
PINE CREEK	470	354.00	6699.20	6700.74	6700.87	6700.87	0.009508	2.84	126.10	91.01	0.41
PINE CREEK	470	413.00	6699.20	6700.92	6701.05	6701.05	0.008798	2.93	142.30	92.86	0.40
PINE CREEK	470	470.00	6699.20	6701.09	6701.23	6701.23	0.008160	3.01	158.05	94.61	0.39
PINE CREEK	470	531.00	6699.20	6701.26	6701.41	6701.41	0.007622	3.08	174.42	96.41	0.38
PINE CREEK	470	222.00	6699.20	6701.31	6700.41	6700.41	0.012151	2.56	87.41	86.45	0.43

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Cnt W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PINE CREEK	400	479.00	6688.00	6691.22	6688.00	6691.22	0.005664	3.53	142.27	52.08	0.36
PINE CREEK	400	550.00	6688.00	6691.78	6688.00	6691.78	0.005899	3.98	172.42	54.56	0.38
PINE CREEK	400	771.00	6688.00	6692.13	6688.00	6692.13	0.006043	4.27	191.58	56.20	0.39
PINE CREEK	400	899.00	6688.00	6692.46	6688.00	6692.46	0.006159	4.56	210.28	57.96	0.40
PINE CREEK	400	266.00	6688.00	6690.31	6688.00	6690.31	0.005578	2.85	96.89	48.12	0.34
PINE CREEK	390	255.00	6687.40	6689.94	6687.40	6689.94	0.015028	2.83	97.75	45.95	0.31
PINE CREEK	390	372.00	6687.40	6689.47	6687.40	6689.47	0.015956	3.31	123.23	49.48	0.33
PINE CREEK	390	479.00	6687.40	6690.88	6687.40	6690.88	0.016683	3.68	144.03	52.21	0.35
PINE CREEK	390	650.00	6687.40	6691.43	6687.40	6691.43	0.017851	4.19	173.47	55.85	0.37
PINE CREEK	390	650.00	6687.40	6691.76	6687.40	6691.76	0.018580	4.51	192.53	58.08	0.38
PINE CREEK	390	899.00	6687.40	6692.08	6687.40	6692.08	0.019192	4.80	211.56	60.10	0.39
PINE CREEK	390	266.00	6690.00	6688.97	6688.00	6688.97	0.017803	2.56	103.86	57.84	0.34
PINE CREEK	380	266.00	6686.00	6689.99	6686.00	6689.99	0.017590	3.70	242.74	77.64	0.37
PINE CREEK	380	650.00	6686.00	6690.52	6686.00	6690.52	0.017649	3.34	194.66	72.68	0.36
PINE CREEK	380	479.00	6686.00	6689.96	6686.00	6689.96	0.017808	3.04	157.41	67.85	0.35
PINE CREEK	380	372.00	6686.00	6689.42	6686.00	6689.42	0.017797	2.83	131.56	63.22	0.35
PINE CREEK	380	255.00	6686.00	6688.91	6686.00	6688.91	0.017792	2.53	100.86	57.23	0.34
PINE CREEK	370	255.00	6685.20	6687.55	6685.20	6687.55	0.021754	2.77	92.02	52.28	0.37
PINE CREEK	370	372.00	6685.20	6688.05	6685.20	6688.05	0.022139	3.12	119.24	57.81	0.38
PINE CREEK	370	479.00	6685.20	6688.43	6685.20	6688.43	0.022313	3.37	142.25	62.10	0.39
PINE CREEK	370	650.00	6685.20	6688.95	6685.20	6688.95	0.022611	3.69	176.05	67.91	0.40
PINE CREEK	370	771.00	6685.20	6689.27	6685.20	6689.27	0.022765	3.88	198.52	71.51	0.41
PINE CREEK	370	899.00	6685.20	6689.59	6685.20	6689.59	0.022797	4.06	221.63	75.03	0.42
PINE CREEK	370	266.00	6687.60	6687.60	6687.60	6687.73	0.021796	2.81	94.71	52.85	0.37
PINE CREEK	360	255.00	6686.30	6688.30	6686.30	6688.38	0.013745	2.23	114.55	63.20	0.29
PINE CREEK	360	372.00	6686.30	6688.78	6686.30	6688.88	0.013953	2.56	145.94	67.89	0.31
PINE CREEK	360	479.00	6686.30	6689.15	6686.30	6689.27	0.014124	2.79	171.78	71.52	0.32
PINE CREEK	360	650.00	6686.30	6689.66	6686.30	6689.81	0.014333	3.10	209.47	76.51	0.33
PINE CREEK	360	771.00	6686.30	6689.98	6686.30	6689.47	0.014471	3.29	234.13	79.60	0.34
PINE CREEK	360	899.00	6686.30	6690.28	6686.30	6689.47	0.014587	3.47	258.96	82.60	0.35
PINE CREEK	360	266.00	6683.90	6686.35	6683.90	6686.43	0.013758	2.26	117.71	63.69	0.29
PINE CREEK	350	255.00	6683.00	6684.99	6683.00	6685.09	0.014947	2.39	103.25	58.86	0.30
PINE CREEK	350	372.00	6683.00	6685.40	6683.00	6685.55	0.015881	2.80	128.16	61.74	0.32
PINE CREEK	350	479.00	6683.00	6685.72	6683.00	6685.91	0.016456	3.10	148.45	63.99	0.33
PINE CREEK	350	650.00	6683.00	6686.15	6683.00	6686.39	0.017480	3.52	176.46	66.97	0.35
PINE CREEK	350	771.00	6683.00	6686.42	6683.00	6686.69	0.018116	3.78	194.33	68.81	0.36
PINE CREEK	350	899.00	6683.00	6686.67	6683.00	6686.99	0.018740	4.03	211.89	70.56	0.37
PINE CREEK	340	255.00	6681.00	6683.14	6681.00	6683.24	0.017526	2.42	105.30	68.59	0.34
PINE CREEK	340	372.00	6681.00	6683.55	6681.00	6683.67	0.016837	2.77	134.21	73.08	0.36
PINE CREEK	340	479.00	6681.00	6683.87	6681.00	6684.01	0.016497	3.04	157.59	76.52	0.37
PINE CREEK	340	650.00	6681.00	6684.28	6681.00	6684.47	0.015886	3.42	190.57	80.84	0.39
PINE CREEK	340	771.00	6681.00	6684.54	6681.00	6684.74	0.015670	3.66	211.17	83.35	0.39
PINE CREEK	340	899.00	6681.00	6684.78	6681.00	6685.02	0.015408	3.89	232.20	85.84	0.40
PINE CREEK	340	266.00	6681.00	6683.19	6681.00	6683.28	0.017469	2.46	108.15	69.05	0.35
PINE CREEK	330	255.00	6679.00	6681.32	6679.00	6681.39	0.015418	2.12	120.24	73.89	0.29
PINE CREEK	330	372.00	6679.00	6681.76	6679.00	6681.85	0.015649	2.43	153.35	77.82	0.30
PINE CREEK	330	479.00	6679.00	6682.09	6679.00	6682.20	0.015813	2.66	179.98	81.16	0.31
PINE CREEK	330	650.00	6679.00	6682.53	6679.00	6682.67	0.015975	3.01	216.60	86.82	0.32
PINE CREEK	330	771.00	6679.00	6682.80	6679.00	6682.96	0.016166	3.23	240.13	89.95	0.33
PINE CREEK	330	899.00	6679.00	6683.05	6679.00	6683.23	0.016309	3.43	263.74	93.17	0.34
PINE CREEK	330	266.00	6679.00	6681.37	6679.00	6681.44	0.015417	2.15	123.61	74.30	0.29
PINE CREEK	320	255.00	6677.30	6679.20	6679.20	6679.32	0.022785	2.75	92.81	70.69	0.42
PINE CREEK	320	372.00	6677.30	6679.52	6679.52	6679.68	0.026700	3.22	115.54	74.34	0.46
PINE CREEK	320	479.00	6677.30	6679.75	6679.75	6679.95	0.028492	3.60	133.17	77.06	0.48
PINE CREEK	320	650.00	6677.30	6680.07	6680.07	6680.33	0.041479	4.10	158.61	80.65	0.51
PINE CREEK	320	771.00	6677.30	6680.26	6680.26	6680.56	0.043288	4.44	173.81	82.38	0.53
PINE CREEK	320	899.00	6677.30	6680.44	6680.44	6680.79	0.044569	4.76	189.38	84.11	0.55

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Chl W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Val Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
PINE CREEK	320	266.00	6677.30	6679.23	6678.58	6679.36	0.033105	2.80	95.09	71.06	0.43
PINE CREEK	310	266.00	6675.70	6678.77	6677.02	6677.02	0.031318	4.07	66.88	65.98	0.70
PINE CREEK	310	899.00	6675.70	6678.14	6678.65	6678.65	0.021101	5.78	163.47	75.76	0.67
PINE CREEK	310	771.00	6675.70	6677.90	6678.36	6678.36	0.022362	5.54	145.42	73.33	0.67
PINE CREEK	310	650.00	6675.70	6677.65	6678.08	6678.08	0.023873	5.29	127.71	71.74	0.68
PINE CREEK	310	479.00	6675.70	6677.28	6677.65	6677.65	0.026689	4.87	101.60	69.33	0.69
PINE CREEK	310	372.00	6675.70	6677.03	6677.35	6677.35	0.029081	4.53	84.38	67.69	0.70
PINE CREEK	310	255.00	6675.70	6676.74	6676.99	6676.99	0.031627	4.01	64.95	65.79	0.70
PINE CREEK	300	899.00	6674.00	6677.40	6677.88	6677.88	0.008098	4.34	215.91	76.47	0.42
PINE CREEK	300	771.00	6674.00	6677.12	6677.37	6677.37	0.008189	4.11	194.90	74.76	0.42
PINE CREEK	300	650.00	6674.00	6676.83	6677.06	6677.06	0.008364	3.88	173.55	72.98	0.42
PINE CREEK	300	479.00	6674.00	6676.37	6676.56	6676.56	0.008790	3.51	140.70	70.16	0.42
PINE CREEK	300	372.00	6674.00	6676.05	6676.21	6676.21	0.009142	3.23	118.48	68.18	0.41
PINE CREEK	300	255.00	6674.00	6675.65	6675.77	6675.77	0.009799	2.85	91.51	65.70	0.41
PINE CREEK	300	266.00	6674.00	6675.89	6675.81	6675.81	0.009714	2.89	94.21	65.95	0.41
PINE CREEK	290	899.00	6672.70	6676.62	6676.85	6676.85	0.014947	3.65	237.16	78.18	0.33
PINE CREEK	290	771.00	6672.70	6676.33	6676.54	6676.54	0.015155	3.48	214.86	75.62	0.33
PINE CREEK	290	650.00	6672.70	6676.03	6676.21	6676.21	0.015532	3.31	191.98	72.90	0.33
PINE CREEK	290	479.00	6672.70	6675.52	6675.67	6675.67	0.016416	3.03	156.40	68.45	0.33
PINE CREEK	290	372.00	6672.70	6675.16	6675.28	6675.28	0.017227	2.81	131.86	65.21	0.33
PINE CREEK	290	255.00	6672.70	6674.67	6674.77	6674.77	0.018908	2.52	101.49	60.96	0.33
PINE CREEK	280	899.00	6671.80	6676.16	6676.41	6676.41	0.005299	3.53	250.22	79.98	0.30
PINE CREEK	280	771.00	6671.80	6675.88	6676.10	6676.10	0.005145	3.34	228.12	77.73	0.30
PINE CREEK	280	650.00	6671.80	6675.58	6675.77	6675.77	0.005018	3.13	205.35	74.67	0.29
PINE CREEK	280	479.00	6671.80	6675.09	6675.24	6675.24	0.004842	2.80	169.84	69.63	0.28
PINE CREEK	280	372.00	6671.80	6674.73	6674.85	6674.85	0.004670	2.54	145.81	65.96	0.27
PINE CREEK	280	255.00	6671.80	6674.24	6674.33	6674.33	0.004542	2.21	114.92	61.01	0.25
PINE CREEK	280	266.00	6671.80	6674.30	6674.39	6674.39	0.004544	2.24	118.09	61.54	0.26
PINE CREEK	270	899.00	6670.00	6675.50	6675.89	6675.89	0.028781	4.98	180.65	64.18	0.52
PINE CREEK	270	771.00	6670.00	6675.24	6675.58	6675.58	0.028276	4.70	164.13	62.53	0.51
PINE CREEK	270	650.00	6670.00	6674.96	6675.27	6675.27	0.028149	4.43	146.88	60.76	0.50
PINE CREEK	270	479.00	6670.00	6674.48	6674.74	6674.74	0.029440	4.04	118.56	57.73	0.50
PINE CREEK	270	372.00	6670.00	6674.14	6674.36	6674.36	0.031116	3.76	98.87	55.53	0.50
PINE CREEK	270	255.00	6670.00	6673.66	6673.84	6673.84	0.032805	3.46	73.70	48.52	0.49
PINE CREEK	260	899.00	6670.00	6674.42	6675.05	6675.05	0.031211	5.61	149.41	58.58	0.60
PINE CREEK	260	771.00	6670.00	6674.14	6674.74	6674.74	0.032983	5.36	133.36	57.10	0.61
PINE CREEK	260	650.00	6670.00	6673.85	6674.40	6674.40	0.034490	5.14	116.95	54.43	0.61
PINE CREEK	260	479.00	6670.00	6673.37	6673.85	6673.85	0.035389	4.83	92.25	48.26	0.61
PINE CREEK	260	372.00	6670.00	6673.02	6673.44	6673.44	0.035741	4.56	76.12	43.76	0.60
PINE CREEK	260	255.00	6670.00	6672.56	6672.90	6672.90	0.035949	4.18	57.32	37.84	0.59
PINE CREEK	260	266.00	6670.00	6672.61	6672.96	6672.96	0.035932	4.22	59.16	38.46	0.59
PINE CREEK	250	899.00	6668.80	6673.40	6674.16	6674.16	0.039711	7.01	128.21	49.28	0.77
PINE CREEK	250	771.00	6668.80	6673.13	6673.83	6673.83	0.039443	6.69	115.16	47.16	0.75
PINE CREEK	250	650.00	6668.80	6672.85	6673.48	6673.48	0.039043	6.35	102.37	44.98	0.74
PINE CREEK	250	479.00	6668.80	6672.40	6672.92	6672.92	0.038363	5.77	83.02	41.46	0.72
PINE CREEK	250	372.00	6668.80	6672.08	6672.52	6672.52	0.037778	5.32	69.91	38.89	0.70
PINE CREEK	250	255.00	6668.80	6671.65	6671.99	6671.99	0.036478	4.71	54.18	34.87	0.66
PINE CREEK	250	266.00	6668.80	6671.70	6672.05	6672.05	0.036653	4.77	55.73	35.13	0.67
PINE CREEK	240	899.00	6668.00	6672.54	6673.21	6673.21	0.021953	6.69	137.62	48.85	0.63
PINE CREEK	240	771.00	6668.00	6672.29	6672.88	6672.88	0.021633	6.29	125.38	47.36	0.62
PINE CREEK	240	650.00	6668.00	6672.04	6672.55	6672.55	0.021058	5.85	113.50	45.87	0.60
PINE CREEK	240	479.00	6668.00	6671.63	6672.02	6672.02	0.019977	5.13	95.26	43.49	0.56
PINE CREEK	240	372.00	6668.00	6671.34	6671.66	6671.66	0.018746	4.56	83.01	41.82	0.53
PINE CREEK	240	255.00	6668.00	6670.94	6671.17	6671.17	0.017921	3.87	66.68	39.47	0.50
PINE CREEK	240	266.00	6668.00	6670.98	6671.22	6671.22	0.017998	3.95	68.34	39.72	0.50
PINE CREEK	230	899.00	6666.00	6670.06	6669.86	6670.36	0.015017	4.03	63.35	42.64	0.58
PINE CREEK	230	771.00	6666.00	6670.06	6669.86	6670.36	0.014057	4.42	84.23	49.34	0.59

Reach	River Sta	Q Total	Min Ch Eri	W.S. Elev	Chl W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Cnl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
PINE CREEK	230	479.00	6666.00	6670.39	6670.74	0.012907	4.76	100.94	51.31		0.59
PINE CREEK	230	650.00	6666.00	6670.55	6671.28	0.011971	5.25	125.19	54.03		0.58
PINE CREEK	230	771.00	6666.00	6671.14	6671.62	0.011548	5.55	141.22	55.76		0.58
PINE CREEK	230	899.00	6666.00	6671.41	6671.94	0.011469	5.87	156.27	57.33		0.59
PINE CREEK	230	266.00	6666.00	6669.65	6669.91	0.014915	4.07	65.43	43.42		0.58
PINE CREEK	220	255.00	6665.10	6668.37	6668.61	0.016422	3.93	64.83	38.10		0.53
PINE CREEK	220	372.00	6664.60	6668.26	6668.47	0.019684	3.34	105.31	47.92		0.36
PINE CREEK	210	255.00	6664.60	6667.78	6667.93	0.019058	2.92	83.85	42.36		0.34
PINE CREEK	210	372.00	6664.60	6668.26	6668.47	0.019684	3.34	105.31	47.92		0.36
PINE CREEK	210	479.00	6664.60	6668.60	6668.86	0.020378	3.68	122.40	53.00		0.37
PINE CREEK	210	650.00	6664.60	6669.06	6669.39	0.020879	4.09	148.08	59.83		0.38
PINE CREEK	210	771.00	6664.60	6669.33	6669.71	0.021095	4.32	165.00	63.93		0.39
PINE CREEK	210	899.00	6664.60	6669.57	6670.00	0.021596	4.56	181.05	67.59		0.40
PINE CREEK	210	266.00	6664.60	6667.86	6668.02	0.018216	2.92	87.42	42.99		0.34
PINE CREEK	200	257.00	6664.00	6667.20	6667.26	0.009020	1.90	133.28	77.78		0.23
PINE CREEK	200	399.00	6664.00	6667.69	6667.78	0.009140	2.21	173.89	86.96		0.24
PINE CREEK	200	524.00	6664.00	6668.04	6668.15	0.009189	2.41	204.99	91.40		0.25
PINE CREEK	200	729.00	6664.00	6668.51	6668.66	0.009204	2.67	248.87	95.63		0.26
PINE CREEK	200	871.00	6664.00	6668.80	6668.97	0.009229	2.82	276.17	98.16		0.26
PINE CREEK	200	1017.00	6664.00	6669.03	6669.24	0.009558	2.99	299.53	100.28		0.27
PINE CREEK	200	282.00	6664.00	6667.30	6667.36	0.009036	1.96	141.03	79.41		0.24
PINE CREEK	190	257.00	6664.00	6666.49	6666.47	0.010113	2.53	102.11	62.13		0.34
PINE CREEK	190	399.00	6664.00	6666.92	6666.84	0.012259	3.09	130.07	66.69		0.37
PINE CREEK	190	524.00	6664.00	6667.23	6666.09	0.013193	3.49	150.88	69.89		0.39
PINE CREEK	190	729.00	6664.00	6667.65	6667.90	0.014278	4.03	181.23	74.31		0.41
PINE CREEK	190	871.00	6664.00	6667.90	6668.19	0.014937	4.35	199.91	76.90		0.43
PINE CREEK	190	1017.00	6664.00	6667.99	6668.37	0.018116	4.89	207.43	77.92		0.48
PINE CREEK	190	282.00	6664.00	6666.58	6666.53	0.011239	2.64	107.52	63.04		0.34
PINE CREEK	185	257.00	6662.70	6663.83	6664.64	0.011197	8.06	31.87	36.12		1.51
PINE CREEK	181	399.00	6662.70	6664.84	6664.31	0.001793	5.13	77.83	38.51		0.64
PINE CREEK	181	524.00	6662.70	6665.11	6664.60	0.002068	5.95	88.21	47.59		0.69
PINE CREEK	181	729.00	6662.70	6665.54	6665.05	0.002200	6.85	109.21	49.25		0.73
PINE CREEK	181	871.00	6662.70	6665.84	6665.43	0.002180	7.28	123.87	50.38		0.74
PINE CREEK	181	1017.00	6662.70	6666.12	6666.00	0.002141	7.65	139.49	60.62		0.74
PINE CREEK	181	282.00	6661.70	6662.99	6664.51	0.000418	2.86	98.54	38.50		0.32
PINE CREEK	179	257.00	6661.80	6663.40	6664.15	0.005905	6.93	37.10	38.49		0.31
PINE CREEK	179	399.00	6661.80	6663.90	6664.90	0.005610	8.06	49.51	25.18		1.01
PINE CREEK	179	524.00	6661.80	6664.54	6665.37	0.003342	7.48	75.53	47.17		0.82
PINE CREEK	179	729.00	6661.80	6665.00	6665.94	0.003191	8.15	98.17	50.11		0.82
PINE CREEK	179	871.00	6661.80	6665.23	6665.23	0.003310	8.71	109.74	50.12		0.84
PINE CREEK	173	257.00	6661.80	6663.40	6664.15	0.005905	6.93	37.10	38.49		1.00
PINE CREEK	173	399.00	6661.80	6663.90	6664.90	0.005610	8.06	49.51	25.18		1.01
PINE CREEK	173	524.00	6661.80	6664.54	6665.37	0.003342	7.48	75.53	47.17		0.82
PINE CREEK	173	729.00	6661.80	6665.00	6665.94	0.003191	8.15	98.17	50.11		0.82
PINE CREEK	173	871.00	6661.80	6665.23	6665.23	0.003310	8.71	109.74	50.12		0.84
PINE CREEK	173	1017.00	6661.80	6665.47	6665.47	0.003331	9.15	121.61	50.13		0.86

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Chl W.S	E.G. Elev	E.G. Slope	Vol Chnl	Flow Area	Top Width	Frude # Chl
PINE CREEK	173	282.00	6661.80	6663.49	6663.49	6664.29	0.005879	7.17	39.35	25.11	1.01

REACH NO. 1
FLOWMASTER LOW FLOW CHANNEL ANALYSIS
DATA SHEETS

Pine Creek
Worksheet for Irregular Channel

Project Description	
Project File	h:\mwp\project9.fmw2
Worksheet	PINE CREEK CHAPEL HILLS DRIVE TO 84"
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Channel Slope	0.010000 ft/ft
Water Surface Elevation	6.00 ft
Elevation range: 5.50 ft to 12.00 ft.	
Station (ft)	Elevation (ft)
0.00	12.00
0.10	7.10
0.20	7.00
0.30	5.50
2.80	5.50
2.90	7.00
3.00	7.10
3.10	12.00

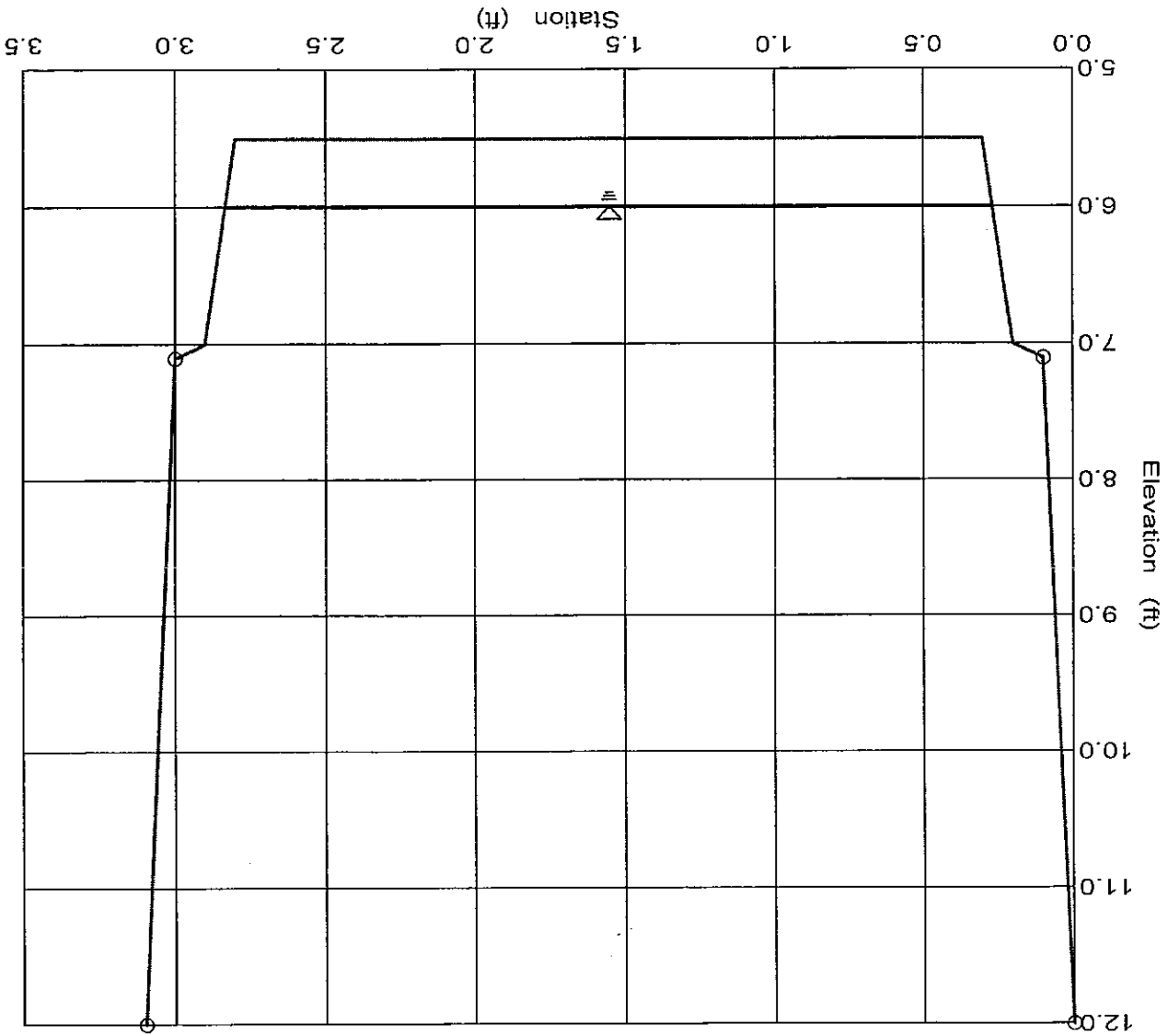
Start Station	3.00	0.00	0.10	0.009
End Station	3.10	3.00	0.10	0.032
Roughness				0.009

Results	
Wtd. Mannings Coefficient	0.032
Discharge	2.99 cfs
Flow Area	1.27 ft ²
Wetted Perimeter	3.50 ft
Top Width	2.57 ft
Height	0.50 ft
Critical Depth	5.85 ft
Critical Slope	0.028802 ft/ft
Velocity	2.36 ft/s
Velocity Head	0.09 ft
Specific Energy	6.09 ft
Froude Number	0.59
Flow is subcritical.	

Cross Section Low Flow Channel
 Cross Section for Irregular Channel

Project Description	
Project File	h:\fmw\project9.fm2
Worksheet	PINE CREEK CHAPEL HILLS DRIVE TO 84"
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data	
Wtd. Mannings Coefficient	0.032
Channel Slope	0.010000 ft/ft
Water Surface Elevation	6.00 ft
Discharge	2.99 cfs



LOW FLOW CHANNEL
Rating Table for Irregular Channel

Project Description	
Project File	h:\mwyproject9.fm2
Worksheet	PINE CREEK CHAPEL HILLS DRIVE TO 84"
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data

Input Data	
Channel Slope	0.010000
Water Surface Elevation	6.00
Minimum	10.50
Maximum	0.035000
Increment	0.005000 ft/ft

Rating Table				
Water Surface Elevation (ft)	Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)

6.00	0.010000	0.032	2.99	2.36
6.00	0.015000	0.032	3.66	2.89
6.00	0.020000	0.032	4.22	3.33
6.00	0.025000	0.032	4.72	3.73
6.00	0.030000	0.032	5.17	4.08
6.00	0.035000	0.032	5.59	4.41
6.50	0.010000	0.032	8.19	3.19*
6.50	0.015000	0.032	10.03	3.91
6.50	0.020000	0.032	11.58	4.51
6.50	0.025000	0.032	12.95	5.05
6.50	0.030000	0.032	14.19	5.53
6.50	0.035000	0.032	15.33	5.97
7.00	0.010000	0.032	14.39	3.69
7.00	0.015000	0.032	17.62	4.52
7.00	0.020000	0.032	20.35	5.22
7.00	0.025000	0.032	22.75	5.83
7.00	0.030000	0.032	24.92	6.39
7.00	0.035000	0.032	26.92	6.90
7.50	0.010000	0.030	23.20	4.34
7.50	0.015000	0.030	28.42	5.32
7.50	0.020000	0.030	32.81	6.14
7.50	0.025000	0.030	36.69	6.87
7.50	0.030000	0.030	40.19	7.52
7.50	0.035000	0.030	43.41	8.12
8.00	0.010000	0.028	34.16	5.02
8.00	0.015000	0.028	41.84	6.15
8.00	0.020000	0.028	48.31	7.10

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Rating Table for Irregular Channel

Rating Table				
Water Surface Elevation (ft)	Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)	Velocity (ft/s)
8.00	0.025000	0.028	54.01	7.93
8.00	0.030000	0.028	59.16	8.69
8.00	0.035000	0.028	63.90	9.39
8.50	0.010000	0.026	46.59	5.63
8.50	0.015000	0.026	57.06	6.89
8.50	0.020000	0.026	65.89	7.96
8.50	0.025000	0.026	73.67	8.90
8.50	0.030000	0.026	80.70	9.75
8.50	0.035000	0.026	87.16	10.53
9.00	0.010000	0.024	60.36	6.18
9.00	0.015000	0.024	73.92	7.57
9.00	0.020000	0.024	85.36	8.74
9.00	0.025000	0.024	95.43	9.77
9.00	0.030000	0.024	104.54	10.71
9.00	0.035000	0.024	112.92	11.57
9.50	0.010000	0.023	75.35	6.69
9.50	0.015000	0.023	92.28	8.20
9.50	0.020000	0.023	106.56	9.47
9.50	0.025000	0.023	119.13	10.58
9.50	0.030000	0.023	130.50	11.59
9.50	0.035000	0.023	140.96	12.52
10.00	0.010000	0.022	91.47	7.17
10.00	0.015000	0.022	112.02	8.78
10.00	0.020000	0.022	129.35	10.14
10.00	0.025000	0.022	144.62	11.33
10.00	0.030000	0.022	158.43	12.41
10.00	0.035000	0.022	171.12	13.41
10.50	0.010000	0.021	108.65	7.61
10.50	0.015000	0.021	133.06	9.32
10.50	0.020000	0.021	153.65	10.76
10.50	0.025000	0.021	171.78	12.03
10.50	0.030000	0.021	188.18	13.18
10.50	0.035000	0.021	203.26	14.24