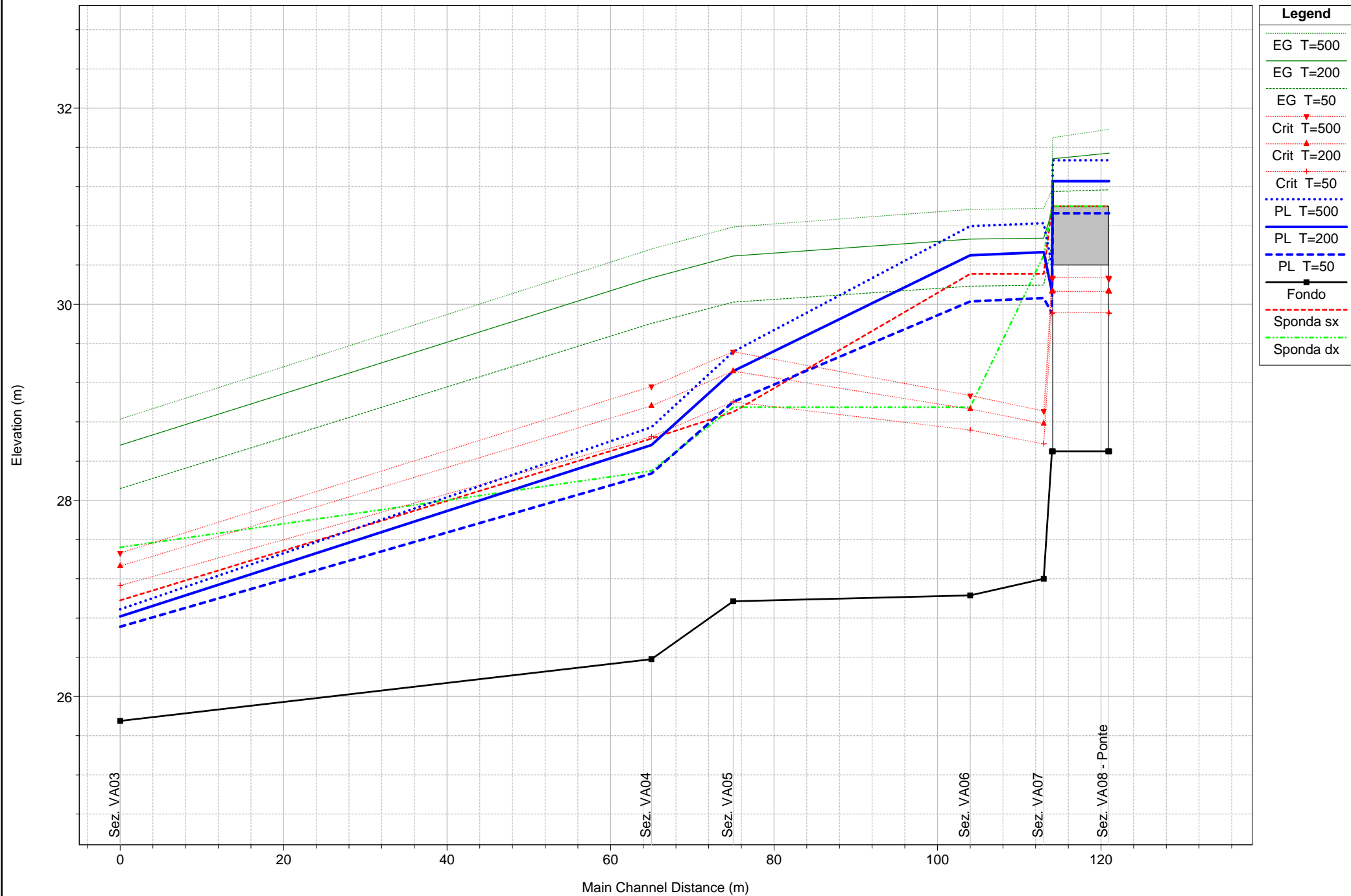
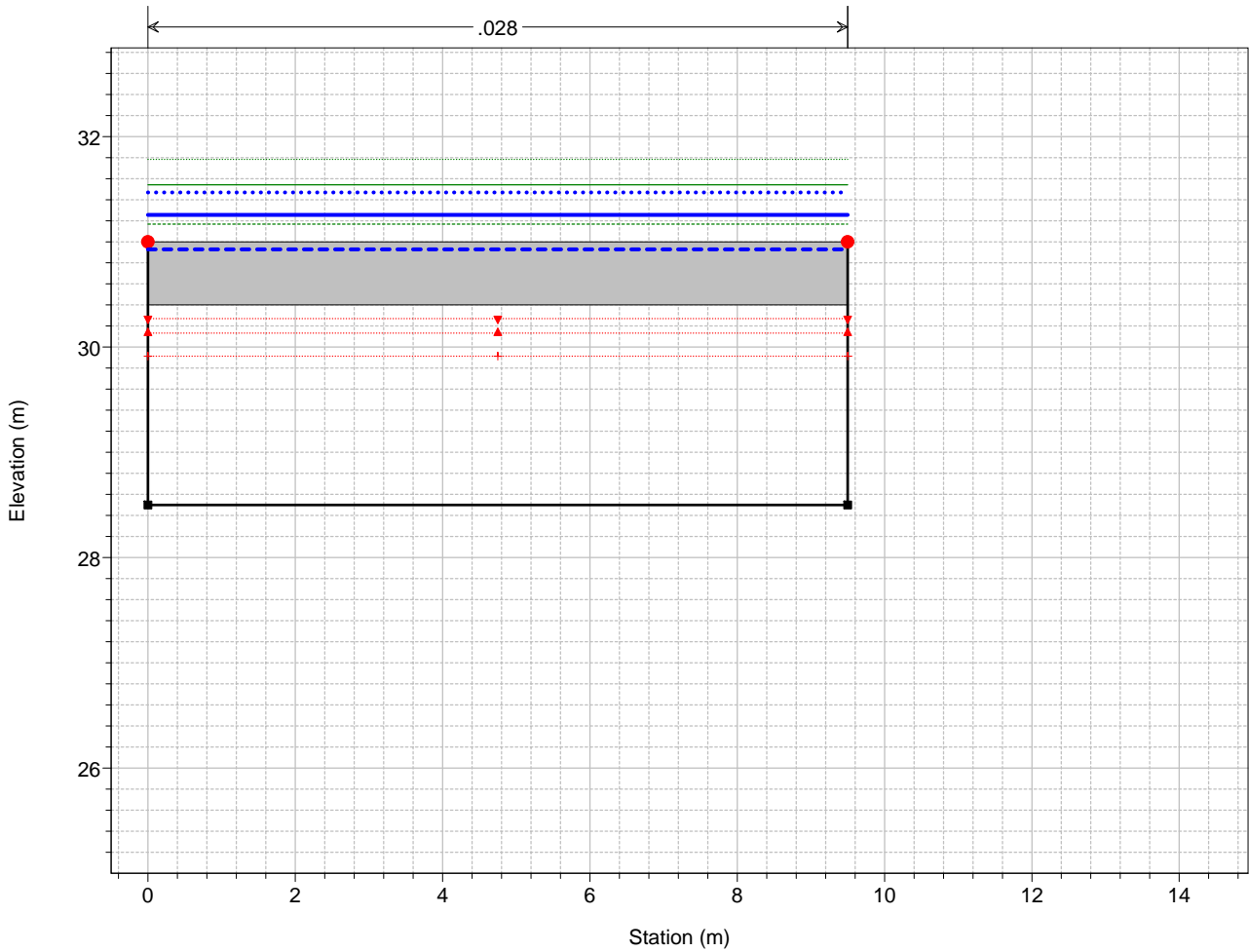


Rio Vallegrande



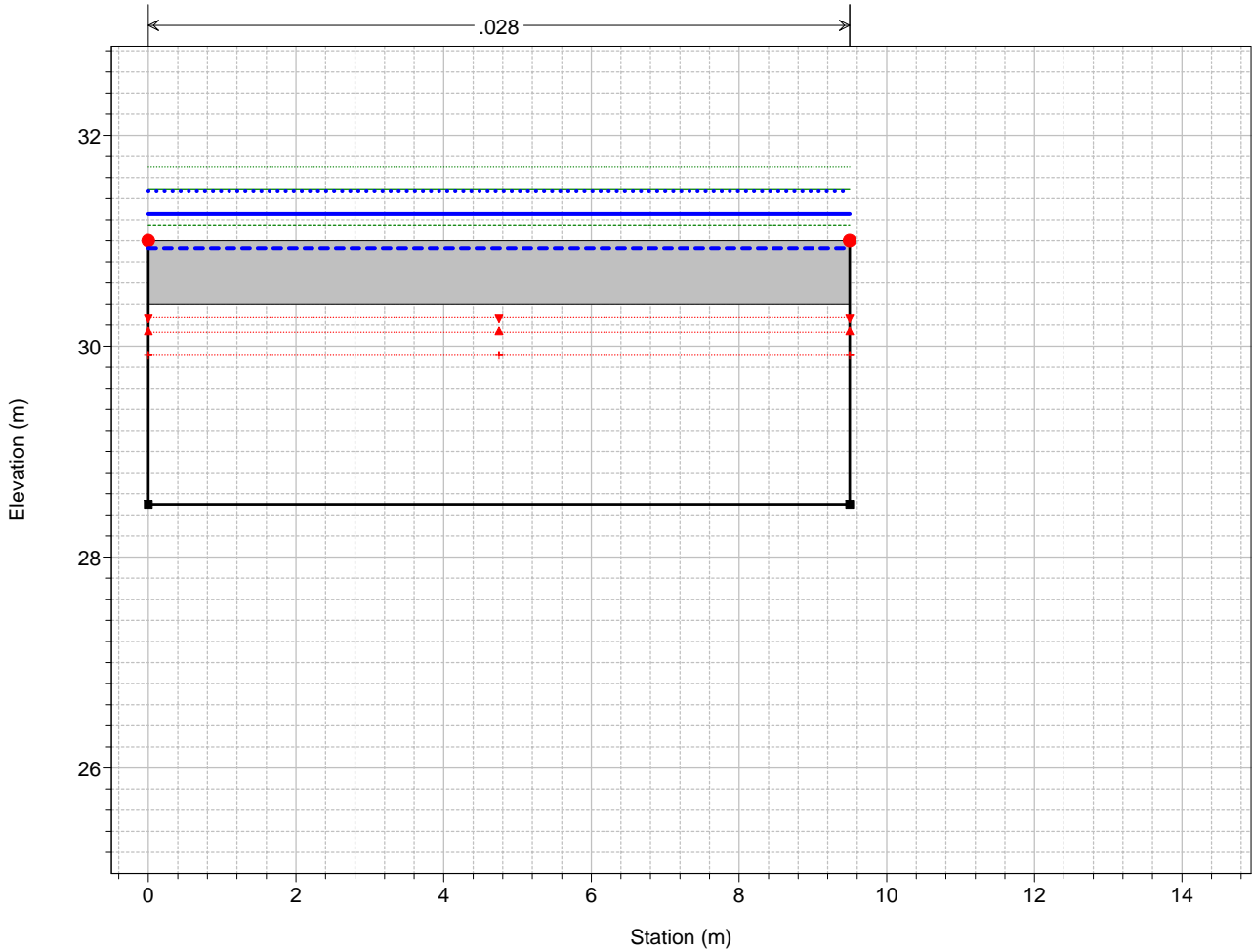
1 cm Horiz. = 6 m 1 cm Vert. = 0.5 m

Rio Vallegrande
Sez. VA08 - Ponte



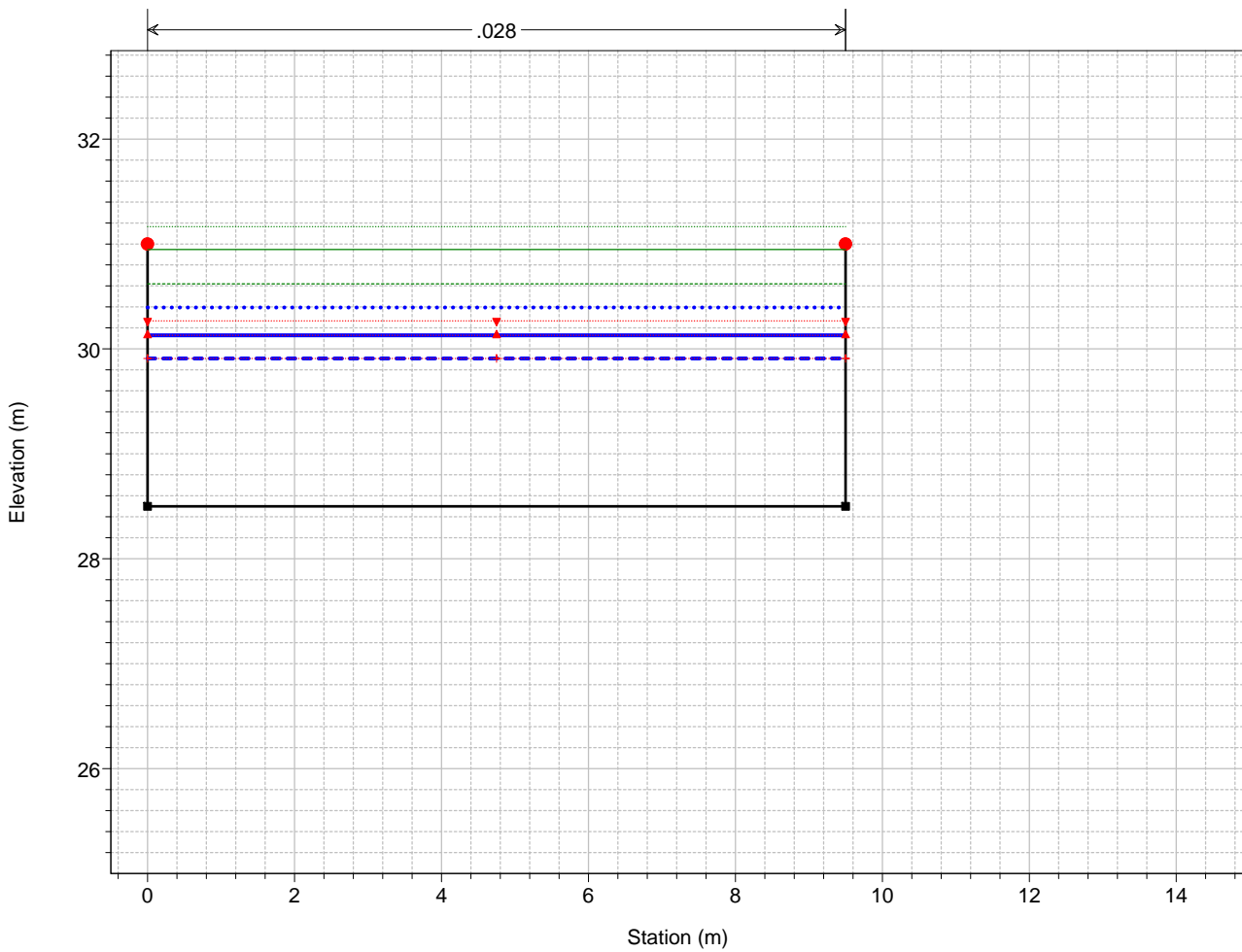
Legend	
EG T=500	(Green dotted line)
EG T=200	(Blue dotted line)
PL T=500	(Blue dashed line)
PL T=200	(Blue solid line)
EG T=50	(Green dashed line)
PL T=50	(Red dotted line)
Crit T=500	(Red inverted triangle)
Crit T=200	(Red triangle)
Crit T=50	(Red plus sign)
Fondo	(Black square)
Sponda	(Red circle)

Rio Vallegrande
Sez. VA08 - Ponte



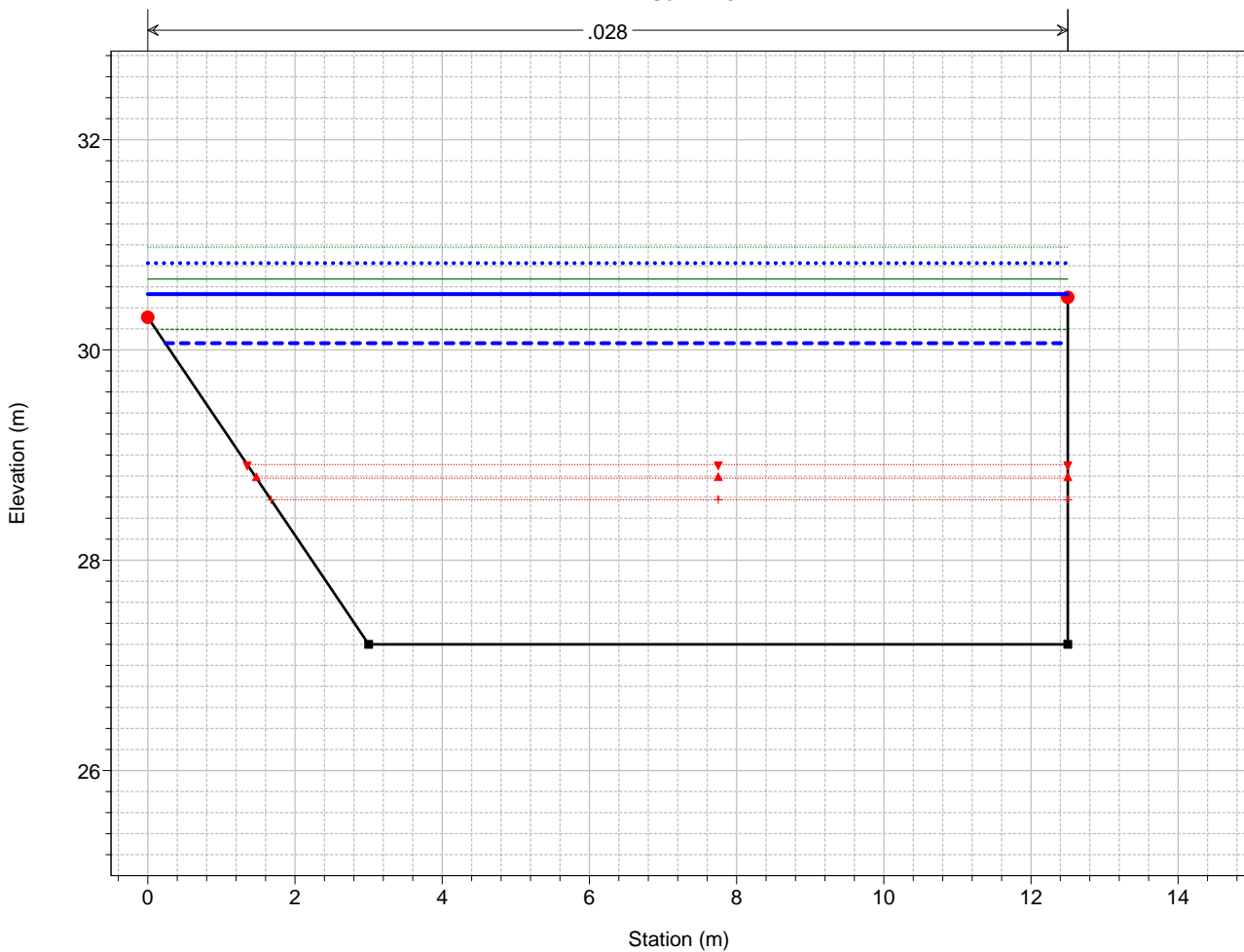
Legend	
EG T=500	(Green dotted line)
EG T=200	(Blue dotted line)
PL T=500	(Blue dashed line)
PL T=200	(Blue solid line)
EG T=50	(Green dashed line)
PL T=50	(Red dotted line)
Crit T=500	(Red inverted triangle)
Crit T=200	(Red triangle)
Crit T=50	(Red plus sign)
Fondo	(Black square)
Sponda	(Red circle)

Rio Vallegrande



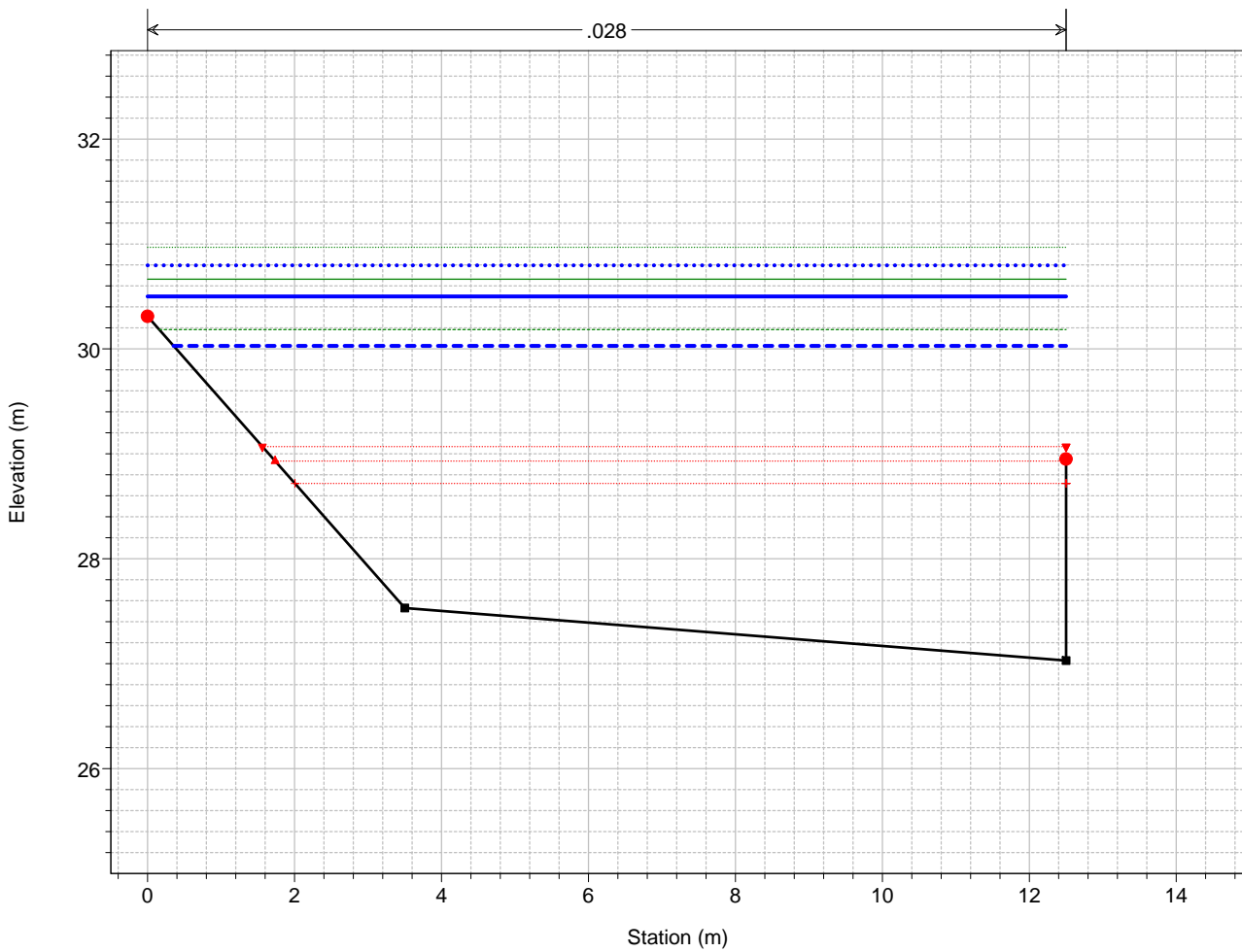
Legend	
EG T=500	—
EG T=200	—
EG T=50	—
PL T=500	—
Crit T=500	▼
Crit T=200	▲
PL T=200	—
PL T=50	—
Crit T=50	+
Fondo	■
Sponda	●

Rio Vallegrande Sez. VA07



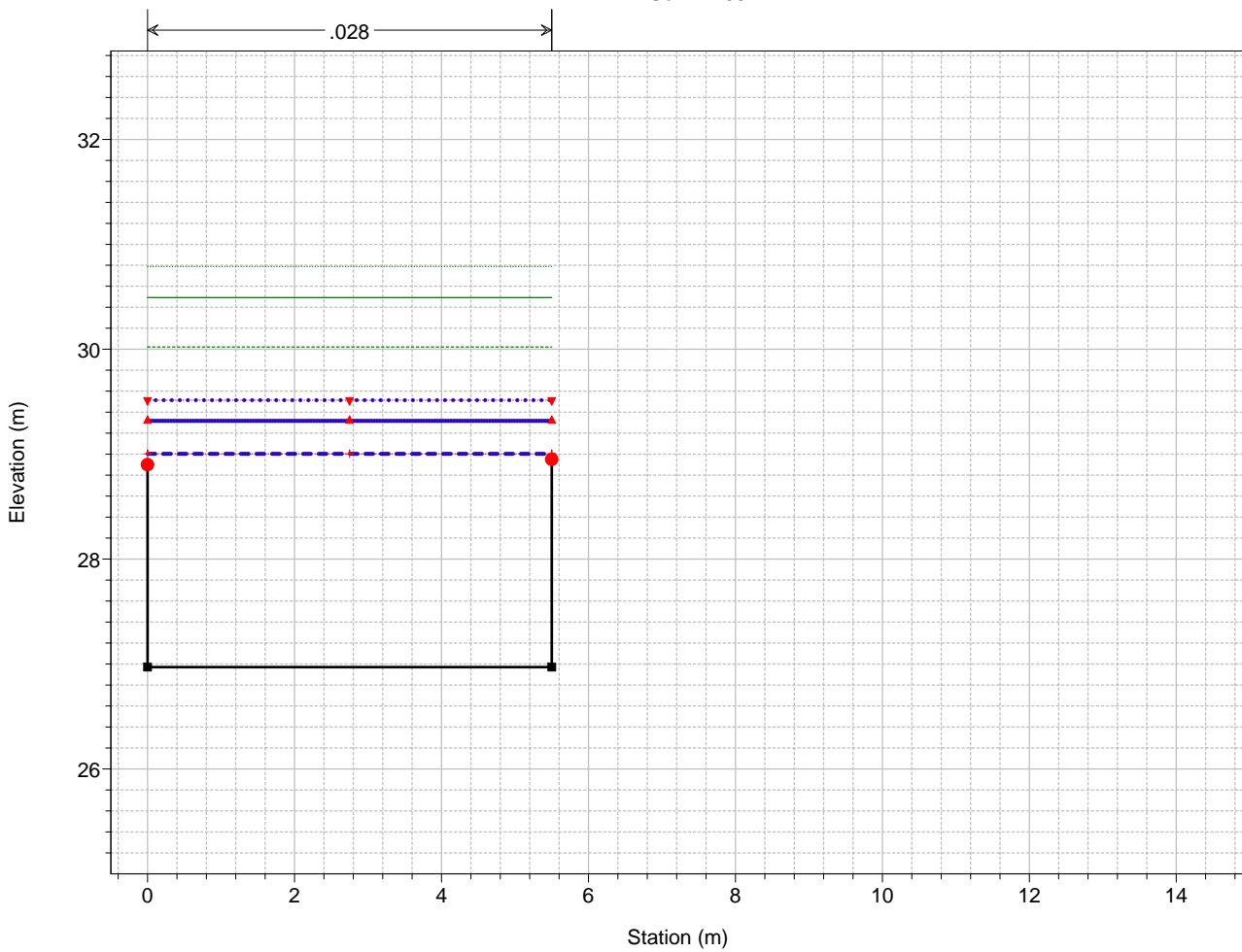
Legend	
EG T=500	—
PL T=500	—
EG T=200	—
PL T=200	—
EG T=50	—
PL T=50	—
Crit T=500	▼
Crit T=200	▲
Crit T=50	+
Fondo	■
Sponda	●

Rio Vallegrande
Sez. VA06



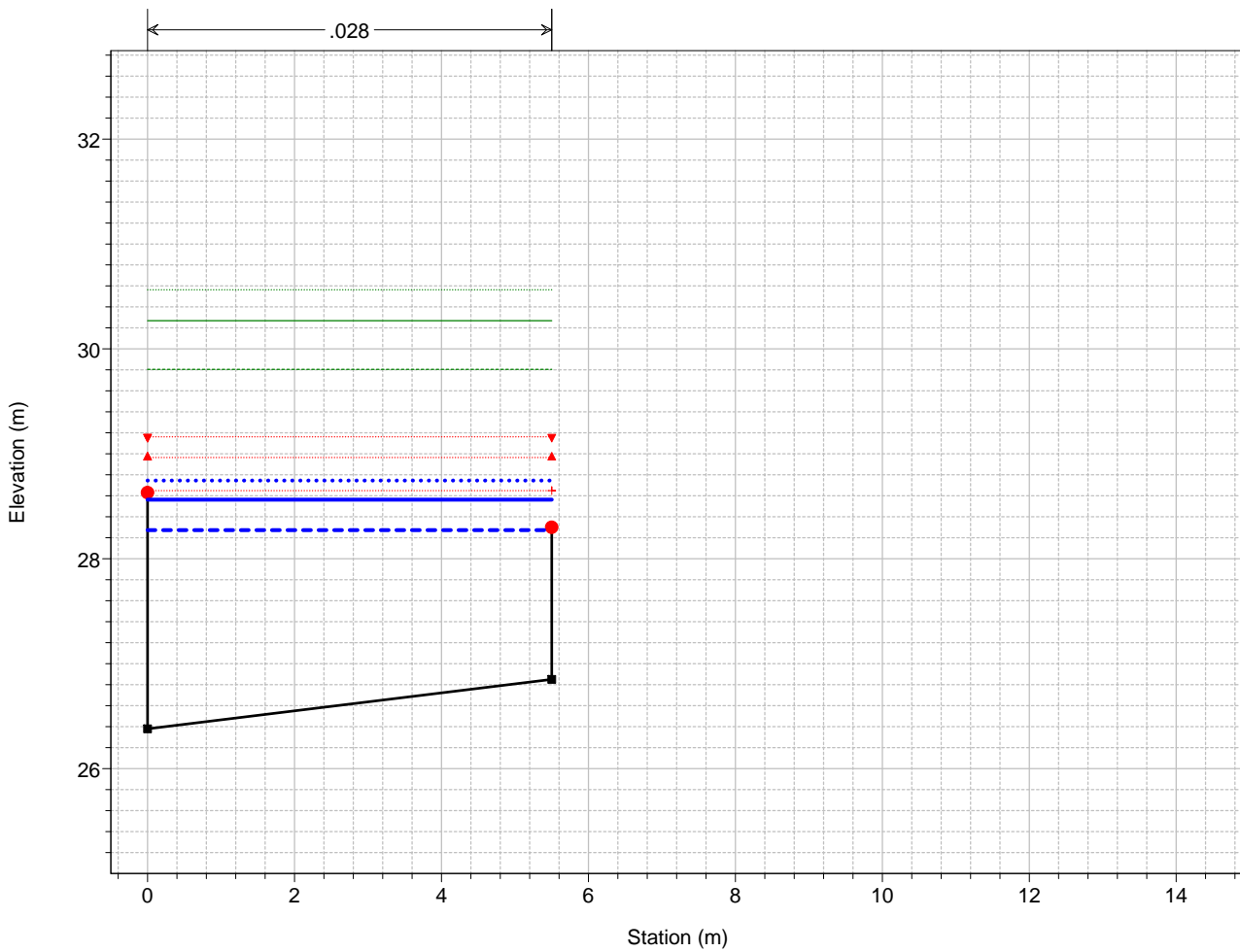
Legend	
EG T=500	(Green dotted line)
PL T=500	(Blue dotted line)
EG T=200	(Green solid line)
PL T=200	(Blue solid line)
EG T=50	(Green dashed line)
PL T=50	(Blue dashed line)
Crit T=500	(Red inverted triangle)
Crit T=200	(Red triangle)
Crit T=50	(Red plus sign)
Fondo	(Black line with square markers)
Sponda	(Red circle)

Rio Vallegrande
Sez. VA05



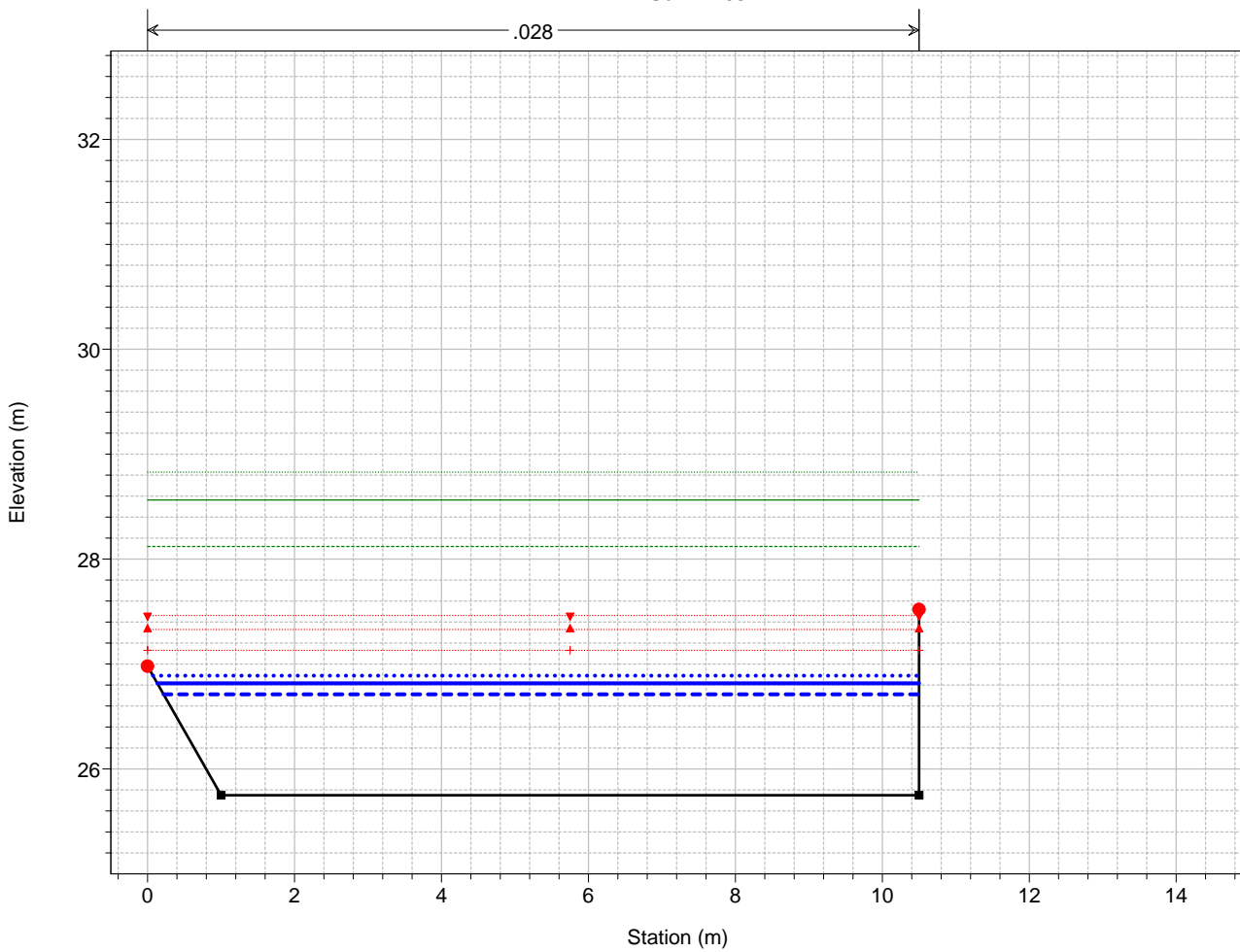
Legend	
EG T=500	(Green dotted line)
EG T=200	(Green solid line)
EG T=50	(Green dashed line)
PL T=500	(Blue dotted line)
Crit T=500	(Red inverted triangle)
Crit T=200	(Red triangle)
PL T=200	(Blue solid line)
PL T=50	(Blue dashed line)
Crit T=50	(Red plus sign)
Fondo	(Black line with square markers)
Sponda	(Red circle)

Rio Vallegrande
Sez. VA04



Legend	
EG T=500	(Dotted Green Line)
EG T=200	(Solid Green Line)
EG T=50	(Dotted Green Line)
Crit T=500	(Dotted Red Line with 'v' marker)
Crit T=200	(Dotted Red Line with '^' marker)
PL T=500	(Dotted Blue Line)
Crit T=50	(Dotted Red Line with '+' marker)
PL T=200	(Solid Blue Line)
PL T=50	(Dashed Blue Line)
Fondo	(Solid Black Line with square marker)
Sponda	(Red Circle)

Rio Vallegrande
Sez. VA03



Legend	
EG T=500	(Dotted Green Line)
EG T=200	(Solid Green Line)
EG T=50	(Dotted Green Line)
Crit T=500	(Dotted Red Line with 'v' marker)
Crit T=200	(Dotted Red Line with '^' marker)
Crit T=50	(Dotted Red Line with '+' marker)
PL T=500	(Dotted Blue Line)
PL T=200	(Solid Blue Line)
PL T=50	(Dashed Blue Line)
Fondo	(Solid Black Line with square marker)
Sponda	(Red Circle)

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
Tratto terminale	8.2	T=50	50.00	28.50	30.93	31.00	0.07	31.00	0.07	29.91	31.17	0.001956	2.17	23.07	9.50	0.44
Tratto terminale	8.2	T=200	62.00	28.50	31.26	31.00	-0.26	31.00	-0.26	30.13	31.54	0.002095	2.37	26.18	9.50	0.46
Tratto terminale	8.2	T=500	70.00	28.50	31.47	31.00	-0.47	31.00	-0.47	30.26	31.78	0.002161	2.48	28.21	9.50	0.46
Tratto terminale	8.11		Bridge													
Tratto terminale	8.1	T=50	50.00	28.50	29.91	31.00	1.09	31.00	1.09	29.91	30.62	0.009804	3.74	13.38	9.50	1.01
Tratto terminale	8.1	T=200	62.00	28.50	30.13	31.00	0.87	31.00	0.87	30.13	30.95	0.009709	4.00	15.49	9.50	1.00
Tratto terminale	8.1	T=500	70.00	28.50	30.40	31.00	0.60	31.00	0.60	30.27	31.17	0.007909	3.89	18.00	9.50	0.90
Tratto terminale	7	T=50	50.00	27.20	30.06	30.31	0.25	30.50	0.44	28.58	30.20	0.000854	1.60	31.16	12.26	0.32
Tratto terminale	7	T=200	62.00	27.20	30.53	30.31	-0.22	30.50	-0.03	28.78	30.67	0.000805	1.68	36.97	12.50	0.31
Tratto terminale	7	T=500	70.00	27.20	30.83	30.31	-0.52	30.50	-0.33	28.91	30.98	0.000782	1.72	40.67	12.50	0.30
Tratto terminale	6	T=50	50.00	27.03	30.03	30.31	0.28	28.95	-1.08	28.72	30.18	0.001098	1.74	28.67	12.15	0.36
Tratto terminale	6	T=200	62.00	27.03	30.50	30.31	-0.19	28.95	-1.55	28.93	30.66	0.000996	1.80	34.51	12.50	0.35
Tratto terminale	6	T=500	70.00	27.03	30.80	30.31	-0.49	28.95	-1.85	29.07	30.97	0.000945	1.83	38.22	12.50	0.33
Tratto terminale	5	T=50	50.00	26.97	29.00	28.90	-0.10	28.95	-0.05	29.00	30.02	0.012715	4.47	11.19	5.50	1.00
Tratto terminale	5	T=200	62.00	26.97	29.32	28.90	-0.42	28.95	-0.37	29.32	30.49	0.013199	4.80	12.91	5.50	1.00
Tratto terminale	5	T=500	70.00	26.97	29.52	28.90	-0.62	28.95	-0.57	29.52	30.79	0.013513	5.00	14.00	5.50	1.00
Tratto terminale	4	T=50	50.00	26.38	28.27	28.63	0.36	28.30	0.03	28.65	29.80	0.022597	5.48	9.12	5.50	1.36
Tratto terminale	4	T=200	62.00	26.38	28.56	28.63	0.07	28.30	-0.26	28.96	30.27	0.022073	5.78	10.72	5.50	1.32
Tratto terminale	4	T=500	70.00	26.38	28.75	28.63	-0.12	28.30	-0.45	29.16	30.56	0.021974	5.97	11.72	5.50	1.31
Tratto terminale	3	T=50	50.00	25.75	26.71	26.98	0.27	27.52	0.81	27.13	28.12	0.028616	5.26	9.51	10.28	1.75
Tratto terminale	3	T=200	62.00	25.75	26.82	26.98	0.16	27.52	0.70	27.33	28.56	0.031554	5.86	10.59	10.37	1.85
Tratto terminale	3	T=500	70.00	25.75	26.89	26.98	0.09	27.52	0.63	27.46	28.83	0.032568	6.17	11.34	10.43	1.89

Plan: Pv Rio Vallegrande Tratto terminale RS: 8.11 Profile: T=50

E.G. US. (m)	31.17	Element	Inside BR US	Inside BR DS
W.S. US. (m)	30.93	E.G. Elev (m)	31.17	31.15
Q Total (m3/s)	50.00	W.S. Elev (m)	30.93	30.93
Q Bridge (m3/s)	49.06	Crit W.S. (m)	29.91	29.91
Q Weir (m3/s)	0.94	Max Chl Dpth (m)	2.43	2.43
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	9.50	Flow Area (m2)		
Weir Submerg	0.00	Froude # Chl	0.57	0.57
Weir Max Depth (m)	0.17	Specif Force (m3)	40.80	40.80
Min El Weir Flow (m)	31.00	Hydr Depth (m)		
Min El Prs (m)	30.40	W.P. Total (m)	22.80	22.80
Delta EG (m)	0.55	Conv. Total (m3/s)		
Delta WS (m)	1.02	Top Width (m)		
BR Open Area (m2)	18.05	Frctn Loss (m)		
BR Open Vel (m/s)	2.72	C & E Loss (m)		
Coef of Q		Shear Total (N/m2)		
Br Sel Method	Press/Weir	Power Total (N/m s)	0.00	0.00

Plan: Pv Rio Vallegrande Tratto terminale RS: 8.11 Profile: T=200

E.G. US. (m)	31.54	Element	Inside BR US	Inside BR DS
W.S. US. (m)	31.26	E.G. Elev (m)	31.54	31.48
Q Total (m3/s)	62.00	W.S. Elev (m)	31.26	31.26
Q Bridge (m3/s)	56.57	Crit W.S. (m)	30.13	30.13
Q Weir (m3/s)	5.43	Max Chl Dpth (m)	2.76	2.76
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	9.50	Flow Area (m2)		
Weir Submerg	0.00	Froude # Chl	0.58	0.58
Weir Max Depth (m)	0.54	Specif Force (m3)	52.03	52.03
Min El Weir Flow (m)	31.00	Hydr Depth (m)		
Min El Prs (m)	30.40	W.P. Total (m)	32.30	32.30
Delta EG (m)	0.59	Conv. Total (m3/s)		
Delta WS (m)	1.13	Top Width (m)	9.50	9.50
BR Open Area (m2)	18.05	Frctn Loss (m)		
BR Open Vel (m/s)	3.13	C & E Loss (m)		
Coef of Q		Shear Total (N/m2)		
Br Sel Method	Press/Weir	Power Total (N/m s)	0.00	0.00

Plan: Pv Rio Vallegrande Tratto terminale RS: 8.11 Profile: T=500

E.G. US. (m)	31.78	Element	Inside BR US	Inside BR DS
W.S. US. (m)	31.47	E.G. Elev (m)	31.78	31.70
Q Total (m3/s)	70.00	W.S. Elev (m)	31.47	31.47
Q Bridge (m3/s)	60.56	Crit W.S. (m)	30.27	30.27
Q Weir (m3/s)	9.44	Max Chl Dpth (m)	2.97	2.97
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	9.50	Flow Area (m2)		
Weir Submerg	0.00	Froude # Chl	0.58	0.58
Weir Max Depth (m)	0.78	Specif Force (m3)	59.68	59.65
Min El Weir Flow (m)	31.00	Hydr Depth (m)		
Min El Prs (m)	30.40	W.P. Total (m)	32.30	32.30
Delta EG (m)	0.62	Conv. Total (m3/s)		
Delta WS (m)	1.07	Top Width (m)	9.50	9.50
BR Open Area (m2)	18.05	Frctn Loss (m)		
BR Open Vel (m/s)	3.35	C & E Loss (m)		
Coef of Q		Shear Total (N/m2)		
Br Sel Method	Press/Weir	Power Total (N/m s)	0.00	0.00

SCHEMA VERIFICA IDRAULICA DI TIPO PUNTUALE

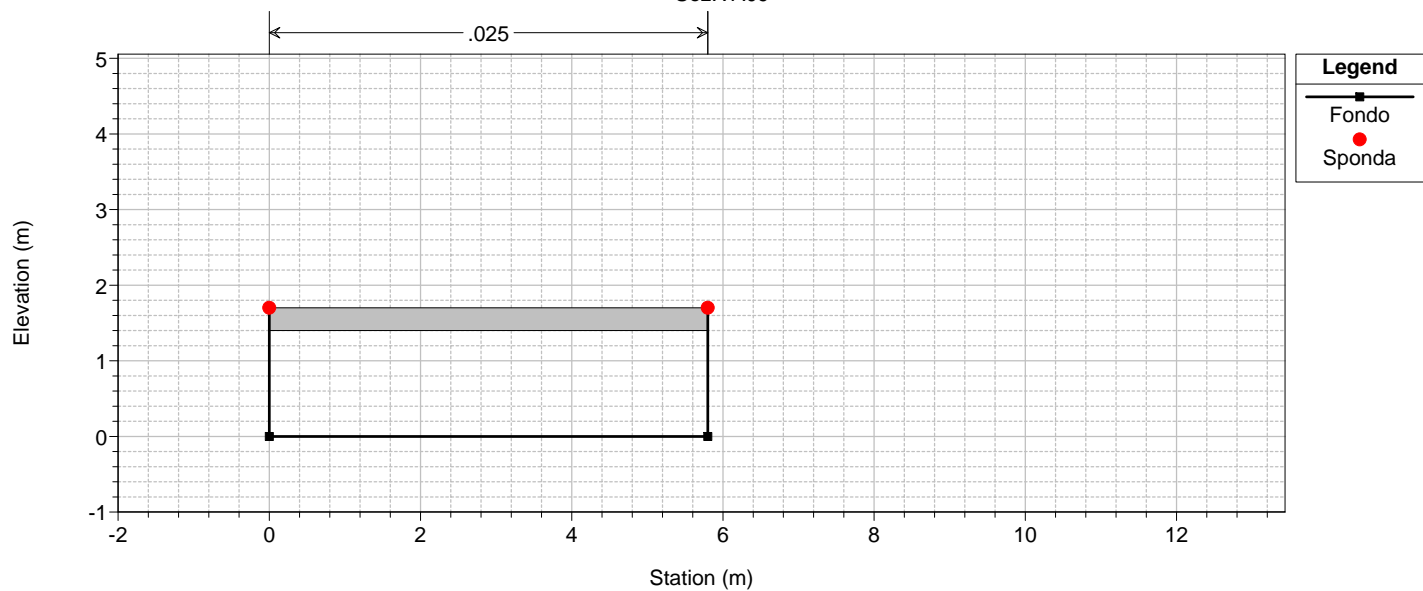
Bacino:	T. Petronio
Sottobacino:	Rio Vallegrande
Corso d'acqua:	Rio Vallegrande
Località:	San Lazzaro
Codice opera:	VA09
Descrizione:	Ponticello
Sezione di riferimento:	28

Calcolo delle condizioni critiche

Periodo di ritorno [anni]	T =	50	200	500
Larghezza di calcolo [m]	B=	5,80	5,80	5,80
Numero pile	np=	0	0	0
Spessore pile [m]	sp=	0,00	0,00	0,00
Larghezza netta [m]	Bo=	5,80	5,80	5,80
Portata [mc/s]	Q=	50	62	70
Rapporto di restringimento	r =	1,00	1,00	1,00
Numero di Froude limite	FL=	1,00	1,00	1,00
Coefficiente di forma delle pile	K=	1,000	1,000	1,000
Altezza pelo libero [m]	Y=	1,96	2,27	2,46
Area [mq]	A=	11,39	13,15	14,26
Perimetro bagnato [m]	P=	9,73	10,33	10,72
Raggio idraulico [m]	R=	1,17	1,27	1,33
Velocità media [m/s]	V=	4,39	4,72	4,91
Carico specifico [m]	E=	2,95	3,40	3,69
Numero di Froude	Fr=	1,00	1,00	1,00
Luce libera media [m]	H=	1,40	1,40	1,40
Franco [m]	f=	-0,56	-0,87	-1,06
Verificata		NO	NO	NO

Rio Vallegrande

Sez.VA09



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