

APPENDIX B

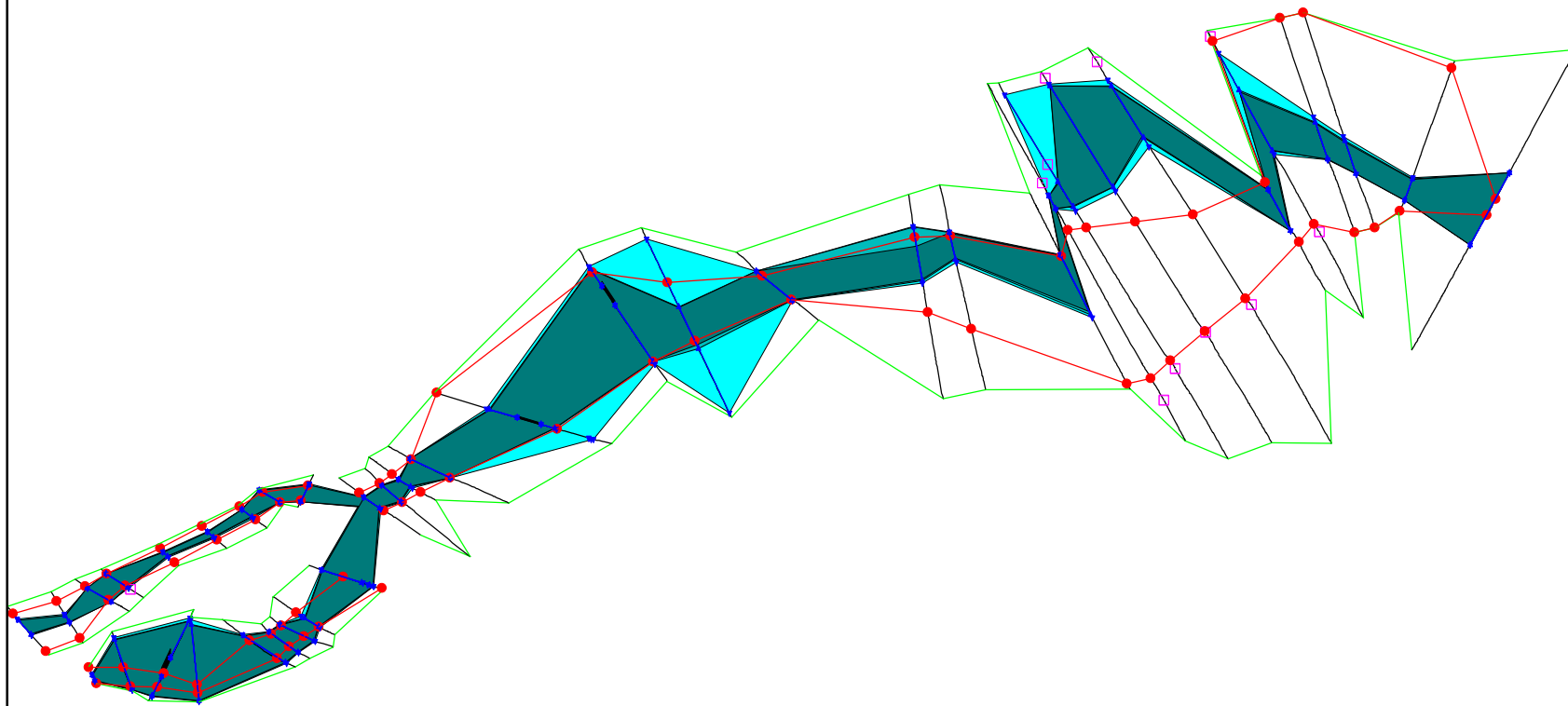
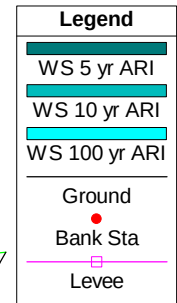
EXISTING HYDRAULIC FLOOD MODEL

HECRAS Model View

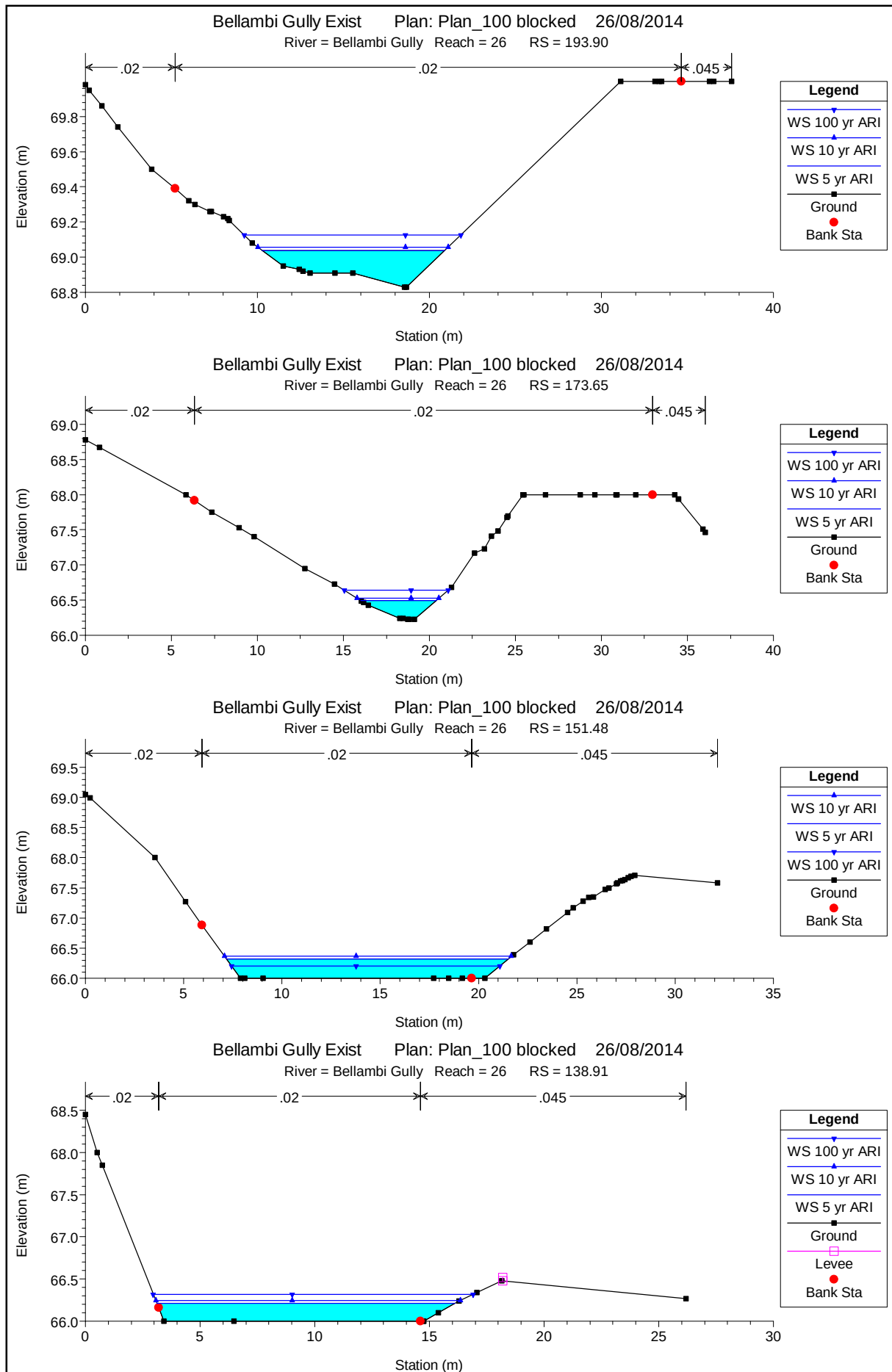


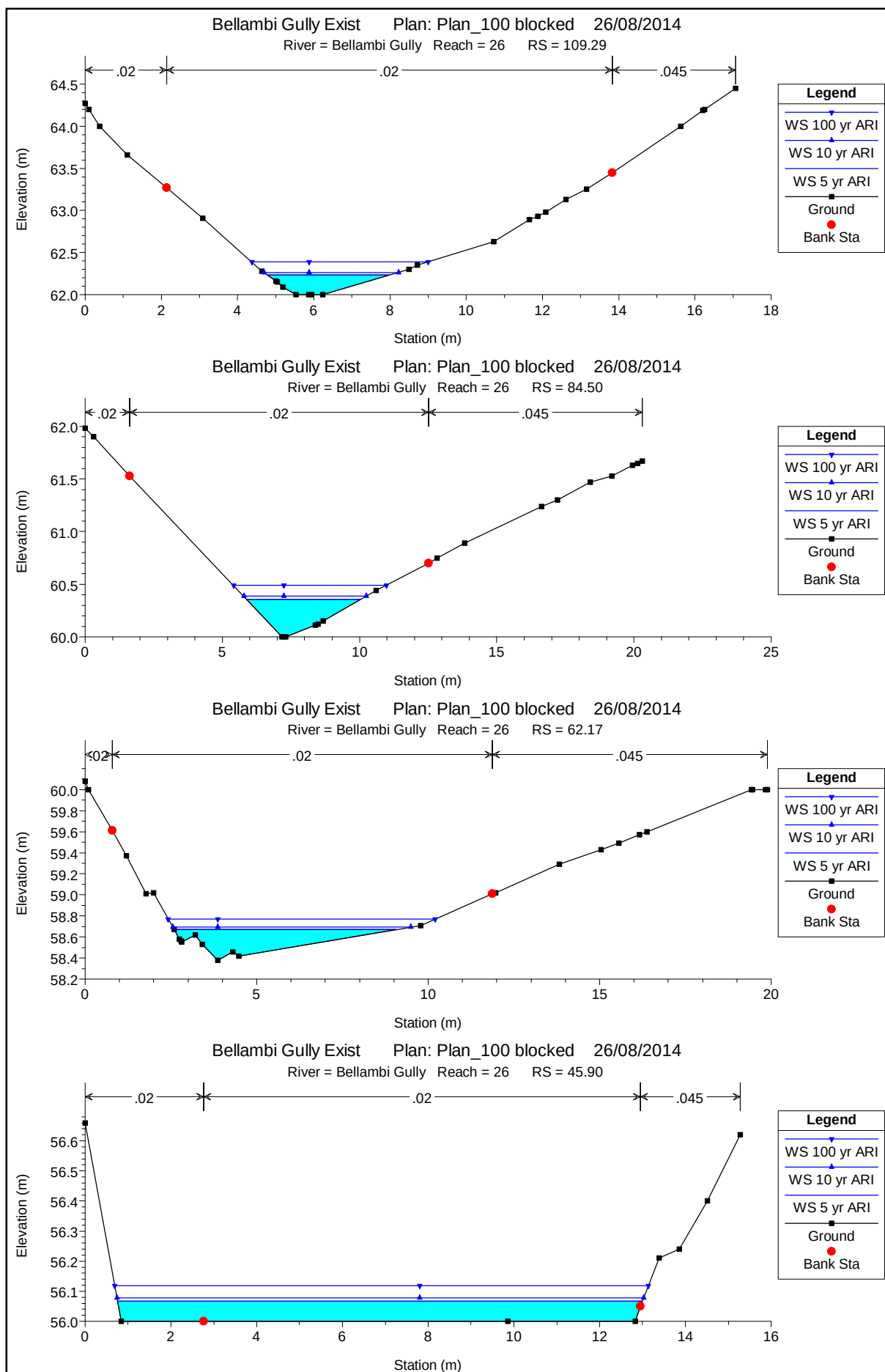
Plan View Scenario 1

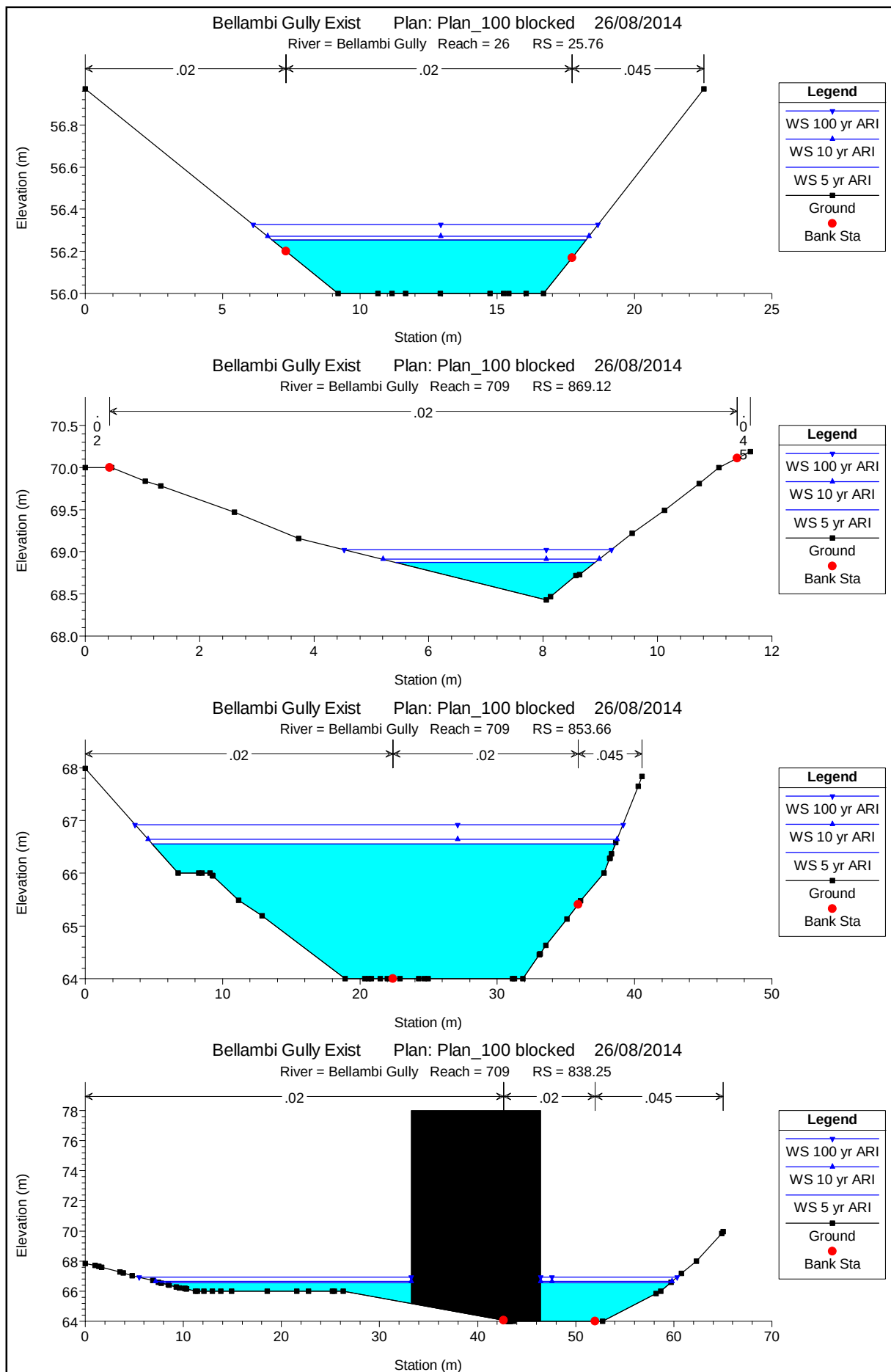
Bellambi Gully Exist Plan: Plan_100 blocked 26/08/2014

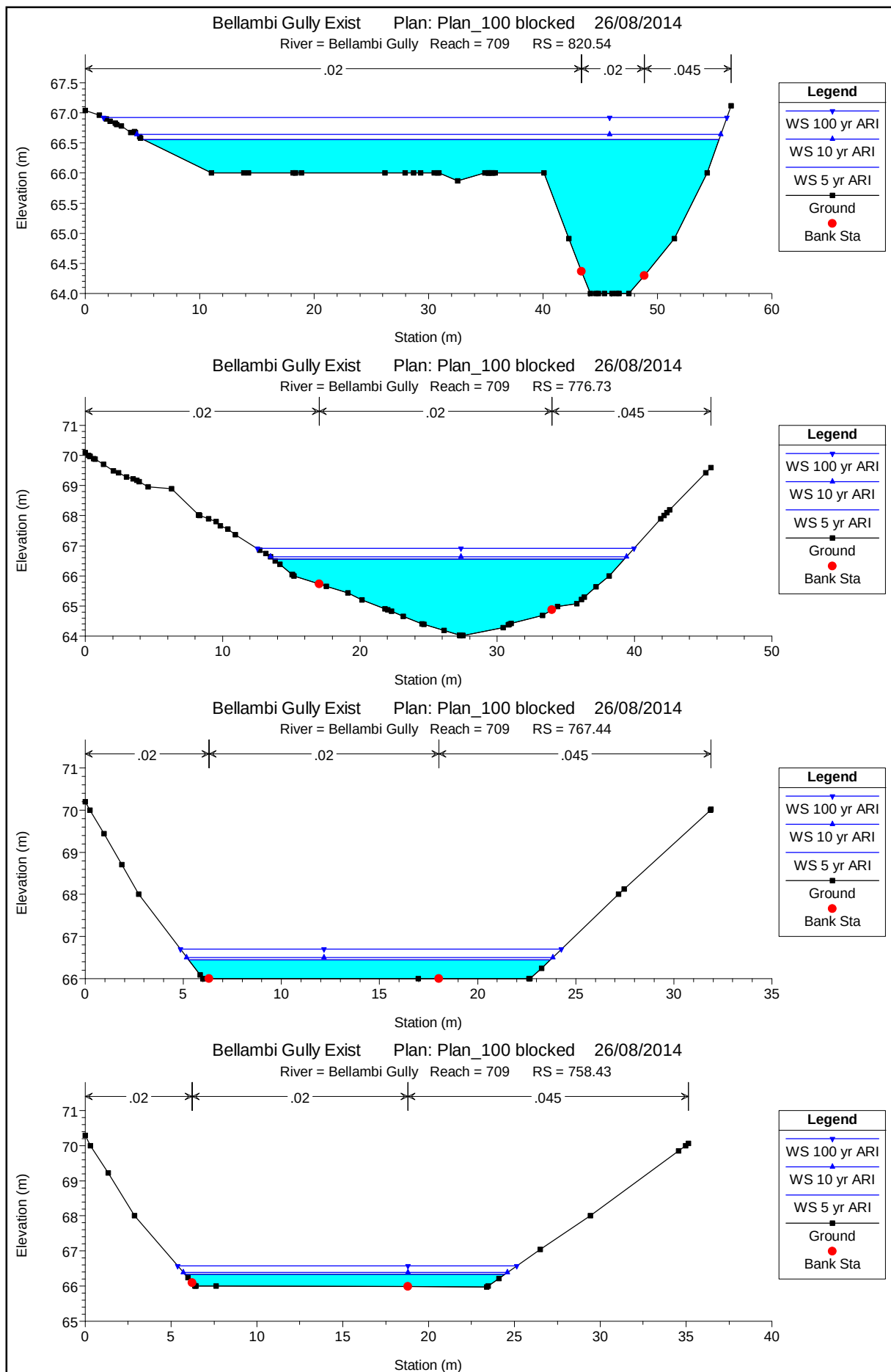


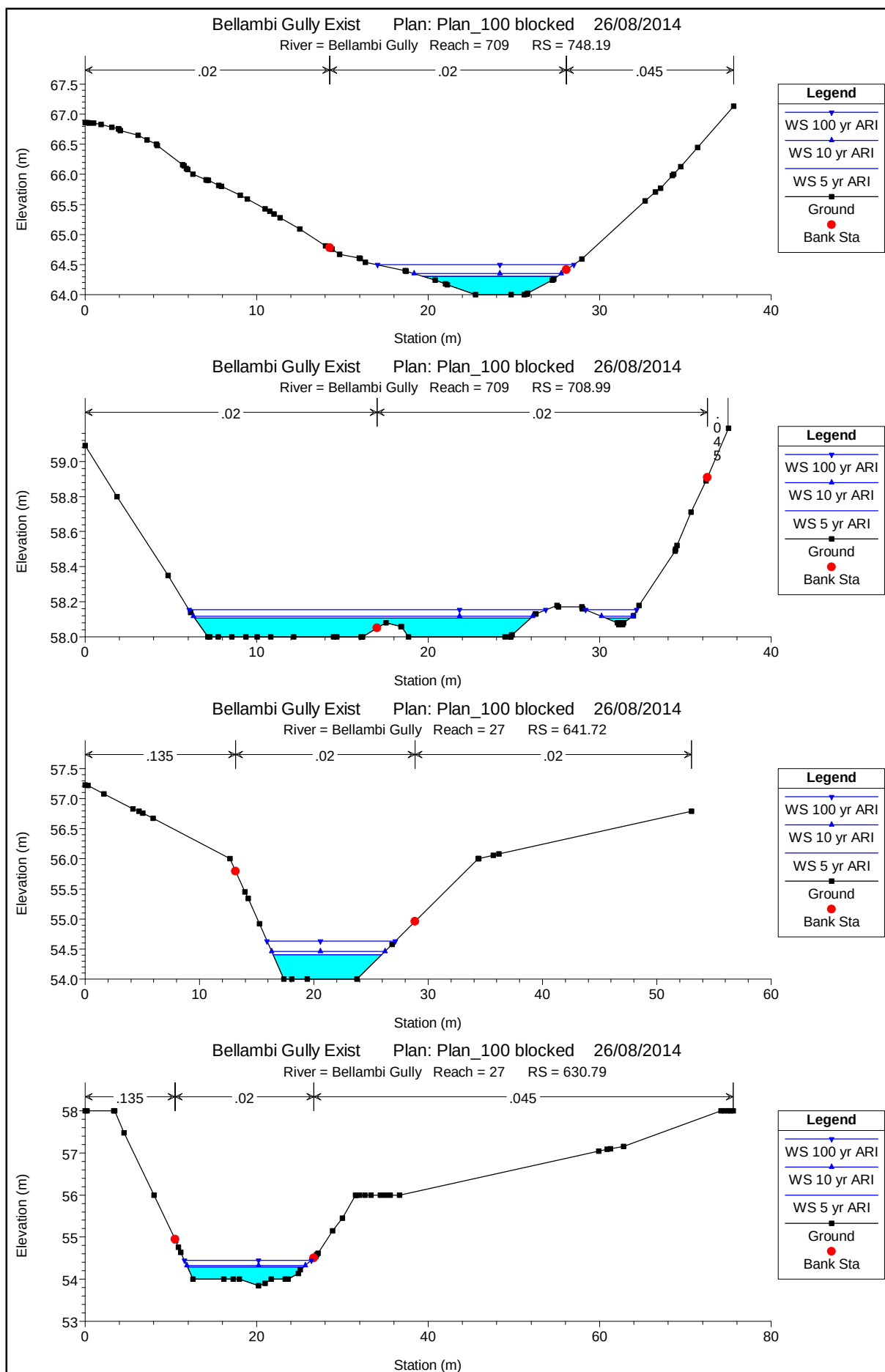
Cross Sections

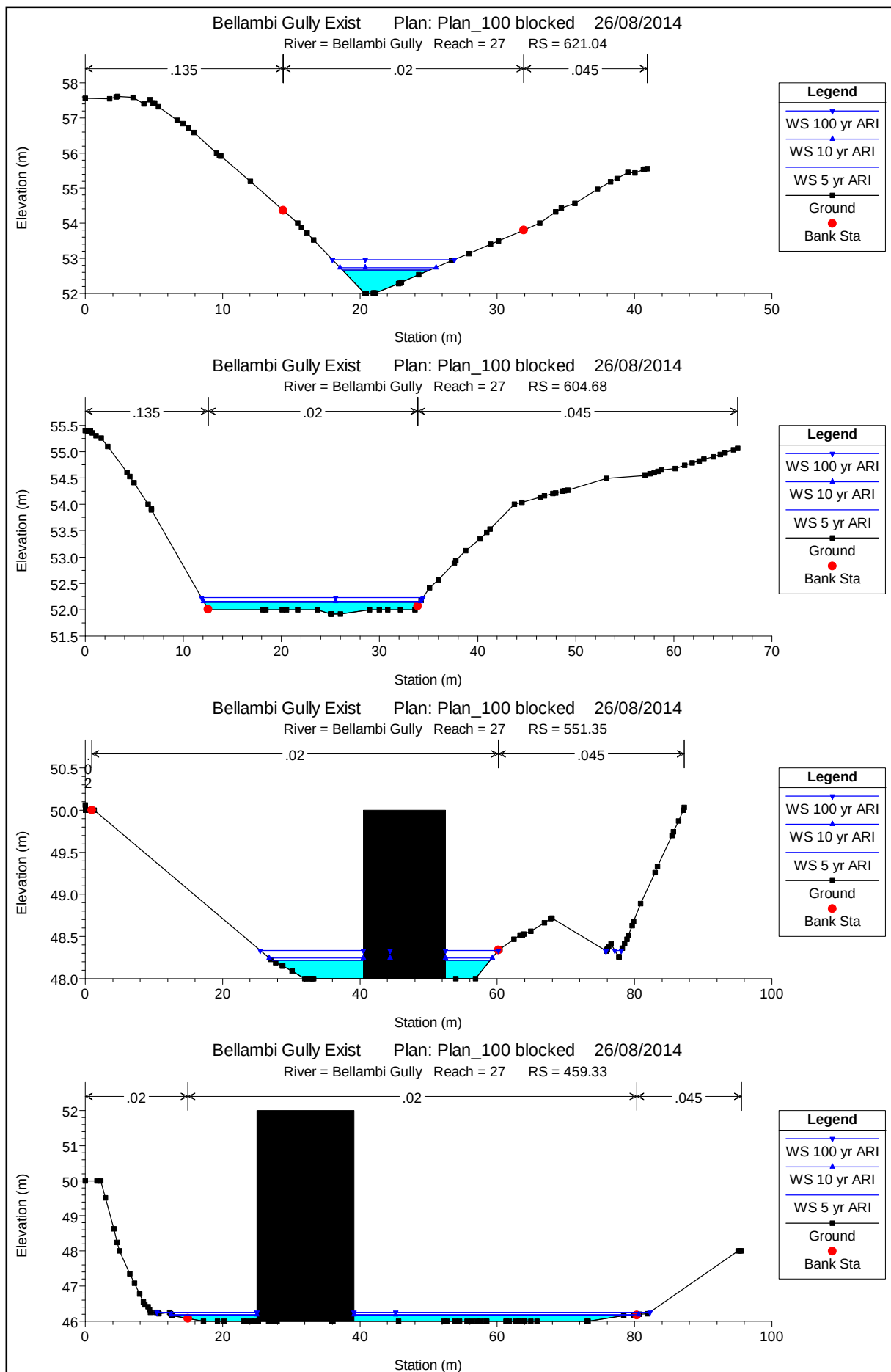


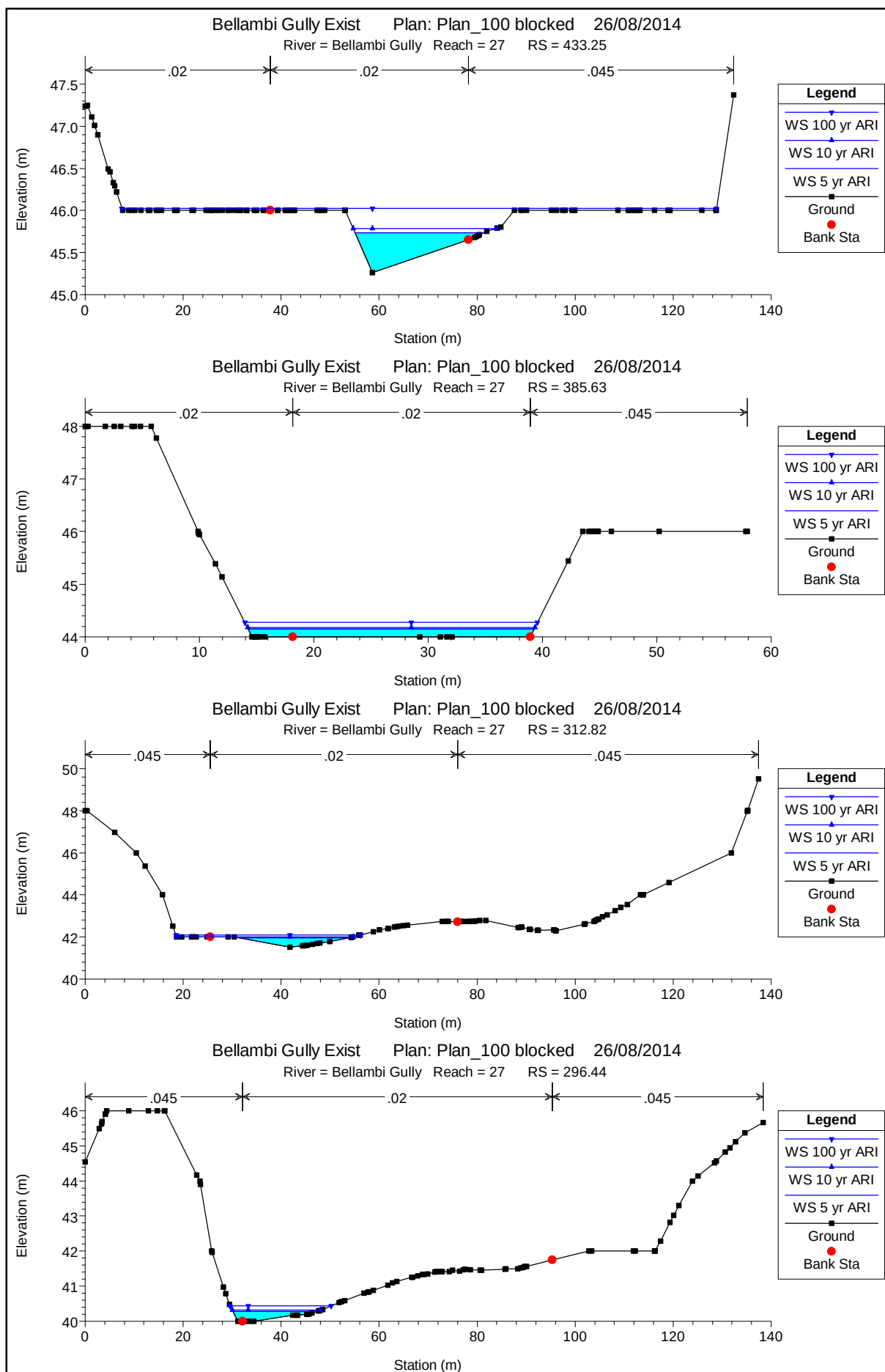


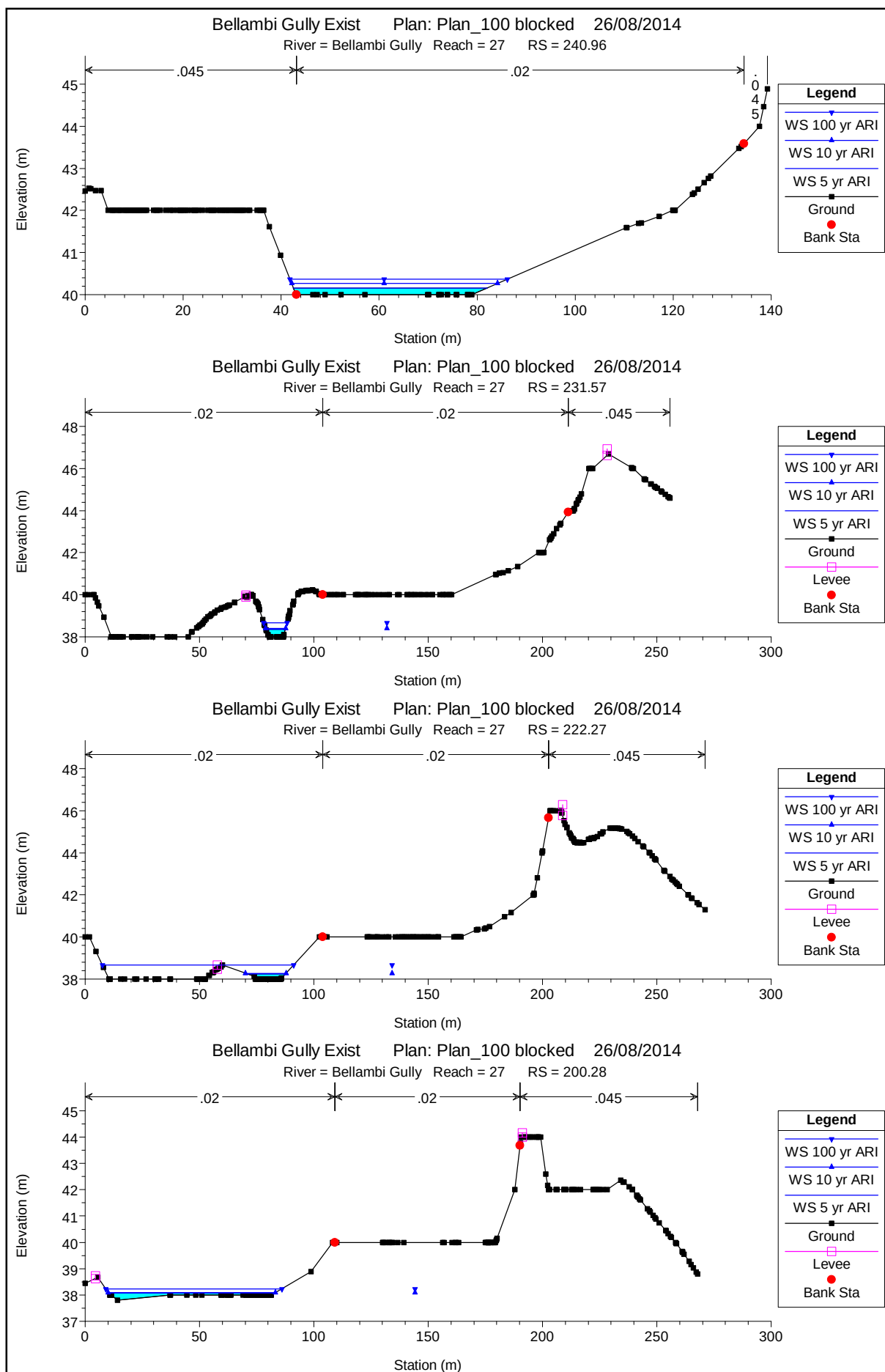


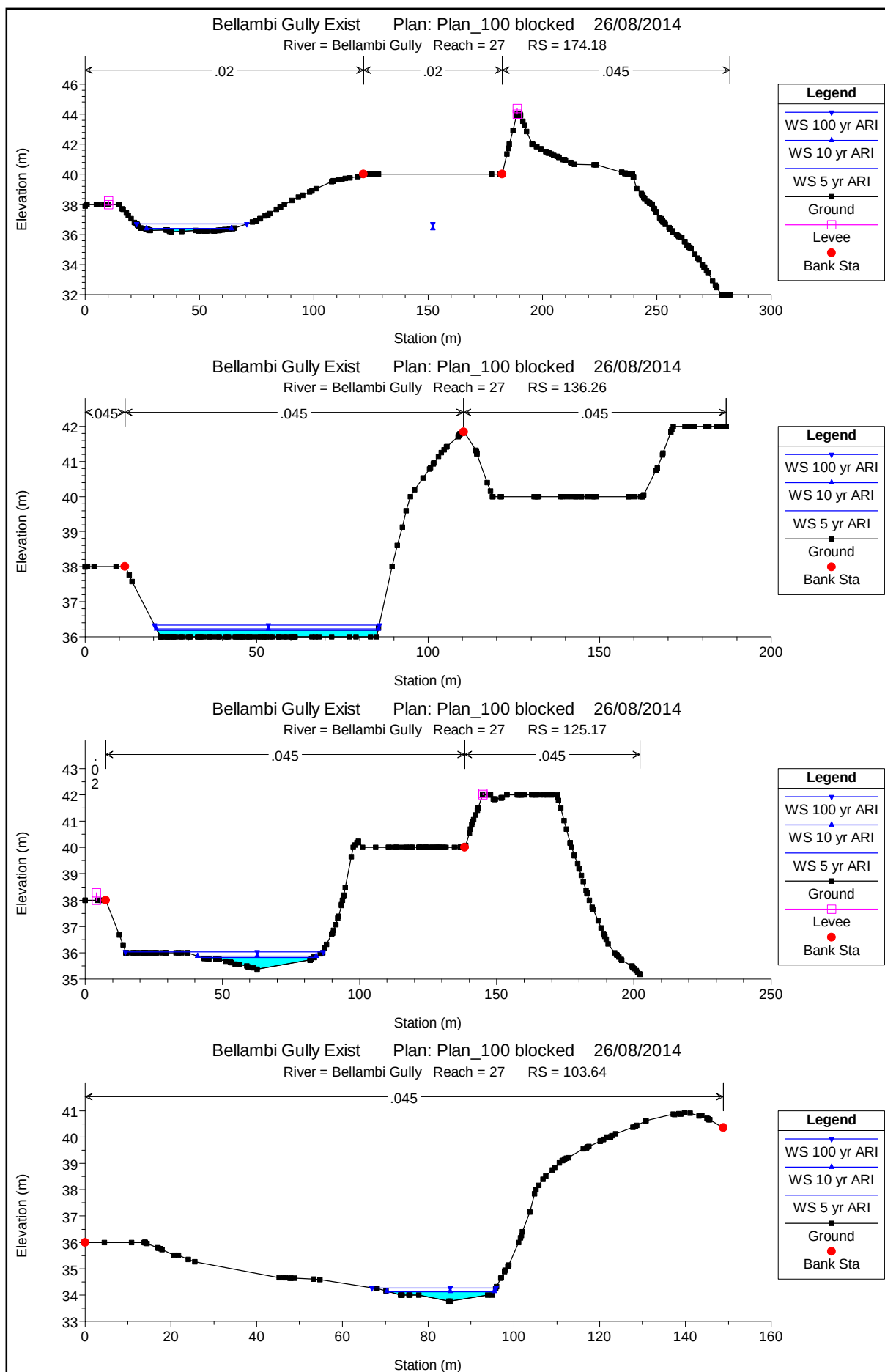


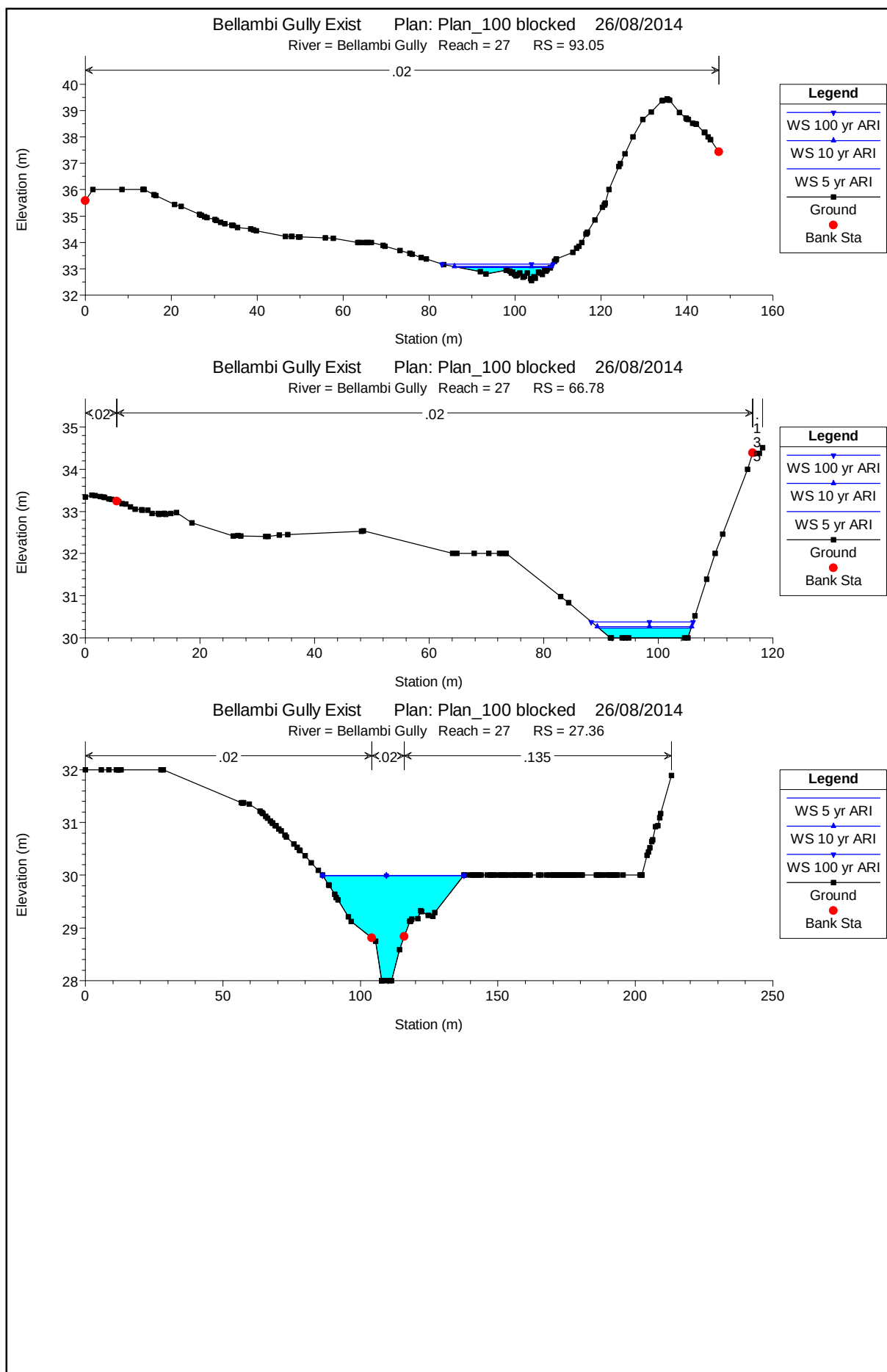












HEC-RAS Plan: 100block

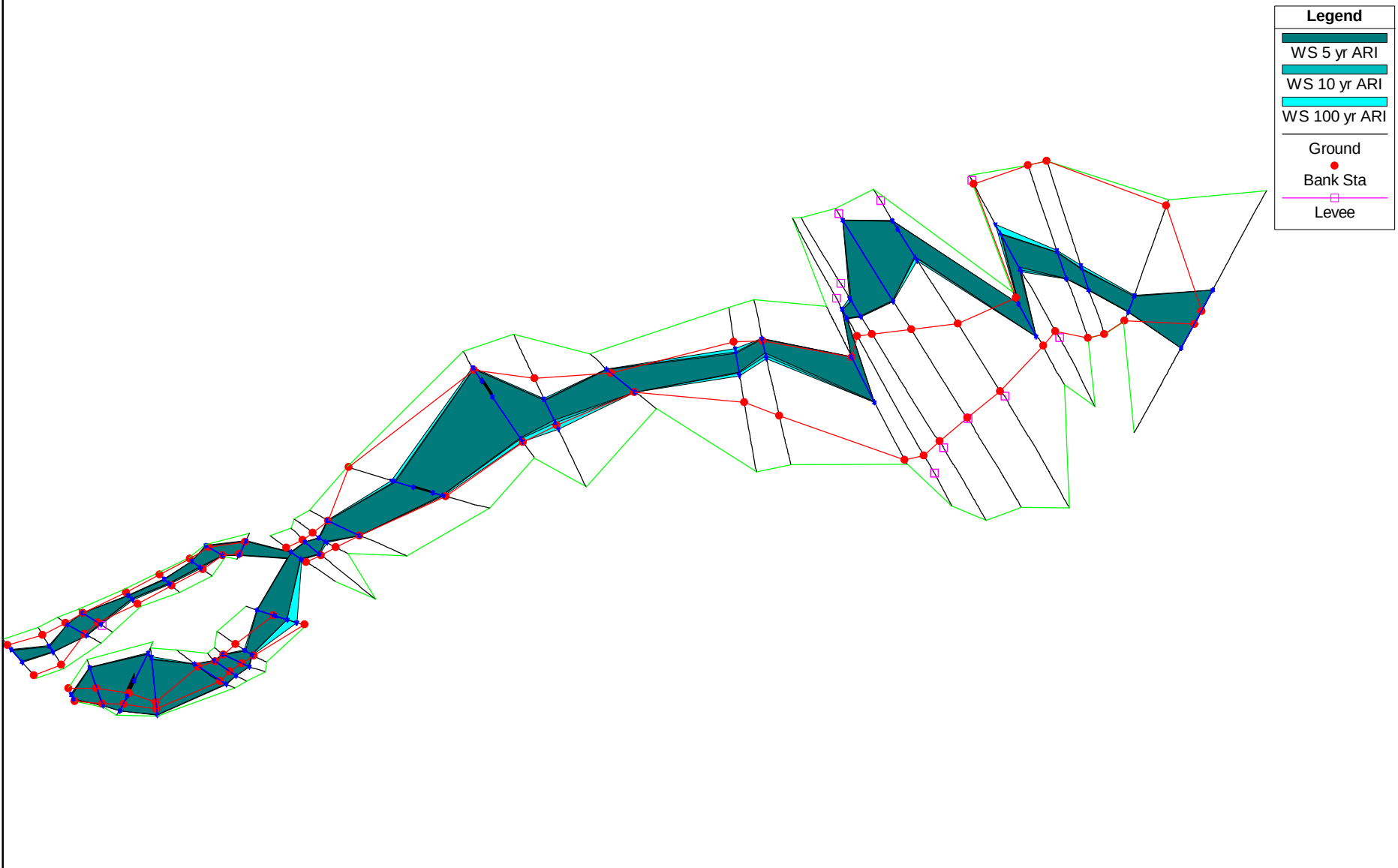
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
26	193.90	5 yr ARI	3.58	68.83	69.04	69.14	69.43	0.050030	2.76	1.30	0.12
26	193.90	10 yr ARI	4.47	68.83	69.06	69.18	69.50	0.050062	2.96	1.51	0.14
26	193.90	100 yr ARI	8.45	68.83	69.13	69.31	69.80	0.050036	3.63	2.33	0.18
26	173.65	5 yr ARI	3.58	66.23	66.50	66.74	67.83	0.122719	5.12	0.70	0.16
26	173.65	10 yr ARI	4.47	66.23	66.53	66.79	67.95	0.112730	5.28	0.85	0.18
26	173.65	100 yr ARI	8.45	66.23	66.64	66.98	68.36	0.091113	5.80	1.46	0.24
26	151.48	5 yr ARI	3.58	66.00	66.32	66.20	66.36	0.001501	0.89	4.30	0.30
26	151.48	10 yr ARI	4.47	66.00	66.36	66.24	66.41	0.001543	0.97	4.91	0.34
26	151.48	100 yr ARI	8.45	66.00	66.21	66.36	66.75	0.037652	3.33	2.68	0.20
26	138.91	5 yr ARI	3.58	66.00	66.21	66.21	66.32	0.006889	1.46	2.57	0.20
26	138.91	10 yr ARI	4.47	66.00	66.25	66.25	66.37	0.006327	1.56	3.04	0.23
26	138.91	100 yr ARI	8.45	66.00	66.32	66.37	66.57	0.009500	2.26	4.02	0.29
26	109.29	5 yr ARI	3.58	62.00	62.23	62.56	65.38	0.339075	7.86	0.46	0.14
26	109.29	10 yr ARI	4.47	62.00	62.26	62.62	65.48	0.299590	7.95	0.56	0.16
26	109.29	100 yr ARI	8.45	62.00	62.39	62.82	65.54	0.177988	7.87	1.07	0.23
26	84.50	5 yr ARI	3.58	60.00	60.35	60.58	61.37	0.072849	4.46	0.80	0.19
26	84.50	10 yr ARI	4.47	60.00	60.39	60.64	61.55	0.075442	4.79	0.93	0.21
26	84.50	100 yr ARI	8.45	60.00	60.49	60.83	62.21	0.082851	5.81	1.45	0.26
26	62.17	5 yr ARI	3.58	58.38	58.67	58.85	59.49	0.092625	4.02	0.89	0.14
26	62.17	10 yr ARI	4.47	58.38	58.69	58.89	59.62	0.092361	4.26	1.05	0.15
26	62.17	100 yr ARI	8.45	58.38	58.77	59.05	60.17	0.091494	5.24	1.61	0.21
26	45.90	5 yr ARI	3.58	56.00	56.07	56.20	57.04	0.282651	4.39	0.82	0.07
26	45.90	10 yr ARI	4.47	56.00	56.08	56.24	57.21	0.270561	4.74	0.95	0.08
26	45.90	100 yr ARI	8.45	56.00	56.12	56.36	57.86	0.239159	5.89	1.45	0.12
26	25.76	5 yr ARI	3.58	56.00	56.25	56.26	56.37	0.006557	1.51	2.41	0.21
26	25.76	10 yr ARI	4.47	56.00	56.27	56.30	56.43	0.008015	1.75	2.60	0.22
26	25.76	100 yr ARI	8.45	56.00	56.33	56.44	56.69	0.014217	2.67	3.28	0.26
709	869.12	5 yr ARI	3.03	68.43	68.87	69.09	69.67	0.050055	3.96	0.76	0.22
709	869.12	10 yr ARI	3.79	68.43	68.91	69.15	69.81	0.050059	4.19	0.90	0.24
709	869.12	100 yr ARI	6.71	68.43	69.03	69.33	70.22	0.050076	4.84	1.39	0.30
709	853.66	5 yr ARI	3.03	64.00	66.56	64.17	66.56	0.000000	0.06	59.84	1.77
709	853.66	10 yr ARI	3.79	64.00	66.64	64.20	66.64	0.000001	0.07	62.71	1.84
709	853.66	100 yr ARI	6.71	64.00	66.92	64.29	66.92	0.000001	0.11	72.46	2.04
709	838.25	5 yr ARI	3.03	64.00	66.56		66.56	0.000002	0.11	41.83	1.08
709	838.25	10 yr ARI	3.79	64.00	66.64		66.64	0.000003	0.13	45.13	1.15
709	838.25	100 yr ARI	6.71	64.00	66.92		66.92	0.000005	0.18	56.44	1.36
709	820.54	5 yr ARI	3.03	64.00	66.56		66.56	0.000002	0.12	44.97	0.89
709	820.54	10 yr ARI	3.79	64.00	66.64		66.64	0.000002	0.14	49.25	0.97
709	820.54	100 yr ARI	6.71	64.00	66.92		66.92	0.000004	0.19	64.00	1.18
709	776.73	5 yr ARI	9.82	64.01	66.56		66.56	0.000014	0.29	39.23	1.53
709	776.73	10 yr ARI	12.28	64.01	66.64		66.64	0.000019	0.34	41.36	1.59
709	776.73	100 yr ARI	21.89	64.01	66.91		66.92	0.000038	0.53	48.60	1.77
709	767.44	5 yr ARI	9.82	66.00	66.44		66.55	0.002807	1.54	7.80	0.42
709	767.44	10 yr ARI	12.28	66.00	66.51		66.63	0.002826	1.69	8.95	0.48
709	767.44	100 yr ARI	21.89	66.00	66.70	66.59	66.90	0.002994	2.16	12.65	0.65
709	758.43	5 yr ARI	9.82	65.99	66.34	66.34	66.50	0.006423	1.95	6.11	0.33
709	758.43	10 yr ARI	12.28	65.99	66.39	66.39	66.58	0.006175	2.10	7.10	0.38
709	758.43	100 yr ARI	21.89	65.99	66.57	66.57	66.85	0.005296	2.52	10.70	0.54
709	748.19	5 yr ARI	9.82	64.00	64.30	64.63	66.16	0.119464	6.04	1.62	0.21
709	748.19	10 yr ARI	12.28	64.00	64.35	64.69	66.26	0.104834	6.13	2.00	0.23
709	748.19	100 yr ARI	21.89	64.00	64.50	64.90	66.54	0.076054	6.34	3.47	0.30
709	708.99	5 yr ARI	9.82	58.00	58.11	58.29	59.53	0.268377	4.72	1.88	0.09
709	708.99	10 yr ARI	12.28	58.00	58.12	58.33	59.92	0.305430	5.29	2.09	0.10
709	708.99	100 yr ARI	21.89	58.00	58.15	58.46	61.08	0.354168	6.64	2.93	0.12
27	641.72	5 yr ARI	14.05	54.00	54.41	54.68	55.36	0.031874	4.32	3.25	0.34
27	641.72	10 yr ARI	17.53	54.00	54.46	54.77	55.56	0.032028	4.65	3.77	0.38
27	641.72	100 yr ARI	31.63	54.00	54.63	55.07	56.28	0.033713	5.69	5.56	0.50
27	630.79	5 yr ARI	14.05	53.85	54.29	54.48	54.95	0.027276	3.59	3.91	0.29
27	630.79	10 yr ARI	17.53	53.85	54.33	54.56	55.14	0.029695	3.99	4.39	0.32

HEC-RAS Plan: 100block (Continued)

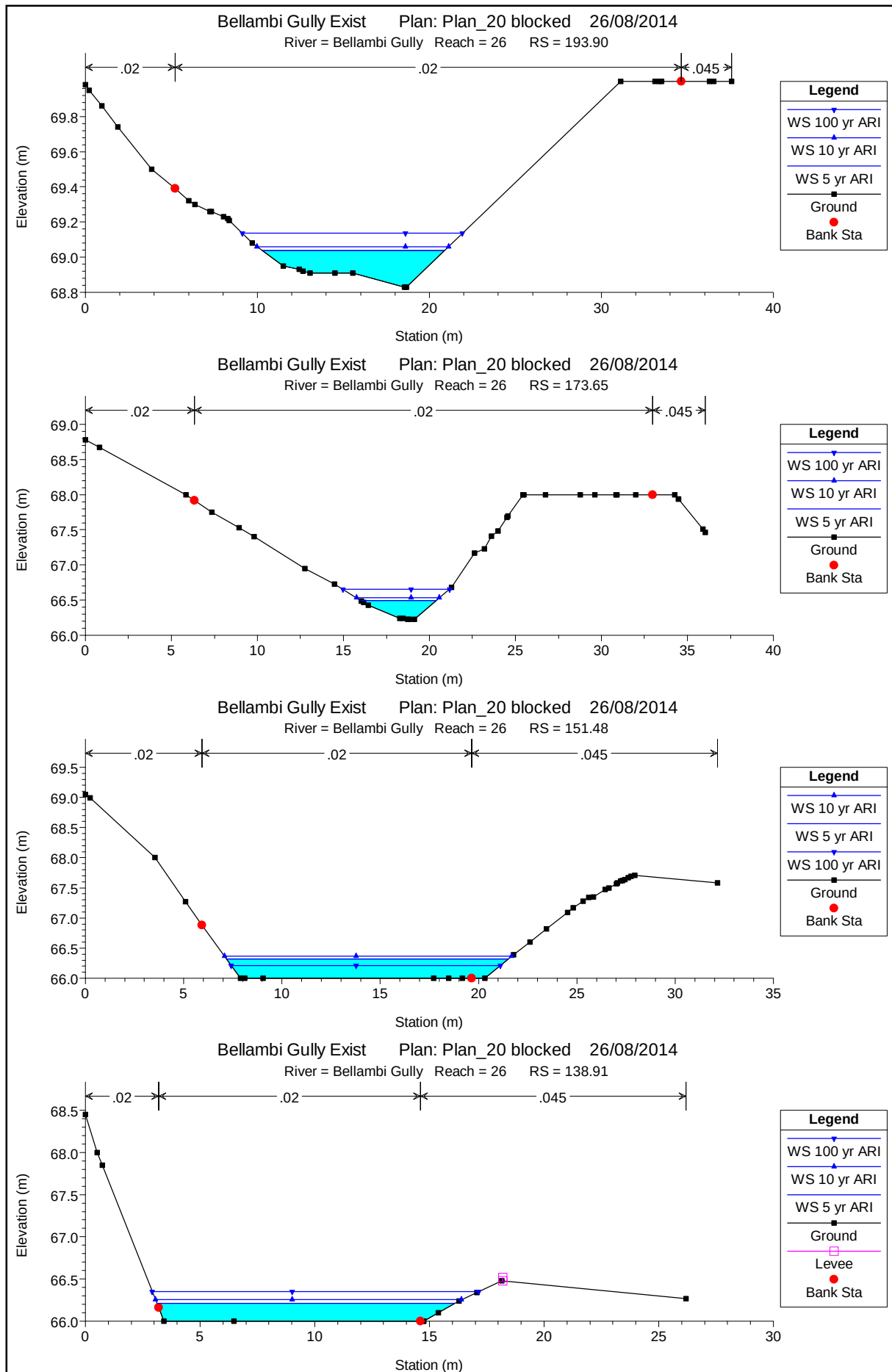
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
27	630.79	100 yr ARI	31.63	53.85	54.44	54.81	55.81	0.035410	5.18	6.10	0.41
27	621.04	5 yr ARI	14.05	52.00	52.67	53.09	54.46	0.055056	5.94	2.37	0.37
27	621.04	10 yr ARI	17.53	52.00	52.74	53.20	54.65	0.051478	6.12	2.86	0.41
27	621.04	100 yr ARI	31.63	52.00	52.97	53.54	55.33	0.045848	6.81	4.65	0.52
27	604.68	5 yr ARI	14.05	51.92	52.14	52.34	53.08	0.089622	4.29	3.31	0.15
27	604.68	10 yr ARI	17.53	51.92	52.16	52.40	53.31	0.094391	4.76	3.73	0.17
27	604.68	100 yr ARI	31.63	51.92	52.23	52.59	54.12	0.099065	6.11	5.28	0.23
27	551.35	5 yr ARI	14.05	48.00	48.22	48.41	49.02	0.064310	3.97	3.54	0.18
27	551.35	10 yr ARI	17.53	48.00	48.25	48.47	49.16	0.063276	4.25	4.13	0.20
27	551.35	100 yr ARI	31.63	48.00	48.34	48.66	49.72	0.065685	5.21	6.11	0.26
27	459.33	5 yr ARI	14.05	46.00	46.17	46.21	46.33	0.014913	1.76	8.04	0.15
27	459.33	10 yr ARI	17.53	46.00	46.19	46.24	46.38	0.015576	1.94	9.12	0.17
27	459.33	100 yr ARI	31.63	46.00	46.26	46.35	46.58	0.017619	2.54	12.71	0.22
27	433.25	5 yr ARI	14.05	45.26	45.73	45.80	45.98	0.011090	2.21	6.46	0.25
27	433.25	10 yr ARI	17.53	45.26	45.79	45.86	46.06	0.009665	2.30	7.93	0.27
27	433.25	100 yr ARI	31.63	45.26	46.03	46.10	46.26	0.008004	2.18	18.02	0.15
27	385.63	5 yr ARI	14.05	44.00	44.15	44.32	44.86	0.067873	3.74	3.80	0.15
27	385.63	10 yr ARI	17.53	44.00	44.18	44.37	45.02	0.068241	4.09	4.34	0.17
27	385.63	100 yr ARI	31.63	44.00	44.27	44.55	45.39	0.050179	4.72	6.83	0.27
27	312.82	5 yr ARI	14.05	41.52	41.96	42.08	42.32	0.019629	2.67	5.26	0.24
27	312.82	10 yr ARI	17.53	41.52	42.01	42.12	42.37	0.020406	2.65	6.71	0.19
27	312.82	100 yr ARI	31.63	41.52	42.09	42.28	42.70	0.025233	3.49	9.58	0.25
27	296.44	5 yr ARI	14.05	40.00	40.28	40.53	41.58	0.118659	5.21	2.90	0.17
27	296.44	10 yr ARI	17.53	40.00	40.31	40.59	41.64	0.097690	5.26	3.59	0.20
27	296.44	100 yr ARI	31.63	40.00	40.44	40.80	41.98	0.066082	5.64	6.04	0.29
27	240.96	5 yr ARI	14.05	40.00	40.16	40.24	40.44	0.027760	2.37	5.96	0.15
27	240.96	10 yr ARI	17.53	40.00	40.27	40.28	40.41	0.007522	1.71	10.33	0.25
27	240.96	100 yr ARI	31.63	40.00	40.37	40.41	40.61	0.008041	2.17	14.76	0.33
27	231.57	5 yr ARI	14.05	40.00	38.36	38.70	39.79	0.054696		2.65	0.31
27	231.57	10 yr ARI	17.53	40.00	38.41	38.80	40.04	0.053014		3.10	0.35
27	231.57	100 yr ARI	31.63	40.00	38.67	39.14	40.28	0.028599		5.64	0.55
27	222.27	5 yr ARI	14.05	40.00	38.25	38.47	39.12	0.058698		3.40	0.20
27	222.27	10 yr ARI	17.53	40.00	38.28	38.54	39.36	0.066834		3.80	0.21
27	222.27	100 yr ARI	31.63	40.00	38.67	38.67	38.70	0.000452		45.14	0.54
27	200.28	5 yr ARI	14.05	40.00	38.09	38.12	38.22	0.018636		8.58	0.12
27	200.28	10 yr ARI	17.53	40.00	38.10	38.15	38.28	0.022554		9.26	0.13
27	200.28	100 yr ARI	31.63	40.00	38.24	38.24	38.37	0.006184		19.87	0.26
27	174.18	5 yr ARI	14.05	40.00	36.36	36.51	37.12	0.125273		3.65	0.10
27	174.18	10 yr ARI	17.53	40.00	36.39	36.55	37.13	0.094497		4.59	0.12
27	174.18	100 yr ARI	31.63	40.00	36.71	36.67	36.86	0.003901		18.92	0.39
27	136.26	5 yr ARI	14.05	36.00	36.19	36.17	36.26	0.024550	1.15	12.23	0.19
27	136.26	10 yr ARI	17.53	36.00	36.22	36.20	36.30	0.022992	1.23	14.27	0.22
27	136.26	100 yr ARI	31.63	36.00	36.33		36.44	0.019476	1.47	21.48	0.33
27	125.17	5 yr ARI	14.05	35.38	35.82	35.82	35.94	0.034400	1.52	9.24	0.22
27	125.17	10 yr ARI	17.53	35.38	35.87	35.87	36.00	0.032223	1.60	10.96	0.25
27	125.17	100 yr ARI	31.63	35.38	36.03	36.03	36.17	0.031228	1.63	19.35	0.27
27	103.64	5 yr ARI	14.05	33.76	34.12	34.26	34.59	0.175939	3.07	4.58	0.19
27	103.64	10 yr ARI	17.53	33.76	34.15	34.31	34.70	0.174752	3.30	5.31	0.21
27	103.64	100 yr ARI	31.63	33.76	34.27	34.48	34.96	0.141328	3.70	8.55	0.30
27	93.05	5 yr ARI	14.05	32.56	33.05	33.22	33.69	0.048622	3.56	3.95	0.19
27	93.05	10 yr ARI	17.53	32.56	33.08	33.27	33.81	0.047865	3.79	4.62	0.21
27	93.05	100 yr ARI	31.63	32.56	33.18	33.45	34.17	0.043482	4.41	7.18	0.28
27	66.78	5 yr ARI	14.05	30.00	30.23	30.45	31.09	0.053602	4.11	3.42	0.21
27	66.78	10 yr ARI	17.53	30.00	30.26	30.51	31.26	0.052531	4.42	3.96	0.24
27	66.78	100 yr ARI	31.63	30.00	30.38	30.74	31.81	0.048655	5.31	5.96	0.34
27	27.36	5 yr ARI	14.05	28.00	30.00	28.86	30.01	0.000054	0.51	44.69	0.87
27	27.36	10 yr ARI	17.53	28.00	30.00	28.96	30.02	0.000085	0.64	44.69	0.87
27	27.36	100 yr ARI	31.63	28.00	30.00	29.26	30.05	0.000276	1.15	44.69	0.87

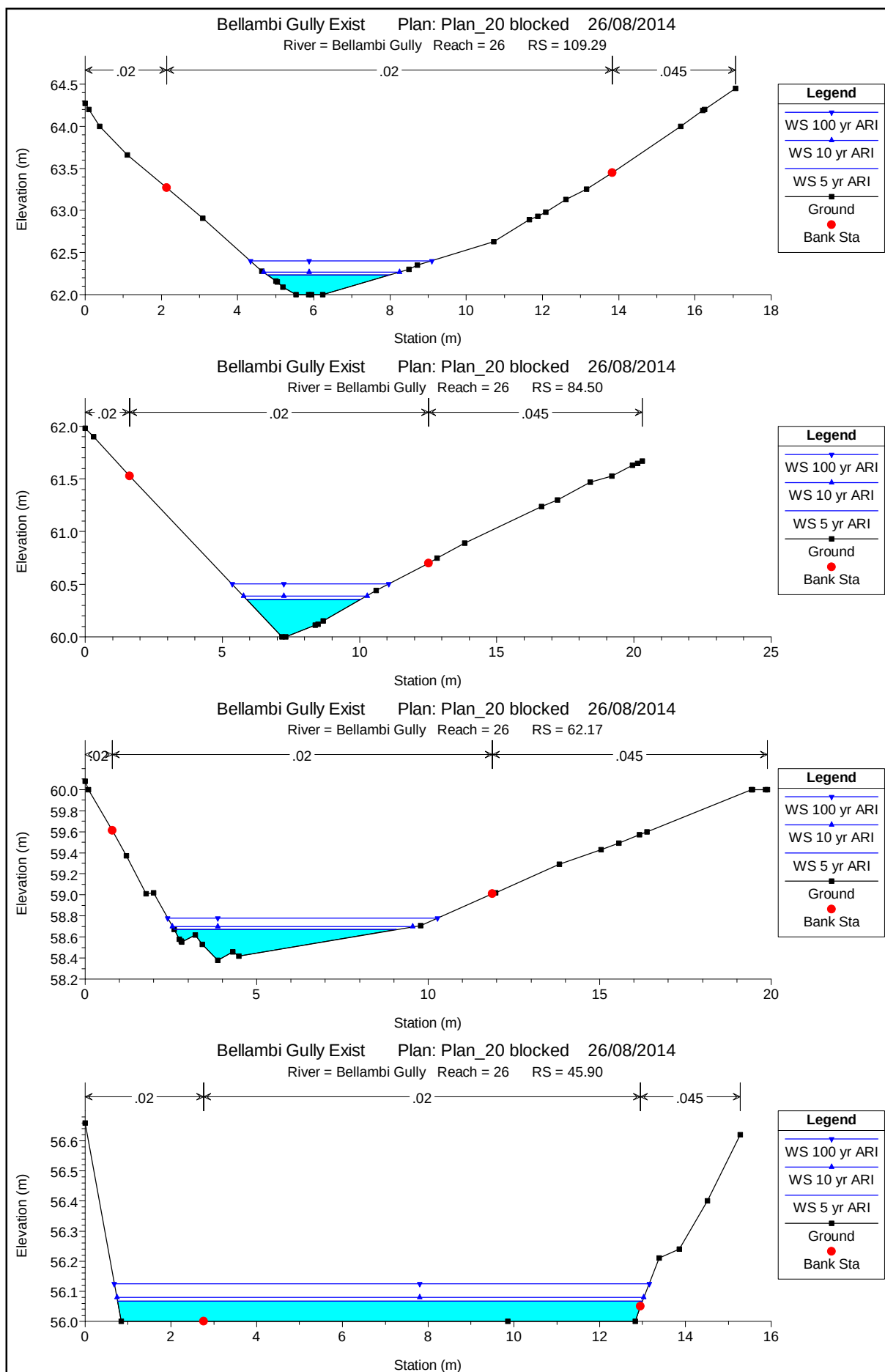
Plan View Scenario 2

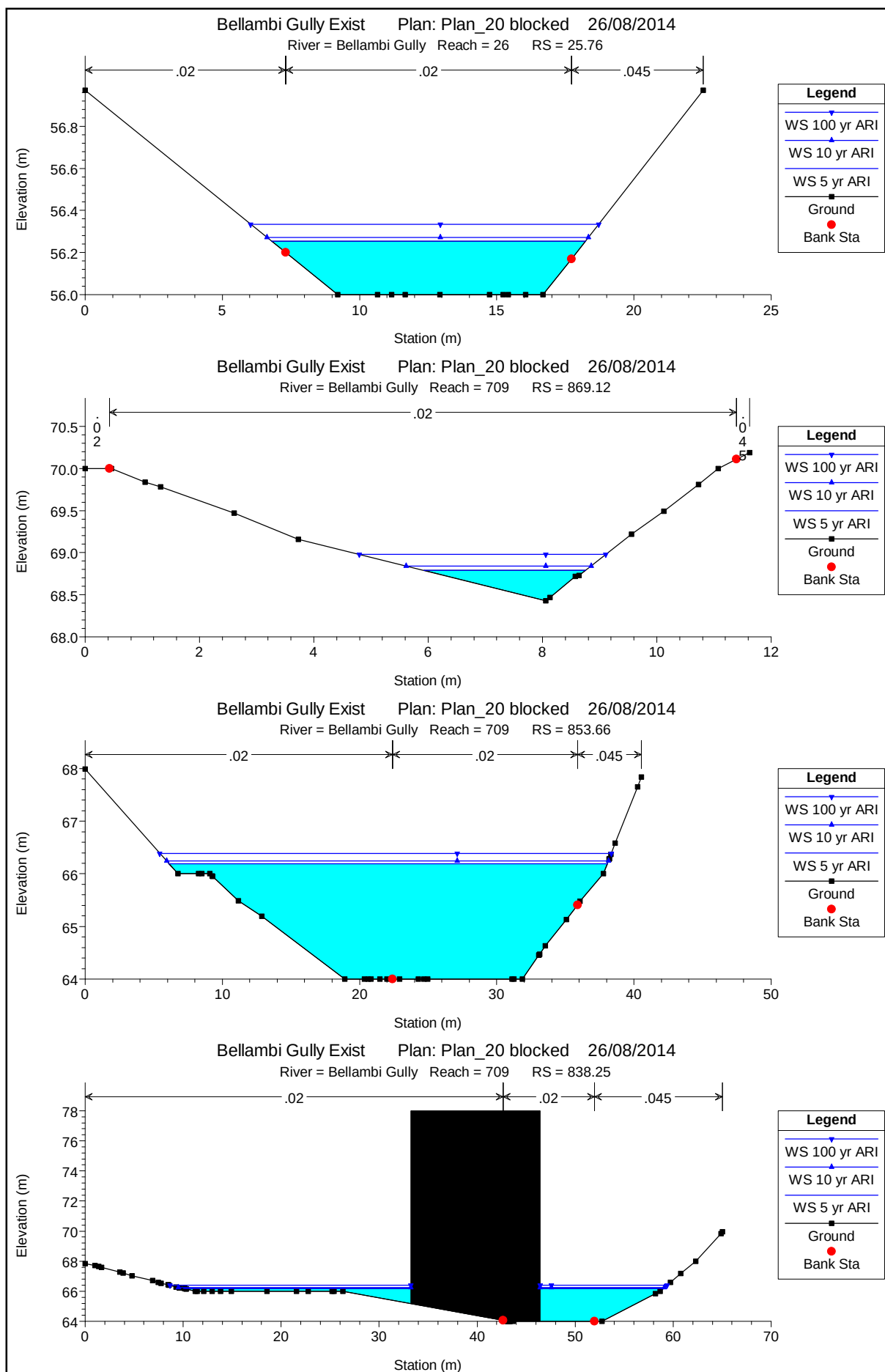
Bellambi Gully Exist Plan: Plan_20 blocked 26/08/2014

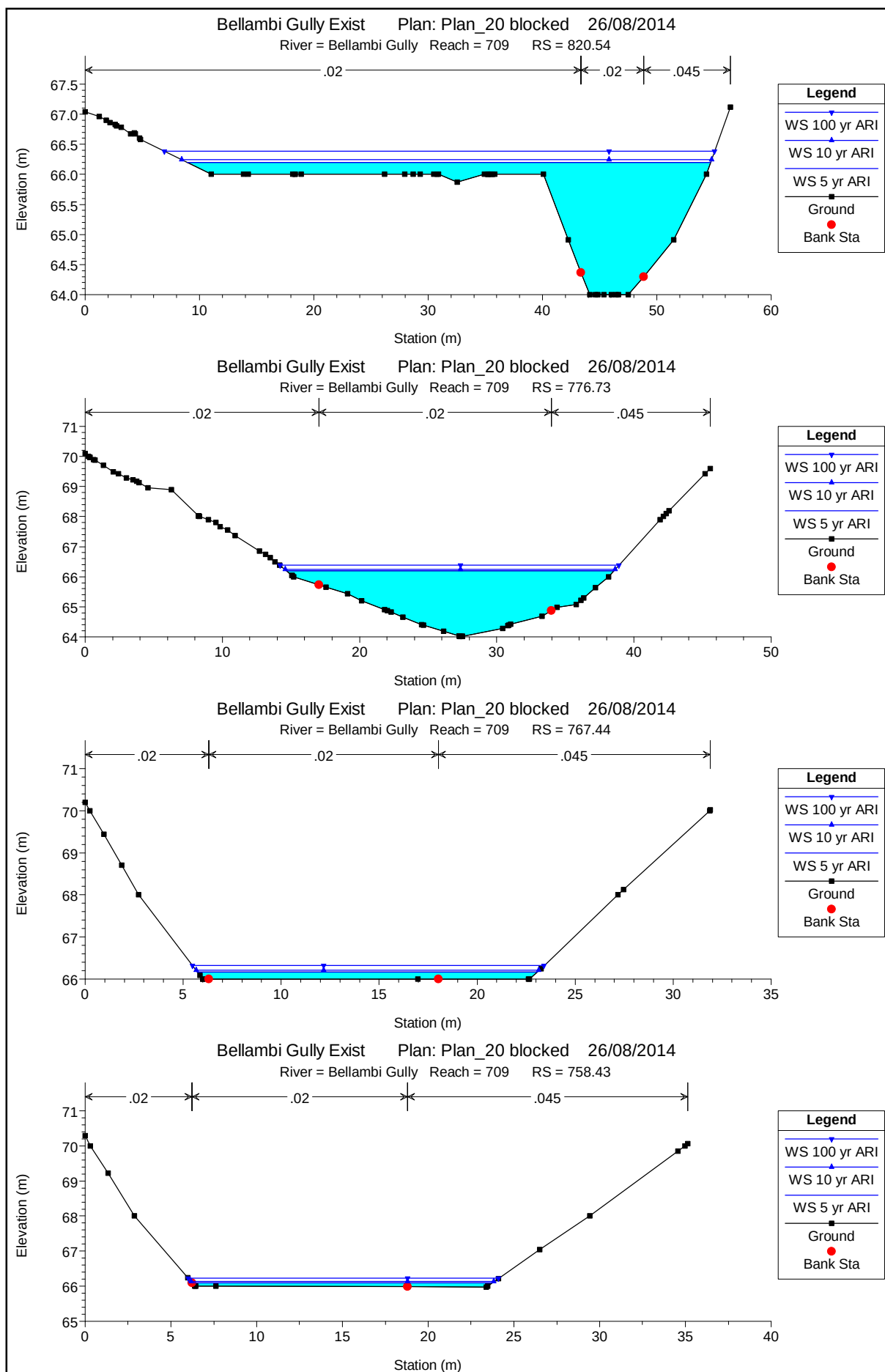


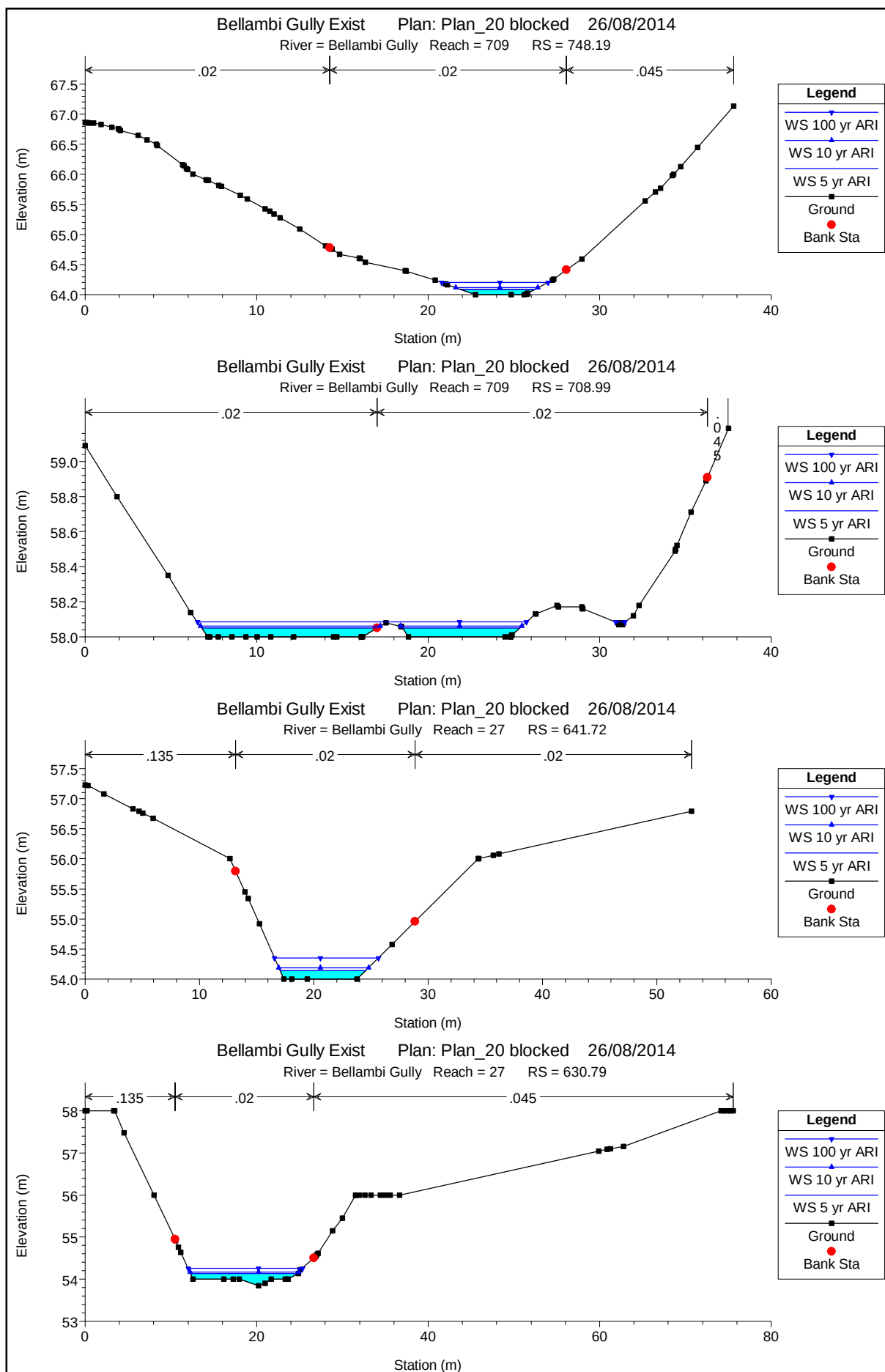
Cross Sections

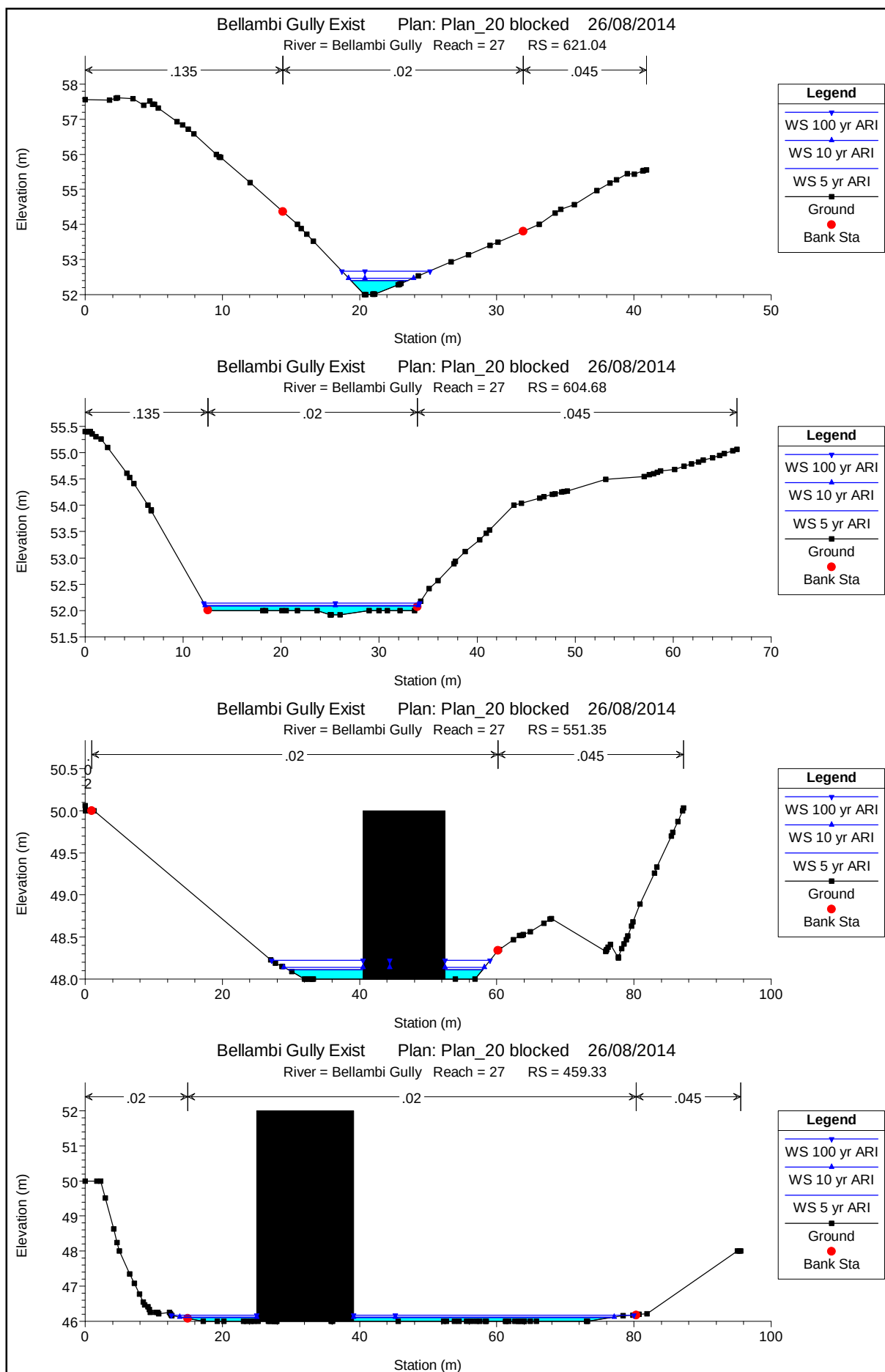


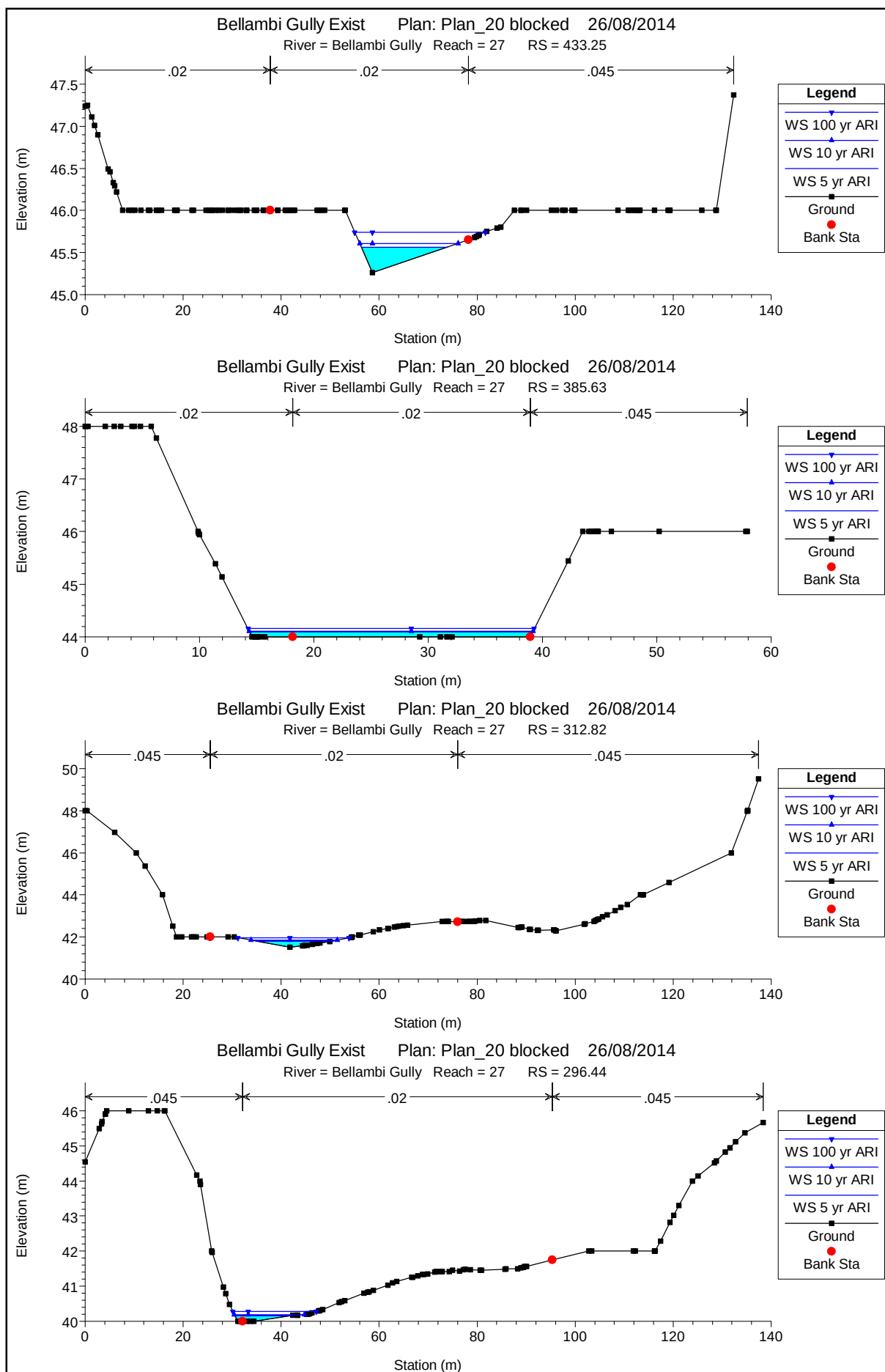


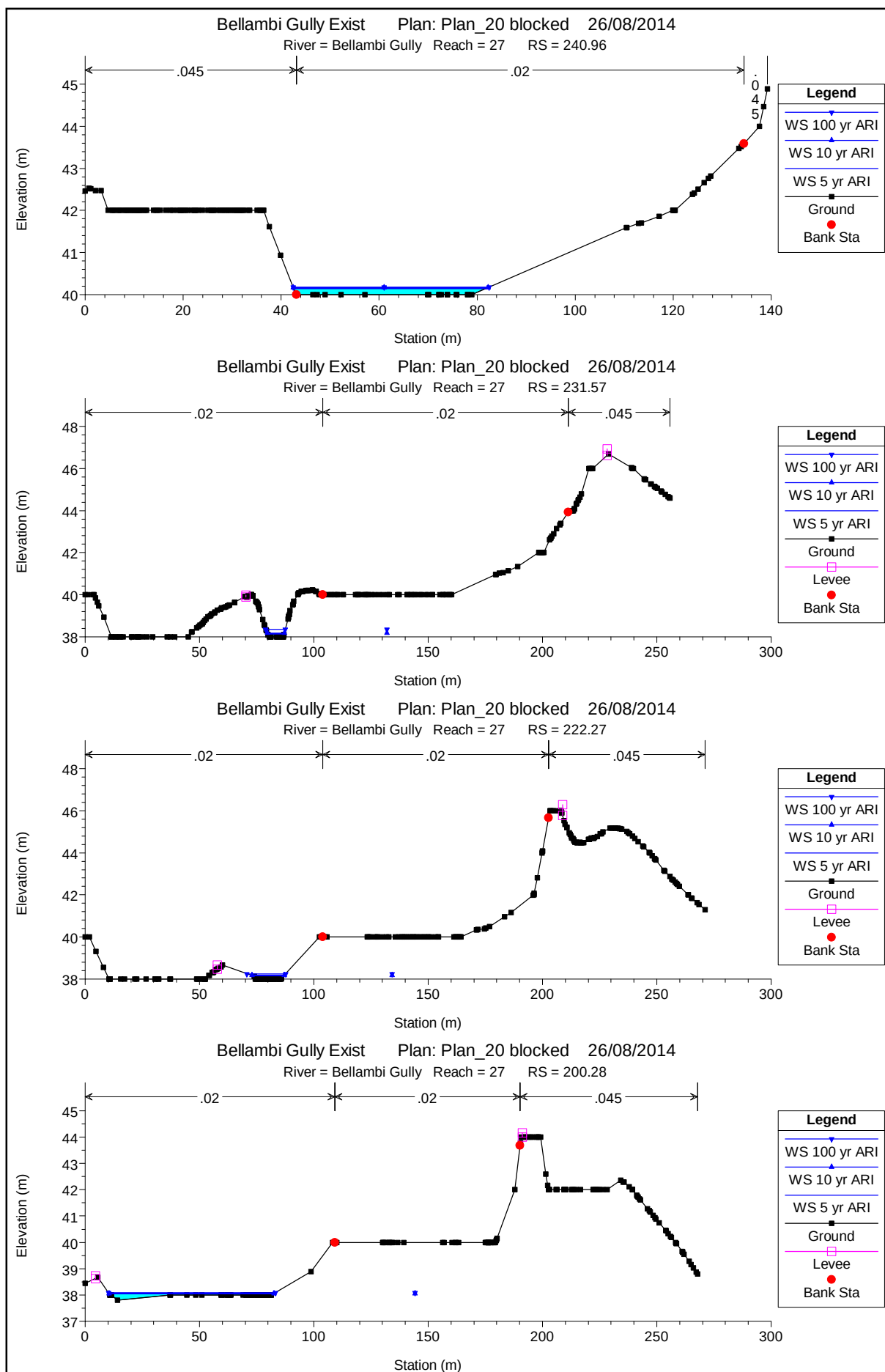


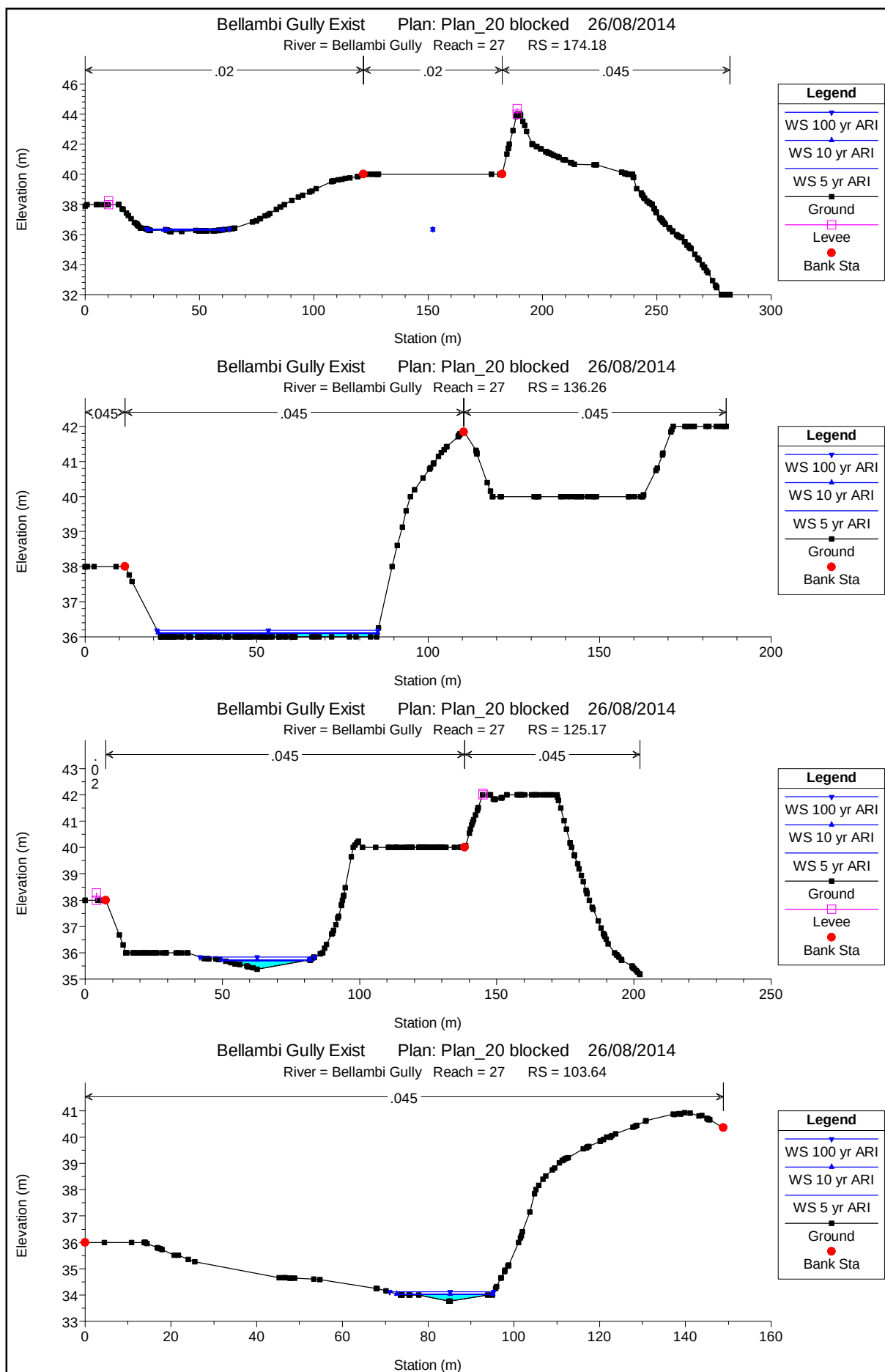


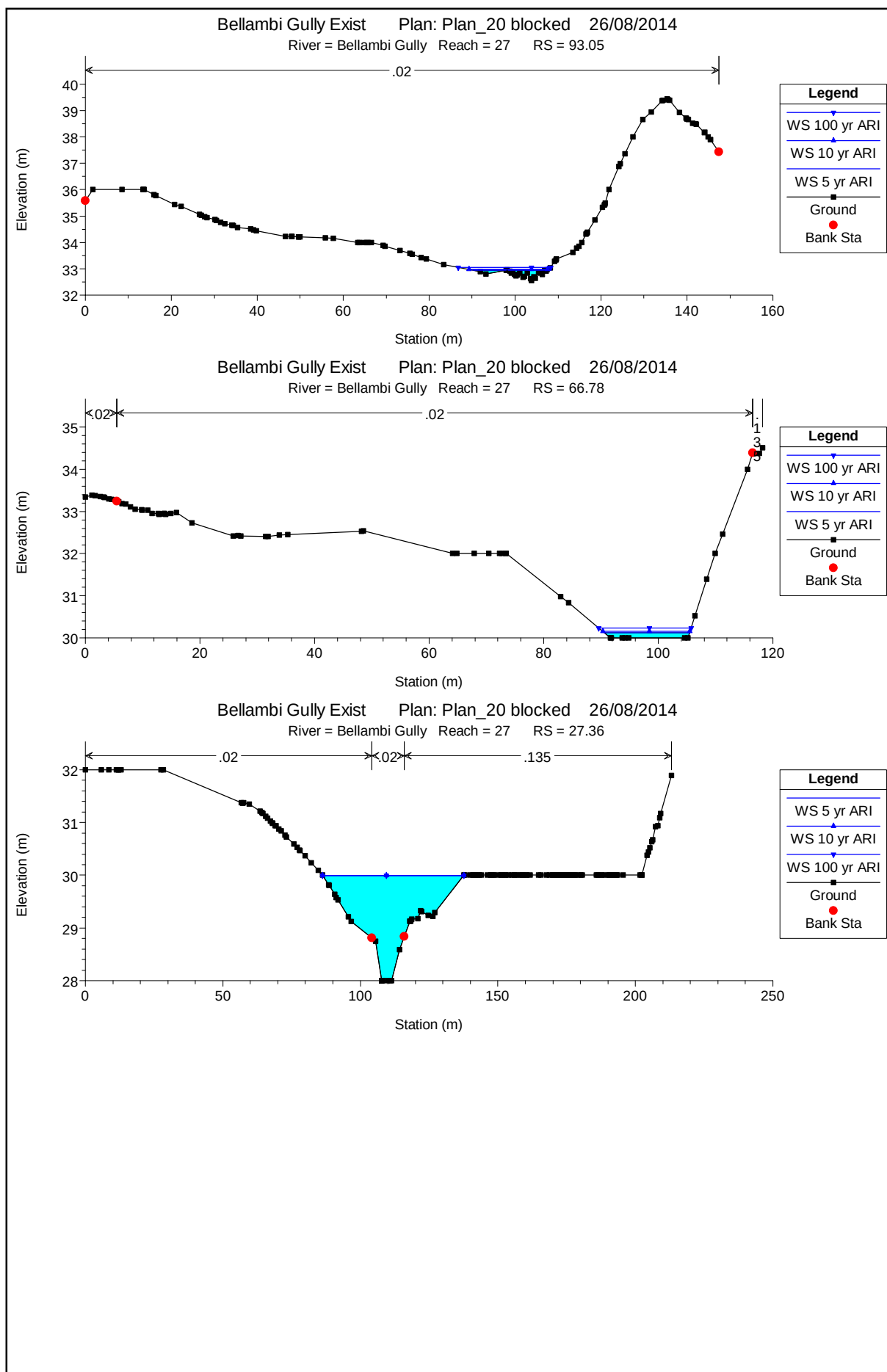












HEC-RAS Plan: 20block

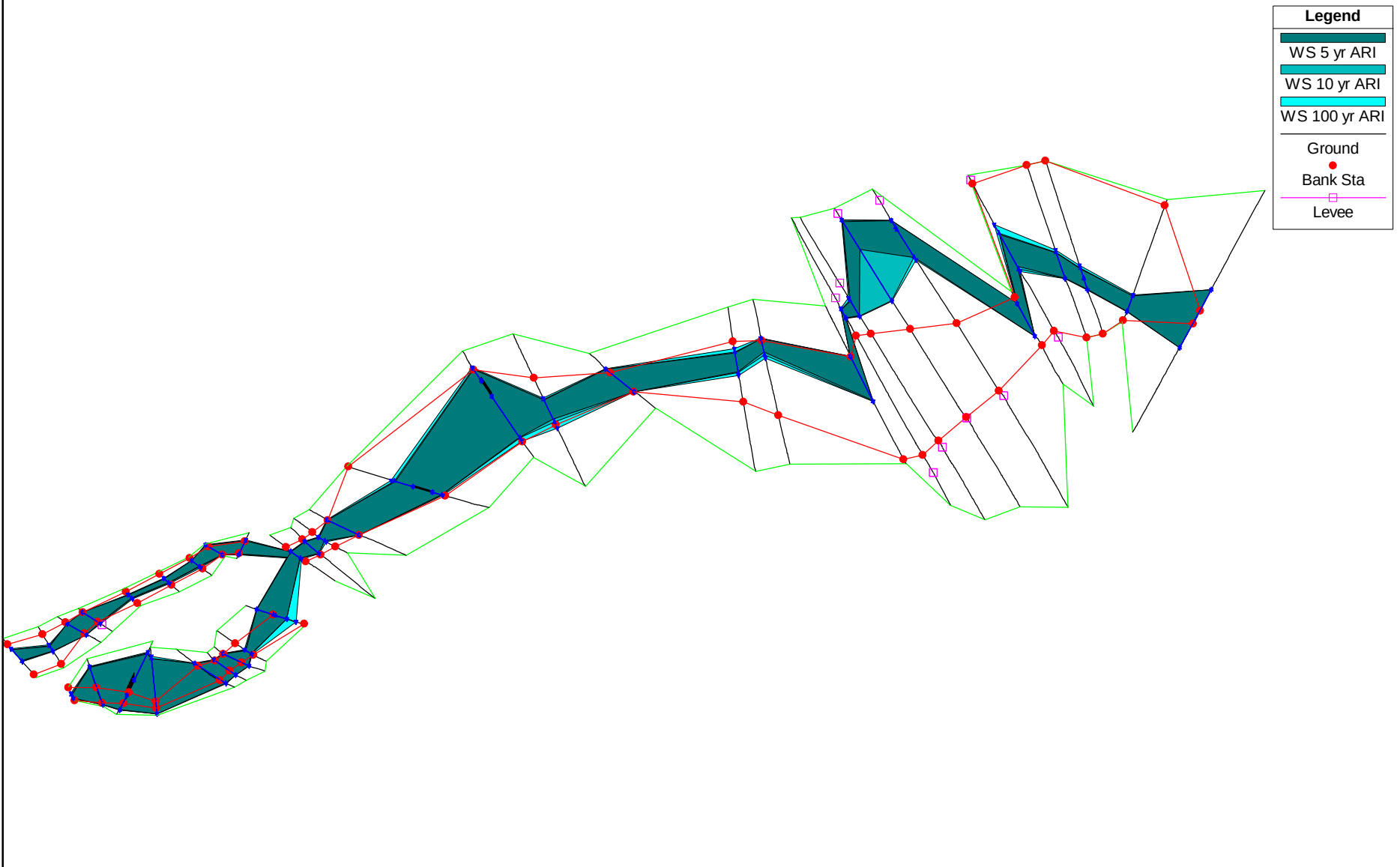
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
26	193.90	5 yr ARI	3.58	68.83	69.04	69.14	69.43	0.050030	2.76	1.30	0.12
26	193.90	10 yr ARI	4.60	68.83	69.06	69.18	69.52	0.050066	2.99	1.54	0.14
26	193.90	100 yr ARI	9.09	68.83	69.14	69.32	69.84	0.050041	3.71	2.45	0.19
26	173.65	5 yr ARI	3.58	66.23	66.50	66.74	67.83	0.122719	5.12	0.70	0.16
26	173.65	10 yr ARI	4.60	66.23	66.53	66.80	67.96	0.111586	5.30	0.87	0.18
26	173.65	100 yr ARI	9.09	66.23	66.66	67.00	68.41	0.089055	5.87	1.55	0.25
26	151.48	5 yr ARI	3.58	66.00	66.32	66.20	66.36	0.001501	0.89	4.30	0.30
26	151.48	10 yr ARI	4.60	66.00	66.37	66.24	66.42	0.001555	0.99	4.99	0.34
26	151.48	100 yr ARI	9.09	66.00	66.21	66.38	66.80	0.038499	3.44	2.78	0.20
26	138.91	5 yr ARI	3.58	66.00	66.21	66.21	66.32	0.006889	1.46	2.57	0.20
26	138.91	10 yr ARI	4.60	66.00	66.25	66.25	66.37	0.006126	1.56	3.13	0.23
26	138.91	100 yr ARI	9.09	66.00	66.35	66.39	66.59	0.007947	2.20	4.47	0.31
26	109.29	5 yr ARI	3.58	62.00	62.23	62.56	65.38	0.339075	7.86	0.46	0.14
26	109.29	10 yr ARI	4.60	62.00	62.27	62.63	65.51	0.295906	7.97	0.58	0.16
26	109.29	100 yr ARI	9.09	62.00	62.40	62.84	65.65	0.176263	7.99	1.14	0.24
26	84.50	5 yr ARI	3.58	60.00	60.35	60.58	61.37	0.072849	4.46	0.80	0.19
26	84.50	10 yr ARI	4.60	60.00	60.39	60.65	61.58	0.075821	4.83	0.95	0.21
26	84.50	100 yr ARI	9.09	60.00	60.50	60.86	62.30	0.083950	5.95	1.53	0.27
26	62.17	5 yr ARI	3.58	58.38	58.67	58.85	59.49	0.092625	4.02	0.89	0.14
26	62.17	10 yr ARI	4.60	58.38	58.70	58.90	59.64	0.092428	4.30	1.07	0.15
26	62.17	100 yr ARI	9.09	58.38	58.78	59.07	60.25	0.091302	5.36	1.69	0.22
26	45.90	5 yr ARI	3.58	56.00	56.07	56.20	57.04	0.282651	4.39	0.82	0.07
26	45.90	10 yr ARI	4.60	56.00	56.08	56.24	57.24	0.268676	4.78	0.97	0.08
26	45.90	100 yr ARI	9.09	56.00	56.12	56.38	57.96	0.235598	6.04	1.52	0.12
26	25.76	5 yr ARI	3.58	56.00	56.25	56.26	56.37	0.006557	1.51	2.41	0.21
26	25.76	10 yr ARI	4.60	56.00	56.27	56.30	56.43	0.008378	1.79	2.61	0.22
26	25.76	100 yr ARI	9.09	56.00	56.33	56.46	56.73	0.015097	2.80	3.37	0.27
709	869.12	5 yr ARI	1.72	68.43	68.79	68.95	69.39	0.050041	3.43	0.50	0.18
709	869.12	10 yr ARI	2.48	68.43	68.84	69.03	69.56	0.050044	3.77	0.66	0.20
709	869.12	100 yr ARI	5.41	68.43	68.98	69.25	70.05	0.050064	4.59	1.18	0.27
709	853.66	5 yr ARI	1.72	64.00	66.20	64.12	66.20	0.000000	0.04	47.86	1.50
709	853.66	10 yr ARI	2.48	64.00	66.24	64.15	66.24	0.000001	0.06	49.38	1.53
709	853.66	100 yr ARI	5.41	64.00	66.39	64.26	66.39	0.000002	0.12	54.09	1.64
709	838.25	5 yr ARI	1.72	64.00	66.20		66.20	0.000002	0.10	28.20	0.79
709	838.25	10 yr ARI	2.48	64.00	66.24		66.24	0.000004	0.13	29.91	0.82
709	838.25	100 yr ARI	5.41	64.00	66.39		66.39	0.000012	0.25	35.20	0.94
709	820.54	5 yr ARI	1.72	64.00	66.19		66.20	0.000002	0.11	27.47	0.60
709	820.54	10 yr ARI	2.48	64.00	66.24		66.24	0.000003	0.15	29.64	0.64
709	820.54	100 yr ARI	5.41	64.00	66.39		66.39	0.000010	0.27	36.39	0.76
709	776.73	5 yr ARI	1.72	64.01	66.19		66.20	0.000001	0.06	30.34	1.27
709	776.73	10 yr ARI	2.48	64.01	66.24		66.24	0.000002	0.09	31.47	1.31
709	776.73	100 yr ARI	5.41	64.01	66.39		66.39	0.000006	0.17	34.96	1.41
709	767.44	5 yr ARI	1.72	66.00	66.17		66.19	0.002145	0.71	2.90	0.17
709	767.44	10 yr ARI	2.48	66.00	66.21		66.24	0.002280	0.84	3.56	0.20
709	767.44	100 yr ARI	5.41	66.00	66.32		66.38	0.002639	1.20	5.50	0.31
709	758.43	5 yr ARI	1.72	65.99	66.10	66.10	66.15	0.010115	1.11	1.85	0.11
709	758.43	10 yr ARI	2.48	65.99	66.13	66.13	66.20	0.009045	1.24	2.38	0.13
709	758.43	100 yr ARI	5.41	65.99	66.22	66.22	66.34	0.007387	1.60	4.06	0.22
709	748.19	5 yr ARI	1.72	64.00	64.09	64.26	65.69	0.430529	5.61	0.31	0.07
709	748.19	10 yr ARI	2.48	64.00	64.11	64.31	65.77	0.319950	5.70	0.44	0.09
709	748.19	100 yr ARI	5.41	64.00	64.20	64.47	65.96	0.176676	5.88	0.92	0.15
709	708.99	5 yr ARI	1.72	58.00	58.05	58.11	58.28	0.102314	2.10	0.82	0.05
709	708.99	10 yr ARI	2.48	58.00	58.06	58.14	58.39	0.119898	2.47	0.98	0.06
709	708.99	100 yr ARI	5.41	58.00	58.08	58.21	58.82	0.185242	3.44	1.43	0.07
27	641.72	5 yr ARI	5.30	54.00	54.14	54.38	55.60	0.171448	5.35	0.99	0.13
27	641.72	10 yr ARI	7.08	54.00	54.19	54.45	55.61	0.118479	5.28	1.34	0.17
27	641.72	100 yr ARI	14.50	54.00	54.35	54.69	55.82	0.058963	5.37	2.70	0.30
27	630.79	5 yr ARI	5.30	53.85	54.14	54.25	54.52	0.037012	2.75	1.93	0.15
27	630.79	10 yr ARI	7.08	53.85	54.17	54.30	54.65	0.037720	3.09	2.29	0.18

HEC-RAS Plan: 20block (Continued)

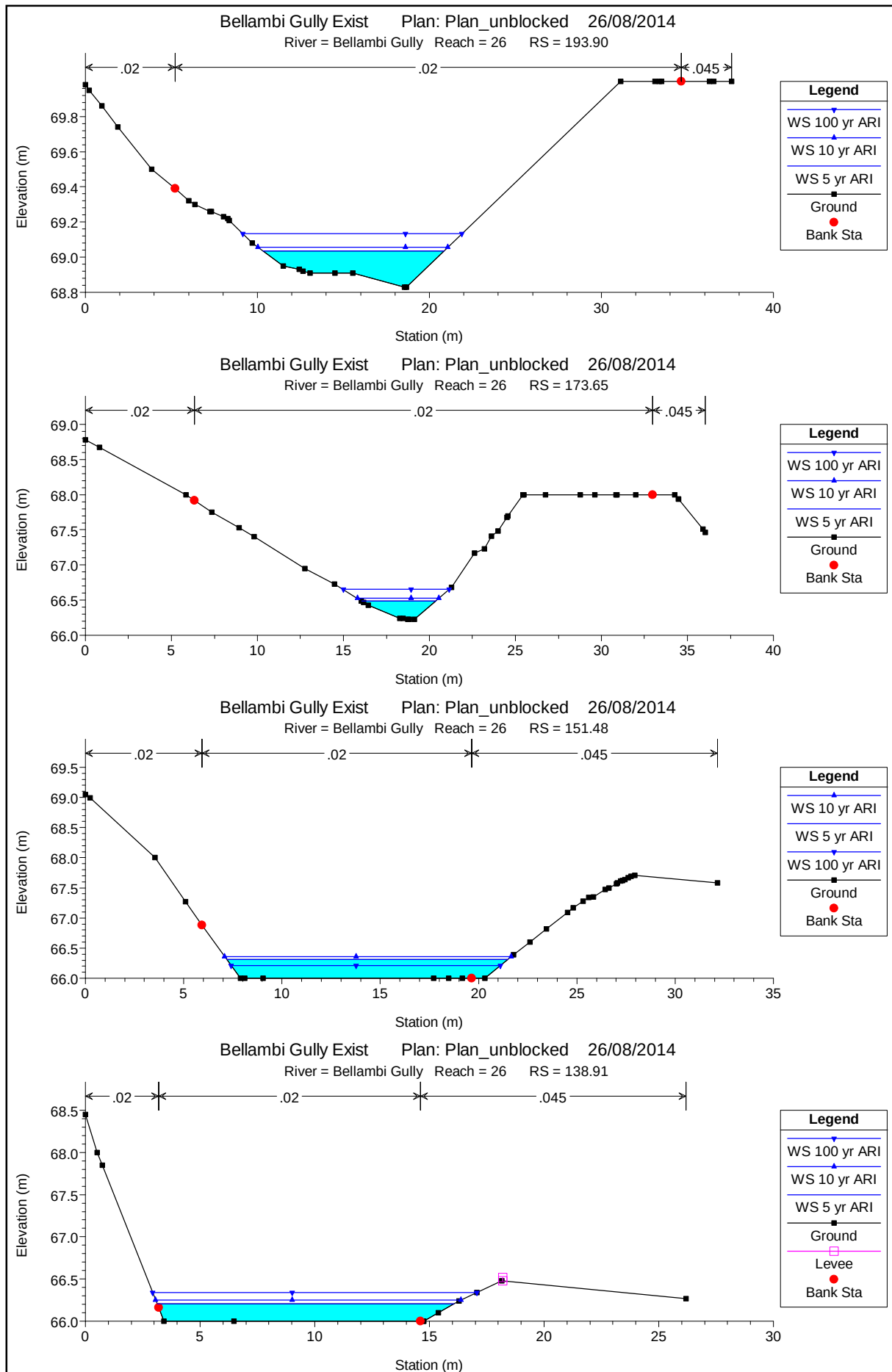
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
27	630.79	100 yr ARI	14.50	53.85	54.26	54.49	55.12	0.039578	4.09	3.54	0.27
27	621.04	5 yr ARI	5.30	52.00	52.40	52.72	53.90	0.083871	5.41	0.98	0.23
27	621.04	10 yr ARI	7.08	52.00	52.47	52.81	54.05	0.074143	5.57	1.27	0.27
27	621.04	100 yr ARI	14.50	52.00	52.67	53.11	54.55	0.057382	6.08	2.39	0.37
27	604.68	5 yr ARI	5.30	51.92	52.09	52.17	52.42	0.058724	2.56	2.08	0.10
27	604.68	10 yr ARI	7.08	51.92	52.10	52.21	52.56	0.067605	3.00	2.38	0.11
27	604.68	100 yr ARI	14.50	51.92	52.14	52.35	53.11	0.091387	4.37	3.35	0.15
27	551.35	5 yr ARI	5.30	48.00	48.11	48.23	48.63	0.086963	3.18	1.67	0.10
27	551.35	10 yr ARI	7.08	48.00	48.14	48.28	48.72	0.076743	3.36	2.10	0.12
27	551.35	100 yr ARI	14.50	48.00	48.22	48.42	49.03	0.063627	4.00	3.63	0.18
27	459.33	5 yr ARI	5.30	46.00	46.10	46.11	46.17	0.011831	1.15	4.63	0.10
27	459.33	10 yr ARI	7.08	46.00	46.12	46.14	46.21	0.012630	1.31	5.43	0.11
27	459.33	100 yr ARI	14.50	46.00	46.17	46.22	46.34	0.015071	1.79	8.18	0.15
27	433.25	5 yr ARI	5.30	45.26	45.56	45.63	45.77	0.020119	2.01	2.64	0.15
27	433.25	10 yr ARI	7.08	45.26	45.61	45.67	45.82	0.017003	2.03	3.49	0.17
27	433.25	100 yr ARI	14.50	45.26	45.74	45.81	45.99	0.010850	2.23	6.65	0.25
27	385.63	5 yr ARI	5.30	44.00	44.10	44.17	44.36	0.047300	2.27	2.35	0.09
27	385.63	10 yr ARI	7.08	44.00	44.11	44.20	44.47	0.053817	2.65	2.69	0.11
27	385.63	100 yr ARI	14.50	44.00	44.16	44.33	44.88	0.068267	3.80	3.86	0.15
27	312.82	5 yr ARI	5.30	41.52	41.81	41.89	42.05	0.022389	2.16	2.45	0.16
27	312.82	10 yr ARI	7.08	41.52	41.85	41.94	42.12	0.020901	2.28	3.11	0.18
27	312.82	100 yr ARI	14.50	41.52	41.97	42.09	42.34	0.019680	2.69	5.38	0.24
27	296.44	5 yr ARI	5.30	40.00	40.17	40.33	41.18	0.178800	4.63	1.25	0.11
27	296.44	10 yr ARI	7.08	40.00	40.19	40.38	41.28	0.183063	4.78	1.60	0.11
27	296.44	100 yr ARI	14.50	40.00	40.28	40.54	41.59	0.116120	5.23	2.98	0.17
27	240.96	5 yr ARI	5.30	40.00	40.14	40.13	40.19	0.005797	1.01	5.29	0.14
27	240.96	10 yr ARI	7.08	40.00	40.17	40.17	40.23	0.005382	1.10	6.49	0.16
27	240.96	100 yr ARI	14.50	40.00	40.18	40.25	40.41	0.019383	2.15	6.80	0.17
27	231.57	5 yr ARI	5.30	40.00	38.14	38.39	39.73	0.188640		0.95	0.13
27	231.57	10 yr ARI	7.08	40.00	38.18	38.46	39.85	0.146789		1.23	0.16
27	231.57	100 yr ARI	14.50	40.00	38.36	38.72	39.85	0.056404		2.68	0.31
27	222.27	5 yr ARI	5.30	40.00	38.15	38.27	38.61	0.053661		1.76	0.13
27	222.27	10 yr ARI	7.08	40.00	38.17	38.32	38.76	0.060023		2.08	0.15
27	222.27	100 yr ARI	14.50	40.00	38.26	38.48	39.17	0.060834		3.43	0.20
27	200.28	5 yr ARI	5.30	40.00	38.05	38.05	38.09	0.008308		6.06	0.08
27	200.28	10 yr ARI	7.08	40.00	38.06	38.07	38.12	0.011087		6.62	0.09
27	200.28	100 yr ARI	14.50	40.00	38.09	38.12	38.23	0.019257		8.66	0.12
27	174.18	5 yr ARI	5.30	40.00	36.29	36.39	37.31	0.436637		1.19	0.05
27	174.18	10 yr ARI	7.08	40.00	36.31	36.42	37.20	0.294531		1.69	0.05
27	174.18	100 yr ARI	14.50	40.00	36.37	36.51	37.12	0.119257		3.78	0.10
27	136.26	5 yr ARI	5.30	36.00	36.10	36.09	36.14	0.031770	0.84	6.28	0.10
27	136.26	10 yr ARI	7.08	36.00	36.12	36.11	36.16	0.027507	0.91	7.81	0.12
27	136.26	100 yr ARI	14.50	36.00	36.19	36.17	36.26	0.025537	1.18	12.32	0.19
27	125.17	5 yr ARI	5.30	35.38	35.69	35.69	35.76	0.036826	1.21	4.37	0.15
27	125.17	10 yr ARI	7.08	35.38	35.72	35.72	35.81	0.036059	1.30	5.45	0.17
27	125.17	100 yr ARI	14.50	35.38	35.84	35.84	35.95	0.031962	1.50	9.68	0.23
27	103.64	5 yr ARI	5.30	33.76	34.02	34.10	34.29	0.214165	2.30	2.31	0.11
27	103.64	10 yr ARI	7.08	33.76	34.04	34.13	34.36	0.203872	2.52	2.81	0.13
27	103.64	100 yr ARI	14.50	33.76	34.11	34.26	34.63	0.191088	3.18	4.55	0.19
27	93.05	5 yr ARI	5.30	32.56	32.94	33.06	33.31	0.050775	2.69	1.97	0.12
27	93.05	10 yr ARI	7.08	32.56	32.97	33.09	33.40	0.050237	2.91	2.43	0.13
27	93.05	100 yr ARI	14.50	32.56	33.05	33.22	33.71	0.048446	3.59	4.04	0.19
27	66.78	5 yr ARI	5.30	30.00	30.13	30.24	30.57	0.058172	2.94	1.80	0.12
27	66.78	10 yr ARI	7.08	30.00	30.15	30.29	30.69	0.057089	3.26	2.17	0.14
27	66.78	100 yr ARI	14.50	30.00	30.24	30.46	31.11	0.053451	4.15	3.49	0.22
27	27.36	5 yr ARI	5.30	28.00	30.00	28.49	30.00	0.000008	0.19	44.69	0.87
27	27.36	10 yr ARI	7.08	28.00	30.00	28.58	30.00	0.000014	0.26	44.69	0.87
27	27.36	100 yr ARI	14.50	28.00	30.00	28.87	30.01	0.000058	0.53	44.69	0.87

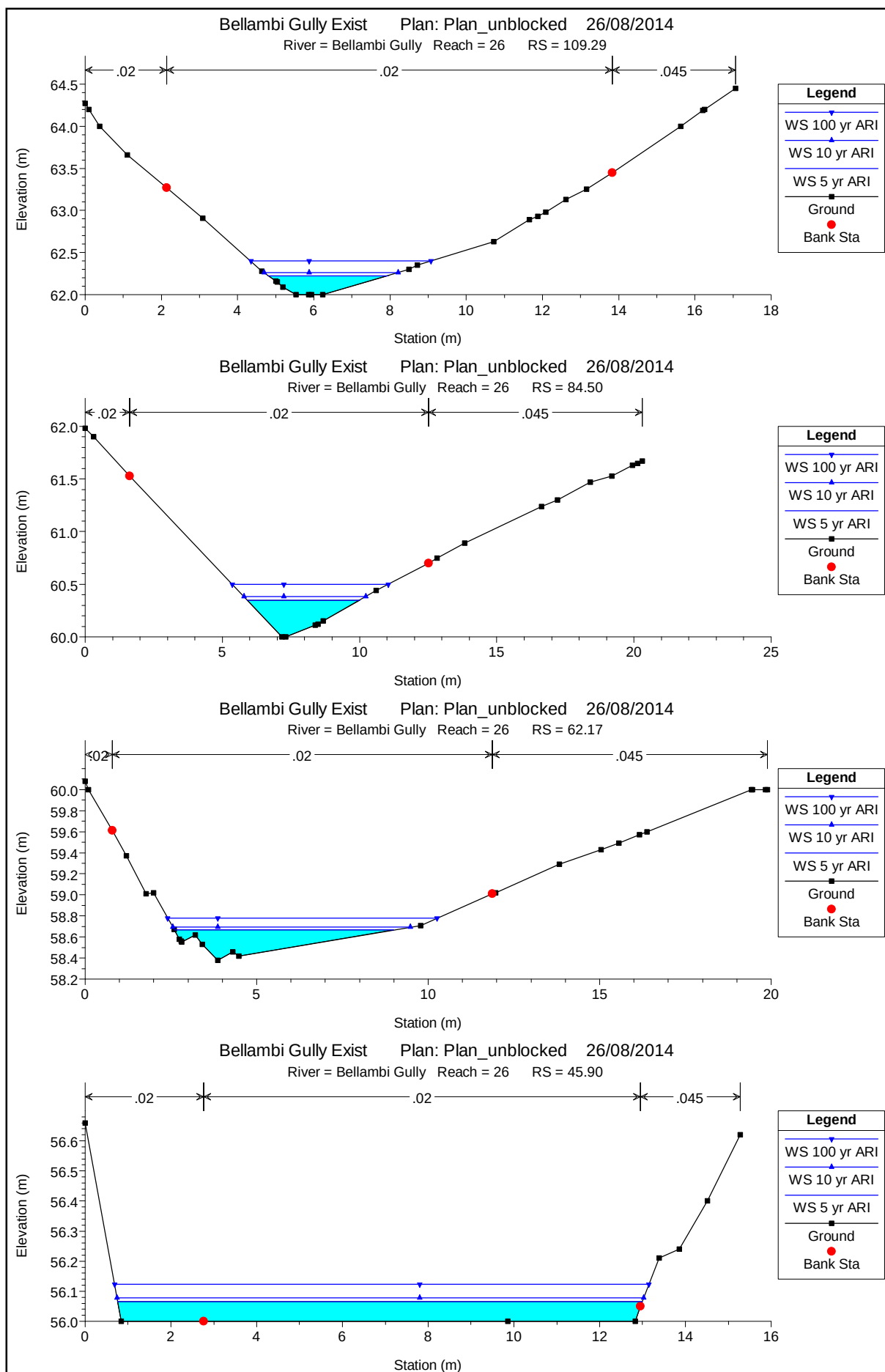
Plan View Scenario 3

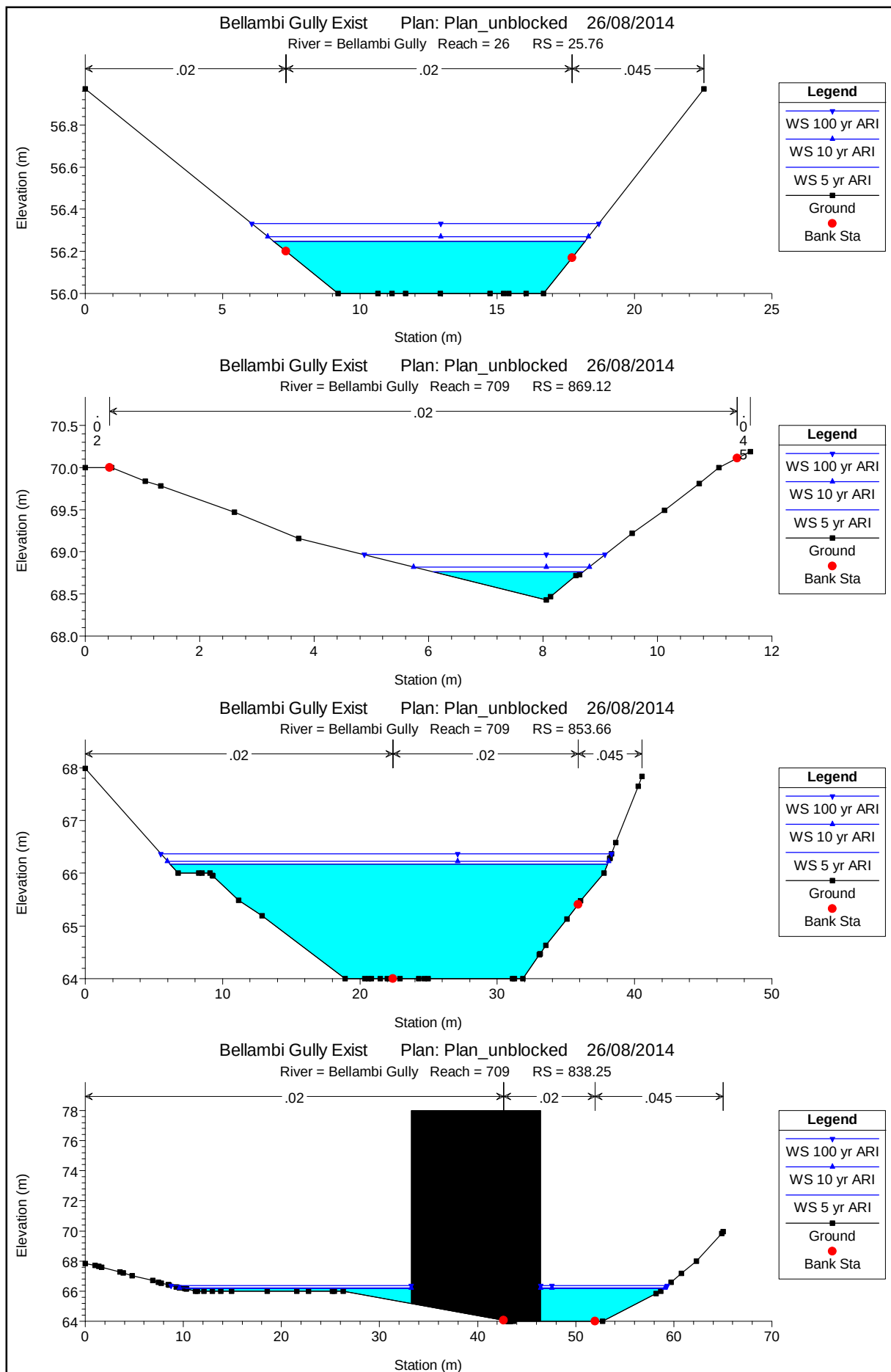
Bellambi Gully Exist Plan: Plan_unblocked 26/08/2014

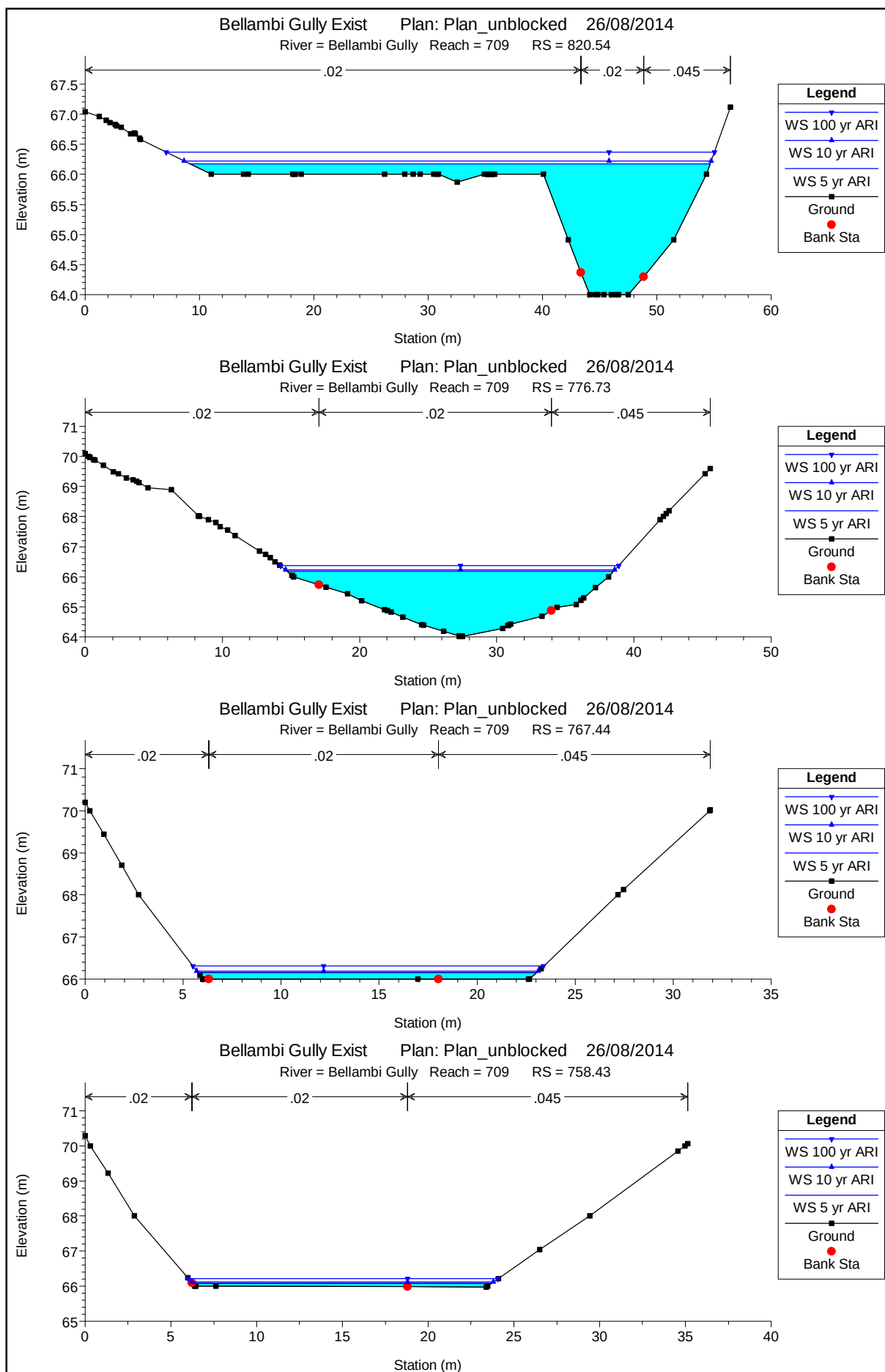


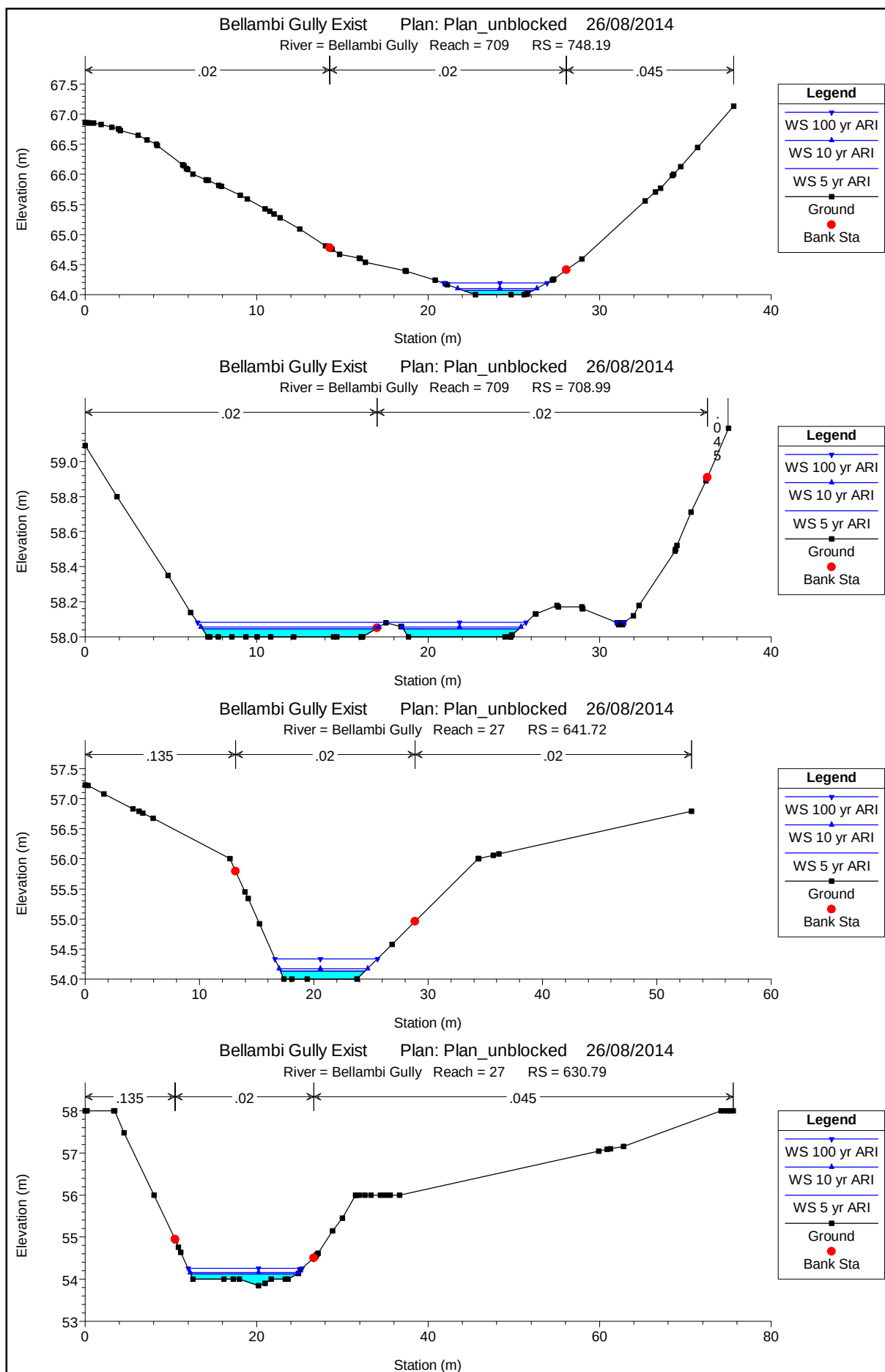
Cross Sections

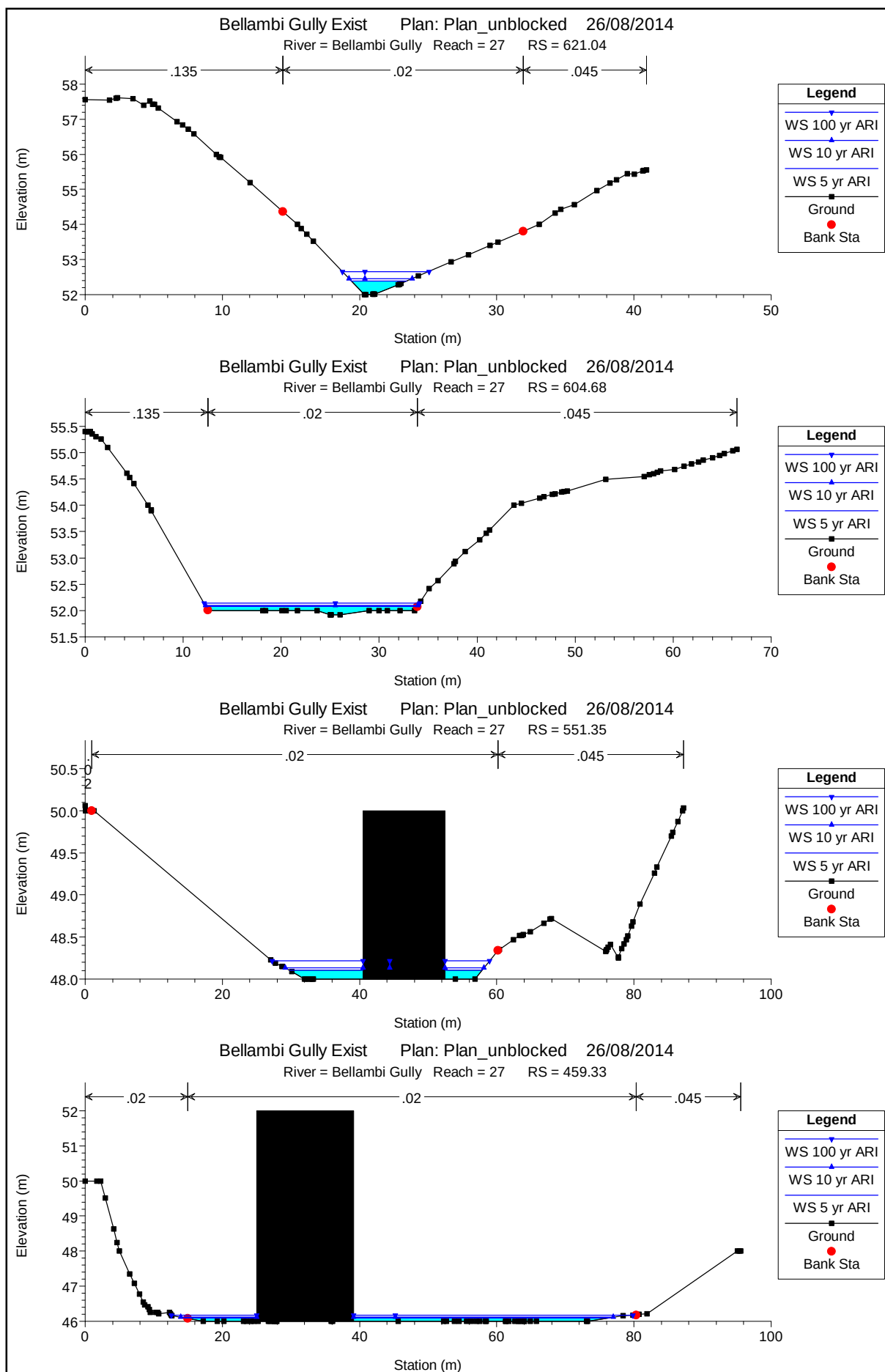


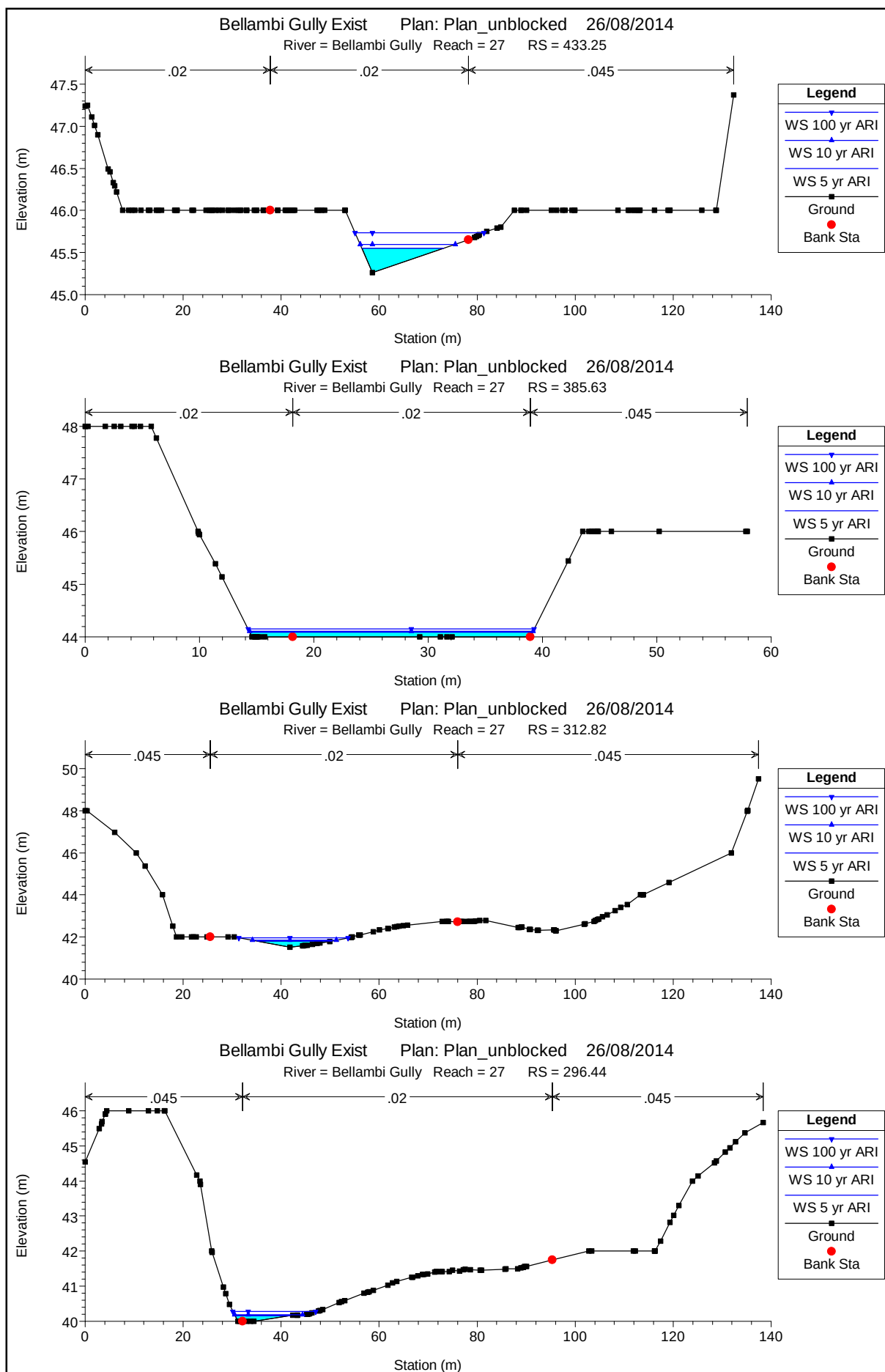


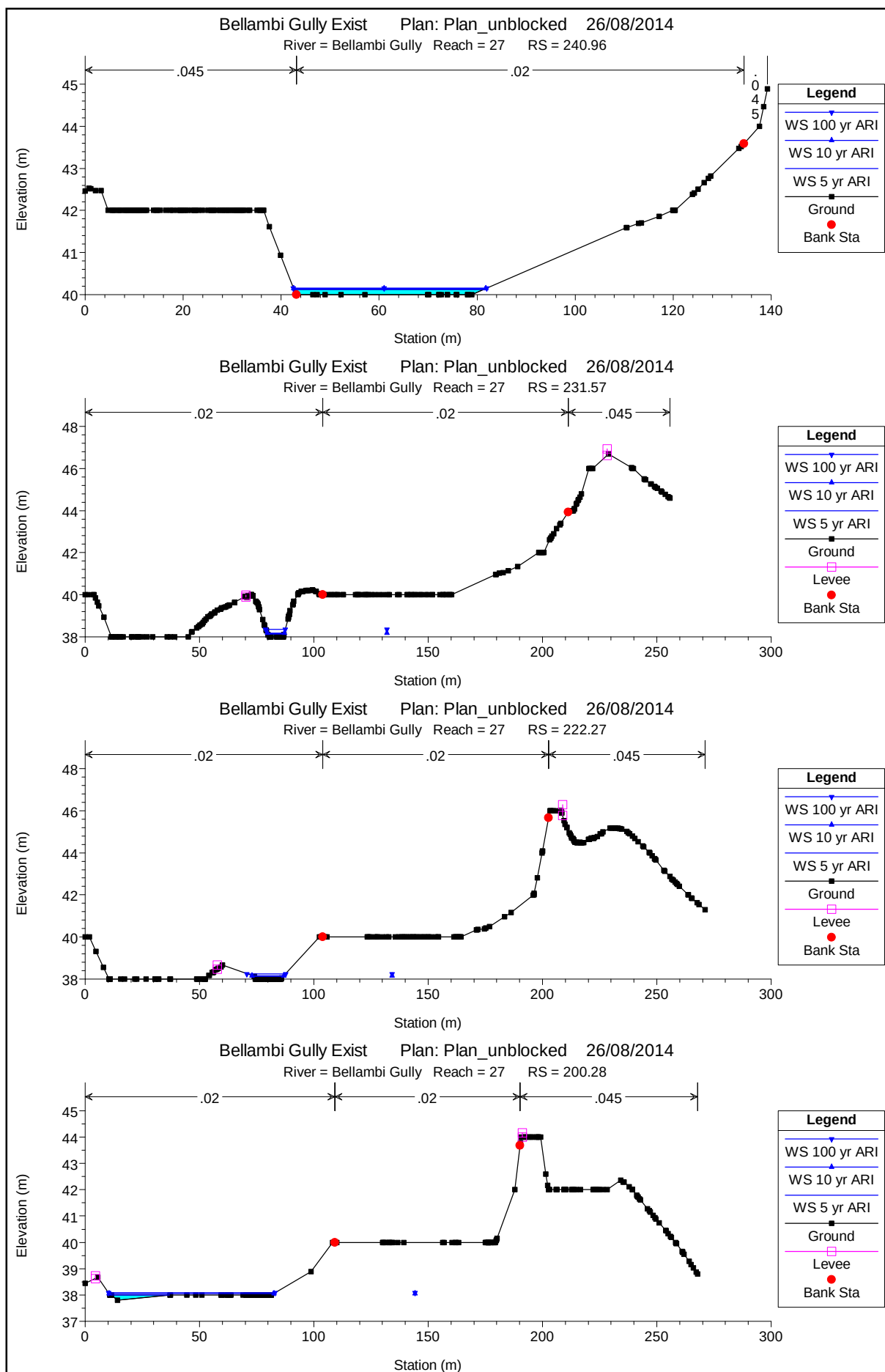


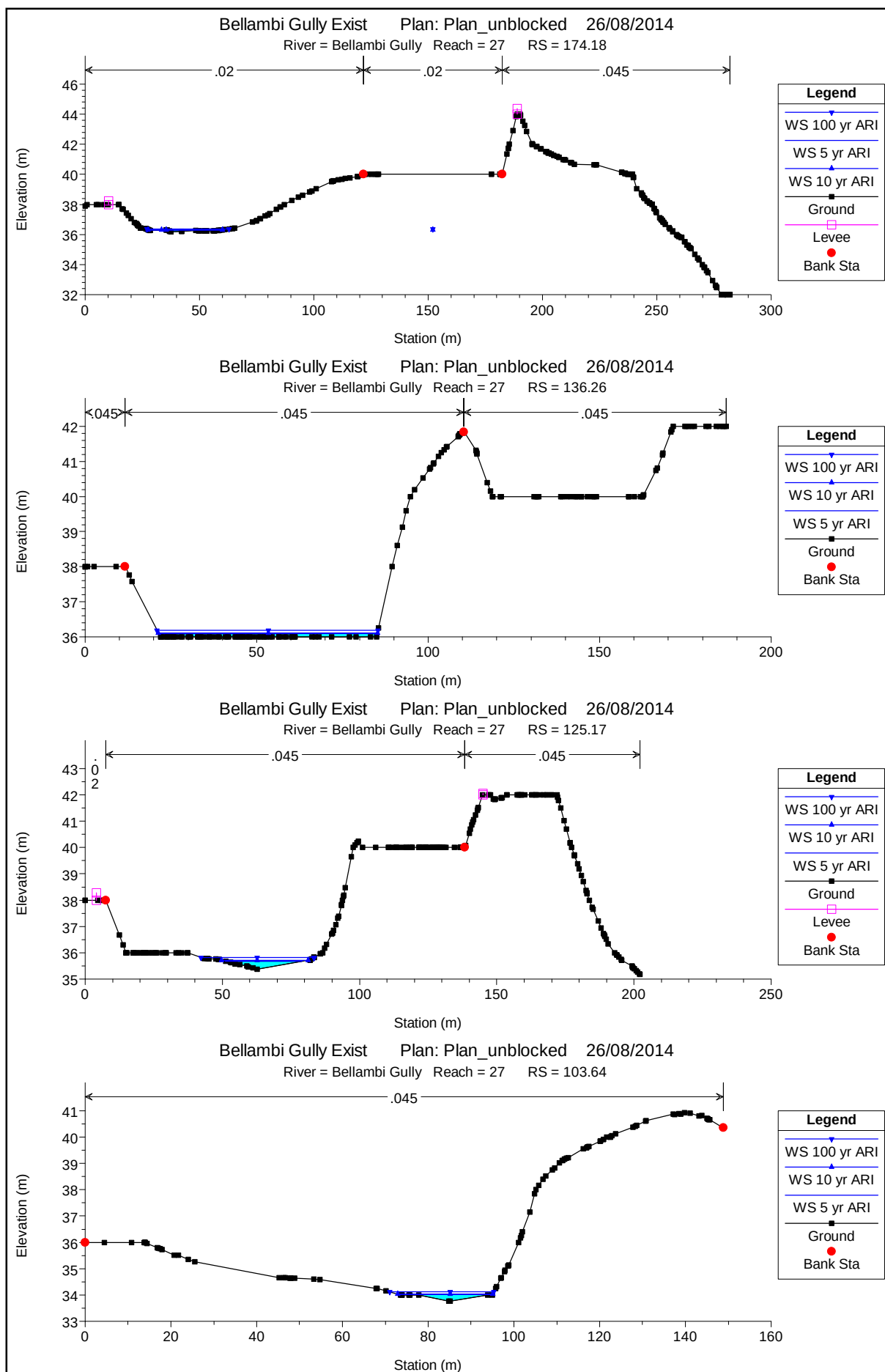


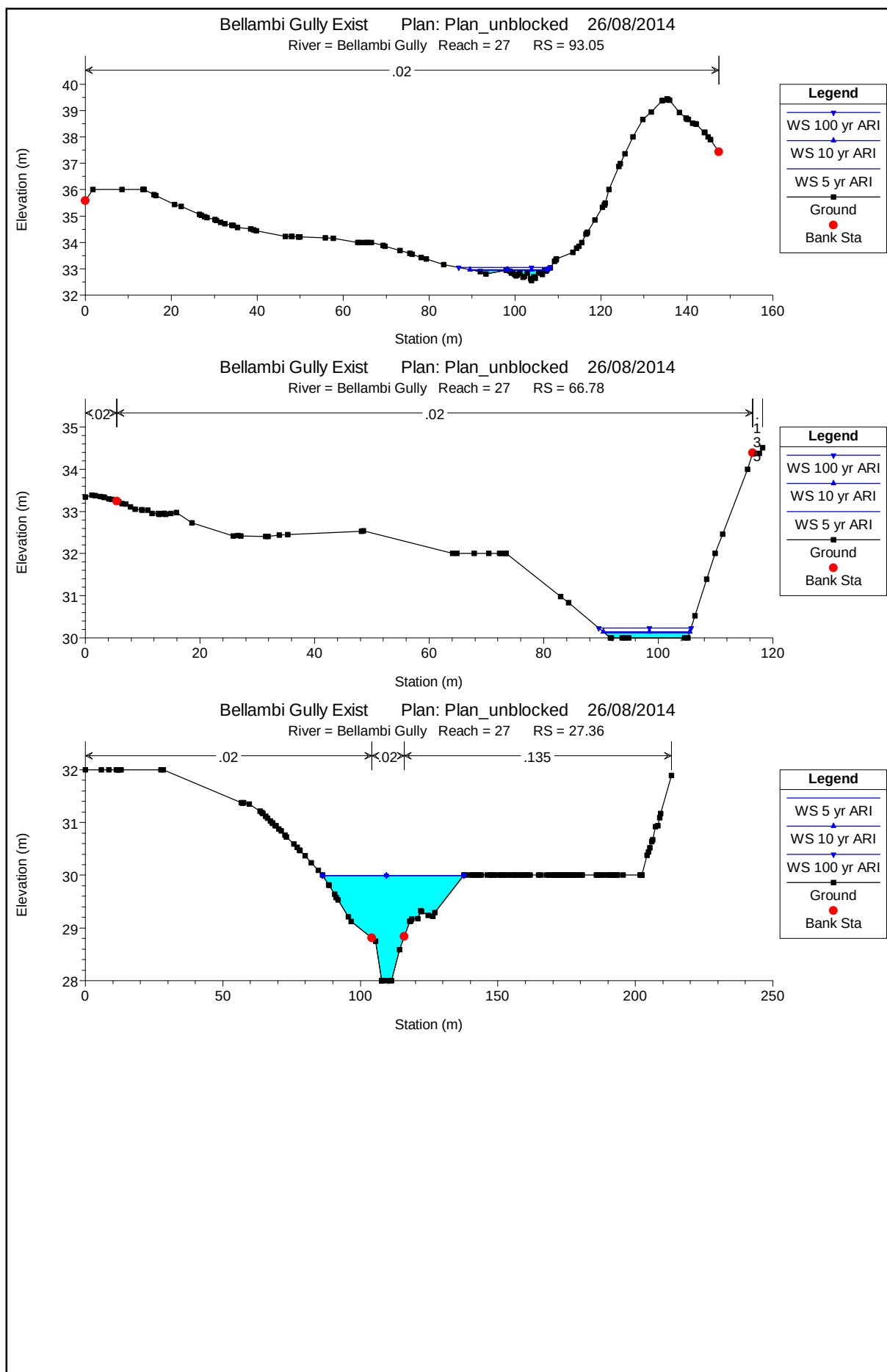












HEC-RAS Plan: unblock

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
26	193.90	5 yr ARI	3.42	68.83	69.03	69.14	69.41	0.050026	2.72	1.26	0.12
26	193.90	10 yr ARI	4.43	68.83	69.06	69.18	69.50	0.050066	2.95	1.50	0.14
26	193.90	100 yr ARI	8.92	68.83	69.13	69.32	69.83	0.050039	3.69	2.42	0.19
26	173.65	5 yr ARI	3.42	66.23	66.49	66.73	67.80	0.124755	5.08	0.67	0.16
26	173.65	10 yr ARI	4.43	66.23	66.53	66.79	67.94	0.113084	5.27	0.84	0.18
26	173.65	100 yr ARI	8.92	66.23	66.65	66.99	68.40	0.089580	5.85	1.52	0.25
26	151.48	5 yr ARI	3.42	66.00	66.31	66.19	66.35	0.001488	0.87	4.19	0.29
26	151.48	10 yr ARI	4.43	66.00	66.36	66.23	66.41	0.001558	0.97	4.87	0.33
26	151.48	100 yr ARI	8.92	66.00	66.21	66.37	66.79	0.038292	3.41	2.76	0.20
26	138.91	5 yr ARI	3.42	66.00	66.20	66.20	66.31	0.007016	1.44	2.49	0.19
26	138.91	10 yr ARI	4.43	66.00	66.25	66.25	66.37	0.005991	1.52	3.08	0.23
26	138.91	100 yr ARI	8.92	66.00	66.34	66.39	66.59	0.008359	2.22	4.34	0.31
26	109.29	5 yr ARI	3.42	62.00	62.23	62.55	65.37	0.349035	7.85	0.44	0.14
26	109.29	10 yr ARI	4.43	62.00	62.26	62.62	65.50	0.304257	7.98	0.56	0.16
26	109.29	100 yr ARI	8.92	62.00	62.40	62.84	65.62	0.176648	7.95	1.12	0.24
26	84.50	5 yr ARI	3.42	60.00	60.35	60.57	61.33	0.072360	4.40	0.78	0.19
26	84.50	10 yr ARI	4.43	60.00	60.38	60.64	61.55	0.075484	4.78	0.93	0.21
26	84.50	100 yr ARI	8.92	60.00	60.50	60.85	62.28	0.083659	5.91	1.51	0.27
26	62.17	5 yr ARI	3.42	58.38	58.67	58.83	59.46	0.092117	3.96	0.86	0.14
26	62.17	10 yr ARI	4.43	58.38	58.69	58.89	59.61	0.092271	4.25	1.04	0.15
26	62.17	100 yr ARI	8.92	58.38	58.78	59.07	60.23	0.091352	5.33	1.67	0.21
26	45.90	5 yr ARI	3.42	56.00	56.07	56.20	57.01	0.285735	4.33	0.79	0.06
26	45.90	10 yr ARI	4.43	56.00	56.08	56.24	57.21	0.271267	4.72	0.94	0.08
26	45.90	100 yr ARI	8.92	56.00	56.12	56.38	57.93	0.236518	6.00	1.50	0.12
26	25.76	5 yr ARI	3.42	56.00	56.25	56.25	56.36	0.006542	1.48	2.34	0.21
26	25.76	10 yr ARI	4.43	56.00	56.27	56.29	56.42	0.007971	1.74	2.59	0.22
26	25.76	100 yr ARI	8.92	56.00	56.33	56.45	56.72	0.014866	2.76	3.35	0.26
709	869.12	5 yr ARI	1.40	68.43	68.76	68.91	69.30	0.050032	3.26	0.43	0.16
709	869.12	10 yr ARI	2.16	68.43	68.82	69.00	69.49	0.050041	3.64	0.59	0.19
709	869.12	100 yr ARI	5.08	68.43	68.97	69.23	70.00	0.050062	4.51	1.13	0.27
709	853.66	5 yr ARI	1.40	64.00	66.18	64.12	66.18	0.000000	0.03	47.23	1.48
709	853.66	10 yr ARI	2.16	64.00	66.22	64.14	66.22	0.000000	0.05	48.77	1.52
709	853.66	100 yr ARI	5.08	64.00	66.37	64.24	66.37	0.000002	0.11	53.61	1.63
709	838.25	5 yr ARI	1.40	64.00	66.18		66.18	0.000001	0.08	27.50	0.77
709	838.25	10 yr ARI	2.16	64.00	66.22		66.22	0.000003	0.12	29.22	0.81
709	838.25	100 yr ARI	5.08	64.00	66.37		66.37	0.000011	0.23	34.66	0.93
709	820.54	5 yr ARI	1.40	64.00	66.18		66.18	0.000001	0.09	26.57	0.58
709	820.54	10 yr ARI	2.16	64.00	66.22		66.22	0.000003	0.13	28.77	0.62
709	820.54	100 yr ARI	5.08	64.00	66.37		66.37	0.000009	0.26	35.71	0.74
709	776.73	5 yr ARI	1.40	64.01	66.18		66.18	0.000001	0.05	29.87	1.26
709	776.73	10 yr ARI	2.16	64.01	66.22		66.22	0.000001	0.08	31.01	1.29
709	776.73	100 yr ARI	5.08	64.01	66.37		66.37	0.000005	0.17	34.61	1.40
709	767.44	5 yr ARI	1.40	66.00	66.16		66.17	0.001921	0.63	2.65	0.15
709	767.44	10 yr ARI	2.16	66.00	66.19		66.22	0.002214	0.79	3.30	0.19
709	767.44	100 yr ARI	5.08	66.00	66.31		66.37	0.002609	1.16	5.30	0.30
709	758.43	5 yr ARI	1.40	65.99	66.08	66.08	66.13	0.013062	1.10	1.51	0.09
709	758.43	10 yr ARI	2.16	65.99	66.12	66.12	66.18	0.009437	1.19	2.16	0.12
709	758.43	100 yr ARI	5.08	65.99	66.21	66.21	66.32	0.007560	1.57	3.88	0.21
709	748.19	5 yr ARI	1.40	64.00	64.07	64.23	65.59	0.485661	5.46	0.26	0.06
709	748.19	10 yr ARI	2.16	64.00	64.10	64.29	65.73	0.355905	5.66	0.38	0.08
709	748.19	100 yr ARI	5.08	64.00	64.19	64.45	65.95	0.184210	5.87	0.87	0.14
709	708.99	5 yr ARI	1.40	58.00	58.05	58.09	58.23	0.095911	1.91	0.73	0.04
709	708.99	10 yr ARI	2.16	58.00	58.06	58.12	58.34	0.112844	2.33	0.91	0.05
709	708.99	100 yr ARI	5.08	58.00	58.08	58.20	58.77	0.178725	3.33	1.39	0.07
27	641.72	5 yr ARI	4.81	54.00	54.13	54.36	55.61	0.195907	5.39	0.89	0.12
27	641.72	10 yr ARI	6.59	54.00	54.18	54.43	55.61	0.131291	5.32	1.24	0.16
27	641.72	100 yr ARI	14.01	54.00	54.34	54.68	55.80	0.060685	5.36	2.61	0.29
27	630.79	5 yr ARI	4.81	53.85	54.13	54.23	54.49	0.036651	2.65	1.82	0.15
27	630.79	10 yr ARI	6.59	53.85	54.16	54.29	54.62	0.037734	3.01	2.19	0.17

HEC-RAS Plan: unblock (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Hydr Depth (m)
27	630.79	100 yr ARI	14.01	53.85	54.26	54.48	55.09	0.039707	4.05	3.46	0.26
27	621.04	5 yr ARI	4.81	52.00	52.38	52.69	53.85	0.087769	5.36	0.90	0.22
27	621.04	10 yr ARI	6.59	52.00	52.45	52.79	54.01	0.076318	5.53	1.19	0.26
27	621.04	100 yr ARI	14.01	52.00	52.66	53.09	54.52	0.058029	6.05	2.32	0.37
27	604.68	5 yr ARI	4.81	51.92	52.08	52.16	52.38	0.055159	2.41	2.00	0.09
27	604.68	10 yr ARI	6.59	51.92	52.10	52.20	52.52	0.064594	2.87	2.31	0.11
27	604.68	100 yr ARI	14.01	51.92	52.14	52.34	53.08	0.090517	4.29	3.29	0.15
27	551.35	5 yr ARI	4.81	48.00	48.11	48.22	48.61	0.092437	3.13	1.53	0.09
27	551.35	10 yr ARI	6.59	48.00	48.13	48.27	48.70	0.079565	3.32	1.98	0.12
27	551.35	100 yr ARI	14.01	48.00	48.22	48.41	49.01	0.063880	3.96	3.54	0.18
27	459.33	5 yr ARI	4.81	46.00	46.10	46.11	46.16	0.011510	1.10	4.39	0.09
27	459.33	10 yr ARI	6.59	46.00	46.12	46.13	46.20	0.012458	1.27	5.22	0.11
27	459.33	100 yr ARI	14.01	46.00	46.17	46.21	46.33	0.014932	1.76	8.02	0.15
27	433.25	5 yr ARI	4.81	45.26	45.55	45.61	45.75	0.021091	2.00	2.41	0.14
27	433.25	10 yr ARI	6.59	45.26	45.60	45.66	45.80	0.017580	2.02	3.27	0.17
27	433.25	100 yr ARI	14.01	45.26	45.73	45.80	45.98	0.011105	2.21	6.45	0.25
27	385.63	5 yr ARI	4.81	44.00	44.09	44.16	44.33	0.045342	2.16	2.24	0.09
27	385.63	10 yr ARI	6.59	44.00	44.11	44.19	44.44	0.052556	2.56	2.59	0.10
27	385.63	100 yr ARI	14.01	44.00	44.15	44.32	44.86	0.067870	3.74	3.79	0.15
27	312.82	5 yr ARI	4.81	41.52	41.80	41.88	42.03	0.022984	2.12	2.27	0.15
27	312.82	10 yr ARI	6.59	41.52	41.84	41.93	42.10	0.021131	2.24	2.94	0.17
27	312.82	100 yr ARI	14.01	41.52	41.96	42.08	42.32	0.019622	2.67	5.25	0.24
27	296.44	5 yr ARI	4.81	40.00	40.16	40.32	41.14	0.183366	4.55	1.15	0.10
27	296.44	10 yr ARI	6.59	40.00	40.19	40.36	41.25	0.186988	4.73	1.50	0.11
27	296.44	100 yr ARI	14.01	40.00	40.27	40.53	41.58	0.118899	5.21	2.89	0.17
27	240.96	5 yr ARI	4.81	40.00	40.12	40.12	40.18	0.007994	1.07	4.51	0.12
27	240.96	10 yr ARI	6.59	40.00	40.15	40.15	40.22	0.007971	1.21	5.49	0.14
27	240.96	100 yr ARI	14.01	40.00	40.16	40.24	40.45	0.028918	2.40	5.88	0.15
27	231.57	5 yr ARI	4.81	40.00	38.13	38.37	39.71	0.208884		0.86	0.12
27	231.57	10 yr ARI	6.59	40.00	38.17	38.45	39.78	0.150244		1.17	0.16
27	231.57	100 yr ARI	14.01	40.00	38.36	38.70	39.78	0.054503		2.65	0.31
27	222.27	5 yr ARI	4.81	40.00	38.14	38.25	38.57	0.051850		1.66	0.13
27	222.27	10 yr ARI	6.59	40.00	38.16	38.31	38.71	0.056651		2.02	0.14
27	222.27	100 yr ARI	14.01	40.00	38.25	38.47	39.12	0.058484		3.40	0.20
27	200.28	5 yr ARI	4.81	40.00	38.00	38.04	38.21	0.038634		2.37	0.09
27	200.28	10 yr ARI	6.59	40.00	38.06	38.06	38.11	0.010414		6.45	0.09
27	200.28	100 yr ARI	14.01	40.00	38.09	38.12	38.22	0.018578		8.57	0.12
27	174.18	5 yr ARI	4.81	40.00	36.32	36.38	36.61	0.100700		1.99	0.06
27	174.18	10 yr ARI	6.59	40.00	36.30	36.41	37.22	0.324145		1.55	0.05
27	174.18	100 yr ARI	14.01	40.00	36.36	36.51	37.12	0.125849		3.63	0.10
27	136.26	5 yr ARI	4.81	36.00	36.09	36.09	36.13	0.033032	0.82	5.85	0.09
27	136.26	10 yr ARI	6.59	36.00	36.11	36.10	36.16	0.031175	0.92	7.20	0.11
27	136.26	100 yr ARI	14.01	36.00	36.19	36.17	36.26	0.024786	1.15	12.17	0.19
27	125.17	5 yr ARI	4.81	35.38	35.68	35.68	35.75	0.035713	1.17	4.12	0.15
27	125.17	10 yr ARI	6.59	35.38	35.72	35.72	35.80	0.033435	1.24	5.32	0.17
27	125.17	100 yr ARI	14.01	35.38	35.83	35.83	35.94	0.034098	1.51	9.25	0.22
27	103.64	5 yr ARI	4.81	33.76	34.01	34.08	34.27	0.230352	2.27	2.12	0.10
27	103.64	10 yr ARI	6.59	33.76	34.03	34.12	34.37	0.237968	2.57	2.56	0.12
27	103.64	100 yr ARI	14.01	33.76	34.12	34.26	34.60	0.178161	3.08	4.56	0.19
27	93.05	5 yr ARI	4.81	32.56	32.94	33.04	33.28	0.049739	2.60	1.85	0.11
27	93.05	10 yr ARI	6.59	32.56	32.97	33.08	33.37	0.049349	2.83	2.33	0.13
27	93.05	100 yr ARI	14.01	32.56	33.05	33.22	33.69	0.048616	3.55	3.94	0.18
27	66.78	5 yr ARI	4.81	30.00	30.12	30.23	30.53	0.059605	2.86	1.68	0.11
27	66.78	10 yr ARI	6.59	30.00	30.14	30.28	30.66	0.058243	3.19	2.06	0.14
27	66.78	100 yr ARI	14.01	30.00	30.23	30.45	31.09	0.053628	4.11	3.41	0.21
27	27.36	5 yr ARI	4.81	28.00	30.00	28.47	30.00	0.000006	0.18	44.69	0.87
27	27.36	10 yr ARI	6.59	28.00	30.00	28.56	30.00	0.000012	0.24	44.69	0.87
27	27.36	100 yr ARI	14.01	28.00	30.00	28.86	30.01	0.000054	0.51	44.69	0.87

APPENDIX C

EXISTING SCENARIO FLOOD MAPS





Scenario 2 (20% blocked pipes)

BELLAMBI GULLY FLOOD STUDY

1:2,500 Scale at A3

Metres
0 40 80 120 160



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
Date: 2014-06-27
Coordinate System: GDA 1994 MGA Zone 56
Project: 82014089-01
Map: G1002_Scenario2_20perc.mxd 02
Aerial imagery supplied by nearmap (July 2013)



Scenario 3 (Unblocked)

BELLAMBI GULLY FLOOD STUDY

1:2,500 Scale at A3

Metres
0 40 80 120 160



Map Produced by Cardno NSW/ACT Pty Ltd (WOL)
Date: 2014-06-27
Coordinate System: GDA 1994 MGA Zone 56
Project: 82014089-01
Map: G1003_Scenario3_unblocked.mxd 02
Aerial imagery supplied by nearmap (July 2013)