

HEC-RAS Plan: Plan 01 River: 1 Reach: 1

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)	Top Width (m)	Froude # Chl
1	1643.340	Q=5	5.00	477.16	477.88	477.88	478.11	0.022040	2.13	2.35	5.09	1.00
1	1643.340	Q=10	10.00	477.16	478.17	478.17	478.50	0.020278	2.56	3.91	5.92	1.00
1	1643.340	Q=15	15.00	477.16	478.40	478.40	478.79	0.019289	2.79	5.38	6.84	1.00
1	1643.340	Q=20	20.00	477.16	478.58	478.58	479.03	0.018784	2.97	6.73	7.59	1.01
1	1643.340	Q10	28.00	477.16	478.84	478.84	479.36	0.017950	3.19	8.77	8.53	1.00
1	1643.340	Q=40	40.00	477.16	479.20	479.20	479.71	0.017823	3.14	12.72	12.83	1.01
1	1643.340	Q=50	50.00	477.16	479.41	479.41	479.93	0.017305	3.21	15.57	14.95	1.00
1	1643.340	Q100	61.00	477.16	479.56	479.56	480.15	0.017014	3.41	17.90	15.38	1.01
1	1643.340	Q500	85.40	477.16	479.98	479.98	480.58	0.017415	3.43	24.88	21.27	1.01
1	1643.340	Qproj	53.00	477.16	479.45	479.45	480.00	0.017452	3.27	16.23	15.29	1.01
1	1615.800	Q=5	5.00	476.78	477.55	477.43	477.67	0.010620	1.56	3.20	6.43	0.71
1	1615.800	Q=10	10.00	476.78	477.75	477.68	478.00	0.014753	2.20	4.54	6.81	0.86
1	1615.800	Q=15	15.00	476.78	477.89	477.88	478.27	0.018527	2.72	5.52	7.08	0.98
1	1615.800	Q=20	20.00	476.78	478.05	478.05	478.51	0.019088	3.01	6.64	7.38	1.01
1	1615.800	Q10	28.00	476.78	478.41	478.41	478.77	0.019270	2.64	10.59	14.92	1.00
1	1615.800	Q=40	40.00	476.78	478.61	478.61	479.04	0.018705	2.88	13.91	16.81	1.01
1	1615.800	Q=50	50.00	476.78	478.75	478.75	479.23	0.017991	3.09	16.20	16.93	1.01
1	1615.800	Q100	61.00	476.78	478.88	478.88	479.44	0.017995	3.32	18.37	17.04	1.02
1	1615.800	Q500	85.40	476.78	479.25	479.25	479.82	0.017037	3.33	25.62	22.52	1.00
1	1615.800	Qproj	53.00	476.78	478.79	478.79	479.29	0.017504	3.13	16.95	16.97	1.00
1	1593.490	Q=5	5.00	476.72	477.16	477.16	477.33	0.023862	1.80	2.77	8.45	1.01
1	1593.490	Q=10	10.00	476.72	477.36	477.36	477.60	0.021484	2.14	4.67	10.11	1.01
1	1593.490	Q=15	15.00	476.72	477.52	477.52	477.81	0.020380	2.36	6.36	11.38	1.01
1	1593.490	Q=20	20.00	476.72	477.66	477.66	477.98	0.019287	2.51	7.98	12.48	1.00
1	1593.490	Q10	28.00	476.72	478.05		478.27	0.008753	2.08	13.48	15.28	0.71
1	1593.490	Q=40	40.00	476.72	478.27		478.56	0.008731	2.37	16.91	15.43	0.72
1	1593.490	Q=50	50.00	476.72	478.48		478.79	0.010288	2.48	20.14	19.33	0.78
1	1593.490	Q100	61.00	476.72	478.65		478.98	0.011194	2.56	23.81	23.06	0.80
1	1593.490	Q500	85.40	476.72	479.01		479.35	0.009081	2.59	33.00	26.10	0.73
1	1593.490	Qproj	53.00	476.72	478.53		478.85	0.010688	2.50	21.17	20.60	0.79
1	1590.640	Q=5	5.00	475.97	476.74		476.85	0.007751	1.43	3.48	5.78	0.59
1	1590.640	Q=10	10.00	475.97	477.10		477.26	0.007331	1.78	5.62	6.10	0.59

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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)	Top Width (m)	Froude # Chl
1	1590.640	Q=15	15.00	475.97	477.37		477.59	0.007690	2.06	7.28	6.34	0.61
1	1590.640	Q=20	20.00	475.97	477.67		477.89	0.009183	2.07	9.64	10.08	0.68
1	1590.640	Q10	28.00	475.97	478.05		478.24	0.007572	1.93	14.51	15.18	0.63
1	1590.640	Q=40	40.00	475.97	478.27		478.52	0.008288	2.21	18.13	16.65	0.67
1	1590.640	Q=50	50.00	475.97	478.48		478.74	0.010220	2.27	21.99	23.13	0.74
1	1590.640	Q100	61.00	475.97	478.66		478.93	0.009332	2.31	26.44	25.20	0.72
1	1590.640	Q500	85.40	475.97	479.02		479.31	0.007654	2.37	35.98	27.87	0.67
1	1590.640	Qproj	53.00	475.97	478.54		478.80	0.010117	2.27	23.32	24.39	0.74
1	1570.770	Q=5	5.00	475.72	476.40	476.37	476.61	0.018322	2.04	2.45	4.85	0.91
1	1570.770	Q=10	10.00	475.72	476.66	476.66	477.02	0.020725	2.65	3.78	5.39	1.01
1	1570.770	Q=15	15.00	475.72	476.90	476.90	477.33	0.019491	2.92	5.13	5.89	1.00
1	1570.770	Q=20	20.00	475.72	477.10	477.10	477.60	0.018940	3.15	6.36	6.31	1.00
1	1570.770	Q10	28.00	475.72	477.38	477.38	477.97	0.018343	3.42	8.19	6.89	1.00
1	1570.770	Q=40	40.00	475.72	477.85	477.85	478.26	0.020410	2.84	14.06	17.41	1.01
1	1570.770	Q=50	50.00	475.72	478.00	477.98	478.46	0.018898	3.00	16.67	17.56	0.98
1	1570.770	Q100	61.00	475.72	478.14	478.11	478.65	0.018506	3.19	19.13	17.70	0.98
1	1570.770	Q500	85.40	475.72	478.42	478.42	479.05	0.018908	3.50	24.39	19.65	1.00
1	1570.770	Qproj	53.00	475.72	478.04	478.02	478.51	0.018699	3.05	17.38	17.60	0.98
1	1545.120	Q=5	5.00	475.38	475.88	475.88	476.09	0.023046	2.02	2.47	5.99	1.01
1	1545.120	Q=10	10.00	475.38	476.13	476.13	476.44	0.020919	2.49	4.01	6.45	1.01
1	1545.120	Q=15	15.00	475.38	476.33	476.33	476.73	0.019787	2.79	5.37	6.82	1.01
1	1545.120	Q=20	20.00	475.38	476.51	476.51	476.97	0.019078	3.02	6.61	7.15	1.00
1	1545.120	Q10	28.00	475.38	476.76	476.76	477.32	0.018466	3.32	8.44	7.61	1.01
1	1545.120	Q=40	40.00	475.38	477.20	477.20	477.75	0.017943	3.27	12.22	11.14	1.00
1	1545.120	Q=50	50.00	475.38	477.48	477.48	477.98	0.018067	3.11	16.06	16.16	1.00
1	1545.120	Q100	61.00	475.38	477.64	477.64	478.18	0.018565	3.24	18.82	18.09	1.01
1	1545.120	Q500	85.40	475.38	477.95	477.95	478.56	0.017381	3.47	24.61	20.24	1.00
1	1545.120	Qproj	53.00	475.38	477.54	477.54	478.04	0.018219	3.12	17.00	17.18	1.00
1	1521.330	Q=5	5.00	474.32	474.96	474.96	475.18	0.022448	2.10	2.38	5.41	1.01
1	1521.330	Q=10	10.00	474.32	475.28	475.23	475.56	0.016072	2.34	4.26	6.19	0.90
1	1521.330	Q=15	15.00	474.32	475.54		475.86	0.013828	2.52	5.96	6.81	0.86
1	1521.330	Q=20	20.00	474.32	475.75		476.12	0.012986	2.69	7.43	7.19	0.85

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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)	Top Width (m)	Froude # Chl
1	1521.330	Q10	28.00	474.32	476.09		476.48	0.012731	2.78	10.07	9.16	0.85
1	1521.330	Q=40	40.00	474.32	476.66		476.93	0.008735	2.32	17.22	15.95	0.71
1	1521.330	Q=50	50.00	474.32	476.98		477.23	0.006177	2.21	22.61	17.12	0.61
1	1521.330	Q100	61.00	474.32	477.10		477.41	0.006904	2.46	24.79	17.22	0.65
1	1521.330	Q500	85.40	474.32	477.41		477.81	0.008948	2.80	30.51	21.33	0.75
1	1521.330	Qproj	53.00	474.32	477.04		477.30	0.005937	2.23	23.78	17.17	0.60
1	1505.580	Q=5	5.00	473.81	474.84		474.95	0.006362	1.45	3.45	4.95	0.55
1	1505.580	Q=10	10.00	473.81	475.17		475.36	0.008280	1.94	5.15	5.69	0.65
1	1505.580	Q=15	15.00	473.81	475.40		475.67	0.009624	2.29	6.55	6.23	0.71
1	1505.580	Q=20	20.00	473.81	475.59		475.93	0.010818	2.58	7.75	6.66	0.76
1	1505.580	Q10	28.00	473.81	475.83		476.28	0.012521	2.98	9.41	7.22	0.83
1	1505.580	Q=40	40.00	473.81	476.08	476.01	476.72	0.015435	3.53	11.34	7.81	0.93
1	1505.580	Q=50	50.00	473.81	476.34	476.34	477.03	0.017464	3.67	13.63	9.93	1.00
1	1505.580	Q100	61.00	473.81	476.94	476.79	477.27	0.012009	2.53	24.13	25.34	0.83
1	1505.580	Q500	85.40	473.81	477.33	477.04	477.65	0.007956	2.49	34.26	26.66	0.70
1	1505.580	Qproj	53.00	473.81	476.44	476.44	477.11	0.017055	3.62	14.66	10.81	0.99
1	1490.850	Q=5	5.00	473.95	474.55	474.55	474.78	0.022307	2.12	2.36	5.22	1.01
1	1490.850	Q=10	10.00	473.95	474.83	474.83	475.16	0.020333	2.55	3.92	5.98	1.01
1	1490.850	Q=15	15.00	473.95	475.05	475.05	475.46	0.019367	2.83	5.30	6.58	1.01
1	1490.850	Q=20	20.00	473.95	475.24	475.24	475.71	0.018492	3.03	6.61	7.10	1.00
1	1490.850	Q10	28.00	473.95	475.50	475.50	476.05	0.017825	3.28	8.54	7.81	1.00
1	1490.850	Q=40	40.00	473.95	475.82	475.82	476.47	0.017367	3.58	11.17	8.68	1.01
1	1490.850	Q=50	50.00	473.95	476.08	476.08	476.78	0.016629	3.70	13.52	9.65	1.00
1	1490.850	Q100	61.00	473.95	476.41	476.41	477.03	0.016748	3.49	17.46	14.14	1.00
1	1490.850	Q500	85.40	473.95	476.78	476.78	477.45	0.016552	3.63	23.56	18.09	1.01
1	1490.850	Qproj	53.00	473.95	476.20	476.20	476.85	0.016716	3.58	14.79	11.29	1.00
1	1470.480	Q=5	5.00	473.21	473.99		474.16	0.013050	1.83	2.74	4.85	0.78
1	1470.480	Q=10	10.00	473.21	474.26	474.18	474.56	0.015507	2.42	4.14	5.28	0.87
1	1470.480	Q=15	15.00	473.21	474.46	474.43	474.88	0.017968	2.88	5.21	5.59	0.95
1	1470.480	Q=20	20.00	473.21	474.63	474.63	475.16	0.019473	3.22	6.21	5.86	1.00
1	1470.480	Q10	28.00	473.21	474.92	474.92	475.55	0.019084	3.52	7.95	6.30	1.00
1	1470.480	Q=40	40.00	473.21	475.37	475.37	476.04	0.018552	3.63	11.02	8.19	1.00

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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)	Top Width (m)	Froude # Chl
1	1470.480	Q=50	50.00	473.21	475.75	475.75	476.31	0.018238	3.31	15.10	13.54	1.00
1	1470.480	Q100	61.00	473.21	475.97	475.97	476.53	0.018133	3.32	18.36	16.62	1.01
1	1470.480	Q500	85.40	473.21	476.37	476.37	476.90	0.017682	3.21	26.63	25.62	1.00
1	1470.480	Qproj	53.00	473.21	475.82	475.82	476.37	0.018152	3.30	16.06	14.51	1.00
1	1447.300	Q=5	5.00	472.87	473.53	473.53	473.76	0.022649	2.13	2.35	5.22	1.01
1	1447.300	Q=10	10.00	472.87	473.80	473.80	474.14	0.020568	2.58	3.87	5.81	1.01
1	1447.300	Q=15	15.00	472.87	474.03	474.03	474.45	0.019558	2.88	5.22	6.28	1.01
1	1447.300	Q=20	20.00	472.87	474.22	474.22	474.71	0.018857	3.09	6.46	6.69	1.00
1	1447.300	Q10	28.00	472.87	474.48	474.48	475.06	0.018303	3.37	8.30	7.25	1.01
1	1447.300	Q=40	40.00	472.87	474.82	474.82	475.51	0.017466	3.67	10.91	7.98	1.00
1	1447.300	Q=50	50.00	472.87	475.28	475.28	475.80	0.018483	3.20	15.63	15.36	1.01
1	1447.300	Q100	61.00	472.87	475.43	475.43	476.01	0.017738	3.39	18.02	15.61	1.01
1	1447.300	Q500	85.40	472.87	475.75	475.75	476.44	0.017063	3.68	23.20	17.05	1.01
1	1447.300	Qproj	53.00	472.87	475.32	475.32	475.86	0.018283	3.26	16.28	15.40	1.01
1	1443.640	Q=5	5.00	472.73	473.25	473.25	473.48	0.023017	2.11	2.36	5.25	1.01
1	1443.640	Q=10	10.00	472.73	473.53	473.53	473.87	0.020974	2.58	3.88	5.78	1.01
1	1443.640	Q=15	15.00	472.73	473.75	473.75	474.17	0.020028	2.89	5.20	6.21	1.01
1	1443.640	Q=20	20.00	472.73	473.94	473.94	474.43	0.019385	3.11	6.42	6.58	1.01
1	1443.640	Q10	28.00	472.73	474.21	474.21	474.79	0.018509	3.38	8.28	7.10	1.00
1	1443.640	Q=40	40.00	472.73	474.55	474.55	475.25	0.017891	3.70	10.81	7.76	1.00
1	1443.640	Q=50	50.00	472.73	474.80	474.80	475.58	0.017563	3.91	12.79	8.24	1.00
1	1443.640	Q100	61.00	472.73	475.30	475.30	475.86	0.018059	3.31	18.41	16.68	1.01
1	1443.640	Q500	85.40	472.73	475.61	475.61	476.26	0.017221	3.59	23.82	18.41	1.01
1	1443.640	Qproj	53.00	472.73	474.86	474.86	475.67	0.017601	3.97	13.34	8.37	1.00
1	1432.620	Q=5	5.00	472.26	472.90	472.85	473.08	0.016019	1.88	2.66	5.38	0.85
1	1432.620	Q=10	10.00	472.26	473.23		473.48	0.013073	2.19	4.56	6.05	0.81
1	1432.620	Q=15	15.00	472.26	473.50		473.80	0.011878	2.40	6.24	6.59	0.79
1	1432.620	Q=20	20.00	472.26	473.73		474.06	0.011195	2.56	7.81	7.06	0.78
1	1432.620	Q10	28.00	472.26	474.09		474.42	0.012958	2.55	11.00	11.64	0.84
1	1432.620	Q=40	40.00	472.26	474.29	474.22	474.74	0.015097	2.98	13.44	12.64	0.92
1	1432.620	Q=50	50.00	472.26	474.42	474.40	474.98	0.017078	3.31	15.10	13.27	0.99
1	1432.620	Q100	61.00	472.26	474.59	474.58	475.21	0.016841	3.48	17.53	14.14	1.00

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	1432.620	Q500	85.40	472.26	475.00	475.00	475.60	0.016843	3.44	24.84	20.98	1.01
1	1432.620	Qproj	53.00	472.26	474.47	474.45	475.04	0.016894	3.35	15.81	13.53	0.99
1	1421.340	Q=5	5.00	471.94	472.61	472.61	472.86	0.022804	2.24	2.24	4.46	1.01
1	1421.340	Q=10	10.00	471.94	472.92	472.92	473.28	0.020936	2.68	3.73	5.17	1.01
1	1421.340	Q=15	15.00	471.94	473.16	473.16	473.61	0.019993	2.96	5.06	5.72	1.01
1	1421.340	Q=20	20.00	471.94	473.37	473.37	473.88	0.019439	3.18	6.29	6.19	1.01
1	1421.340	Q10	28.00	471.94	473.77	473.77	474.23	0.018917	3.00	9.33	10.18	1.00
1	1421.340	Q=40	40.00	471.94	474.07	474.07	474.55	0.018596	3.05	13.11	14.10	1.01
1	1421.340	Q=50	50.00	471.94	474.25	474.25	474.77	0.017634	3.19	15.65	15.12	1.00
1	1421.340	Q100	61.00	471.94	474.55	474.47	474.98	0.014606	2.88	21.17	21.16	0.92
1	1421.340	Q500	85.40	471.94	475.04		475.40	0.008103	2.63	32.50	23.63	0.72
1	1421.340	Qproj	53.00	471.94	474.32	474.32	474.83	0.017574	3.16	16.77	16.52	1.00
1	1401.870	Q=5	5.00	471.38	472.00	472.00	472.24	0.022882	2.14	2.34	5.11	1.01
1	1401.870	Q=10	10.00	471.38	472.31	472.28	472.63	0.018266	2.50	4.00	5.61	0.94
1	1401.870	Q=15	15.00	471.38	472.55	472.51	472.95	0.017477	2.80	5.36	5.98	0.94
1	1401.870	Q=20	20.00	471.38	472.74	472.70	473.22	0.017478	3.05	6.55	6.29	0.95
1	1401.870	Q10	28.00	471.38	473.01	472.98	473.59	0.017727	3.38	8.28	6.74	0.97
1	1401.870	Q=40	40.00	471.38	473.46	473.38	474.05	0.015723	3.40	11.77	8.70	0.93
1	1401.870	Q=50	50.00	471.38	473.75	473.63	474.36	0.014794	3.46	14.44	9.85	0.91
1	1401.870	Q100	61.00	471.38	473.90	473.87	474.64	0.017016	3.81	16.01	10.46	0.98
1	1401.870	Q500	85.40	471.38	474.44	474.44	475.14	0.017107	3.71	22.99	16.34	1.00
1	1401.870	Qproj	53.00	471.38	473.79	473.70	474.44	0.015398	3.56	14.89	10.03	0.93
1	1375.060	Q=5	5.00	470.70	471.50	471.44	471.70	0.016335	2.00	2.50	4.64	0.87
1	1375.060	Q=10	10.00	470.70	471.76	471.75	472.12	0.019839	2.64	3.78	5.17	0.99
1	1375.060	Q=15	15.00	470.70	472.00	472.00	472.45	0.019605	2.97	5.06	5.64	1.00
1	1375.060	Q=20	20.00	470.70	472.21	472.21	472.72	0.019093	3.19	6.27	6.06	1.00
1	1375.060	Q10	28.00	470.70	472.49	472.49	473.10	0.018522	3.46	8.09	6.64	1.00
1	1375.060	Q=40	40.00	470.70	472.84	472.84	473.58	0.018183	3.80	10.54	7.21	1.00
1	1375.060	Q=50	50.00	470.70	473.33	473.33	473.90	0.018678	3.35	14.93	13.29	1.01
1	1375.060	Q100	61.00	470.70	473.49	473.49	474.14	0.018227	3.57	17.11	13.41	1.01
1	1375.060	Q500	85.40	470.70	473.82	473.82	474.62	0.017576	3.96	21.56	13.67	1.01
1	1375.060	Qproj	53.00	470.70	473.37	473.37	473.97	0.018721	3.42	15.49	13.32	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	1342.360	Q=5	5.00	470.28	470.85	470.85	471.08	0.022826	2.09	2.40	5.49	1.01
1	1342.360	Q=10	10.00	470.28	471.12	471.12	471.45	0.020588	2.53	3.95	6.09	1.00
1	1342.360	Q=15	15.00	470.28	471.33	471.33	471.74	0.019696	2.83	5.30	6.56	1.01
1	1342.360	Q=20	20.00	470.28	471.52	471.52	472.00	0.019057	3.05	6.55	6.96	1.01
1	1342.360	Q10	28.00	470.28	471.78	471.78	472.34	0.018399	3.33	8.41	7.53	1.01
1	1342.360	Q=40	40.00	470.28	472.11	472.11	472.78	0.017562	3.63	11.01	8.20	1.00
1	1342.360	Q=50	50.00	470.28	472.34	472.34	473.10	0.017240	3.85	12.98	8.60	1.00
1	1342.360	Q100	61.00	470.28	472.58	472.58	473.41	0.016952	4.05	15.06	9.01	1.00
1	1342.360	Q500	85.40	470.28	473.12	473.12	474.00	0.016911	4.16	20.52	11.83	1.01
1	1342.360	Qproj	53.00	470.28	472.41	472.41	473.19	0.017139	3.91	13.56	8.72	1.00
1	1321.400	Q=5	5.00	469.81	470.53		470.64	0.009565	1.49	3.36	6.64	0.67
1	1321.400	Q=10	10.00	469.81	470.78		470.98	0.010472	1.95	5.12	7.00	0.73
1	1321.400	Q=15	15.00	469.81	470.98		471.25	0.011538	2.31	6.50	7.26	0.78
1	1321.400	Q=20	20.00	469.81	471.14		471.49	0.012296	2.59	7.73	7.49	0.81
1	1321.400	Q10	28.00	469.81	471.37		471.82	0.013483	2.97	9.42	7.79	0.86
1	1321.400	Q=40	40.00	469.81	471.73		472.26	0.012669	3.23	12.38	8.40	0.85
1	1321.400	Q=50	50.00	469.81	472.21	471.80	472.58	0.012969	2.69	18.56	17.97	0.85
1	1321.400	Q100	61.00	469.81	472.40	472.22	472.79	0.011267	2.77	22.03	18.20	0.80
1	1321.400	Q500	85.40	469.81	472.73	472.49	473.20	0.010421	3.05	28.04	18.60	0.79
1	1321.400	Qproj	53.00	469.81	472.27	472.12	472.64	0.012142	2.69	19.67	18.04	0.82
1	1306.710	Q=5	5.00	469.72	470.25	470.24	470.43	0.020807	1.88	2.67	6.77	0.95
1	1306.710	Q=10	10.00	469.72	470.48	470.47	470.76	0.019829	2.37	4.22	7.09	0.98
1	1306.710	Q=15	15.00	469.72	470.69	470.65	471.03	0.017478	2.61	5.74	7.38	0.95
1	1306.710	Q=20	20.00	469.72	470.88	470.82	471.27	0.015937	2.79	7.17	7.64	0.92
1	1306.710	Q10	28.00	469.72	471.16	471.05	471.61	0.014165	2.99	9.38	8.04	0.88
1	1306.710	Q=40	40.00	469.72	471.58		472.07	0.011823	3.10	12.92	8.94	0.82
1	1306.710	Q=50	50.00	469.72	471.88	471.61	472.35	0.016198	3.05	16.38	15.33	0.94
1	1306.710	Q100	61.00	469.72	472.00	472.00	472.56	0.018285	3.33	18.34	16.52	1.01
1	1306.710	Q500	85.40	469.72	472.29	472.29	472.98	0.017378	3.69	23.14	16.87	1.01
1	1306.710	Qproj	53.00	469.72	471.91	471.88	472.41	0.017471	3.14	16.90	16.12	0.98
1	1276.710	Q=5	5.00	469.14	469.74		469.90	0.014920	1.79	2.80	5.81	0.82

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	1276.710	Q=10	10.00	469.14	470.06		470.29	0.012154	2.11	4.74	6.29	0.78
1	1276.710	Q=15	15.00	469.14	470.30		470.59	0.011982	2.40	6.26	6.64	0.79
1	1276.710	Q=20	20.00	469.14	470.51		470.85	0.011598	2.59	7.72	6.95	0.78
1	1276.710	Q10	28.00	469.14	470.82		471.23	0.010942	2.81	9.97	7.42	0.77
1	1276.710	Q=40	40.00	469.14	471.13	471.13	471.63	0.018585	3.14	12.75	12.72	1.00
1	1276.710	Q=50	50.00	469.14	471.46	471.41	471.83	0.016893	2.69	18.56	22.85	0.95
1	1276.710	Q100	61.00	469.14	471.68	471.55	472.00	0.012714	2.54	24.03	26.19	0.85
1	1276.710	Q500	85.40	469.14	471.98	471.80	472.33	0.010552	2.62	32.64	29.46	0.79
1	1276.710	Qproj	53.00	469.14	471.53	471.46	471.88	0.015412	2.62	20.25	24.36	0.92
1	1252.790	Q=5	5.00	468.72	469.34	469.29	469.52	0.016802	1.88	2.67	5.55	0.86
1	1252.790	Q=10	10.00	468.72	469.55	469.55	469.90	0.021562	2.59	3.86	5.76	1.01
1	1252.790	Q=15	15.00	468.72	469.77	469.77	470.21	0.020464	2.91	5.15	5.97	1.00
1	1252.790	Q=20	20.00	468.72	469.96	469.96	470.48	0.020074	3.17	6.31	6.16	1.00
1	1252.790	Q10	28.00	468.72	470.23	470.23	470.86	0.019857	3.51	7.98	6.41	1.00
1	1252.790	Q=40	40.00	468.72	470.65	470.65	471.14	0.020079	3.10	12.89	13.33	1.01
1	1252.790	Q=50	50.00	468.72	470.82	470.82	471.38	0.019172	3.32	15.07	13.39	1.00
1	1252.790	Q100	61.00	468.72	471.03	471.03	471.61	0.018859	3.38	18.06	15.52	1.00
1	1252.790	Q500	85.40	468.72	471.42	471.42	471.99	0.018040	3.34	25.59	22.41	1.00
1	1252.790	Qproj	53.00	468.72	470.86	470.86	471.44	0.019028	3.38	15.68	13.41	1.00
1	1233.490	Q=5	5.00	468.50	468.97	468.97	469.15	0.022773	1.87	2.68	7.49	0.99
1	1233.490	Q=10	10.00	468.50	469.21	469.18	469.46	0.017927	2.23	4.49	7.70	0.93
1	1233.490	Q=15	15.00	468.50	469.43	469.35	469.72	0.014902	2.42	6.19	7.90	0.87
1	1233.490	Q=20	20.00	468.50	469.63		469.96	0.012867	2.55	7.86	8.08	0.82
1	1233.490	Q10	28.00	468.50	469.92		470.30	0.011688	2.75	10.19	8.47	0.80
1	1233.490	Q=40	40.00	468.50	470.50	470.04	470.72	0.008557	2.08	19.23	19.87	0.67
1	1233.490	Q=50	50.00	468.50	470.81		471.01	0.006638	1.95	25.64	24.16	0.60
1	1233.490	Q100	61.00	468.50	471.08		471.25	0.005320	1.84	33.21	29.21	0.55
1	1233.490	Q500	85.40	468.50	471.51		471.69	0.003682	1.86	45.85	29.21	0.47
1	1233.490	Qproj	53.00	468.50	470.91		471.09	0.006566	1.87	28.28	28.47	0.60
1	1219.600	Q=5	5.00	468.06	468.63	468.63	468.83	0.022057	1.98	2.52	6.21	0.99
1	1219.600	Q=10	10.00	468.06	468.87	468.87	469.18	0.020948	2.49	4.02	6.43	1.01
1	1219.600	Q=15	15.00	468.06	469.07	469.07	469.47	0.020174	2.82	5.31	6.60	1.00

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	1219.600	Q=20	20.00	468.06	469.24	469.24	469.73	0.020001	3.09	6.46	6.74	1.01
1	1219.600	Q10	28.00	468.06	469.52	469.52	470.08	0.019056	3.33	8.42	7.53	1.00
1	1219.600	Q=40	40.00	468.06	469.85	469.85	470.51	0.018279	3.58	11.16	8.62	1.01
1	1219.600	Q=50	50.00	468.06	470.10	470.10	470.81	0.017663	3.74	13.36	9.41	1.00
1	1219.600	Q100	61.00	468.06	470.48	470.48	471.09	0.017905	3.46	17.64	14.52	1.00
1	1219.600	Q500	85.40	468.06	470.78	470.78	471.54	0.017850	3.85	22.18	15.09	1.01
1	1219.600	Qproj	53.00	468.06	470.17	470.17	470.90	0.017441	3.78	14.02	9.63	1.00
1	1199.630	Q=5	5.00	467.61	468.17	468.17	468.38	0.023023	2.04	2.45	5.87	1.01
1	1199.630	Q=10	10.00	467.61	468.42	468.42	468.74	0.020877	2.51	3.98	6.28	1.01
1	1199.630	Q=15	15.00	467.61	468.63	468.63	469.03	0.019861	2.82	5.31	6.62	1.01
1	1199.630	Q=20	20.00	467.61	468.81	468.81	469.28	0.019242	3.06	6.53	6.91	1.01
1	1199.630	Q10	28.00	467.61	469.06	469.06	469.64	0.018644	3.36	8.33	7.33	1.01
1	1199.630	Q=40	40.00	467.61	469.39	469.39	470.08	0.017909	3.69	10.85	7.87	1.00
1	1199.630	Q=50	50.00	467.61	469.63	469.63	470.41	0.017641	3.91	12.79	8.26	1.00
1	1199.630	Q100	61.00	467.61	470.15	470.10	470.67	0.015757	3.18	19.20	16.49	0.94
1	1199.630	Q500	85.40	467.61	470.43	470.38	471.09	0.015609	3.58	23.87	16.71	0.96
1	1199.630	Qproj	53.00	467.61	469.70	469.70	470.50	0.017679	3.98	13.32	8.37	1.01
1	1180.110	Q=5	5.00	467.20	467.68	467.68	467.86	0.023328	1.91	2.62	7.23	1.01
1	1180.110	Q=10	10.00	467.20	467.90	467.90	468.18	0.020780	2.34	4.28	7.83	1.01
1	1180.110	Q=15	15.00	467.20	468.15	468.07	468.44	0.014302	2.38	6.31	8.25	0.87
1	1180.110	Q=20	20.00	467.20	468.44		468.70	0.009600	2.29	8.74	8.71	0.73
1	1180.110	Q10	28.00	467.20	468.84		469.10	0.006791	2.26	12.38	9.33	0.63
1	1180.110	Q=40	40.00	467.20	469.36		469.63	0.005170	2.29	17.48	10.13	0.56
1	1180.110	Q=50	50.00	467.20	469.78		470.04	0.005218	2.27	22.06	13.40	0.56
1	1180.110	Q100	61.00	467.20	470.21		470.45	0.003896	2.19	27.88	13.93	0.49
1	1180.110	Q500	85.40	467.20	470.46		470.84	0.005357	2.71	31.48	14.22	0.58
1	1180.110	Qproj	53.00	467.20	469.90		470.16	0.004744	2.24	23.70	13.56	0.54
1	1173.140	Q=5	5.00	466.82	467.48		467.64	0.015424	1.79	2.79	5.80	0.82
1	1173.140	Q=10	10.00	466.82	467.78		468.03	0.013411	2.18	4.58	5.86	0.79
1	1173.140	Q=15	15.00	466.82	468.00		468.33	0.014423	2.56	5.86	5.89	0.82
1	1173.140	Q=20	20.00	466.82	468.17	468.06	468.60	0.016118	2.92	6.85	5.92	0.87
1	1173.140	Q10	28.00	466.82	468.33	468.33	468.98	0.021638	3.59	7.80	5.95	1.00

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	1173.140	Q=40	40.00	466.82	468.68	468.68	469.51	0.022077	4.03	9.94	6.02	1.00
1	1173.140	Q=50	50.00	466.82	468.95	468.95	469.91	0.022645	4.33	11.54	6.06	1.00
1	1173.140	Q100	61.00	466.82	469.22	469.22	470.31	0.023192	4.62	13.21	6.11	1.00
1	1173.140	Q500	85.40	466.82	470.32	470.12	470.78	0.011898	2.98	28.68	20.24	0.80
1	1173.140	Qproj	53.00	466.82	469.02	469.02	470.02	0.022946	4.42	11.98	6.08	1.01
1	1171.370	Q=5	5.00	466.73	467.48		467.60	0.010379	1.55	3.22	5.98	0.68
1	1171.370	Q=10	10.00	466.73	467.79		467.99	0.010138	1.96	5.09	6.01	0.68
1	1171.370	Q=15	15.00	466.73	468.02		468.29	0.011332	2.33	6.43	6.03	0.72
1	1171.370	Q=20	20.00	466.73	468.19		468.55	0.012878	2.67	7.48	6.05	0.77
1	1171.370	Q10	28.00	466.73	468.37		468.91	0.017039	3.27	8.57	6.07	0.88
1	1171.370	Q=40	40.00	466.73	468.61	468.59	469.42	0.022278	4.00	10.00	6.09	1.00
1	1171.370	Q=50	50.00	466.73	468.86	468.86	469.81	0.023202	4.33	11.55	6.11	1.01
1	1171.370	Q100	61.00	466.73	469.13	469.13	470.22	0.023651	4.61	13.23	6.14	1.00
1	1171.370	Q500	85.40	466.73	470.03	470.03	470.72	0.019899	3.70	23.07	16.67	1.00
1	1171.370	Qproj	53.00	466.73	468.93	468.93	469.93	0.023357	4.41	12.01	6.12	1.01
1	1156.080	Q=5	5.00	466.49	467.24		467.41	0.014624	1.83	2.73	5.45	0.83
1	1156.080	Q=10	10.00	466.49	467.49	467.45	467.78	0.017774	2.40	4.17	6.31	0.94
1	1156.080	Q=15	15.00	466.49	467.68	467.67	468.07	0.018479	2.73	5.49	6.98	0.98
1	1156.080	Q=20	20.00	466.49	467.85	467.85	468.31	0.018862	3.01	6.63	7.29	1.01
1	1156.080	Q10	28.00	466.49	468.09	468.09	468.65	0.018137	3.30	8.49	7.78	1.01
1	1156.080	Q=40	40.00	466.49	468.41	468.41	469.08	0.017445	3.62	11.06	8.41	1.01
1	1156.080	Q=50	50.00	466.49	468.65	468.65	469.39	0.016984	3.79	13.19	9.09	1.00
1	1156.080	Q100	61.00	466.49	468.90	468.90	469.69	0.016666	3.94	15.49	9.93	1.01
1	1156.080	Q500	85.40	466.49	469.52	469.52	470.13	0.016749	3.46	24.71	20.35	1.00
1	1156.080	Qproj	53.00	466.49	468.72	468.72	469.47	0.016870	3.83	13.83	9.33	1.00
1	1125.720	Q=5	5.00	466.11	466.69	466.68	466.88	0.021173	1.94	2.58	6.39	0.97
1	1125.720	Q=10	10.00	466.11	466.94	466.92	467.22	0.018776	2.36	4.24	6.97	0.97
1	1125.720	Q=15	15.00	466.11	467.12	467.11	467.49	0.019090	2.71	5.54	7.41	1.00
1	1125.720	Q=20	20.00	466.11	467.28	467.28	467.73	0.018712	2.94	6.80	7.81	1.01
1	1125.720	Q10	28.00	466.11	467.52	467.52	468.05	0.017913	3.21	8.72	8.40	1.01
1	1125.720	Q=40	40.00	466.11	467.84	467.84	468.45	0.017047	3.47	11.52	9.42	1.00
1	1125.720	Q=50	50.00	466.11	468.07	468.07	468.74	0.016483	3.62	13.82	10.35	1.00

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	1125.720	Q100	61.00	466.11	468.40	468.40	469.00	0.016124	3.44	17.73	14.40	0.99
1	1125.720	Q500	85.40	466.11	468.79	468.79	469.36	0.016811	3.37	25.34	22.33	1.01
1	1125.720	Qproj	53.00	466.11	468.13	468.13	468.82	0.016625	3.68	14.39	10.57	1.01
1	1092.560	Q=5	5.00	465.30	465.97	465.95	466.18	0.020774	2.08	2.41	5.18	0.97
1	1092.560	Q=10	10.00	465.30	466.24	466.24	466.56	0.020614	2.54	3.94	6.12	1.01
1	1092.560	Q=15	15.00	465.30	466.46	466.46	466.85	0.019293	2.78	5.40	6.90	1.00
1	1092.560	Q=20	20.00	465.30	466.65	466.65	467.10	0.018658	2.97	6.74	7.55	1.00
1	1092.560	Q10	28.00	465.30	466.90	466.90	467.42	0.018106	3.21	8.73	8.41	1.01
1	1092.560	Q=40	40.00	465.30	467.24	467.24	467.80	0.018217	3.31	12.09	10.86	1.00
1	1092.560	Q=50	50.00	465.30	467.56	467.56	468.05	0.018835	3.11	16.05	16.22	1.00
1	1092.560	Q100	61.00	465.30	467.81	467.81	468.24	0.020046	2.91	20.97	25.29	1.02
1	1092.560	Q500	85.40	465.30	468.03	468.03	468.55	0.018285	3.18	26.87	26.36	1.00
1	1092.560	Qproj	53.00	465.30	467.64	467.64	468.11	0.019103	3.05	17.37	18.43	1.00
1	1067.380	Q=5	5.00	464.98	465.55		465.71	0.015884	1.78	2.80	6.26	0.85
1	1067.380	Q=10	10.00	464.98	465.78	465.75	466.05	0.018049	2.31	4.33	7.12	0.95
1	1067.380	Q=15	15.00	464.98	465.95	465.95	466.31	0.019495	2.68	5.60	7.77	1.01
1	1067.380	Q=20	20.00	464.98	466.12	466.12	466.54	0.018742	2.87	6.97	8.43	1.01
1	1067.380	Q10	28.00	464.98	466.35	466.35	466.84	0.017956	3.10	9.03	9.35	1.01
1	1067.380	Q=40	40.00	464.98	466.64	466.64	467.21	0.017122	3.36	11.92	10.51	1.01
1	1067.380	Q=50	50.00	464.98	467.02	467.02	467.44	0.018506	2.86	17.46	21.44	1.01
1	1067.380	Q100	61.00	464.98	467.14	467.14	467.61	0.017796	3.04	20.07	21.77	1.01
1	1067.380	Q500	85.40	464.98	467.38	467.38	467.96	0.016760	3.36	25.41	22.42	1.01
1	1067.380	Qproj	53.00	464.98	467.05	467.05	467.49	0.018191	2.91	18.22	21.54	1.01
1	1049.960	Q=5	5.00	464.58	465.18	465.18	465.38	0.023459	1.96	2.55	6.54	1.00
1	1049.960	Q=10	10.00	464.58	465.42	465.42	465.71	0.021195	2.39	4.18	7.32	1.01
1	1049.960	Q=15	15.00	464.58	465.61	465.61	465.97	0.019523	2.64	5.68	8.02	1.00
1	1049.960	Q=20	20.00	464.58	465.77	465.77	466.19	0.019020	2.85	7.01	8.59	1.01
1	1049.960	Q10	28.00	464.58	466.00	466.00	466.49	0.017798	3.08	9.10	9.41	1.00
1	1049.960	Q=40	40.00	464.58	466.28	466.28	466.86	0.017229	3.37	11.86	10.37	1.01
1	1049.960	Q=50	50.00	464.58	466.65	466.65	467.09	0.018408	2.92	17.11	20.03	1.01
1	1049.960	Q100	61.00	464.58	466.77	466.77	467.27	0.018116	3.13	19.52	20.28	1.02
1	1049.960	Q500	85.40	464.58	467.03	467.03	467.63	0.016844	3.45	24.78	20.80	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	1049.960	Qproj	53.00	464.58	466.69	466.69	467.14	0.018156	2.97	17.84	20.11	1.01
1	1046.680	Q=5	5.00	464.28	464.83	464.81	465.02	0.021937	1.96	2.55	5.89	0.95
1	1046.680	Q=10	10.00	464.28	465.07	465.07	465.38	0.022138	2.48	4.03	6.50	1.01
1	1046.680	Q=15	15.00	464.28	465.27	465.27	465.66	0.020877	2.77	5.41	7.03	1.01
1	1046.680	Q=20	20.00	464.28	465.46	465.46	465.90	0.019892	2.96	6.76	7.66	1.01
1	1046.680	Q10	28.00	464.28	465.70	465.70	466.22	0.018928	3.19	8.78	8.57	1.01
1	1046.680	Q=40	40.00	464.28	466.01	466.01	466.62	0.018001	3.45	11.60	9.70	1.01
1	1046.680	Q=50	50.00	464.28	466.25	466.23	466.90	0.016794	3.58	13.98	10.51	0.99
1	1046.680	Q100	61.00	464.28	466.62	466.62	467.13	0.018231	3.15	19.39	19.66	1.01
1	1046.680	Q500	85.40	464.28	467.01	466.88	467.52	0.012519	3.14	27.16	20.41	0.87
1	1046.680	Qproj	53.00	464.28	466.29	466.29	466.98	0.017372	3.68	14.41	10.65	1.01
1	1023.100	Q=5	5.00	463.94	464.56		464.66	0.009836	1.39	3.59	8.23	0.67
1	1023.100	Q=10	10.00	463.94	464.85		464.99	0.007886	1.65	6.05	8.88	0.64
1	1023.100	Q=15	15.00	463.94	465.09		465.26	0.007085	1.83	8.20	9.41	0.63
1	1023.100	Q=20	20.00	463.94	465.29		465.49	0.006647	1.97	10.17	9.87	0.62
1	1023.100	Q10	28.00	463.94	465.57		465.81	0.006281	2.14	13.06	10.51	0.61
1	1023.100	Q=40	40.00	463.94	465.93		466.21	0.006053	2.36	16.95	11.32	0.62
1	1023.100	Q=50	50.00	463.94	466.28		466.53	0.007306	2.23	22.43	19.19	0.66
1	1023.100	Q100	61.00	463.94	466.54		466.79	0.005792	2.22	27.42	19.47	0.60
1	1023.100	Q500	85.40	463.94	467.00		467.28	0.004696	2.34	36.57	20.15	0.55
1	1023.100	Qproj	53.00	463.94	466.36		466.61	0.006654	2.21	23.98	19.28	0.63
1	1009.860	Q=5	5.00	463.66	464.25	464.25	464.46	0.022425	2.04	2.45	5.84	1.01
1	1009.860	Q=10	10.00	463.66	464.50	464.50	464.81	0.020324	2.47	4.06	6.67	1.01
1	1009.860	Q=15	15.00	463.66	464.71	464.71	465.09	0.018898	2.73	5.49	7.24	1.00
1	1009.860	Q=20	20.00	463.66	464.89	464.89	465.33	0.018198	2.94	6.80	7.73	1.00
1	1009.860	Q10	28.00	463.66	465.13	465.13	465.65	0.017472	3.20	8.75	8.40	1.00
1	1009.860	Q=40	40.00	463.66	465.44	465.44	466.06	0.016760	3.49	11.46	9.25	1.00
1	1009.860	Q=50	50.00	463.66	465.65	465.65	466.35	0.016494	3.69	13.54	9.86	1.01
1	1009.860	Q100	61.00	463.66	465.96	465.96	466.63	0.016152	3.62	16.85	12.52	1.00
1	1009.860	Q500	85.40	463.66	466.31	466.31	467.12	0.016232	3.98	21.48	13.43	1.00
1	1009.860	Qproj	53.00	463.66	465.71	465.71	466.43	0.016439	3.75	14.14	10.03	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	986.850	Q=5	5.00	463.18	463.73	463.73	463.93	0.022930	2.01	2.49	6.17	1.01
1	986.850	Q=10	10.00	463.18	463.97	463.97	464.28	0.020513	2.46	4.06	6.63	1.00
1	986.850	Q=15	15.00	463.18	464.17	464.17	464.56	0.019562	2.77	5.41	6.99	1.01
1	986.850	Q=20	20.00	463.18	464.34	464.34	464.80	0.018957	3.01	6.65	7.32	1.01
1	986.850	Q10	28.00	463.18	464.59	464.59	465.14	0.018014	3.28	8.54	7.78	1.00
1	986.850	Q=40	40.00	463.18	464.90	464.90	465.57	0.017623	3.64	11.00	8.19	1.00
1	986.850	Q=50	50.00	463.18	465.33	465.33	465.79	0.019437	3.00	16.66	18.42	1.01
1	986.850	Q100	61.00	463.18	465.46	465.46	465.99	0.019528	3.22	18.92	18.48	1.02
1	986.850	Q500	85.40	463.18	466.11	465.82	466.44	0.008840	2.58	33.11	24.34	0.71
1	986.850	Qproj	53.00	463.18	465.37	465.37	465.85	0.019480	3.07	17.29	18.44	1.01
1	976.900	Q=5	5.00	463.08	463.46	463.46	463.63	0.024826	1.81	2.76	8.35	1.01
1	976.900	Q=10	10.00	463.08	463.65	463.65	463.92	0.022303	2.28	4.39	8.41	1.01
1	976.900	Q=15	15.00	463.08	463.84	463.82	464.16	0.018604	2.49	6.02	8.48	0.94
1	976.900	Q=20	20.00	463.08	464.09		464.40	0.013080	2.47	8.11	8.56	0.81
1	976.900	Q10	28.00	463.08	464.46		464.77	0.009428	2.49	11.27	8.68	0.70
1	976.900	Q=40	40.00	463.08	464.68		465.15	0.012012	3.03	13.19	8.75	0.79
1	976.900	Q=50	50.00	463.08	464.80	464.66	465.43	0.014846	3.50	14.28	8.79	0.88
1	976.900	Q100	61.00	463.08	464.93	464.88	465.73	0.017602	3.95	15.43	8.84	0.96
1	976.900	Q500	85.40	463.08	465.50	465.50	466.28	0.019728	3.90	21.88	14.15	1.00
1	976.900	Qproj	53.00	463.08	464.84	464.72	465.51	0.015593	3.63	14.61	8.81	0.90
1	956.300	Q=5	5.00	462.11	463.04		463.14	0.006233	1.40	3.57	5.13	0.54
1	956.300	Q=10	10.00	462.11	463.39		463.56	0.007838	1.85	5.41	5.74	0.61
1	956.300	Q=15	15.00	462.11	463.65		463.89	0.008399	2.15	6.98	6.00	0.64
1	956.300	Q=20	20.00	462.11	463.89		464.18	0.008765	2.38	8.41	6.22	0.65
1	956.300	Q10	28.00	462.11	464.15	463.80	464.50	0.018158	2.65	10.57	12.71	0.93
1	956.300	Q=40	40.00	462.11	464.31	464.31	464.82	0.021213	3.17	12.61	12.76	1.02
1	956.300	Q=50	50.00	462.11	464.48	464.48	465.06	0.020159	3.39	14.77	12.82	1.01
1	956.300	Q100	61.00	462.11	464.64	464.64	465.31	0.019700	3.61	16.90	12.88	1.01
1	956.300	Q500	85.40	462.11	465.15	465.15	465.79	0.018625	3.54	24.10	18.75	1.00
1	956.300	Qproj	53.00	462.11	464.52	464.52	465.13	0.019934	3.45	15.38	12.84	1.01
1	933.510	Q=5	5.00	462.13	462.65	462.65	462.88	0.023520	2.10	2.38	5.35	1.01
1	933.510	Q=10	10.00	462.13	462.92	462.92	463.26	0.021821	2.61	3.83	5.60	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	933.510	Q=15	15.00	462.13	463.14	463.14	463.58	0.021127	2.95	5.08	5.81	1.01
1	933.510	Q=20	20.00	462.13	463.58	463.33	463.86	0.025642	2.35	8.53	17.30	1.07
1	933.510	Q10	28.00	462.13	463.75	463.75	464.04	0.021430	2.38	11.75	20.25	1.00
1	933.510	Q=40	40.00	462.13	463.94	463.91	464.26	0.017870	2.51	15.96	22.06	0.94
1	933.510	Q=50	50.00	462.13	464.10	464.02	464.44	0.014822	2.58	19.40	22.12	0.88
1	933.510	Q100	61.00	462.13	464.23	464.13	464.61	0.013915	2.73	22.38	22.17	0.87
1	933.510	Q500	85.40	462.13	464.65		464.98	0.011911	2.57	33.21	32.34	0.81
1	933.510	Qproj	53.00	462.13	464.13	464.05	464.48	0.014619	2.62	20.20	22.14	0.88
1	907.120	Q=5	5.00	461.40	462.17		462.30	0.009359	1.59	3.15	5.39	0.66
1	907.120	Q=10	10.00	461.40	462.54		462.73	0.008186	1.89	5.29	6.05	0.64
1	907.120	Q=15	15.00	461.40	462.82		463.05	0.008184	2.13	7.03	6.54	0.66
1	907.120	Q=20	20.00	461.40	463.15		463.35	0.013703	1.95	10.27	17.41	0.81
1	907.120	Q10	28.00	461.40	463.26	463.20	463.53	0.015683	2.31	12.12	17.48	0.89
1	907.120	Q=40	40.00	461.40	463.40	463.37	463.78	0.017944	2.76	14.51	17.57	0.97
1	907.120	Q=50	50.00	461.40	463.50	463.50	463.98	0.019370	3.07	16.29	17.63	1.02
1	907.120	Q100	61.00	461.40	463.64	463.64	464.18	0.018319	3.25	18.78	17.72	1.01
1	907.120	Q500	85.40	461.40	463.91	463.91	464.58	0.017395	3.62	23.61	17.90	1.00
1	907.120	Qproj	53.00	461.40	463.54	463.54	464.03	0.018988	3.12	17.00	17.66	1.01
1	884.060	Q=5	5.00	461.21	461.83		462.02	0.015657	1.92	2.60	4.83	0.84
1	884.060	Q=10	10.00	461.21	462.06	462.06	462.42	0.021371	2.67	3.75	5.22	1.01
1	884.060	Q=15	15.00	461.21	462.30	462.30	462.75	0.020460	2.98	5.04	5.62	1.00
1	884.060	Q=20	20.00	461.21	462.71	462.71	462.94	0.023089	2.12	9.44	21.34	1.02
1	884.060	Q10	28.00	461.21	462.82	462.82	463.11	0.021598	2.37	11.84	21.40	1.02
1	884.060	Q=40	40.00	461.21	462.97	462.97	463.33	0.020640	2.68	14.94	21.49	1.02
1	884.060	Q=50	50.00	461.21	463.09	463.09	463.50	0.019063	2.84	17.58	21.56	1.01
1	884.060	Q100	61.00	461.21	463.21	463.21	463.68	0.018116	3.02	20.20	21.63	1.00
1	884.060	Q500	85.40	461.21	463.50	463.50	463.99	0.018188	3.11	27.49	28.50	1.01
1	884.060	Qproj	53.00	461.21	463.12	463.12	463.55	0.019028	2.91	18.23	21.58	1.01
1	858.360	Q=5	5.00	460.97	461.36	461.36	461.51	0.024689	1.67	2.99	10.68	1.01
1	858.360	Q=10	10.00	460.97	461.53	461.53	461.75	0.021631	2.05	4.88	11.61	1.01
1	858.360	Q=15	15.00	460.97	461.67	461.67	461.94	0.020100	2.31	6.50	12.18	1.01
1	858.360	Q=20	20.00	460.97	461.79	461.79	462.11	0.019111	2.50	7.98	12.68	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	858.360	Q10	28.00	460.97	461.96	461.96	462.34	0.018039	2.75	10.18	13.39	1.01
1	858.360	Q=40	40.00	460.97	462.24	462.24	462.60	0.018252	2.66	15.01	20.91	1.00
1	858.360	Q=50	50.00	460.97	462.36	462.36	462.78	0.017444	2.86	17.51	21.10	1.00
1	858.360	Q100	61.00	460.97	462.54	462.48	462.96	0.014065	2.87	21.24	21.38	0.92
1	858.360	Q500	85.40	460.97	462.95		463.36	0.009140	2.83	30.20	22.05	0.77
1	858.360	Qproj	53.00	460.97	462.39	462.39	462.83	0.017285	2.91	18.21	21.15	1.00
1	834.250	Q=5	5.00	460.49	460.88		461.00	0.015891	1.49	3.36	10.18	0.83
1	834.250	Q=10	10.00	460.49	461.12		461.27	0.011352	1.72	5.83	10.94	0.75
1	834.250	Q=15	15.00	460.49	461.33		461.50	0.008867	1.81	8.27	11.78	0.69
1	834.250	Q=20	20.00	460.49	461.59		461.73	0.008123	1.62	12.35	19.69	0.65
1	834.250	Q10	28.00	460.49	461.88		462.00	0.004856	1.54	18.21	21.06	0.53
1	834.250	Q=40	40.00	460.49	462.15		462.29	0.004082	1.66	24.13	21.56	0.50
1	834.250	Q=50	50.00	460.49	462.35		462.51	0.003840	1.76	28.47	22.07	0.49
1	834.250	Q100	61.00	460.49	462.55		462.73	0.003656	1.85	32.97	22.59	0.49
1	834.250	Q500	85.40	460.49	462.96		463.17	0.003346	2.01	42.46	23.65	0.48
1	834.250	Qproj	53.00	460.49	462.41		462.57	0.003787	1.78	29.71	22.21	0.49
1	816.890	Q=5	5.00	460.04	460.46	460.46	460.66	0.023215	1.96	2.55	6.60	1.01
1	816.890	Q=10	10.00	460.04	460.70	460.70	460.99	0.020859	2.41	4.15	7.10	1.01
1	816.890	Q=15	15.00	460.04	460.89	460.89	461.26	0.019658	2.71	5.54	7.52	1.01
1	816.890	Q=20	20.00	460.04	461.05	461.05	461.49	0.018891	2.93	6.83	7.89	1.01
1	816.890	Q10	28.00	460.04	461.30	461.30	461.81	0.017819	3.16	8.87	8.68	1.00
1	816.890	Q=40	40.00	460.04	461.68	461.68	462.13	0.018066	2.98	13.42	14.91	1.00
1	816.890	Q=50	50.00	460.04	461.82	461.82	462.35	0.017755	3.21	15.56	15.07	1.01
1	816.890	Q100	61.00	460.04	461.98	461.98	462.57	0.016971	3.40	17.94	15.25	1.00
1	816.890	Q500	85.40	460.04	462.28	462.28	463.01	0.016351	3.78	22.62	15.65	1.00
1	816.890	Qproj	53.00	460.04	461.87	461.87	462.41	0.017483	3.26	16.23	15.12	1.01
1	794.590	Q=5	5.00	459.26	459.86	459.86	460.07	0.023027	2.05	2.44	5.79	1.01
1	794.590	Q=10	10.00	459.26	460.11	460.11	460.44	0.020938	2.53	3.96	6.19	1.01
1	794.590	Q=15	15.00	459.26	460.34	460.32	460.73	0.018465	2.77	5.42	6.54	0.97
1	794.590	Q=20	20.00	459.26	460.61	460.50	461.00	0.014100	2.76	7.24	6.99	0.87
1	794.590	Q10	28.00	459.26	460.76	460.76	461.34	0.018621	3.36	8.33	7.30	1.01
1	794.590	Q=40	40.00	459.26	461.26	461.20	461.60	0.015098	2.55	15.69	19.04	0.90

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	794.590	Q=50	50.00	459.26	461.48		461.80	0.011355	2.53	19.74	19.32	0.80
1	794.590	Q100	61.00	459.26	461.72		462.03	0.009433	2.47	24.68	21.77	0.74
1	794.590	Q500	85.40	459.26	462.22		462.48	0.006153	2.26	37.85	27.48	0.61
1	794.590	Qproj	53.00	459.26	461.54		461.86	0.010608	2.53	20.93	19.41	0.78
1	770.800	Q=5	5.00	458.63	459.51		459.64	0.008955	1.60	3.13	5.05	0.65
1	770.800	Q=10	10.00	458.63	459.91		460.09	0.007906	1.88	5.31	5.83	0.63
1	770.800	Q=15	15.00	458.63	460.12	459.87	460.38	0.009802	2.28	6.57	6.24	0.71
1	770.800	Q=20	20.00	458.63	460.32	460.07	460.61	0.016580	2.40	8.34	11.47	0.90
1	770.800	Q10	28.00	458.63	460.49	460.43	460.86	0.016478	2.71	10.34	11.54	0.91
1	770.800	Q=40	40.00	458.63	460.71	460.67	461.20	0.017016	3.10	12.91	11.87	0.95
1	770.800	Q=50	50.00	458.63	460.88	460.84	461.45	0.017180	3.35	14.92	12.13	0.96
1	770.800	Q100	61.00	458.63	461.05	461.02	461.70	0.017250	3.58	17.02	12.40	0.98
1	770.800	Q500	85.40	458.63	461.44	461.38	462.21	0.015870	3.89	21.98	13.02	0.95
1	770.800	Qproj	53.00	458.63	460.93	460.89	461.52	0.017183	3.42	15.51	12.21	0.97
1	749.690	Q=5	5.00	458.02	459.09	459.06	459.35	0.020988	2.23	2.25	3.84	0.93
1	749.690	Q=10	10.00	458.02	459.42	459.42	459.80	0.023062	2.74	3.65	4.77	1.00
1	749.690	Q=15	15.00	458.02	459.83	459.80	460.09	0.021053	2.26	6.64	11.95	0.97
1	749.690	Q=20	20.00	458.02	460.04	459.93	460.28	0.013112	2.15	9.29	12.25	0.79
1	749.690	Q10	28.00	458.02	460.16	460.09	460.51	0.016177	2.61	10.74	12.25	0.89
1	749.690	Q=40	40.00	458.02	460.37	460.30	460.83	0.016716	3.00	13.33	12.27	0.92
1	749.690	Q=50	50.00	458.02	460.53	460.47	461.08	0.017348	3.29	15.19	12.30	0.95
1	749.690	Q100	61.00	458.02	460.68	460.64	461.33	0.017855	3.56	17.12	12.40	0.97
1	749.690	Q500	85.40	458.02	460.99	460.99	461.84	0.018742	4.07	21.01	12.60	1.00
1	749.690	Qproj	53.00	458.02	460.57	460.52	461.15	0.017658	3.38	15.69	12.32	0.96
1	721.880	Q=5	5.00	458.11	458.69		458.85	0.013982	1.78	2.81	5.28	0.78
1	721.880	Q=10	10.00	458.11	458.96	458.87	459.23	0.015964	2.34	4.27	5.60	0.86
1	721.880	Q=15	15.00	458.11	459.17	459.10	459.55	0.017212	2.73	5.50	5.86	0.90
1	721.880	Q=20	20.00	458.11	459.34	459.29	459.82	0.019160	3.06	6.54	6.25	0.96
1	721.880	Q10	28.00	458.11	459.71	459.65	460.05	0.017041	2.59	10.82	13.14	0.91
1	721.880	Q=40	40.00	458.11	459.91	459.86	460.36	0.017450	2.98	13.44	13.15	0.94
1	721.880	Q=50	50.00	458.11	460.08	460.02	460.59	0.016663	3.16	15.80	13.44	0.93
1	721.880	Q100	61.00	458.11	460.24	460.18	460.83	0.016795	3.39	18.00	13.80	0.95

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	721.880	Q500	85.40	458.11	460.56	460.52	461.30	0.017192	3.81	22.41	14.49	0.98
1	721.880	Qproj	53.00	458.11	460.15	460.07	460.66	0.015867	3.17	16.69	13.59	0.91
1	704.470	Q=5	5.00	457.77	458.31	458.31	458.53	0.023631	2.07	2.42	5.61	1.01
1	704.470	Q=10	10.00	457.77	458.57	458.57	458.91	0.021815	2.57	3.89	5.87	1.01
1	704.470	Q=15	15.00	457.77	458.78	458.78	459.21	0.021022	2.90	5.17	6.09	1.01
1	704.470	Q=20	20.00	457.77	458.99	458.97	459.48	0.019518	3.10	6.44	6.30	0.98
1	704.470	Q10	28.00	457.77	459.54		459.79	0.010280	2.23	12.54	13.28	0.73
1	704.470	Q=40	40.00	457.77	459.64	459.57	460.06	0.015200	2.87	13.92	13.45	0.90
1	704.470	Q=50	50.00	457.77	459.74	459.72	460.29	0.018008	3.28	15.24	13.61	0.99
1	704.470	Q100	61.00	457.77	459.89	459.89	460.52	0.018027	3.51	17.36	13.86	1.00
1	704.470	Q500	85.40	457.77	460.23	460.23	460.99	0.017256	3.88	22.02	14.39	1.00
1	704.470	Qproj	53.00	457.77	459.77	459.77	460.36	0.018732	3.39	15.63	13.65	1.01
1	674.380	Q=5	5.00	456.76	457.46	457.41	457.67	0.018402	2.06	2.43	4.34	0.88
1	674.380	Q=10	10.00	456.76	457.71	457.71	458.12	0.023624	2.82	3.55	4.43	1.00
1	674.380	Q=15	15.00	456.76	457.96	457.96	458.49	0.023768	3.20	4.68	4.51	1.00
1	674.380	Q=20	20.00	456.76	458.19	458.19	458.82	0.024130	3.51	5.70	4.59	1.01
1	674.380	Q10	28.00	456.76	458.50	458.50	459.28	0.024947	3.91	7.16	4.69	1.01
1	674.380	Q=40	40.00	456.76	459.13	459.13	459.50	0.022544	2.67	14.99	21.63	1.02
1	674.380	Q=50	50.00	456.76	459.25	459.25	459.66	0.020921	2.84	17.63	21.86	1.01
1	674.380	Q100	61.00	456.76	459.37	459.37	459.84	0.020025	3.01	20.24	22.08	1.00
1	674.380	Q500	85.40	456.76	459.74	459.61	460.20	0.013476	3.01	28.38	22.76	0.86
1	674.380	Qproj	53.00	456.76	459.29	459.29	459.71	0.020585	2.88	18.38	21.92	1.01
1	669.800	Q=5	5.00	456.76	457.41		457.58	0.015444	1.86	2.69	5.24	0.83
1	669.800	Q=10	10.00	456.76	457.64	457.61	457.97	0.019130	2.53	3.96	5.45	0.95
1	669.800	Q=15	15.00	456.76	457.87	457.84	458.29	0.018885	2.87	5.23	5.65	0.95
1	669.800	Q=20	20.00	456.76	458.09	458.03	458.57	0.018080	3.09	6.46	5.85	0.94
1	669.800	Q10	28.00	456.76	458.32	458.32	458.97	0.020518	3.58	7.82	6.05	1.01
1	669.800	Q=40	40.00	456.76	459.01	459.01	459.38	0.020884	2.70	14.84	20.08	1.00
1	669.800	Q=50	50.00	456.76	459.12	459.12	459.56	0.020695	2.93	17.08	20.15	1.02
1	669.800	Q100	61.00	456.76	459.25	459.25	459.74	0.019918	3.12	19.55	20.22	1.01
1	669.800	Q500	85.40	456.76	459.49	459.49	460.11	0.018782	3.48	24.57	20.37	1.01
1	669.800	Qproj	53.00	456.76	459.16	459.16	459.61	0.020617	2.99	17.73	20.17	1.02

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	638.780	Q=5	5.00	456.34	457.03		457.15	0.011596	1.59	3.14	6.63	0.74
1	638.780	Q=10	10.00	456.34	457.34		457.52	0.009577	1.89	5.29	7.22	0.70
1	638.780	Q=15	15.00	456.34	457.63		457.83	0.009153	1.97	7.61	9.40	0.70
1	638.780	Q=20	20.00	456.34	457.94		458.10	0.008703	1.77	11.31	16.25	0.68
1	638.780	Q10	28.00	456.34	458.19		458.35	0.006780	1.76	15.93	19.02	0.61
1	638.780	Q=40	40.00	456.34	458.38		458.59	0.007279	2.05	19.51	19.28	0.65
1	638.780	Q=50	50.00	456.34	458.51		458.77	0.007614	2.26	22.17	19.50	0.68
1	638.780	Q100	61.00	456.34	458.65		458.96	0.007915	2.45	24.87	19.71	0.70
1	638.780	Q500	85.40	456.34	458.93		459.33	0.008363	2.81	30.37	20.15	0.73
1	638.780	Qproj	53.00	456.34	458.55		458.82	0.007683	2.31	22.94	19.56	0.68
1	605.860	Q=5	5.00	456.09	456.75		456.85	0.007096	1.39	3.60	5.91	0.57
1	605.860	Q=10	10.00	456.09	457.01		457.20	0.009617	1.93	5.18	6.28	0.68
1	605.860	Q=15	15.00	456.09	457.19		457.48	0.012017	2.37	6.33	6.54	0.77
1	605.860	Q=20	20.00	456.09	457.36	457.20	457.73	0.013525	2.69	7.42	6.77	0.82
1	605.860	Q10	28.00	456.09	457.67	457.67	457.96	0.021735	2.42	11.56	19.86	1.01
1	605.860	Q=40	40.00	456.09	457.83	457.83	458.20	0.020176	2.71	14.76	20.07	1.01
1	605.860	Q=50	50.00	456.09	457.95	457.95	458.38	0.019246	2.90	17.21	20.23	1.01
1	605.860	Q100	61.00	456.09	458.07	458.07	458.56	0.018512	3.09	19.74	20.39	1.00
1	605.860	Q500	85.40	456.09	458.32	458.32	458.92	0.017731	3.45	24.74	20.71	1.01
1	605.860	Qproj	53.00	456.09	457.98	457.98	458.43	0.019129	2.96	17.89	20.27	1.01
1	590.630	Q=5	5.00	455.92	456.47	456.47	456.66	0.023090	1.94	2.58	6.84	1.01
1	590.630	Q=10	10.00	455.92	456.70	456.70	456.99	0.020543	2.36	4.23	7.53	1.01
1	590.630	Q=15	15.00	455.92	456.89	456.89	457.24	0.019351	2.64	5.67	8.09	1.01
1	590.630	Q=20	20.00	455.92	457.19	457.19	457.44	0.020832	2.21	9.03	18.02	1.00
1	590.630	Q10	28.00	455.92	457.34	457.34	457.60	0.020778	2.29	12.24	23.23	1.01
1	590.630	Q=40	40.00	455.92	457.48	457.48	457.81	0.019263	2.56	15.61	23.45	1.00
1	590.630	Q=50	50.00	455.92	457.58	457.58	457.97	0.019079	2.78	17.98	23.61	1.02
1	590.630	Q100	61.00	455.92	457.70	457.70	458.14	0.017864	2.94	20.78	23.79	1.00
1	590.630	Q500	85.40	455.92	458.09		458.50	0.010631	2.83	30.22	24.38	0.81
1	590.630	Qproj	53.00	455.92	457.61	457.61	458.02	0.018960	2.84	18.68	23.65	1.02
1	588.230	Q=5	5.00	455.34	455.87	455.87	456.09	0.022613	2.06	2.43	5.72	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	588.230	Q=10	10.00	455.34	456.14	456.14	456.45	0.020418	2.46	4.06	6.63	1.01
1	588.230	Q=15	15.00	455.34	456.34	456.34	456.72	0.019309	2.73	5.50	7.35	1.01
1	588.230	Q=20	20.00	455.34	456.52	456.52	456.95	0.018639	2.92	6.84	7.96	1.01
1	588.230	Q10	28.00	455.34	456.76	456.76	457.27	0.017626	3.14	8.93	8.92	1.00
1	588.230	Q=40	40.00	455.34	457.28	457.28	457.61	0.019502	2.53	15.83	24.41	1.00
1	588.230	Q=50	50.00	455.34	457.47	457.38	457.77	0.013293	2.44	20.47	24.72	0.86
1	588.230	Q100	61.00	455.34	457.72		457.99	0.008433	2.28	26.73	25.13	0.71
1	588.230	Q500	85.40	455.34	458.18		458.43	0.005390	2.22	38.48	26.52	0.59
1	588.230	Qproj	53.00	455.34	457.55		457.83	0.011216	2.37	22.39	24.85	0.80
1	581.910	Q=5	5.00	455.06	455.91		455.97	0.004166	1.08	4.62	8.14	0.46
1	581.910	Q=10	10.00	455.06	456.22		456.31	0.004529	1.36	7.34	9.65	0.50
1	581.910	Q=15	15.00	455.06	456.46		456.58	0.004449	1.53	9.80	10.54	0.51
1	581.910	Q=20	20.00	455.06	456.66		456.81	0.004319	1.67	11.99	10.87	0.51
1	581.910	Q10	28.00	455.06	456.93		457.11	0.004402	1.87	14.94	11.22	0.52
1	581.910	Q=40	40.00	455.06	457.24		457.48	0.005267	2.17	18.47	12.24	0.56
1	581.910	Q=50	50.00	455.06	457.42		457.72	0.006099	2.41	20.76	12.72	0.60
1	581.910	Q100	61.00	455.06	457.55		457.93	0.007482	2.72	22.40	13.06	0.66
1	581.910	Q500	85.40	455.06	457.79		458.35	0.011123	3.31	25.78	14.84	0.80
1	581.910	Qproj	53.00	455.06	457.46		457.78	0.006453	2.49	21.26	12.83	0.62
1	579.290	Q=5	5.00	455.01	455.90		455.96	0.003722	1.04	4.80	8.21	0.43
1	579.290	Q=10	10.00	455.01	456.21		456.30	0.004191	1.33	7.52	9.67	0.48
1	579.290	Q=15	15.00	455.01	456.45		456.57	0.004181	1.50	9.98	10.52	0.49
1	579.290	Q=20	20.00	455.01	456.66		456.79	0.004113	1.64	12.17	10.87	0.50
1	579.290	Q10	28.00	455.01	456.92		457.10	0.004212	1.86	15.09	11.01	0.51
1	579.290	Q=40	40.00	455.01	457.22		457.46	0.004725	2.17	18.40	11.03	0.54
1	579.290	Q=50	50.00	455.01	457.39		457.70	0.006137	2.45	20.37	12.25	0.61
1	579.290	Q100	61.00	455.01	457.50		457.90	0.007835	2.81	21.71	12.57	0.68
1	579.290	Q500	85.40	455.01	457.64	457.44	458.31	0.012720	3.64	23.45	13.01	0.87
1	579.290	Qproj	53.00	455.01	457.43		457.76	0.006582	2.55	20.80	12.39	0.63
1	570.750	Q=5	5.00	455.19	455.69	455.69	455.88	0.023207	1.96	2.55	6.65	1.01
1	570.750	Q=10	10.00	455.19	455.92	455.92	456.21	0.020571	2.39	4.19	7.28	1.00
1	570.750	Q=15	15.00	455.19	456.11	456.11	456.47	0.019520	2.68	5.60	7.78	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	570.750	Q=20	20.00	455.19	456.27	456.27	456.70	0.018795	2.90	6.90	8.21	1.01
1	570.750	Q10	28.00	455.19	456.52	456.52	457.00	0.017916	3.07	9.13	9.62	1.01
1	570.750	Q=40	40.00	455.19	456.81	456.81	457.36	0.017247	3.28	12.20	11.34	1.01
1	570.750	Q=50	50.00	455.19	457.09	457.09	457.60	0.017087	3.16	15.80	15.64	1.00
1	570.750	Q100	61.00	455.19	457.29	457.29	457.80	0.016724	3.16	19.32	19.05	1.00
1	570.750	Q500	85.40	455.19	457.61	457.61	458.15	0.016056	3.24	26.37	24.49	1.00
1	570.750	Qproj	53.00	455.19	457.15	457.15	457.65	0.017036	3.16	16.77	16.65	1.00
1	560.380	Q=5	5.00	454.46	455.45		455.59	0.015310	1.66	3.01	7.22	0.82
1	560.380	Q=10	10.00	454.46	455.74		455.92	0.011451	1.86	5.37	8.65	0.75
1	560.380	Q=15	15.00	454.46	455.97		456.18	0.009871	2.01	7.46	9.50	0.72
1	560.380	Q=20	20.00	454.46	456.17		456.40	0.008988	2.12	9.41	10.23	0.71
1	560.380	Q10	28.00	454.46	456.45		456.71	0.008044	2.26	12.40	11.25	0.69
1	560.380	Q=40	40.00	454.46	456.68		457.04	0.009968	2.64	15.16	12.82	0.77
1	560.380	Q=50	50.00	454.46	456.84	456.63	457.26	0.012202	2.88	17.33	15.07	0.86
1	560.380	Q100	61.00	454.46	456.98	456.88	457.47	0.014123	3.11	19.61	17.11	0.93
1	560.380	Q500	85.40	454.46	457.39	457.28	457.83	0.012622	2.95	28.93	25.09	0.88
1	560.380	Qproj	53.00	454.46	456.87	456.72	457.32	0.012950	2.97	17.84	15.55	0.89
1	533.070	Q=5	5.00	454.37	455.19		455.29	0.007564	1.42	3.52	6.34	0.61
1	533.070	Q=10	10.00	454.37	455.45		455.63	0.009826	1.89	5.29	7.51	0.72
1	533.070	Q=15	15.00	454.37	455.62		455.88	0.011892	2.26	6.64	8.29	0.81
1	533.070	Q=20	20.00	454.37	455.74	455.66	456.09	0.014132	2.60	7.70	8.86	0.89
1	533.070	Q10	28.00	454.37	455.91	455.91	456.37	0.017726	3.03	9.24	10.03	1.01
1	533.070	Q=40	40.00	454.37	456.28	456.28	456.67	0.018774	2.78	14.41	18.74	1.01
1	533.070	Q=50	50.00	454.37	456.40	456.40	456.85	0.018415	2.99	16.70	19.00	1.02
1	533.070	Q100	61.00	454.37	456.53	456.53	457.04	0.017453	3.16	19.30	19.28	1.01
1	533.070	Q500	85.40	454.37	456.79	456.79	457.42	0.016801	3.52	24.28	19.83	1.01
1	533.070	Qproj	53.00	454.37	456.44	456.44	456.91	0.017931	3.03	17.48	19.08	1.01
1	504.730	Q=5	5.00	454.31	454.77	454.77	454.94	0.024193	1.82	2.75	8.28	1.01
1	504.730	Q=10	10.00	454.31	454.97	454.97	455.22	0.021556	2.25	4.44	8.73	1.01
1	504.730	Q=15	15.00	454.31	455.18	455.18	455.43	0.021926	2.20	6.82	13.97	1.01
1	504.730	Q=20	20.00	454.31	455.32	455.31	455.57	0.021536	2.23	8.95	17.64	1.00
1	504.730	Q10	28.00	454.31	455.57		455.78	0.011564	2.01	13.96	19.98	0.77

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	504.730	Q=40	40.00	454.31	455.78		456.03	0.009997	2.20	18.20	20.03	0.74
1	504.730	Q=50	50.00	454.31	455.99		456.25	0.008051	2.23	22.37	20.07	0.68
1	504.730	Q100	61.00	454.31	456.21		456.48	0.006724	2.27	26.82	20.12	0.63
1	504.730	Q500	85.40	454.31	456.66		456.95	0.005301	2.39	35.79	20.23	0.57
1	504.730	Qproj	53.00	454.31	456.05		456.31	0.007600	2.24	23.63	20.09	0.66
1	486.340	Q=5	5.00	453.75	454.39		454.52	0.015837	1.64	3.06	7.54	0.82
1	486.340	Q=10	10.00	453.75	454.65		454.83	0.013663	1.91	5.24	9.05	0.80
1	486.340	Q=15	15.00	453.75	454.87		455.08	0.011130	2.06	7.29	9.43	0.75
1	486.340	Q=20	20.00	453.75	455.02		455.29	0.011209	2.27	8.79	9.70	0.76
1	486.340	Q10	28.00	453.75	455.23	455.17	455.52	0.015516	2.39	11.72	15.77	0.89
1	486.340	Q=40	40.00	453.75	455.54		455.84	0.010334	2.41	16.63	15.80	0.75
1	486.340	Q=50	50.00	453.75	455.79		456.09	0.008347	2.44	20.48	15.83	0.68
1	486.340	Q100	61.00	453.75	456.01		456.34	0.007528	2.54	24.04	15.85	0.66
1	486.340	Q500	85.40	453.75	456.43		456.83	0.006885	2.78	30.74	15.89	0.64
1	486.340	Qproj	53.00	453.75	455.85		456.16	0.008023	2.46	21.53	15.83	0.67
1	474.020	Q=5	5.00	453.14	454.34		454.39	0.005417	1.05	4.77	10.28	0.49
1	474.020	Q=10	10.00	453.14	454.63		454.71	0.004564	1.29	7.77	10.44	0.48
1	474.020	Q=15	15.00	453.14	454.86		454.97	0.004329	1.47	10.23	10.57	0.48
1	474.020	Q=20	20.00	453.14	455.02		455.16	0.005245	1.67	11.97	11.54	0.52
1	474.020	Q10	28.00	453.14	455.16		455.38	0.006873	2.05	13.63	11.56	0.60
1	474.020	Q=40	40.00	453.14	455.44		455.73	0.007263	2.37	16.87	11.61	0.63
1	474.020	Q=50	50.00	453.14	455.64		455.99	0.007701	2.61	19.16	11.64	0.65
1	474.020	Q100	61.00	453.14	455.80		456.23	0.008618	2.90	21.05	11.66	0.69
1	474.020	Q500	85.40	453.14	456.03		456.69	0.011794	3.60	23.73	11.70	0.81
1	474.020	Qproj	53.00	453.14	455.69		456.06	0.007894	2.68	19.74	11.65	0.66
1	458.080	Q=5	5.00	453.58	454.03	454.03	454.22	0.024617	1.94	2.58	6.86	1.01
1	458.080	Q=10	10.00	453.58	454.25	454.25	454.55	0.022289	2.42	4.13	7.00	1.01
1	458.080	Q=15	15.00	453.58	454.50	454.50	454.82	0.021850	2.50	6.00	9.44	1.00
1	458.080	Q=20	20.00	453.58	454.69	454.69	454.99	0.022181	2.45	8.17	13.50	1.00
1	458.080	Q10	28.00	453.58	455.01		455.24	0.011472	2.10	13.30	16.61	0.75
1	458.080	Q=40	40.00	453.58	455.38		455.59	0.007004	2.06	19.41	16.73	0.61
1	458.080	Q=50	50.00	453.58	455.61		455.84	0.006167	2.15	23.27	16.81	0.58

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	458.080	Q100	61.00	453.58	455.80		456.07	0.006151	2.31	26.44	16.87	0.59
1	458.080	Q500	85.40	453.58	456.08		456.46	0.007141	2.73	31.28	16.97	0.64
1	458.080	Qproj	53.00	453.58	455.67		455.91	0.006085	2.19	24.25	16.83	0.58
1	447.450	Q=5	5.00	452.83	453.60		453.73	0.009130	1.59	3.14	5.02	0.64
1	447.450	Q=10	10.00	452.83	453.91		454.13	0.010842	2.11	4.74	5.34	0.71
1	447.450	Q=15	15.00	452.83	454.13		454.45	0.012569	2.50	6.00	5.70	0.78
1	447.450	Q=20	20.00	452.83	454.57	454.31	454.76	0.009424	1.91	10.48	12.69	0.67
1	447.450	Q10	28.00	452.83	454.98	454.52	455.13	0.005856	1.70	16.45	16.42	0.54
1	447.450	Q=40	40.00	452.83	455.36		455.51	0.005083	1.71	23.39	20.97	0.52
1	447.450	Q=50	50.00	452.83	455.61		455.76	0.004618	1.70	29.39	24.86	0.50
1	447.450	Q100	61.00	452.83	455.82		455.98	0.004067	1.76	34.60	24.86	0.48
1	447.450	Q500	85.40	452.83	456.15		456.35	0.004060	2.00	42.73	24.86	0.49
1	447.450	Qproj	53.00	452.83	455.68		455.83	0.004366	1.71	31.01	24.86	0.49
1	443.900	Q=5	5.00	452.82	453.55		453.69	0.010722	1.67	2.99	5.03	0.69
1	443.900	Q=10	10.00	452.82	453.83		454.09	0.013098	2.24	4.47	5.39	0.79
1	443.900	Q=15	15.00	452.82	453.99	453.93	454.39	0.017379	2.80	5.36	5.59	0.91
1	443.900	Q=20	20.00	452.82	454.13	454.13	454.67	0.020875	3.25	6.15	5.77	1.01
1	443.900	Q10	28.00	452.82	454.50	454.50	455.05	0.020937	3.29	8.51	7.74	1.00
1	443.900	Q=40	40.00	452.82	454.89	454.89	455.44	0.020760	3.27	12.23	11.25	1.00
1	443.900	Q=50	50.00	452.82	455.11	455.11	455.69	0.020300	3.36	14.88	12.95	1.00
1	443.900	Q100	61.00	452.82	455.39	455.39	455.92	0.019718	3.22	18.94	17.69	0.99
1	443.900	Q500	85.40	452.82	455.68	455.68	456.29	0.018947	3.44	24.80	20.30	0.99
1	443.900	Qproj	53.00	452.82	455.18	455.18	455.75	0.020279	3.37	15.71	13.62	1.00
1	434.950	Q=5	5.00	452.71	453.41		453.58	0.014461	1.82	2.75	5.49	0.82
1	434.950	Q=10	10.00	452.71	453.77		453.96	0.010550	1.91	5.23	7.63	0.74
1	434.950	Q=15	15.00	452.71	453.99		454.22	0.010653	2.17	6.92	8.37	0.76
1	434.950	Q=20	20.00	452.71	454.17		454.45	0.010566	2.35	8.51	9.00	0.77
1	434.950	Q10	28.00	452.71	454.60		454.78	0.011246	1.91	14.66	22.57	0.76
1	434.950	Q=40	40.00	452.71	454.84		455.03	0.008716	1.95	20.49	24.89	0.69
1	434.950	Q=50	50.00	452.71	454.95		455.18	0.008985	2.15	23.29	24.89	0.71
1	434.950	Q100	61.00	452.71	455.06		455.34	0.009198	2.33	26.15	24.89	0.73
1	434.950	Q500	85.40	452.71	455.29		455.66	0.009520	2.68	31.88	24.89	0.76

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	434.950	Qproj	53.00	452.71	454.98		455.23	0.009062	2.20	24.08	24.89	0.71
1	420.800	Q=5	5.00	452.15	453.17		453.37	0.014090	1.97	2.54	4.13	0.80
1	420.800	Q=10	10.00	452.15	453.49	453.46	453.76	0.018359	2.29	4.37	7.19	0.94
1	420.800	Q=15	15.00	452.15	453.69	453.65	454.02	0.017591	2.56	5.86	7.82	0.9
1	420.800	Q=20	20.00	452.15	453.85	453.82	454.25	0.017405	2.79	7.18	8.34	0.96
1	420.800	Q10	28.00	452.15	454.07	454.05	454.56	0.017402	3.08	9.09	9.04	0.98
1	420.800	Q=40	40.00	452.15	454.52	454.52	454.84	0.019955	2.50	16.03	25.25	1.00
1	420.800	Q=50	50.00	452.15	454.63	454.63	454.99	0.019025	2.68	18.64	25.25	1.00
1	420.800	Q100	61.00	452.15	454.73	454.73	455.15	0.018324	2.86	21.31	25.25	0.99
1	420.800	Q500	85.40	452.15	454.94	454.94	455.47	0.017399	3.20	26.65	25.25	1.00
1	420.800	Qproj	53.00	452.15	454.66	454.66	455.04	0.018745	2.73	19.41	25.25	0.99
1	402.410	Q=5	5.00	452.16	453.01		453.13	0.009841	1.55	3.22	6.13	0.68
1	402.410	Q=10	10.00	452.16	453.29		453.48	0.010785	1.93	5.18	7.61	0.75
1	402.410	Q=15	15.00	452.16	453.50		453.74	0.011081	2.19	6.84	8.41	0.78
1	402.410	Q=20	20.00	452.16	453.67		453.96	0.011505	2.41	8.30	9.06	0.80
1	402.410	Q10	28.00	452.16	453.90	453.75	454.26	0.011656	2.66	10.53	9.98	0.83
1	402.410	Q=40	40.00	452.16	454.30	454.18	454.53	0.011237	2.11	18.92	25.13	0.78
1	402.410	Q=50	50.00	452.16	454.43	454.29	454.69	0.010563	2.26	22.12	25.13	0.77
1	402.410	Q100	61.00	452.16	454.55	454.39	454.85	0.010379	2.43	25.14	25.13	0.77
1	402.410	Q500	85.40	452.16	454.74	454.61	455.15	0.011742	2.86	29.81	25.13	0.84
1	402.410	Qproj	53.00	452.16	454.47	454.32	454.74	0.010182	2.29	23.19	25.13	0.76
1	379.330	Q=5	5.00	452.01	452.68		452.84	0.016855	1.74	2.87	7.07	0.87
1	379.330	Q=10	10.00	452.01	452.89	452.88	453.15	0.018598	2.27	4.41	7.77	0.96
1	379.330	Q=15	15.00	452.01	453.06	453.06	453.40	0.019060	2.60	5.76	8.34	1.00
1	379.330	Q=20	20.00	452.01	453.22	453.22	453.62	0.018478	2.82	7.10	8.89	1.01
1	379.330	Q10	28.00	452.01	453.42	453.42	453.91	0.018467	3.11	9.00	9.64	1.03
1	379.330	Q=40	40.00	452.01	453.76	453.76	454.18	0.018401	2.90	13.81	16.60	1.01
1	379.330	Q=50	50.00	452.01	453.97	453.97	454.36	0.018654	2.77	18.06	23.39	1.01
1	379.330	Q100	61.00	452.01	454.13	454.13	454.52	0.019480	2.77	22.02	29.27	1.02
1	379.330	Q500	85.40	452.01	454.32	454.32	454.81	0.018823	3.11	27.49	29.29	1.02
1	379.330	Qproj	53.00	452.01	453.99	453.99	454.41	0.019582	2.87	18.50	23.56	1.03

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	356.690	Q=5	5.00	451.40	452.20	452.20	452.38	0.023690	1.91	2.62	7.10	1.01
1	356.690	Q=10	10.00	451.40	452.42	452.42	452.70	0.021424	2.35	4.25	7.73	1.01
1	356.690	Q=15	15.00	451.40	452.60	452.60	452.95	0.019998	2.63	5.70	8.26	1.01
1	356.690	Q=20	20.00	451.40	452.76	452.76	453.17	0.018875	2.83	7.07	8.72	1.00
1	356.690	Q10	28.00	451.40	453.18		453.45	0.013277	2.30	12.15	15.83	0.84
1	356.690	Q=40	40.00	451.40	453.46		453.73	0.013360	2.31	17.33	22.83	0.85
1	356.690	Q=50	50.00	451.40	453.68		453.93	0.009490	2.22	22.53	24.06	0.73
1	356.690	Q100	61.00	451.40	453.85		454.11	0.008219	2.29	26.65	24.06	0.69
1	356.690	Q500	85.40	451.40	454.10		454.45	0.008336	2.61	32.72	24.06	0.71
1	356.690	Qproj	53.00	451.40	453.74		453.99	0.008524	2.19	24.15	24.06	0.70
1	335.540	Q=5	5.00	451.10	451.90	451.75	452.01	0.009132	1.45	3.45	7.00	0.66
1	335.540	Q=10	10.00	451.10	452.17	452.01	452.34	0.009434	1.83	5.46	7.87	0.70
1	335.540	Q=15	15.00	451.10	452.39	452.20	452.61	0.009537	2.08	7.20	8.54	0.72
1	335.540	Q=20	20.00	451.10	452.57	452.36	452.83	0.009578	2.27	8.80	9.12	0.74
1	335.540	Q10	28.00	451.10	452.93	452.59	453.17	0.012575	2.16	12.99	18.29	0.82
1	335.540	Q=40	40.00	451.10	453.36	453.05	453.51	0.005972	1.70	23.58	27.13	0.58
1	335.540	Q=50	50.00	451.10	453.64	453.18	453.77	0.003853	1.61	30.98	27.13	0.48
1	335.540	Q100	61.00	451.10	453.82		453.97	0.003532	1.69	36.01	27.13	0.47
1	335.540	Q500	85.40	451.10	454.09		454.29	0.003868	1.98	43.19	27.13	0.50
1	335.540	Qproj	53.00	451.10	453.71	453.21	453.84	0.003520	1.60	33.03	27.13	0.46
1	322.750	Q=5	5.00	451.17	451.63	451.63	451.83	0.022965	1.98	2.53	6.44	1.01
1	322.750	Q=10	10.00	451.17	451.87	451.87	452.16	0.020560	2.40	4.16	7.17	1.01
1	322.750	Q=15	15.00	451.17	452.06	452.06	452.42	0.019335	2.68	5.60	7.76	1.01
1	322.750	Q=20	20.00	451.17	452.23	452.23	452.65	0.018331	2.87	6.96	8.28	1.00
1	322.750	Q10	28.00	451.17	452.46	452.46	452.96	0.017519	3.13	8.96	8.99	1.00
1	322.750	Q=40	40.00	451.17	452.75	452.75	453.35	0.016945	3.43	11.67	9.87	1.01
1	322.750	Q=50	50.00	451.17	452.95	452.95	453.63	0.016766	3.64	13.72	10.44	1.01
1	322.750	Q100	61.00	451.17	453.37	453.37	453.85	0.017060	3.07	19.85	20.33	0.99
1	322.750	Q500	85.40	451.17	453.66	453.66	454.17	0.017025	3.15	27.12	26.76	1.00
1	322.750	Qproj	53.00	451.17	453.01	453.01	453.70	0.016518	3.68	14.39	10.62	1.01
1	320.620	Q=5	5.00	450.23	451.01		451.07	0.004552	1.11	4.50	7.98	0.47
1	320.620	Q=10	10.00	450.23	451.31		451.42	0.004764	1.43	6.99	8.56	0.51

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	320.620	Q=15	15.00	450.23	451.54		451.68	0.005058	1.67	8.99	9.00	0.53
1	320.620	Q=20	20.00	450.23	451.73		451.91	0.005300	1.86	10.77	9.37	0.55
1	320.620	Q10	28.00	450.23	452.00		452.22	0.005621	2.10	13.31	9.88	0.58
1	320.620	Q=40	40.00	450.23	452.31		452.61	0.006336	2.43	16.44	10.58	0.62
1	320.620	Q=50	50.00	450.23	452.48		452.86	0.007332	2.73	18.35	11.05	0.68
1	320.620	Q100	61.00	450.23	452.63		453.11	0.008552	3.04	20.06	11.46	0.73
1	320.620	Q500	85.40	450.23	452.96	452.66	453.59	0.012626	3.50	24.43	15.64	0.89
1	320.620	Qproj	53.00	450.23	452.53		452.93	0.007649	2.81	18.85	11.18	0.69
1	304.240	Q=5	5.00	449.99	450.84		450.96	0.010340	1.54	3.24	6.48	0.70
1	304.240	Q=10	10.00	449.99	451.09		451.29	0.012067	1.99	5.02	7.63	0.78
1	304.240	Q=15	15.00	449.99	451.27		451.54	0.013221	2.33	6.43	8.18	0.84
1	304.240	Q=20	20.00	449.99	451.41	451.33	451.76	0.014182	2.61	7.66	8.64	0.88
1	304.240	Q10	28.00	449.99	451.62	451.56	452.06	0.015128	2.95	9.49	9.28	0.93
1	304.240	Q=40	40.00	449.99	451.90	451.89	452.43	0.016925	3.22	12.43	11.73	1.00
1	304.240	Q=50	50.00	449.99	452.10	452.10	452.67	0.016599	3.34	14.98	13.21	1.00
1	304.240	Q100	61.00	449.99	452.29	452.29	452.90	0.016133	3.48	17.54	14.24	1.00
1	304.240	Q500	85.40	449.99	452.63	452.63	453.35	0.015693	3.75	22.75	16.14	1.01
1	304.240	Qproj	53.00	449.99	452.15	452.15	452.73	0.016476	3.38	15.68	13.50	1.00
1	281.200	Q=5	5.00	449.85	450.43	450.42	450.62	0.021466	1.95	2.56	6.34	0.98
1	281.200	Q=10	10.00	449.85	450.69	450.67	450.95	0.018340	2.22	4.50	8.13	0.95
1	281.200	Q=15	15.00	449.85	450.87	450.85	451.19	0.017383	2.50	6.01	8.67	0.96
1	281.200	Q=20	20.00	449.85	451.03	451.01	451.40	0.016806	2.71	7.39	9.13	0.96
1	281.200	Q10	28.00	449.85	451.26	451.23	451.69	0.016431	2.91	9.61	10.41	0.97
1	281.200	Q=40	40.00	449.85	451.61	451.54	452.03	0.014362	2.87	13.92	14.03	0.92
1	281.200	Q=50	50.00	449.85	451.88		452.27	0.011846	2.76	18.10	16.81	0.85
1	281.200	Q100	61.00	449.85	452.17		452.52	0.008824	2.63	23.21	18.57	0.75
1	281.200	Q500	85.40	449.85	452.67		453.01	0.006127	2.59	32.93	20.28	0.65
1	281.200	Qproj	53.00	449.85	451.97		452.34	0.010984	2.71	19.56	17.68	0.82
1	253.350	Q=5	5.00	449.30	449.99		450.14	0.013524	1.73	2.88	5.94	0.79
1	253.350	Q=10	10.00	449.30	450.26	450.18	450.49	0.014407	2.13	4.70	7.47	0.85
1	253.350	Q=15	15.00	449.30	450.46	450.38	450.75	0.013883	2.38	6.31	8.18	0.86
1	253.350	Q=20	20.00	449.30	450.65	450.54	450.98	0.013196	2.54	7.86	8.80	0.86

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	253.350	Q10	28.00	449.30	450.92		451.29	0.011944	2.70	10.35	9.74	0.84
1	253.350	Q=40	40.00	449.30	451.21	451.07	451.66	0.012033	3.00	13.35	10.75	0.86
1	253.350	Q=50	50.00	449.30	451.51		451.96	0.009983	2.98	16.79	11.80	0.80
1	253.350	Q100	61.00	449.30	451.84		452.27	0.008277	2.93	20.79	12.92	0.74
1	253.350	Q500	85.40	449.30	452.57		452.81	0.006461	2.17	39.40	33.36	0.64
1	253.350	Qproj	53.00	449.30	451.62	451.33	452.06	0.009214	2.94	18.04	12.16	0.77
1	235.250	Q=5	5.00	448.60	449.61	449.61	449.82	0.023982	2.03	2.47	5.88	1.00
1	235.250	Q=10	10.00	448.60	449.86	449.86	450.16	0.021820	2.45	4.08	6.74	1.01
1	235.250	Q=15	15.00	448.60	450.06	450.06	450.44	0.020461	2.74	5.48	7.23	1.00
1	235.250	Q=20	20.00	448.60	450.23	450.23	450.68	0.019621	2.95	6.77	7.66	1.00
1	235.250	Q10	28.00	448.60	450.47	450.47	451.00	0.019074	3.24	8.64	8.24	1.01
1	235.250	Q=40	40.00	448.60	450.98		451.45	0.011856	3.04	13.15	9.49	0.82
1	235.250	Q=50	50.00	448.60	451.31		451.78	0.010088	3.03	16.48	10.51	0.77
1	235.250	Q100	61.00	448.60	451.68		452.12	0.008791	2.93	20.84	12.90	0.74
1	235.250	Q500	85.40	448.60	452.18		452.63	0.011440	2.98	28.65	22.09	0.84
1	235.250	Qproj	53.00	448.60	451.44		451.89	0.009509	2.97	17.83	11.31	0.76
1	206.680	Q=5	5.00	448.40	449.00		449.16	0.016506	1.82	2.75	6.18	0.87
1	206.680	Q=10	10.00	448.40	449.34		449.54	0.011115	2.00	4.99	7.01	0.76
1	206.680	Q=15	15.00	448.40	449.68		449.88	0.007626	1.99	7.52	7.84	0.65
1	206.680	Q=20	20.00	448.40	449.99		450.19	0.005817	1.97	10.13	8.61	0.58
1	206.680	Q10	28.00	448.40	450.42		450.62	0.004582	2.00	14.04	9.65	0.53
1	206.680	Q=40	40.00	448.40	450.99		451.20	0.003535	2.02	19.80	10.47	0.47
1	206.680	Q=50	50.00	448.40	451.32		451.55	0.003519	2.15	23.26	10.86	0.47
1	206.680	Q100	61.00	448.40	451.66		451.92	0.003445	2.25	27.06	11.28	0.46
1	206.680	Q500	85.40	448.40	452.04		452.41	0.004547	2.72	31.42	11.92	0.53
1	206.680	Qproj	53.00	448.40	451.43		451.67	0.003415	2.16	24.52	11.00	0.46
1	179.060	Q=5	5.00	447.94	448.64		448.79	0.010987	1.67	3.00	4.91	0.68
1	179.060	Q=10	10.00	447.94	449.06		449.26	0.009254	1.98	5.04	4.95	0.63
1	179.060	Q=15	15.00	447.94	449.38		449.64	0.009447	2.26	6.62	4.99	0.63
1	179.060	Q=20	20.00	447.94	449.69		449.98	0.009657	2.39	8.35	6.00	0.65
1	179.060	Q10	28.00	447.94	450.13		450.44	0.008622	2.50	11.21	7.04	0.63
1	179.060	Q=40	40.00	447.94	450.73		451.06	0.006845	2.51	15.95	8.49	0.58

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	179.060	Q=50	50.00	447.94	451.03		451.40	0.007038	2.70	18.54	8.86	0.60
1	179.060	Q100	61.00	447.94	451.36		451.77	0.006943	2.83	21.52	9.27	0.59
1	179.060	Q500	85.40	447.94	451.39		452.17	0.013134	3.92	21.80	9.30	0.82
1	179.060	Qproj	53.00	447.94	451.16		451.53	0.006753	2.70	19.63	9.01	0.58
1	160.060	Q=5	5.00	447.65	448.45		448.59	0.009922	1.66	3.01	4.47	0.65
1	160.060	Q=10	10.00	447.65	448.57	448.57	448.97	0.024027	2.81	3.56	4.50	1.01
1	160.060	Q=15	15.00	447.65	448.82	448.82	449.34	0.024180	3.20	4.69	4.55	1.01
1	160.060	Q=20	20.00	447.65	449.04	449.04	449.67	0.024561	3.51	5.70	4.59	1.01
1	160.060	Q10	28.00	447.65	449.36	449.36	450.14	0.025307	3.91	7.17	4.66	1.01
1	160.060	Q=40	40.00	447.65	449.75	449.75	450.75	0.027668	4.44	9.00	4.74	1.03
1	160.060	Q=50	50.00	447.65	450.27	450.27	451.13	0.023923	4.10	12.18	7.12	1.00
1	160.060	Q100	61.00	447.65	450.52	450.52	451.49	0.023925	4.36	13.98	7.22	1.00
1	160.060	Q500	85.40	447.65	451.27	451.27	451.79	0.020011	3.20	26.67	25.23	0.99
1	160.060	Qproj	53.00	447.65	450.73	450.73	451.33	0.013453	3.42	15.50	7.30	0.75
1	157.180	Q=5	5.00	447.93	448.36	448.36	448.54	0.023184	1.90	2.63	7.25	1.01
1	157.180	Q=10	10.00	447.93	448.58	448.58	448.85	0.021023	2.34	4.27	7.77	1.01
1	157.180	Q=15	15.00	447.93	448.76	448.76	449.11	0.019982	2.63	5.70	8.20	1.01
1	157.180	Q=20	20.00	447.93	448.91	448.91	449.33	0.019456	2.87	6.97	8.41	1.01
1	157.180	Q10	28.00	447.93	449.12	449.12	449.64	0.019079	3.21	8.73	8.41	1.01
1	157.180	Q=40	40.00	447.93	449.39	449.39	450.06	0.018959	3.61	11.07	8.41	1.00
1	157.180	Q=50	50.00	447.93	449.61	449.61	450.38	0.019005	3.89	12.86	8.41	1.00
1	157.180	Q100	61.00	447.93	449.83	449.83	450.70	0.019008	4.14	14.72	8.42	1.00
1	157.180	Q500	85.40	447.93	450.34	450.34	451.36	0.018910	4.46	19.15	9.46	1.00
1	157.180	Qproj	53.00	447.93	449.67	449.67	450.47	0.019043	3.97	13.37	8.41	1.00
1	146.300	Q=5	5.00	447.64	448.28		448.36	0.008326	1.29	3.89	8.59	0.61
1	146.300	Q=10	10.00	447.64	448.51		448.65	0.008998	1.70	5.89	8.83	0.66
1	146.300	Q=15	15.00	447.64	448.62		448.86	0.012587	2.18	6.87	8.95	0.79
1	146.300	Q=20	20.00	447.64	448.70	448.65	449.05	0.016158	2.62	7.64	9.04	0.91
1	146.300	Q10	28.00	447.64	448.85	448.85	449.35	0.019326	3.12	8.99	9.20	1.01
1	146.300	Q=40	40.00	447.64	449.12	449.12	449.74	0.018712	3.47	11.52	9.49	1.01
1	146.300	Q=50	50.00	447.64	449.33	449.33	450.03	0.018175	3.70	13.52	9.72	1.00
1	146.300	Q100	61.00	447.64	449.54	449.54	450.32	0.017910	3.92	15.56	9.95	1.00

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	146.300	Q500	85.40	447.64	450.02	450.02	450.90	0.017561	4.16	20.53	11.67	1.00
1	146.300	Qproj	53.00	447.64	449.39	449.39	450.11	0.018090	3.76	14.09	9.78	1.00
1	127.500	Q=5	5.00	447.43	447.90	447.90	448.10	0.023323	2.00	2.50	6.24	1.01
1	127.500	Q=10	10.00	447.43	448.23	448.23	448.39	0.024757	1.76	5.67	18.01	1.00
1	127.500	Q=15	15.00	447.43	448.33	448.33	448.54	0.023035	2.01	7.46	18.17	1.00
1	127.500	Q=20	20.00	447.43	448.41	448.41	448.67	0.022720	2.23	8.97	18.30	1.02
1	127.500	Q10	28.00	447.43	448.54	448.54	448.85	0.020952	2.46	11.39	18.52	1.00
1	127.500	Q=40	40.00	447.43	448.71	448.71	449.10	0.020070	2.76	14.50	18.79	1.00
1	127.500	Q=50	50.00	447.43	448.84	448.84	449.28	0.019649	2.96	16.87	18.99	1.00
1	127.500	Q100	61.00	447.43	449.03	448.97	449.48	0.015918	2.97	20.57	19.31	0.92
1	127.500	Q500	85.40	447.43	449.42		449.89	0.012046	3.03	28.22	19.95	0.81
1	127.500	Qproj	53.00	447.43	448.87	448.87	449.34	0.019429	3.01	17.58	19.05	1.00
1	122.470	Q=5	5.00	446.82	447.37	447.37	447.58	0.023051	2.04	2.45	5.89	1.01
1	122.470	Q=10	10.00	446.82	447.62	447.62	447.94	0.020783	2.51	3.99	6.27	1.00
1	122.470	Q=15	15.00	446.82	447.83	447.83	448.23	0.019917	2.83	5.30	6.58	1.01
1	122.470	Q=20	20.00	446.82	448.01	448.01	448.49	0.019360	3.07	6.51	6.85	1.01
1	122.470	Q10	28.00	446.82	448.35	448.35	448.70	0.021443	2.61	10.73	16.05	1.02
1	122.470	Q=40	40.00	446.82	448.54	448.54	448.97	0.020000	2.89	13.83	16.34	1.00
1	122.470	Q=50	50.00	446.82	448.68	448.68	449.17	0.019514	3.10	16.14	16.55	1.00
1	122.470	Q100	61.00	446.82	448.82	448.82	449.38	0.019397	3.31	18.45	16.76	1.01
1	122.470	Q500	85.40	446.82	449.11	449.11	449.79	0.018835	3.65	23.37	17.20	1.00
1	122.470	Qproj	53.00	446.82	448.72	448.72	449.23	0.019496	3.16	16.78	16.61	1.00
1	105.790	Q=5	5.00	446.37	447.24		447.28	0.003652	0.88	5.71	11.93	0.40
1	105.790	Q=10	10.00	446.37	447.55		447.61	0.003080	1.04	9.59	13.00	0.39
1	105.790	Q=15	15.00	446.37	447.81		447.88	0.002837	1.15	13.02	13.87	0.38
1	105.790	Q=20	20.00	446.37	448.06		448.13	0.003279	1.15	17.33	21.00	0.41
1	105.790	Q10	28.00	446.37	448.29		448.37	0.003033	1.27	22.08	21.37	0.40
1	105.790	Q=40	40.00	446.37	448.56		448.66	0.003020	1.43	27.92	21.84	0.40
1	105.790	Q=50	50.00	446.37	448.76		448.88	0.003012	1.54	32.42	22.23	0.41
1	105.790	Q100	61.00	446.37	449.00		449.13	0.003651	1.61	37.90	28.82	0.45
1	105.790	Q500	85.40	446.37	449.28		449.45	0.003982	1.85	46.15	29.96	0.48
1	105.790	Qproj	53.00	446.37	448.82		448.94	0.003007	1.57	33.72	22.34	0.41

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (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)	Top Width (m)	Froude # Chl
1	83.230	Q=5	5.00	446.43	446.90	446.90	447.10	0.022995	1.99	2.51	6.28	1.01
1	83.230	Q=10	10.00	446.43	447.14	447.14	447.44	0.020559	2.43	4.11	6.90	1.01
1	83.230	Q=15	15.00	446.43	447.34	447.34	447.71	0.019294	2.71	5.53	7.41	1.00
1	83.230	Q=20	20.00	446.43	447.50	447.50	447.94	0.018760	2.94	6.80	7.83	1.01
1	83.230	Q10	28.00	446.43	447.80	447.80	448.20	0.019412	2.77	10.10	12.91	1.00
1	83.230	Q=40	40.00	446.43	448.04	448.04	448.49	0.019216	2.97	13.45	14.90	1.00
1	83.230	Q=50	50.00	446.43	448.18	448.18	448.70	0.019085	3.19	15.66	15.11	1.00
1	83.230	Q100	61.00	446.43	448.32	448.32	448.92	0.019578	3.43	17.76	15.32	1.02
1	83.230	Q500	85.40	446.43	448.77	448.77	449.25	0.018658	3.08	27.75	28.54	1.00
1	83.230	Qproj	53.00	446.43	448.22	448.22	448.76	0.019184	3.26	16.26	15.17	1.01
1	59.990	Q=5	5.00	445.67	446.17	446.17	446.37	0.022836	1.97	2.53	6.46	1.01
1	59.990	Q=10	10.00	445.67	446.40	446.40	446.70	0.020639	2.40	4.17	7.26	1.01
1	59.990	Q=15	15.00	445.67	446.59	446.59	446.96	0.019418	2.69	5.58	7.69	1.01
1	59.990	Q=20	20.00	445.67	446.76	446.76	447.19	0.018412	2.90	6.90	8.07	1.00
1	59.990	Q10	28.00	445.67	446.99	446.99	447.50	0.017823	3.19	8.79	8.58	1.00
1	59.990	Q=40	40.00	445.67	447.46	447.44	447.89	0.017200	2.89	13.82	15.21	0.97
1	59.990	Q=50	50.00	445.67	447.58	447.57	448.10	0.018474	3.19	15.69	15.49	1.01
1	59.990	Q100	61.00	445.67	447.81	447.81	448.29	0.018860	3.08	19.79	20.78	1.01
1	59.990	Q500	85.40	445.67	448.08	448.05	448.65	0.016957	3.35	25.53	21.11	0.97
1	59.990	Qproj	53.00	445.67	447.64	447.61	448.16	0.017745	3.20	16.55	15.62	0.99
1	41.050	Q=5	5.00	444.94	445.83	445.61	445.93	0.007043	1.41	3.53	6.00	0.59
1	41.050	Q=10	10.00	444.94	446.12		446.29	0.008362	1.84	5.43	6.95	0.66
1	41.050	Q=15	15.00	444.94	446.33		446.57	0.009008	2.14	7.01	7.44	0.70
1	41.050	Q=20	20.00	444.94	446.52		446.81	0.009516	2.38	8.41	7.85	0.73
1	41.050	Q10	28.00	444.94	446.76		447.13	0.010290	2.70	10.38	8.39	0.77
1	41.050	Q=40	40.00	444.94	447.35	446.84	447.57	0.011028	2.09	19.14	25.08	0.76
1	41.050	Q=50	50.00	444.94	447.62	447.31	447.81	0.006312	1.91	26.12	25.34	0.60
1	41.050	Q100	61.00	444.94	447.81		448.01	0.005516	1.98	30.84	25.51	0.57
1	41.050	Q500	85.40	444.94	448.16		448.37	0.005708	2.05	41.56	33.61	0.59
1	41.050	Qproj	53.00	444.94	447.70	447.34	447.88	0.005579	1.88	28.14	25.41	0.57
1	24.770	Q=5	5.00	444.96	445.52	445.52	445.73	0.022622	2.00	2.50	6.21	1.01

HEC-RAS Plan: Plan 01 River: 1 Reach: 1 (Continued)

Reach	River Sta	Profile	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
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1	24.770	Q=10	10.00	444.96	445.77	445.77	446.07	0.020369	2.44	4.10	6.84	1.01
1	24.770	Q=15	15.00	444.96	445.97	445.97	446.35	0.019284	2.73	5.50	7.35	1.01
1	24.770	Q=20	20.00	444.96	446.14	446.14	446.58	0.018593	2.95	6.79	7.78	1.01
1	24.770	Q10	28.00	444.96	446.38	446.38	446.90	0.017449	3.19	8.78	8.42	1.00
1	24.770	Q=40	40.00	444.96	446.68	446.68	447.31	0.016895	3.50	11.43	9.19	1.00
1	24.770	Q=50	50.00	444.96	446.91	446.91	447.60	0.016474	3.69	13.53	9.76	1.00
1	24.770	Q100	61.00	444.96	447.35	447.35	447.83	0.017878	3.06	19.91	20.83	1.00
1	24.770	Q500	85.40	444.96	447.62	447.62	448.19	0.017135	3.34	25.58	22.61	1.00
1	24.770	Qproj	53.00	444.96	446.96	446.96	447.68	0.016530	3.76	14.10	9.91	1.01