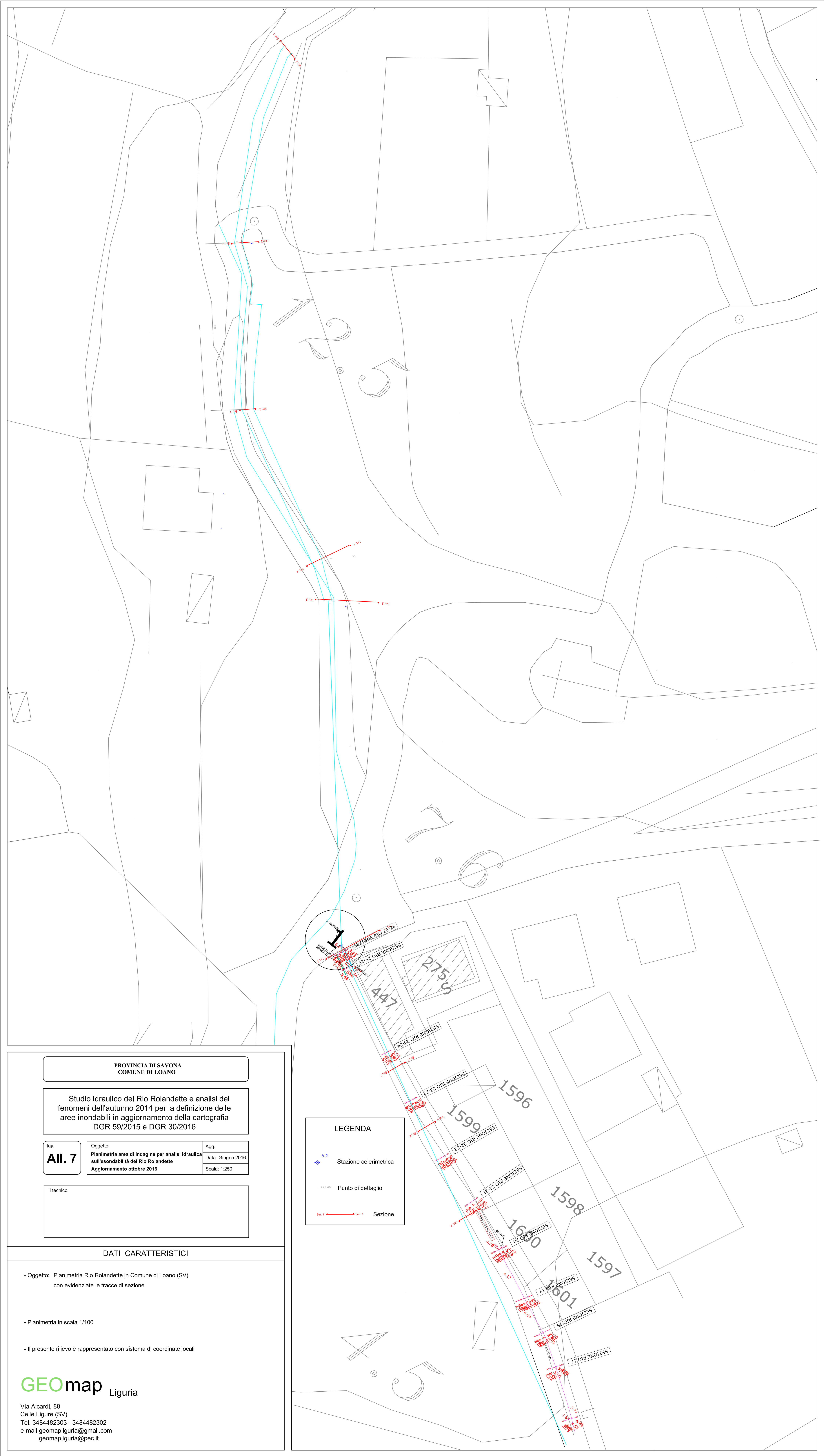




PROVINCIA DI SAVONA
COMUNE DI LOANO

Studio idraulico del Rio Rolandette e analisi dei
fenomeni dell'autunno 2014 per la definizione delle
aree inondabili in aggiornamento della cartografia
DGR 59/2015 e DGR 30/2016

tav.	Oggetto:	Agg.
All. 7	Planimetria area di indagine per analisi idraulica sull'esondabilità del Rio Rolandette	Data: Giugno 2016
	Aggiornamento ottobre 2016	Scala: 1:250

Il tecnico

DATI CARATTERISTICI

- Oggetto: Planimetria Rio Rolandette in Comune di Loano (SV)
con evidenziate le tracce di sezione

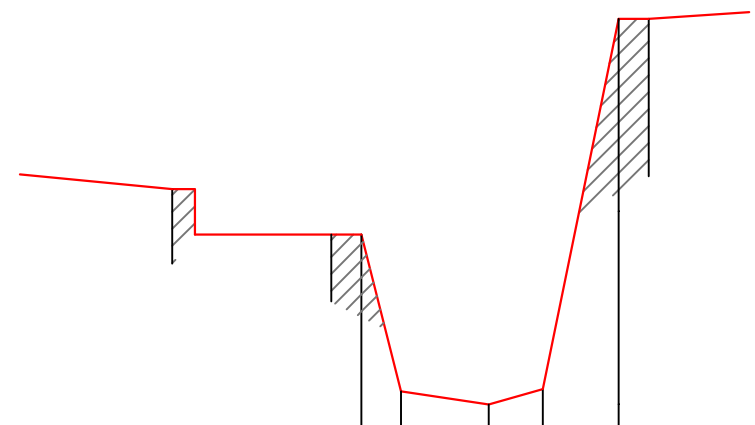
- Planimetria in scala 1/100

- Il presente rilievo è rappresentato con sistema di coordinate locali

GEOmap Liguria

Via Aicardi, 88
Celle Ligure (SV)
Tel. 3484482303 - 3484482302
e-mail geomapliguria@gmail.com
geomapliguria@pec.it

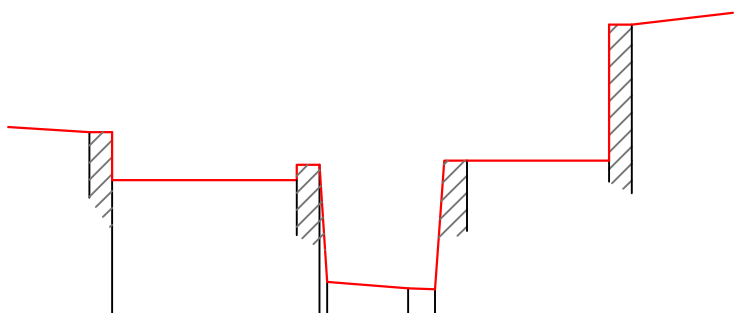
Sezione 31
Sezione 1 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	0.30				
Quote	125	124	123	122	121
Distanze progressive	0.71	1.34	2.49	3.11	4.09
Distanze parziali	0.71	1.16	0.72		

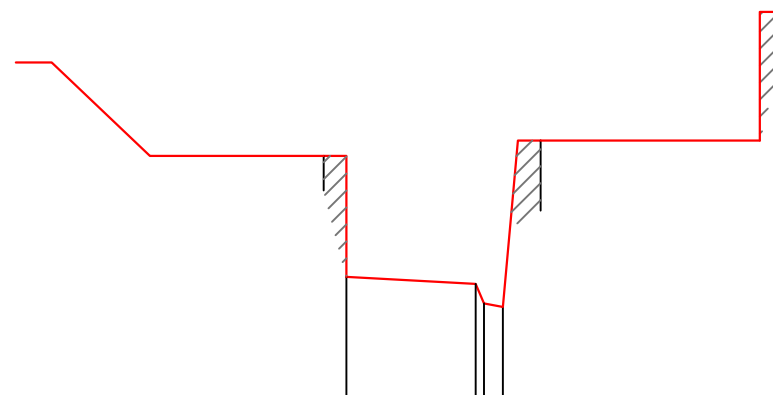
Sezione 30
Sezione 2 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-0.40				
Quote	11.68	11.25	10.25	9.61	9.66
Distanze progressive	0.13	2.57	4.05	4.49	
Distanze parziali		2.74	1.07	0.36	

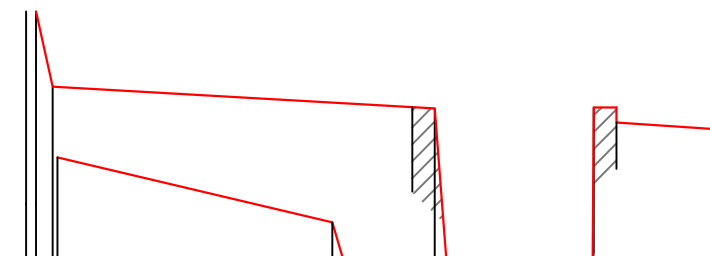
Sezione 29
Sezione 3 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-2.37				
Quote	8.88	8.22	7.22	6.88	
Distanze progressive	0.46	2.21	2.21		
Distanze parziali		1.71			

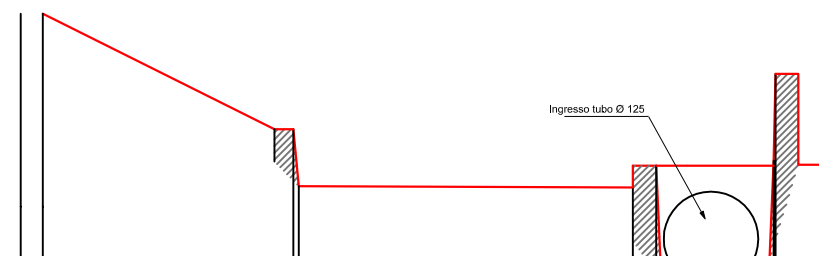
Sezione 28
Sezione 4 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-1.10				
Quote	10.65	10.22	9.41	8.15	7.55
Distanze progressive	0.13	5.41	5.41	2.59	
Distanze parziali		5.05	1.90		

Sezione 27
Sezione 5 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-1.70				
Quote	11.15	10.87	10.22	9.51	8.46
Distanze progressive	0.29	3.61	3.61	0.91	
Distanze parziali		3.32	4.42	0.71	

PROVINCIA DI SAVONA
COMUNE DI LOANO

Studio idraulico del Rio Rolandette e analisi
dei fenomeni dell'autunno 2014 per la definizione
delle aree inondabili in aggiornamento della
cartografia DGR 59/2015 e DGR 30/2016

tar.	Oggetto:	Agg.
AII. 8	Sezioni area di indagine per analisi idraulica sull'esondabilità del Rio Rolandette Aggiornamento ottobre 2016	Data: ottobre 2016 Scala: 1:100

Il tecnico

DATI CARATTERISTICI

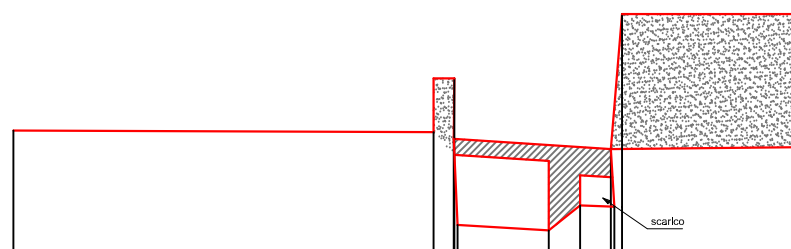
- Oggetto: Sezioni rio Rolandette in Comune di Loano (SV)

- Scala 1:100

GEOmap Liguria

Via Aicardi, 88
Celle Ligure (SV)
Tel. 3484482303 - 3484482302
e-mail geomapliguria@gmail.com
geomapliguria@pec.it

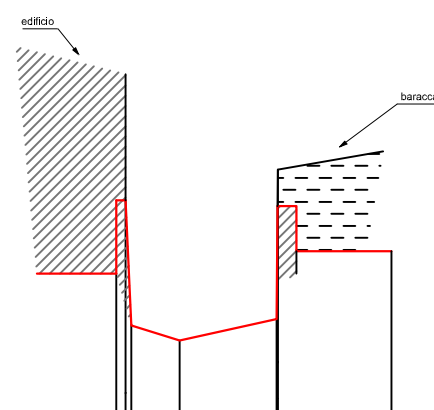
Sezione 26
Sezione 6 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-3.70				
Quote	6.61	6.22	5.22	4.61	4.66
Distanze progressive	0.11	5.22	5.22	11.34	
Distanze parziali		5.56	2.46	2.37	

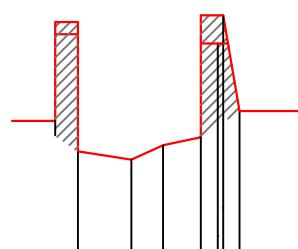
Sezione 23.5
Sezione 7 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

Piano di rif.	-4.80				
Quote	10.22	9.22	8.22	7.22	6.39
Distanze progressive	0.15	1.15	2.33	2.46	
Distanze parziali		0.94	1.30		

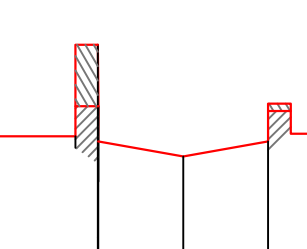
Sezione 22.5
Sezione 8 (2016)



Scala orizzontale 1/100
Scala verticale 1/100

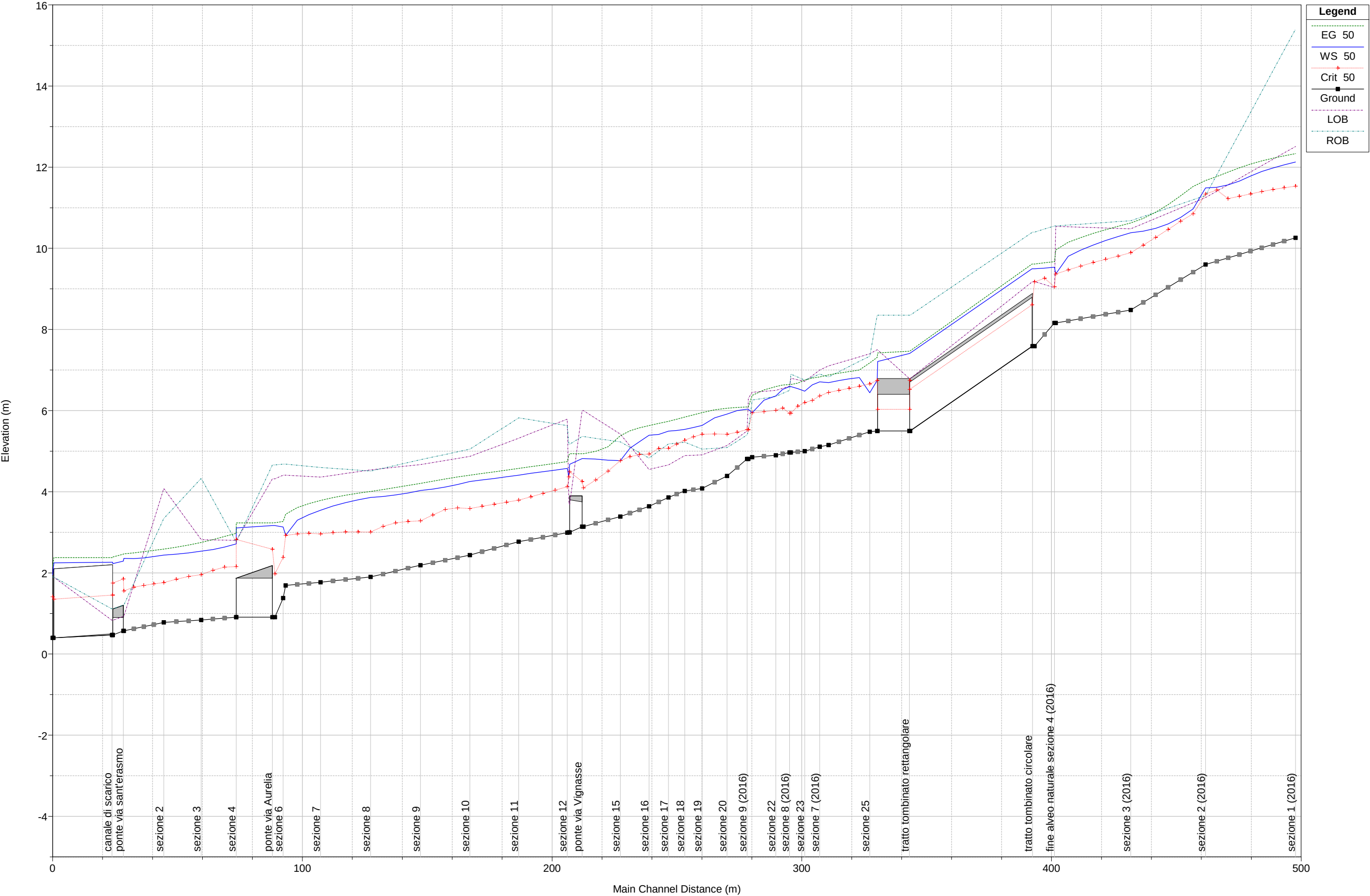
Piano di rif.	-5.20				
Quote	10.88	9.87	8.87	7.87	6.87
Distanze progressive	0.24	1.45	2.72	2.72	
Distanze parziali		0.71	0.95		

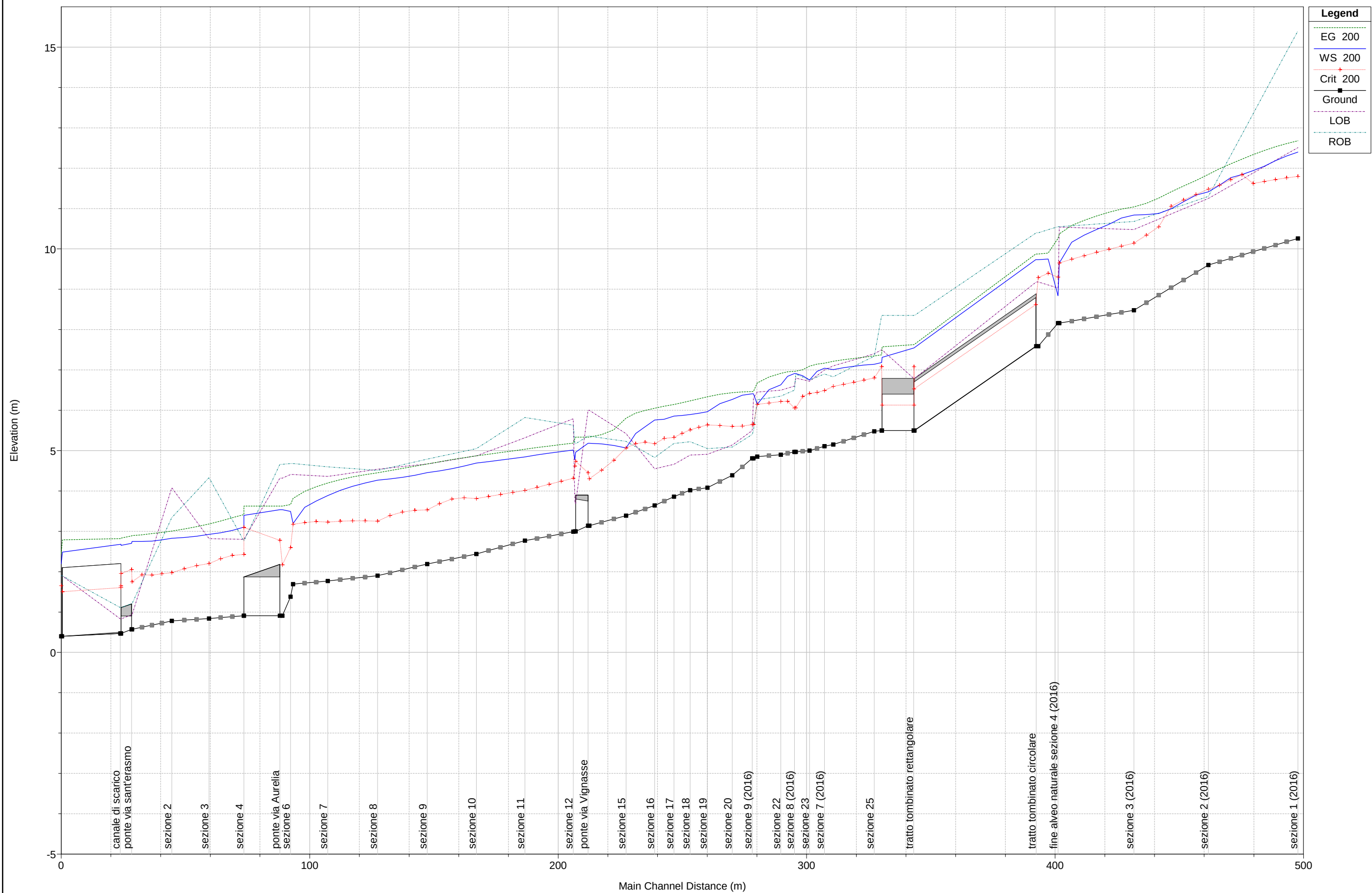
Sezione 21.5
Sezione 9 (2016)

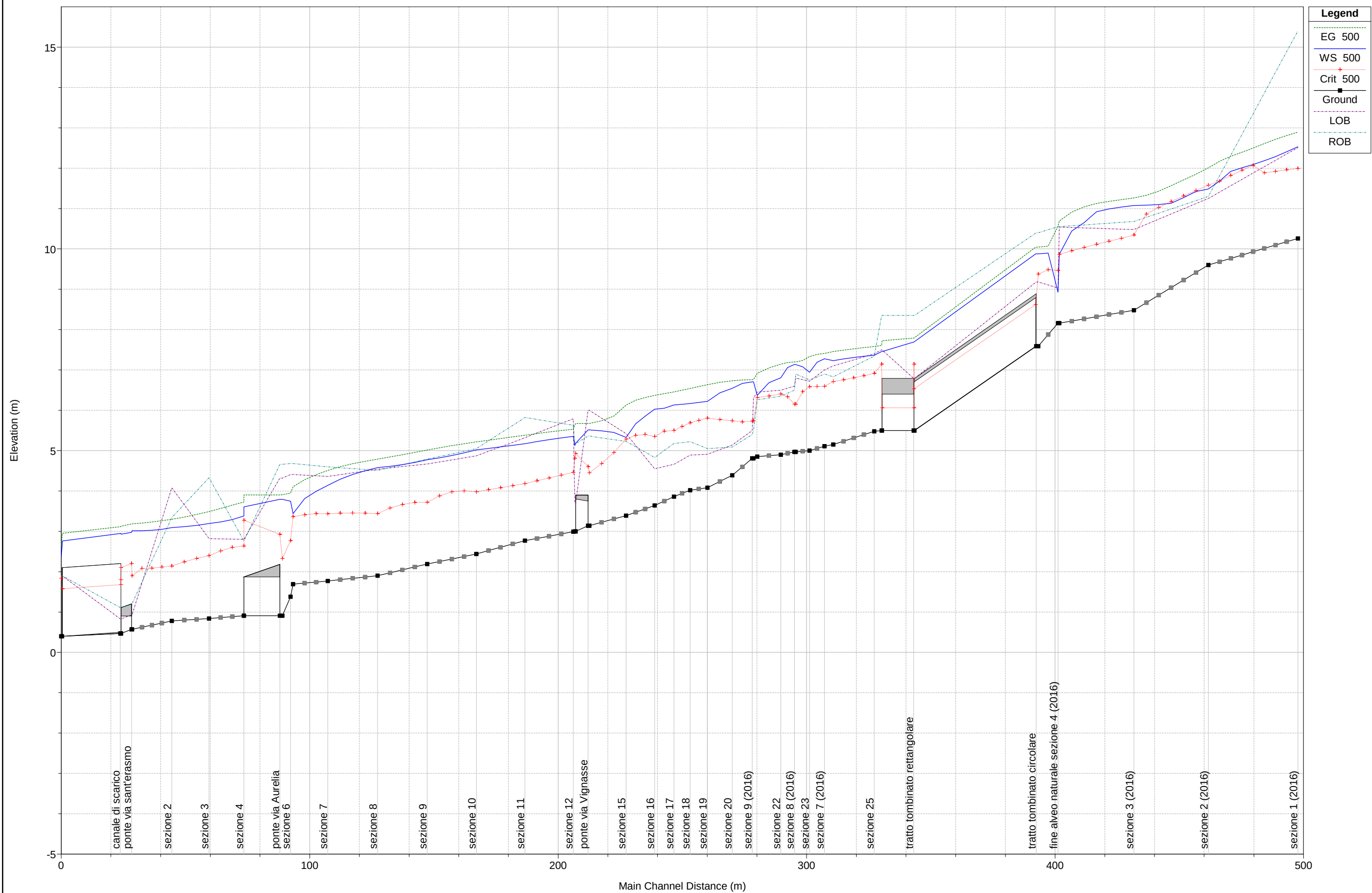


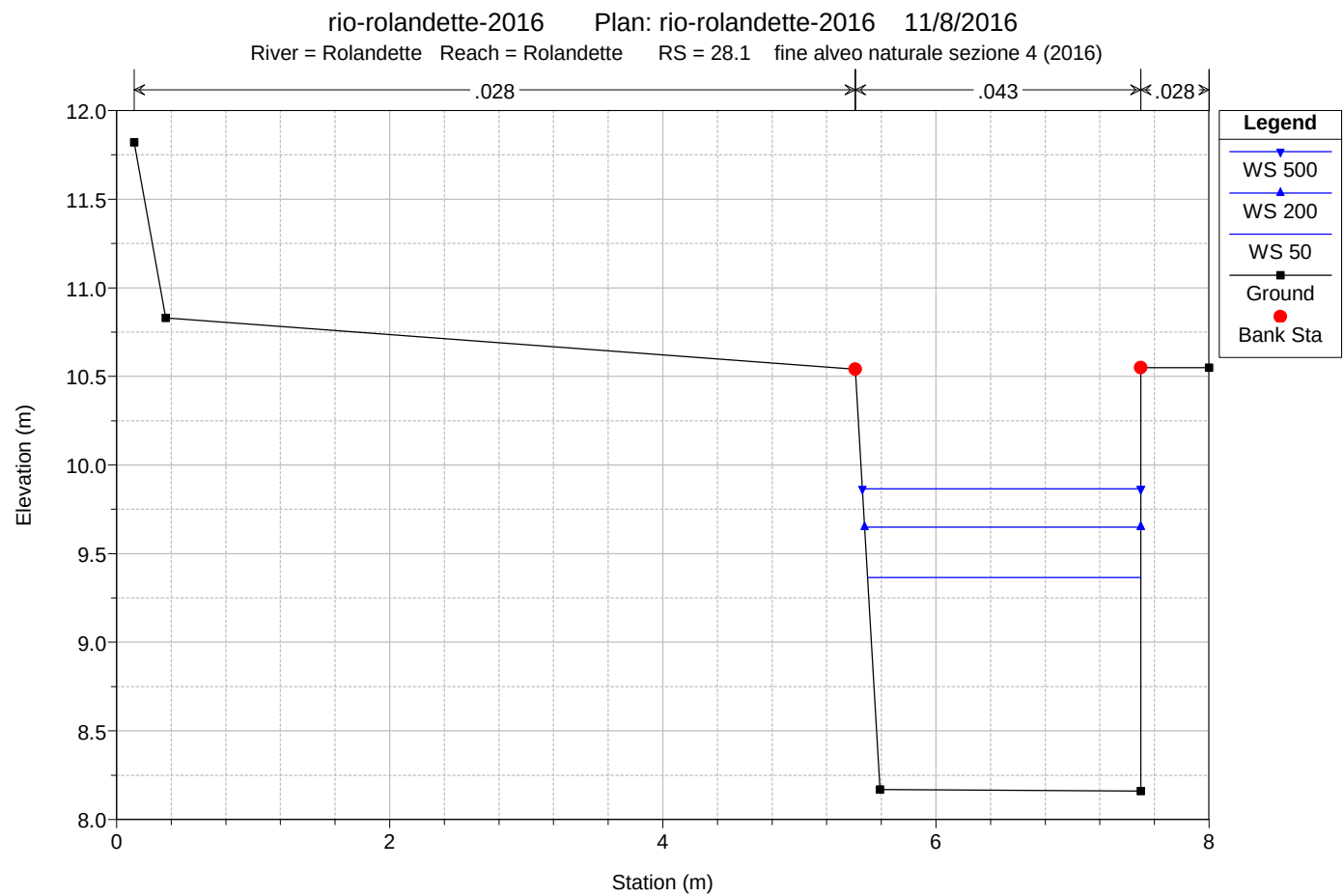
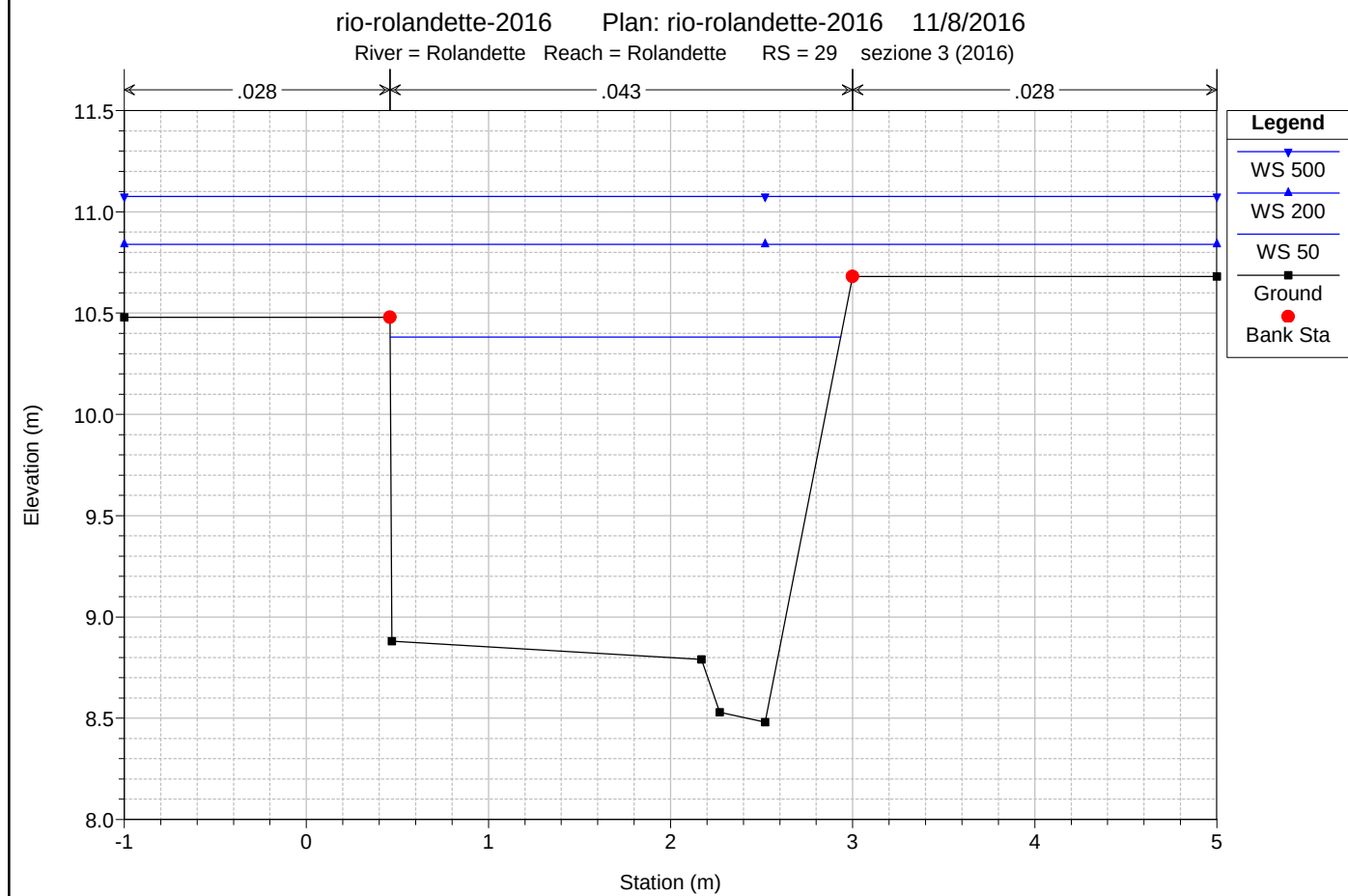
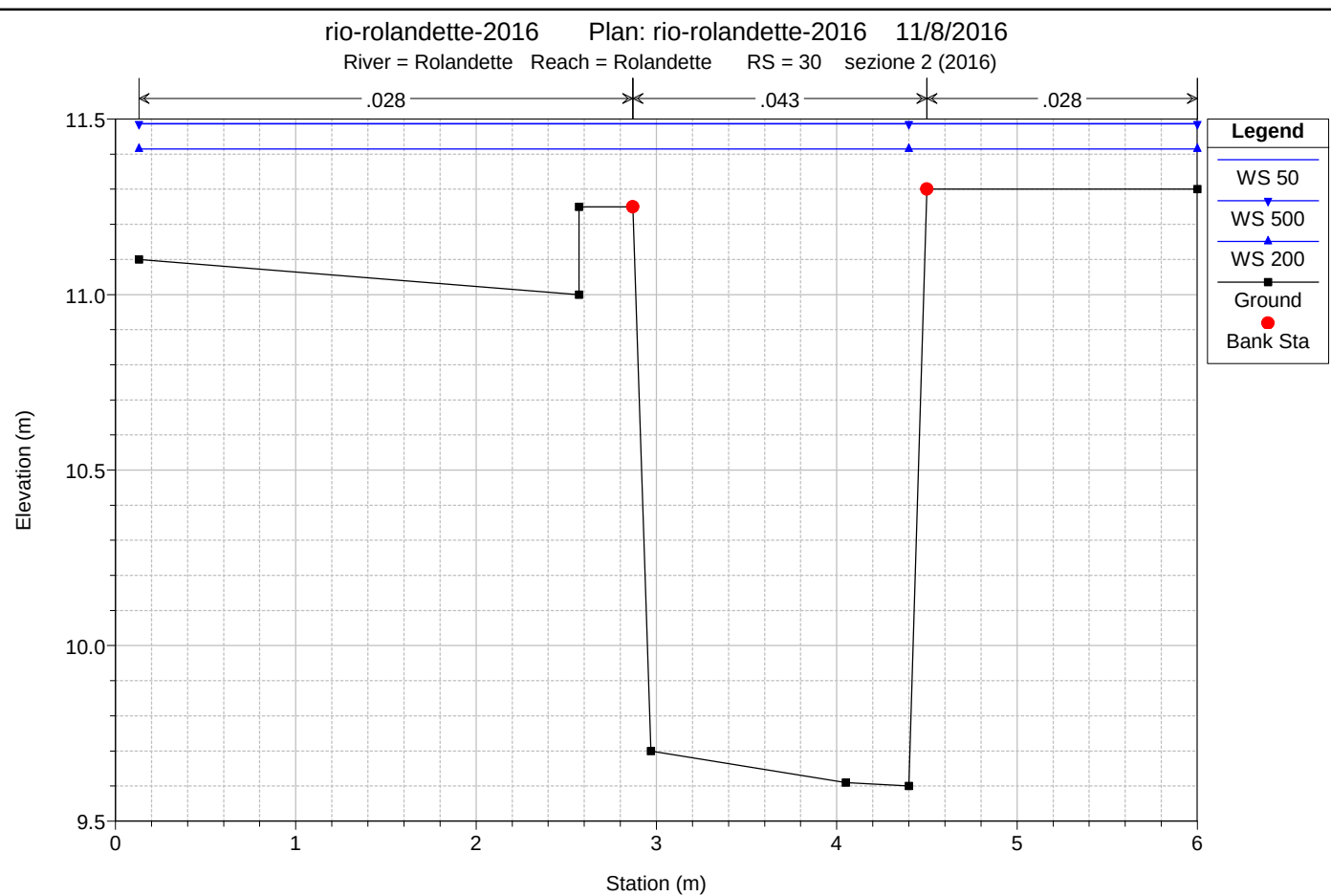
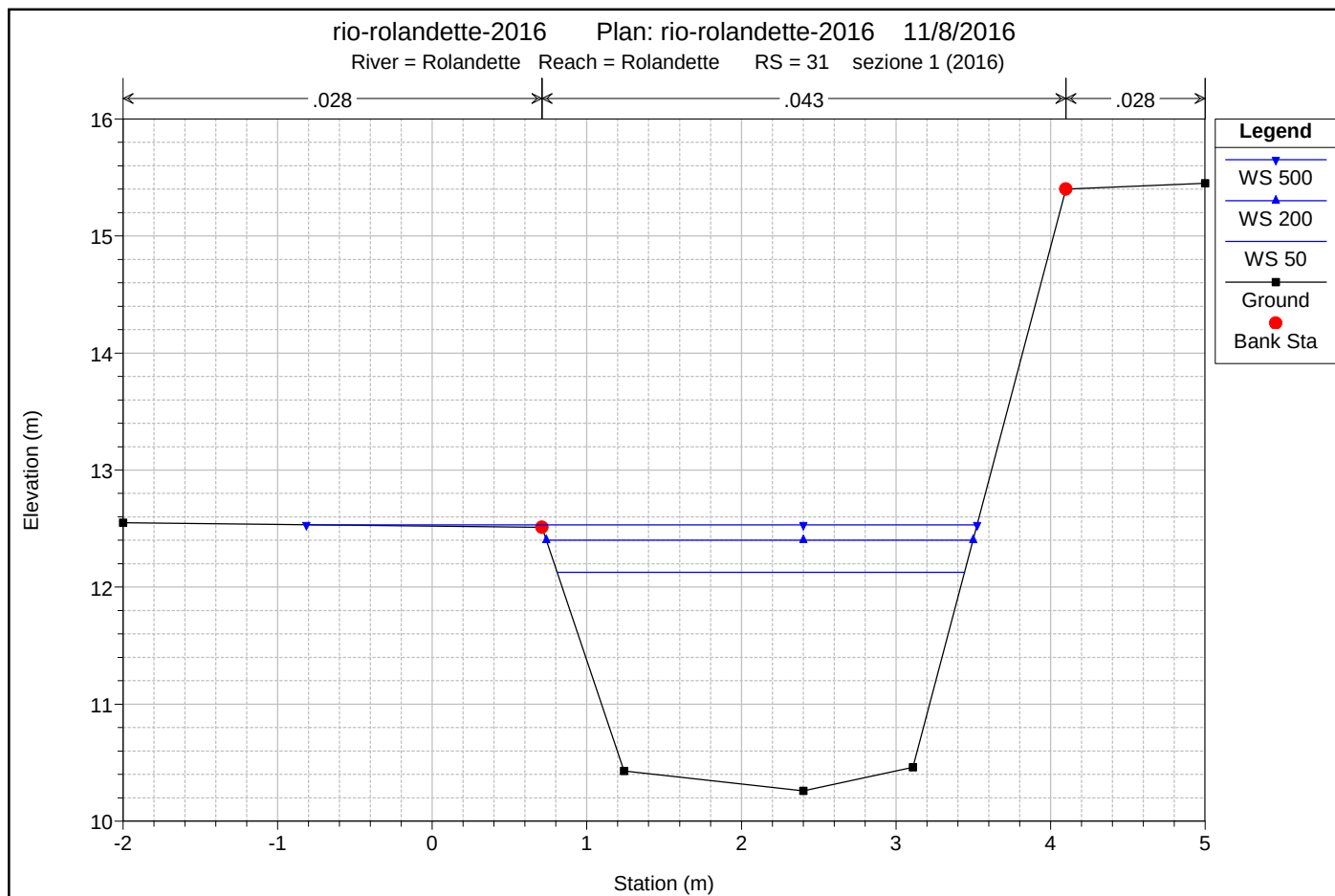
Scala orizzontale 1/100
Scala verticale 1/100

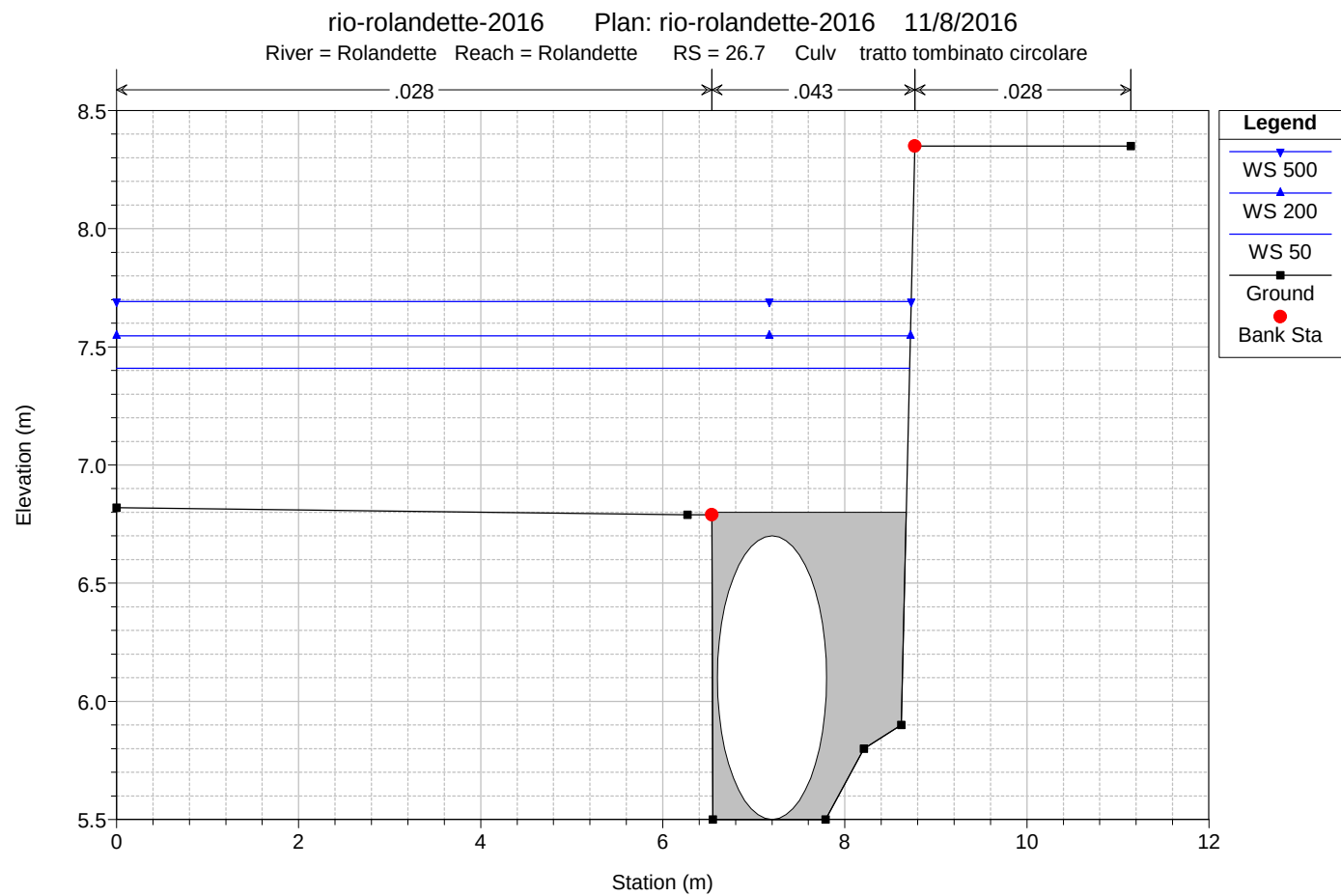
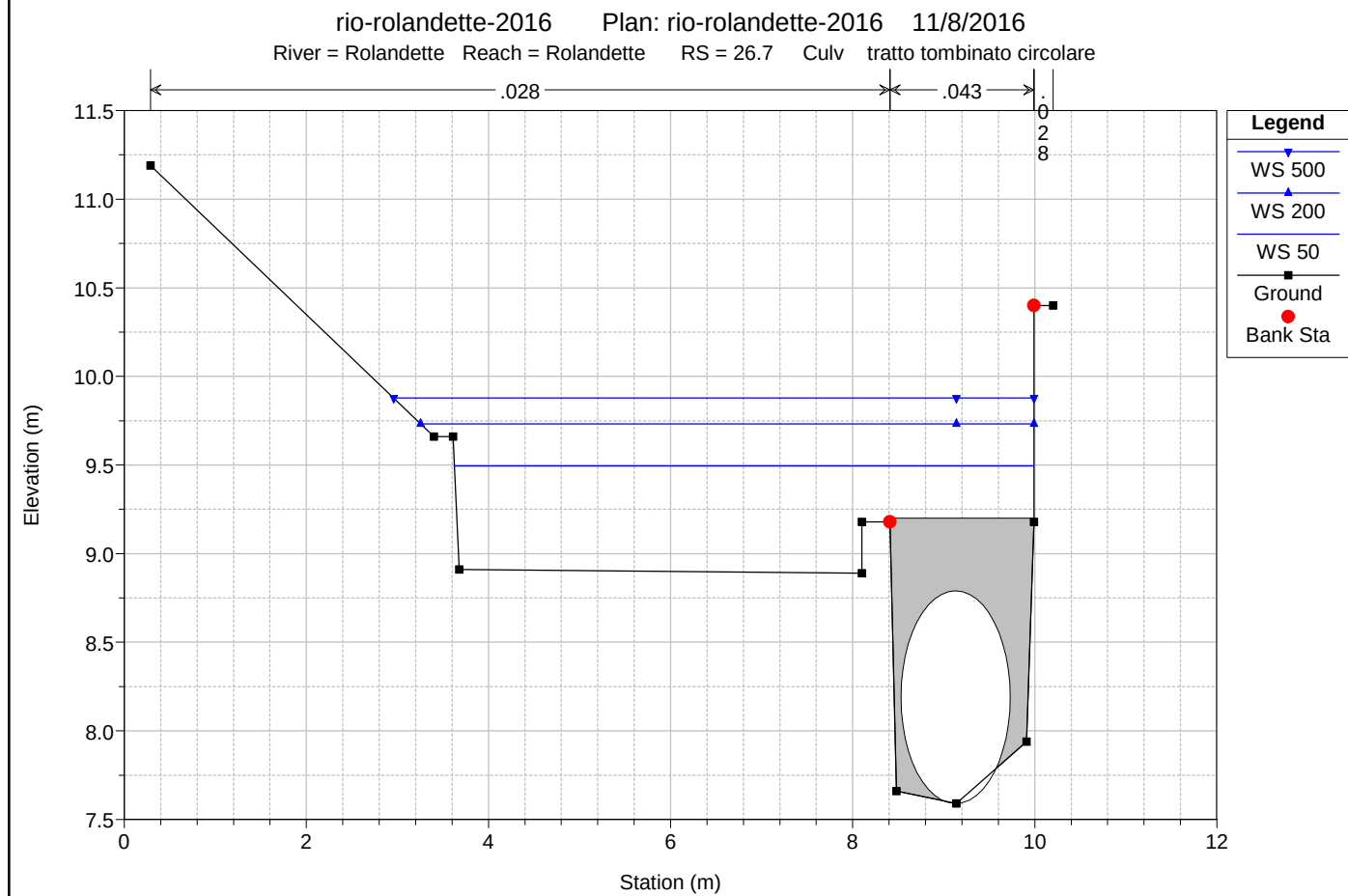
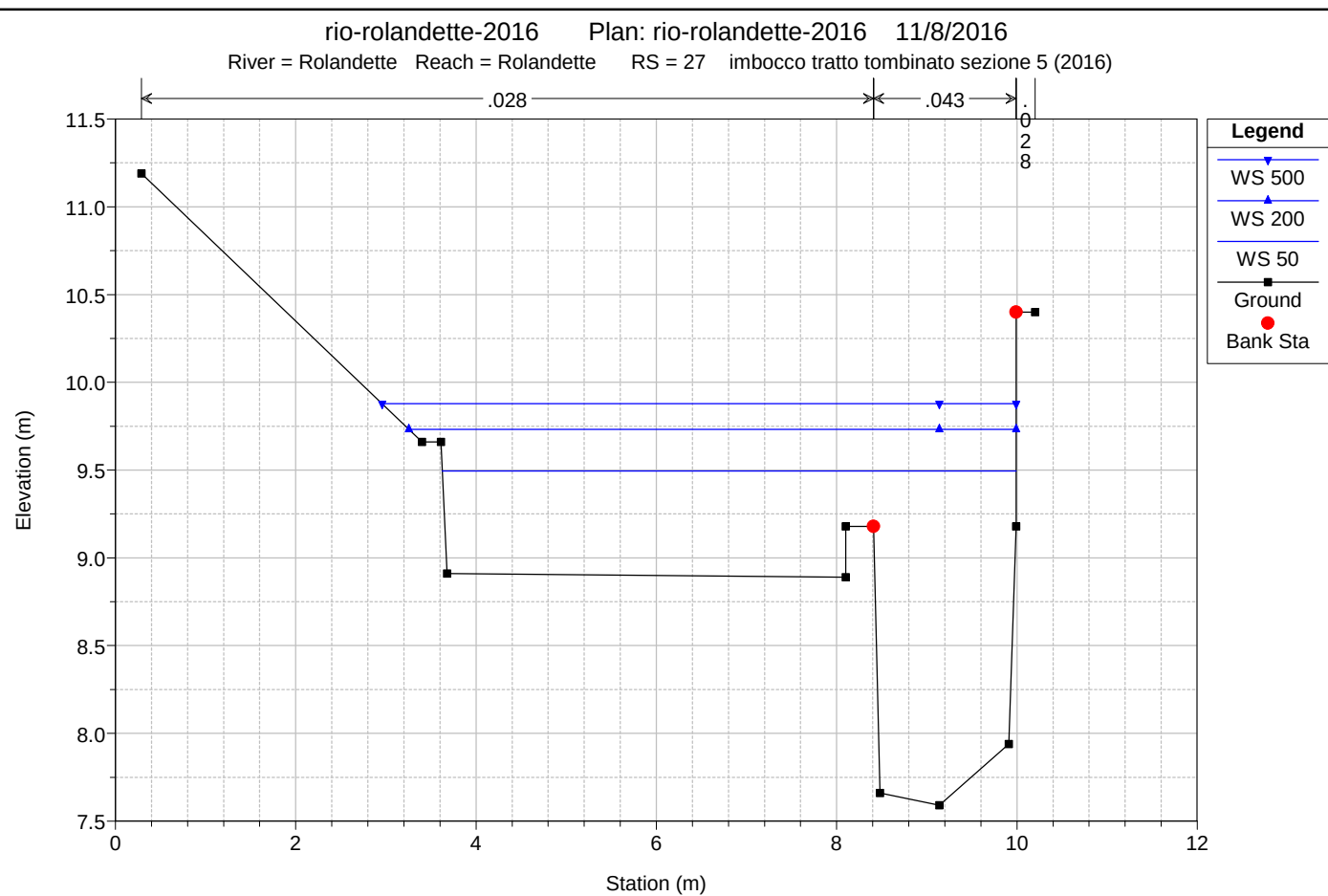
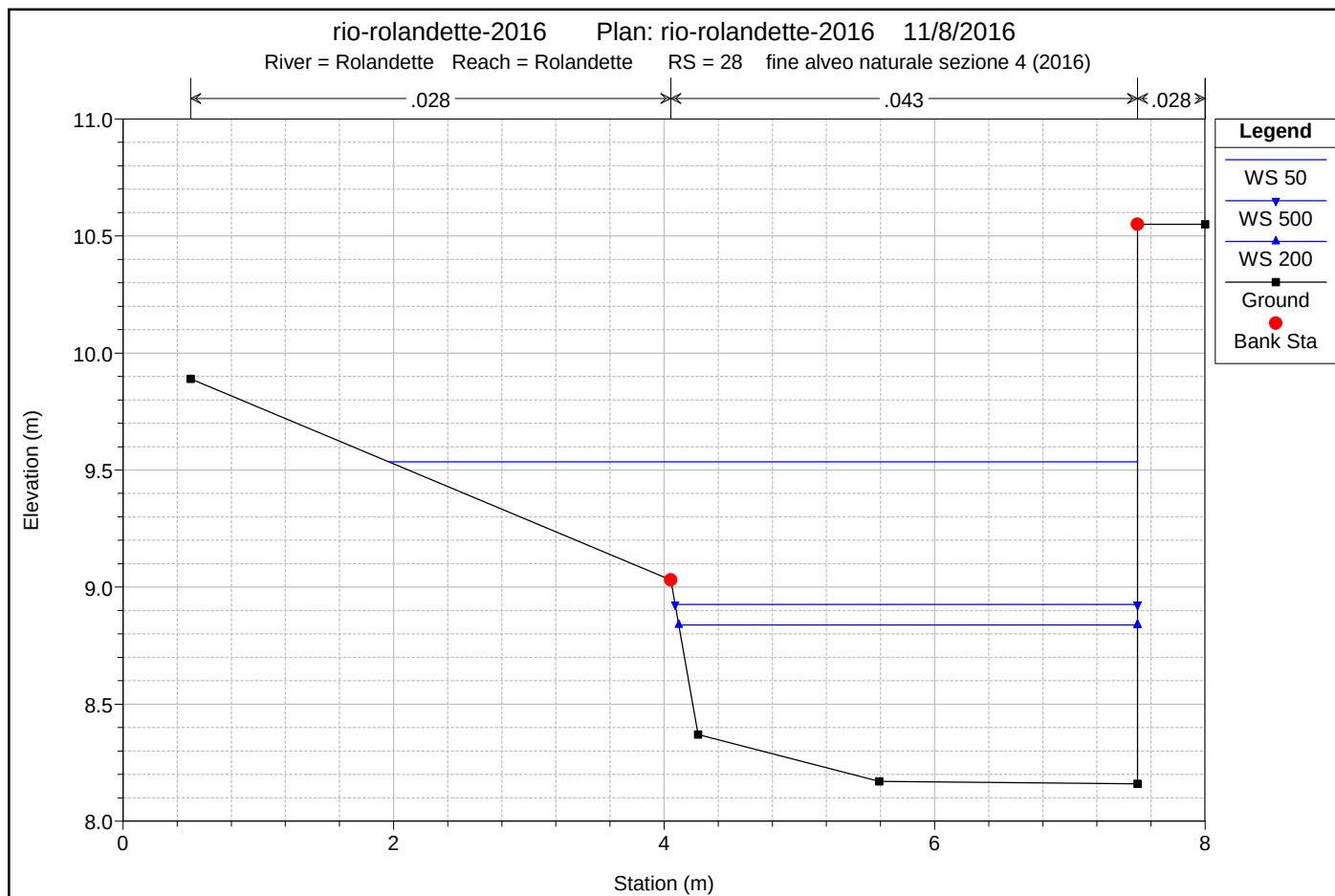
Piano di rif.	-5.40				
Quote	10.22	9.22	8.22	7.22	6.22
Distanze progressive	1.58	2.28	3.80		
Distanze parziali		2.25			

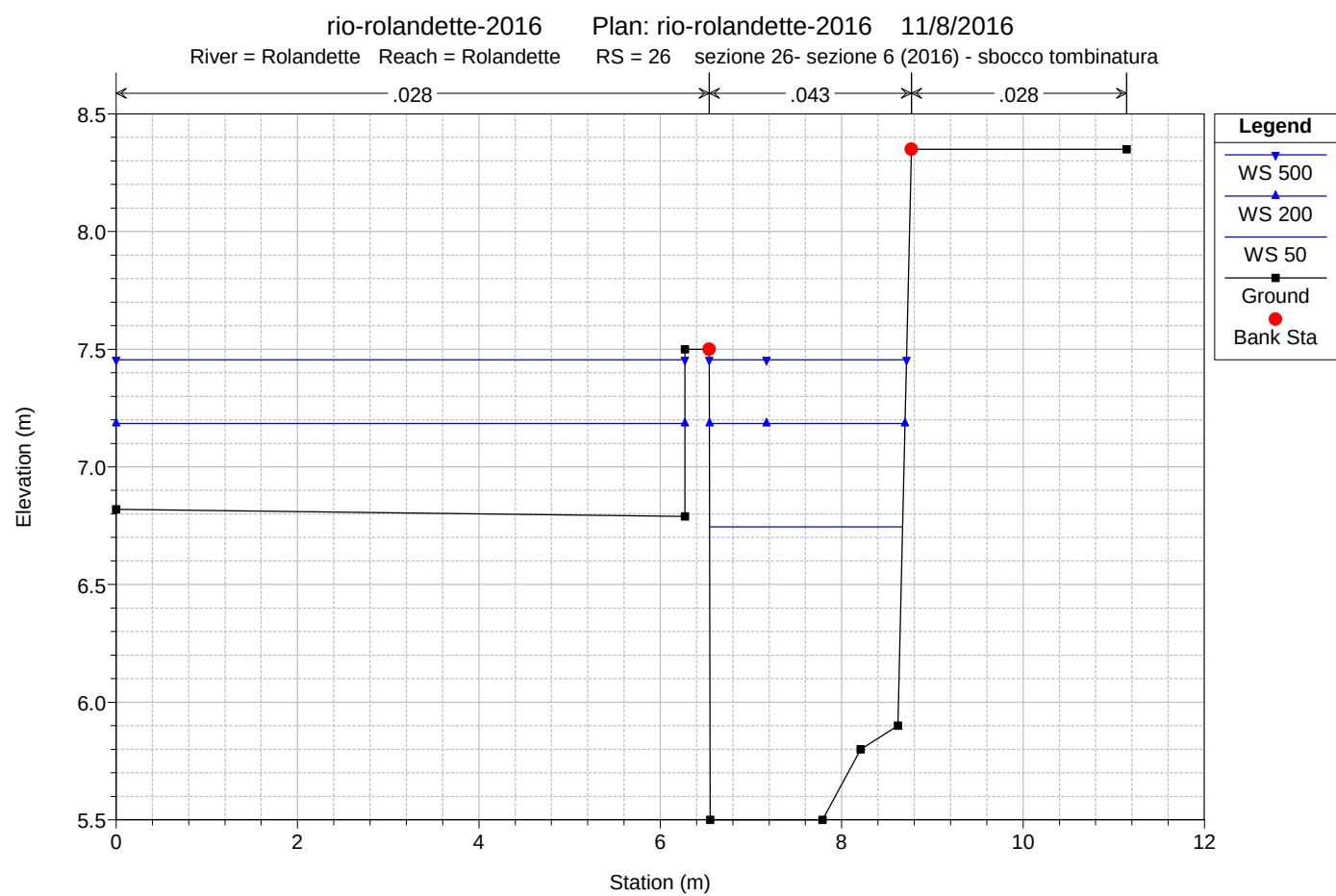
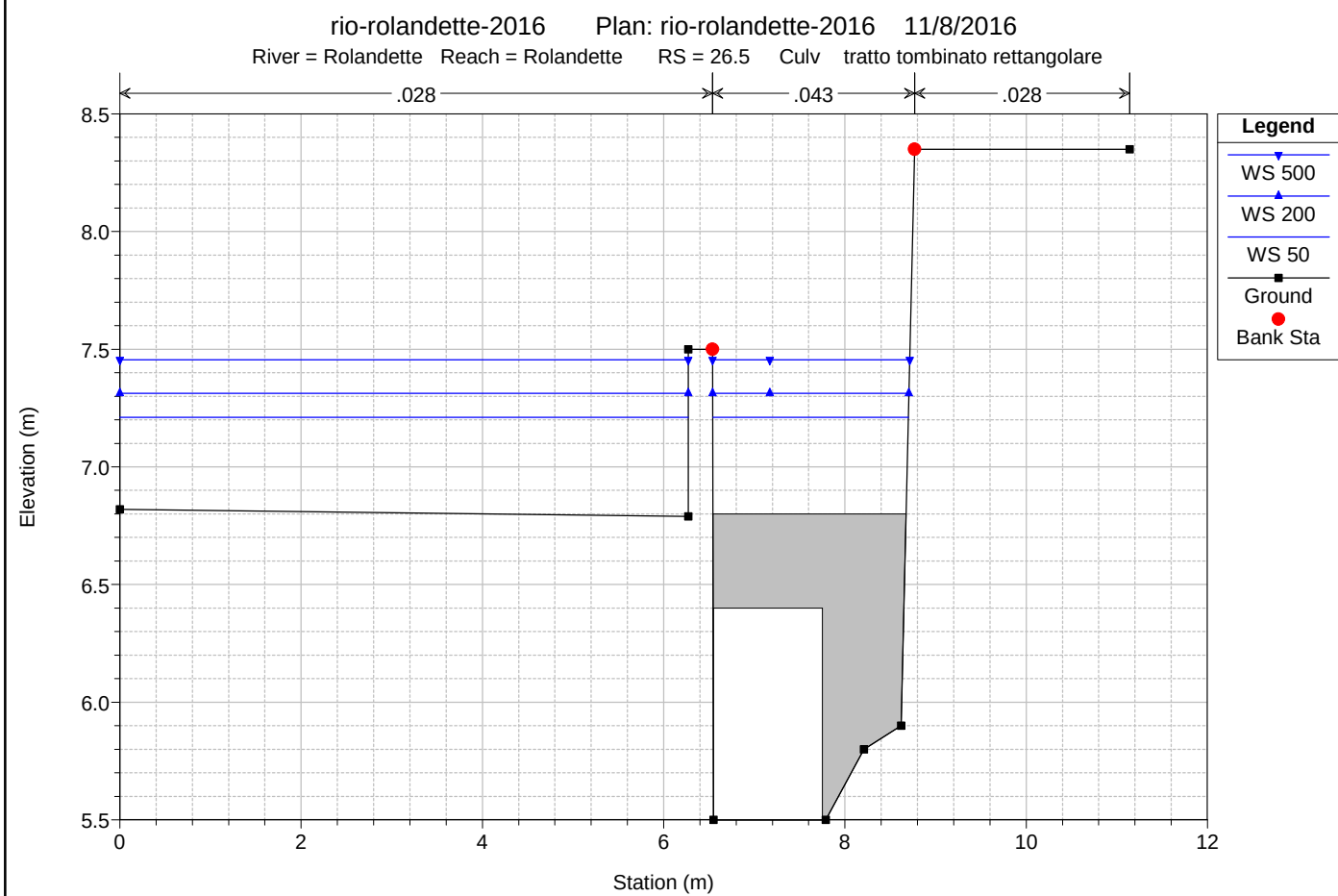
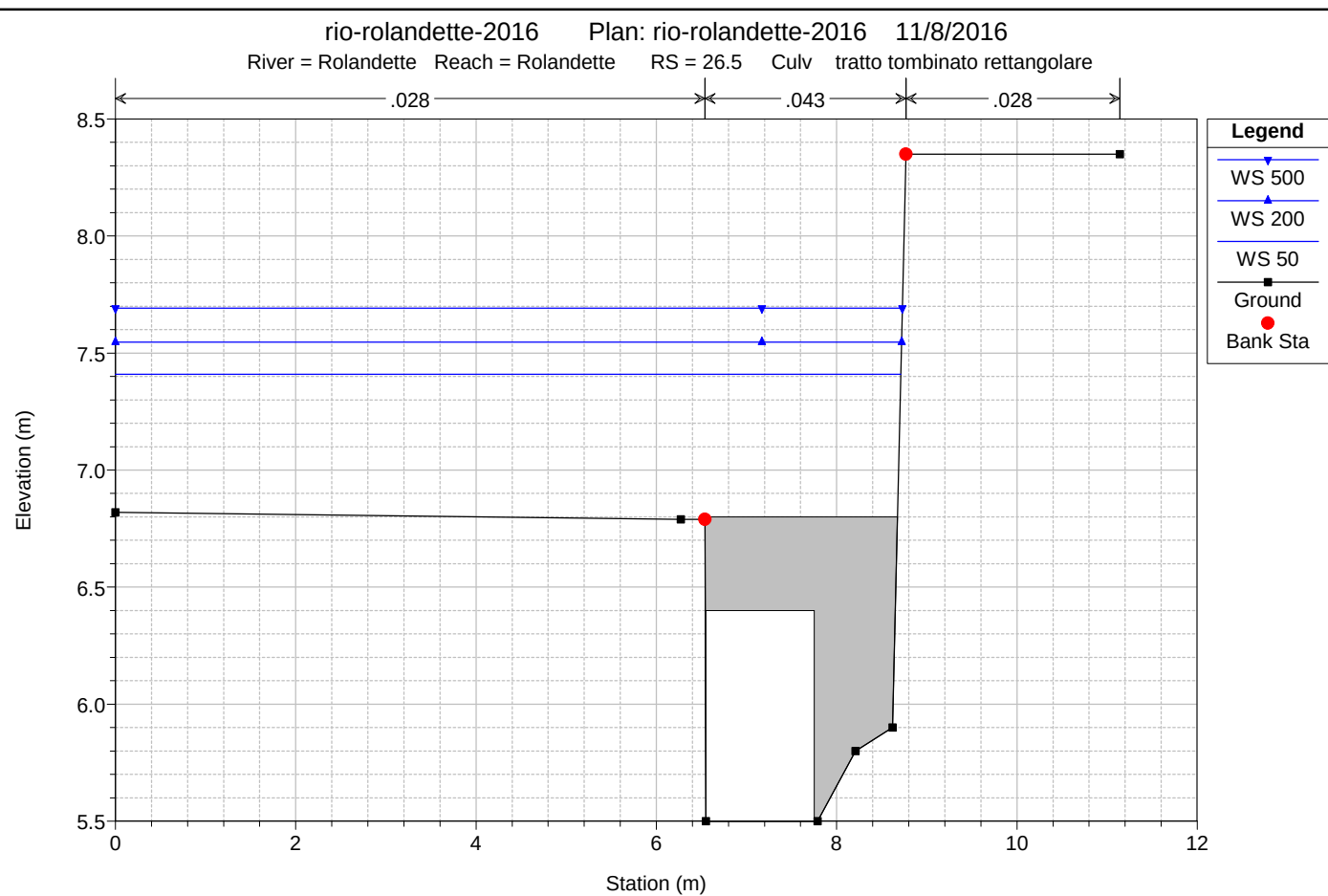
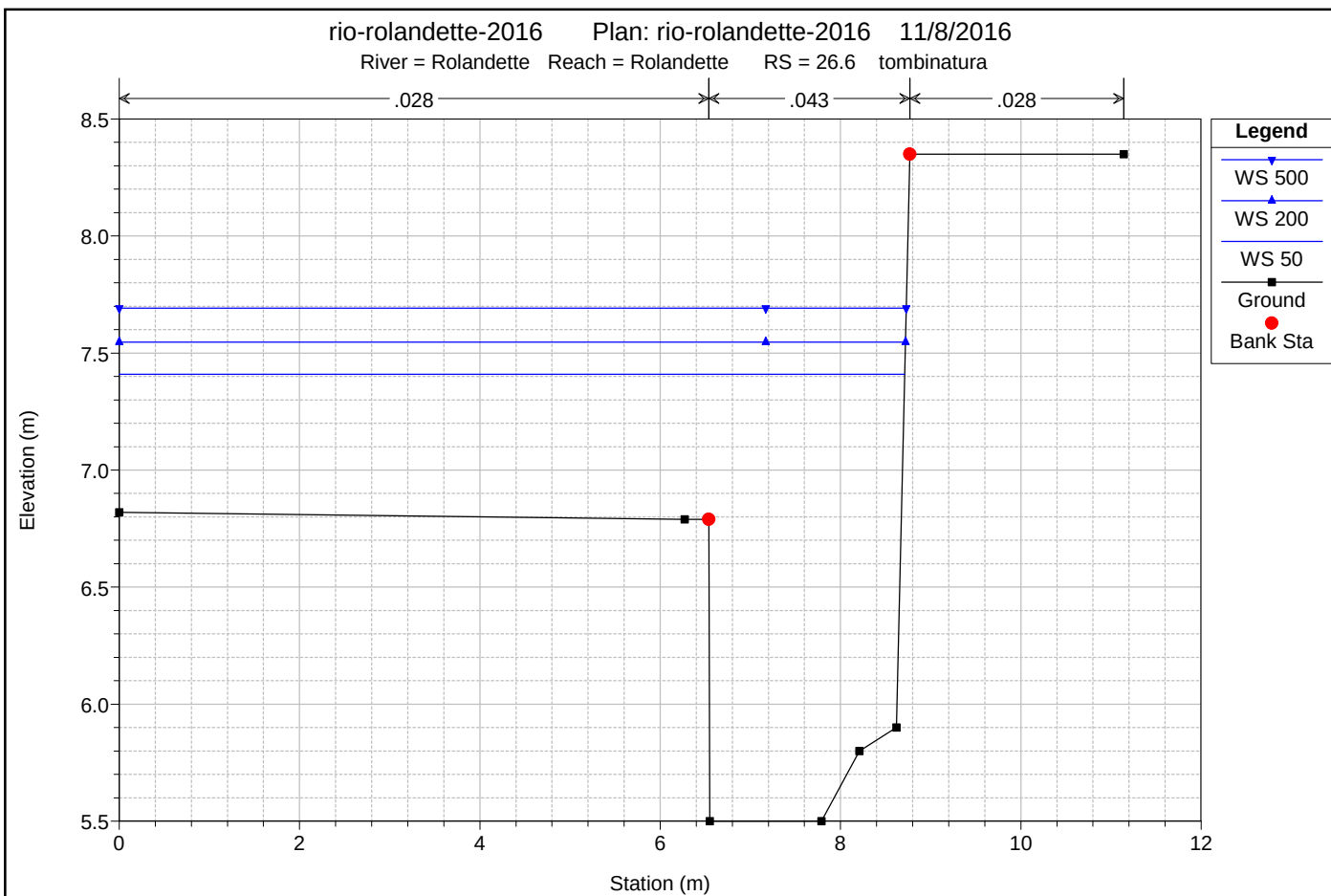


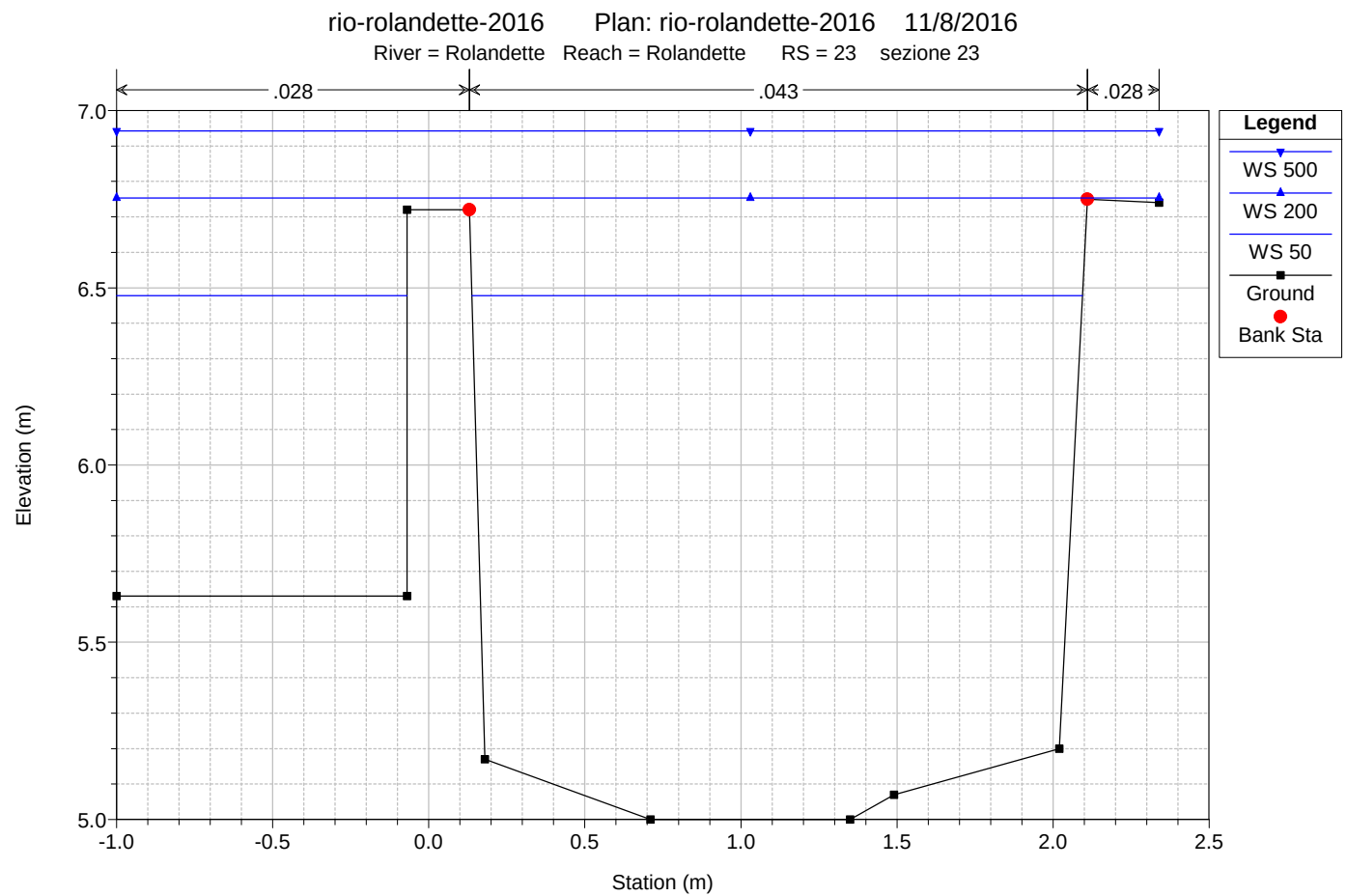
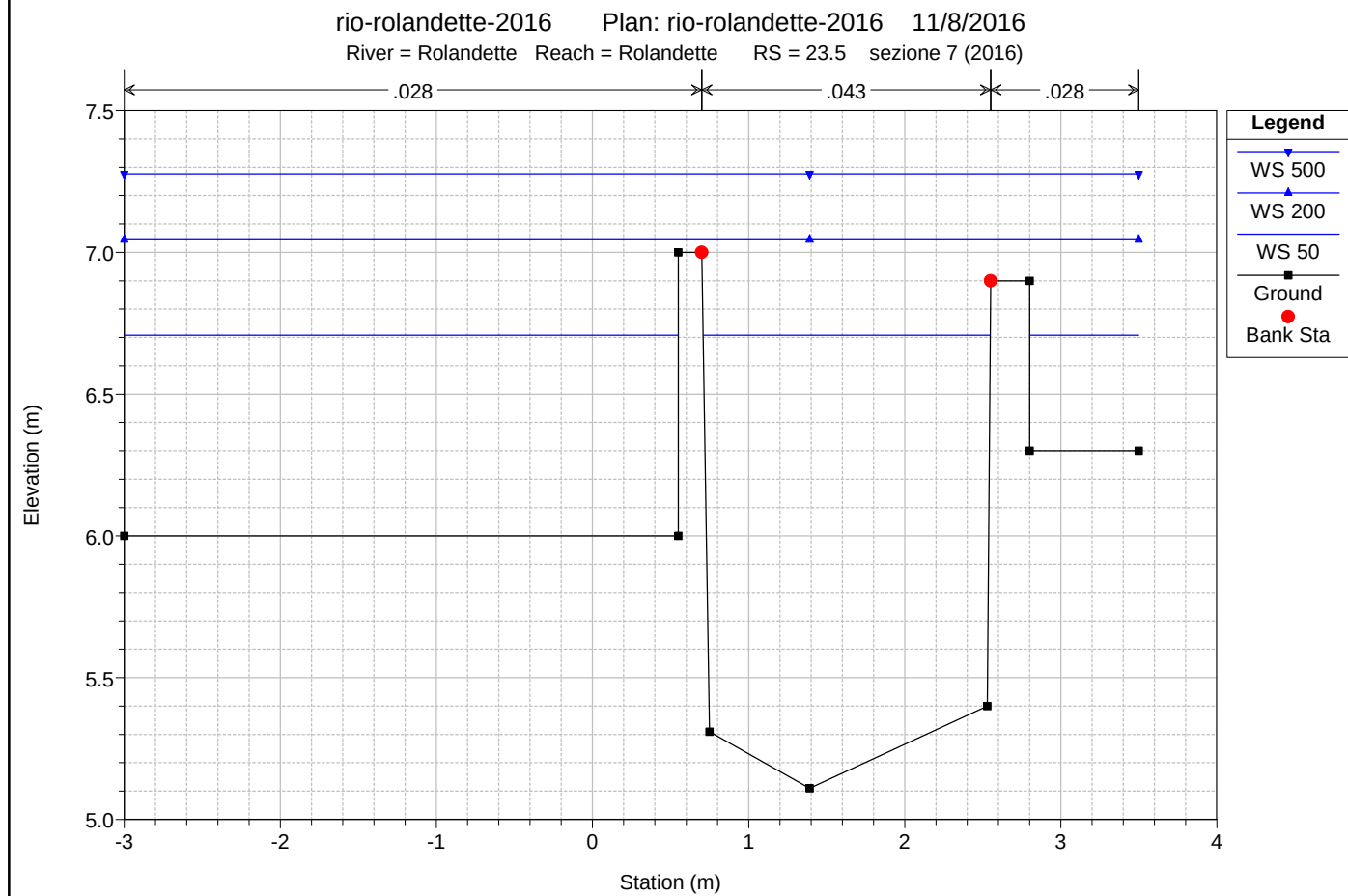
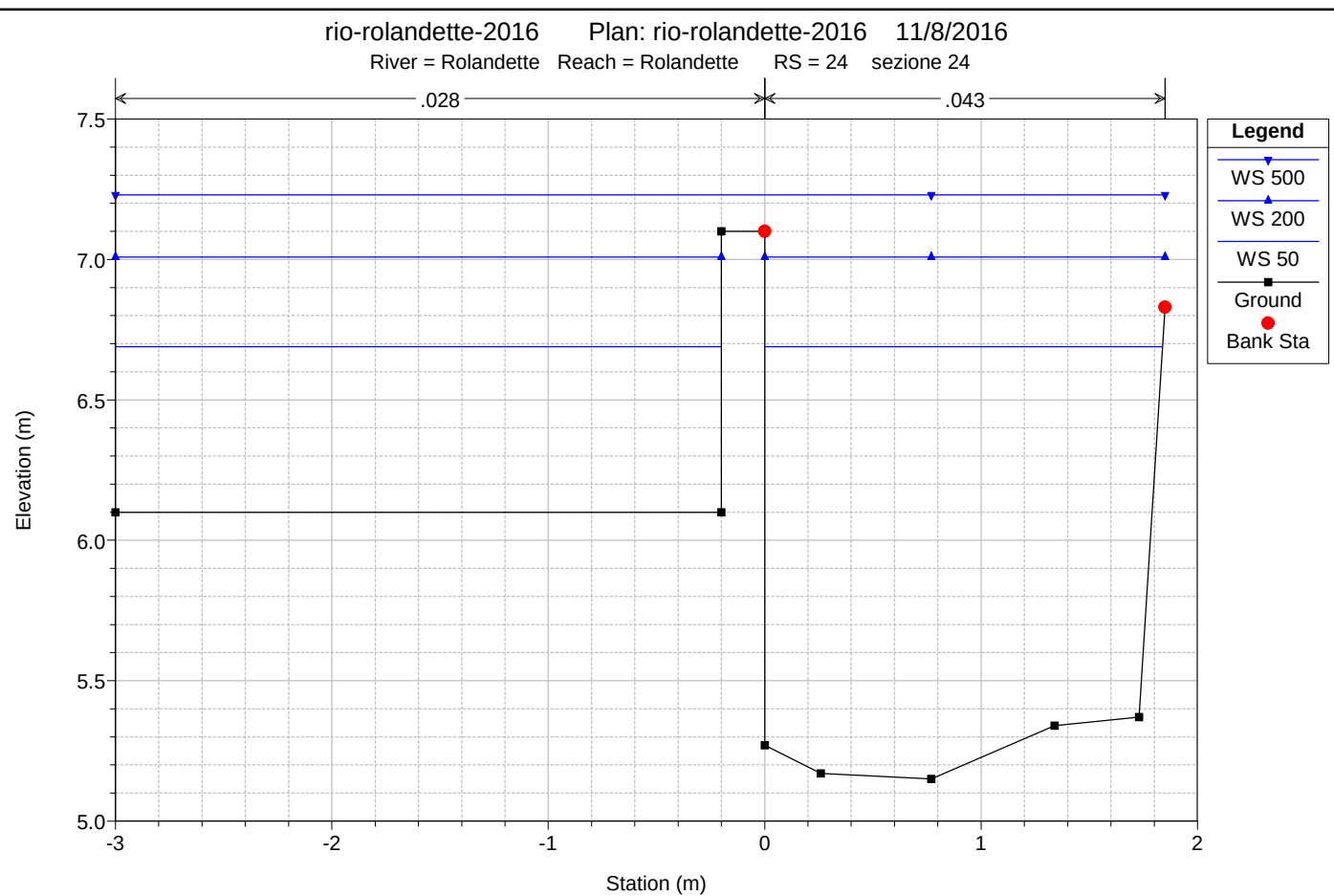
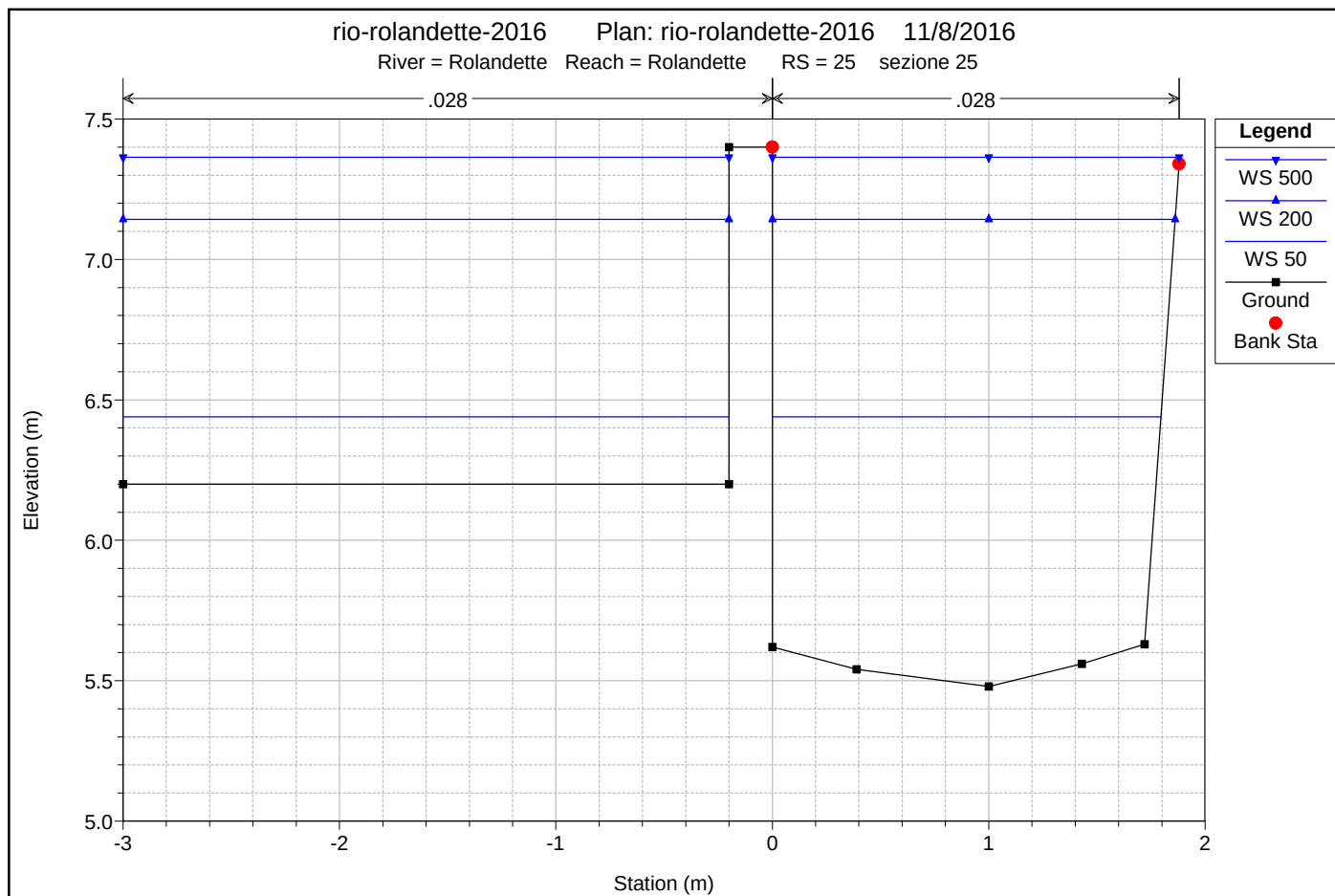


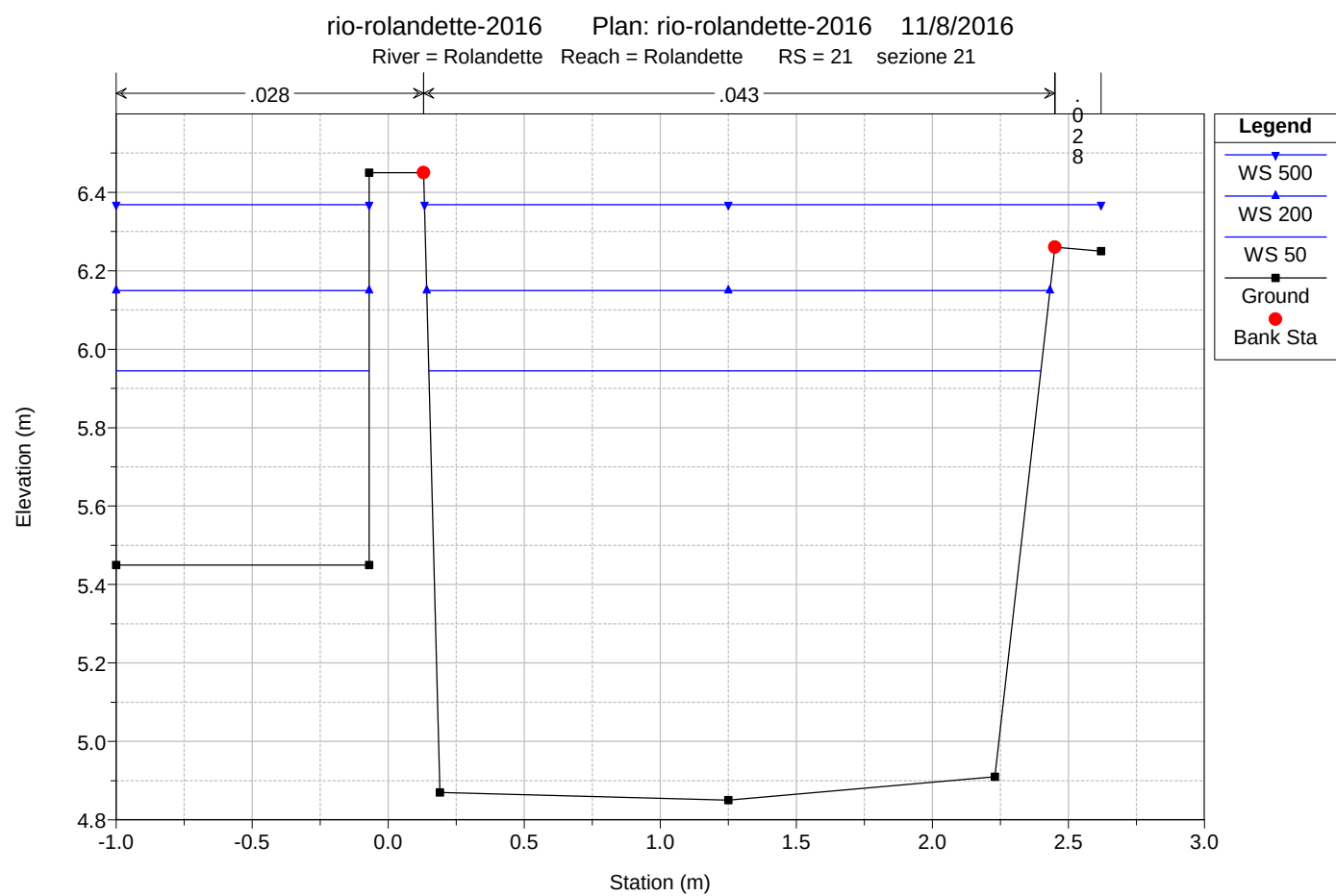
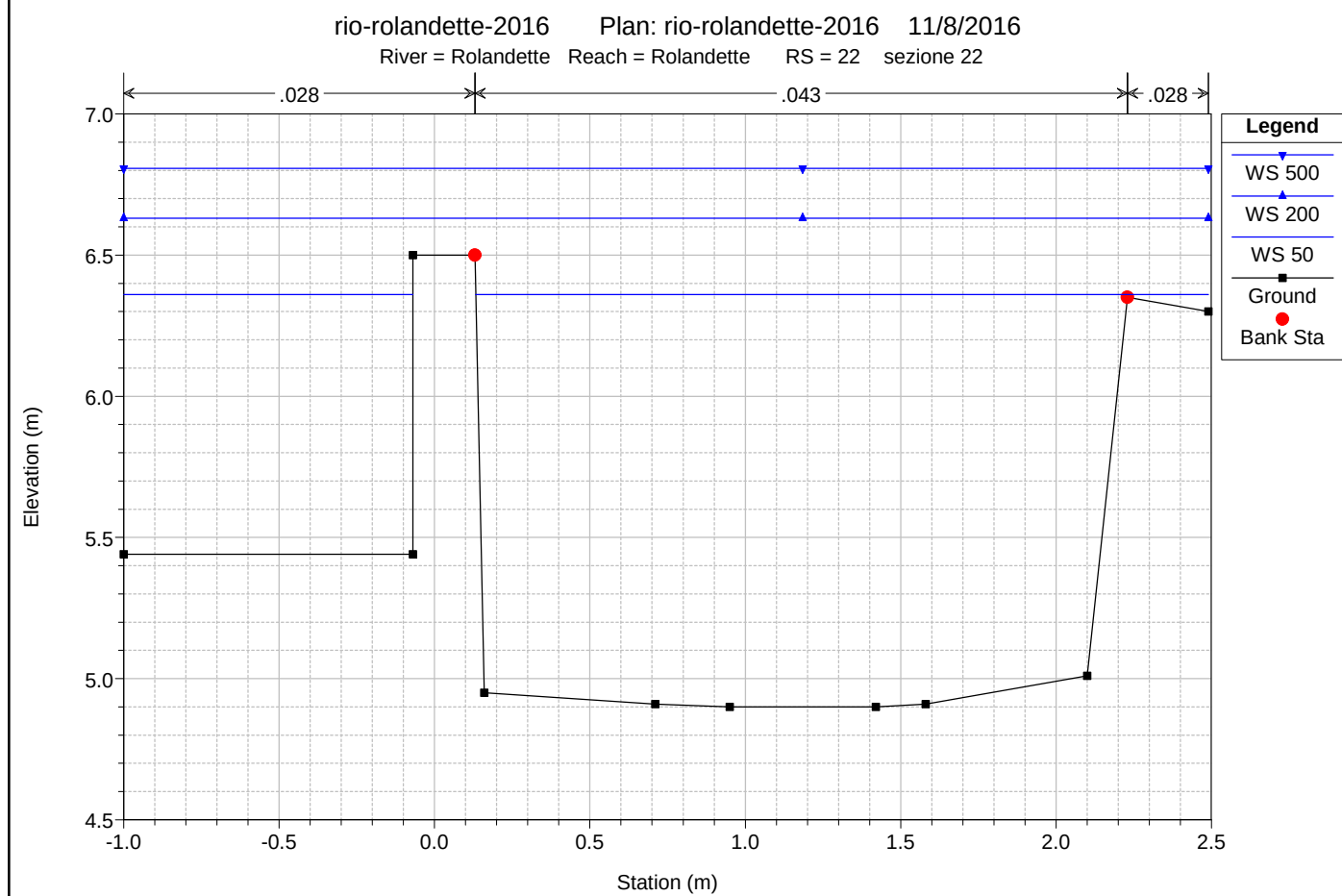
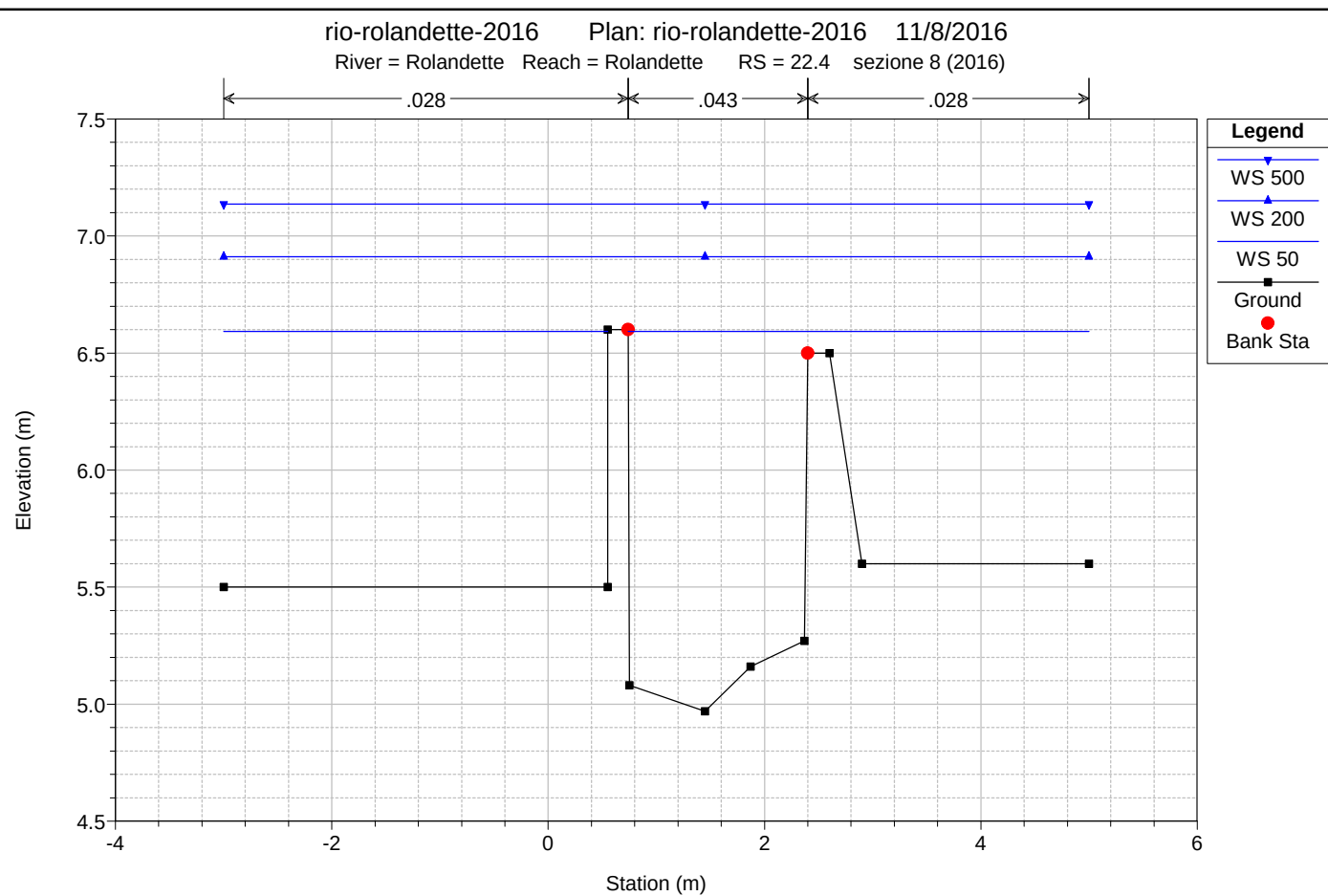
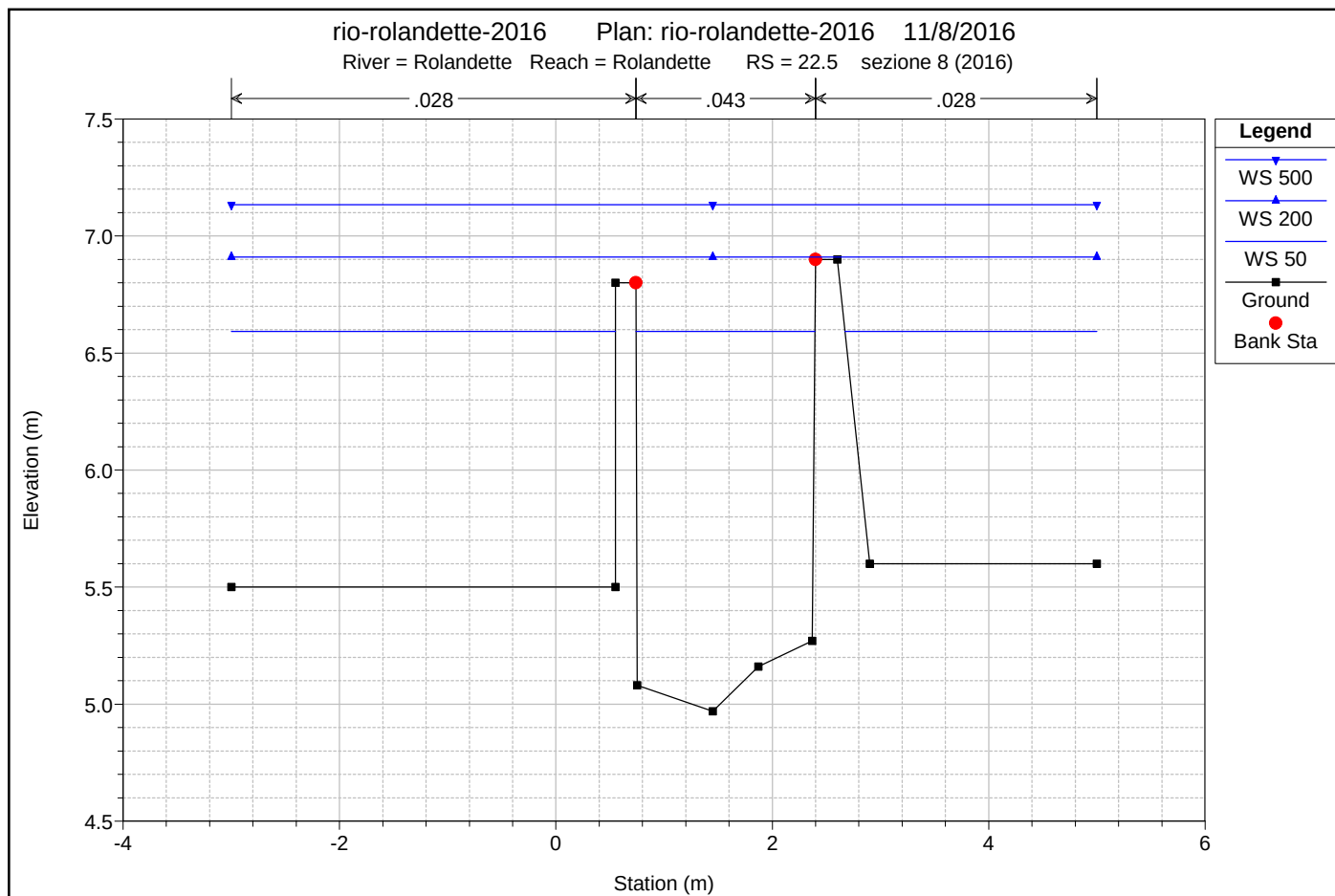


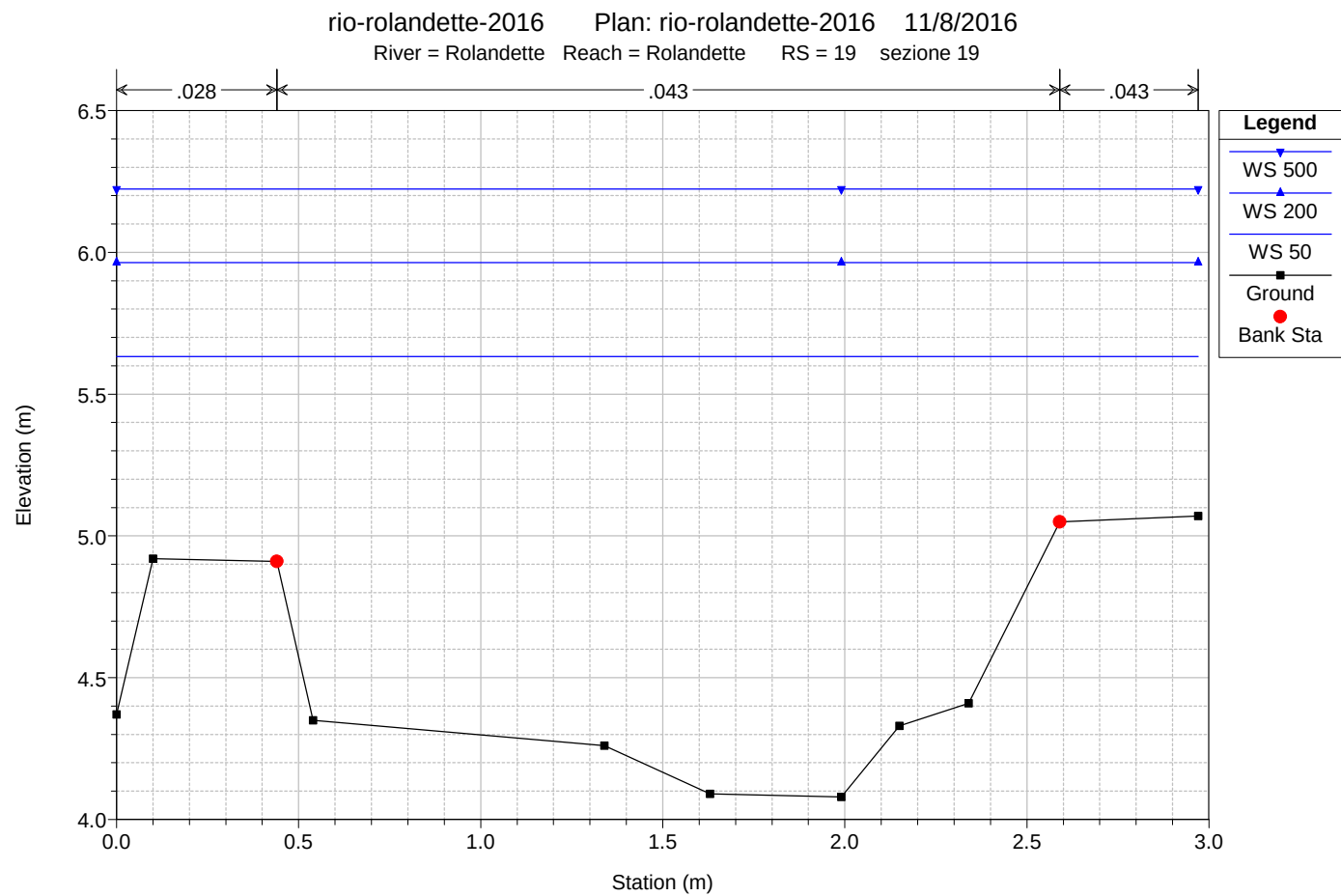
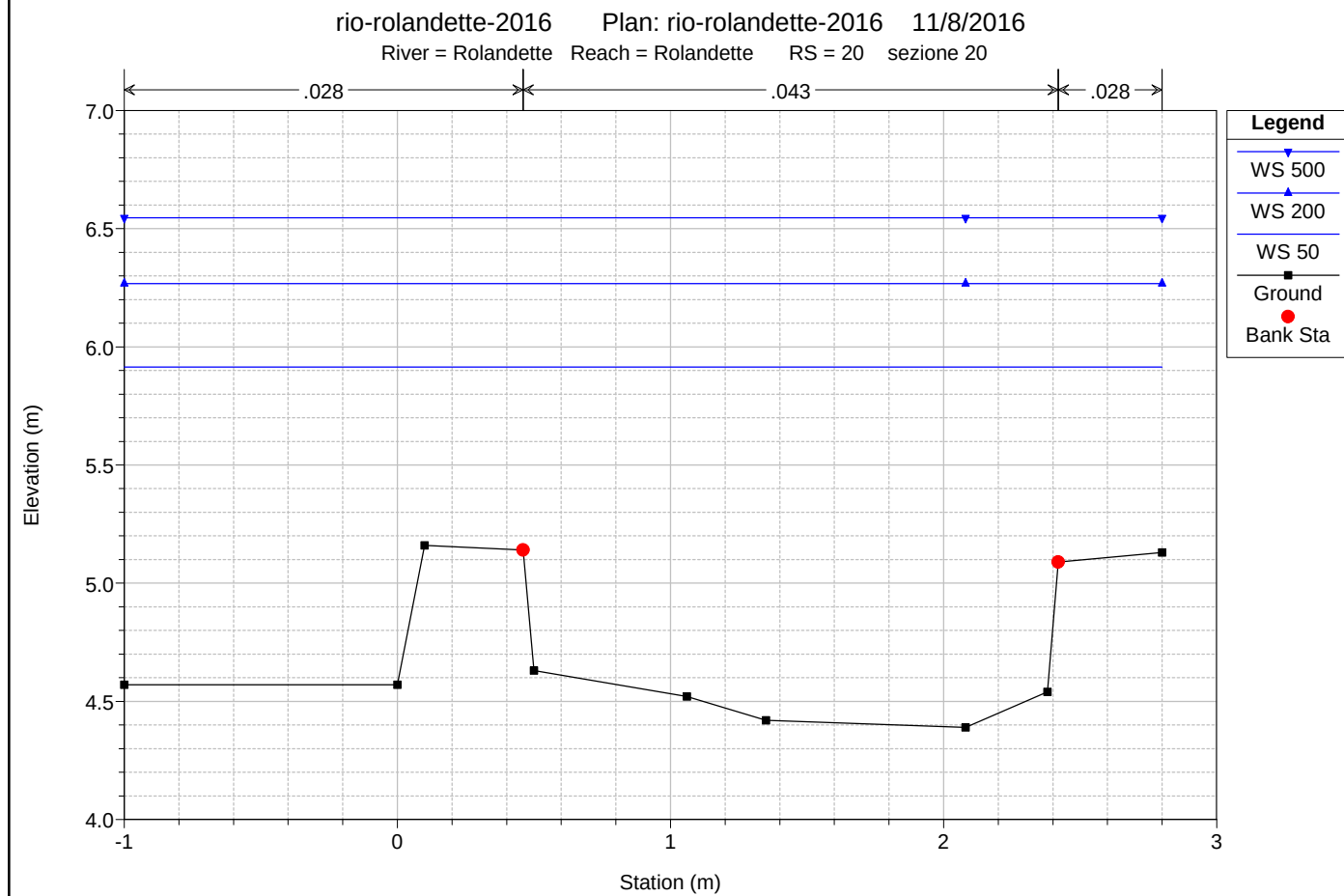
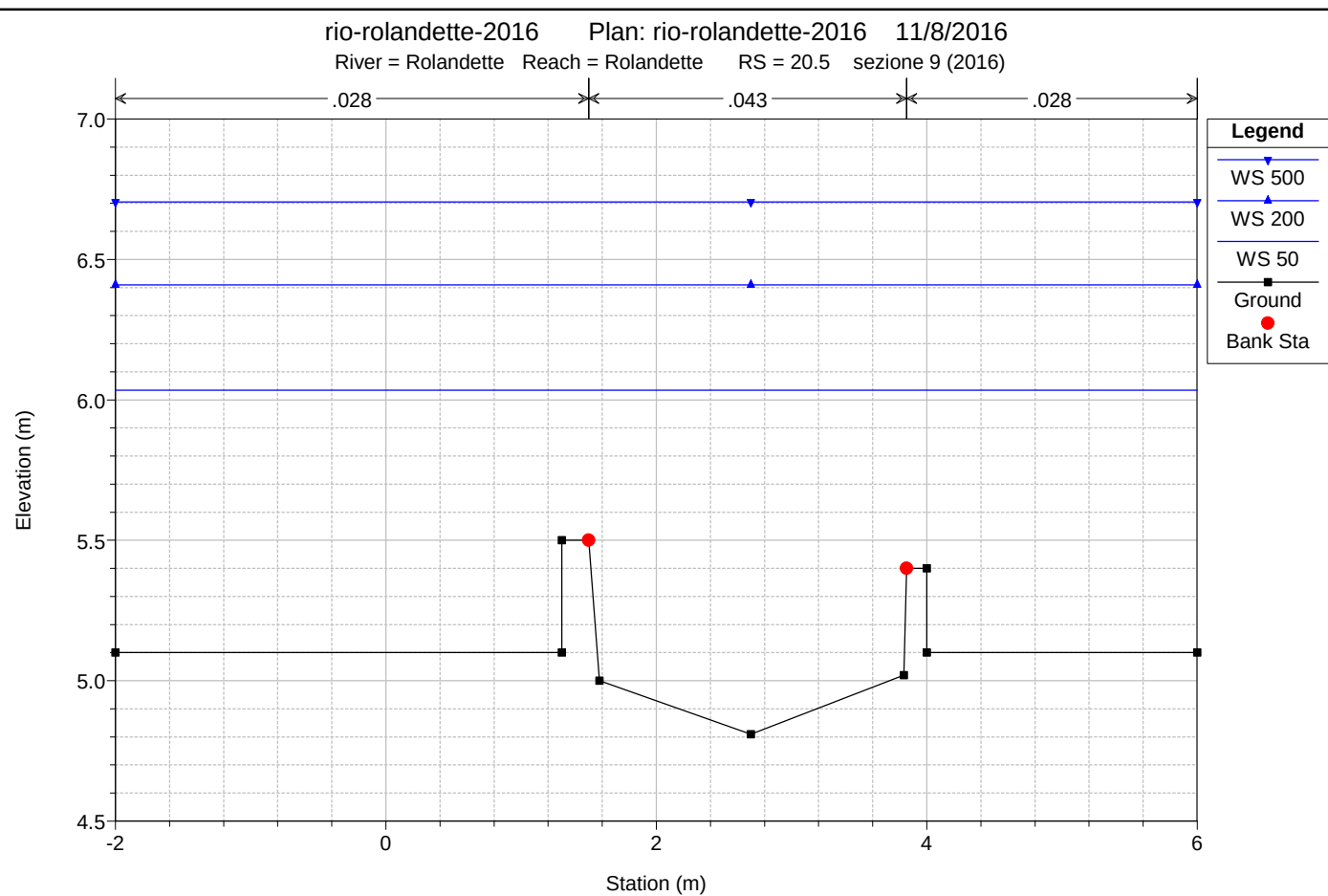
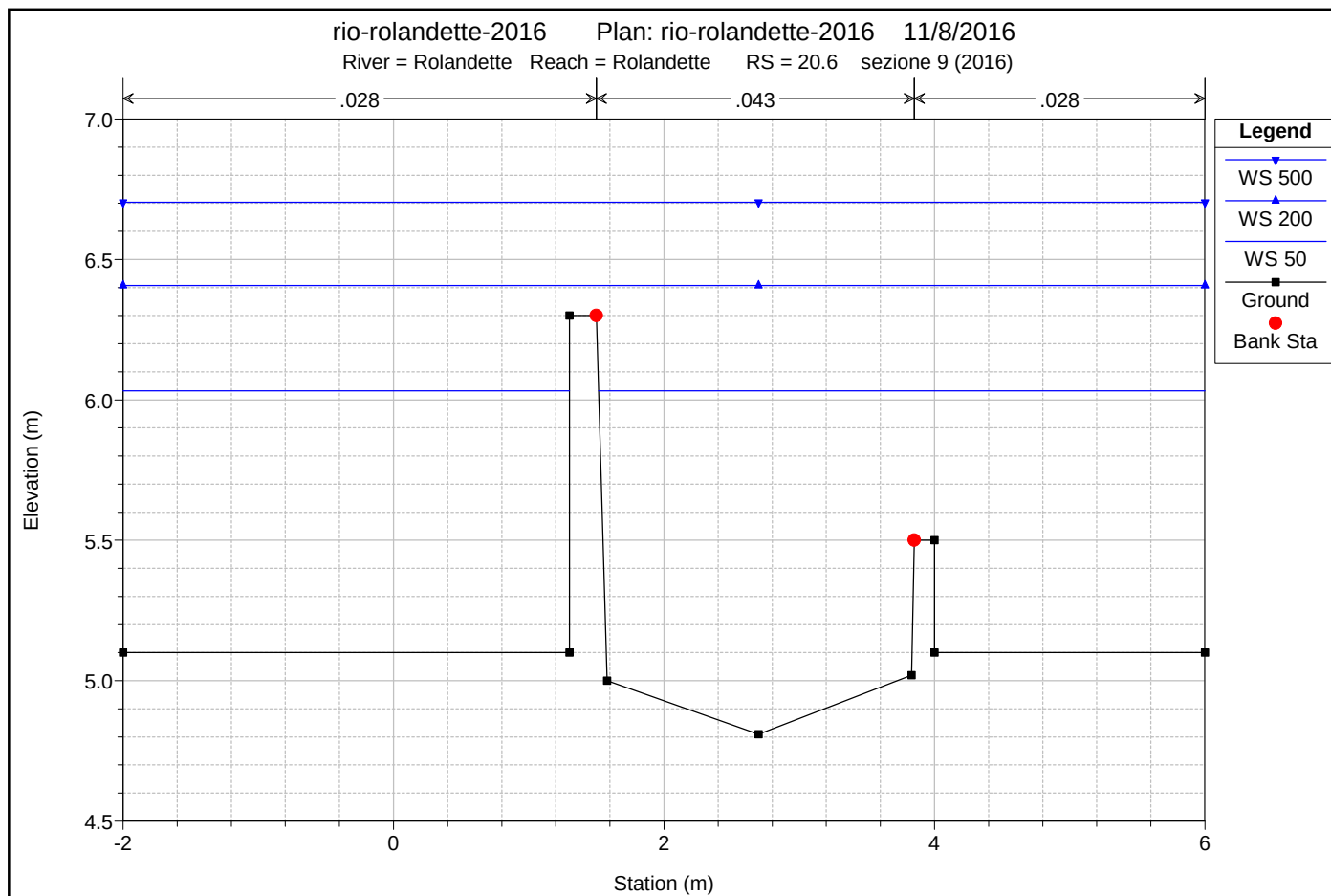


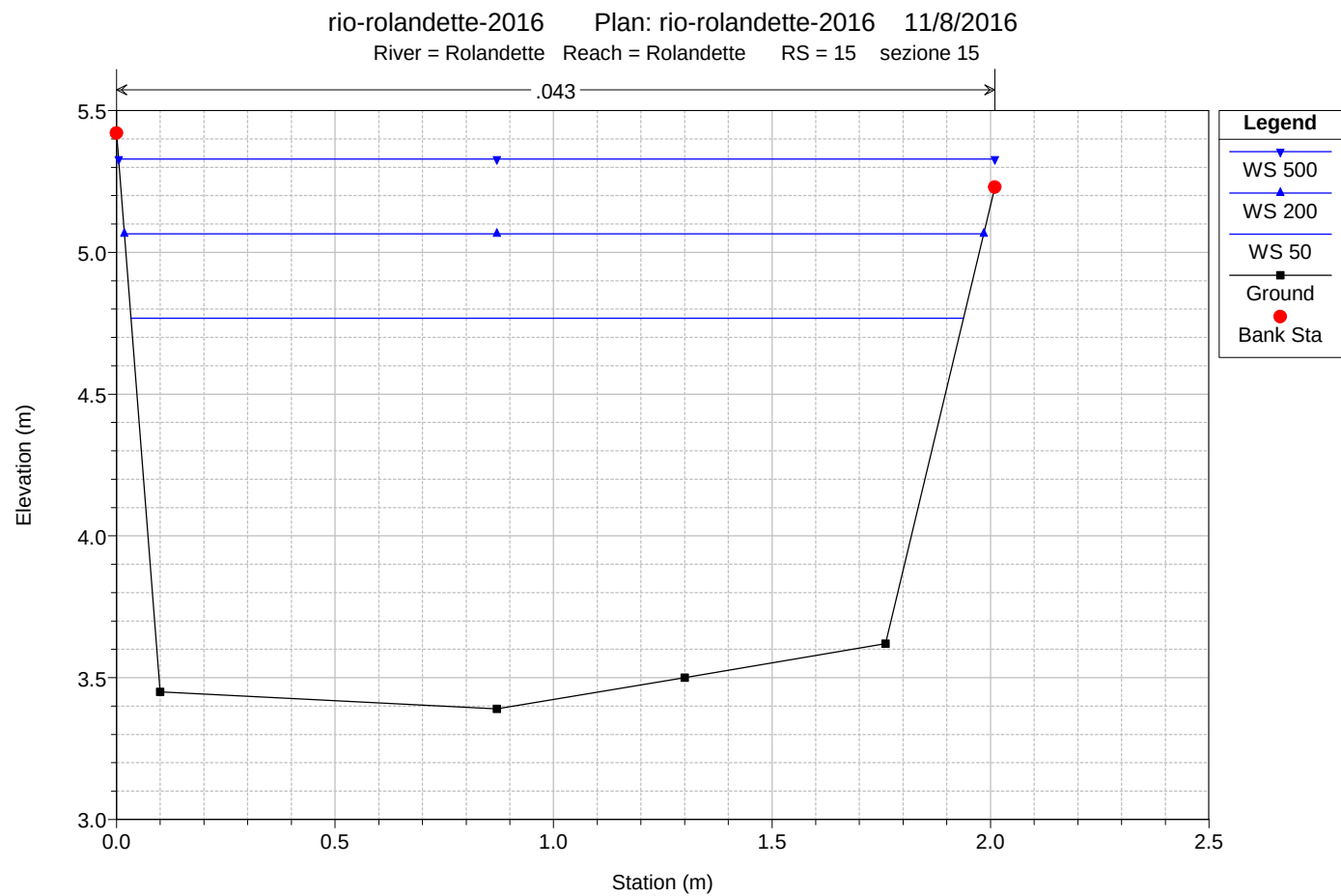
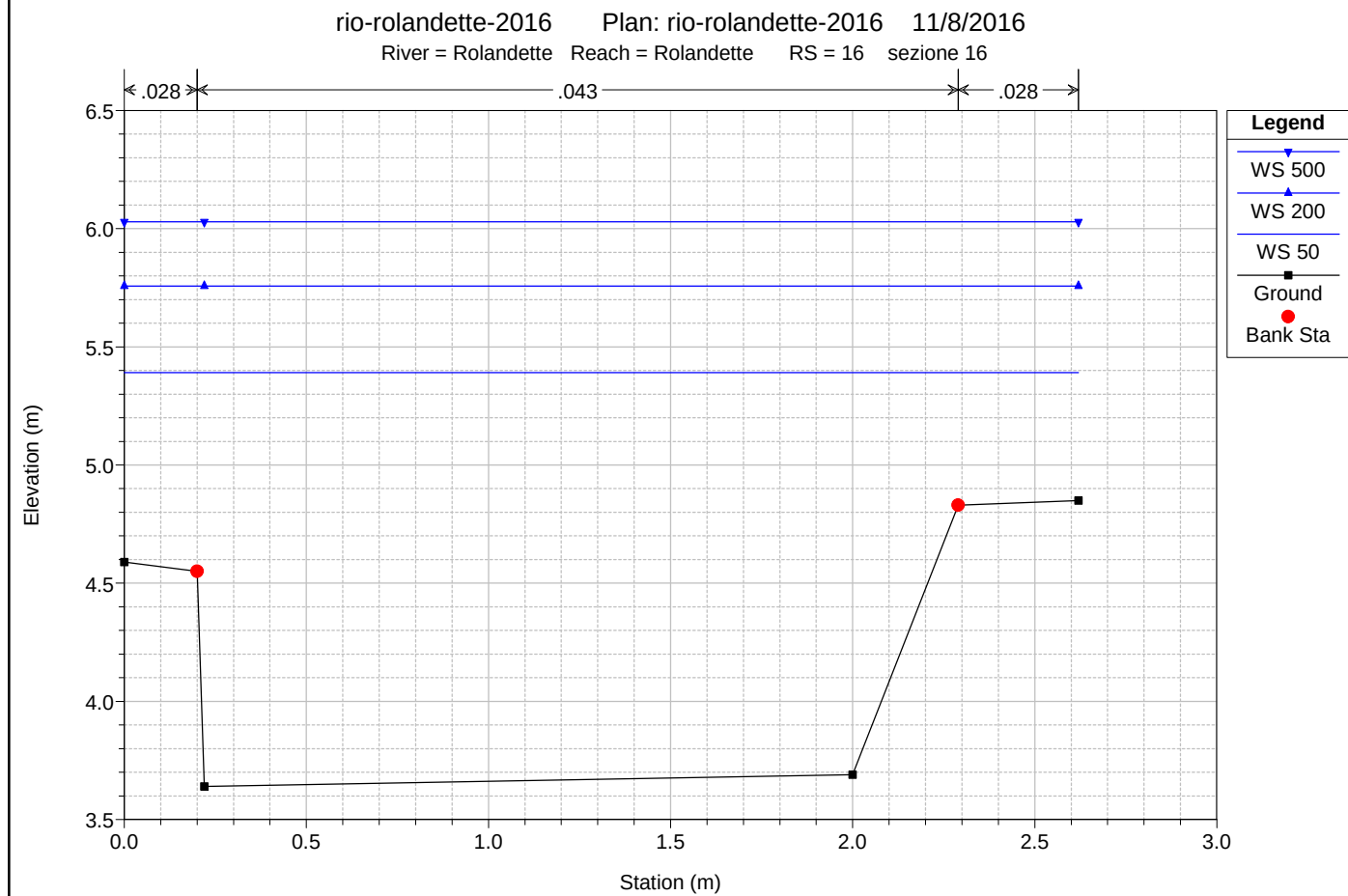
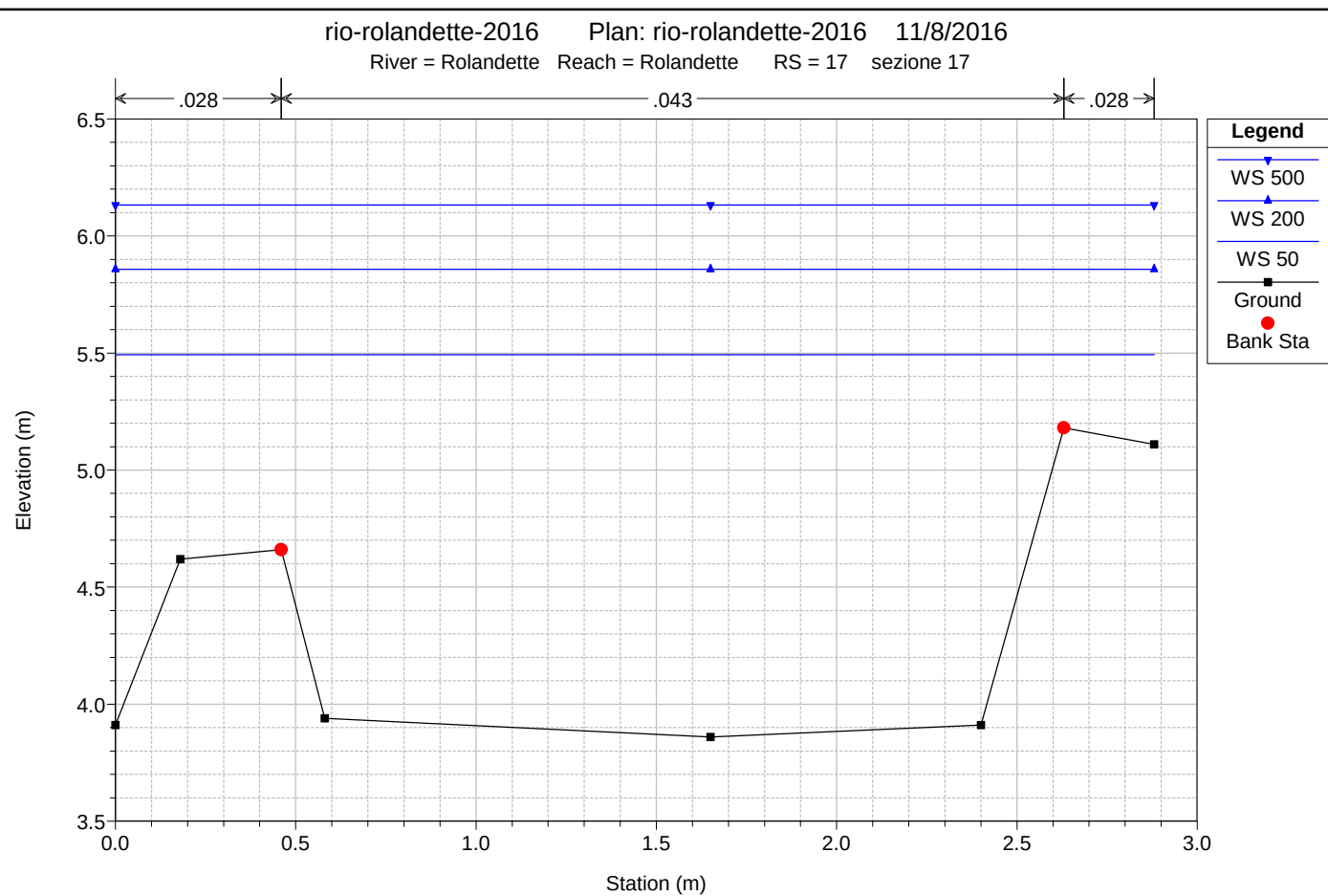
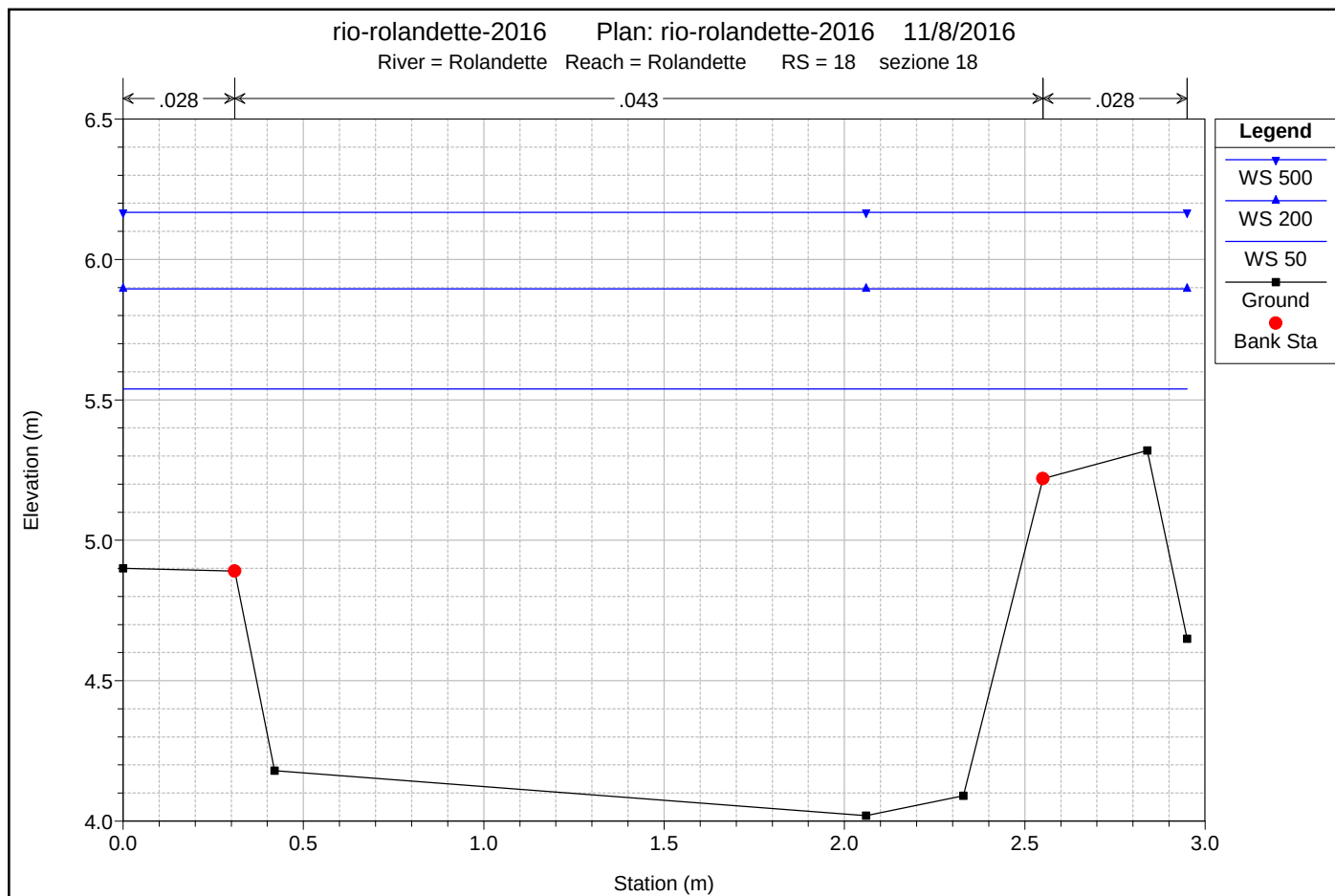


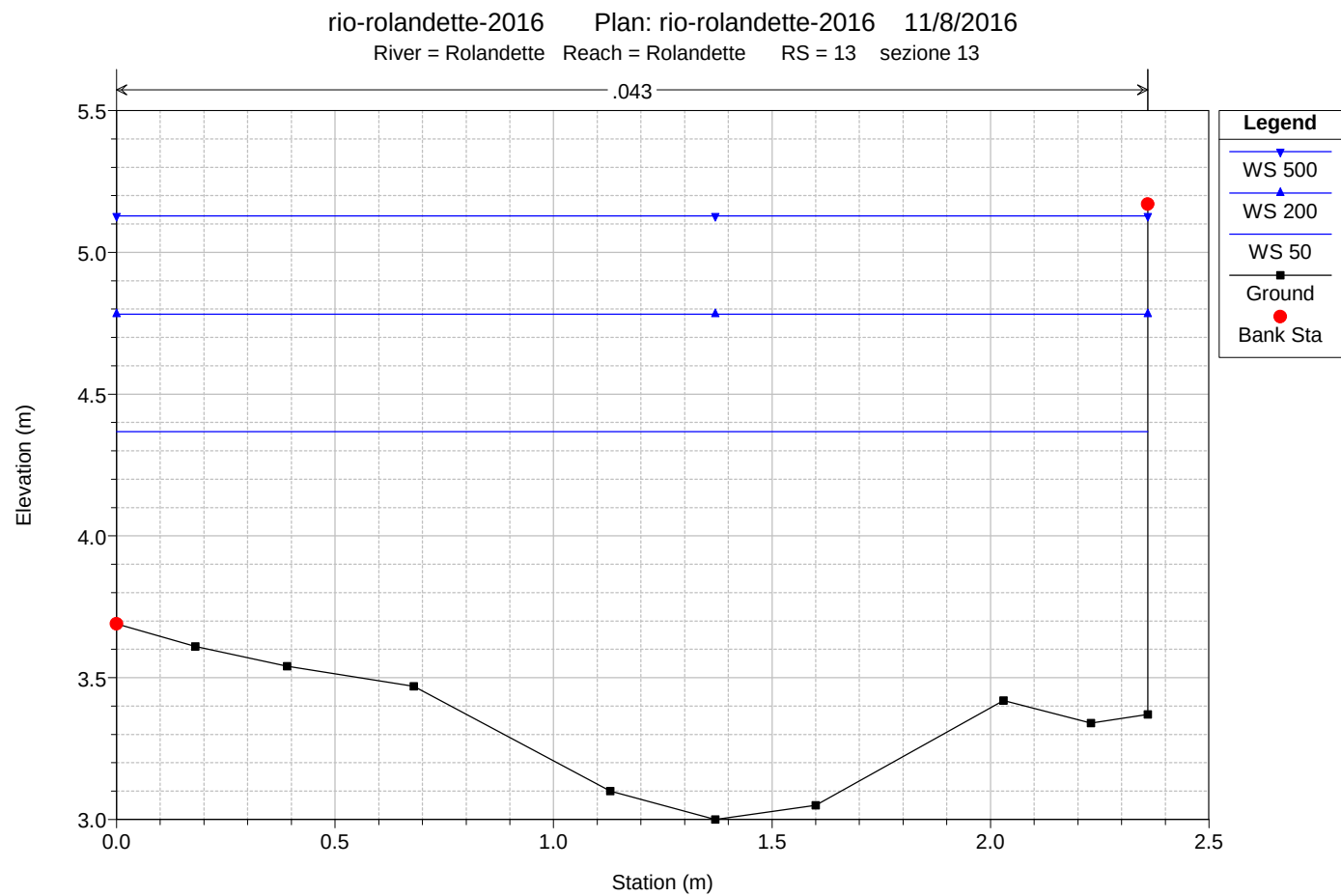
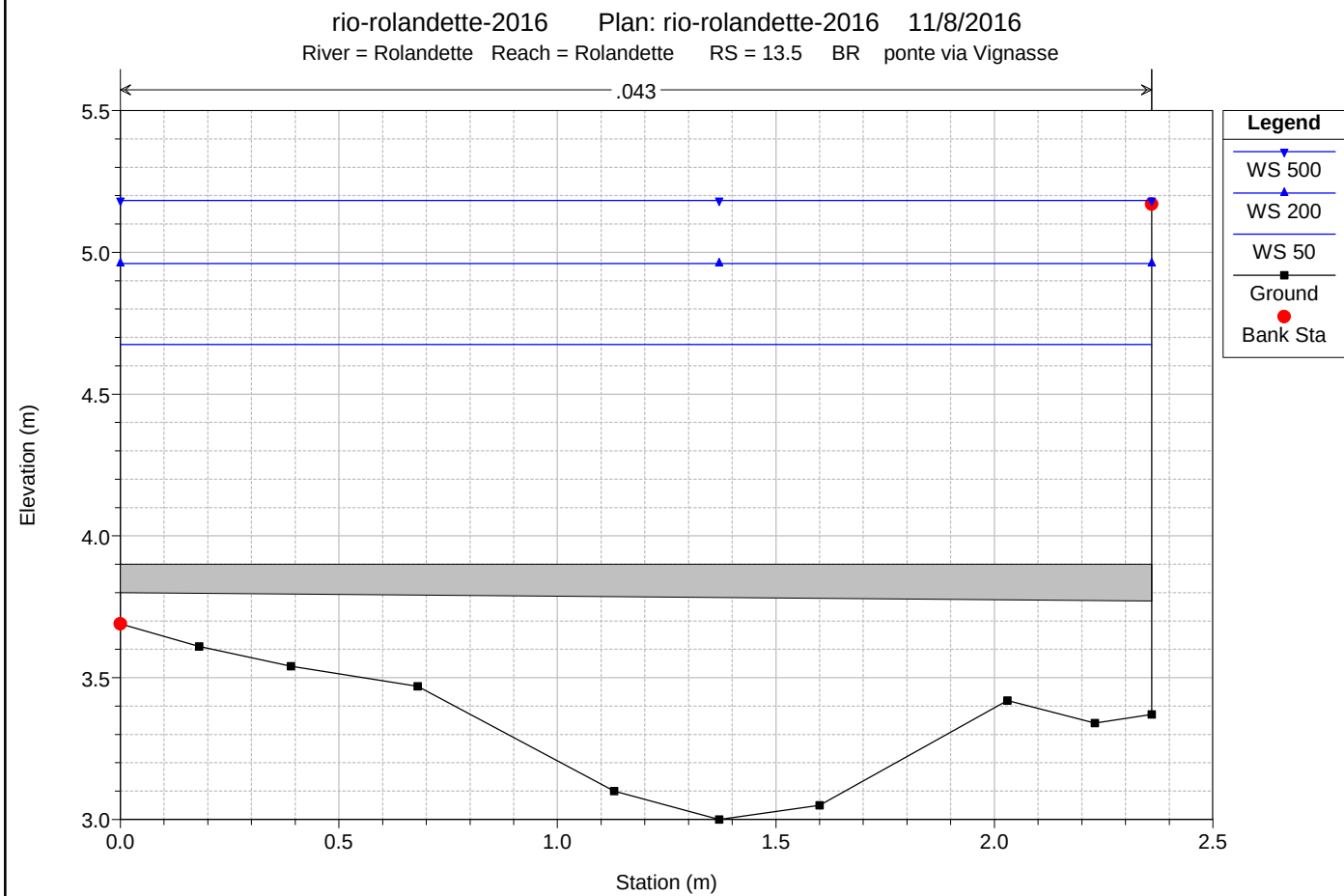
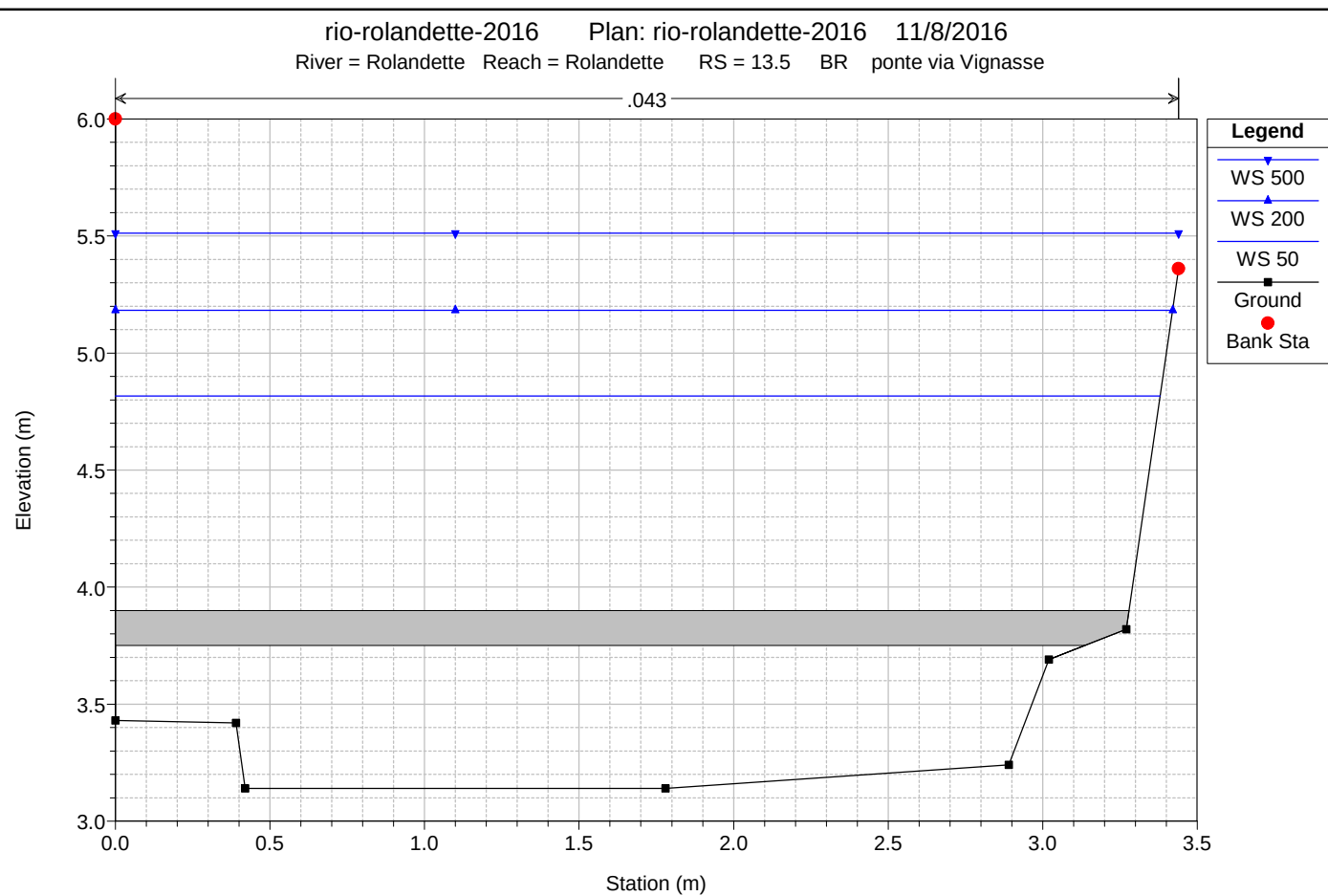
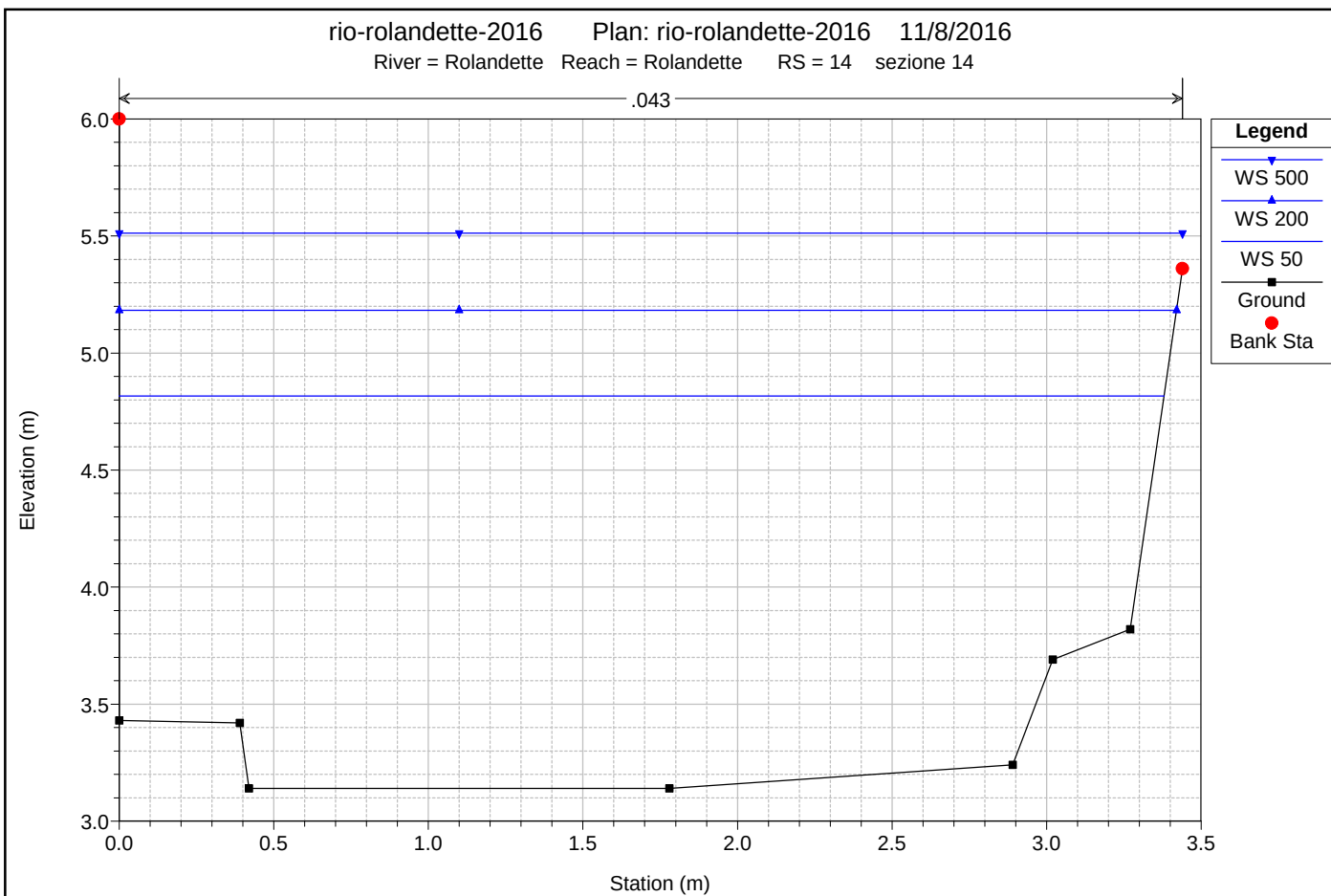


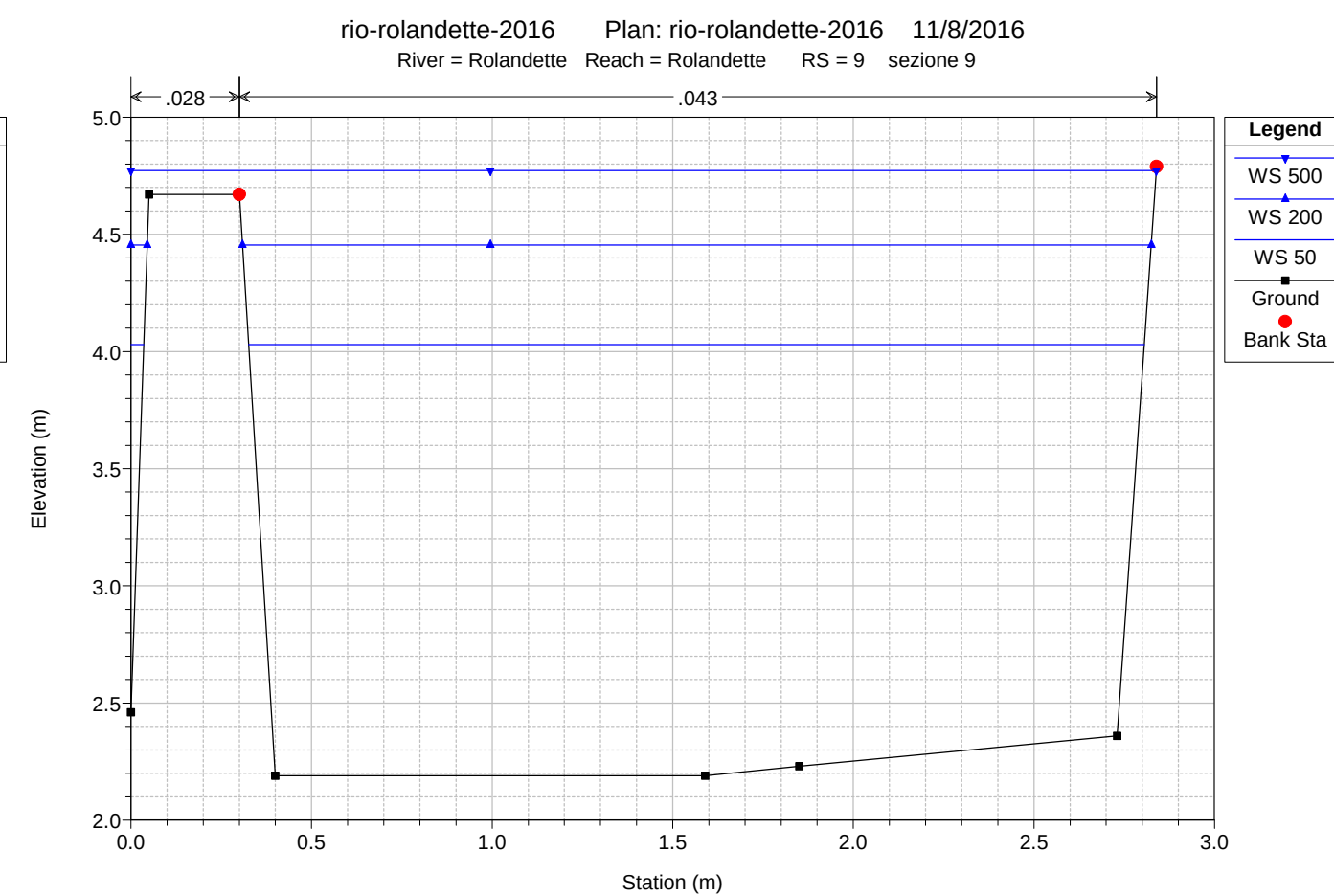
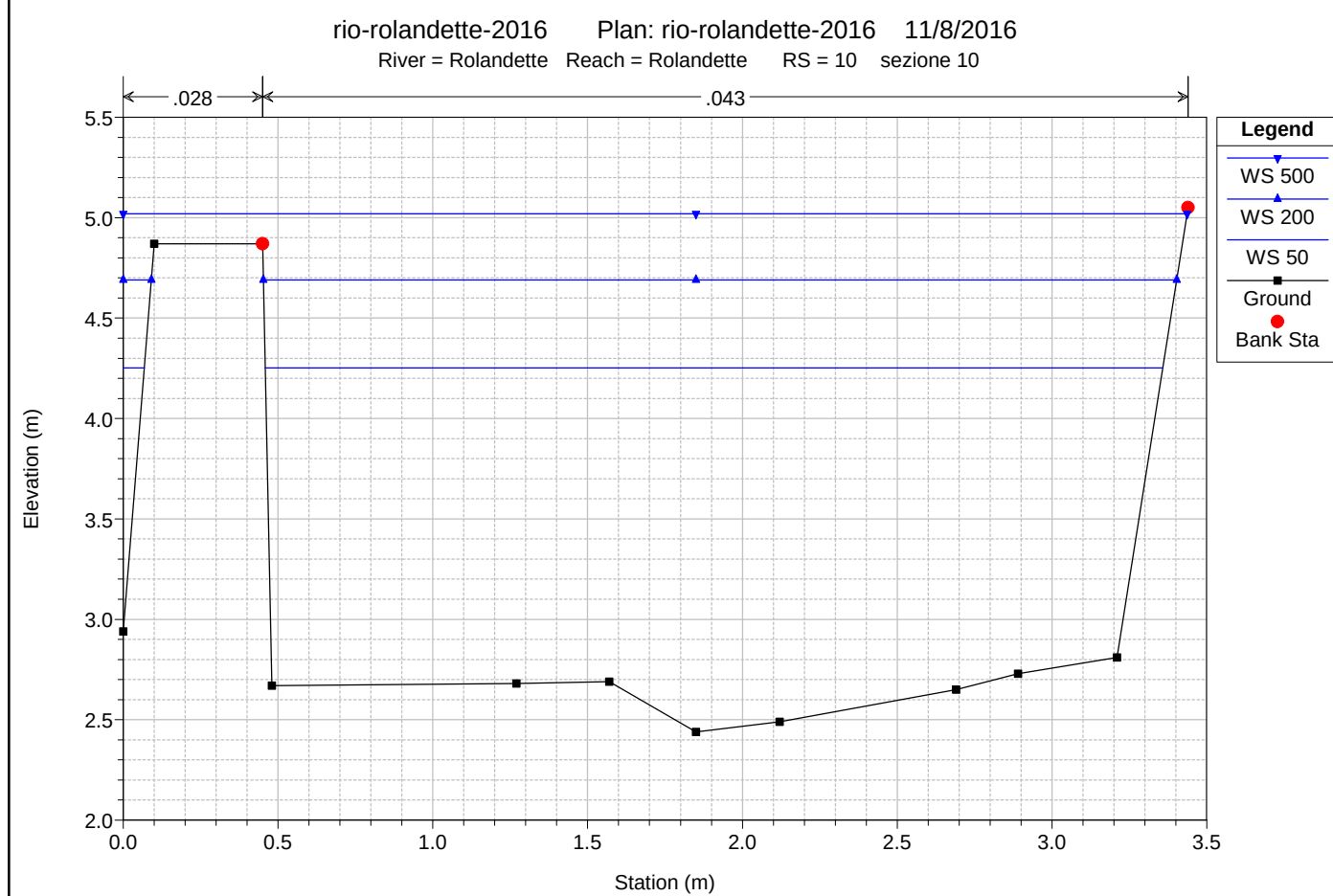
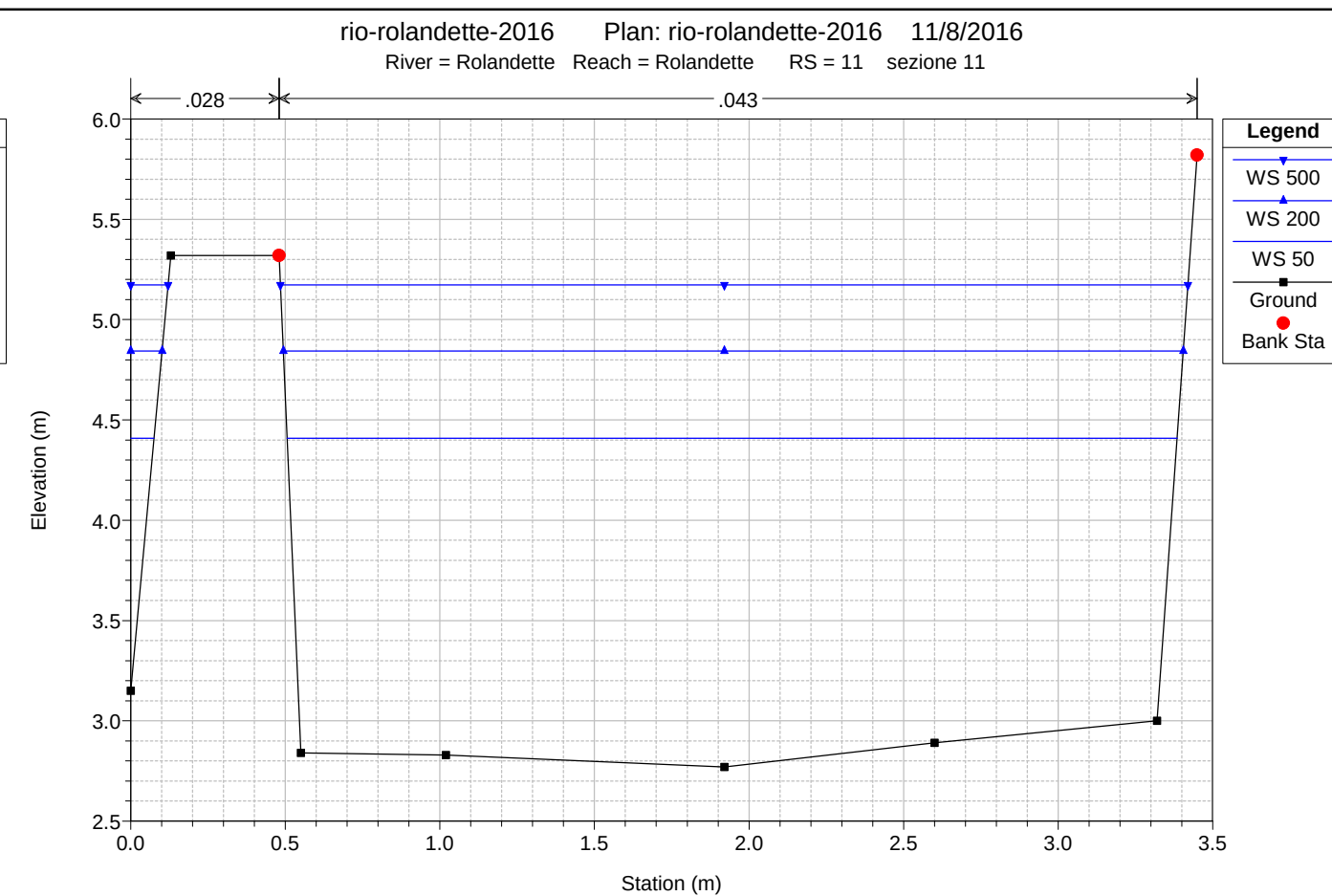
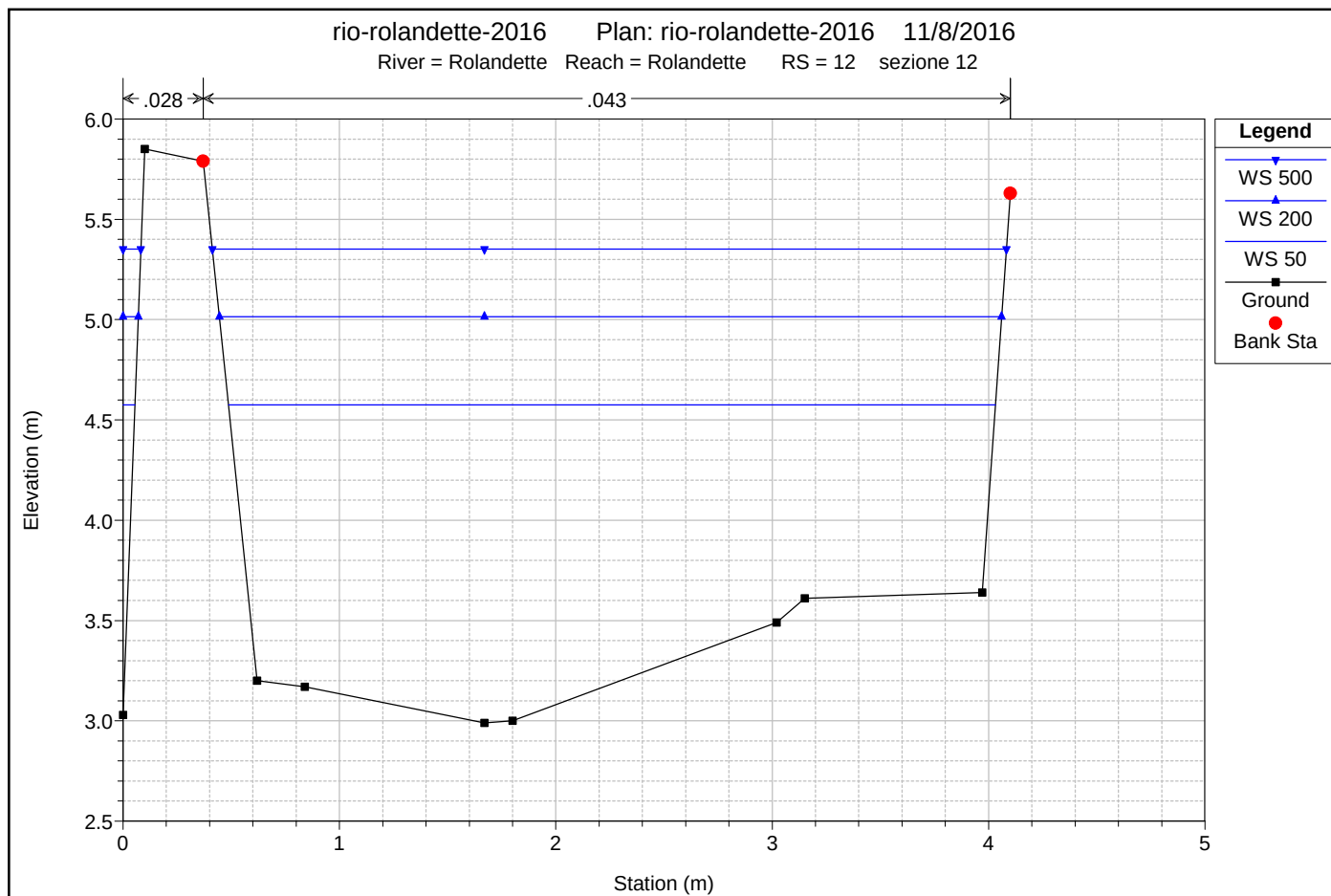


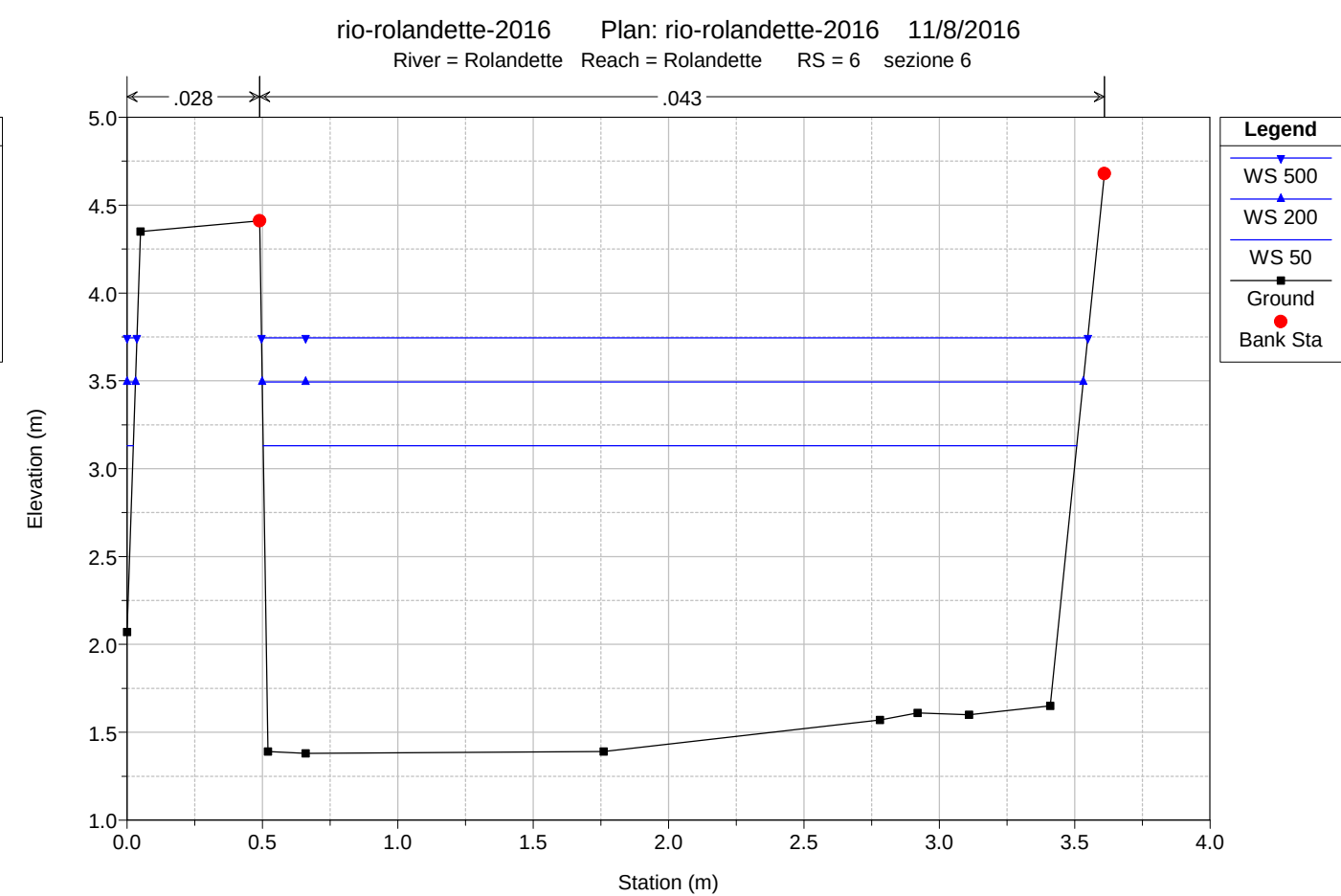
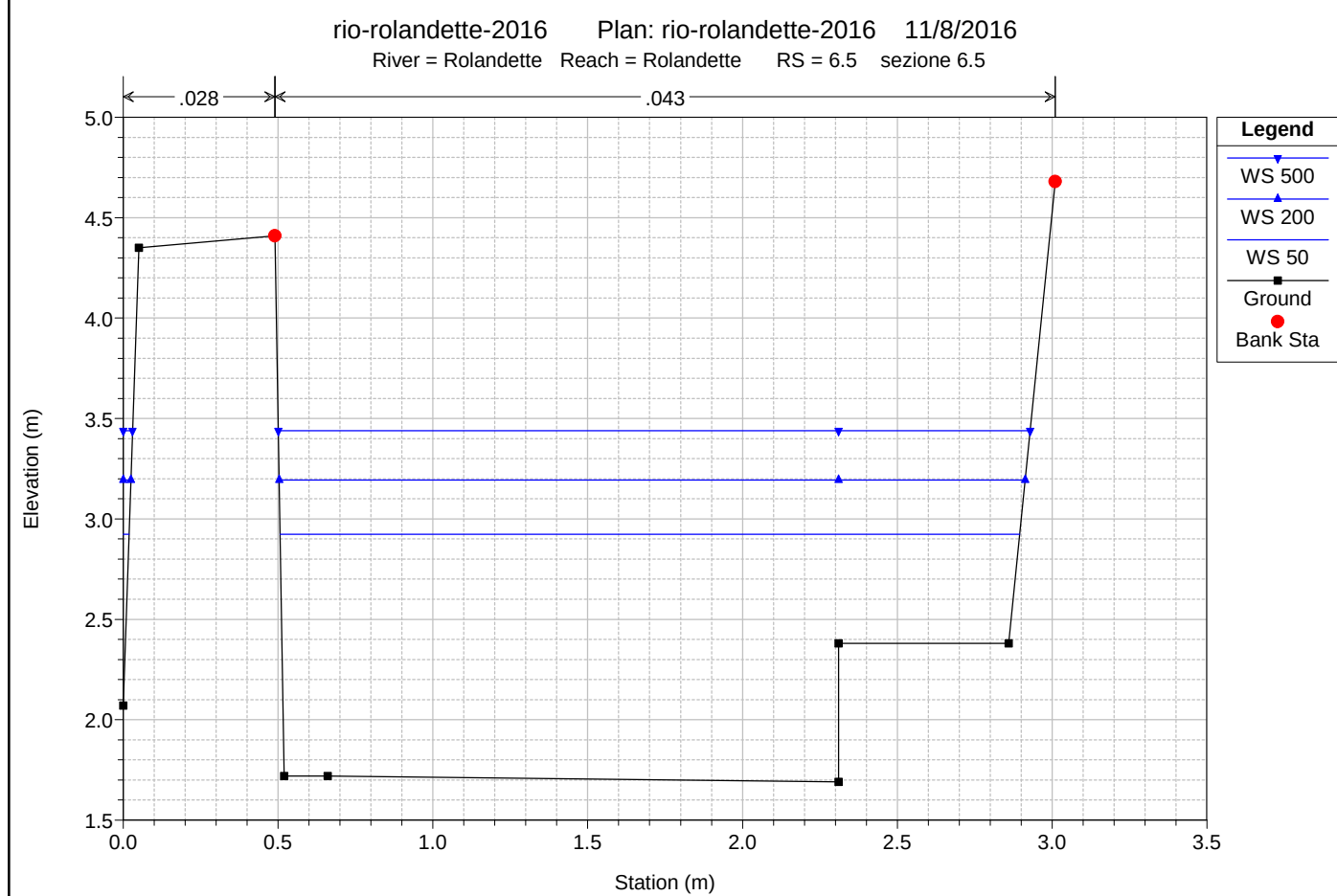
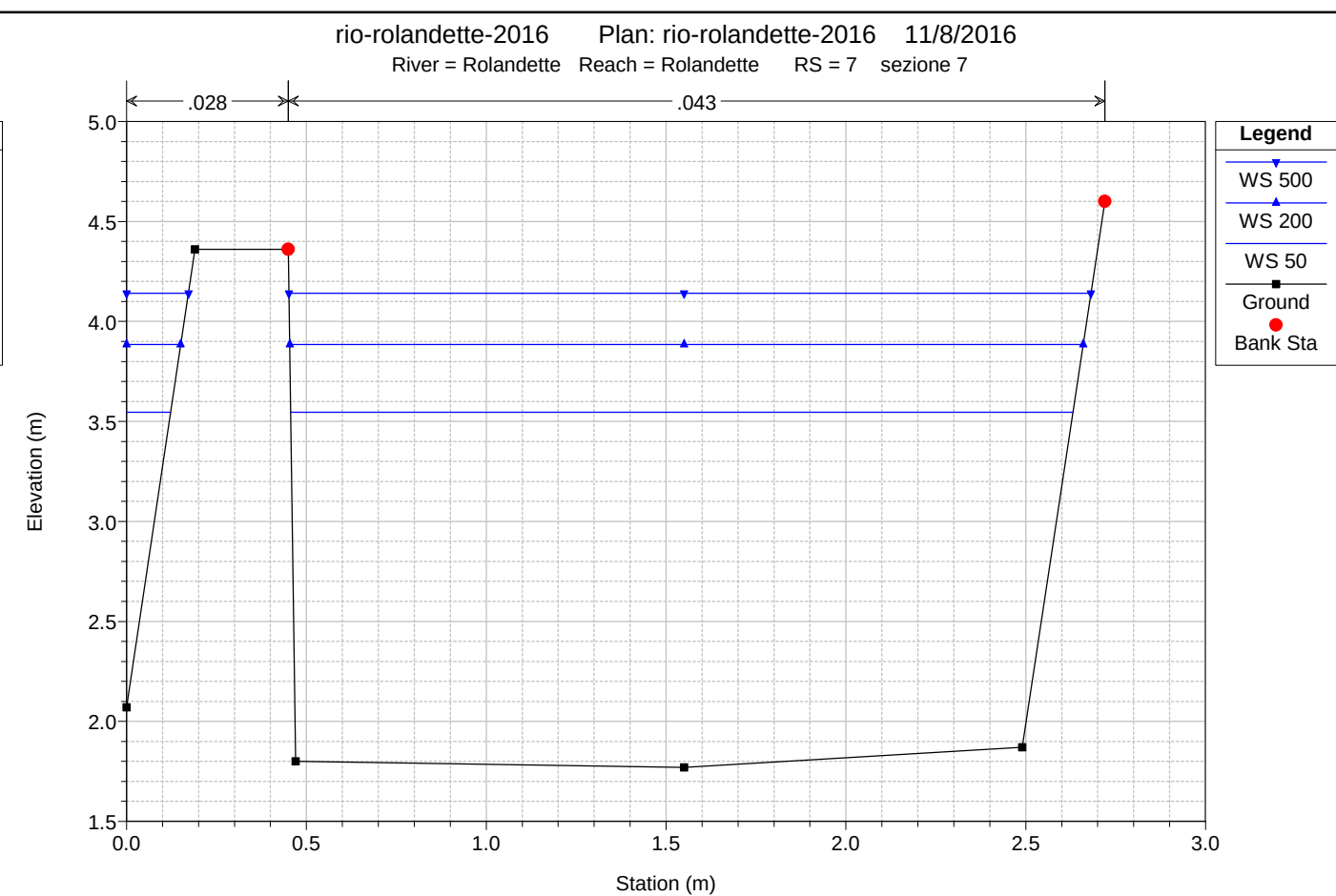
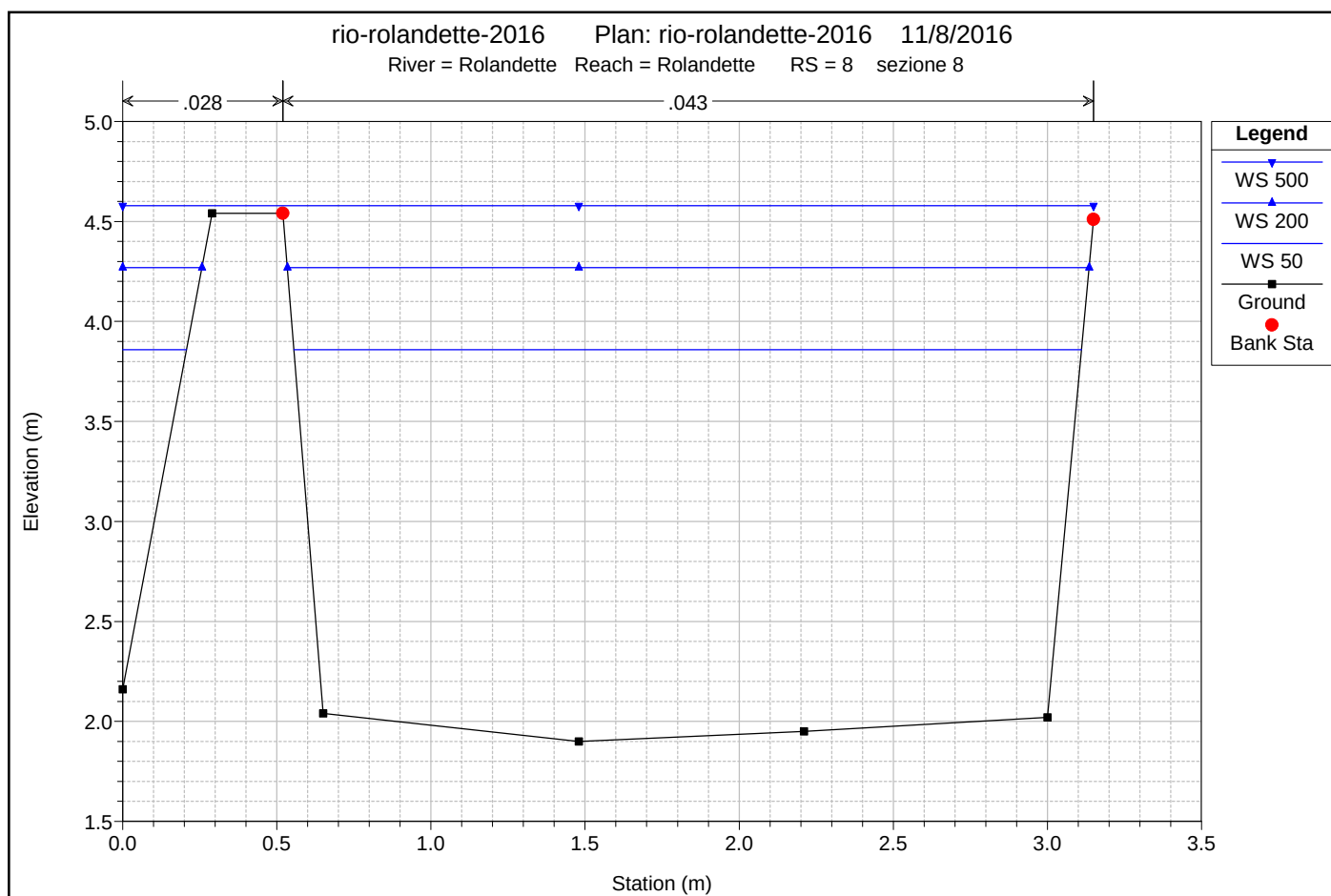


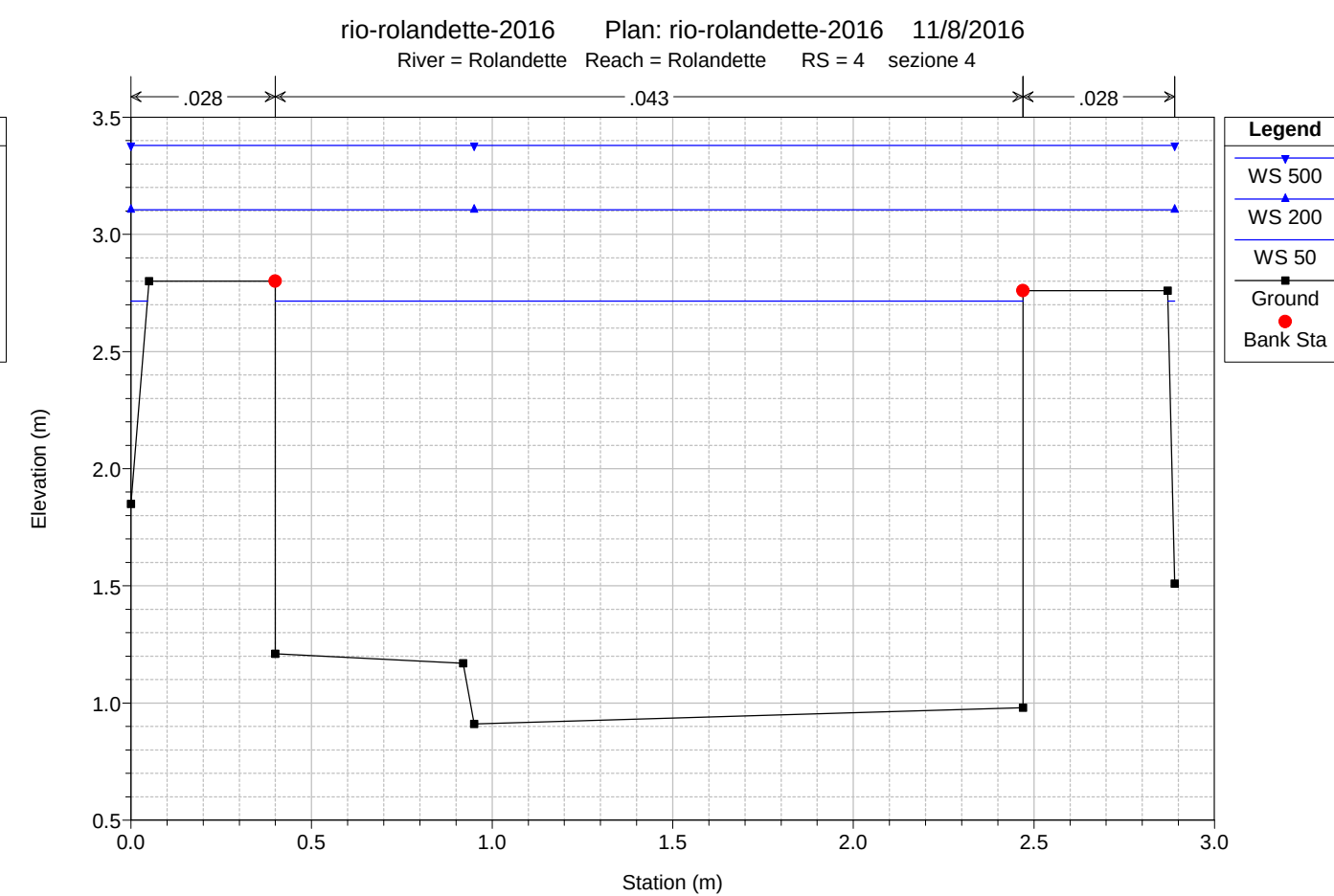
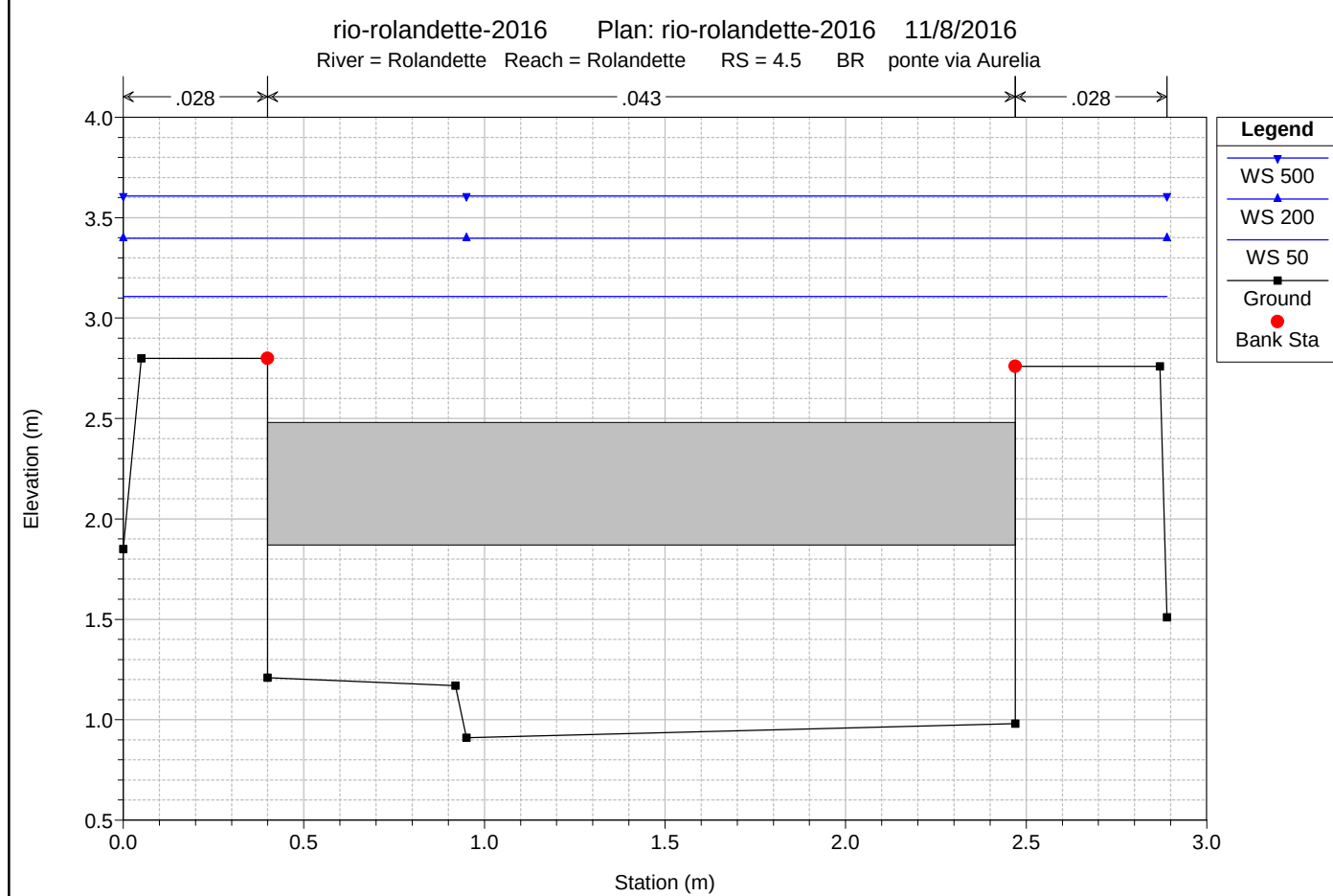
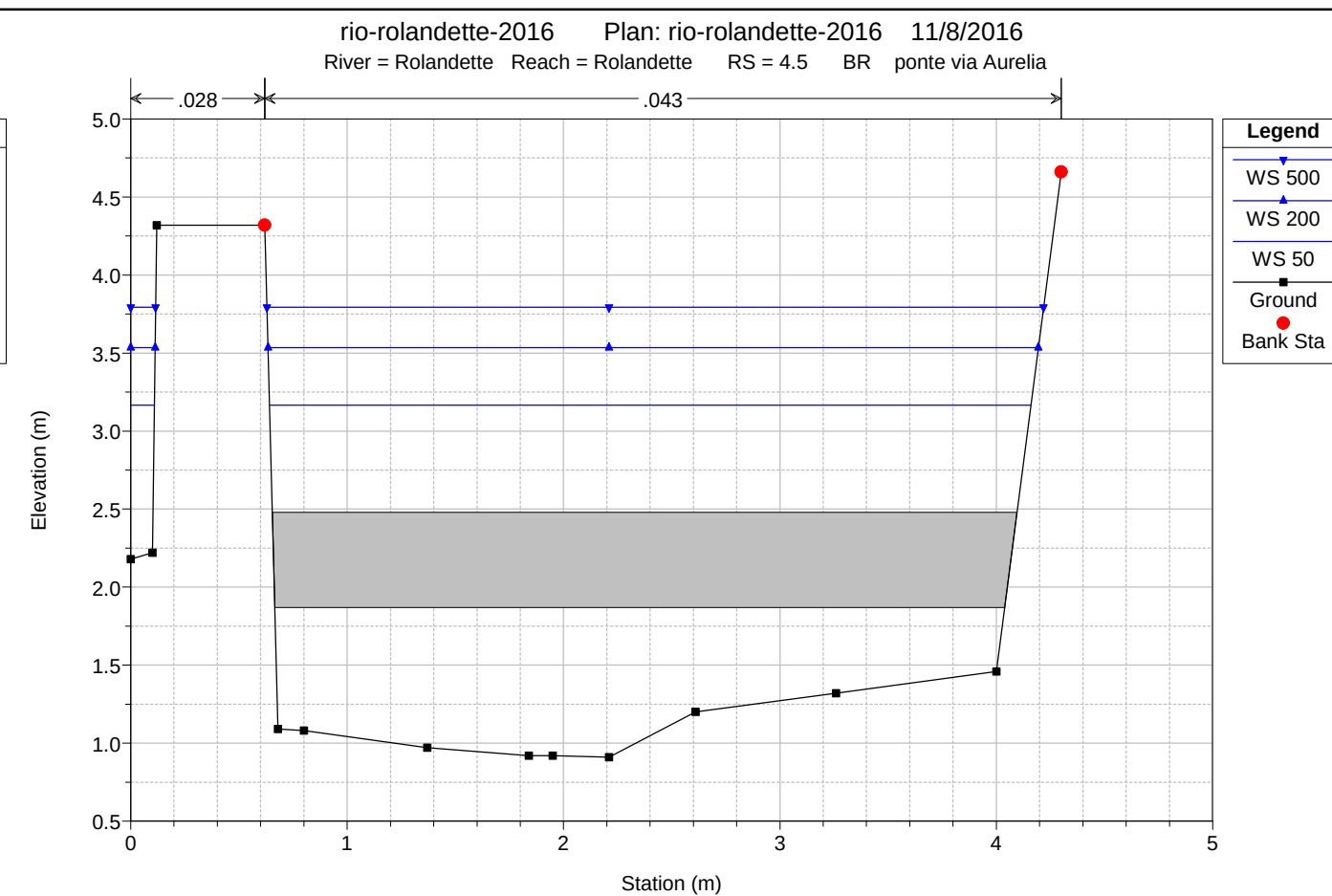
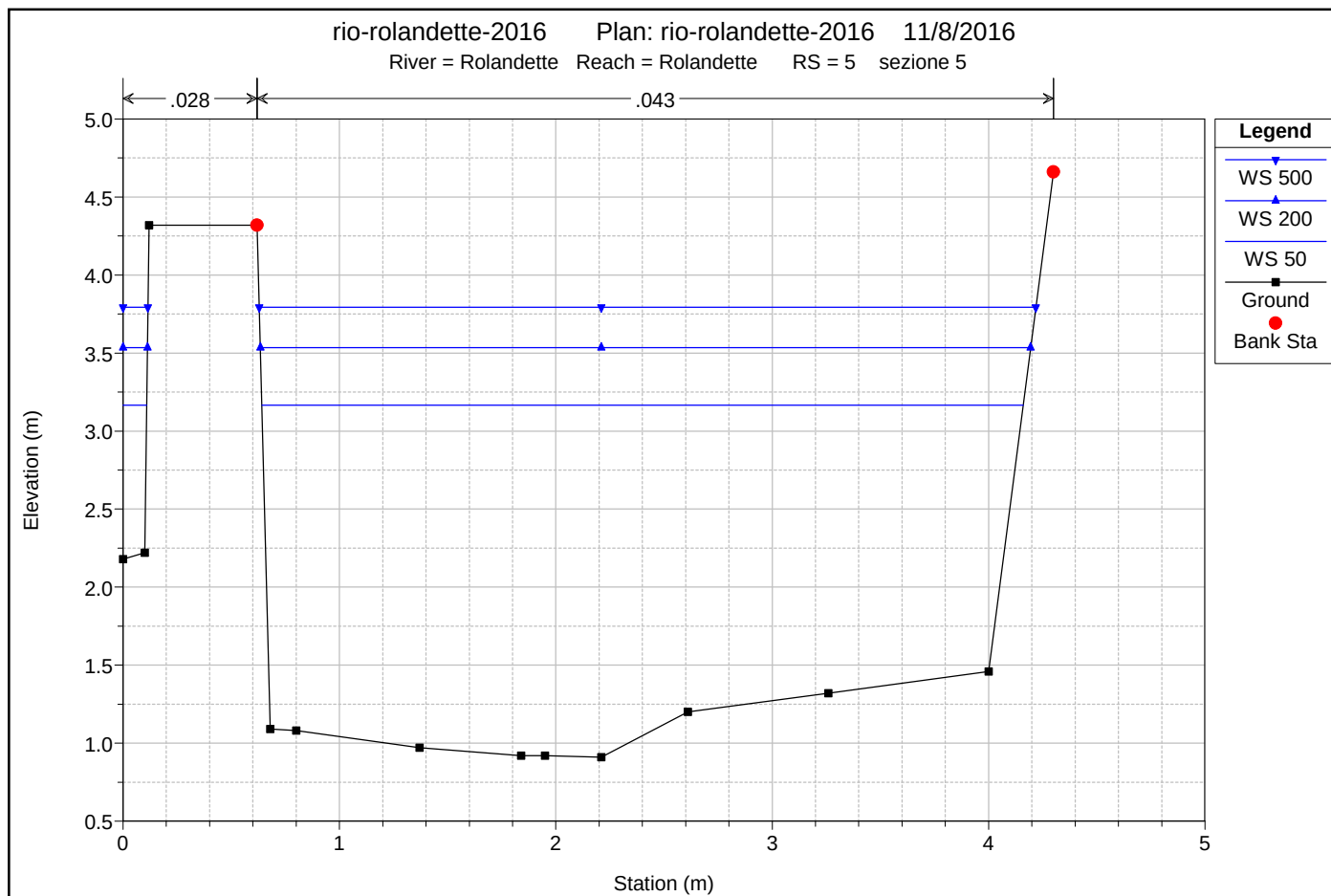


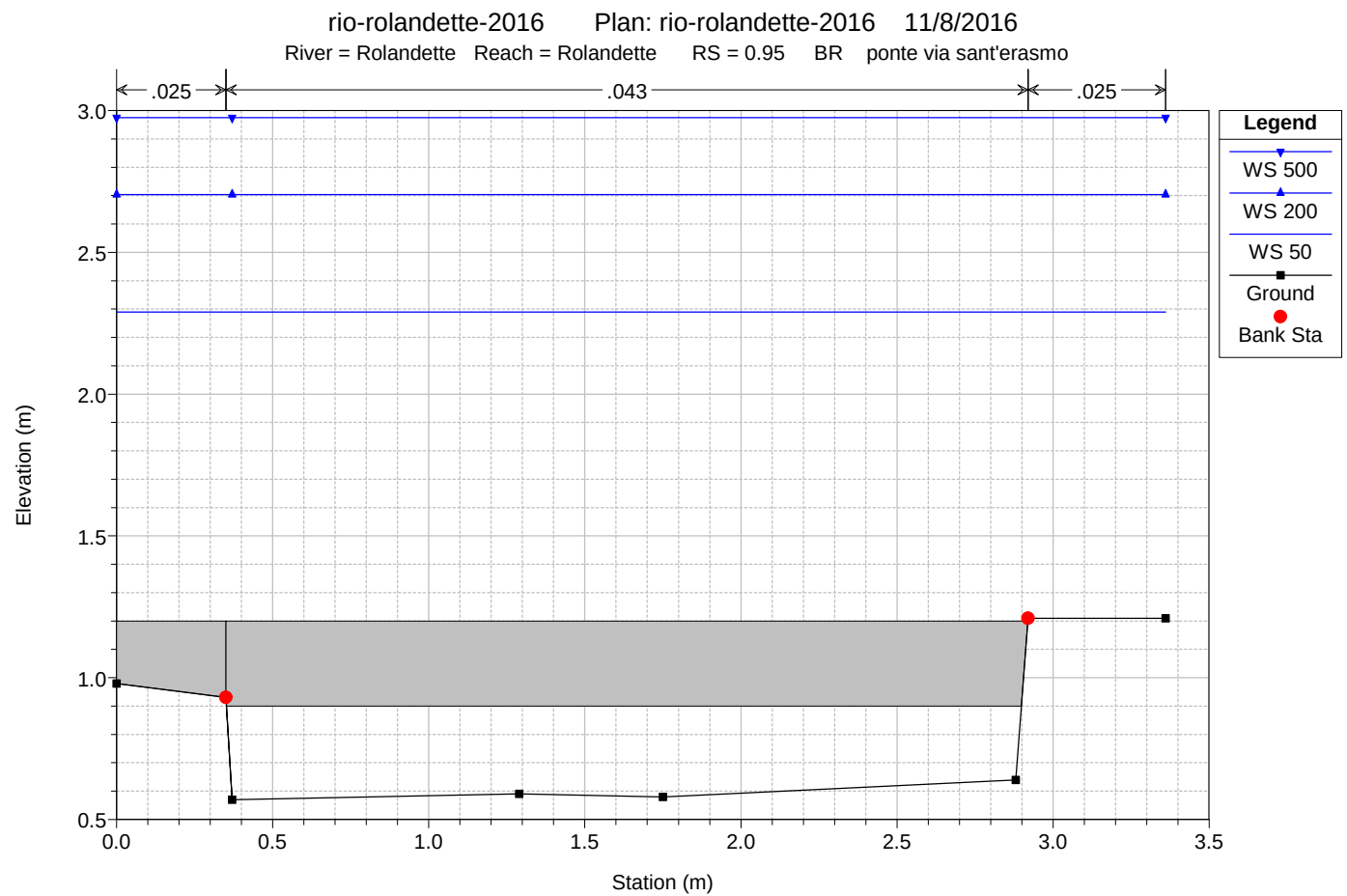
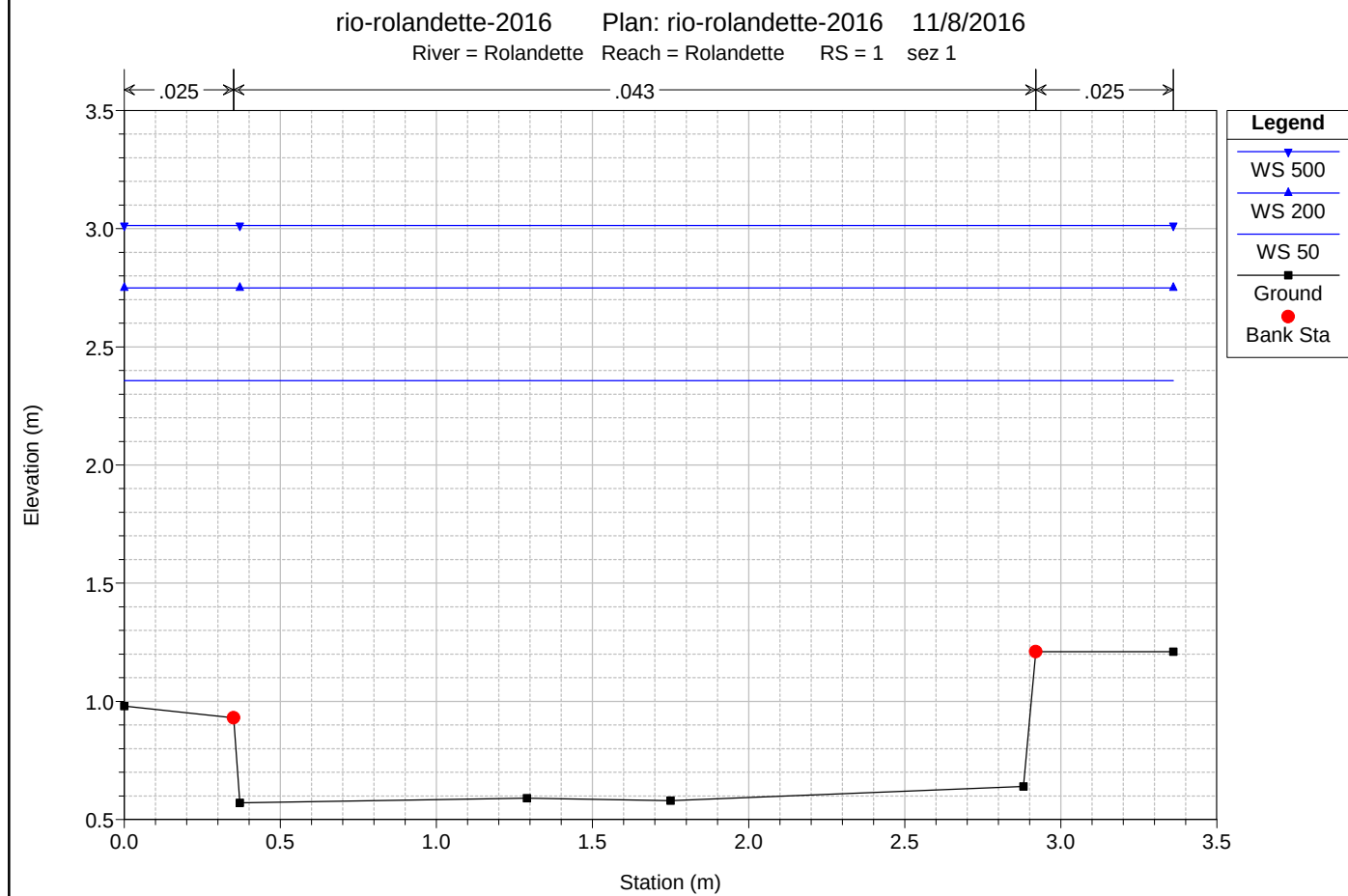
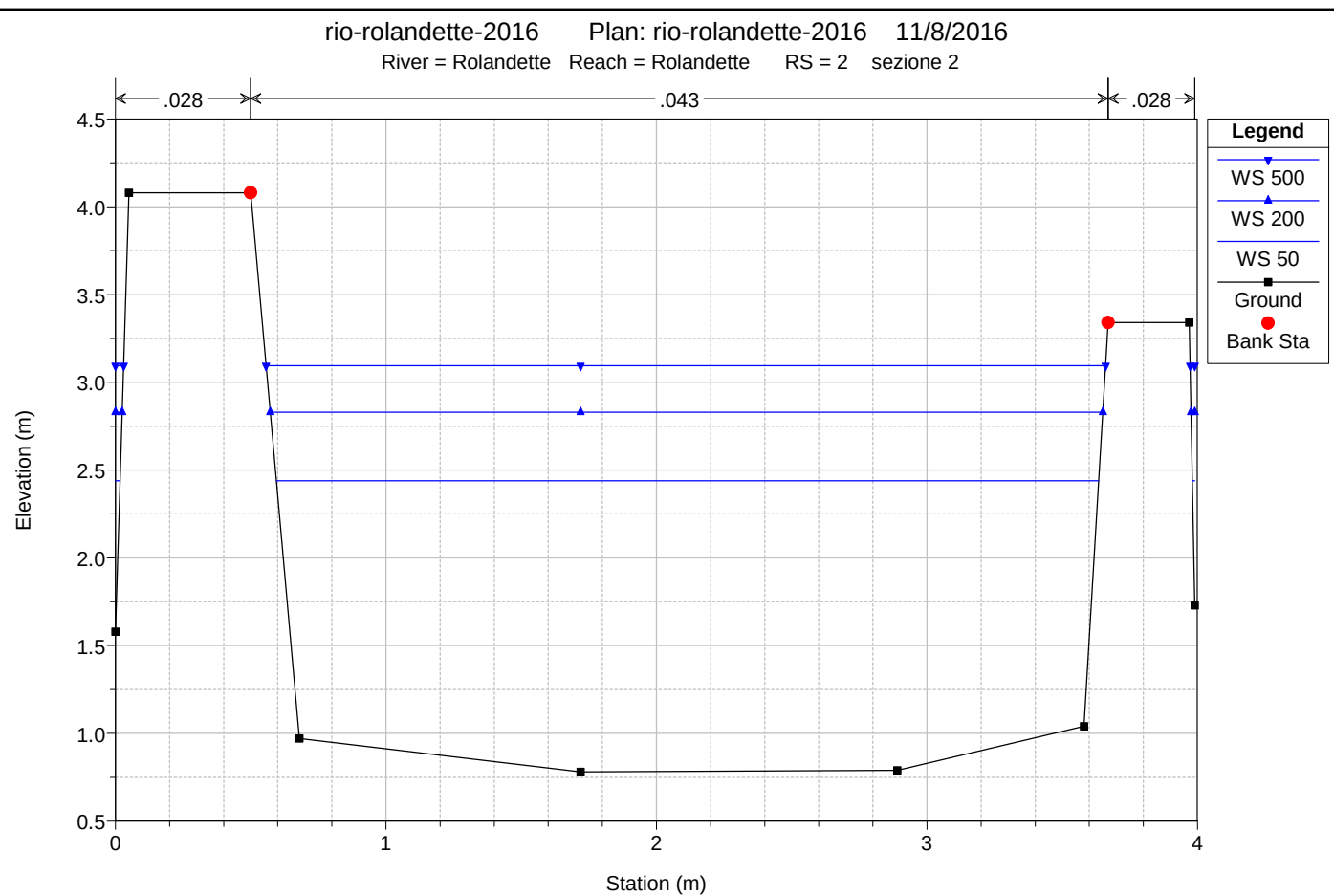
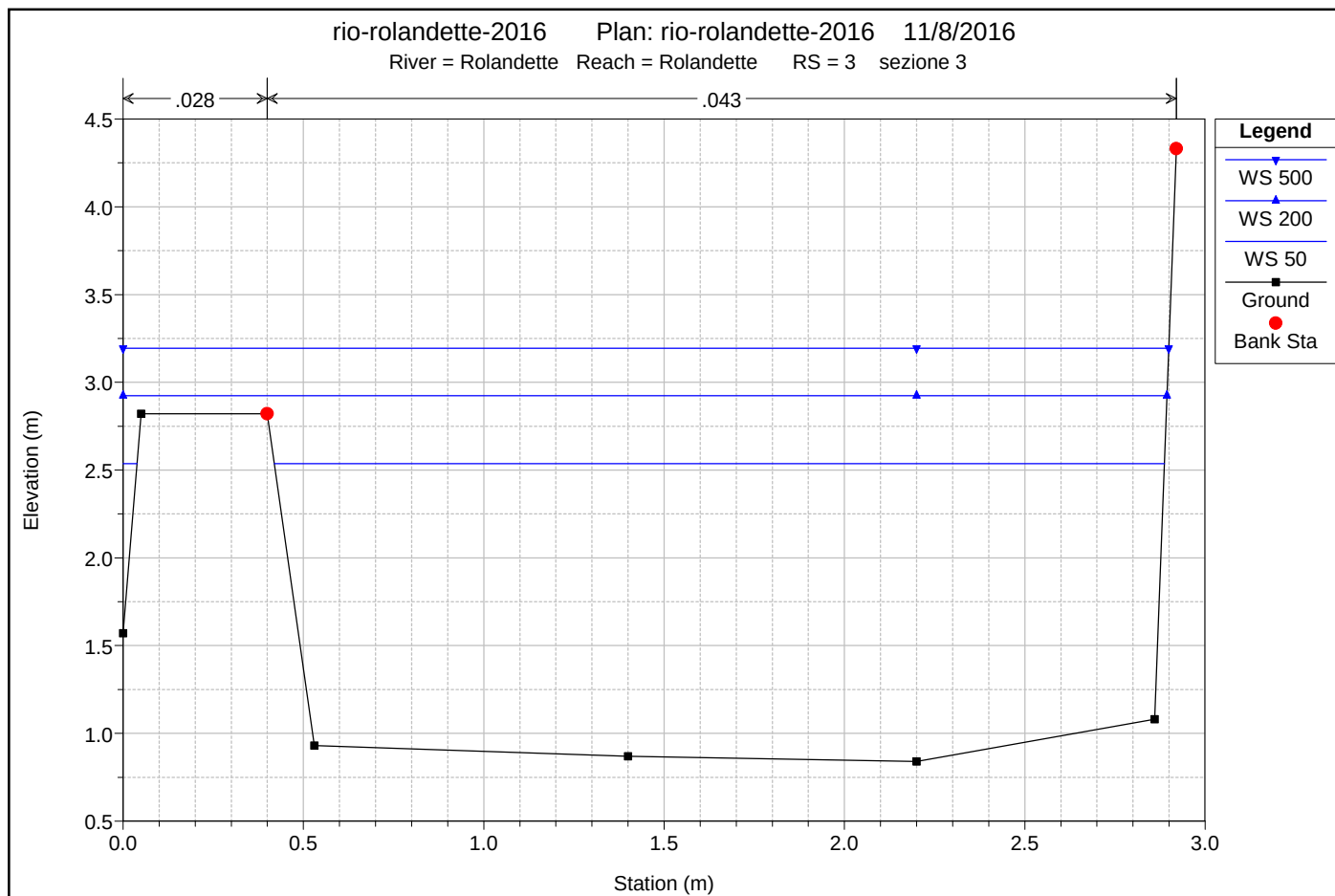


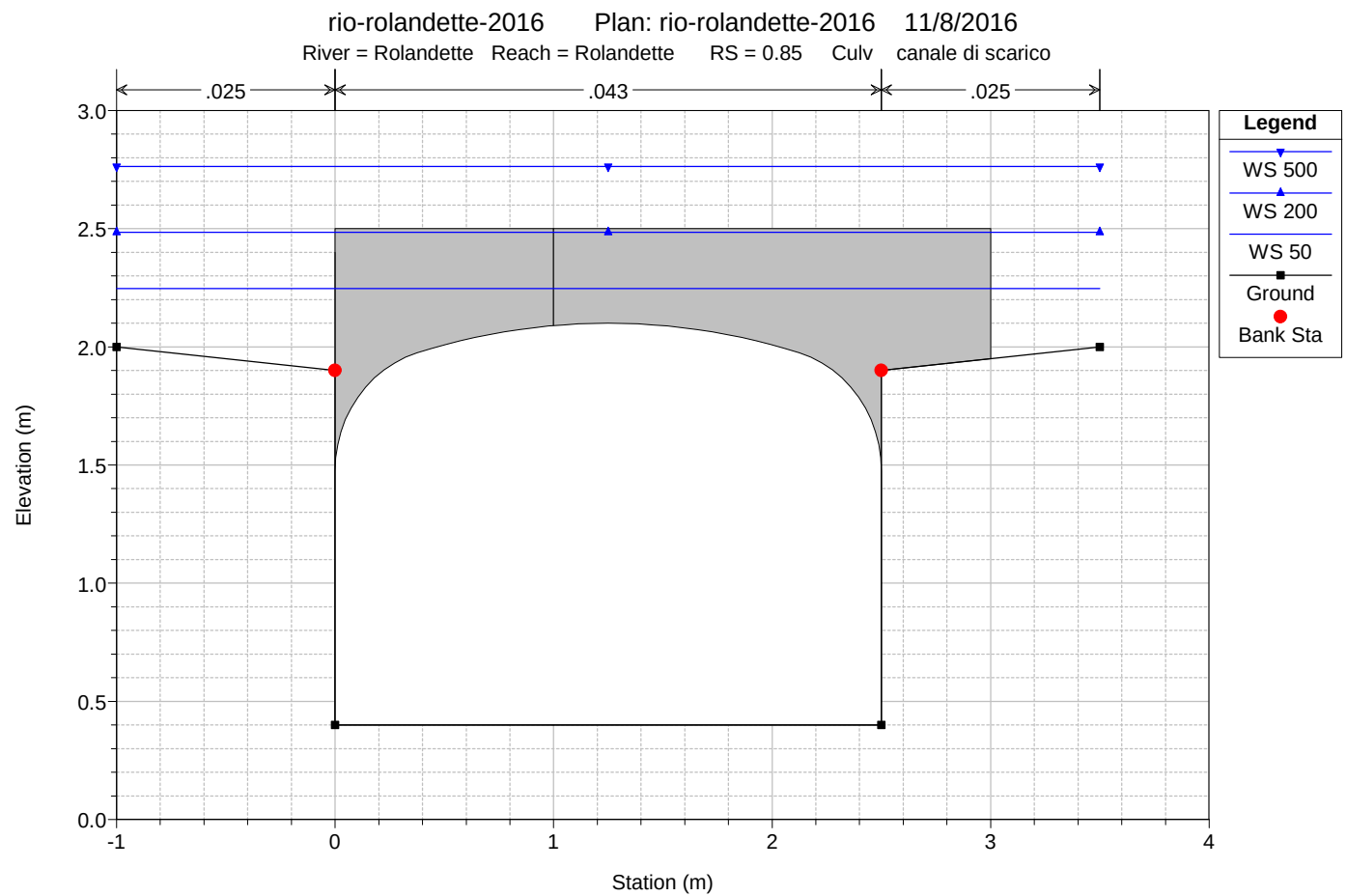
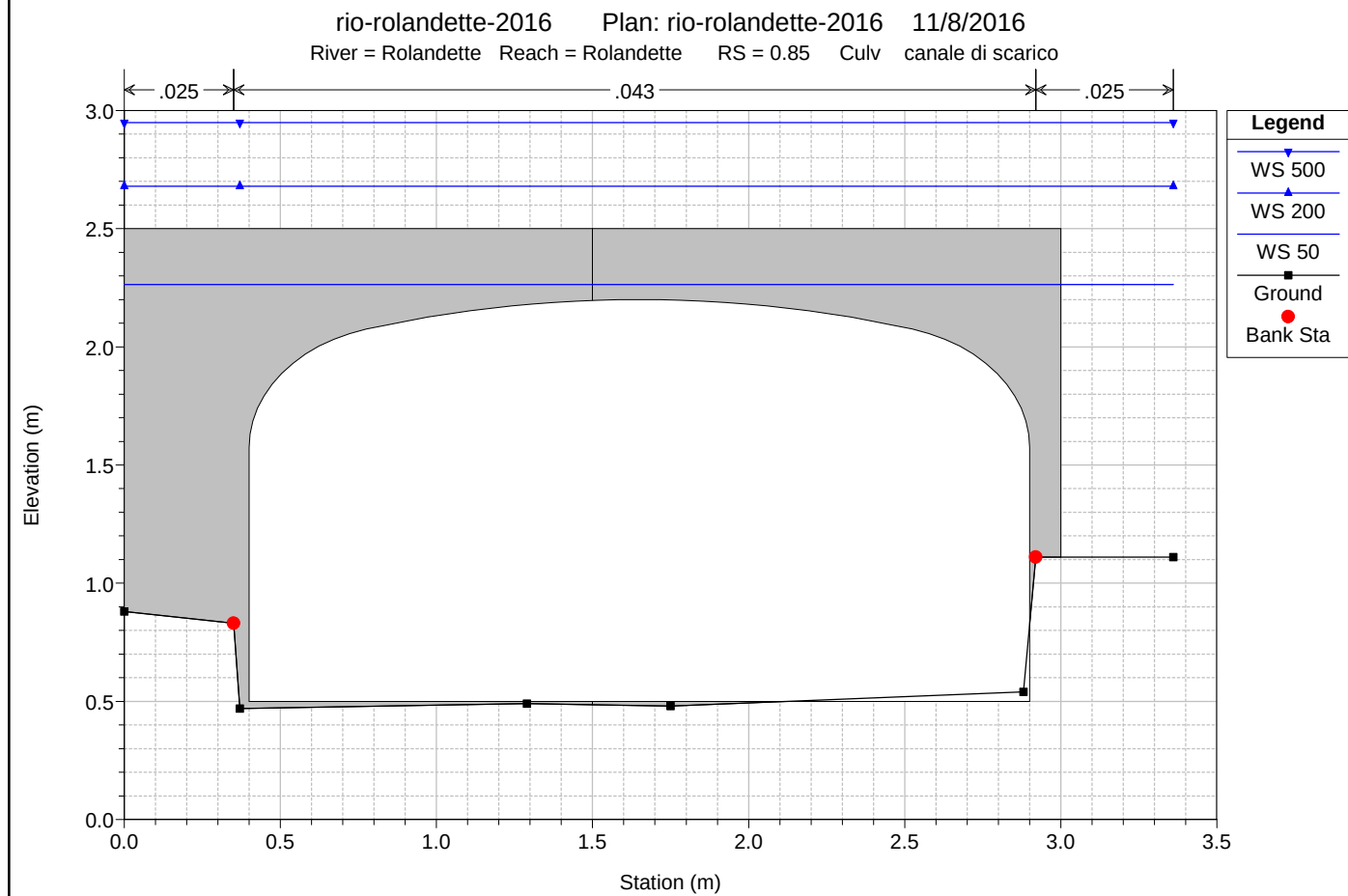
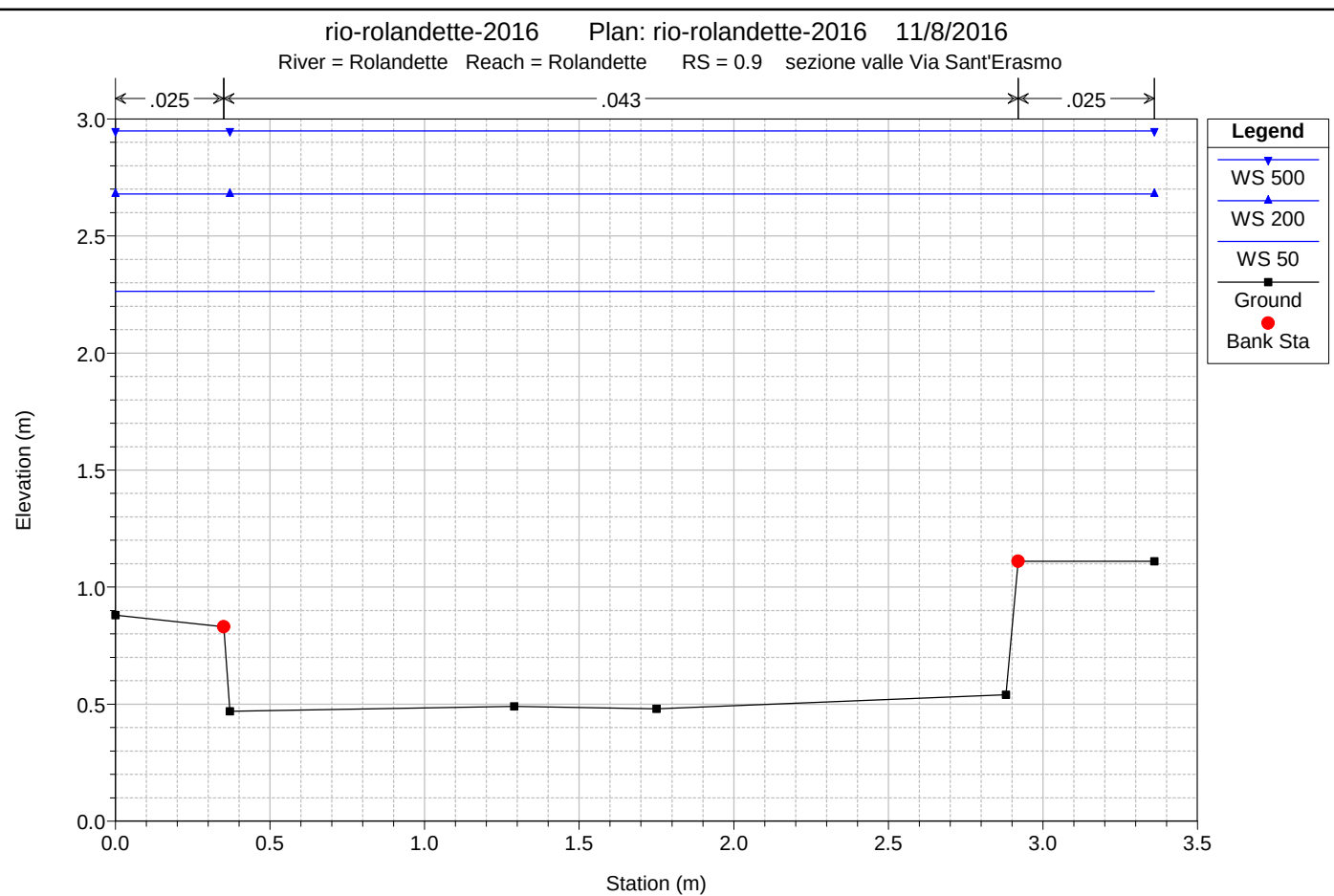
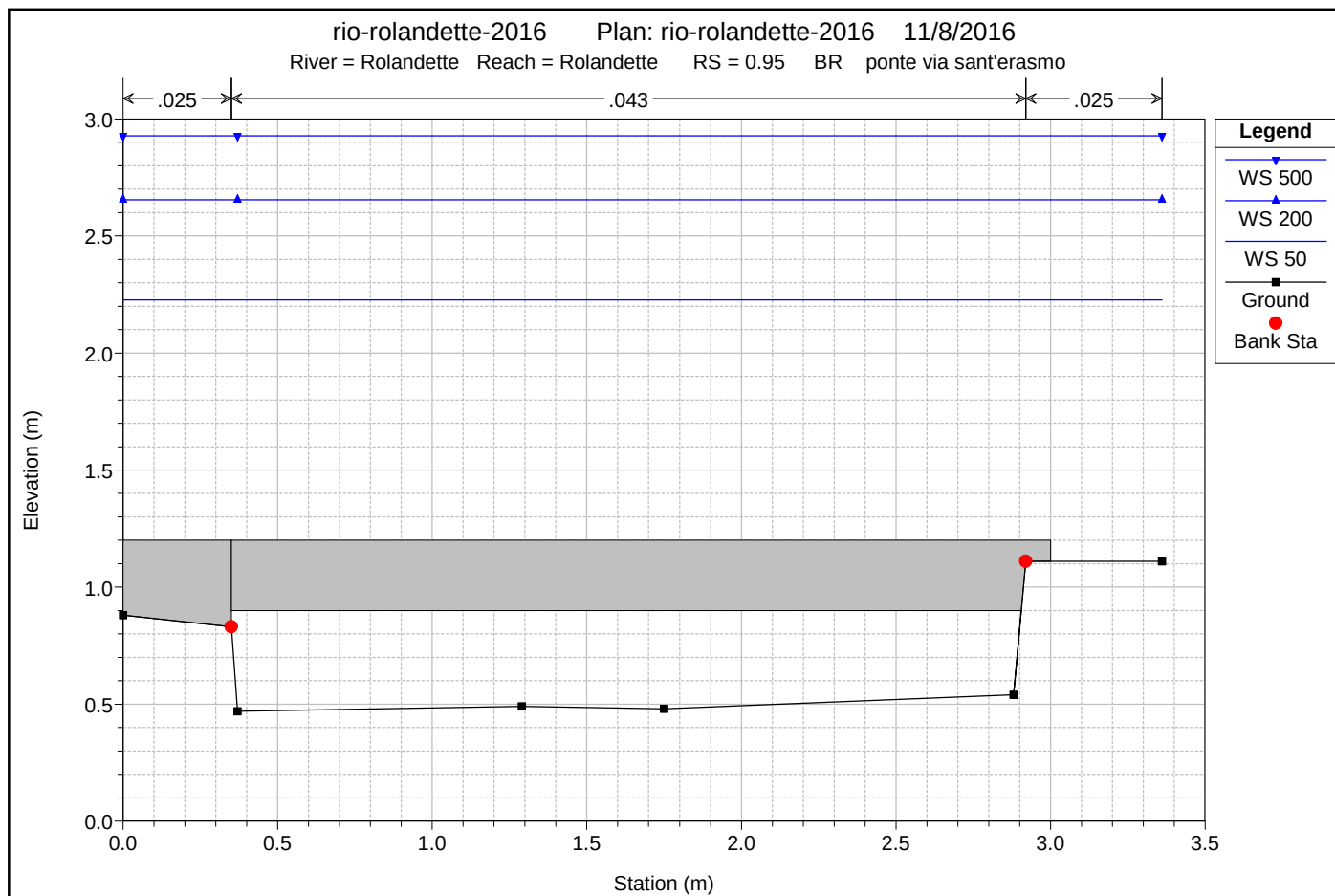


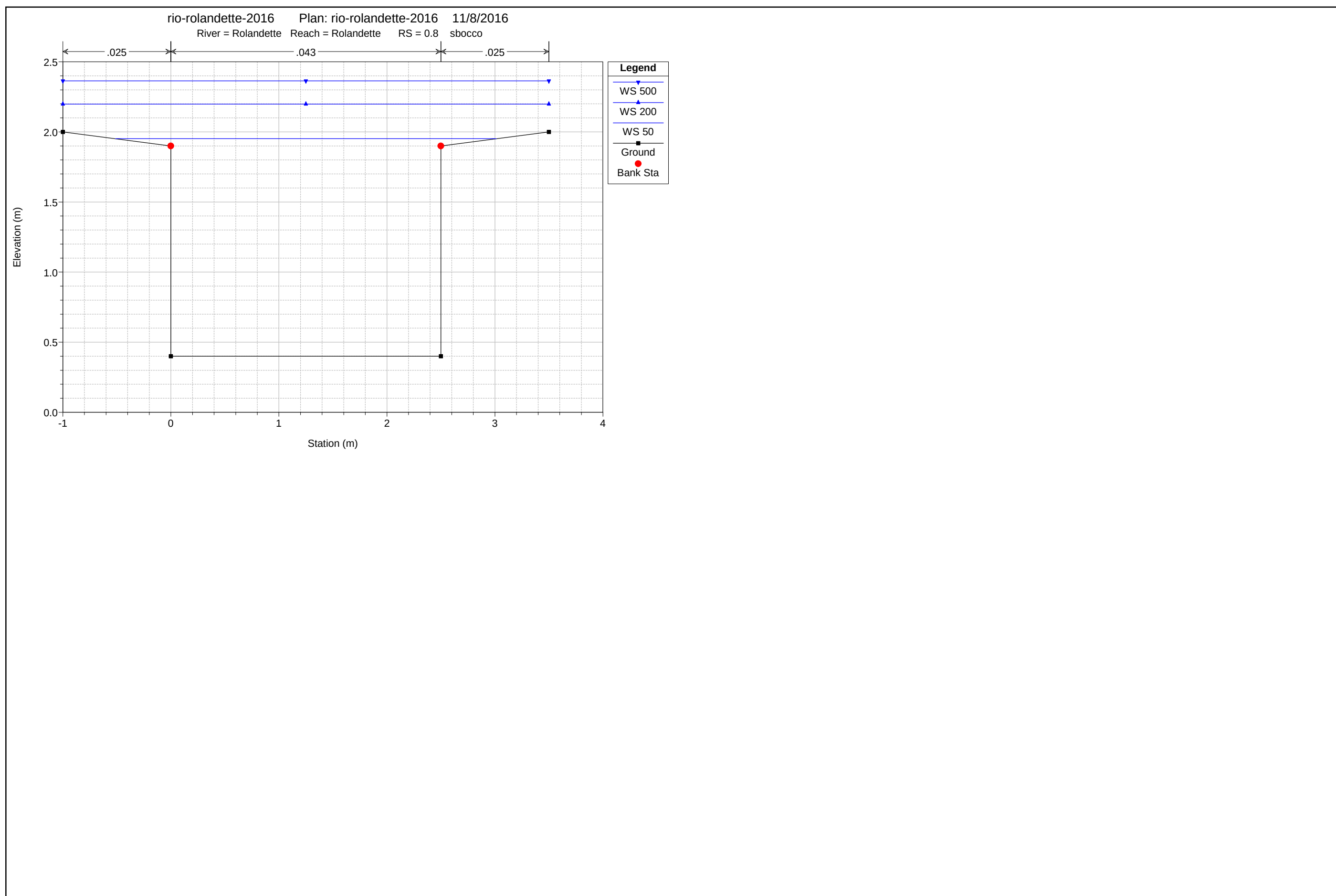












HEC-RAS Plan: rol-att-2016 River: Rolandette Reach: Rolandette

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	LOB Elev	ROB Elev
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)		(m)	(m)
Rolandette	31	50	8.00	10.26	12.13	11.53	12.33	0.011266	2.02	3.96	2.64	0.53	12.51	15.40
Rolandette	31	200	11.00	10.26	12.40	11.80	12.68	0.013731	2.34	4.71	2.76	0.57	12.51	15.40
Rolandette	31	500	13.50	10.26	12.53	11.99	12.89	0.016984	2.66	5.09	4.34	0.63	12.51	15.40
Rolandette	30	50	8.00	9.60	11.49	11.34	11.67	0.013041	1.90	4.26	5.87	0.46	11.25	11.30
Rolandette	30	200	11.00	9.60	11.41	11.48	11.85	0.033608	2.97	3.84	5.87	0.73	11.25	11.30
Rolandette	30	500	13.50	9.60	11.49	11.58	12.01	0.037320	3.22	4.25	5.87	0.78	11.25	11.30
Rolandette	29	50	8.00	8.48	10.38	9.89	10.62	0.015701	2.18	3.67	2.47	0.57	10.48	10.68
Rolandette	29	200	11.00	8.48	10.84	10.14	11.04	0.010453	2.04	5.67	6.00	0.47	10.48	10.68
Rolandette	29	500	13.50	8.48	11.08	10.34	11.26	0.008344	1.97	7.08	6.00	0.43	10.48	10.68
Rolandette	28.1	50	8.00	8.16	9.37	9.37	9.96	0.048380	3.41	2.35	2.00	1.00	10.54	10.55
Rolandette	28.1	200	11.00	8.16	9.65	9.65	10.37	0.052125	3.77	2.92	2.02	1.00	10.54	10.55
Rolandette	28.1	500	13.50	8.16	9.86	9.86	10.69	0.055236	4.02	3.36	2.04	1.00	10.54	10.55
Rolandette	28	50	8.00	8.16	9.54	9.05	9.67	0.006376	1.65	5.01	5.54	0.46	9.03	10.55
Rolandette	28	200	11.00	8.16	8.84	9.30	10.26	0.141410	5.28	2.08	3.39	2.15	9.03	10.55
Rolandette	28	500	13.50	8.16	8.93	9.47	10.57	0.143702	5.67	2.38	3.42	2.17	9.03	10.55
Rolandette	27	50	8.00	7.59	9.50	9.17	9.61	0.005753	1.24	5.46	6.36	0.30	9.18	10.40
Rolandette	27	200	11.00	7.59	9.73	9.29	9.87	0.004954	1.22	6.99	6.74	0.28	9.18	10.40
Rolandette	27	500	13.50	7.59	9.88	9.38	10.04	0.004880	1.24	7.99	7.03	0.27	9.18	10.40
Rolandette	26.7		Culvert											
Rolandette	26.6	50	8.00	5.50	7.41	6.74	7.47	0.002207	0.92	7.79	8.71	0.22	6.79	8.35
Rolandette	26.6	200	11.00	5.50	7.55	7.08	7.63	0.002607	1.03	8.98	8.72	0.24	6.79	8.35
Rolandette	26.6	500	13.50	5.50	7.69	7.14	7.79	0.002526	1.04	10.25	8.73	0.23	6.79	8.35
Rolandette	26.5		Culvert											
Rolandette	26	50	8.00	5.50	6.75	6.75	7.31	0.044485	3.34	2.40	2.13	1.00	7.50	8.35
Rolandette	26	200	11.00	5.50	7.18	7.08	7.37	0.012279	1.93	5.71	8.43	0.50	7.50	8.35
Rolandette	26	500	13.50	5.50	7.45	7.15	7.61	0.006502	1.46	8.00	8.44	0.35	7.50	8.35
Rolandette	25	50	8.00	5.48	6.44	6.66	7.18	0.036134	4.08	2.24	4.60	1.39	7.40	7.34
Rolandette	25	200	11.00	5.48	7.14	6.80	7.35	0.006476	2.04	5.50	4.66	0.52	7.40	7.34
Rolandette	25	500	13.50	5.48	7.36	6.92	7.58	0.006196	2.06	6.53	4.68	0.50	7.40	7.34
Rolandette	24	50	8.00	5.15	6.69	6.45	6.88	0.011702	1.73	4.23	4.64	0.47	7.10	6.83
Rolandette	24	200	11.00	5.15	7.01	6.59	7.22	0.009268	1.62	5.71	4.65	0.39	7.10	6.83
Rolandette	24	500	13.50	5.15	7.23	6.71	7.46	0.008601	1.62	6.77	4.85	0.37	7.10	6.83

HEC-RAS Plan: rol-att-2016 River: Rolandette Reach: Rolandette (Continued)

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HEC-RAS Plan: rol-att-2016 River: Rolandette Reach: Rolandette (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	LOB Elev (m)	ROB Elev (m)
Rolandette	17	50	8.00	3.86	5.49	5.07	5.74	0.011577	2.25	3.82	2.88	0.58	4.66	5.18
Rolandette	17	200	11.00	3.86	5.86	5.33	6.14	0.010370	2.46	4.87	2.88	0.57	4.66	5.18
Rolandette	17	500	13.50	3.86	6.13	5.50	6.46	0.009800	2.62	5.66	2.88	0.57	4.66	5.18
Rolandette	16	50	8.00	3.64	5.39	4.93	5.63	0.010634	2.21	3.77	2.62	0.55	4.55	4.83
Rolandette	16	200	11.00	3.64	5.76	5.17	6.05	0.010051	2.46	4.73	2.62	0.55	4.55	4.83
Rolandette	16	500	13.50	3.64	6.03	5.35	6.37	0.009836	2.65	5.44	2.62	0.56	4.55	4.83
Rolandette	15	50	8.00	3.39	4.77	4.77	5.38	0.048950	3.47	2.31	1.90	1.01	5.42	5.23
Rolandette	15	200	11.00	3.39	5.06	5.06	5.81	0.052658	3.81	2.88	1.97	1.01	5.42	5.23
Rolandette	15	500	13.50	3.39	5.33	5.29	6.13	0.052279	3.96	3.41	2.01	0.97	5.42	5.23
Rolandette	14	50	8.00	3.14	4.82	4.10	4.94	0.005748	1.55	5.17	3.38	0.40	6.00	5.36
Rolandette	14	200	11.00	3.14	5.18	4.30	5.33	0.006126	1.71	6.42	3.42	0.40	6.00	5.36
Rolandette	14	500	13.50	3.14	5.51	4.45	5.68	0.006057	1.79	7.55	3.44	0.39	6.00	5.36
Rolandette	13.5		Bridge											
Rolandette	13	50	8.00	3.00	4.37	4.37	4.90	0.041516	3.23	2.47	2.36	1.01	3.69	5.17
Rolandette	13	200	11.00	3.00	4.78	4.62	5.30	0.032555	3.19	3.45	2.36	0.84	3.69	5.17
Rolandette	13	500	13.50	3.00	5.13	4.81	5.64	0.028519	3.16	4.27	2.36	0.75	3.69	5.17
Rolandette	12	50	8.00	2.99	4.58	4.12	4.74	0.008837	1.81	4.45	3.60	0.52	5.79	5.63
Rolandette	12	200	11.00	2.99	5.01	4.31	5.19	0.007282	1.84	6.05	3.69	0.46	5.79	5.63
Rolandette	12	500	13.50	2.99	5.35	4.46	5.53	0.006682	1.87	7.31	3.75	0.43	5.79	5.63
Rolandette	11	50	8.00	2.77	4.41	3.79	4.58	0.008793	1.82	4.44	2.95	0.47	5.32	5.82
Rolandette	11	200	11.00	2.77	4.84	4.01	5.04	0.008628	1.94	5.74	3.01	0.44	5.32	5.82
Rolandette	11	500	13.50	2.77	5.17	4.18	5.38	0.008720	2.03	6.74	3.06	0.43	5.32	5.82
Rolandette	10	50	8.00	2.44	4.25	3.59	4.41	0.008135	1.76	4.59	2.97	0.45	4.87	5.05
Rolandette	10	200	11.00	2.44	4.69	3.81	4.87	0.008067	1.89	5.90	3.04	0.43	4.87	5.05
Rolandette	10	500	13.50	2.44	5.02	3.98	5.22	0.007944	1.98	6.96	3.44	0.42	4.87	5.05
Rolandette	9	50	8.00	2.19	4.03	3.29	4.20	0.009499	1.85	4.35	2.52	0.45	4.67	4.79
Rolandette	9	200	11.00	2.19	4.45	3.53	4.67	0.010338	2.04	5.43	2.56	0.45	4.67	4.79
Rolandette	9	500	13.50	2.19	4.77	3.72	5.01	0.010828	2.18	6.27	2.84	0.45	4.67	4.79
Rolandette	8	50	8.00	1.90	3.86	3.01	4.01	0.007610	1.71	4.82	2.76	0.40	4.54	4.51
Rolandette	8	200	11.00	1.90	4.27	3.25	4.45	0.008545	1.90	5.98	2.86	0.41	4.54	4.51
Rolandette	8	500	13.50	1.90	4.58	3.44	4.79	0.009150	2.04	6.88	3.15	0.41	4.54	4.51
Rolandette	7	50	8.00	1.77	3.55	2.96	3.79	0.014975	2.18	3.74	2.30	0.54	4.36	4.60
Rolandette	7	200	11.00	1.77	3.89	3.23	4.20	0.017793	2.49	4.53	2.36	0.56	4.36	4.60

HEC-RAS Plan: rol-att-2016 River: Rolandette Reach: Rolandette (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	LOB Elev	ROB Elev
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)		(m)	(m)
Rolandette	7	500	13.50	1.77	4.14	3.43	4.51	0.019844	2.70	5.14	2.40	0.58	4.36	4.60
Rolandette	6.5	50	8.00	1.69	2.92	2.92	3.45	0.045081	3.20	2.51	2.41	1.00	4.41	4.68
Rolandette	6.5	200	11.00	1.69	3.19	3.17	3.82	0.045661	3.50	3.16	2.43	0.98	4.41	4.68
Rolandette	6.5	500	13.50	1.69	3.44	3.36	4.10	0.043429	3.61	3.76	2.46	0.93	4.41	4.68
Rolandette	6	50	8.00	1.38	3.13	2.38	3.27	0.006682	1.63	4.91	3.03	0.41	4.41	4.68
Rolandette	6	200	11.00	1.38	3.49	2.60	3.66	0.007488	1.84	6.01	3.06	0.42	4.41	4.68
Rolandette	6	500	13.50	1.38	3.74	2.77	3.95	0.008299	2.00	6.78	3.09	0.43	4.41	4.68
Rolandette	5	50	8.00	0.91	3.17	1.97	3.24	0.002608	1.15	7.02	3.63	0.26	4.32	4.66
Rolandette	5	200	11.00	0.91	3.54	2.17	3.63	0.003153	1.33	8.37	3.67	0.28	4.32	4.66
Rolandette	5	500	13.50	0.91	3.79	2.32	3.91	0.003622	1.47	9.32	3.70	0.29	4.32	4.66
Rolandette	4.5		Bridge											
Rolandette	4	50	8.00	0.91	2.71	2.16	2.98	0.017252	2.26	3.57	2.14	0.55	2.80	2.76
Rolandette	4	200	11.00	0.91	3.10	2.43	3.42	0.016389	2.49	4.64	2.89	0.55	2.80	2.76
Rolandette	4	500	13.50	0.91	3.38	2.64	3.73	0.015820	2.66	5.44	2.89	0.55	2.80	2.76
Rolandette	3	50	8.00	0.84	2.54	1.96	2.75	0.011939	2.04	3.94	2.51	0.52	2.82	4.33
Rolandette	3	200	11.00	0.84	2.92	2.20	3.18	0.012634	2.25	4.95	2.89	0.51	2.82	4.33
Rolandette	3	500	13.50	0.84	3.19	2.40	3.49	0.012938	2.41	5.74	2.90	0.52	2.82	4.33
Rolandette	2	50	8.00	0.78	2.44	1.76	2.59	0.007073	1.70	4.72	3.07	0.43	4.08	3.34
Rolandette	2	200	11.00	0.78	2.83	1.98	3.01	0.007454	1.86	5.93	3.12	0.43	4.08	3.34
Rolandette	2	500	13.50	0.78	3.09	2.14	3.30	0.008066	2.01	6.76	3.15	0.43	4.08	3.34
Rolandette	1	50	8.00	0.57	2.36	1.55	2.47	0.003104	1.55	5.51	3.36	0.37	0.93	1.21
Rolandette	1	200	11.00	0.57	2.75	1.75	2.89	0.003012	1.75	6.83	3.36	0.38	0.93	1.21
Rolandette	1	500	13.50	0.57	3.01	1.90	3.19	0.003105	1.92	7.72	3.36	0.39	0.93	1.21
Rolandette	0.95		Bridge											
Rolandette	0.9	50	8.00	0.47	2.26	1.45	2.38	0.003063	1.55	5.53	3.36	0.37	0.83	1.11
Rolandette	0.9	200	11.00	0.47	2.68	1.65	2.82	0.002880	1.73	6.93	3.36	0.37	0.83	1.11
Rolandette	0.9	500	13.50	0.47	2.95	1.80	3.12	0.002961	1.89	7.83	3.36	0.39	0.83	1.11
Rolandette	0.85		Culvert											
Rolandette	0.8	50	8.00	0.40	1.95	1.41	2.17	0.012502	2.06	3.90	3.52	0.53	1.90	1.90
Rolandette	0.8	200	11.00	0.40	2.20	1.65	2.45	0.012512	2.27	4.99	4.50	0.54	1.90	1.90
Rolandette	0.8	500	13.50	0.40	2.36	1.84	2.65	0.012501	2.41	5.74	4.50	0.55	1.90	1.90