

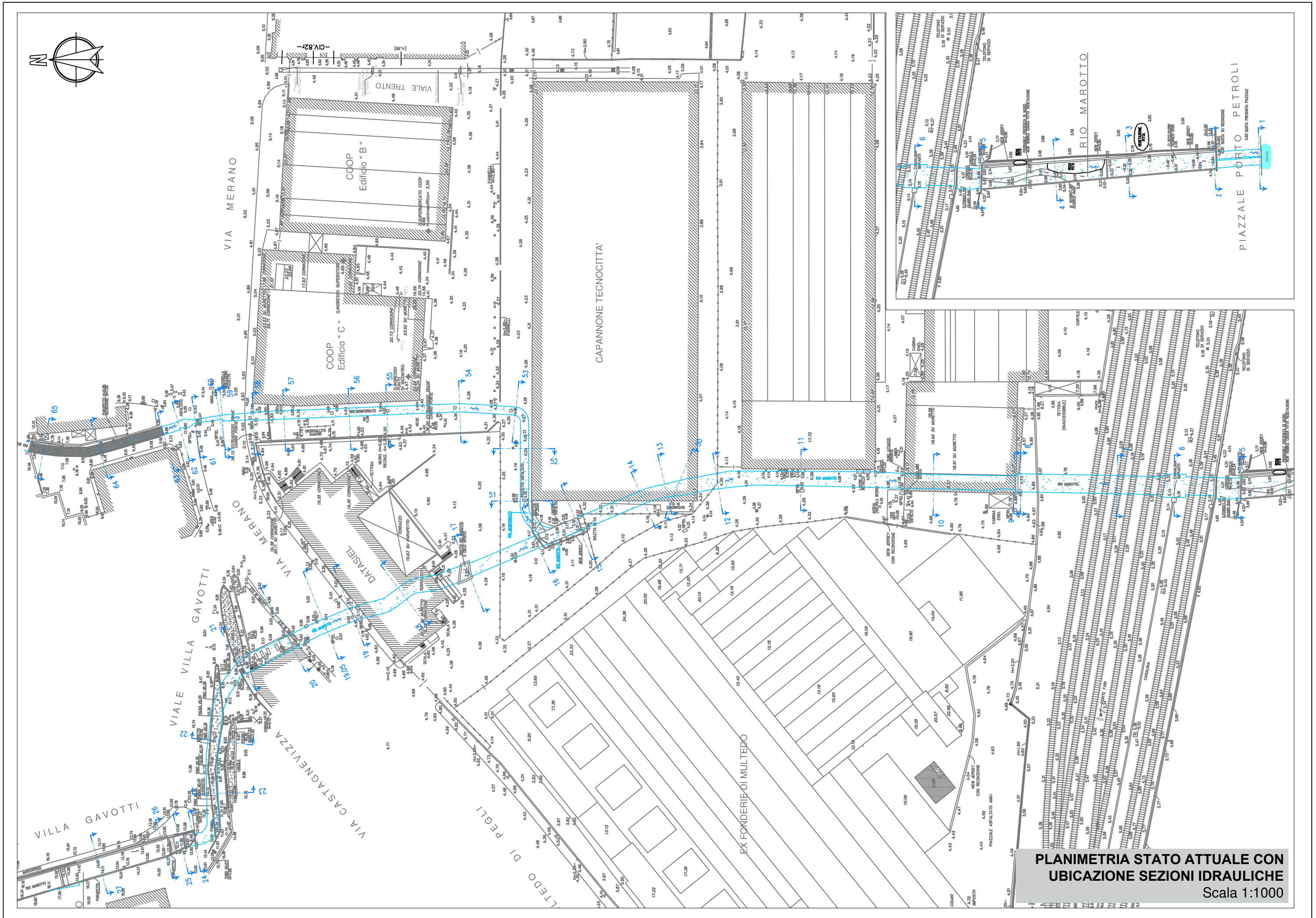
## **Rio Zanina – Marotto**

dalla sezione MAR\_S1 alla MAR\_S27

## **Rio Monferrato**

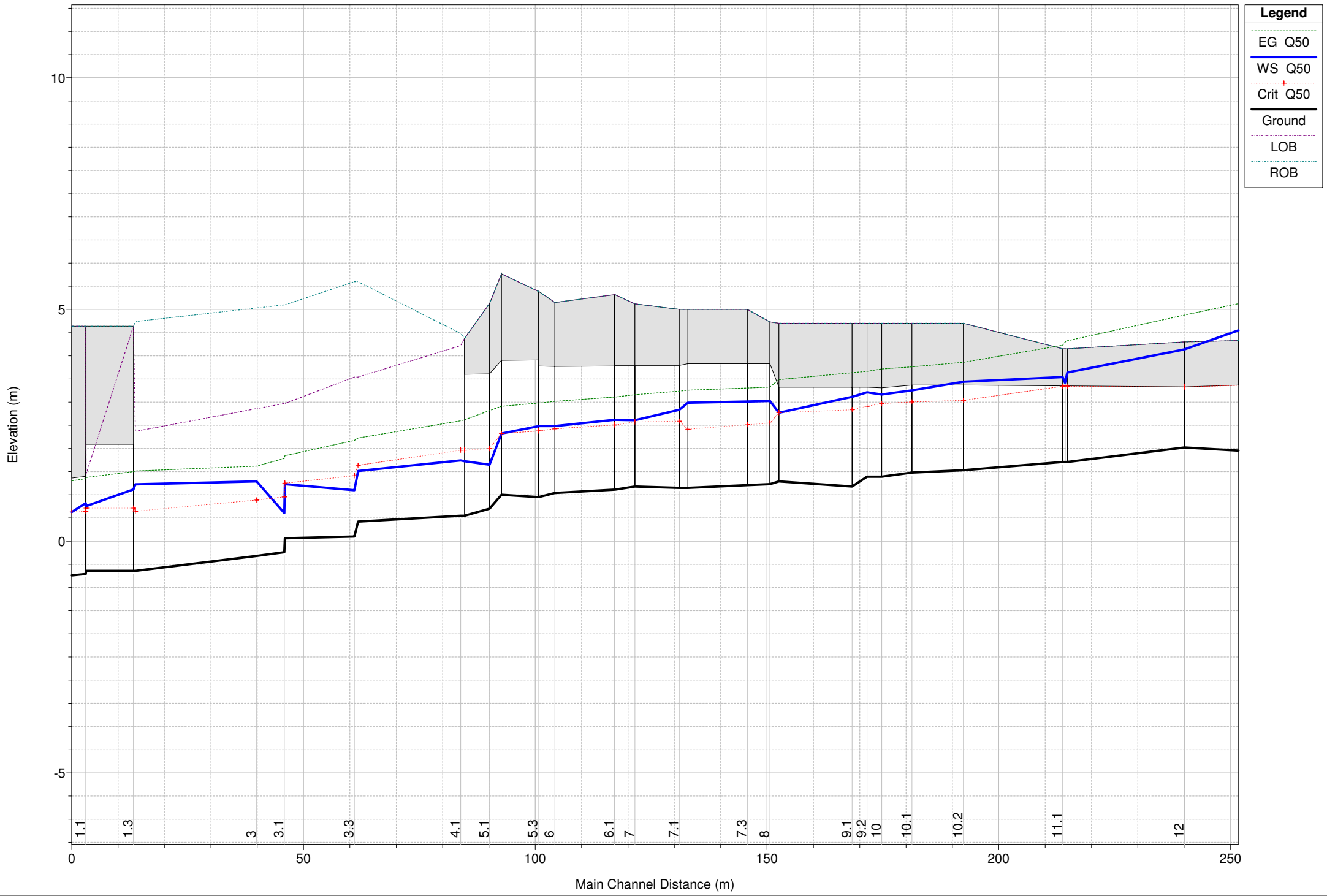
dalla sezione MAR\_S50 alla MAR\_S65

- Profili di corrente
- Sezioni idrauliche
- Tabelle dei risultati



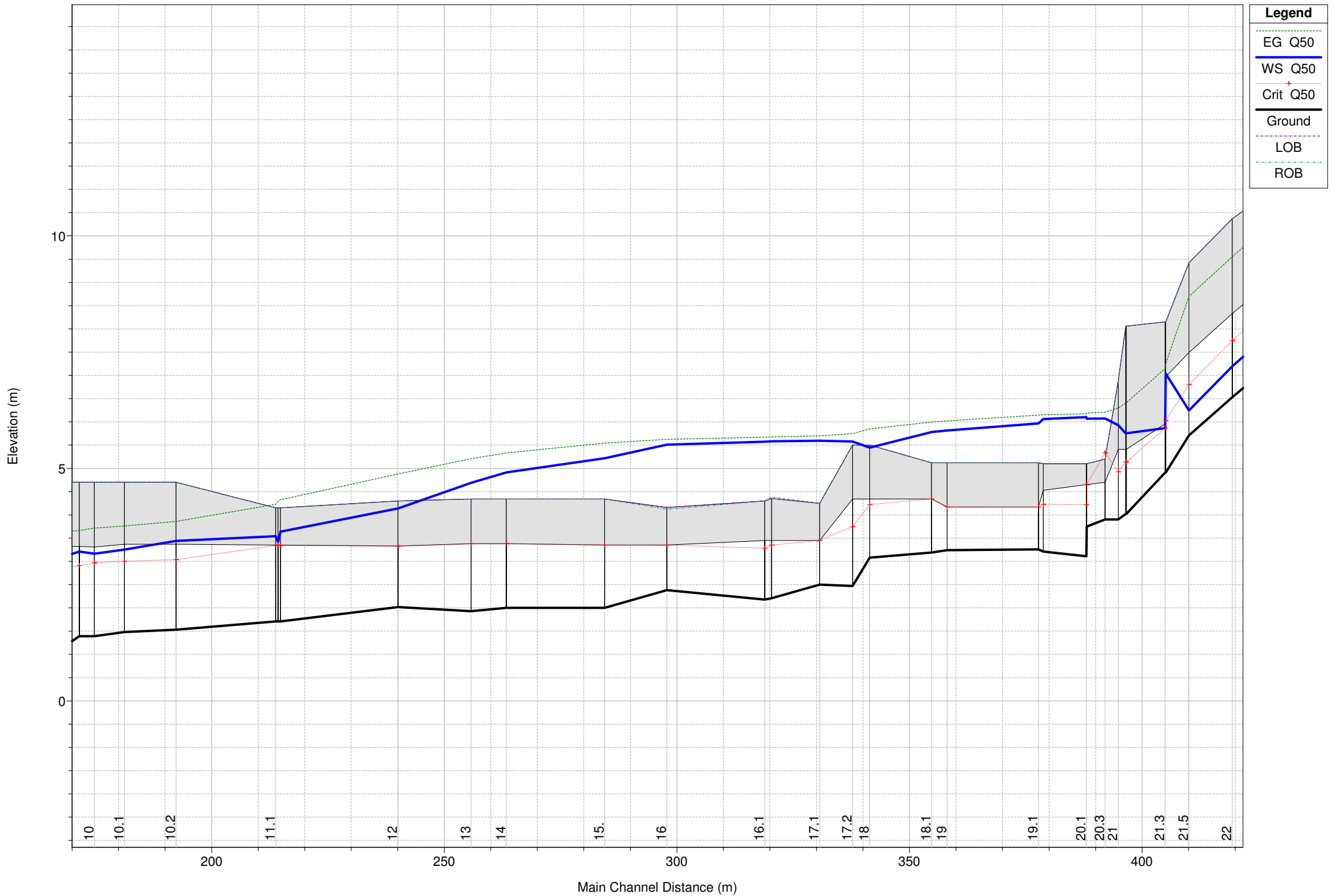
**PLANIMETRIA STATO ATTUALE CON  
UBICAZIONE SEZIONI IDRAULICHE**  
Scala 1:1000

MAROTTO\_MONFERRATO-Progetto preliminare Plan: Marotto-att

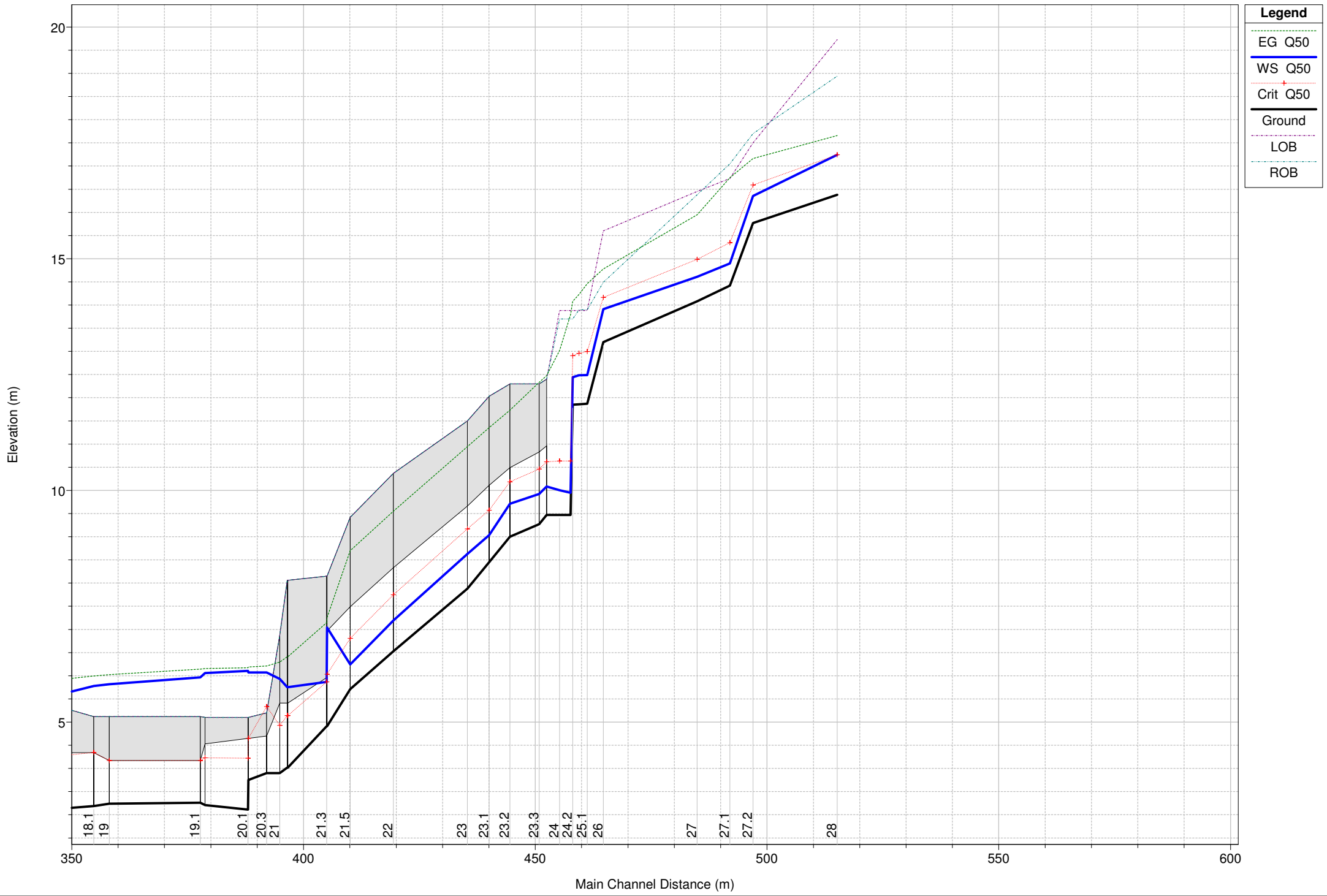


**Legend**

- EG Q50
- WS Q50
- Crit Q50
- Ground
- LOB
- ROB



MAROTTO\_MONFERRATO-Progetto preliminare Plan: Marotto-att



HEC-RAS Plan: Mar-att River: Marotto Reach: Marotto Profile: Q50

Reach	River Sta	Profile	Cum Ch Len	Min Ch El	LOB Elev	ROB Elev	Q Total	W.S. Elev	E.G. Elev	Hydr Depth	Max Chl Dpth	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m)	(m)	(m)	(m)	(m3/s)	(m)	(m)	(m)	(m)	(m/s)	(m2)	(m)	
Marotto	1	Q50		-0.74	1.36	1.36	22.00	0.63	1.30	1.36	1.37	3.63	6.06	4.46	0.99
Marotto	1.1	Q50	3.00	-0.71	1.40	1.40	22.00	0.82	1.35	1.53	1.53	3.23	6.81	4.46	0.83
Marotto	1.2	Q50	3.10	-0.64	2.09	2.09	22.00	0.76	1.38	1.35	1.40	3.49	6.31	4.67	0.96
Marotto	1.3	Q50	13.30	-0.64	2.09	2.09	22.00	1.12	1.50	1.71	1.76	2.75	7.99	4.67	0.67
Marotto	2	Q50	13.70	-0.64	2.37	4.74	22.00	1.23	1.51	1.82	1.87	2.38	9.25	5.07	0.56
Marotto	3	Q50	39.86	-0.32	2.86	5.03	22.00	1.29	1.62	1.59	1.61	2.54	8.65	5.45	0.64
Marotto	3.1	Q50	45.86	-0.24	2.97	5.10	22.00	0.61	1.78	0.84	0.85	4.80	4.58	5.45	1.67
Marotto	3.2	Q50	45.96	0.06	2.97	5.10	22.00	1.23	1.84	1.16	1.17	3.47	6.34	5.45	1.03
Marotto	3.3	Q50	60.96	0.10	3.54	5.60	22.00	1.10	2.17	0.82	1.00	4.59	4.80	5.86	1.62
Marotto	4	Q50	61.76	0.42	3.54	5.60	22.00	1.51	2.23	1.00	1.09	3.74	5.88	5.86	1.19
Marotto	4.1	Q50	83.92	0.55	4.22	4.48	22.00	1.74	2.60	0.86	1.19	4.10	5.36	6.24	1.41
Marotto	5	Q50	84.72	0.55	3.60	3.60	22.00	1.73	2.62	0.84	1.18	4.18	5.26	6.24	1.46
Marotto	5.1	Q50	90.12	0.70	3.61	3.61	22.00	1.65	2.82	0.72	0.95	4.79	4.60	6.36	1.80
Marotto	5.2	Q50	92.72	1.00	3.90	3.90	22.00	2.32	2.91	1.18	1.32	3.41	6.46	5.48	1.00
Marotto	5.3	Q50	100.61	0.95	3.91	3.91	22.00	2.48	2.98	1.28	1.53	3.12	7.04	5.48	0.88
Marotto	5.4	Q50	100.71	0.95	3.78	3.78	22.00	2.48	2.98	1.29	1.53	3.12	7.05	5.48	0.88
Marotto	6	Q50	104.21	1.04	3.77	3.77	22.00	2.48	3.02	1.24	1.44	3.23	6.81	5.48	0.92
Marotto	6.1	Q50	117.08	1.11	3.78	3.78	22.00	2.62	3.11	1.29	1.51	3.10	7.10	5.50	0.87
Marotto	6.2	Q50	117.18	1.11	2.88	2.88	22.00	2.62	3.11	1.29	1.51	3.10	7.11	5.50	0.87
Marotto	7	Q50	121.48	1.18	2.88	2.88	22.00	2.61	3.16	1.22	1.43	3.29	6.68	5.50	0.95
Marotto	7.1	Q50	131.08	1.15	2.88	2.88	22.00	2.83	3.24	1.43	1.68	2.80	7.84	5.50	0.75
Marotto	7.2	Q50	132.92	1.15	2.90	2.88	22.00	2.99	3.26	1.86	1.84	2.30	9.56	5.13	0.54
Marotto	7.3	Q50	145.75	1.21	2.90	2.88	22.00	3.01	3.31	1.81	1.80	2.40	9.15	5.05	0.57
Marotto	8	Q50	150.62	1.23	2.90	2.90	22.00	3.02	3.33	1.79	1.79	2.44	9.03	5.03	0.58
Marotto	9	Q50	152.57	1.29	3.32	3.32	22.00	2.77	3.49	1.43	1.48	3.75	5.87	4.10	1.00
Marotto	9.1	Q50	168.37	1.18	3.32	3.32	22.00	3.11	3.64	1.75	1.93	3.21	6.86	3.91	0.77
Marotto	9.2	Q50	171.57	1.39	3.32	3.32	22.00	3.21	3.66	1.64	1.82	2.98	7.37	4.49	0.74
Marotto	10	Q50	174.77	1.39	3.31	3.31	22.00	3.16	3.71	1.60	1.78	3.28	6.70	4.18	0.83
Marotto	10.1	Q50	181.27	1.48	3.37	3.37	22.00	3.25	3.76	1.66	1.77	3.16	6.96	4.20	0.78
Marotto	10.2	Q50	192.37	1.53	3.37	3.37	22.00	3.44	3.86		1.91	2.87	7.66		0.66
Marotto	11.1	Q50	213.79	1.71	3.35	3.35	22.00	3.54	4.23		1.83	3.67	5.99		0.87
Marotto	11.2	Q50	214.29	1.71	3.35	3.35	22.00	3.42	4.30		1.71	4.15	5.30		1.01
Marotto	11.3	Q50	214.79	1.71	3.35	3.35	22.00	3.64	4.33		1.93	3.67	5.99		0.84
Marotto	12	Q50	240.07	2.02	3.33	3.33	22.00	4.14	4.88		2.12	3.81	5.77		0.84
Marotto	13	Q50	255.76	1.93	3.38	3.38	22.00	4.69	5.21	1.70	2.76	3.20	6.88	4.04	0.61
Marotto	14	Q50	263.34	2.00	3.38	3.38	22.00	4.91	5.33	1.89	2.91	2.87	7.67	4.06	0.54
Marotto	15.	Q50	284.48	2.00	3.35	3.35	22.00	5.22	5.54	2.16	3.22	2.52	8.73	4.04	0.45
Marotto	16	Q50	297.86	2.38	3.35	3.35	13.40	5.51	5.63	2.32	3.13	1.50	8.94	3.85	0.27
Marotto	16.1	Q50	318.88	2.18	3.45	3.45	13.40	5.58	5.67	2.52	3.40	1.38	9.68	3.85	0.24
Marotto	17	Q50	320.38	2.21	3.45	3.45	13.40	5.58	5.68	2.34	3.37	1.35	9.91	4.23	0.24
Marotto	17.1	Q50	330.68	2.50	3.45	3.45	13.40	5.59	5.70	2.17	3.09	1.46	9.17	4.23	0.27
Marotto	17.2	Q50	337.75	2.47	4.34	4.34	13.40	5.58	5.75	1.64	3.11	1.82	7.37	4.50	0.33
Marotto	18	Q50	341.45	3.08	4.34	4.34	13.40	5.45	5.85		2.37	2.80	4.78		0.58
Marotto	18.1	Q50	354.75	3.19	4.34	4.34	13.40	5.78	6.00	1.62	2.59	2.07	6.49	4.00	0.41
Marotto	19	Q50	358.09	3.24	4.17	4.17	13.40	5.82	6.02	1.63	2.58	2.01	6.67	4.10	0.40
Marotto	19.1	Q50	377.71	3.26	4.17	4.17	13.40	5.97	6.14	1.76	2.71	1.86	7.20	4.10	0.36
Marotto	20	Q50	378.75	3.21	4.53	4.53	13.40	6.06	6.15	2.25	2.85	1.37	9.78	4.34	0.26

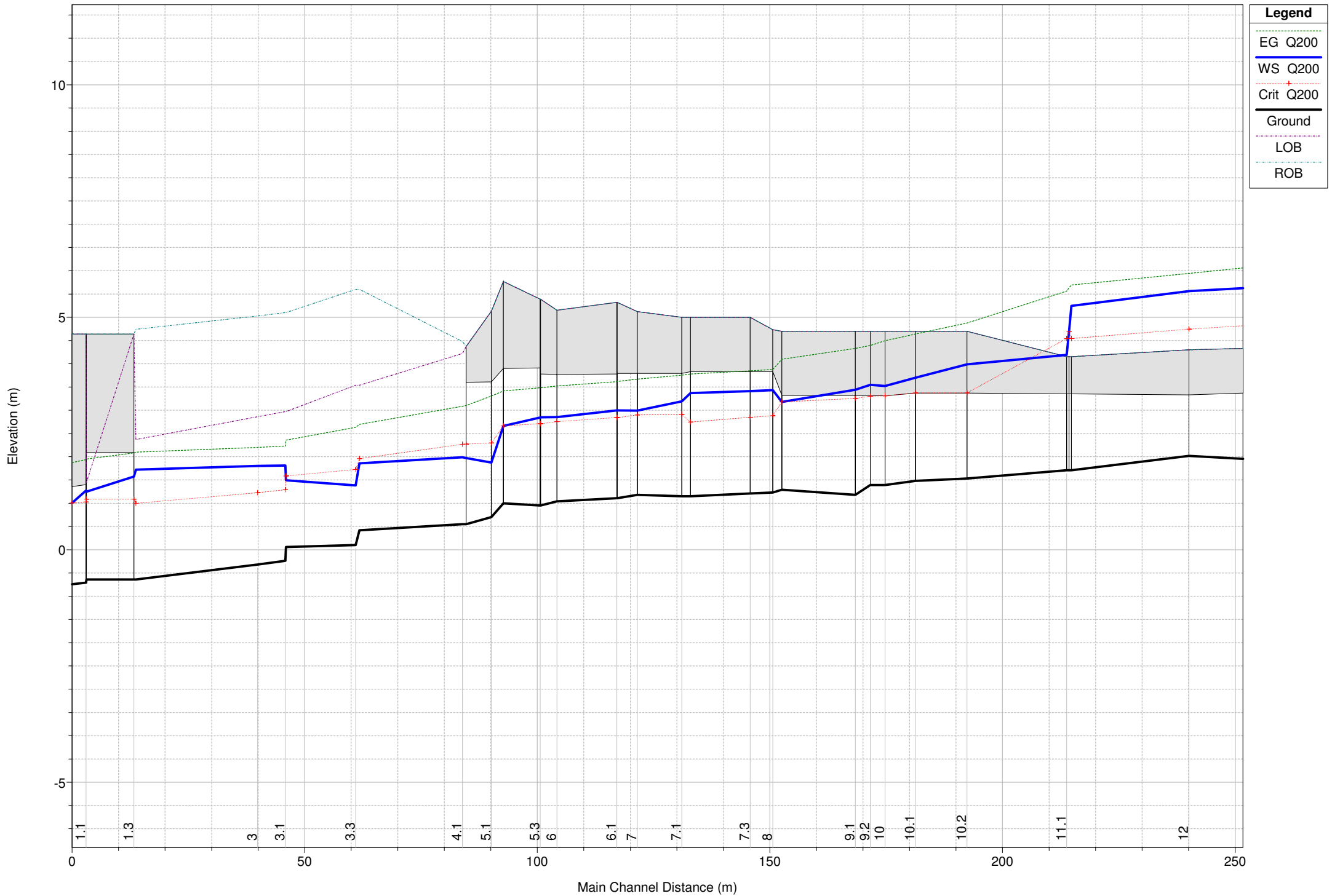


HEC-RAS Plan: Mar-att River: Marotto Reach: Marotto Profile: Q50 (Continued)

Reach	River Sta	Profile	Cum Ch Len (m)	Min Ch El (m)	LOB Elev (m)	ROB Elev (m)	Q Total (m3/s)	W.S. Elev (m)	E.G. Elev (m)	Hydr Depth (m)	Max Chl Dpth (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Marotto	20.1	Q50	388.00	3.11	4.65	4.65	13.40	6.10	6.17	2.35	2.99	1.17	11.41	4.85	0.22
Marotto	20.2	Q50	388.10	3.75	4.65	4.65	13.40	6.07	6.19	1.82	2.32	1.52	8.84	4.85	0.32
Marotto	20.3	Q50	392.04	3.90	4.70	4.70	13.40	6.07	6.21	1.63	2.17	1.64	8.17	5.00	0.36
Marotto	21	Q50	394.89	3.90	4.48	4.48	13.40	5.93	6.30		2.03	2.68	5.00		0.60
Marotto	21.1	Q50	396.49	4.02	4.48	4.48	13.40	5.75	6.41		1.73	3.59	3.73		0.87
Marotto	21.2	Q50	396.59	4.02	4.48	4.48	13.40	5.76	6.41		1.74	3.59	3.73		0.87
Marotto	21.3	Q50	404.97	4.91	5.03	5.03	13.40	5.87	7.15	2.54	0.96	5.01	2.67	1.05	1.64
Marotto	21.4	Q50	405.07	4.91	6.18	6.18	13.40	7.04	7.26		2.13	2.06	6.50		0.45
Marotto	21.5	Q50	410.08	5.71	6.70	6.70	13.40	6.25	8.70	0.54	0.54	6.94	1.93	3.60	3.02
Marotto	22	Q50	419.40	6.53	7.62	7.62	13.40	7.19	9.55	0.58	0.66	6.80	1.97	3.40	2.85
Marotto	23	Q50	435.35	7.88	8.95	8.95	13.40	8.63	10.95	0.58	0.75	6.74	1.99	3.40	2.81
Marotto	23.1	Q50	440.03	8.45	9.37	9.37	13.40	9.03	11.36	0.58	0.58	6.75	1.98	3.40	2.82
Marotto	23.2	Q50	444.51	9.00	9.75	9.75	13.40	9.71	11.73	0.63	0.71	6.30	2.13	3.40	2.54
Marotto	23.3	Q50	450.85	9.27	10.09	10.09	13.40	9.92	12.33	0.57	0.65	6.88	1.95	3.40	2.90
Marotto	23.4	Q50	452.44	9.47	10.22	10.22	13.40	10.09	12.48	0.58	0.62	6.85	1.96	3.40	2.88
Marotto	24	Q50	455.24	9.47	13.88	13.70	13.40	10.01	13.02	0.47	0.54	7.69	1.74	3.67	3.56
Marotto	24.1	Q50	457.61	9.47	13.88	13.70	13.40	9.95	13.79	0.42	0.48	8.68	1.54	3.63	4.25
Marotto	24.2	Q50	458.07	11.85	13.88	13.70	13.40	12.44	14.08	0.59	0.59	5.67	2.36	4.00	2.35
Marotto	25	Q50	459.44	11.86	13.88	13.90	13.40	12.49	14.23	0.56	0.63	5.85	2.29	4.08	2.49
Marotto	25.1	Q50	461.20	11.87	13.88	13.90	13.40	12.49	14.46	0.53	0.62	6.23	2.15	4.07	2.73
Marotto	26	Q50	464.69	13.20	15.60	14.49	13.40	13.91	14.78	0.63	0.71	4.13	3.24	5.18	1.67
Marotto	27	Q50	484.90	14.08	16.45	16.38	13.40	14.61	15.95	0.51	0.53	5.12	2.62	5.15	2.29
Marotto	27.1	Q50	492.00	14.42	16.73	17.05	13.40	14.90	16.75	0.43	0.48	6.03	2.22	5.14	2.93
Marotto	27.2	Q50	497.00	15.77	17.50	17.70	13.40	16.35	17.16	0.55	0.58	3.99	3.36	6.11	1.72
Marotto	28	Q50	515.14	16.38	19.73	18.94	13.40	17.24	17.66	0.84	0.86	2.85	4.71	5.62	0.99

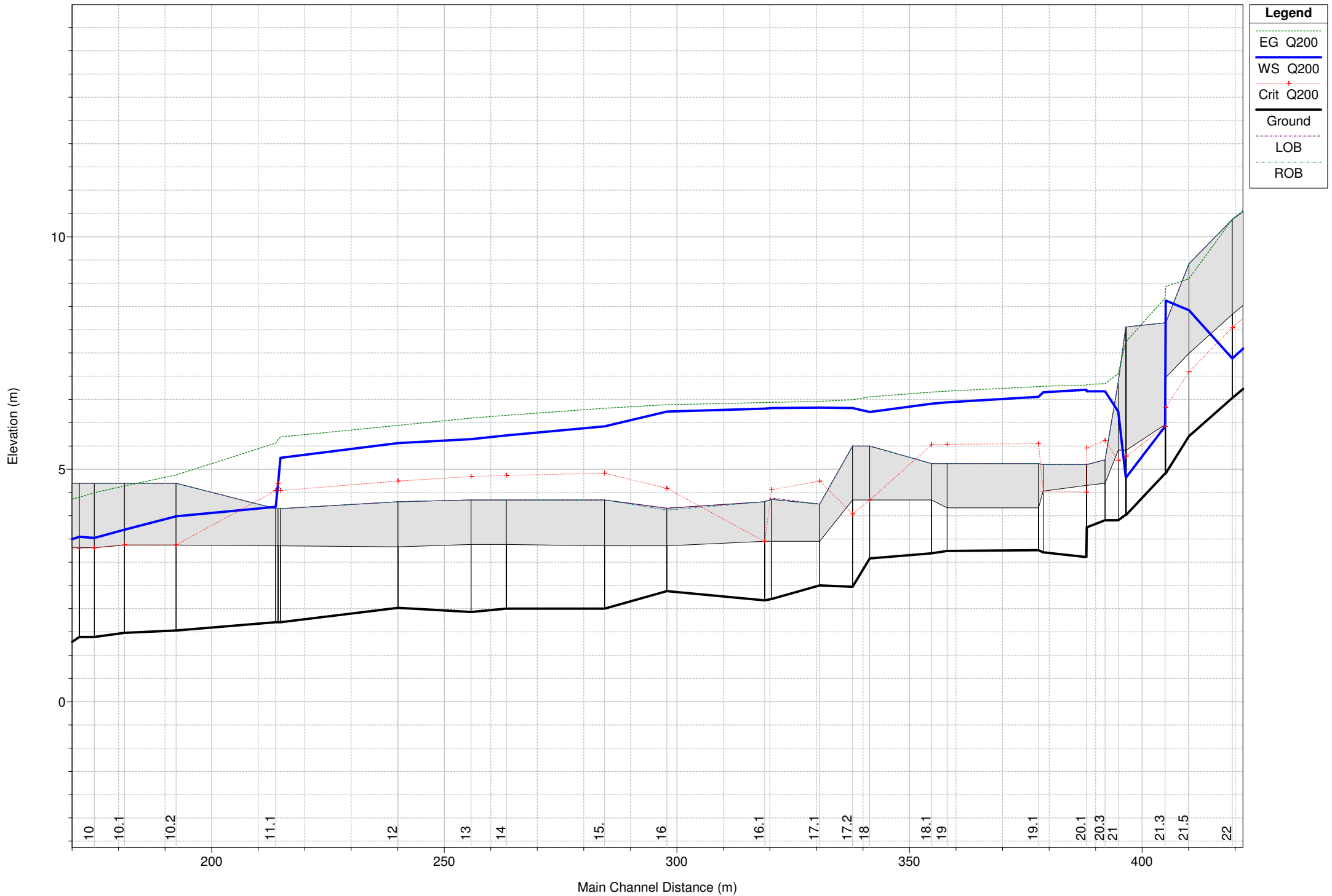
MAROTTO\_MONFERRATO-Progetto preliminare

Plan: Marotto-att





MAROTTO\_MONFERRATO-Progetto preliminare Plan: Marotto-att



MAROTTO\_MONFERRATO-Progetto preliminare Plan: Marotto-att



1 cm Horiz. = 10 m 1 cm Vert. = 1 m

Modificato con DDG n. 98 del 13/04/2017

HEC-RAS Plan: Mar-att River: Marotto Reach: Marotto Profile: Q200

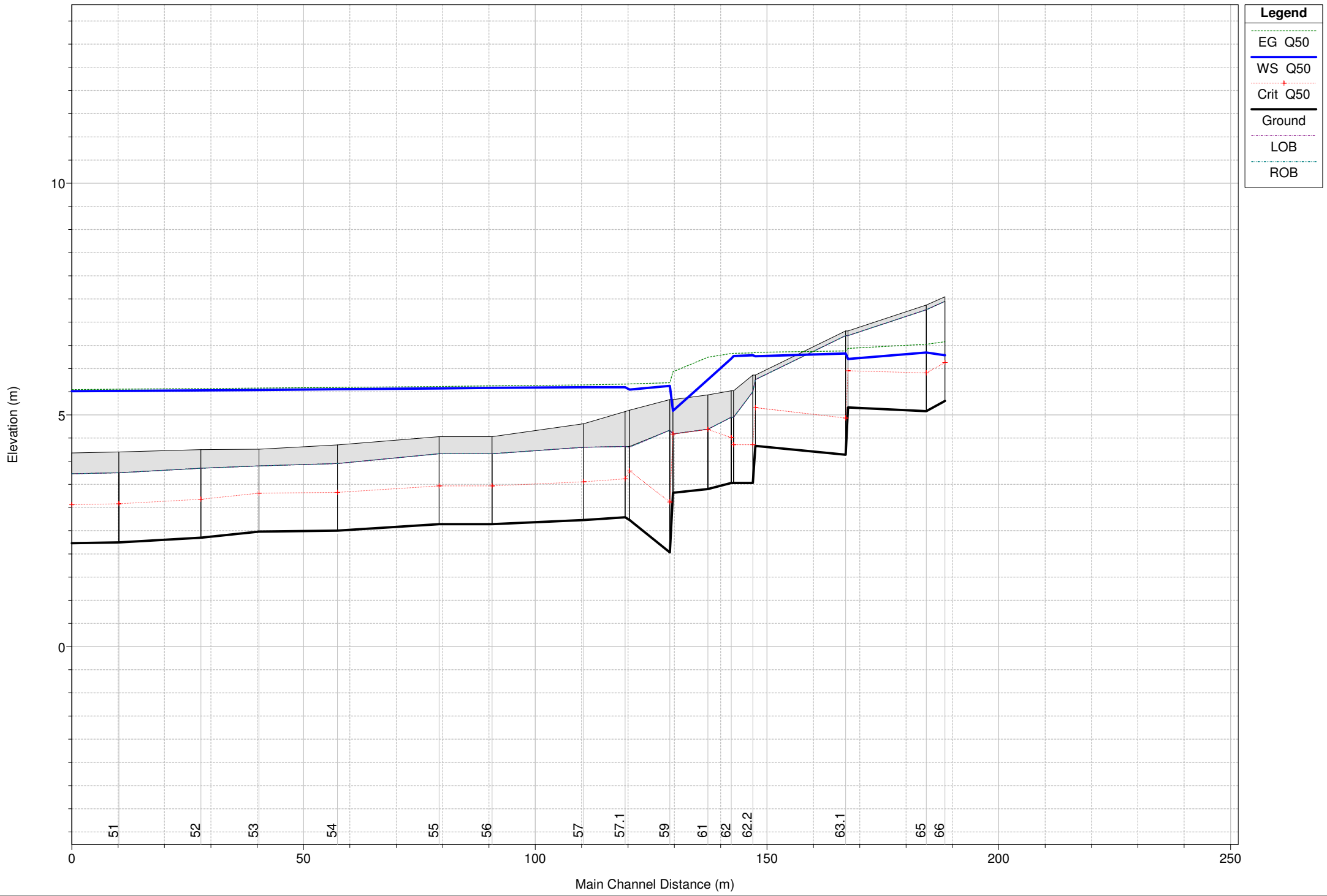
Reach	River Sta	Profile	Cum Ch Len	Min Ch El	LOB Elev	ROB Elev	Q Total	W.S. Elev	E.G. Elev	Hydr Depth	Max Chl Dpth	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m)	(m)	(m)	(m)	(m3/s)	(m)	(m)	(m)	(m)	(m/s)	(m2)	(m)	
Marotto	1	Q200		-0.74	1.36	1.36	32.00	1.01	1.88	1.74	1.75	4.13	7.74	4.46	1.00
Marotto	1.1	Q200	3.00	-0.71	1.40	1.40	32.00	1.27	1.94	1.98	1.98	3.62	8.84	4.46	0.82
Marotto	1.2	Q200	3.10	-0.64	2.09	2.09	32.00	1.25	1.95	1.84	1.89	3.72	8.61	4.67	0.87
Marotto	1.3	Q200	13.30	-0.64	2.09	2.09	32.00	1.57	2.08	2.17	2.21	3.16	10.13	4.67	0.68
Marotto	2	Q200	13.70	-0.64	2.37	4.74	32.00	1.72	2.10	2.32	2.36	2.72	11.77	5.07	0.57
Marotto	3	Q200	39.86	-0.32	2.86	5.03	32.00	1.80	2.20	2.10	2.12	2.79	11.45	5.45	0.62
Marotto	3.1	Q200	45.86	-0.24	2.97	5.10	32.00	1.81	2.23	2.04	2.05	2.87	11.14	5.45	0.64
Marotto	3.2	Q200	45.96	0.06	2.97	5.10	32.00	1.49	2.36	1.42	1.43	4.12	7.76	5.45	1.10
Marotto	3.3	Q200	60.96	0.10	3.54	5.60	32.00	1.38	2.63	1.10	1.28	4.95	6.46	5.86	1.50
Marotto	4	Q200	61.76	0.42	3.54	5.60	32.00	1.86	2.69	1.35	1.44	4.05	7.90	5.86	1.11
Marotto	4.1	Q200	83.92	0.55	4.22	4.48	32.00	1.99	3.08	1.11	1.44	4.64	6.90	6.24	1.41
Marotto	5	Q200	84.72	0.55	3.60	3.60	32.00	1.97	3.10	1.09	1.42	4.71	6.79	6.24	1.44
Marotto	5.1	Q200	90.12	0.70	3.61	3.61	32.00	1.88	3.31	0.95	1.18	5.30	6.04	6.36	1.74
Marotto	5.2	Q200	92.72	1.00	3.90	3.90	32.00	2.66	3.41	1.52	1.66	3.84	8.32	5.48	1.00
Marotto	5.3	Q200	100.61	0.95	3.91	3.91	32.00	2.85	3.48	1.65	1.90	3.54	9.04	5.48	0.88
Marotto	5.4	Q200	100.71	0.95	3.78	3.78	32.00	2.85	3.48	1.65	1.90	3.54	9.05	5.48	0.88
Marotto	6	Q200	104.21	1.04	3.77	3.77	32.00	2.85	3.52	1.61	1.81	3.63	8.83	5.48	0.91
Marotto	6.1	Q200	117.08	1.11	3.78	3.78	32.00	3.00	3.62	1.67	1.89	3.48	9.18	5.50	0.86
Marotto	6.2	Q200	117.18	1.11	2.88	2.88	32.00	3.00	3.62	1.79	1.89	3.50	9.15	5.11	0.81
Marotto	7	Q200	121.48	1.18	2.88	2.88	32.00	2.99	3.67	1.71	1.81	3.65	8.78	5.12	0.86
Marotto	7.1	Q200	131.08	1.15	2.88	2.88	32.00	3.19	3.75	2.16	2.04	3.32	9.65	4.46	0.74
Marotto	7.2	Q200	132.92	1.15	2.90	2.88	32.00	3.37	3.78	2.91	2.22	2.84	11.29	3.88	0.61
Marotto	7.3	Q200	145.75	1.21	2.90	2.88	32.00	3.41	3.85	2.91	2.20	2.93	10.91	3.75	0.63
Marotto	8	Q200	150.62	1.23	2.90	2.90	32.00	3.43	3.88	2.93	2.20	2.96	10.80	3.68	0.64
Marotto	9	Q200	152.57	1.29	3.32	3.32	32.00	3.18	4.10	1.84	1.89	4.25	7.53	4.10	1.00
Marotto	9.1	Q200	168.37	1.18	3.32	3.32	32.00	3.44	4.33		2.26	4.17	7.67		0.89
Marotto	9.2	Q200	171.57	1.39	3.32	3.32	32.00	3.55	4.39		2.16	4.07	7.86		0.88
Marotto	10	Q200	174.77	1.39	3.31	3.31	32.00	3.52	4.50		2.13	4.38	7.31		0.96
Marotto	10.1	Q200	181.27	1.48	3.37	3.37	32.00	3.70	4.64		2.22	4.30	7.44		0.92
Marotto	10.2	Q200	192.37	1.53	3.37	3.37	32.00	3.99	4.88		2.46	4.18	7.66		0.85
Marotto	11.1	Q200	213.79	1.71	3.35	3.35	32.00	4.19	5.56	1.40	2.48	5.19	6.16	4.40	1.05
Marotto	11.2	Q200	214.29	1.71	3.35	3.35	32.00	4.69	5.63	1.89	2.98	4.31	7.43	3.94	0.80
Marotto	11.3	Q200	214.79	1.71	3.35	3.35	32.00	5.25	5.69	2.46	3.54	2.96	10.81	4.40	0.50
Marotto	12	Q200	240.07	2.02	3.33	3.33	32.00	5.56	5.94	2.50	3.54	2.74	11.66	4.67	0.47
Marotto	13	Q200	255.76	1.93	3.38	3.38	32.00	5.65	6.10	2.66	3.72	2.98	10.74	4.04	0.49
Marotto	14	Q200	263.34	2.00	3.38	3.38	32.00	5.73	6.16	2.70	3.73	2.92	10.98	4.06	0.48
Marotto	15.	Q200	284.48	2.00	3.35	3.35	32.00	5.92	6.31	2.86	3.92	2.77	11.57	4.04	0.45
Marotto	16	Q200	297.86	2.38	3.35	3.35	20.00	6.24	6.39	3.05	3.86	1.70	11.74	3.85	0.28
Marotto	16.1	Q200	318.88	2.18	3.45	3.45	20.00	6.30	6.43	3.24	4.12	1.60	12.48	3.85	0.25
Marotto	17	Q200	320.38	2.21	3.45	3.45	20.00	6.32	6.44	3.08	4.11	1.54	13.01	4.23	0.24
Marotto	17.1	Q200	330.68	2.50	3.45	3.45	20.00	6.32	6.46	2.90	3.82	1.63	12.26	4.23	0.27
Marotto	17.2	Q200	337.75	2.47	4.34	4.34	20.00	6.31	6.49	2.37	3.84	1.87	10.68	4.50	0.30
Marotto	18	Q200	341.45	3.08	4.34	4.34	20.00	6.23	6.56	1.85	3.15	2.53	7.90	4.26	0.46
Marotto	18.1	Q200	354.75	3.19	4.34	4.34	20.00	6.41	6.66	2.25	3.22	2.22	8.99	4.00	0.40
Marotto	19	Q200	358.09	3.24	4.17	4.17	20.00	6.44	6.68	2.25	3.20	2.17	9.22	4.10	0.39
Marotto	19.1	Q200	377.71	3.26	4.17	4.17	20.00	6.55	6.77	2.34	3.29	2.08	9.61	4.10	0.37
Marotto	20	Q200	378.75	3.21	4.53	4.53	20.00	6.65	6.79	2.85	3.44	1.62	12.36	4.34	0.28

HEC-RAS Plan: Mar-att River: Marotto Reach: Marotto Profile: Q200 (Continued)

Reach	River Sta	Profile	Cum Ch Len (m)	Min Ch El (m)	LOB Elev (m)	ROB Elev (m)	Q Total (m3/s)	W.S. Elev (m)	E.G. Elev (m)	Hydr Depth (m)	Max Chl Dpth (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Marotto	20.1	Q200	388.00	3.11	4.65	4.65	20.00	6.71	6.81	2.96	3.60	1.39	14.34	4.85	0.23
Marotto	20.2	Q200	388.10	3.75	4.65	4.65	20.00	6.67	6.82	2.43	2.92	1.70	11.76	4.85	0.32
Marotto	20.3	Q200	392.04	3.90	4.70	4.70	20.00	6.68	6.84	2.24	2.78	1.79	11.19	5.00	0.34
Marotto	21	Q200	394.89	3.90	4.48	4.48	20.00	6.24	7.05		2.34	4.00	5.00		0.83
Marotto	21.1	Q200	396.49	4.02	4.48	4.48	20.00	4.83	7.74	0.96	0.81	7.56	2.65	2.77	2.68
Marotto	21.2	Q200	396.59	4.02	4.48	4.48	20.00	4.83	7.75	0.95	0.81	7.57	2.64	2.77	2.68
Marotto	21.3	Q200	404.97	4.91	5.03	5.03	20.00	5.92	8.68	5.50	1.01	7.36	2.72	0.49	2.33
Marotto	21.4	Q200	405.07	4.91	6.18	6.18	20.00	8.63	8.93	2.28	3.72	2.43	8.22	3.60	0.40
Marotto	21.5	Q200	410.08	5.71	6.70	6.70	20.00	8.42	9.10		2.71	3.64	5.49		0.71
Marotto	22	Q200	419.40	6.53	7.62	7.62	20.00	7.38	10.37	0.77	0.85	7.66	2.61	3.40	2.79
Marotto	23	Q200	435.35	7.88	8.95	8.95	20.00	8.83	11.72	0.78	0.95	7.53	2.66	3.40	2.72
Marotto	23.1	Q200	440.03	8.45	9.37	9.37	20.00	9.23	12.11	0.78	0.78	7.51	2.66	3.40	2.71
Marotto	23.2	Q200	444.51	9.00	9.75	9.75	20.00	9.93	12.47	0.94	0.93	7.06	2.83	3.00	2.34
Marotto	23.3	Q200	450.85	9.27	10.09	10.09	20.00	10.12	13.08	0.79	0.85	7.61	2.63	3.33	2.63
Marotto	23.4	Q200	452.44	9.47	10.22	10.22	20.00	10.29	13.22	0.81	0.82	7.58	2.64	3.25	2.68
Marotto	24	Q200	455.24	9.47	13.88	13.70	20.00	10.18	13.72	0.63	0.71	8.33	2.40	3.79	3.34
Marotto	24.1	Q200	457.61	9.47	13.88	13.70	20.00	10.13	14.35	0.58	0.66	9.11	2.20	3.75	3.80
Marotto	24.2	Q200	458.07	11.85	13.88	13.70	20.00	12.65	14.63	0.80	0.80	6.23	3.21	4.01	2.23
Marotto	25	Q200	459.44	11.86	13.88	13.90	20.00	12.69	14.77	0.76	0.83	6.39	3.13	4.11	2.33
Marotto	25.1	Q200	461.20	11.87	13.88	13.90	20.00	12.69	14.97	0.73	0.82	6.68	2.99	4.10	2.50
Marotto	26	Q200	464.69	13.20	15.60	14.49	20.00	14.08	15.28	0.79	0.88	4.86	4.12	5.22	1.75
Marotto	27	Q200	484.90	14.08	16.45	16.38	20.00	14.77	16.48	0.67	0.69	5.79	3.45	5.18	2.26
Marotto	27.1	Q200	492.00	14.42	16.73	17.05	20.00	15.07	17.16	0.60	0.65	6.41	3.12	5.17	2.63
Marotto	27.2	Q200	497.00	15.77	17.50	17.70	20.00	16.54	17.54	0.74	0.77	4.42	4.53	6.15	1.64
Marotto	28	Q200	515.14	16.38	19.73	18.94	20.00	17.50	18.04	1.08	1.12	3.25	6.15	5.71	1.00

MAROTTO\_MONFERRATO-Progetto preliminare

Plan: Monferrato-att

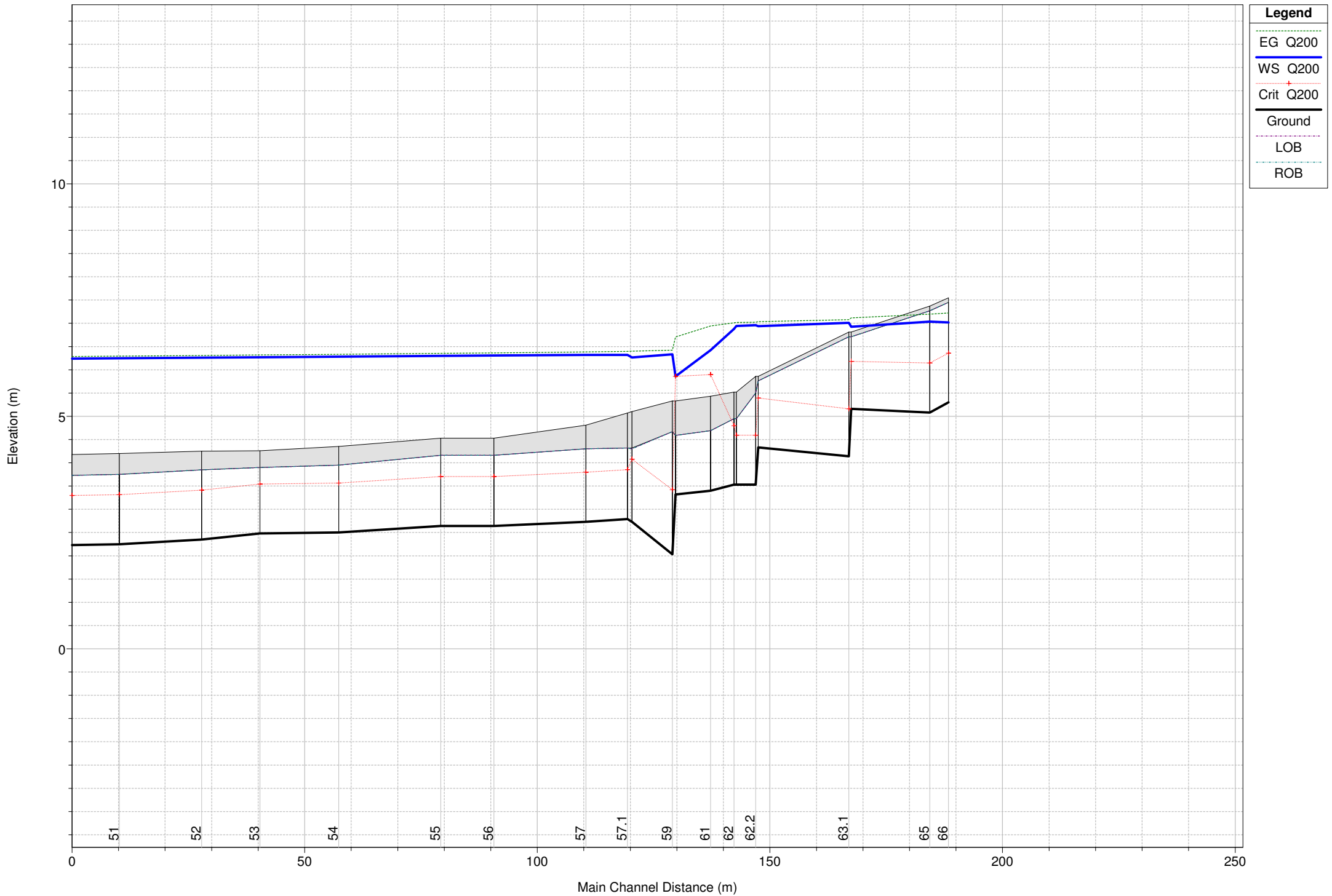


1 cm Horiz. = 10 m 1 cm Vert. = 1 m

Modificato con DDG n. 98 del 13/04/2017

HEC-RAS Plan: Monf-att River: Monferrato Reach: Monferrato monte Profile: Q50

Reach	River Sta	Profile	Cum Ch Len	Min Ch El	LOB Elev	ROB Elev	Q Total	W.S. Elev	E.G. Elev	Hydr Depth	Max Chl Dpth	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m)	(m)	(m)	(m)	(m3/s)	(m)	(m)	(m)	(m)	(m/s)	(m2)	(m)	
Monferrato monte	50	Q50		2.23	3.73	3.73	5.90	5.51	5.55	2.83	3.28	0.83	7.08	2.50	0.15
Monferrato monte	51	Q50	10.18	2.25	3.75	3.75	5.90	5.52	5.55	2.82	3.27	0.84	7.04	2.50	0.15
Monferrato monte	52	Q50	27.85	2.35	3.85	3.85	5.90	5.53	5.57	2.78	3.18	0.85	6.95	2.50	0.15
Monferrato monte	53	Q50	40.39	2.48	3.90	3.90	5.90	5.54	5.58	2.70	3.06	0.87	6.75	2.50	0.16
Monferrato monte	54	Q50	57.30	2.50	3.95	3.95	5.90	5.55	5.59	2.65	3.05	0.89	6.63	2.50	0.16
Monferrato monte	55	Q50	79.26	2.64	4.16	4.16	5.90	5.57	5.61	2.56	2.93	0.92	6.40	2.50	0.17
Monferrato monte	56	Q50	90.66	2.64	4.16	4.16	5.90	5.58	5.63	2.57	2.94	0.92	6.43	2.50	0.17
Monferrato monte	57	Q50	110.43	2.73	4.30	4.30	5.90	5.60	5.65	2.36	2.87	1.00	5.89	2.50	0.19
Monferrato monte	57.1	Q50	119.37	2.79	4.32	4.32	5.90	5.60	5.66	2.06	2.81	1.15	5.14	2.50	0.22
Monferrato monte	58	Q50	120.37	2.73	4.32	4.32	5.90	5.55	5.67	1.91	2.82	1.53	3.85	2.02	0.29
Monferrato monte	59	Q50	129.02	2.03	4.67	4.67	5.90	5.63	5.69	2.77	3.60	1.13	5.21	1.88	0.19
Monferrato monte	60	Q50	129.69	3.32	4.59	4.59	5.90	5.09	5.93		1.77	4.07	1.45		0.98
Monferrato monte	61	Q50	137.26	3.40	4.69	4.69	5.90	5.76	6.25	1.62	2.36	3.08	1.91	1.18	0.64
Monferrato monte	62	Q50	142.29	3.53	4.95	4.95	5.90	6.22	6.32	2.12	2.69	1.44	4.08	1.93	0.28
Monferrato monte	62.1	Q50	142.79	3.53	4.95	4.95	5.90	6.27	6.33	2.17	2.74	1.09	5.42	2.50	0.21
Monferrato monte	62.2	Q50	146.96	3.53	5.50	5.50	5.90	6.29	6.34	2.40	2.76	0.98	5.99	2.50	0.19
Monferrato monte	63	Q50	147.50	4.33	5.76	5.76	5.90	6.26	6.35	1.83	1.93	1.29	4.58	2.50	0.30
Monferrato monte	63.1	Q50	166.98	4.14	6.71	6.71	5.90	6.33	6.38	2.19	2.19	1.01	5.82	2.66	0.22
Monferrato monte	64	Q50	167.48	5.16	6.71	6.71	5.90	6.21	6.44	1.05	1.05	2.12	2.78	2.66	0.66
Monferrato monte	65	Q50	184.38	5.08	7.27	7.27	5.90	6.34	6.52	1.26	1.26	1.87	3.16	2.50	0.53
Monferrato monte	66	Q50	188.39	5.30	7.45	7.45	5.90	6.29	6.58	0.99	0.99	2.39	2.47	2.50	0.77





HEC-RAS Plan: Monf-att River: Monferrato Reach: Monferrato monte Profile: Q200

Reach	River Sta	Profile	Cum Ch Len	Min Ch El	LOB Elev	ROB Elev	Q Total	W.S. Elev	E.G. Elev	Hydr Depth	Max Chl Dpth	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m)	(m)	(m)	(m)	(m3/s)	(m)	(m)	(m)	(m)	(m/s)	(m2)	(m)	
Monferrato monte	50	Q200		2.23	3.73	3.73	8.60	6.24	6.29	3.56	4.01	0.97	8.90	2.50	0.15
Monferrato monte	51	Q200	10.18	2.25	3.75	3.75	8.60	6.25	6.29	3.55	4.00	0.97	8.87	2.50	0.15
Monferrato monte	52	Q200	27.85	2.35	3.85	3.85	8.60	6.26	6.31	3.51	3.91	0.98	8.77	2.50	0.16
Monferrato monte	53	Q200	40.39	2.48	3.90	3.90	8.60	6.27	6.32	3.43	3.79	1.00	8.57	2.50	0.16
Monferrato monte	54	Q200	57.30	2.50	3.95	3.95	8.60	6.28	6.33	3.38	3.78	1.02	8.45	2.50	0.17
Monferrato monte	55	Q200	79.26	2.64	4.16	4.16	8.60	6.30	6.35	3.29	3.66	1.05	8.22	2.50	0.17
Monferrato monte	56	Q200	90.66	2.64	4.16	4.16	8.60	6.31	6.36	3.30	3.67	1.04	8.25	2.50	0.17
Monferrato monte	57	Q200	110.43	2.73	4.30	4.30	8.60	6.32	6.39	3.08	3.59	1.12	7.70	2.50	0.19
Monferrato monte	57.1	Q200	119.37	2.79	4.32	4.32	8.60	6.32	6.40	2.78	3.53	1.24	6.95	2.50	0.21
Monferrato monte	58	Q200	120.37	2.73	4.32	4.32	8.60	6.27	6.40	2.63	3.54	1.62	5.31	2.02	0.28
Monferrato monte	59	Q200	129.02	2.03	4.67	4.67	8.60	6.33	6.42	3.48	4.30	1.32	6.53	1.88	0.20
Monferrato monte	60	Q200	129.69	3.32	4.59	4.59	8.60	5.86	6.70	1.69	2.54	4.07	2.11	1.25	0.82
Monferrato monte	61	Q200	137.26	3.40	4.69	4.69	8.60	6.42	6.94	2.28	3.02	3.20	2.69	1.18	0.59
Monferrato monte	62	Q200	142.29	3.53	4.95	4.95	8.60	6.88	7.01	2.78	3.35	1.60	5.37	1.93	0.28
Monferrato monte	62.1	Q200	142.79	3.53	4.95	4.95	8.60	6.94	7.02	2.84	3.41	1.21	7.11	2.50	0.21
Monferrato monte	62.2	Q200	146.96	3.53	5.50	5.50	8.60	6.96	7.03	3.07	3.43	1.12	7.68	2.50	0.19
Monferrato monte	63	Q200	147.50	4.33	5.76	5.76	8.60	6.94	7.04	2.51	2.61	1.37	6.27	2.50	0.27
Monferrato monte	63.1	Q200	166.98	4.14	6.71	6.71	8.60	7.01	7.08	2.77	2.87	1.17	7.36	2.66	0.22
Monferrato monte	64	Q200	167.48	5.16	6.71	6.71	8.60	6.92	7.12	1.66	1.76	1.94	4.43	2.66	0.47
Monferrato monte	65	Q200	184.38	5.08	7.27	7.27	8.60	7.04	7.19	1.96	1.96	1.76	4.89	2.50	0.40
Monferrato monte	66	Q200	188.39	5.30	7.45	7.45	8.60	7.02	7.22	1.72	1.72	2.00	4.30	2.50	0.49