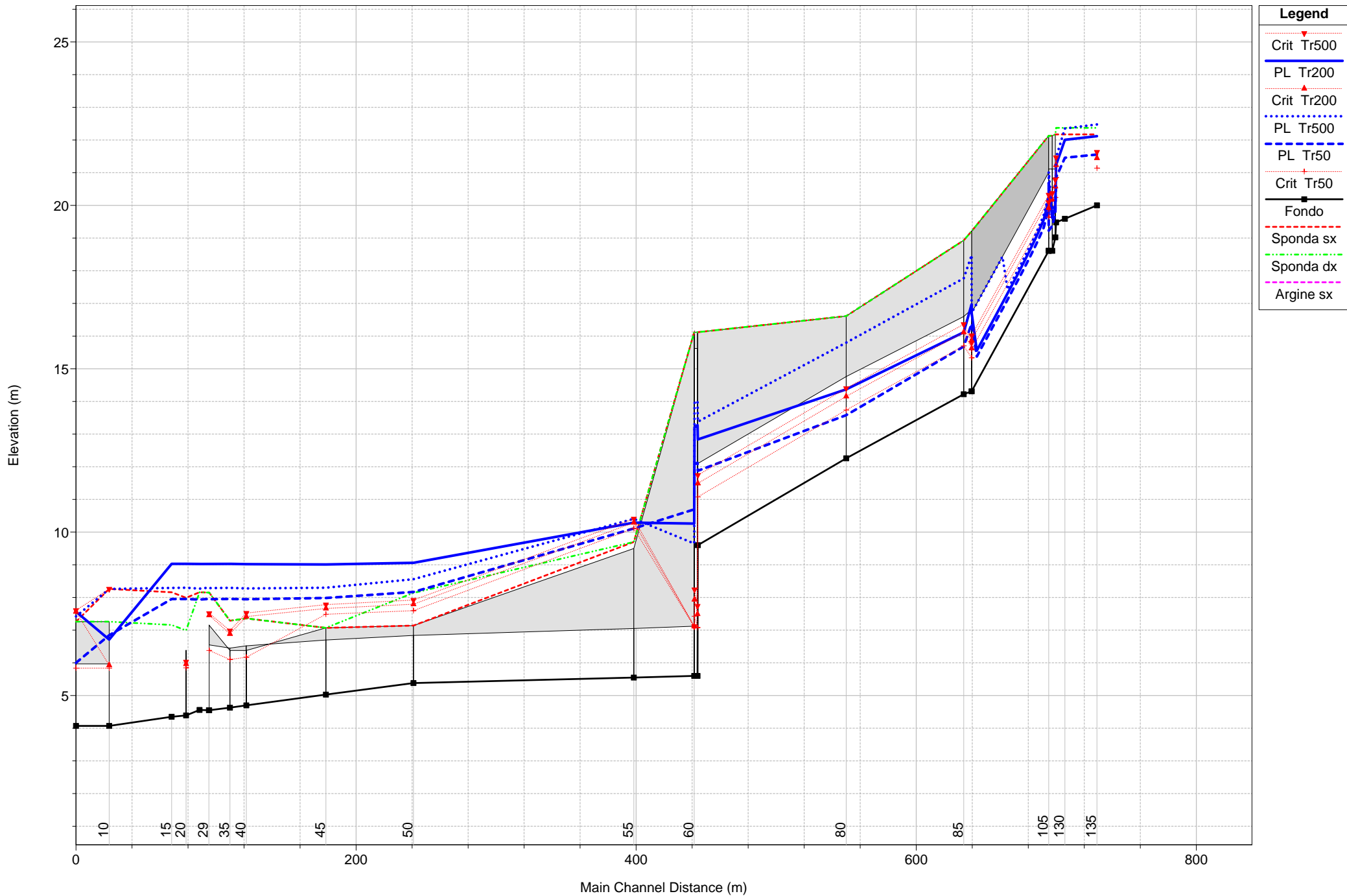


Verifiche idrauliche

Rio Ritorto

Sez. 1 – 135

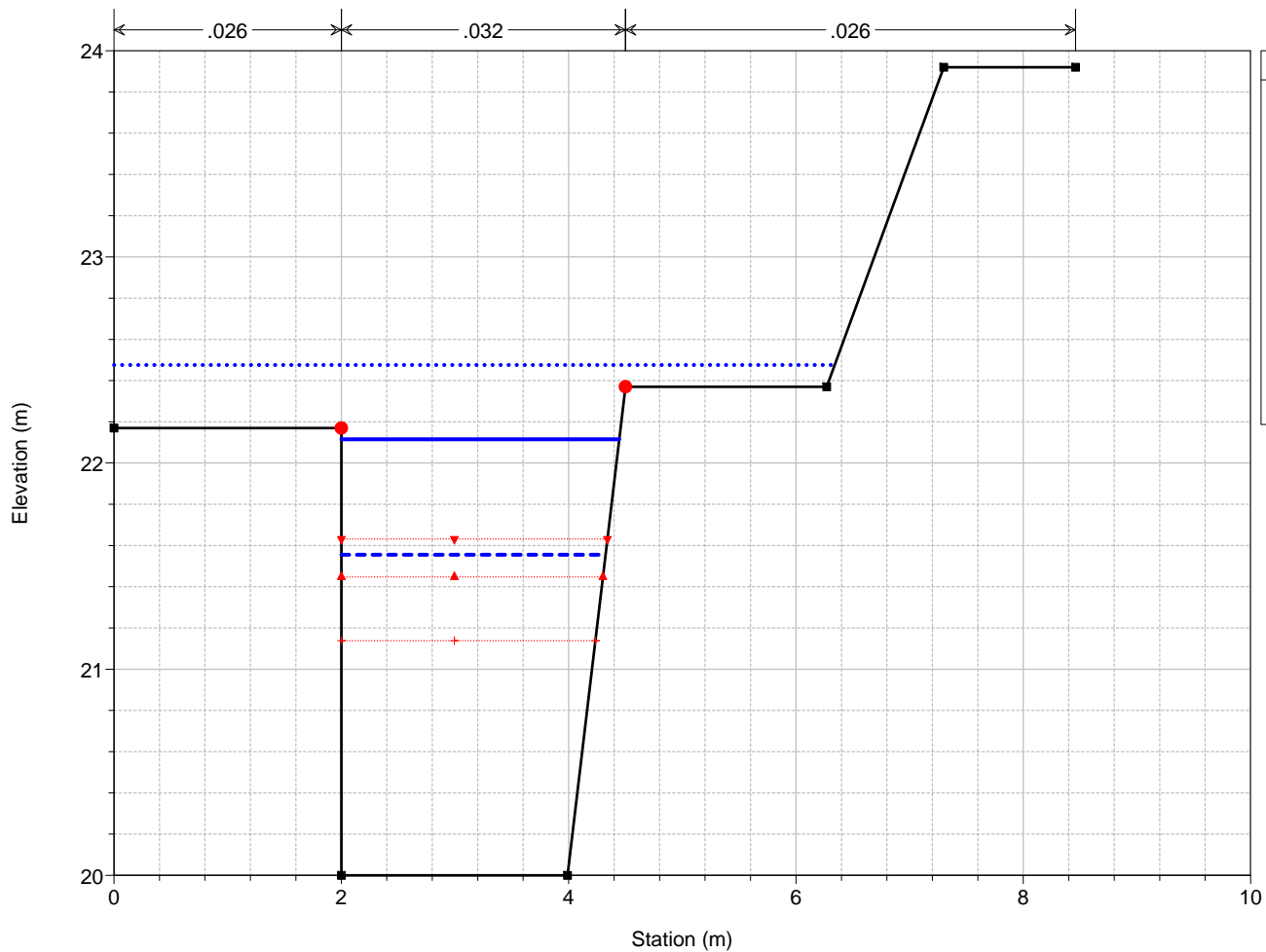
- Profilo longitudinale
- Sezioni trasversali
- Tabelle di calcolo



1 cm Horiz. = 35 m 1 cm Vert. = 1.5 m

rioritorto.lid.reale.rev01

RS = 135

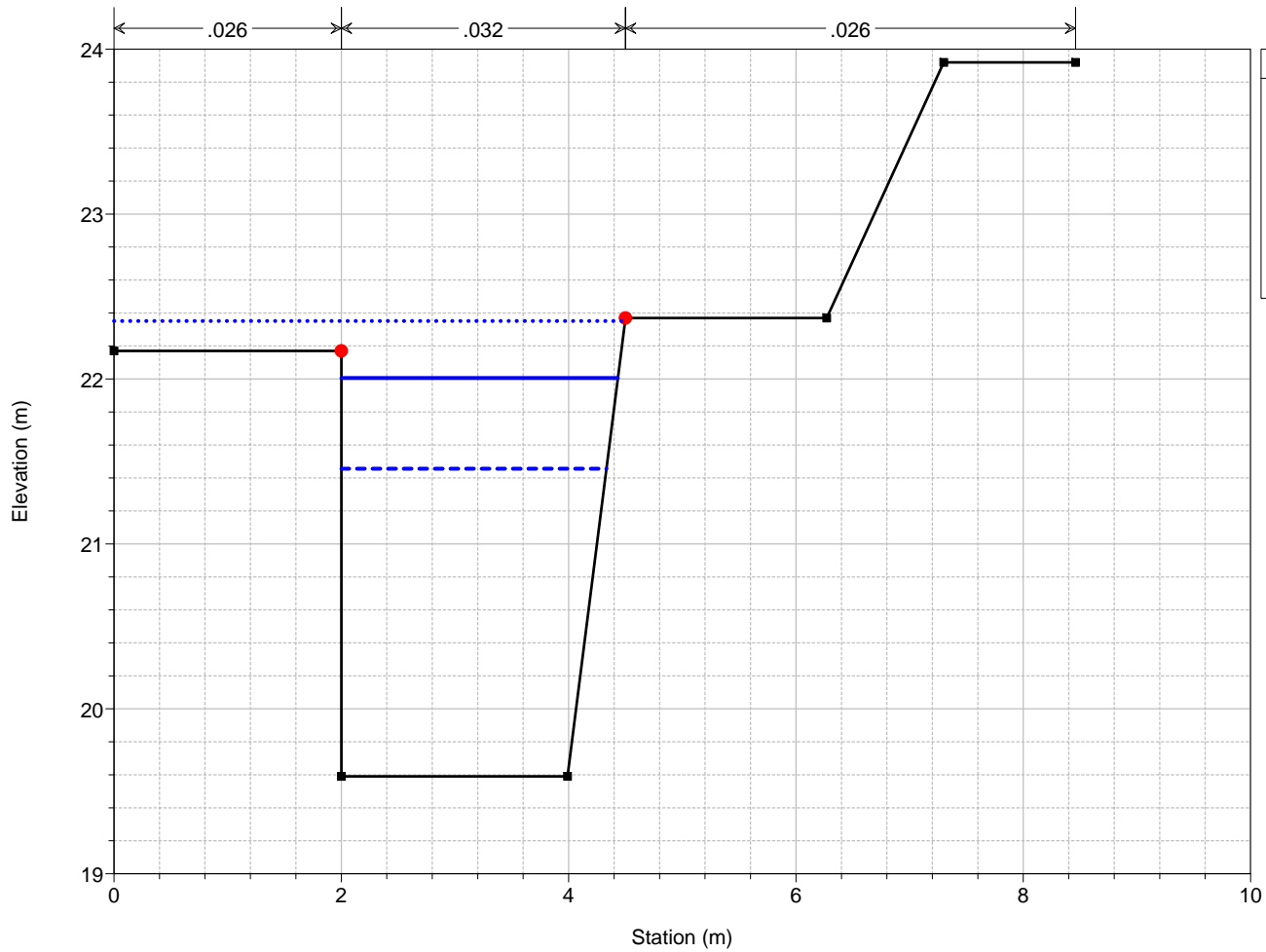


Legend

- PL Tr500
- PL Tr200
- Crit Tr500
- PL Tr50
- Crit Tr200
- Crit Tr50
- Fondo
- Sponda

rioritorto.lid.reale.rev01

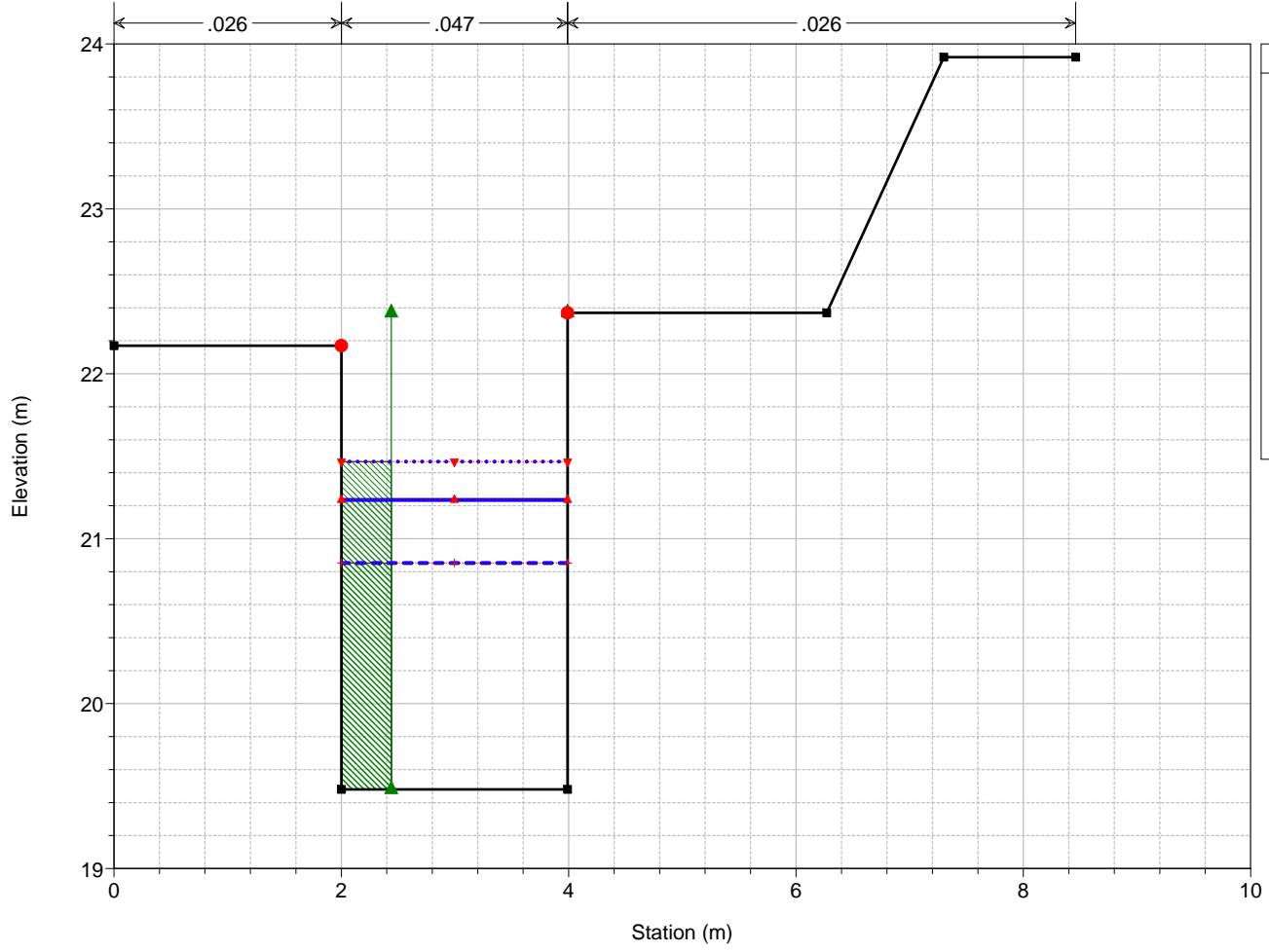
RS = 130



Legend

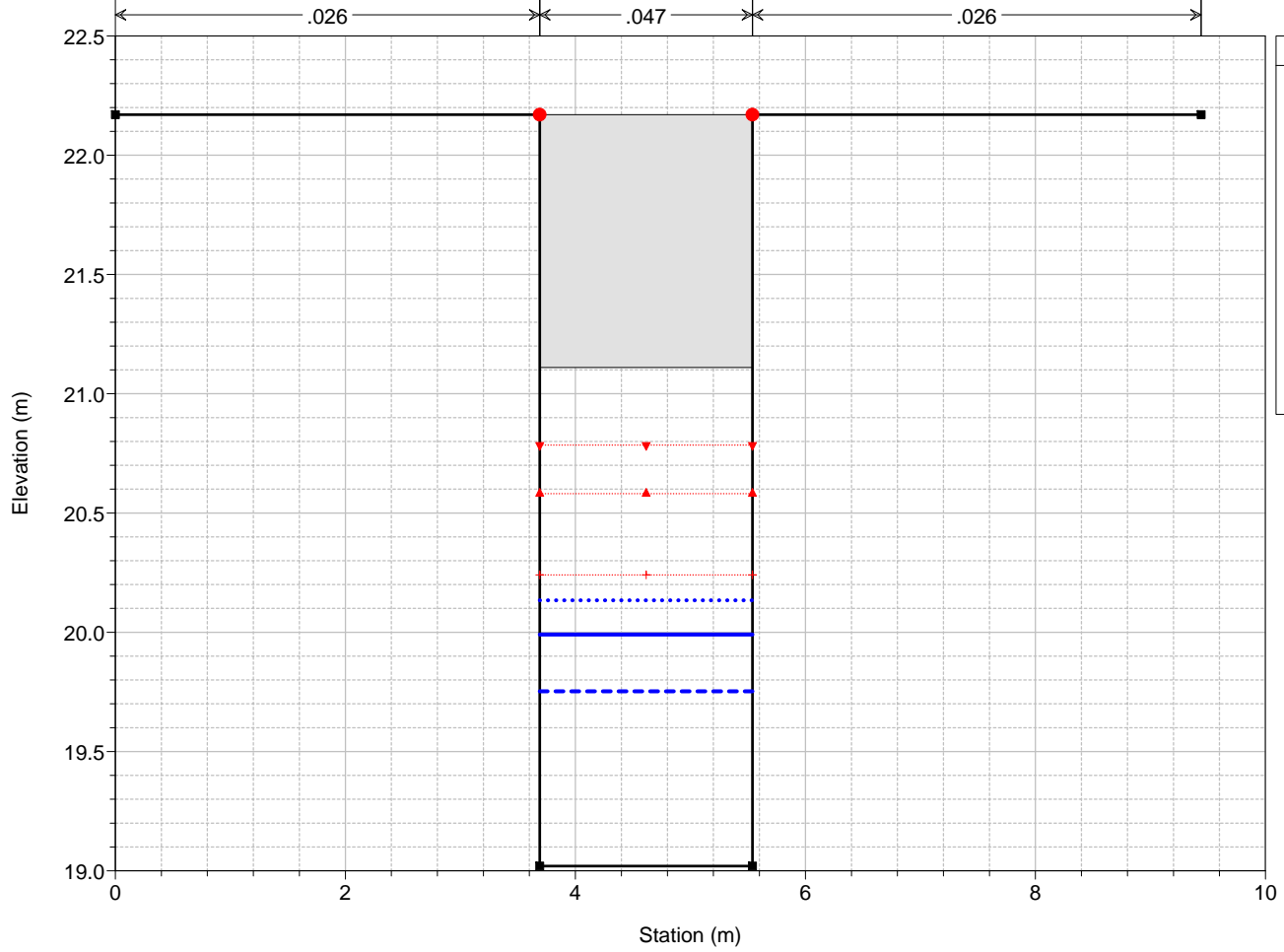
- PL Tr500
- PL Tr200
- PL Tr50
- Fondo
- Sponda

rioritorto.lid.reale.rev01
RS = 125



- Legend**
- PL Tr500
 - Crit Tr500
 - PL Tr200
 - Crit Tr200
 - PL Tr50
 - Crit Tr50
 - Fondo
 - Ineff
 - Sponda

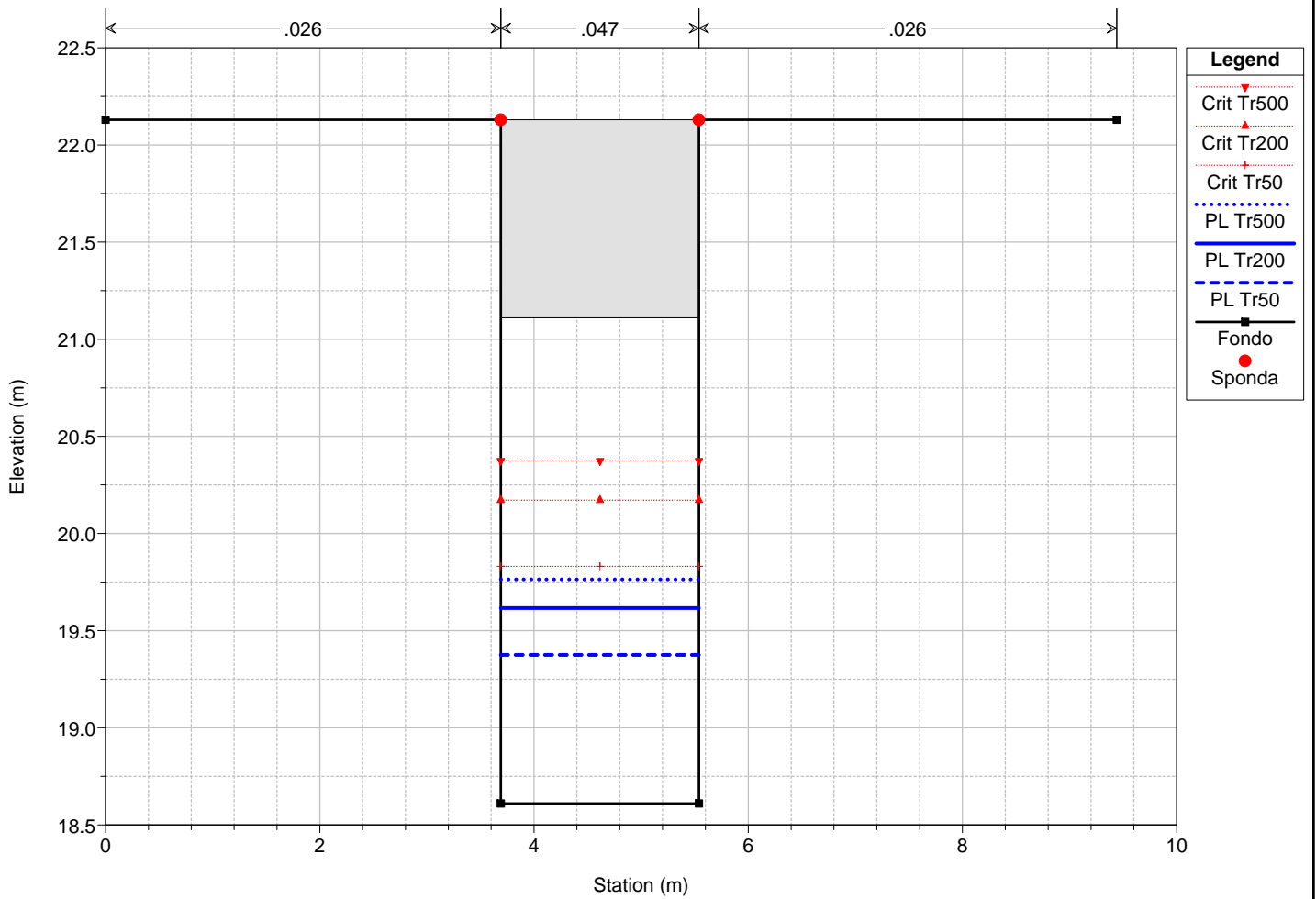
rioritorto.lid.reale.rev01
RS = 120



- Legend**
- Crit Tr500
 - Crit Tr200
 - Crit Tr50
 - PL Tr500
 - PL Tr200
 - PL Tr50
 - Fondo
 - Sponda

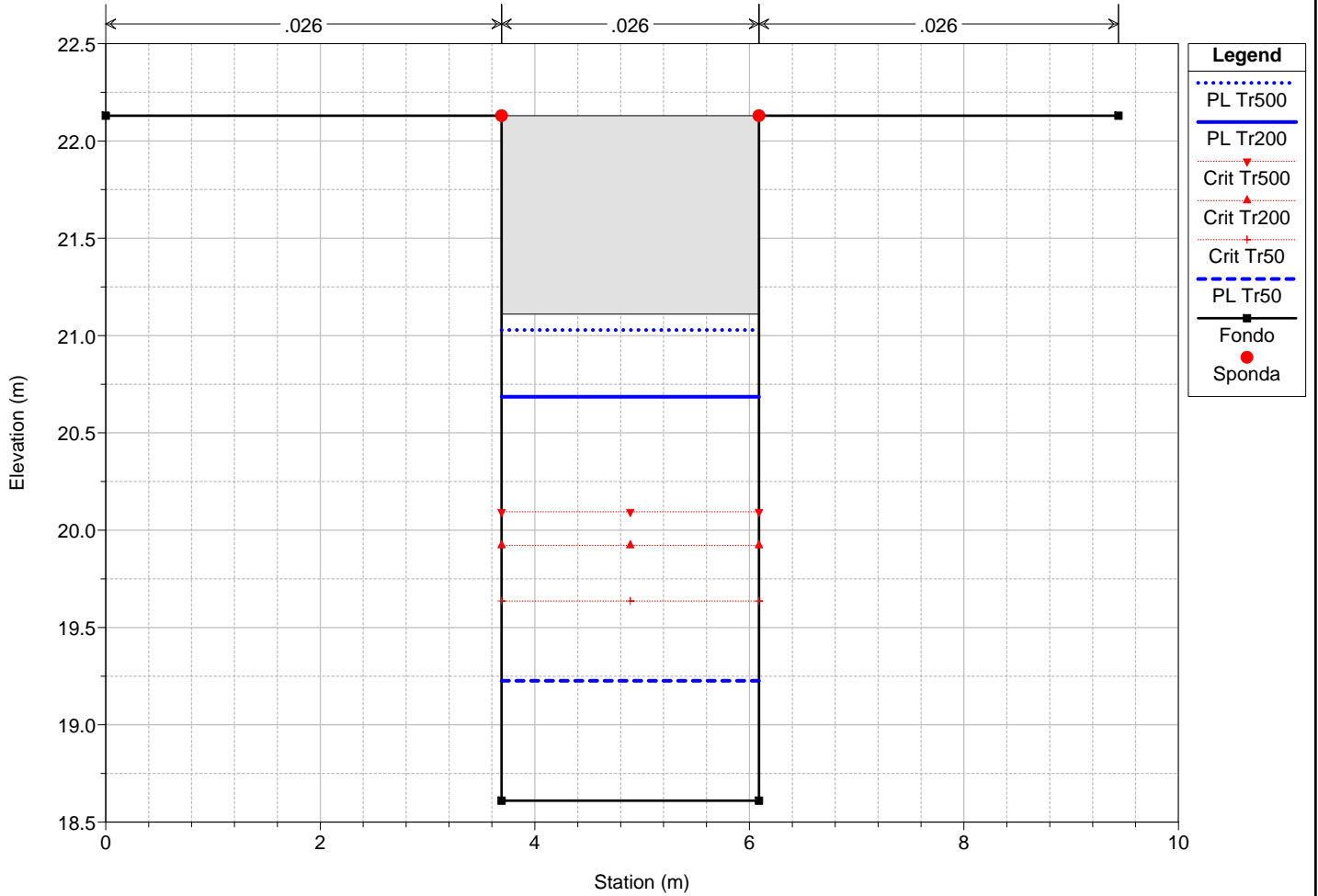
rioritorto.lid.reale.rev01

RS = 115



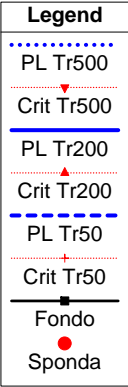
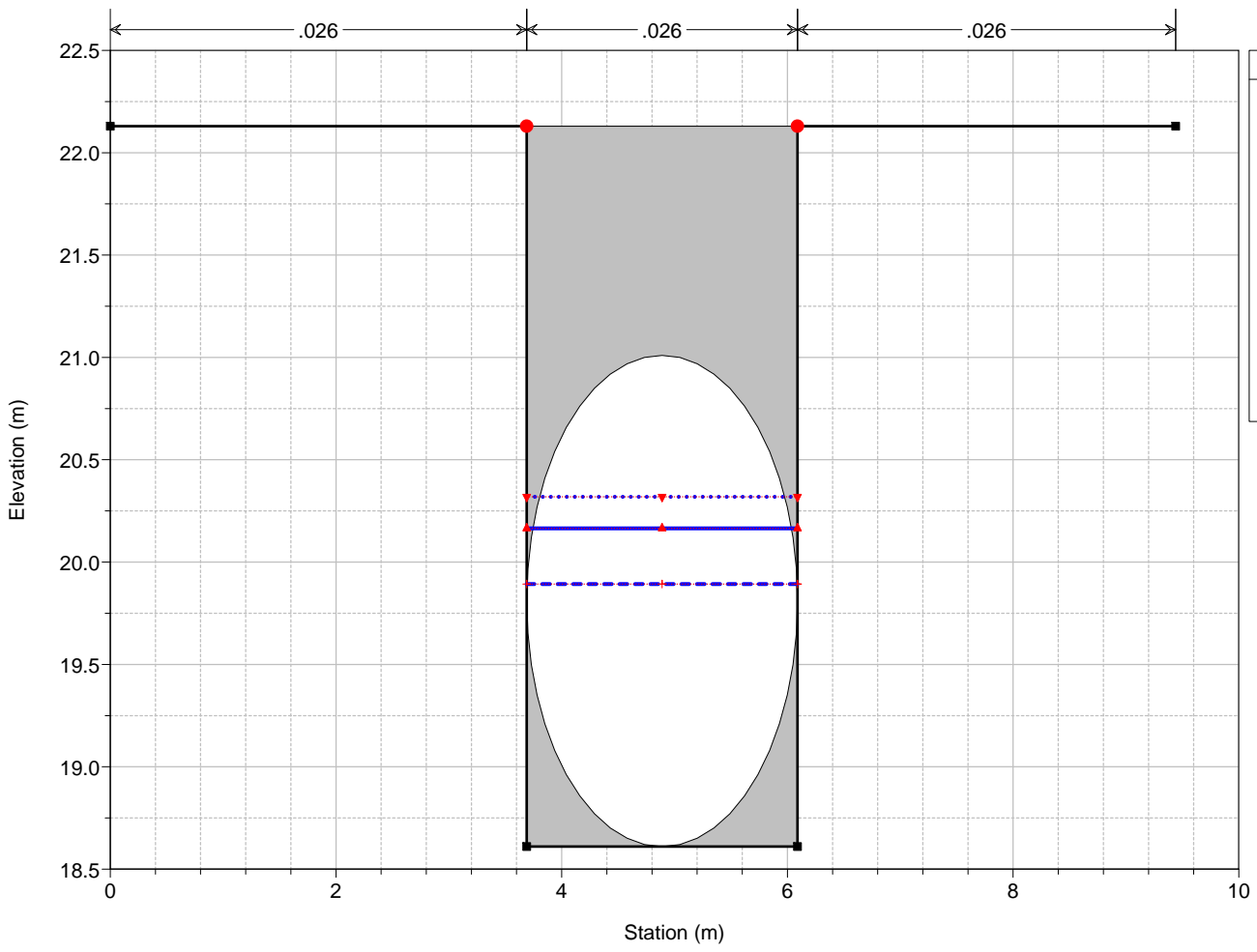
rioritorto.lid.reale.rev01

RS = 110



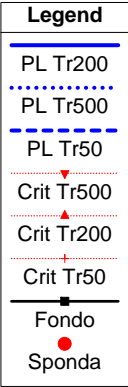
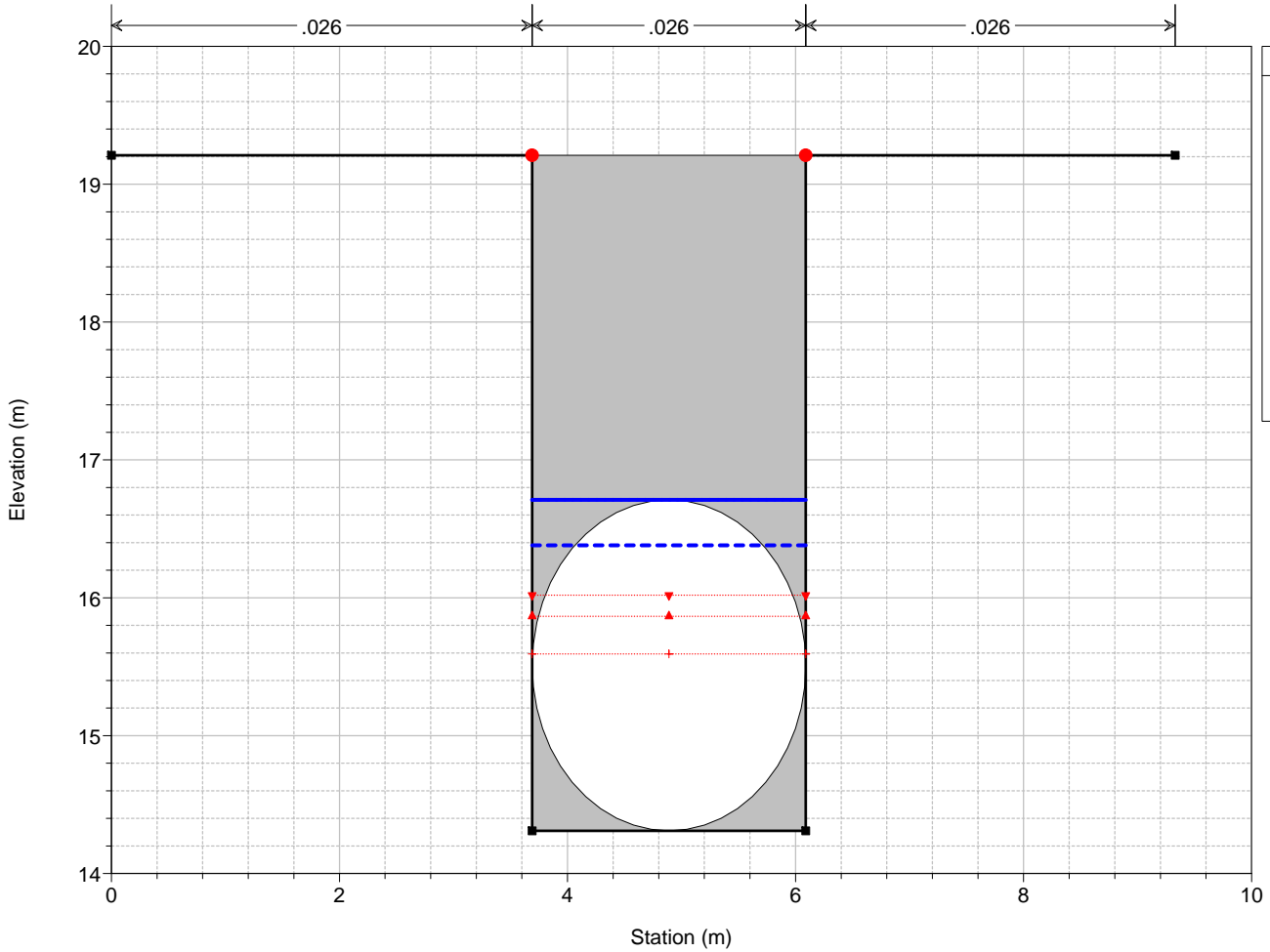
rioritorto.lid.reale.rev01

RS = 105 Culv



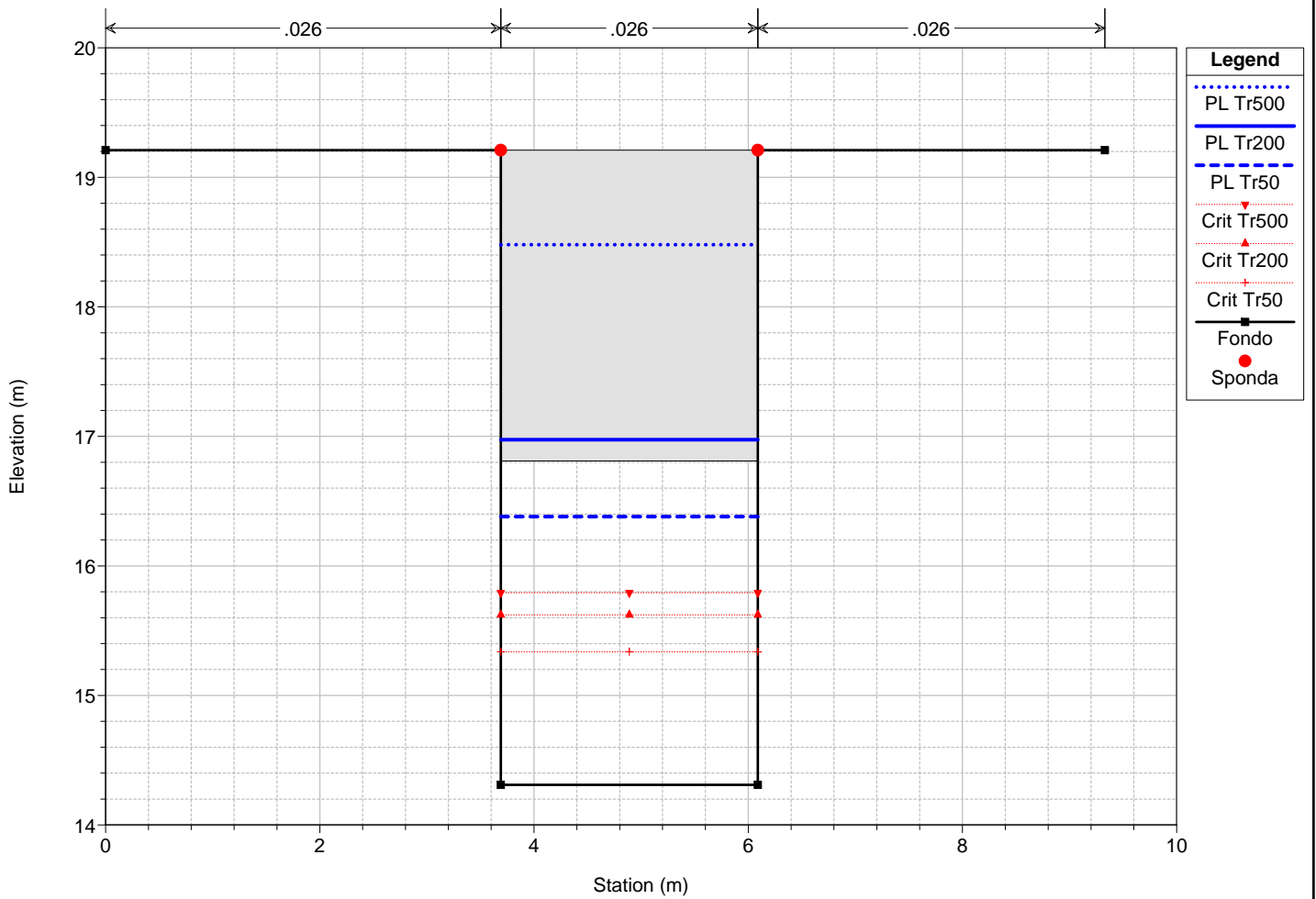
rioritorto.lid.reale.rev01

RS = 105 Culv



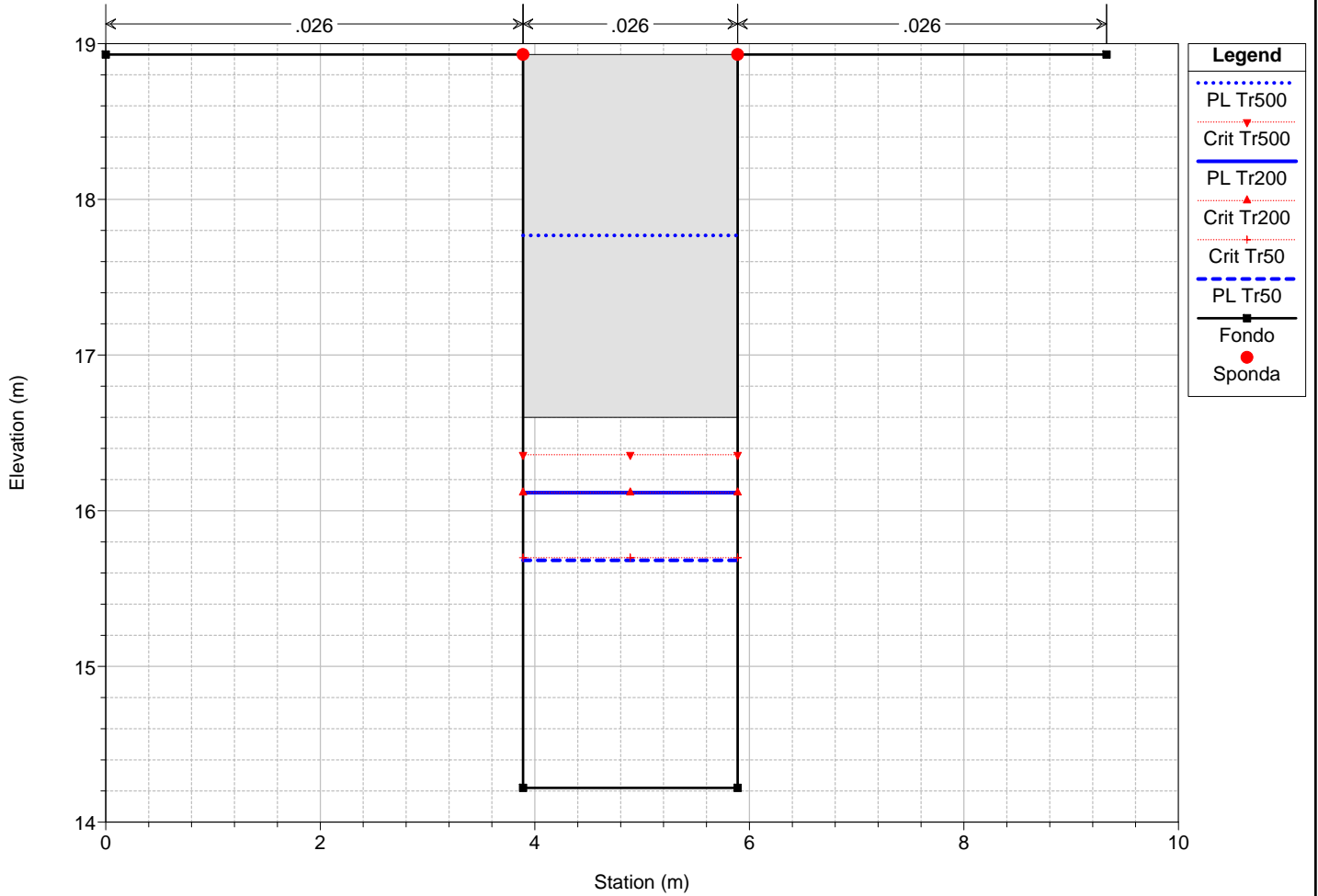
rioritorto.lid.reale.rev01

RS = 90



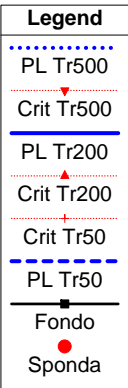
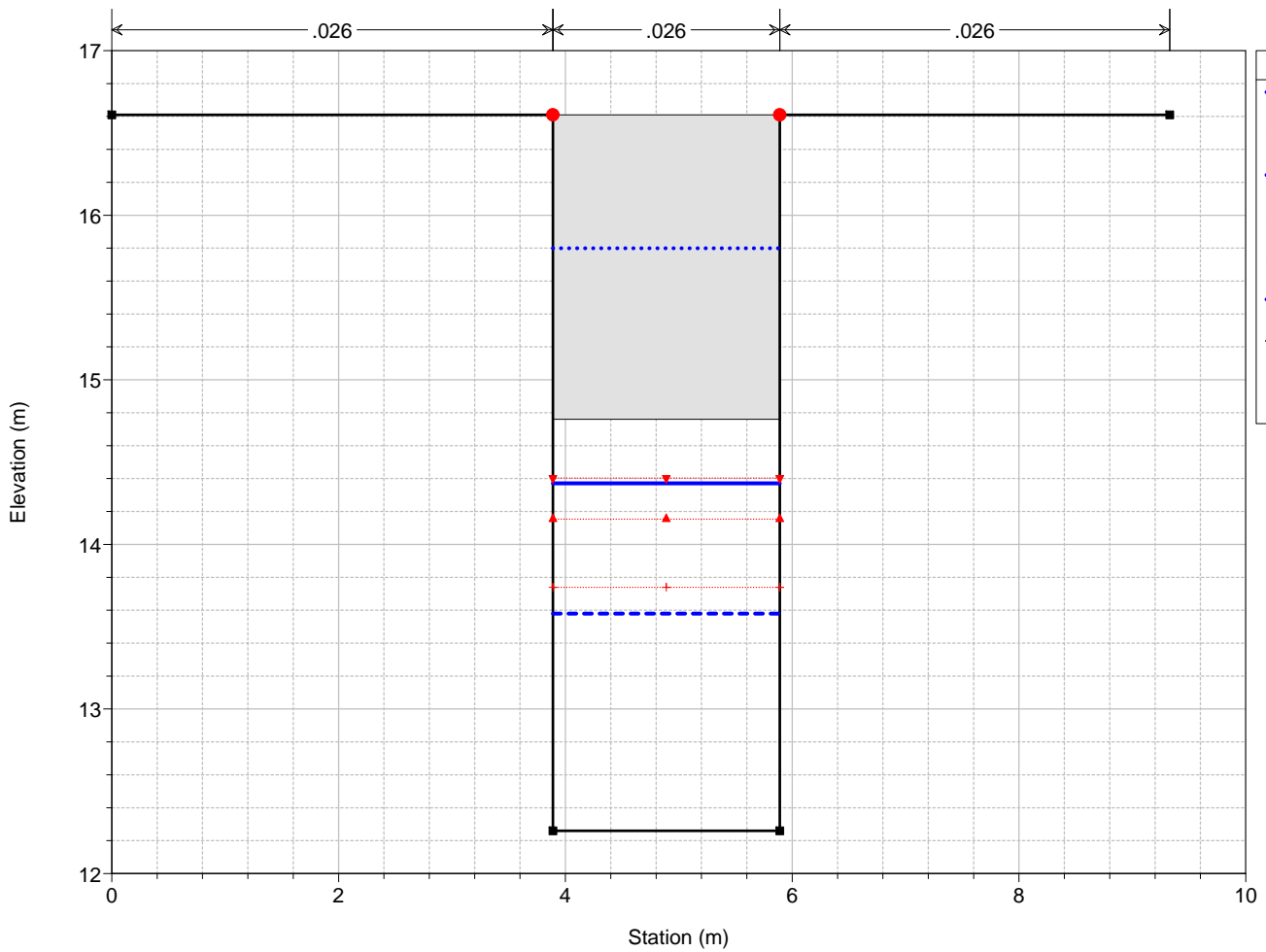
rioritorto.lid.reale.rev01

RS = 85



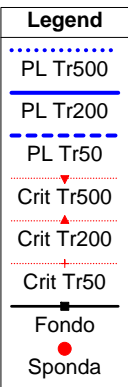
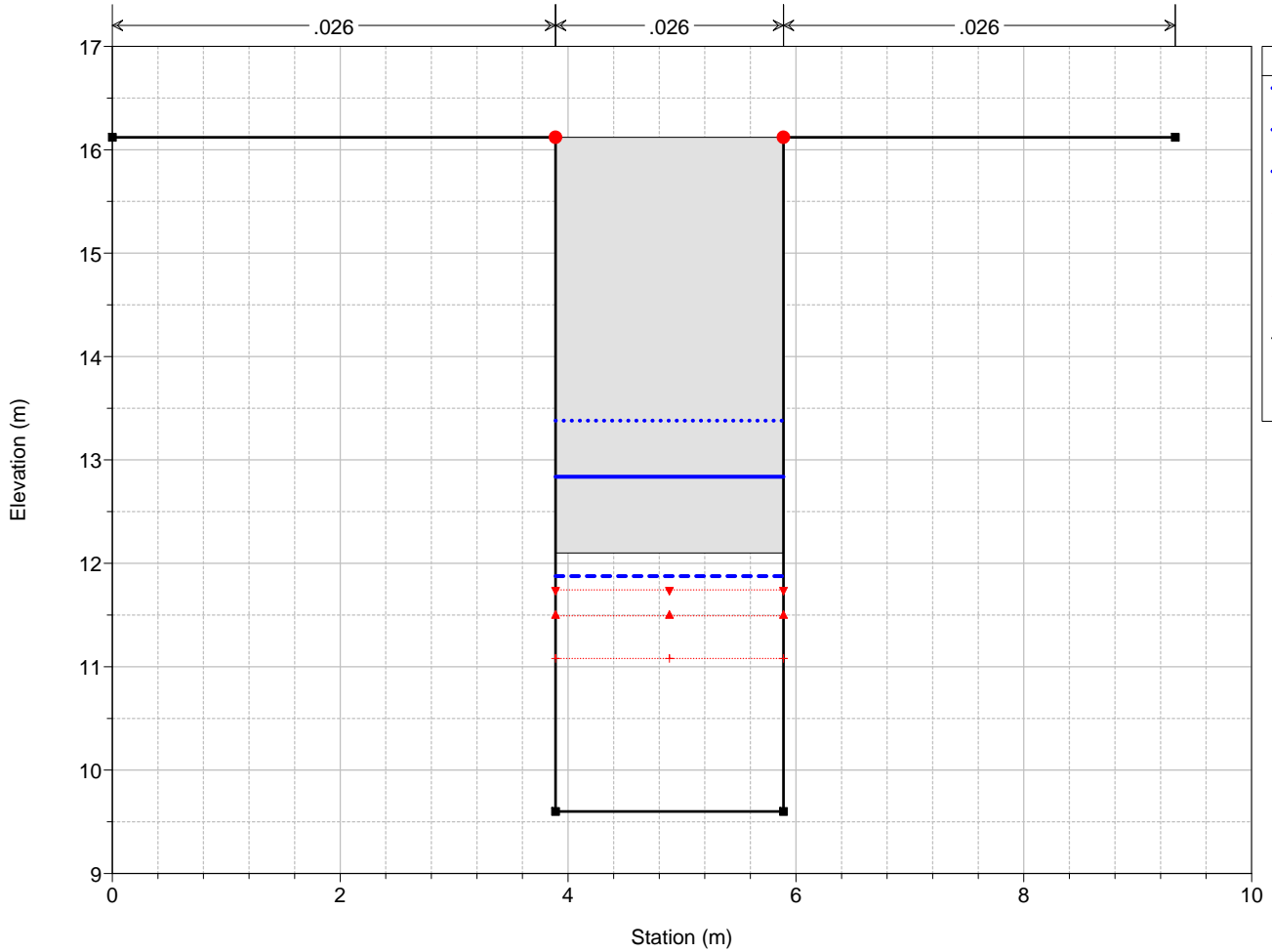
rioritorto.lid.reale.rev01

RS = 80



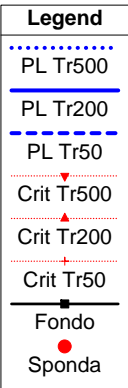
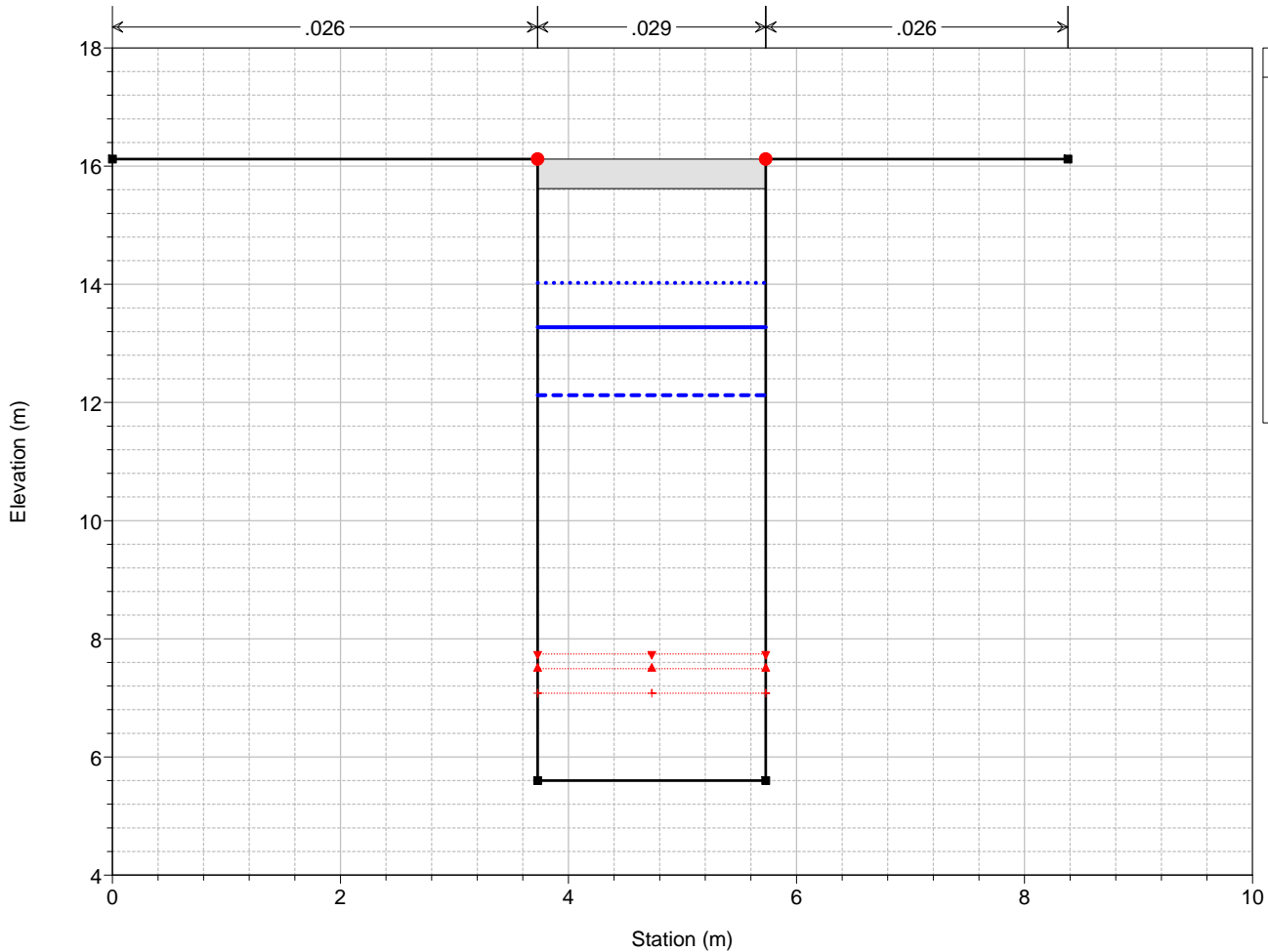
rioritorto.lid.reale.rev01

RS = 75



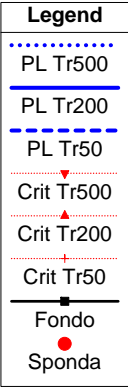
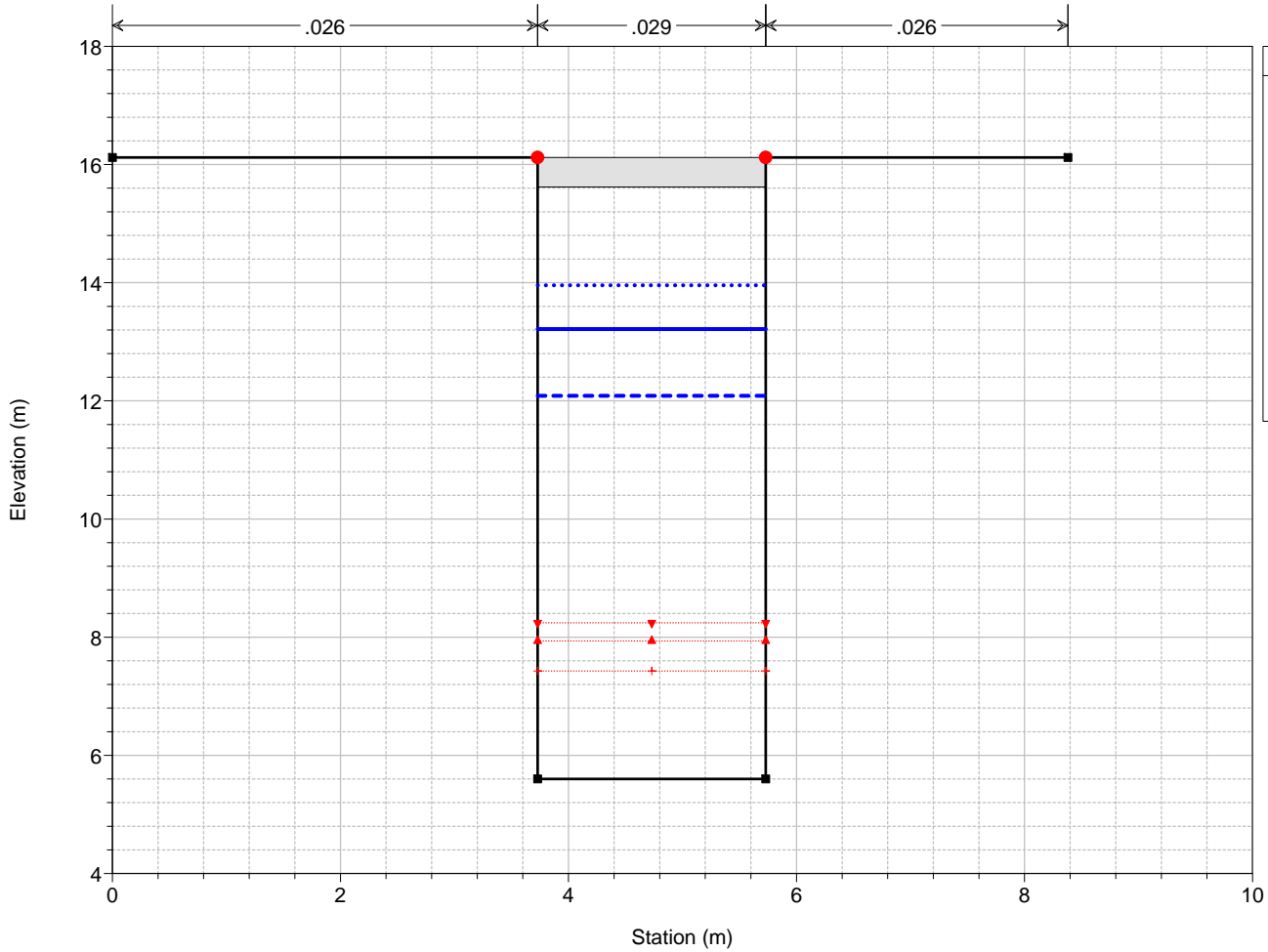
rioritorto.lid.reale.rev01

RS = 70



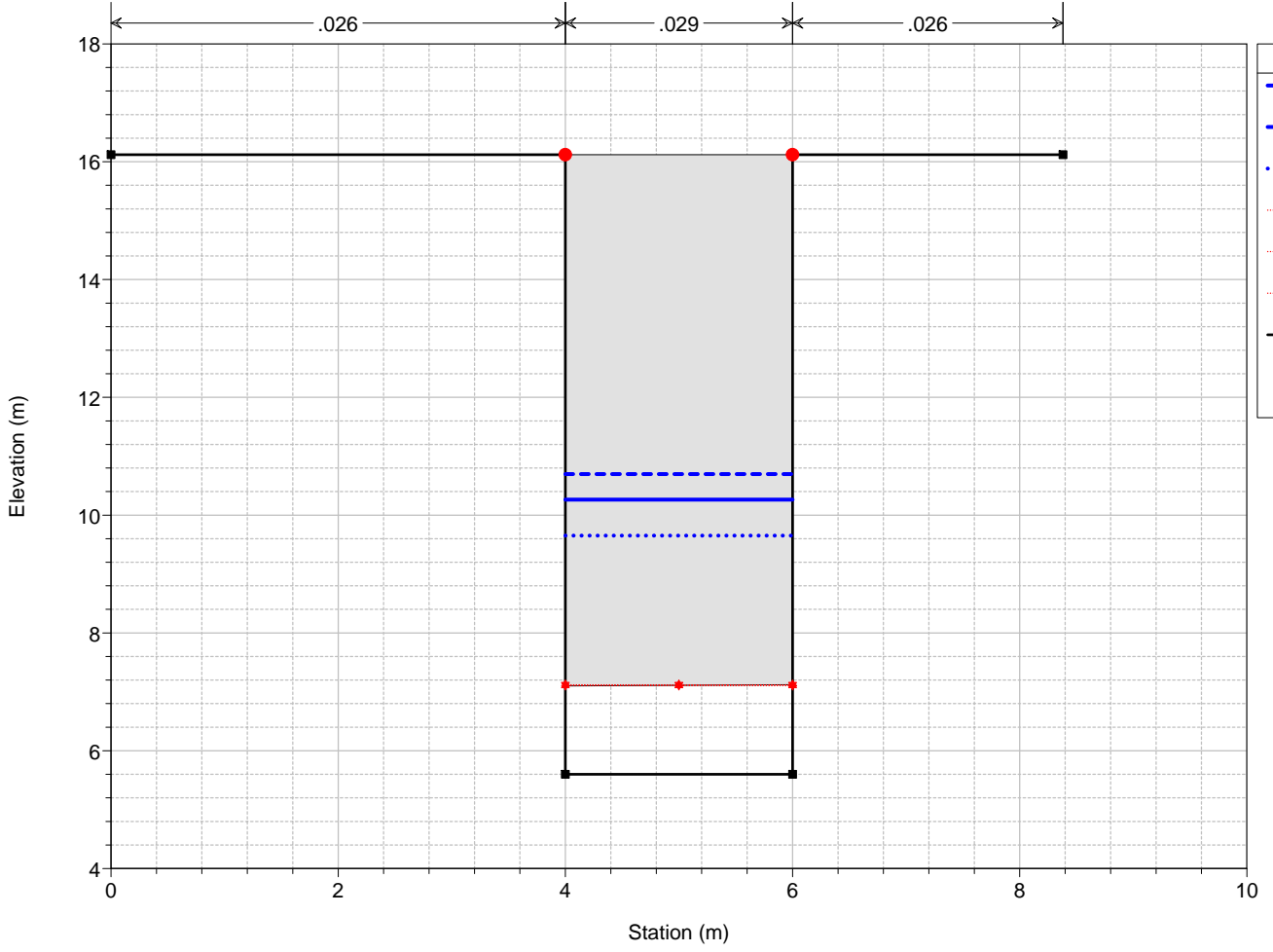
rioritorto.lid.reale.rev01

RS = 65



rioritorto.lid.reale.rev01

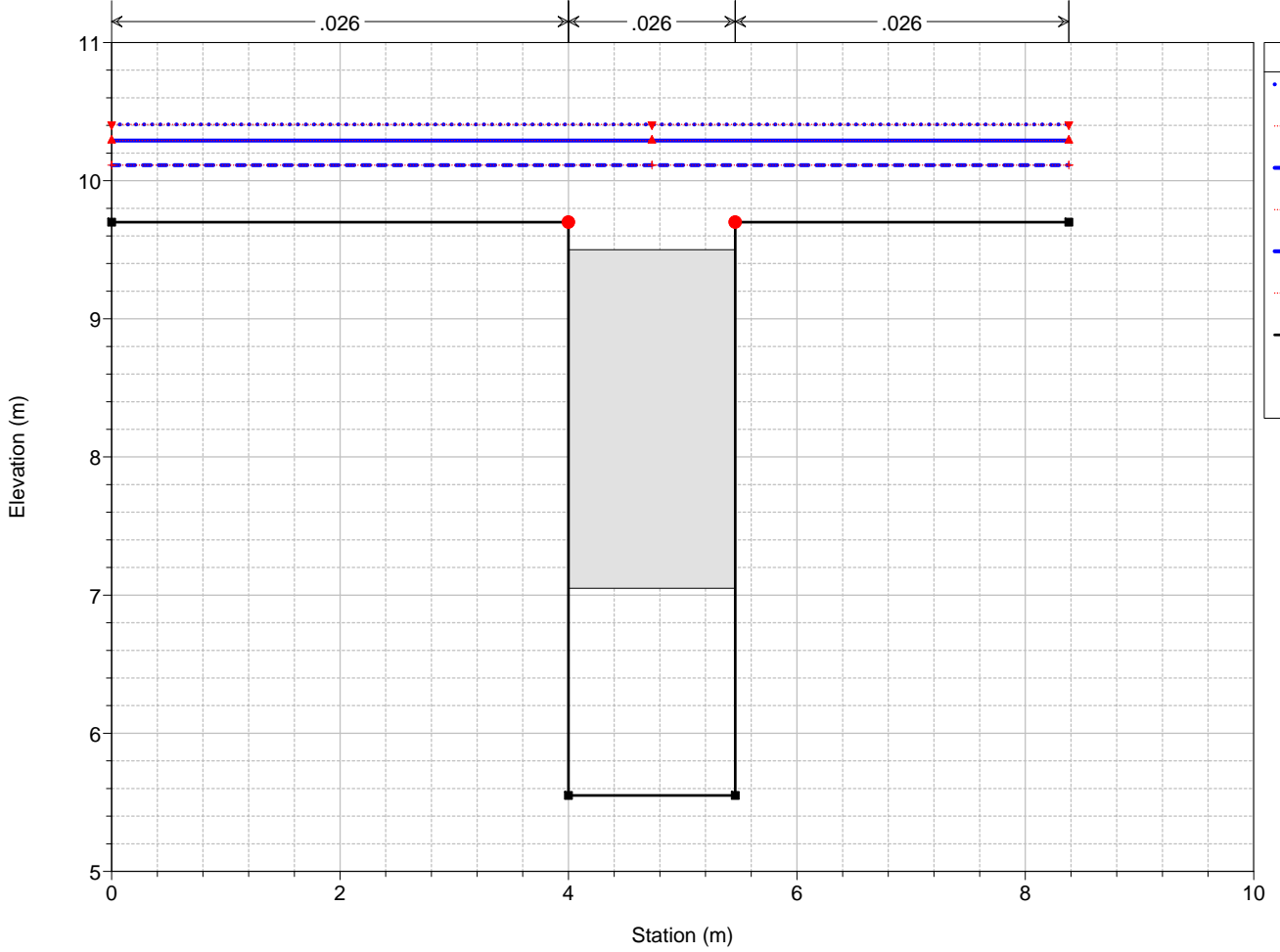
RS = 60



- Legend**
- PL Tr50
 - PL Tr200
 - ... PL Tr500
 - ▼ Crit Tr500
 - ▲ Crit Tr200
 - + Crit Tr50
 - Fondo
 - Sponda

rioritorto.lid.reale.rev01

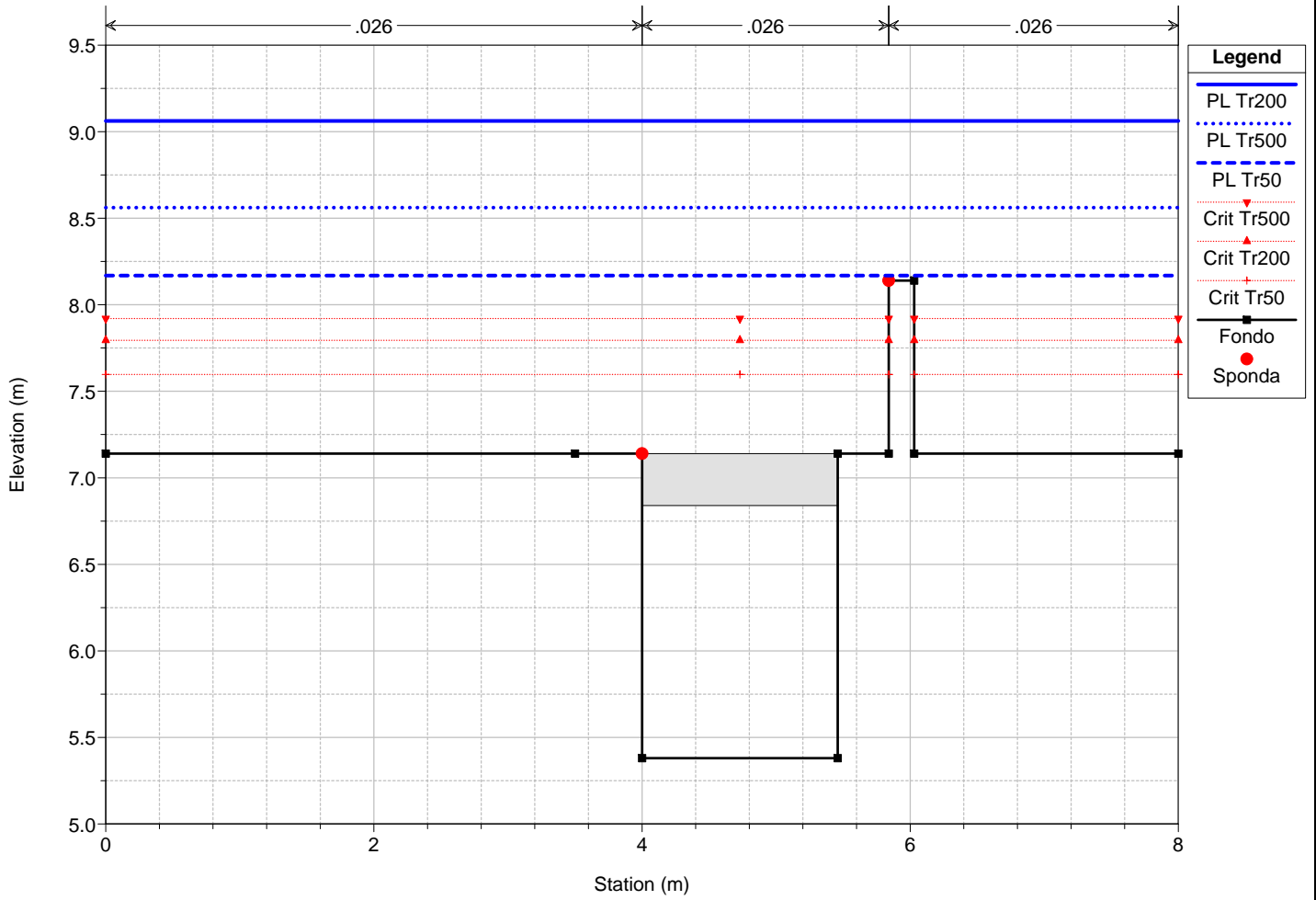
RS = 55



- Legend**
- ... PL Tr500
 - ▼ Crit Tr500
 - PL Tr200
 - ▲ Crit Tr200
 - PL Tr50
 - + Crit Tr50
 - Fondo
 - Sponda

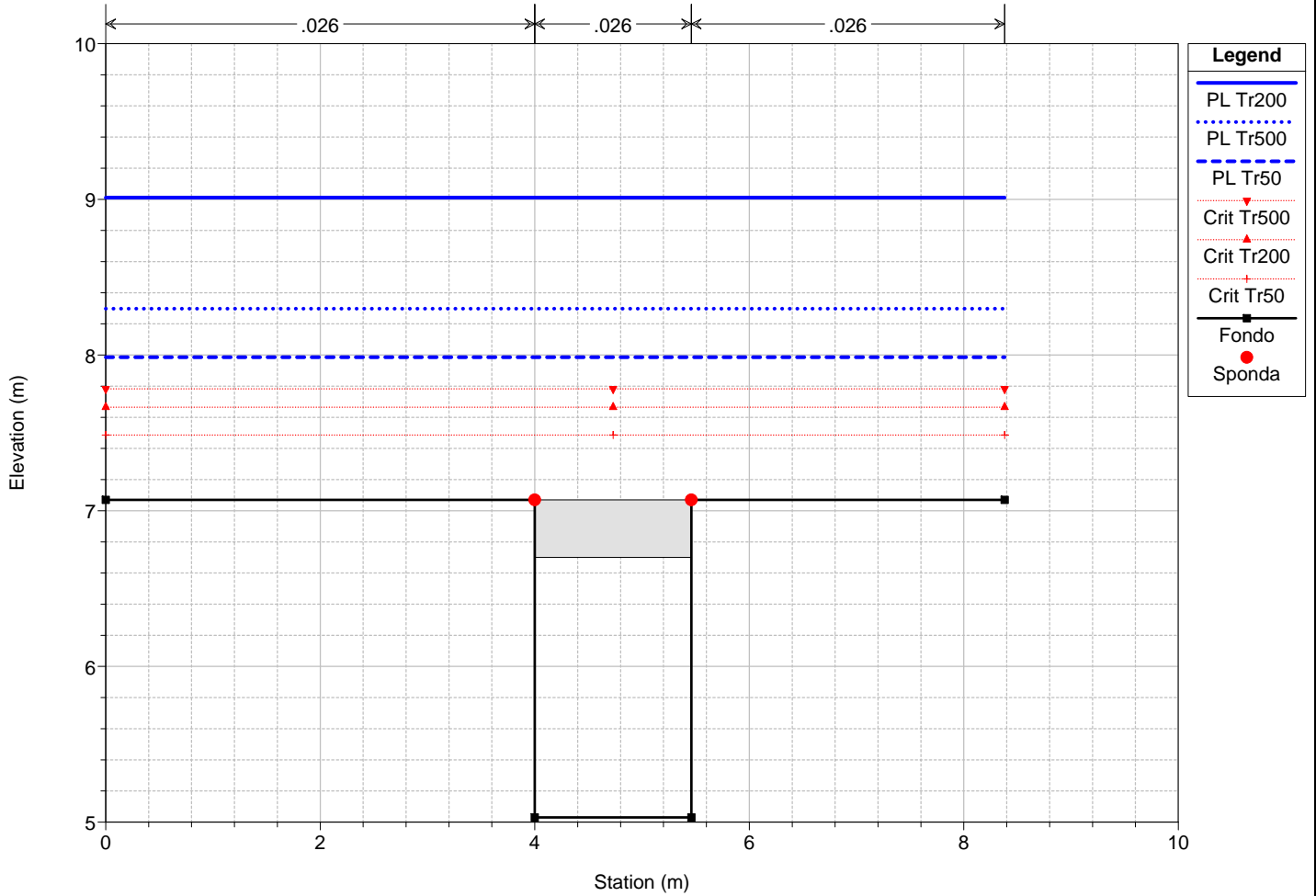
rioritorto.lid.reale.rev01

RS = 50

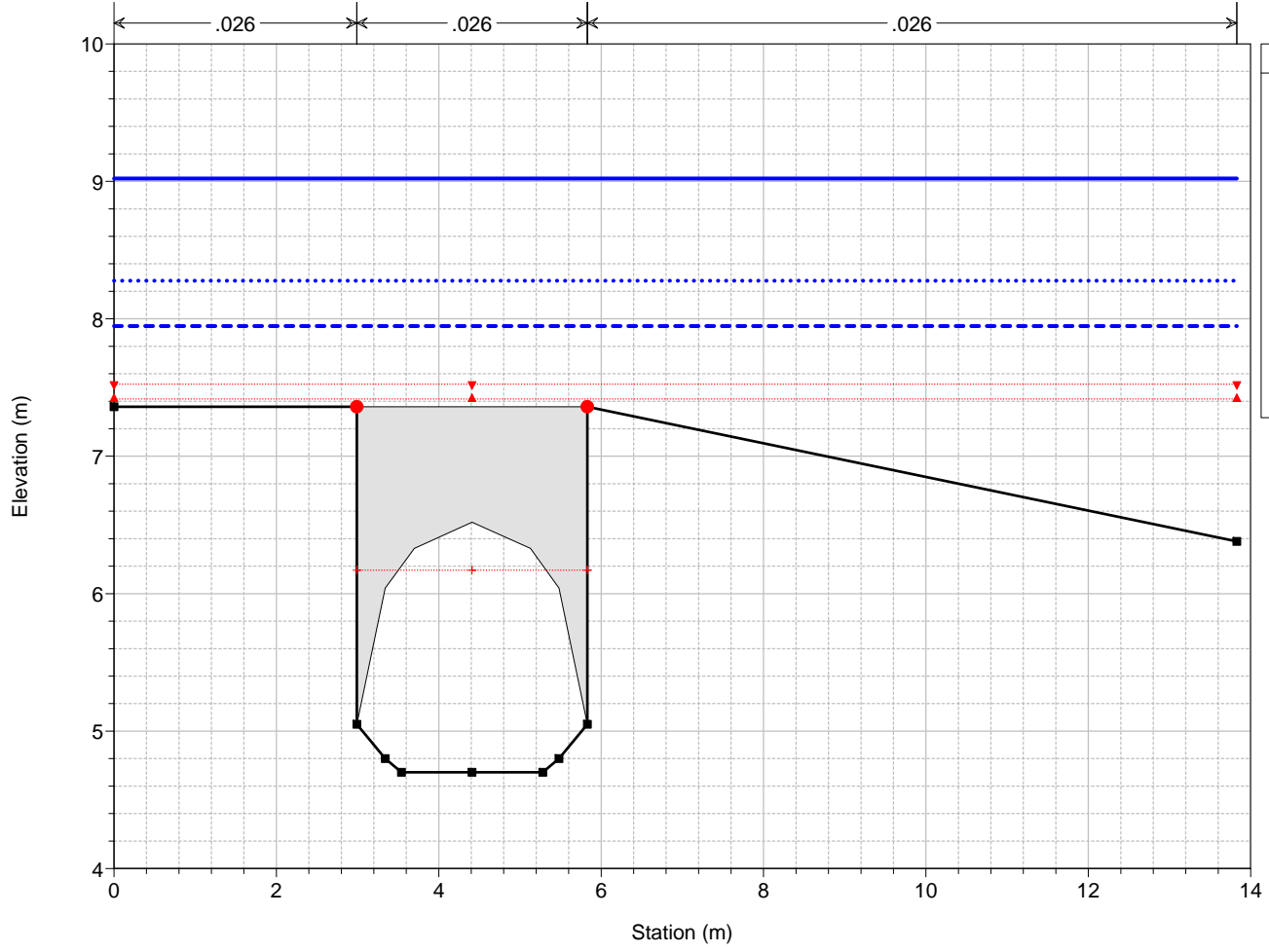


rioritorto.lid.reale.rev01

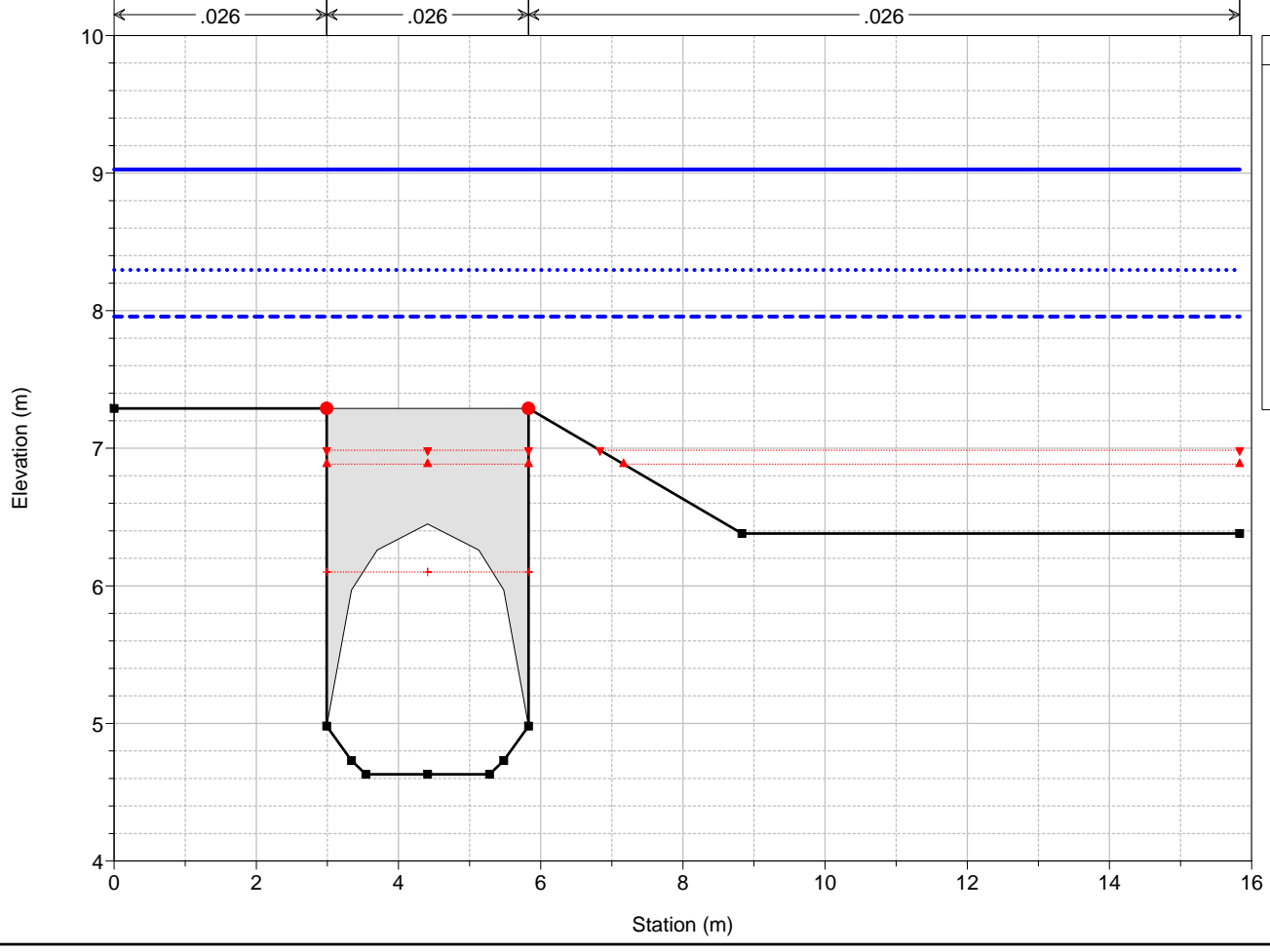
RS = 45



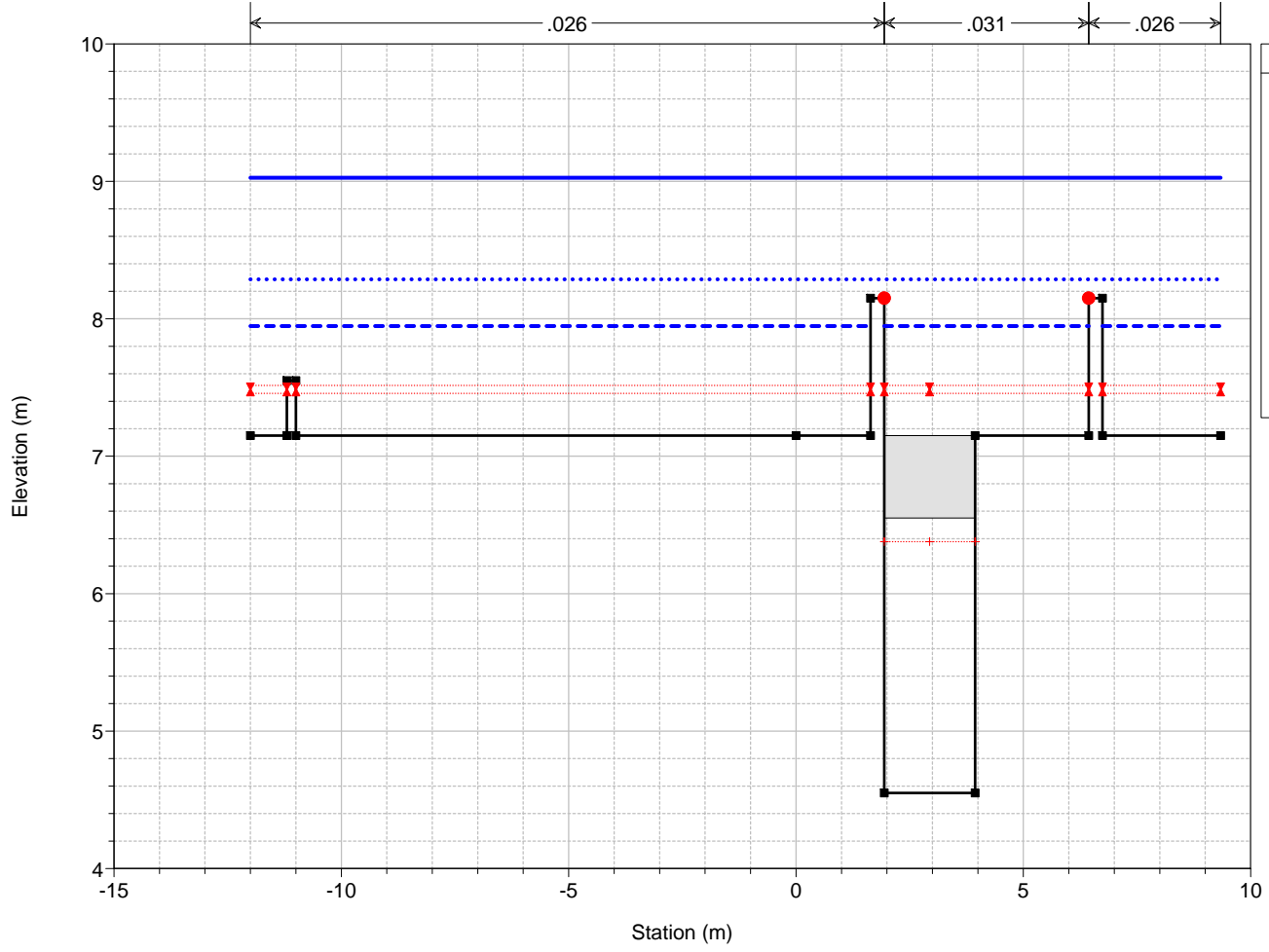
rioritorto.lid.reale.rev01
RS = 40



rioritorto.lid.reale.rev01
RS = 35

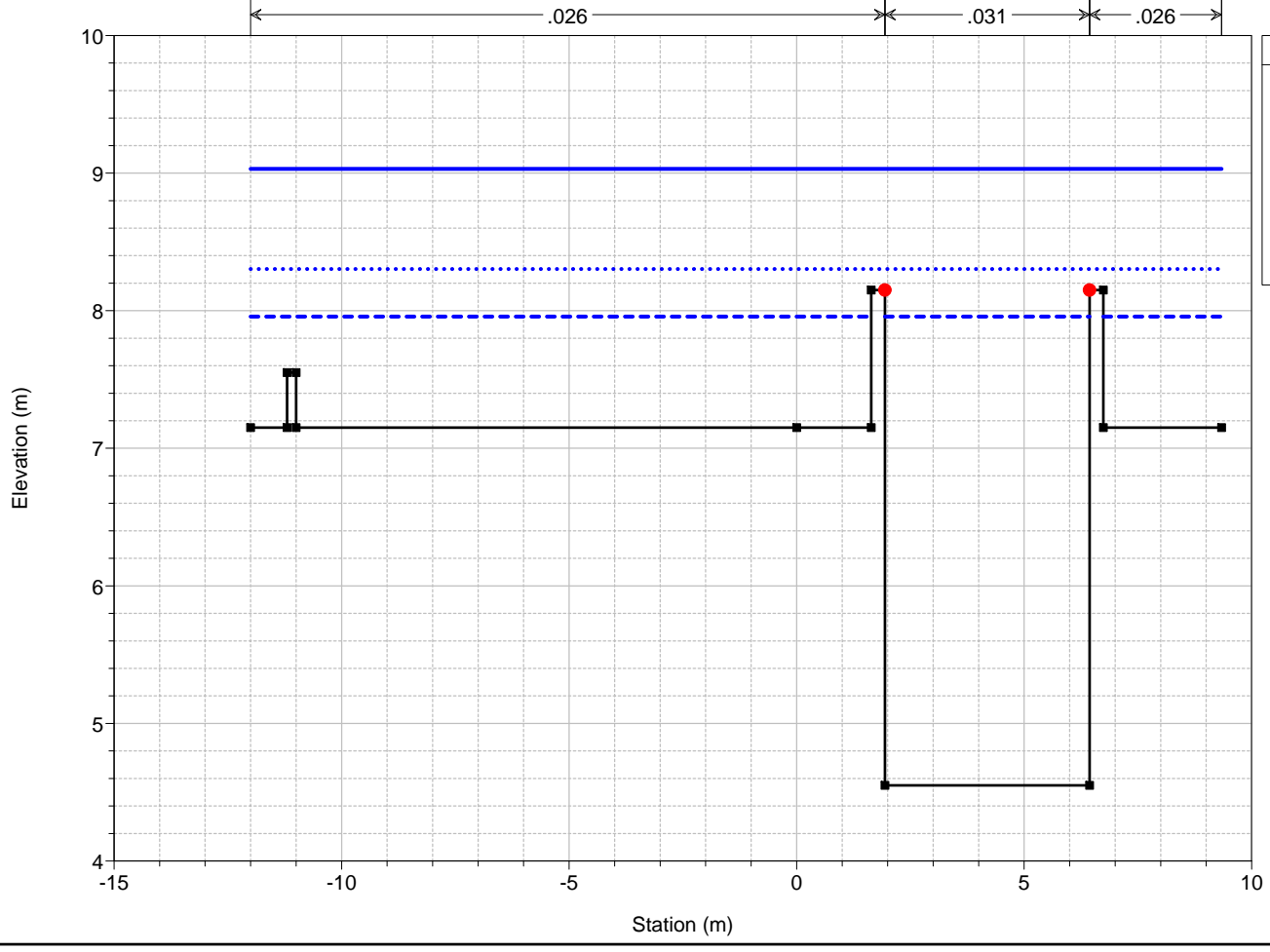


rioritorto.lid.reale.rev01
RS = 30



- Legend**
- PL Tr200
 - PL Tr500
 - PL Tr50
 - Crit Tr500
 - Crit Tr200
 - Crit Tr50
 - Fondo
 - Sponda

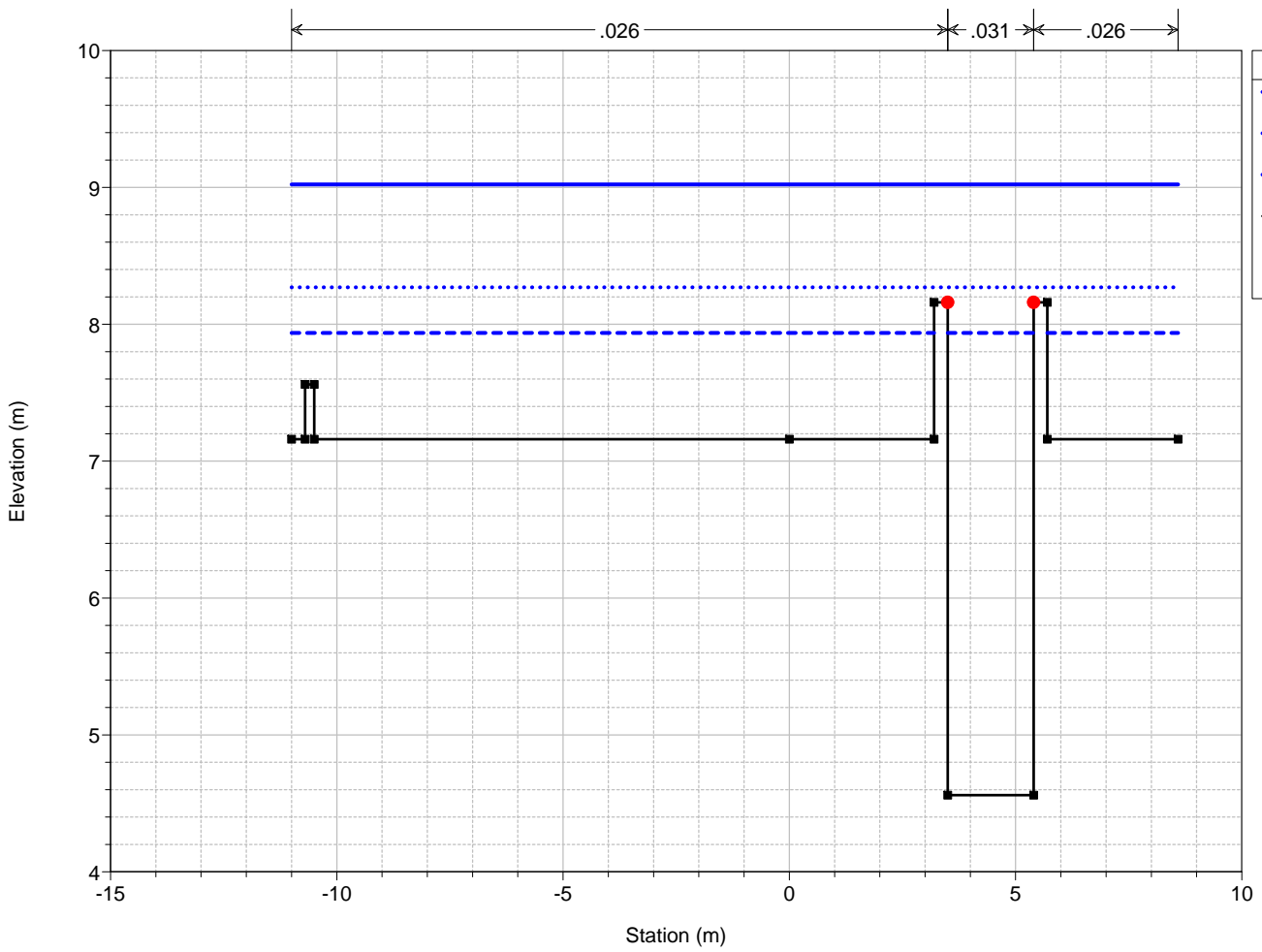
rioritorto.lid.reale.rev01
RS = 29



- Legend**
- PL Tr200
 - PL Tr500
 - PL Tr50
 - Fondo
 - Sponda

rioritorto.lid.reale.rev01

RS = 25

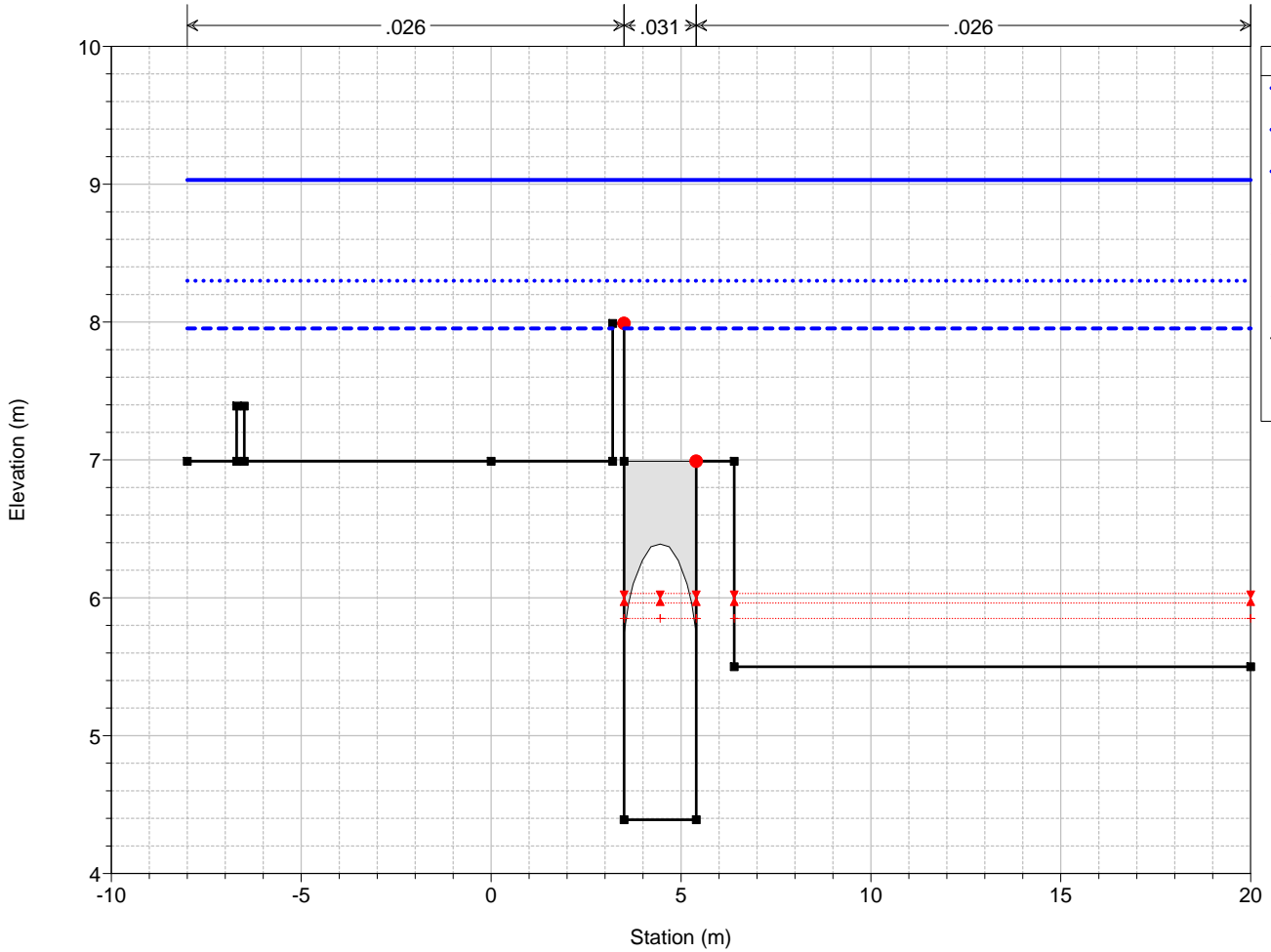


Legend

- PL Tr200
- PL Tr500
- PL Tr50
- Fondo
- Sponda

rioritorto.lid.reale.rev01

RS = 20

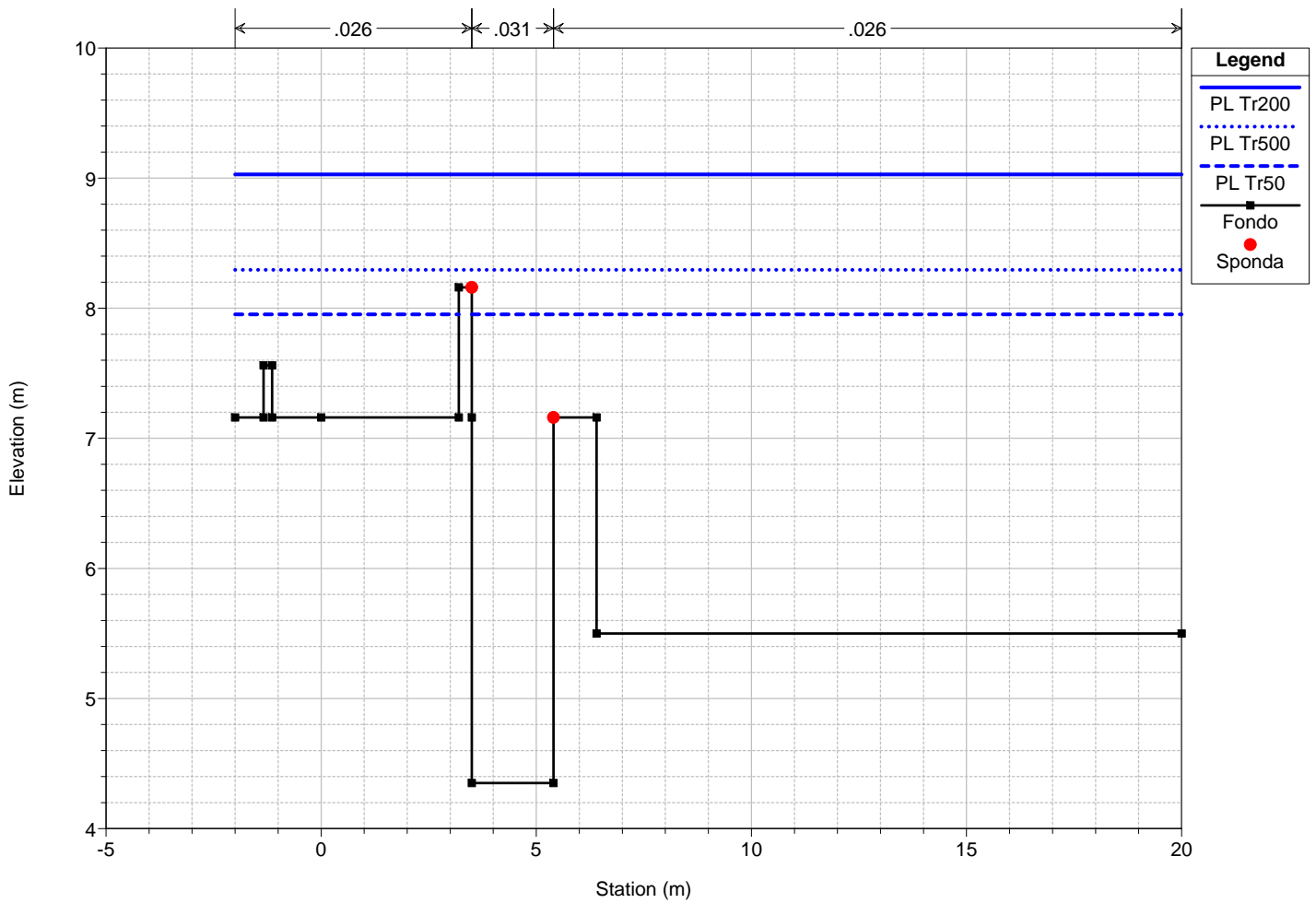


Legend

- PL Tr200
- PL Tr500
- PL Tr50
- Crit Tr500
- Crit Tr200
- Crit Tr50
- Fondo
- Sponda

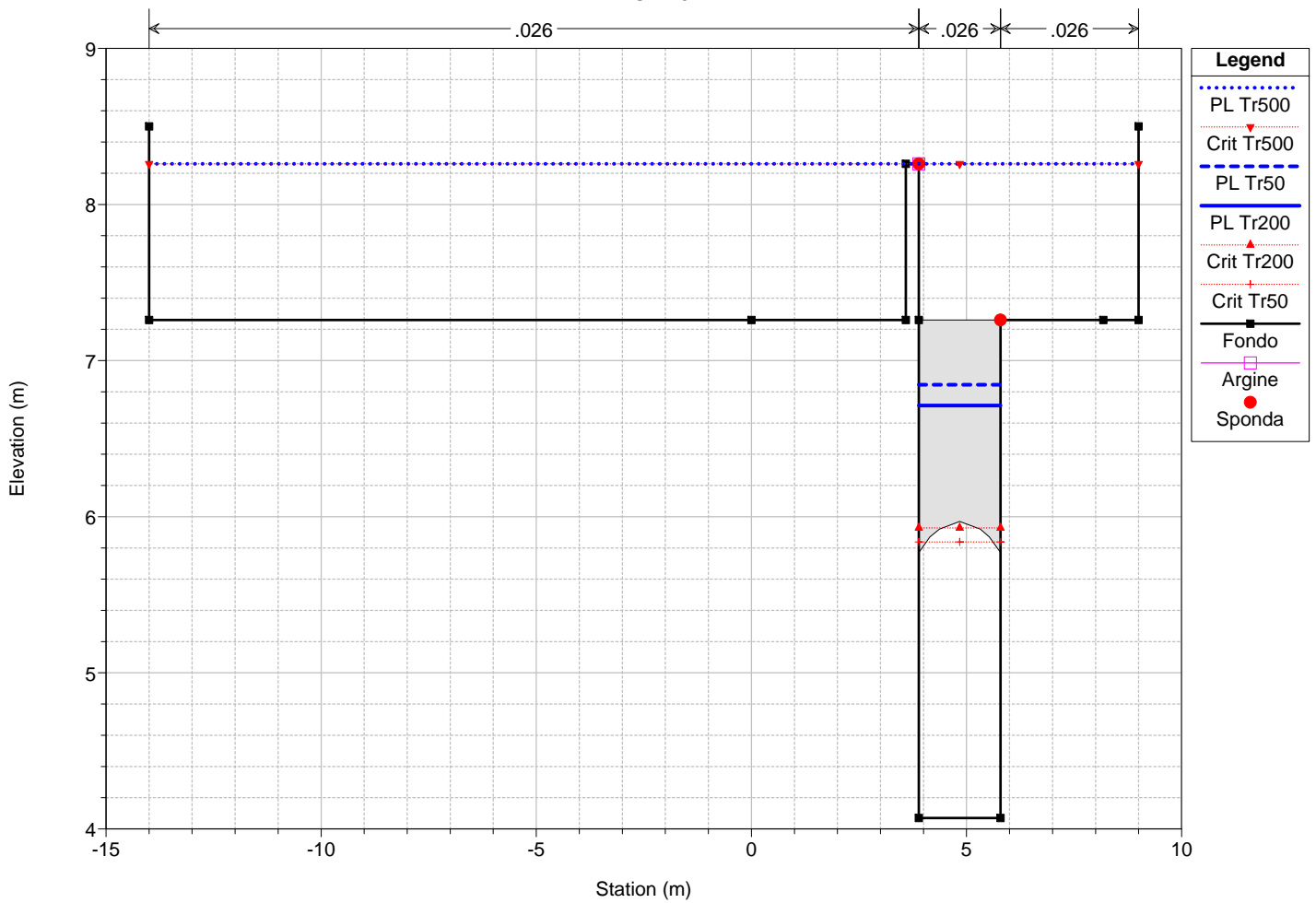
rioritorto.lid.reale.rev01

RS = 15



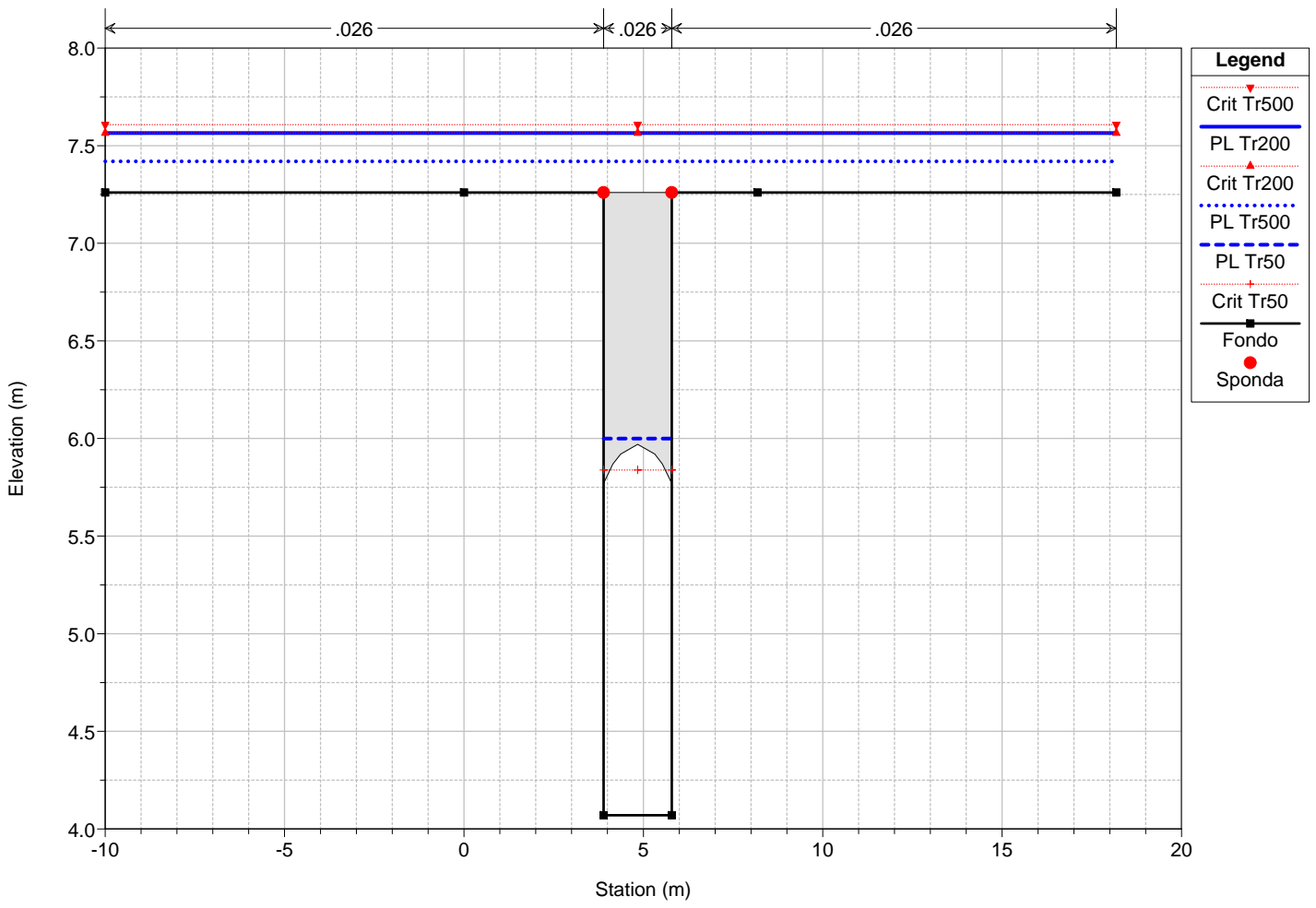
rioritorto.lid.reale.rev01

RS = 10



rioritorto.lid.reale.rev01

RS = 5



Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
t. letimbro	135	Tr50	7.81	20.00	21.56	22.17	0.61	22.37	0.81	21.14	21.83	0.009788	2.33	3.36	2.32	0.62
t. letimbro	135	Tr200	11.30	20.00	22.12	22.17	0.05	22.37	0.25	21.45	22.41	0.008745	2.41	4.69	2.45	0.56
t. letimbro	135	Tr500	13.59	20.00	22.48	22.17	-0.31	22.37	-0.11	21.63	22.73	0.006564	2.27	6.39	6.34	0.48
t. letimbro	130	Tr50	7.81	19.59	21.46	22.17	0.71	22.37	0.91		21.65	0.006169	1.94	4.03	2.33	0.47
t. letimbro	130	Tr200	11.30	19.59	22.01	22.17	0.16	22.37	0.36		22.23	0.006393	2.11	5.34	2.43	0.46
t. letimbro	130	Tr500	13.59	19.59	22.35	22.17	-0.18	22.37	0.02		22.58	0.005924	2.14	6.56	4.50	0.43
t. letimbro	125	Tr50	7.81	19.48	20.85	22.17	1.32	22.37	1.52	20.85	21.54	0.045426	3.67	2.13	1.99	1.00
t. letimbro	125	Tr200	11.30	19.48	21.24	22.17	0.93	22.37	1.13	21.24	22.11	0.049370	4.15	2.72	1.99	1.00
t. letimbro	125	Tr500	13.59	19.48	21.47	22.17	0.70	22.37	0.90	21.47	22.46	0.051715	4.41	3.08	1.99	1.00
t. letimbro	120	Tr50	7.81	19.02	19.75	21.11	1.36	21.11	1.36	20.24	21.45	0.241858	5.76	1.36	1.85	2.15
t. letimbro	120	Tr200	11.30	19.02	19.99	21.11	1.12	21.11	1.12	20.58	22.01	0.237226	6.30	1.79	1.85	2.04
t. letimbro	120	Tr500	13.59	19.02	20.13	21.11	0.98	21.11	0.98	20.78	22.35	0.238465	6.59	2.06	1.85	1.99
t. letimbro	115	Tr50	7.81	18.61	19.38	21.11	1.73	21.11	1.73	19.83	20.93	0.214378	5.51	1.42	1.85	2.01
t. letimbro	115	Tr200	11.30	18.61	19.62	21.11	1.49	21.11	1.49	20.17	21.49	0.215355	6.07	1.86	1.85	1.93
t. letimbro	115	Tr500	13.59	18.61	19.76	21.11	1.35	21.11	1.35	20.37	21.83	0.217664	6.37	2.14	1.85	1.89
t. letimbro	110	Tr50	7.81	18.61	19.23	21.11	1.88	21.11	1.88	19.64	20.65	0.062511	5.28	1.48	2.40	2.15
t. letimbro	110	Tr200	11.30	18.61	20.69	21.11	0.42	21.11	0.42	19.92	20.95	0.005010	2.27	4.98	2.40	0.50
t. letimbro	110	Tr500	13.59	18.61	21.03	21.11	0.08	21.11	0.08	20.09	21.31	0.004973	2.34	5.80	2.40	0.48
t. letimbro	105		Culvert													
t. letimbro	90	Tr50	7.81	14.31	16.38	16.81	0.43	16.81	0.43	15.34	16.51	0.002407	1.57	4.97	2.40	0.35
t. letimbro	90	Tr200	11.30	14.31	16.97	16.81	-0.16	16.81	-0.16	15.62	17.16	0.004612	1.88	6.00		0.37
t. letimbro	90	Tr500	13.59	14.31	18.48	16.81	-1.67	16.81	-1.67	15.79	18.74	0.006671	2.27	6.00		0.35
t. letimbro	85	Tr50	11.28	14.22	15.68	16.60	0.92	16.60	0.92	15.70	16.44	0.020178	3.86	2.92	2.00	1.02
t. letimbro	85	Tr200	16.32	14.22	16.12	16.60	0.48	16.60	0.48	16.12	17.06	0.022020	4.30	3.79	2.00	1.00
t. letimbro	85	Tr500	19.64	14.22	17.77	16.60	-1.17	16.60	-1.17	16.36	18.64	0.025954	4.13	4.76		0.70
t. letimbro	80	Tr50	11.28	12.26	13.58	14.76	1.18	14.76	1.18	13.74	14.51	0.026202	4.27	2.64	2.00	1.19
t. letimbro	80	Tr200	16.32	12.26	14.37	14.76	0.39	14.76	0.39	14.15	15.13	0.016936	3.87	4.22	2.00	0.85
t. letimbro	80	Tr500	19.64	12.26	15.80	14.76	-1.04	14.76	-1.04	14.40	16.59	0.022835	3.93	5.00		0.67
t. letimbro	75	Tr50	11.28	9.60	11.88	12.10	0.22	12.10	0.22	11.08	12.19	0.006740	2.48	4.55	2.00	0.52
t. letimbro	75	Tr200	16.32	9.60	12.84	12.10	-0.74	12.10	-0.74	11.49	13.38	0.015768	3.26	5.00		0.58
t. letimbro	75	Tr500	19.64	9.60	13.38	12.10	-1.28	12.10	-1.28	11.74	14.17	0.022835	3.93	5.00		0.65
t. letimbro	70	Tr50	11.28	5.60	12.12	15.62	3.50	15.62	3.50	7.08	12.16	0.000761	0.86	13.05	2.00	0.11
t. letimbro	70	Tr200	16.32	5.60	13.27	15.62	2.35	15.62	2.35	7.49	13.33	0.001120	1.06	15.34	2.00	0.12
t. letimbro	70	Tr500	19.64	5.60	14.03	15.62	1.59	15.62	1.59	7.74	14.09	0.001327	1.17	16.85	2.00	0.13
t. letimbro	65	Tr50	15.45	5.60	12.09	15.62	3.53	15.62	3.53	7.43	12.16	0.001445	1.19	12.97	2.00	0.15
t. letimbro	65	Tr200	22.35	5.60	13.21	15.62	2.41	15.62	2.41	7.94	13.32	0.002136	1.47	15.23	2.00	0.17
t. letimbro	65	Tr500	26.89	5.60	13.96	15.62	1.66	15.62	1.66	8.24	14.09	0.002533	1.61	16.71	2.00	0.18

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
t. letimbro	60	Tr50	15.45	5.60	10.70	7.10	-3.60	7.12	-3.58	7.11	12.03	0.067772	5.12	3.02		0.72
t. letimbro	60	Tr200	22.35	5.60	10.26	7.10	-3.16	7.12	-3.14	7.11	13.06	0.141823	7.40	3.02		1.09
t. letimbro	60	Tr500	26.89	5.60	9.65	7.10	-2.55	7.12	-2.53	7.12	13.69	0.205293	8.90	3.02		1.41
t. letimbro	55	Tr50	15.45	5.55	10.11	7.05	-3.06	7.05	-3.06	10.11	10.46	0.016467	2.66	5.94	8.38	0.39
t. letimbro	55	Tr200	22.35	5.55	10.29	7.05	-3.24	7.05	-3.24	10.29	10.76	0.016738	2.83	7.43	8.38	0.44
t. letimbro	55	Tr500	26.89	5.55	10.41	7.05	-3.36	7.05	-3.36	10.41	10.94	0.016157	2.88	8.41	8.38	0.47
t. letimbro	50	Tr50	15.45	5.38	8.17	6.84	-1.33	6.84	-1.33	7.60	8.30	0.003059	1.27	10.17	8.00	0.31
t. letimbro	50	Tr200	22.35	5.38	9.06	6.84	-2.22	6.84	-2.22	7.79	9.16	0.001200	1.00	17.32	8.00	0.23
t. letimbro	50	Tr500	26.89	5.38	8.56	6.84	-1.72	6.84	-1.72	7.92	8.80	0.003927	1.61	13.31	8.00	0.38
t. letimbro	45	Tr50	15.45	5.03	7.99	6.70	-1.29	6.70	-1.29	7.49	8.11	0.002903	1.29	10.11	8.38	0.29
t. letimbro	45	Tr200	22.35	5.03	9.01	6.70	-2.31	6.70	-2.31	7.66	9.09	0.000875	0.88	18.70	8.38	0.20
t. letimbro	45	Tr500	26.89	5.03	8.30	6.70	-1.60	6.70	-1.60	7.78	8.54	0.004192	1.67	12.73	8.38	0.39
t. letimbro	40	Tr50	15.45	4.70	7.95	5.05	-2.90	5.05	-2.90	6.17	8.00	0.000984	0.80	15.97	13.83	0.18
t. letimbro	40	Tr200	22.35	4.70	9.02	5.05	-3.97	5.05	-3.97	7.42	9.05	0.000254	0.54	30.82	13.83	0.12
t. letimbro	40	Tr500	26.89	4.70	8.28	5.05	-3.23	5.05	-3.23	7.52	8.37	0.001328	1.03	20.54	13.83	0.23
t. letimbro	35	Tr50	15.45	4.63	7.96	4.98	-2.98	4.98	-2.98	6.10	7.99	0.000338	0.48	22.23	15.83	0.13
t. letimbro	35	Tr200	22.35	4.63	9.03	4.98	-4.05	4.98	-4.05	6.89	9.05	0.000121	0.38	39.15	15.83	0.09
t. letimbro	35	Tr500	26.89	4.63	8.30	4.98	-3.32	4.98	-3.32	6.99	8.35	0.000519	0.66	27.60	15.83	0.17
t. letimbro	30	Tr50	15.45	4.55	7.95	6.55	-1.40	6.55	-1.40	6.38	7.98	0.000849	0.62	20.45	20.74	0.14
t. letimbro	30	Tr200	22.35	4.55	9.03	6.55	-2.48	6.55	-2.48	7.46	9.04	0.000150	0.36	43.37	21.34	0.08
t. letimbro	30	Tr500	26.89	4.55	8.29	6.55	-1.74	6.55	-1.74	7.52	8.34	0.000980	0.74	27.59	21.34	0.17
t. letimbro	29	Tr50	15.45	4.55	7.96	8.15	0.19	8.15	0.19		7.97	0.000248	0.62	28.36	20.74	0.11
t. letimbro	29	Tr200	22.35	4.55	9.03	8.15	-0.88	8.15	-0.88		9.04	0.000087	0.43	51.15	21.34	0.07
t. letimbro	29	Tr500	26.89	4.55	8.30	8.15	-0.15	8.15	-0.15		8.33	0.000394	0.82	35.64	21.34	0.13
t. letimbro	25	Tr50	15.45	4.56	7.94	8.16	0.22	8.16	0.22		7.97	0.000806	0.75	19.61	18.99	0.13
t. letimbro	25	Tr200	22.35	4.56	9.02	8.16	-0.86	8.16	-0.86		9.04	0.000156	0.38	40.74	19.59	0.06
t. letimbro	25	Tr500	26.89	4.56	8.27	8.16	-0.11	8.16	-0.11		8.33	0.001011	0.87	26.00	19.59	0.14
t. letimbro	20	Tr50	15.45	4.39	7.95	5.74	-2.21	5.74	-2.21	5.85	7.96	0.000040	0.13	50.34	27.70	0.06
t. letimbro	20	Tr200	22.35	4.39	9.03	5.74	-3.29	5.74	-3.29	5.96	9.03	0.000020	0.12	80.46	28.00	0.04
t. letimbro	20	Tr500	26.89	4.39	8.30	5.74	-2.56	5.74	-2.56	6.03	8.31	0.000072	0.19	59.99	28.00	0.08
t. letimbro	15	Tr50	15.45	4.35	7.95	8.16	0.21	7.16	-0.79		7.96	0.000047	0.19	45.03	21.70	0.03
t. letimbro	15	Tr200	22.35	4.35	9.03	8.16	-0.87	7.16	-1.87		9.03	0.000028	0.17	68.63	22.00	0.03
t. letimbro	15	Tr500	26.89	4.35	8.29	8.16	-0.13	7.16	-1.13		8.31	0.000090	0.28	52.49	22.00	0.05
t. letimbro	10	Tr50	15.45	4.07	6.84	5.77	-1.07	5.77	-1.07	5.84	7.85	0.035602	4.44	3.48		0.85
t. letimbro	10	Tr200	22.35	4.07	6.71	5.77	-0.94	5.77	-0.94	5.93	8.82	0.074502	6.43	3.48		1.26
t. letimbro	10	Tr500	26.89	4.07	8.26	5.77	-2.49	5.77	-2.49	8.26	8.30	0.000722	0.88	30.66	23.00	0.14

HEC-RAS Plan: lid.reale.rev01 River: rio ritorto Reach: t. letimbro (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
t. letimbro	5	Tr50	15.45	4.07	6.00	5.77	-0.23	5.77	-0.23	5.84	7.01	0.035602	4.44	3.48		1.02
t. letimbro	5	Tr200	22.35	4.07	7.56	5.77	-1.79	5.77	-1.79	7.56	7.75	0.009603	2.19	12.07	28.18	0.32
t. letimbro	5	Tr500	26.89	4.07	7.42	5.77	-1.65	5.77	-1.65	7.61	8.17	0.044357	4.49	7.97	28.18	0.67