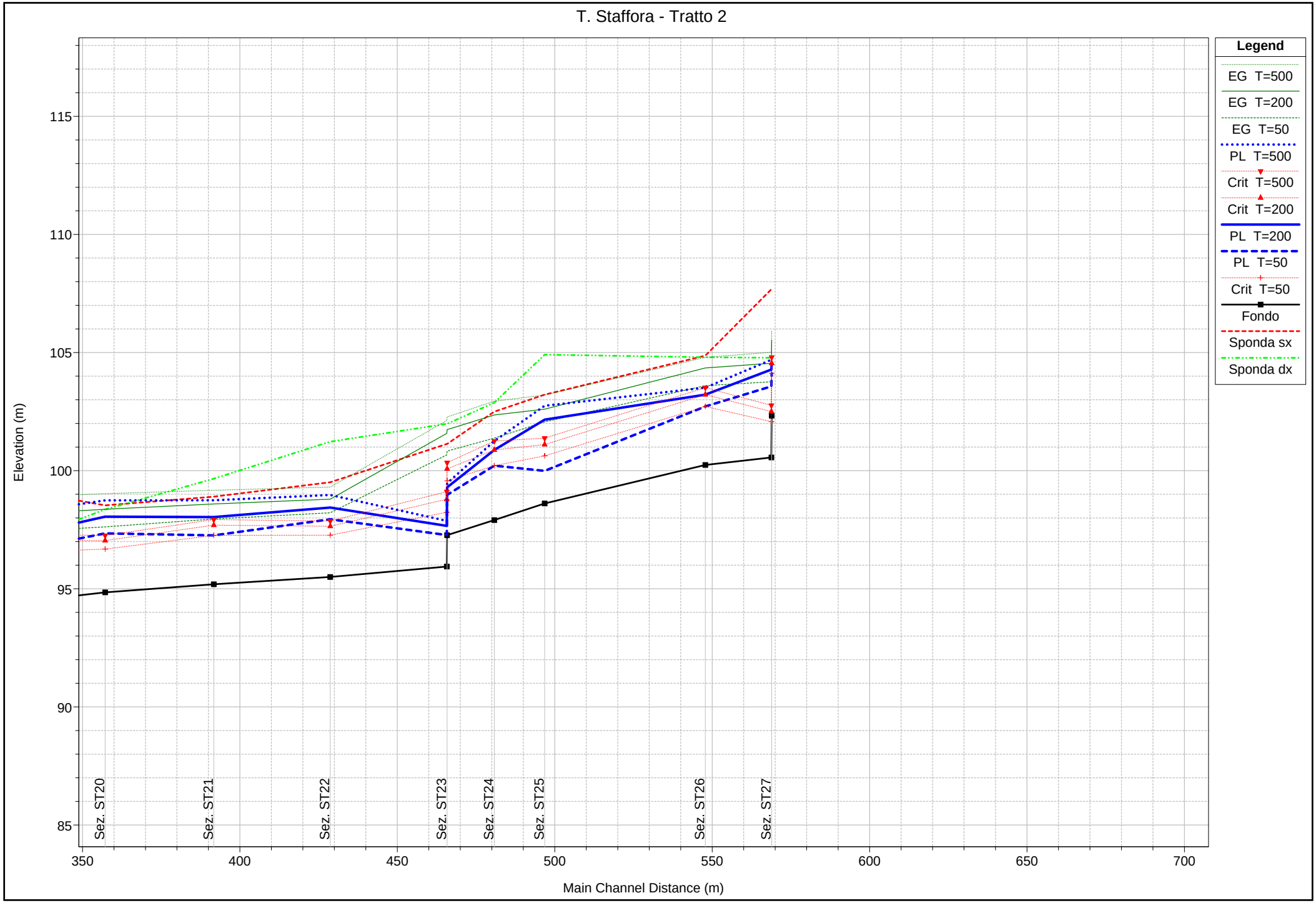
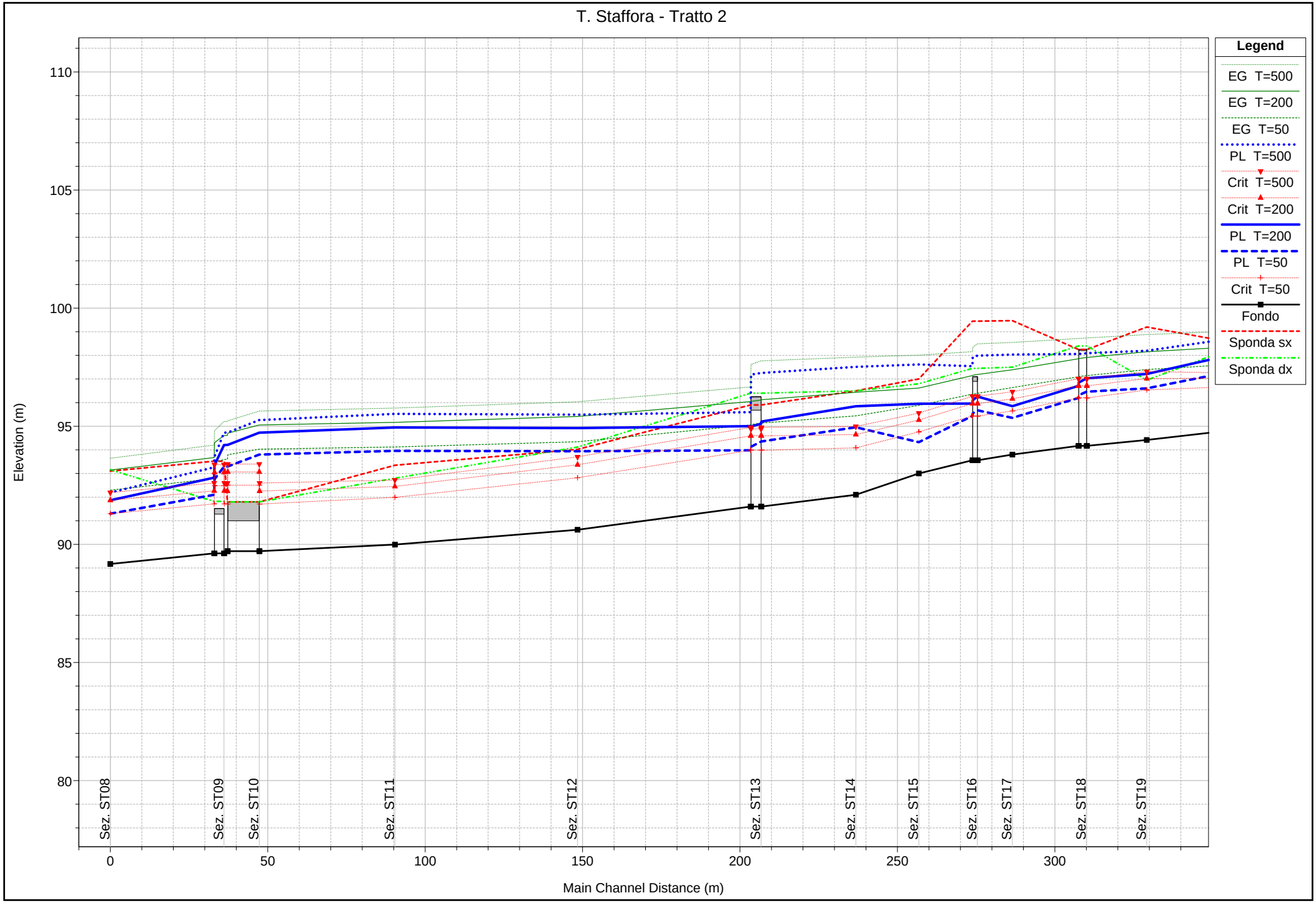


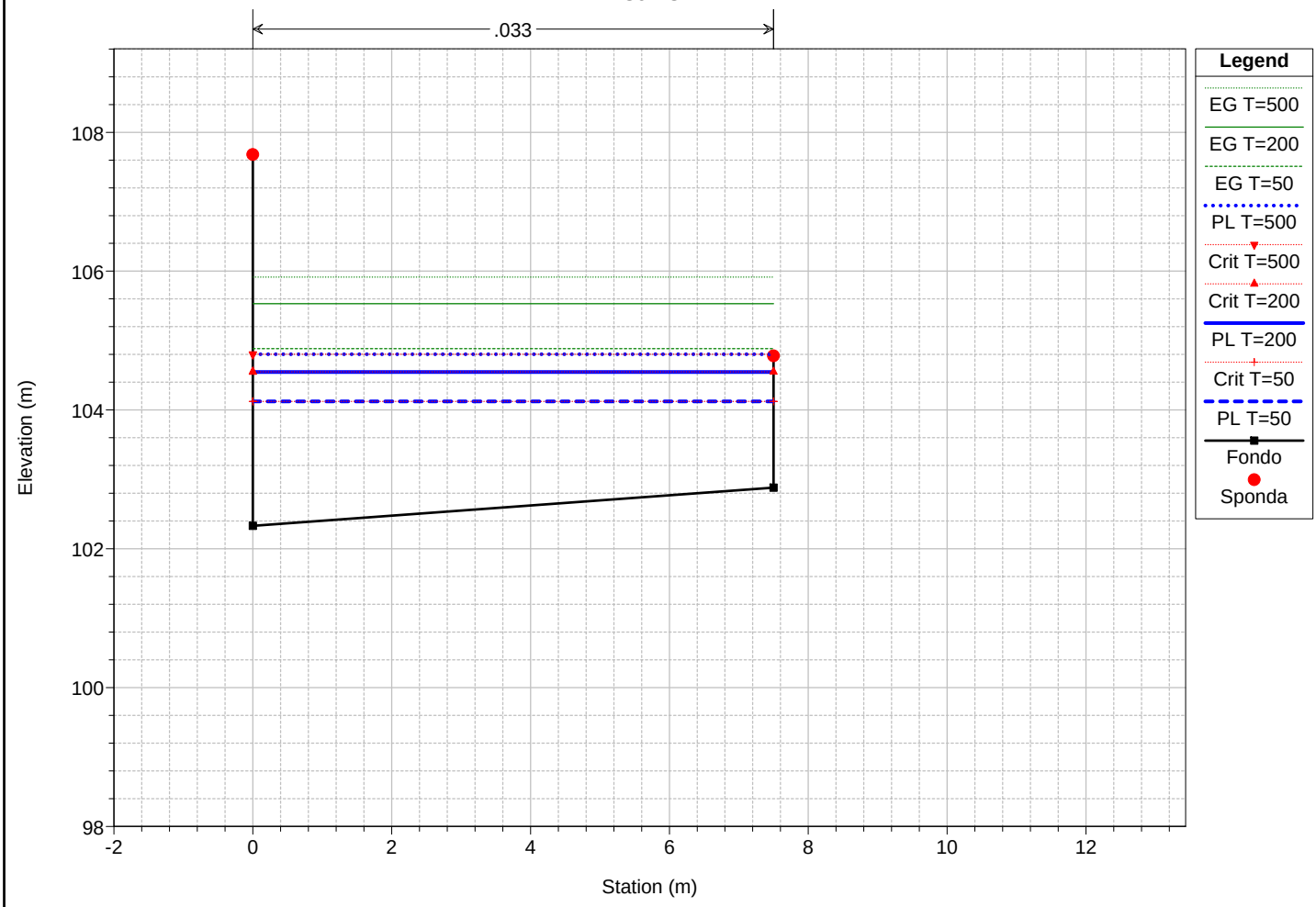
1 cm Horiz. = 15 m 1 cm Vert. = 2 m



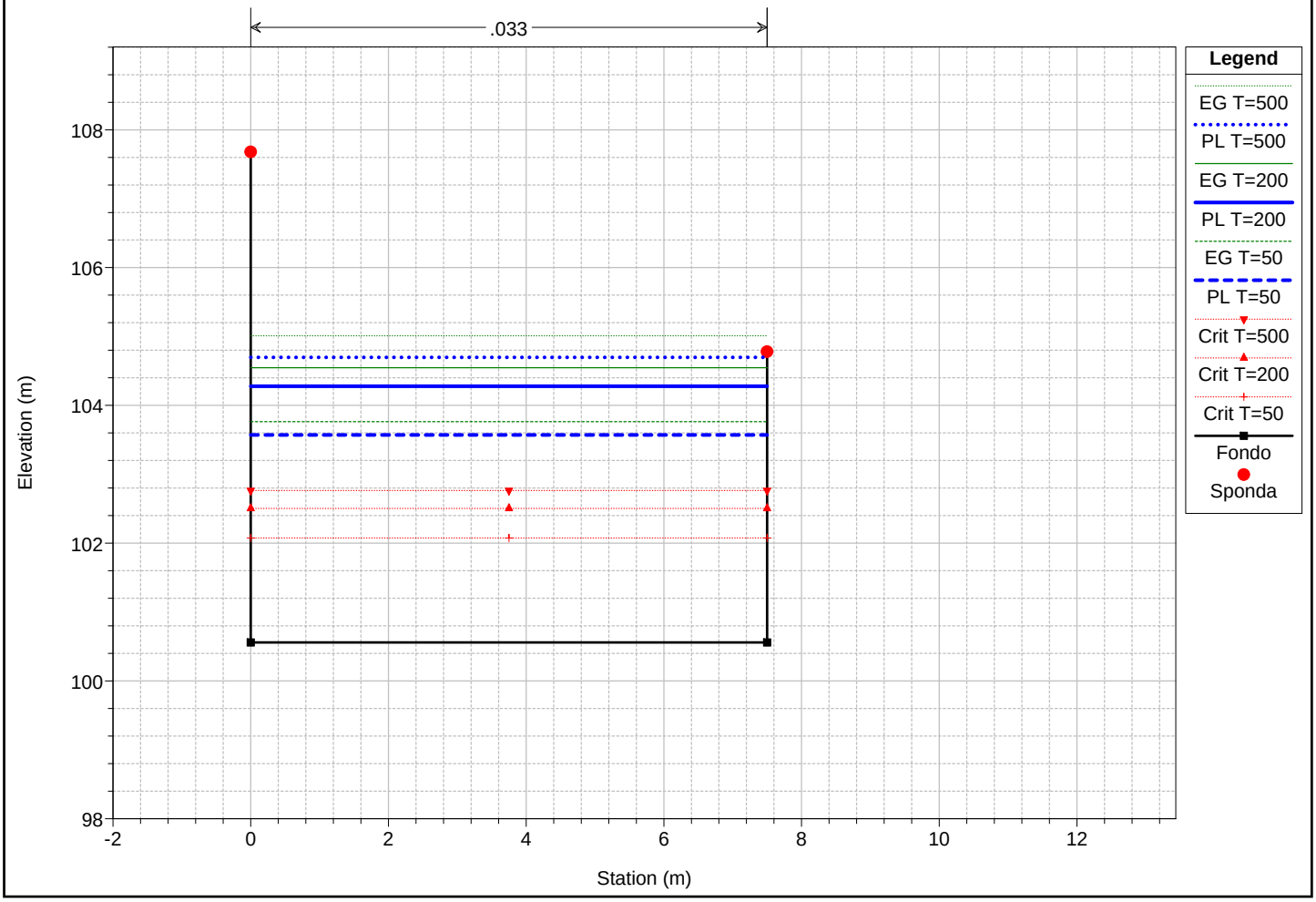
1 cm Horiz. = 15 m 1 cm Vert. = 2 m

T. Staffora - Tratto 2

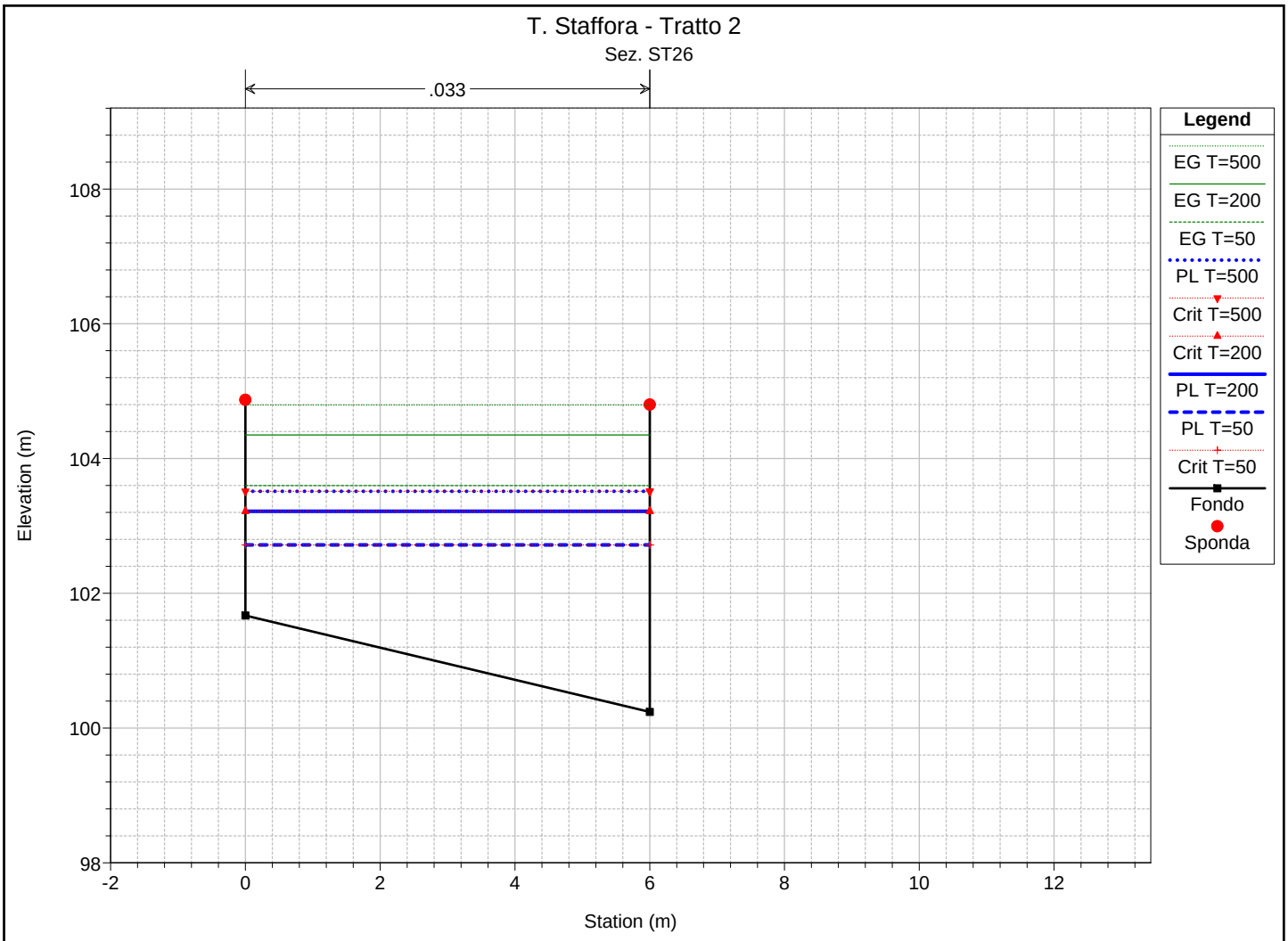
Sez. ST27

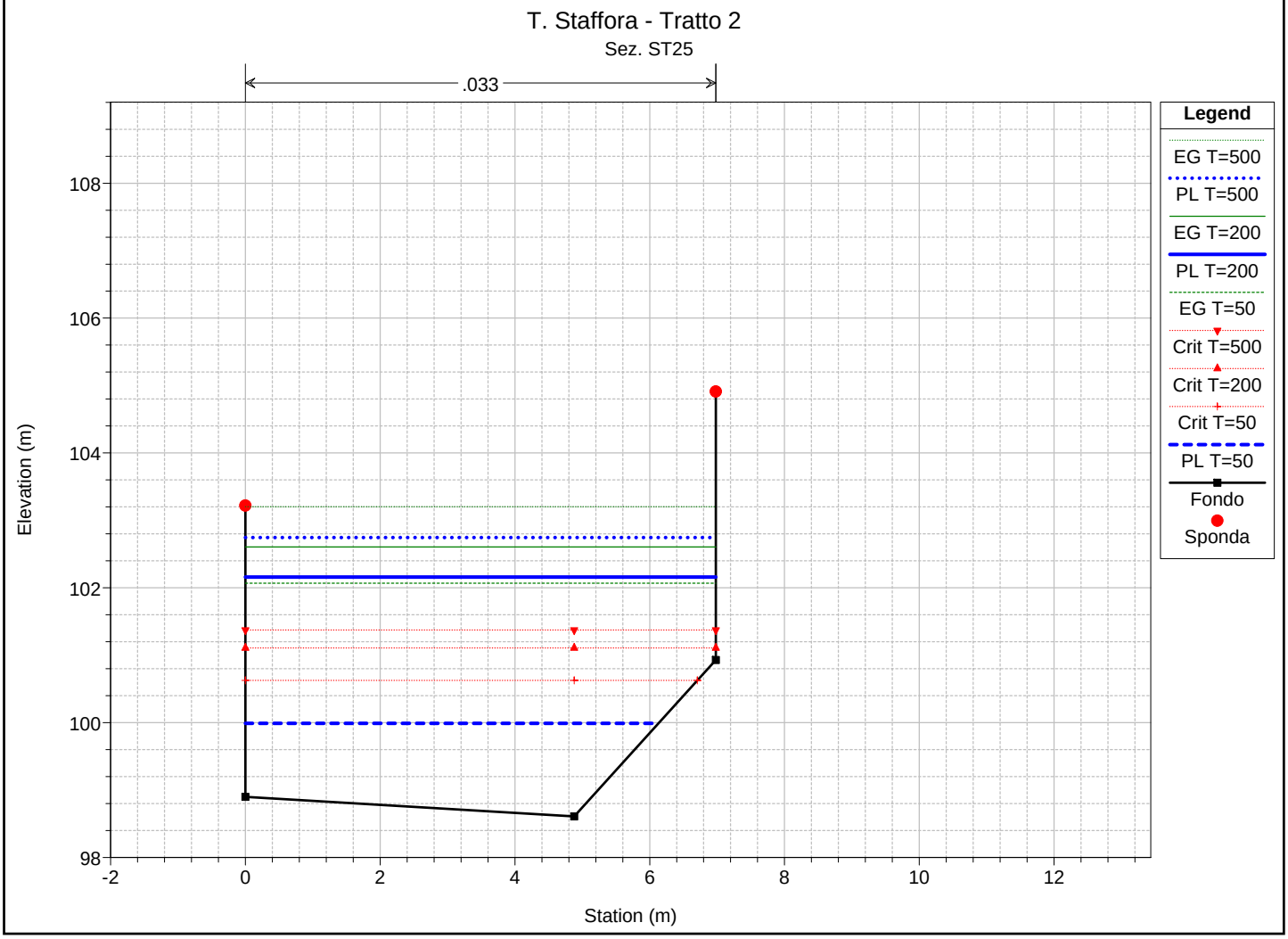


T. Staffora - Tratto 2

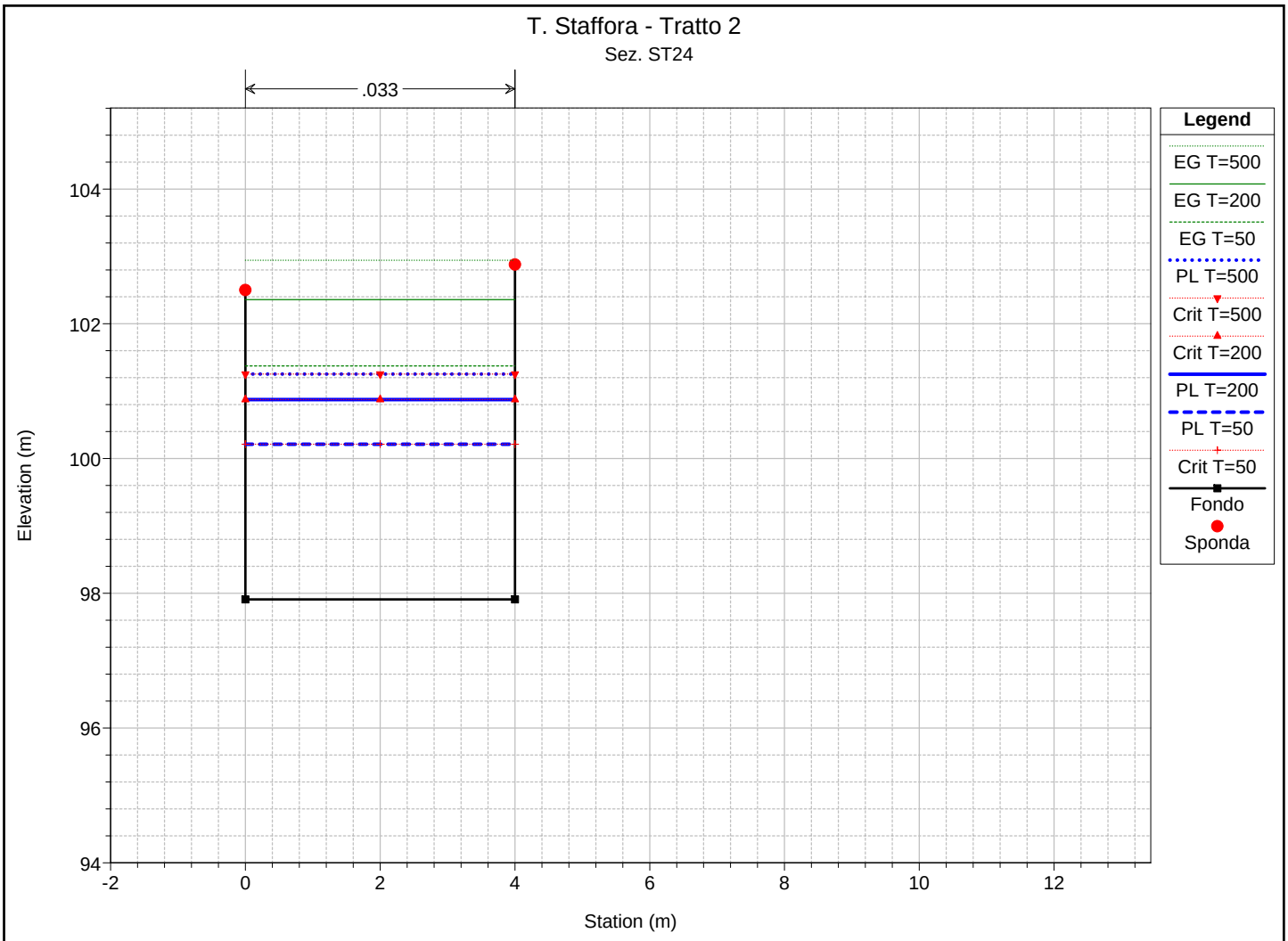


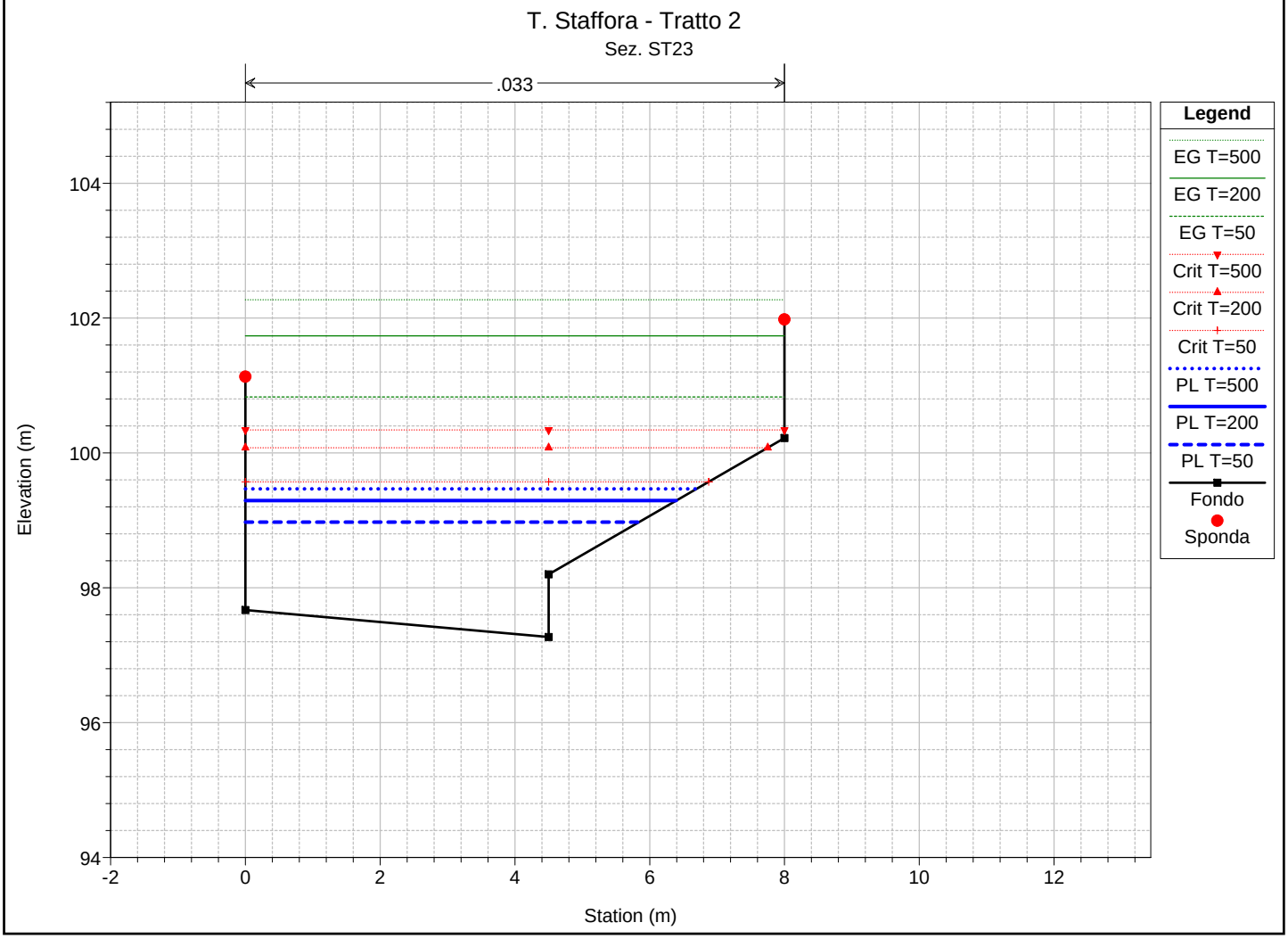
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



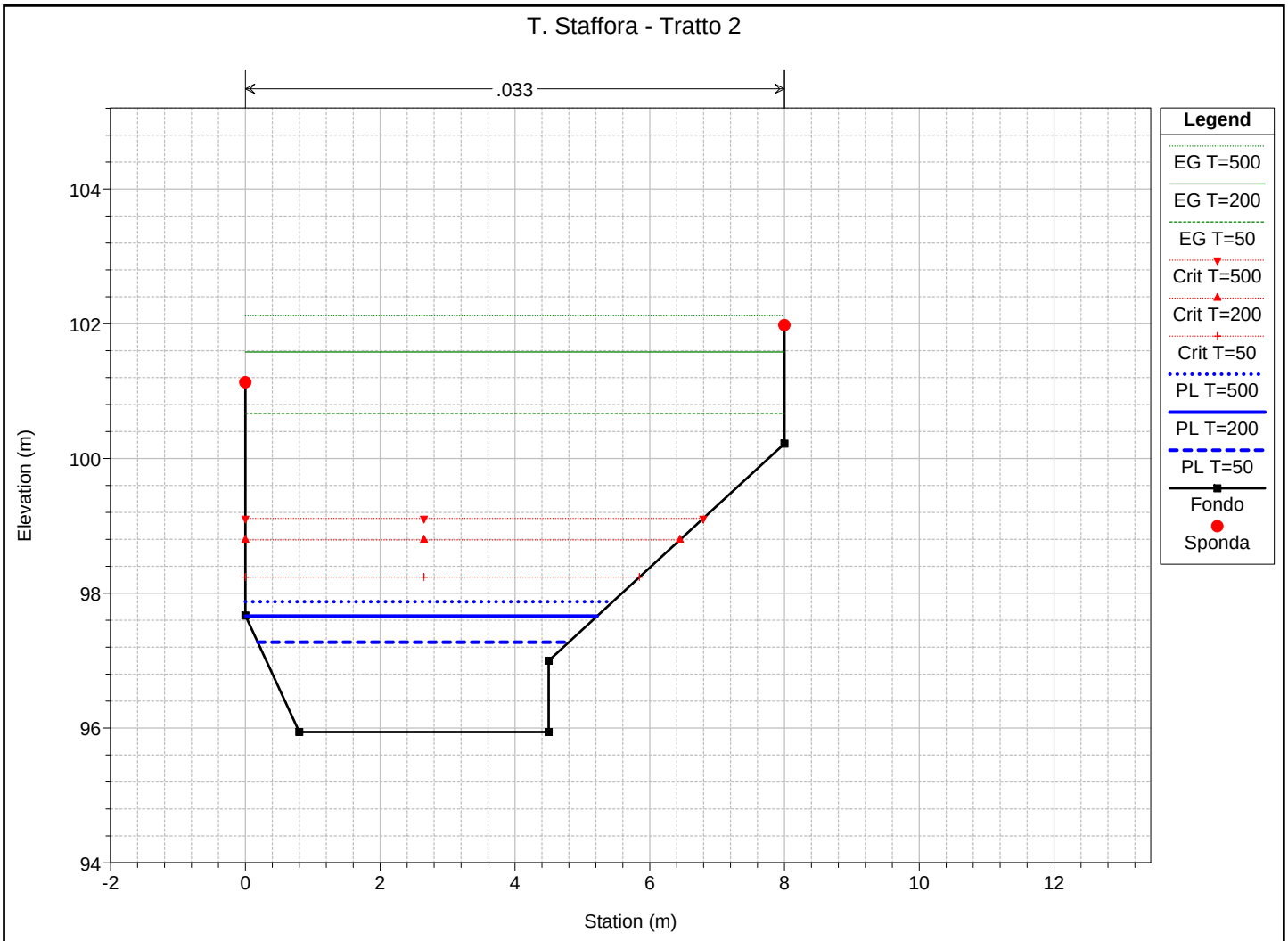


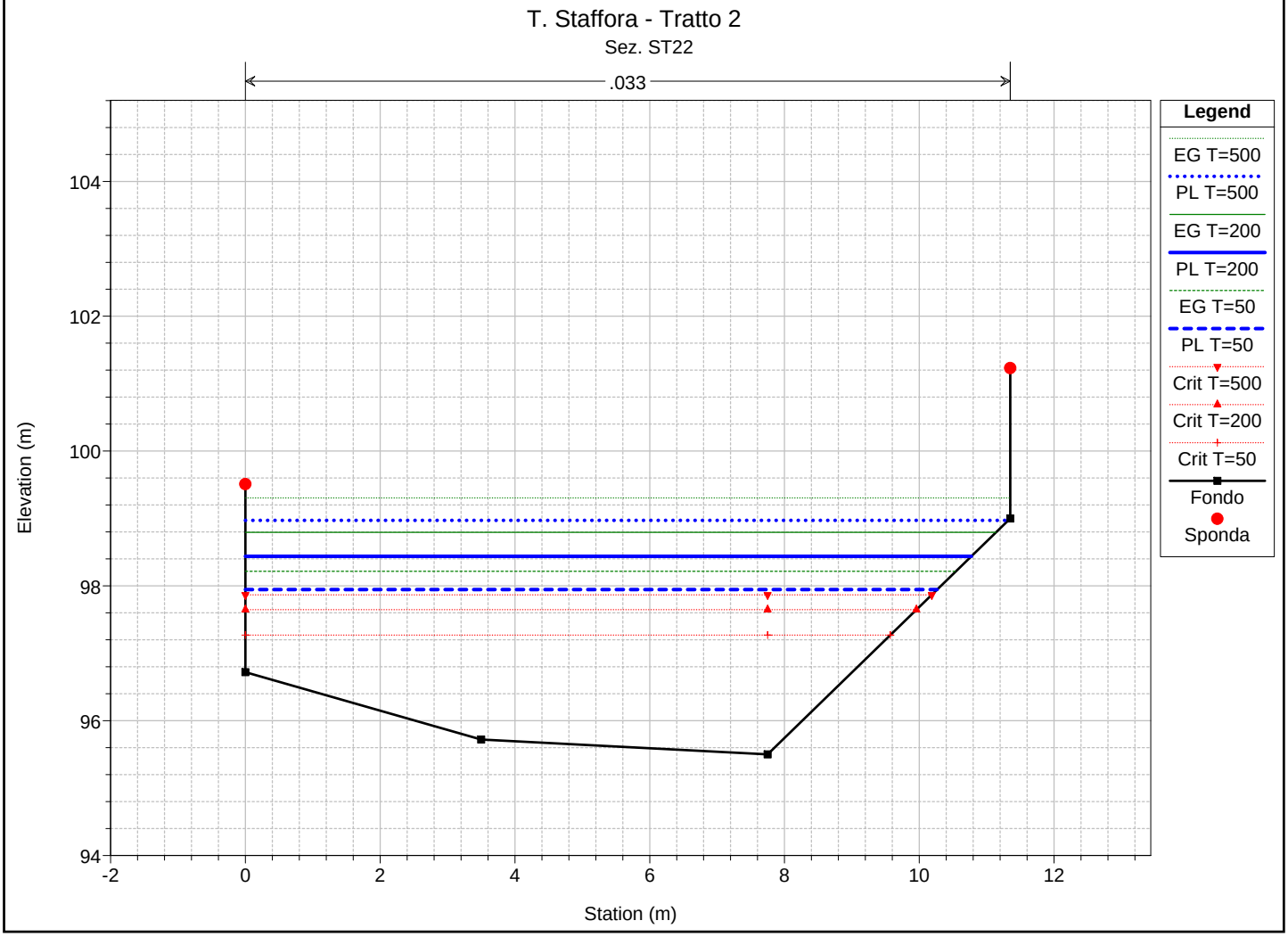
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



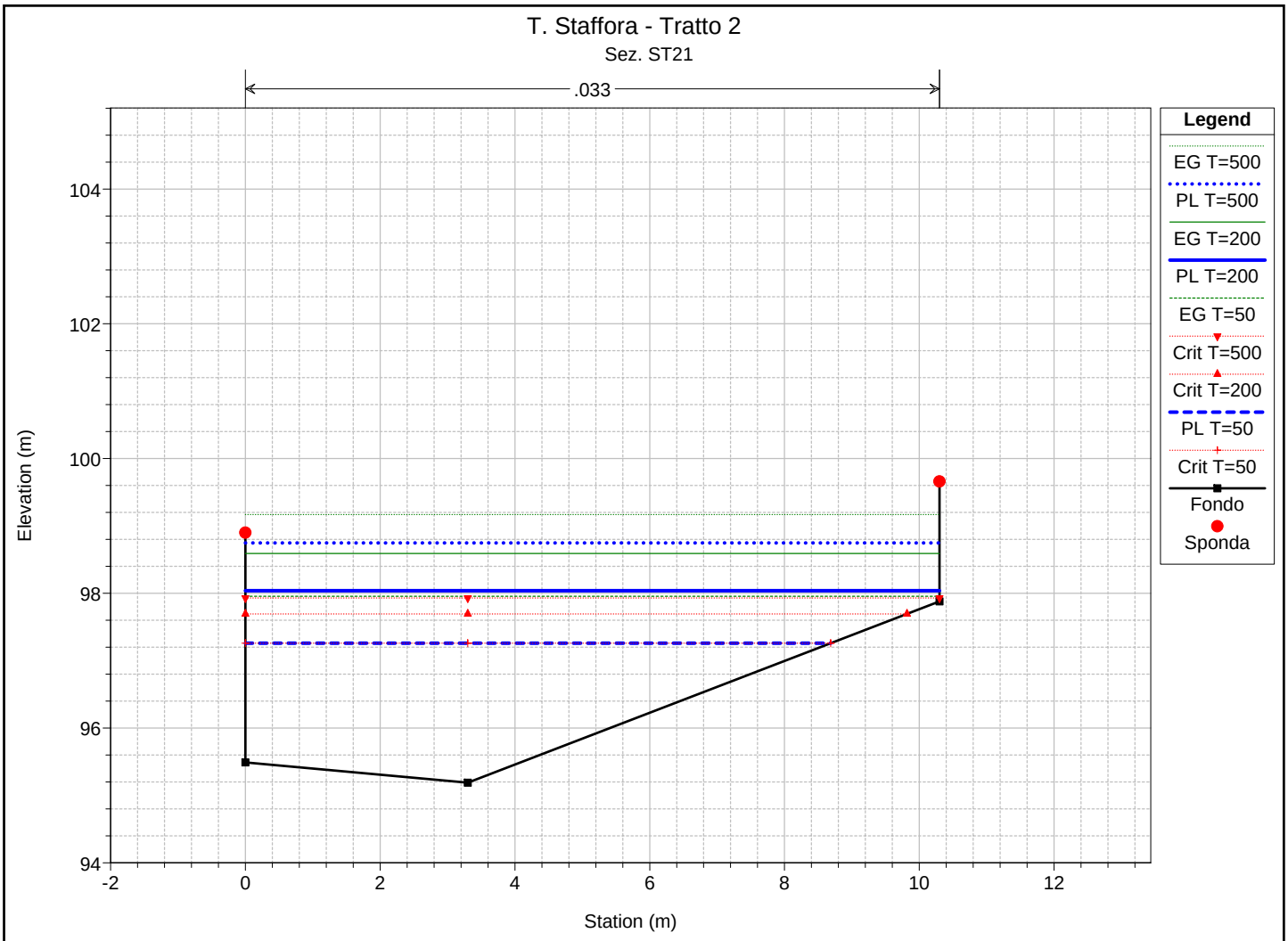


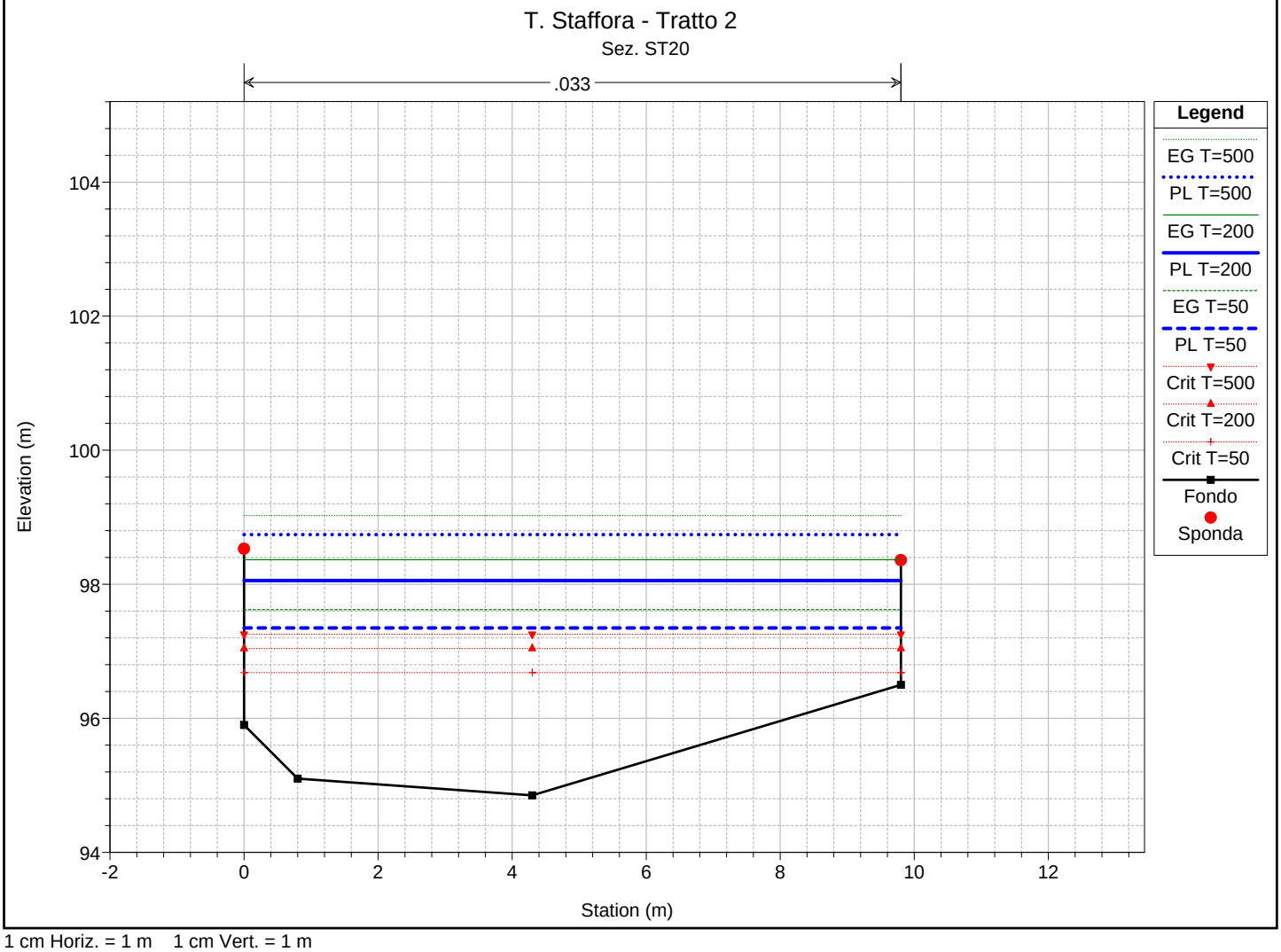
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



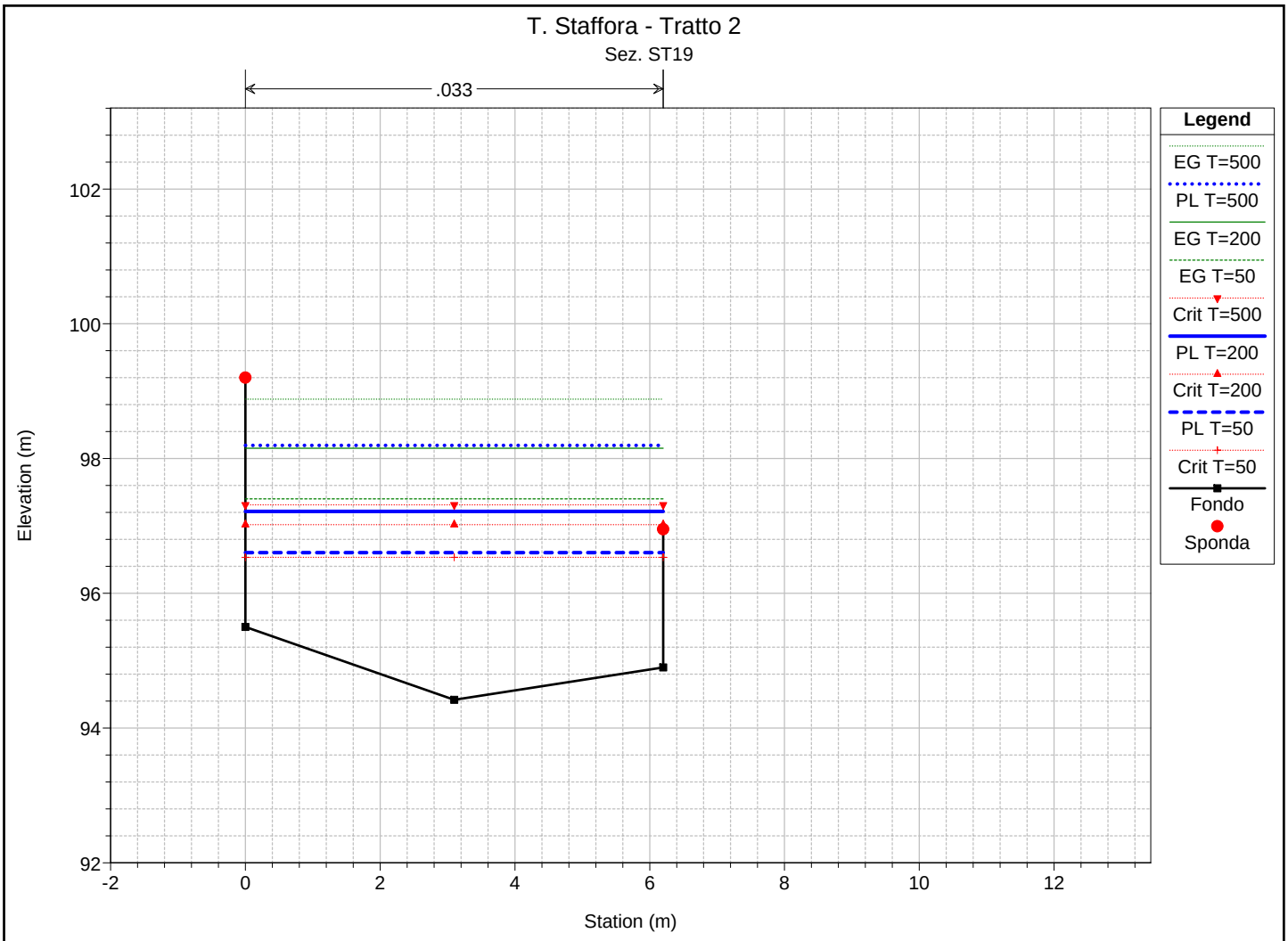


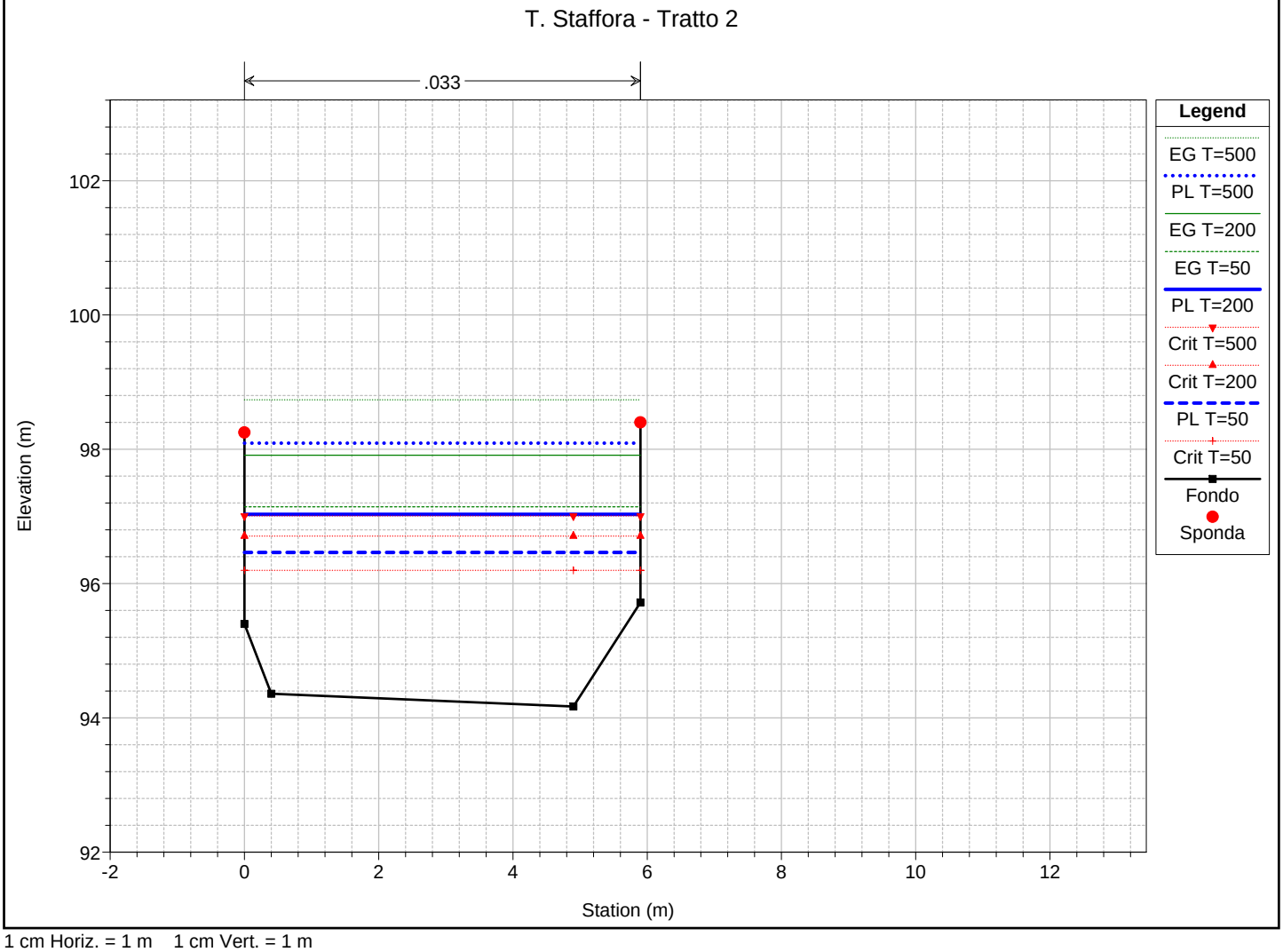
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



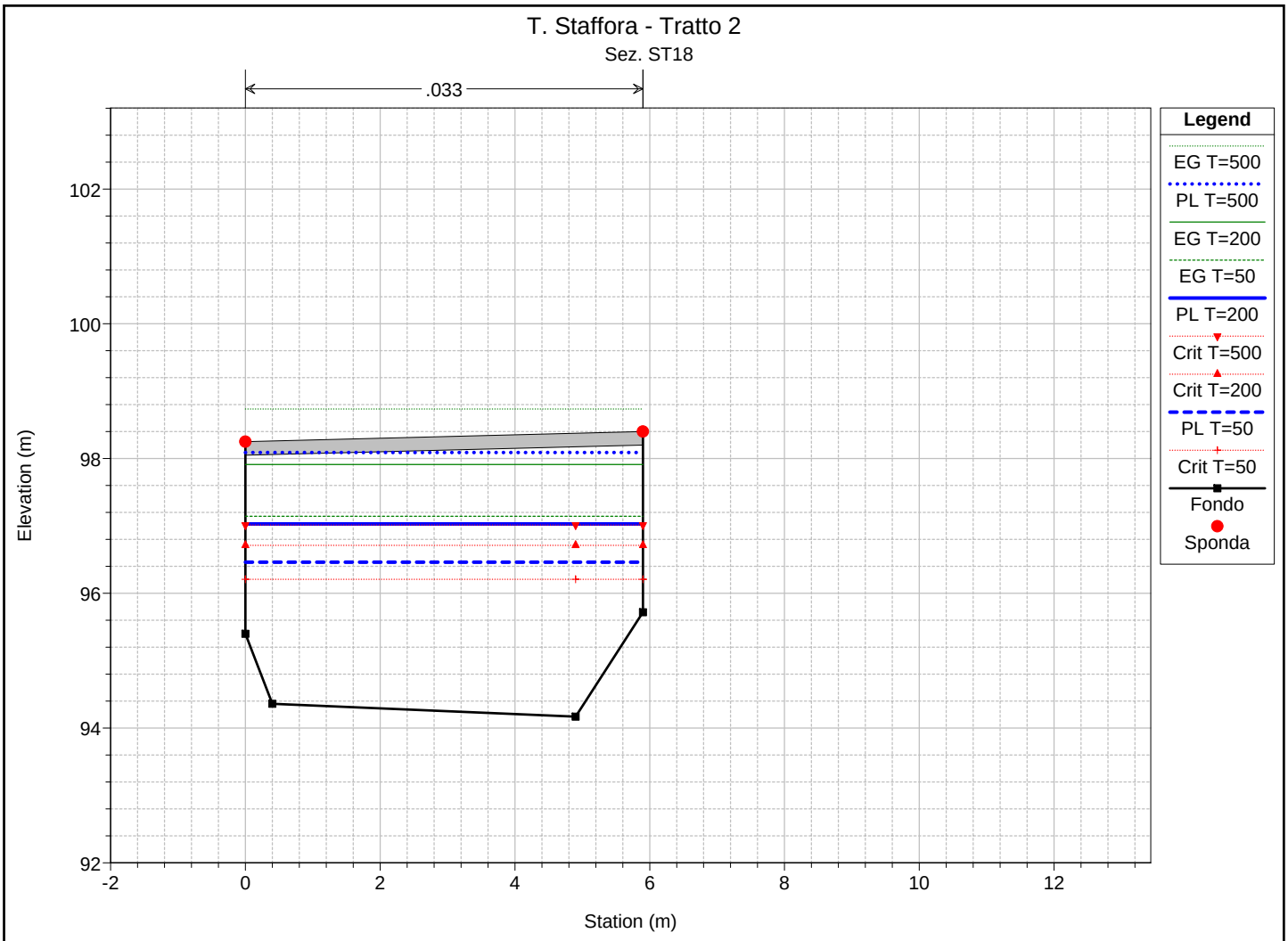


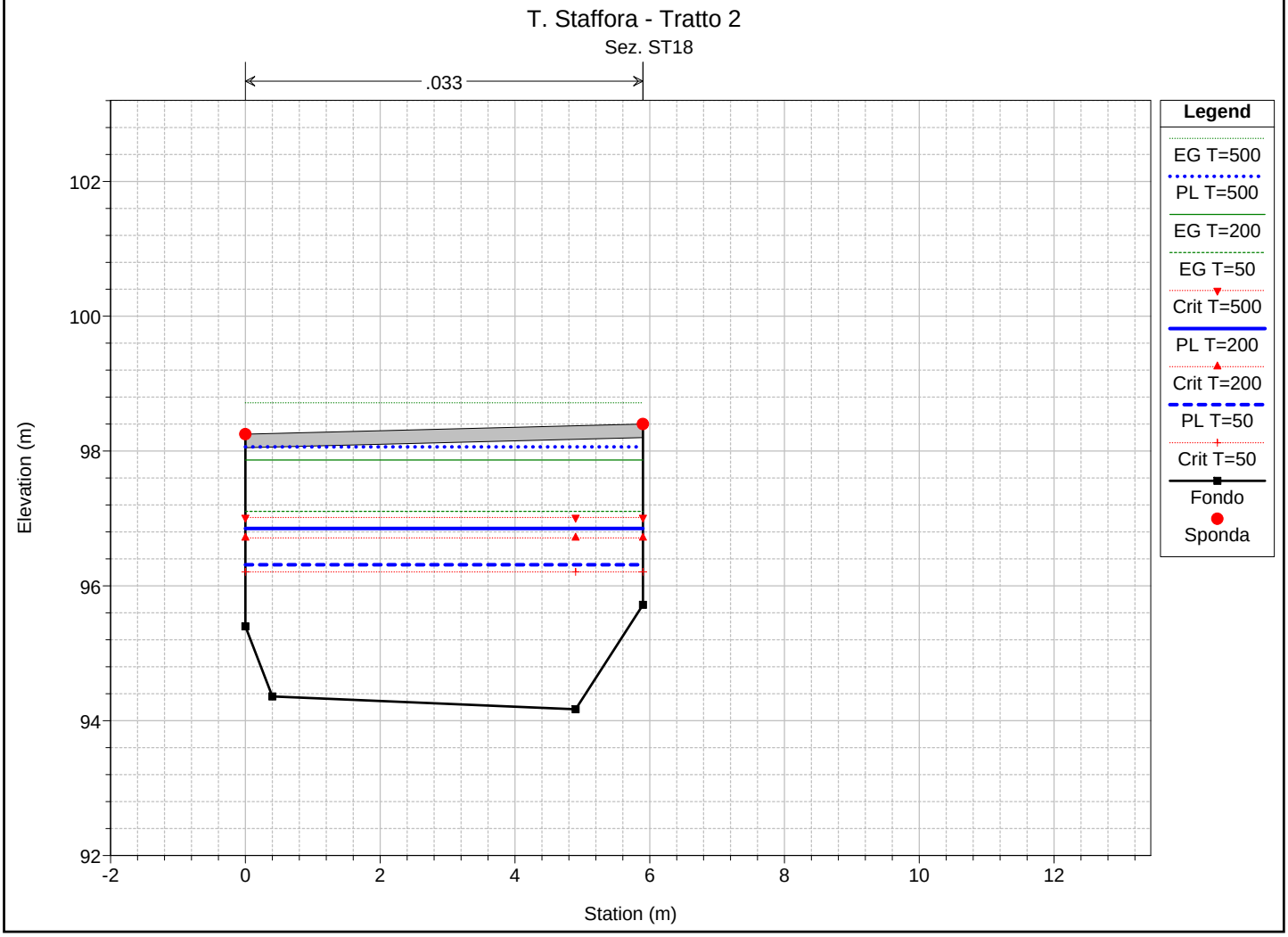
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



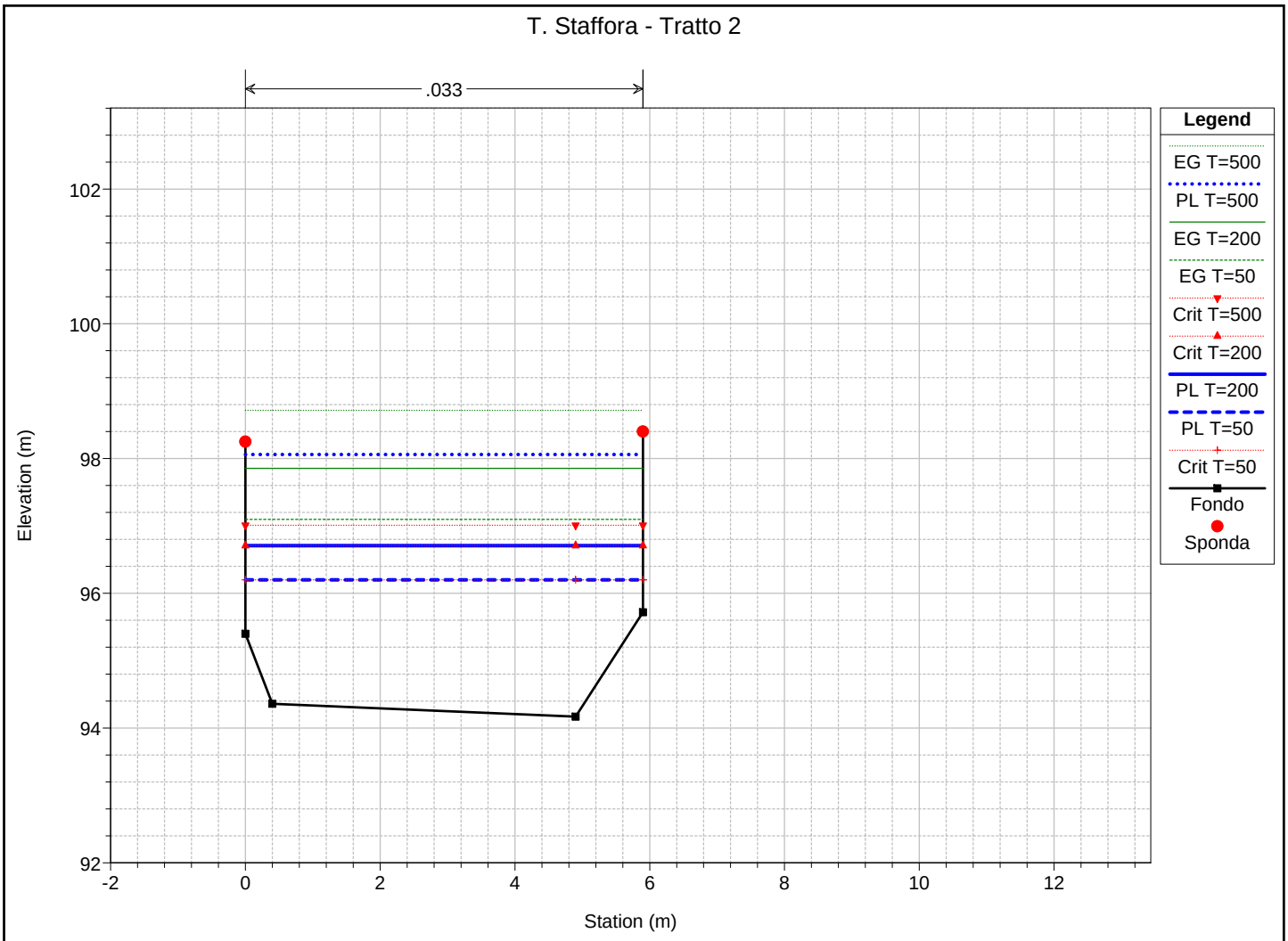


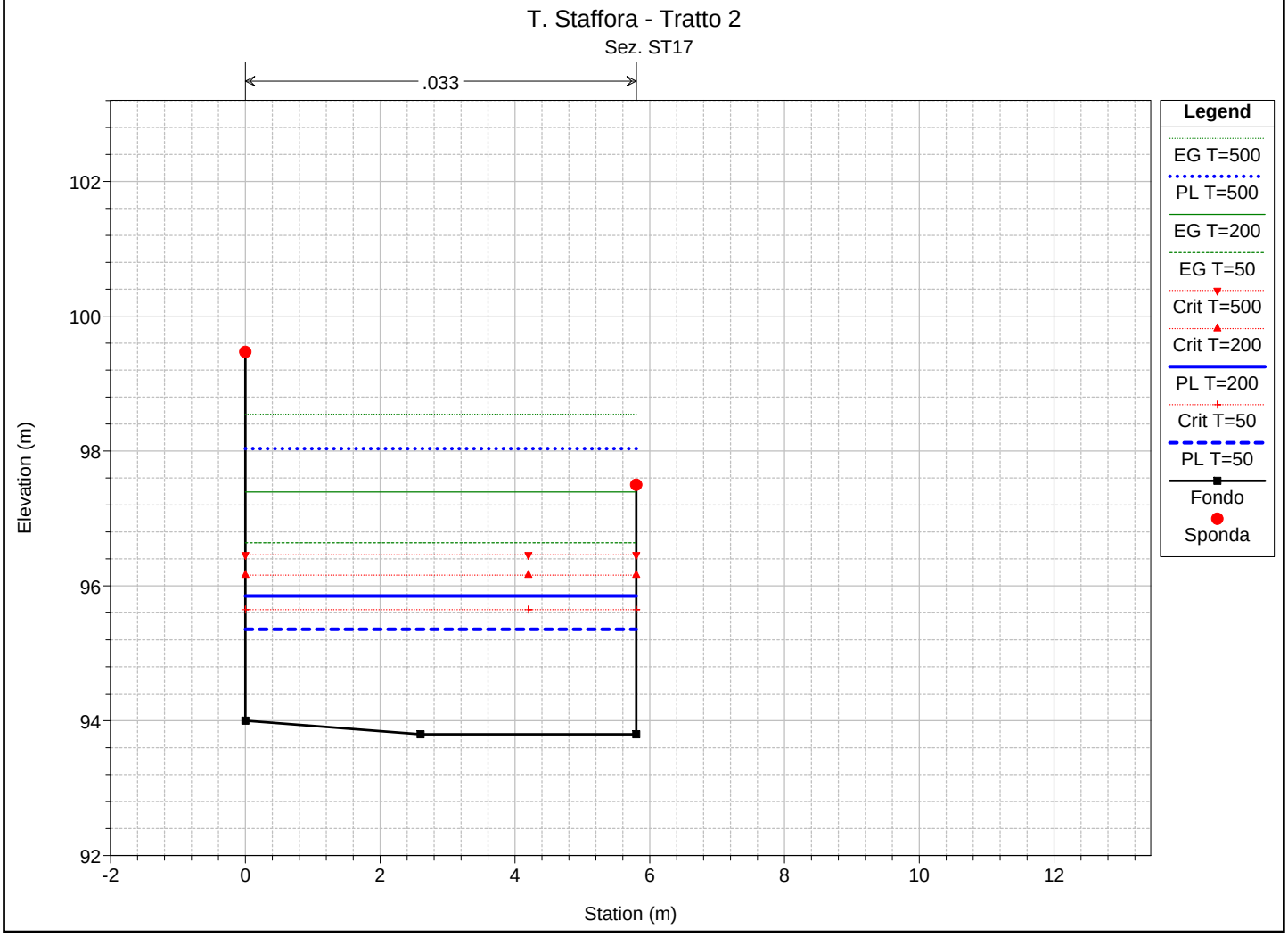
1 cm Horiz. = 1 m 1 cm Vert. = 1 m



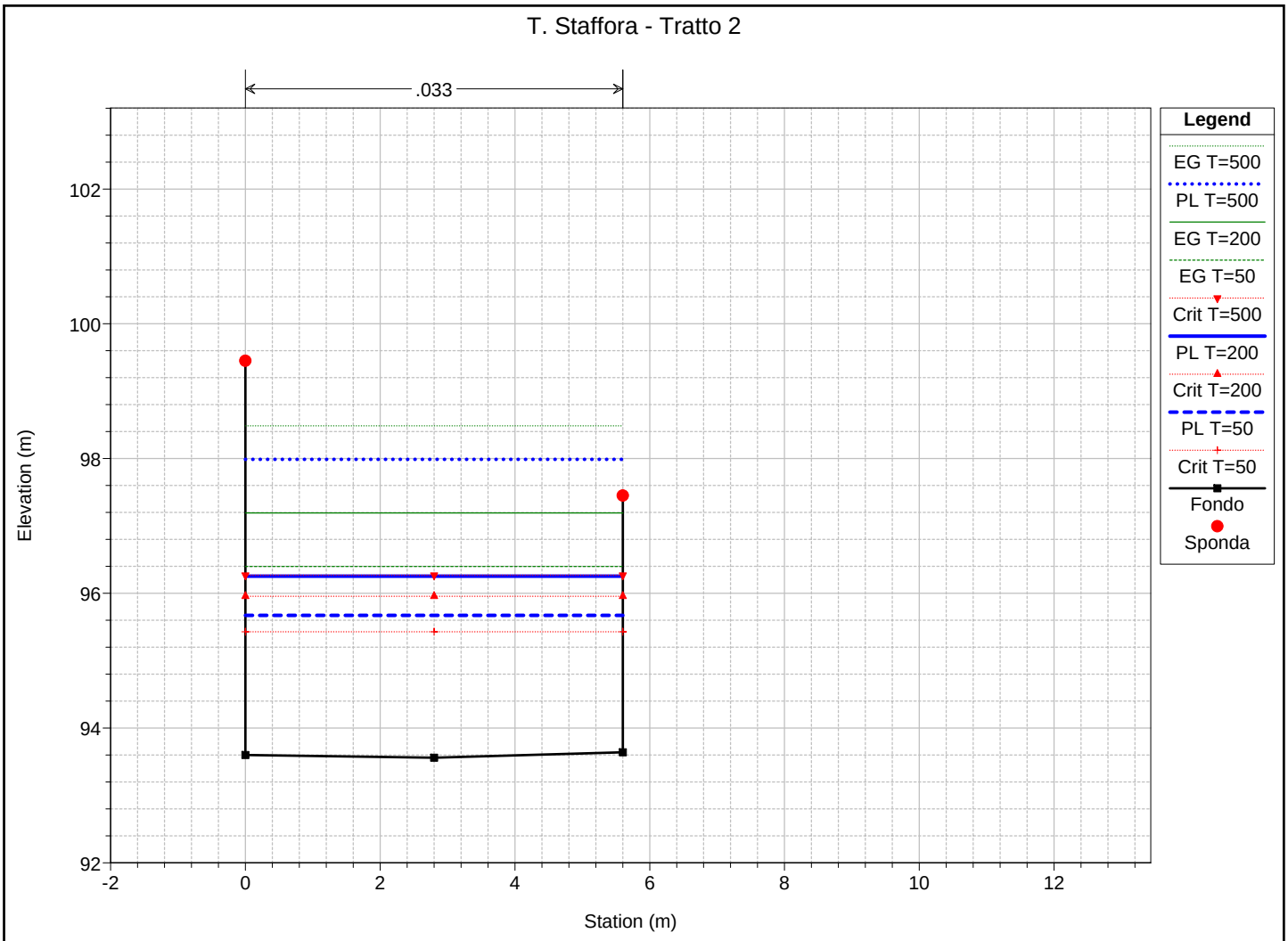


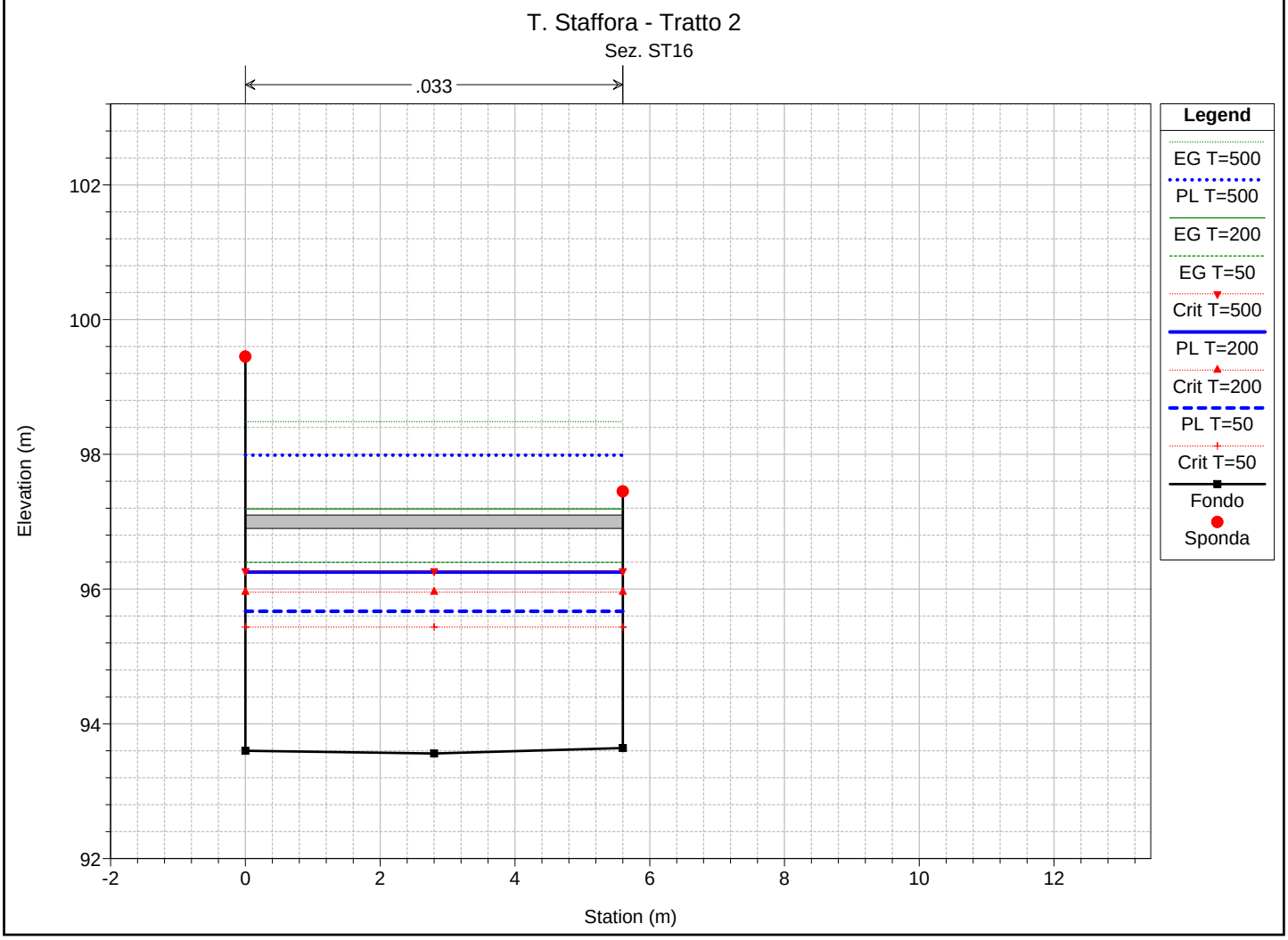
1 cm Horiz. = 1 m 1 cm Vert. = 1 m





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

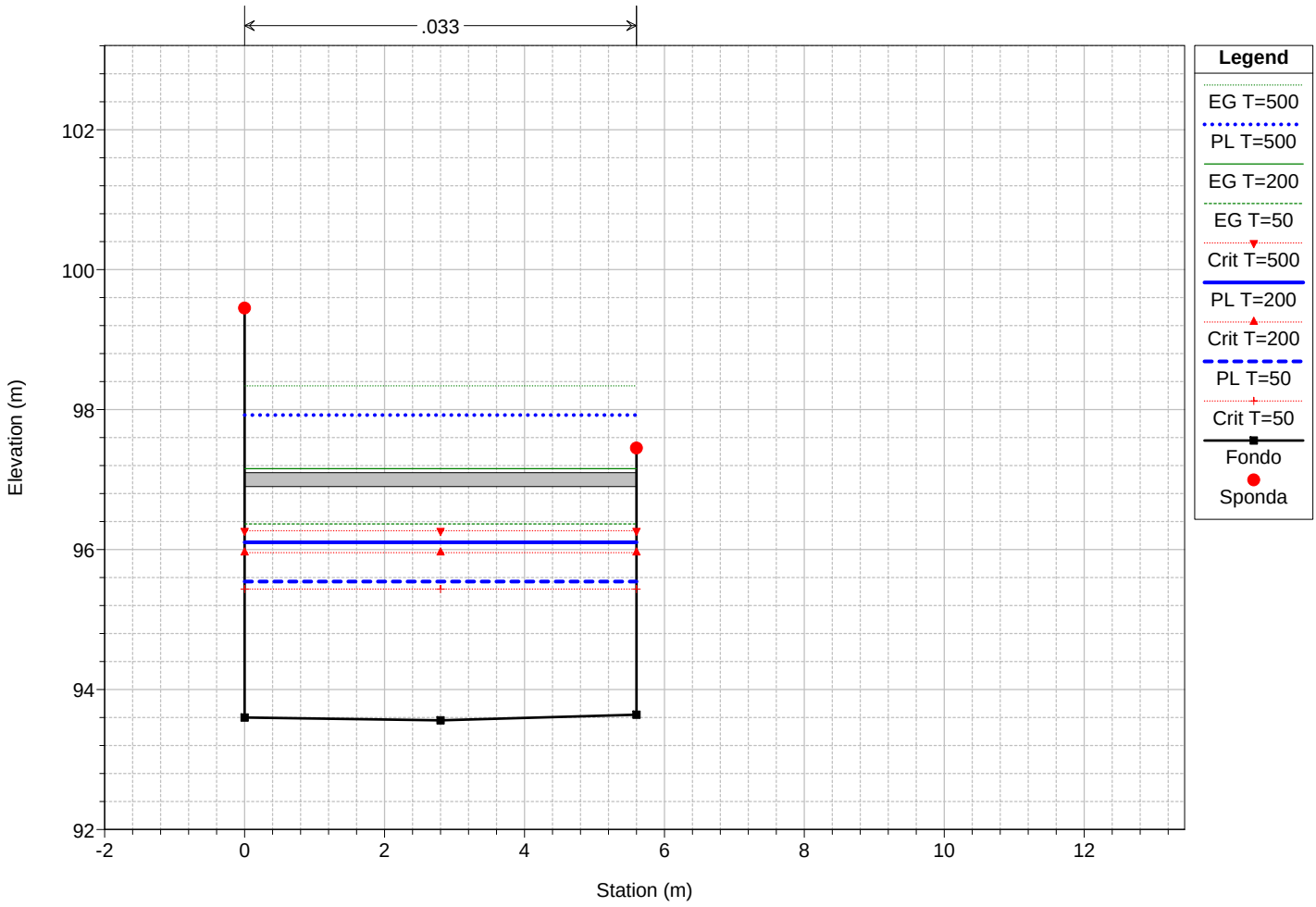




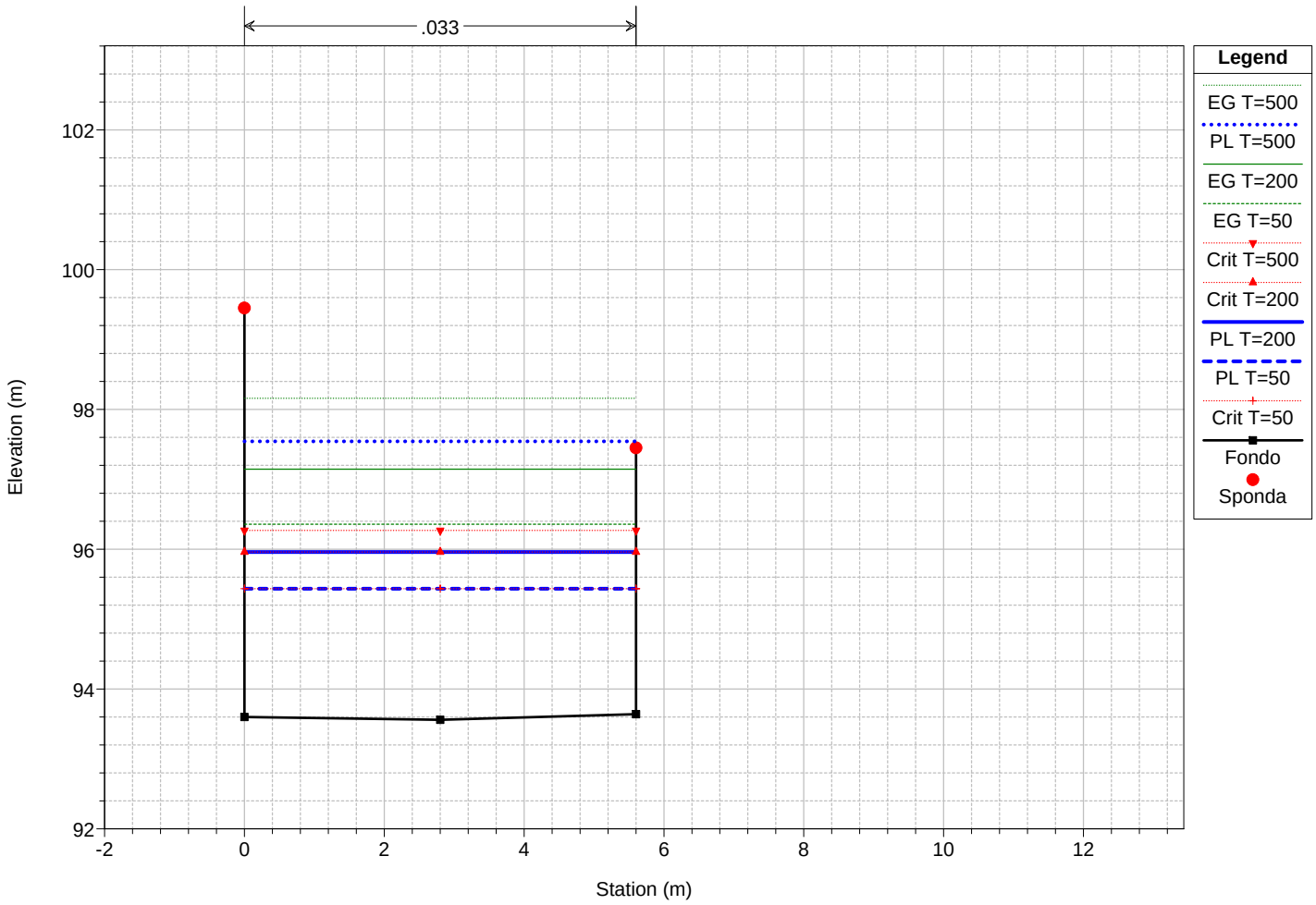
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 2

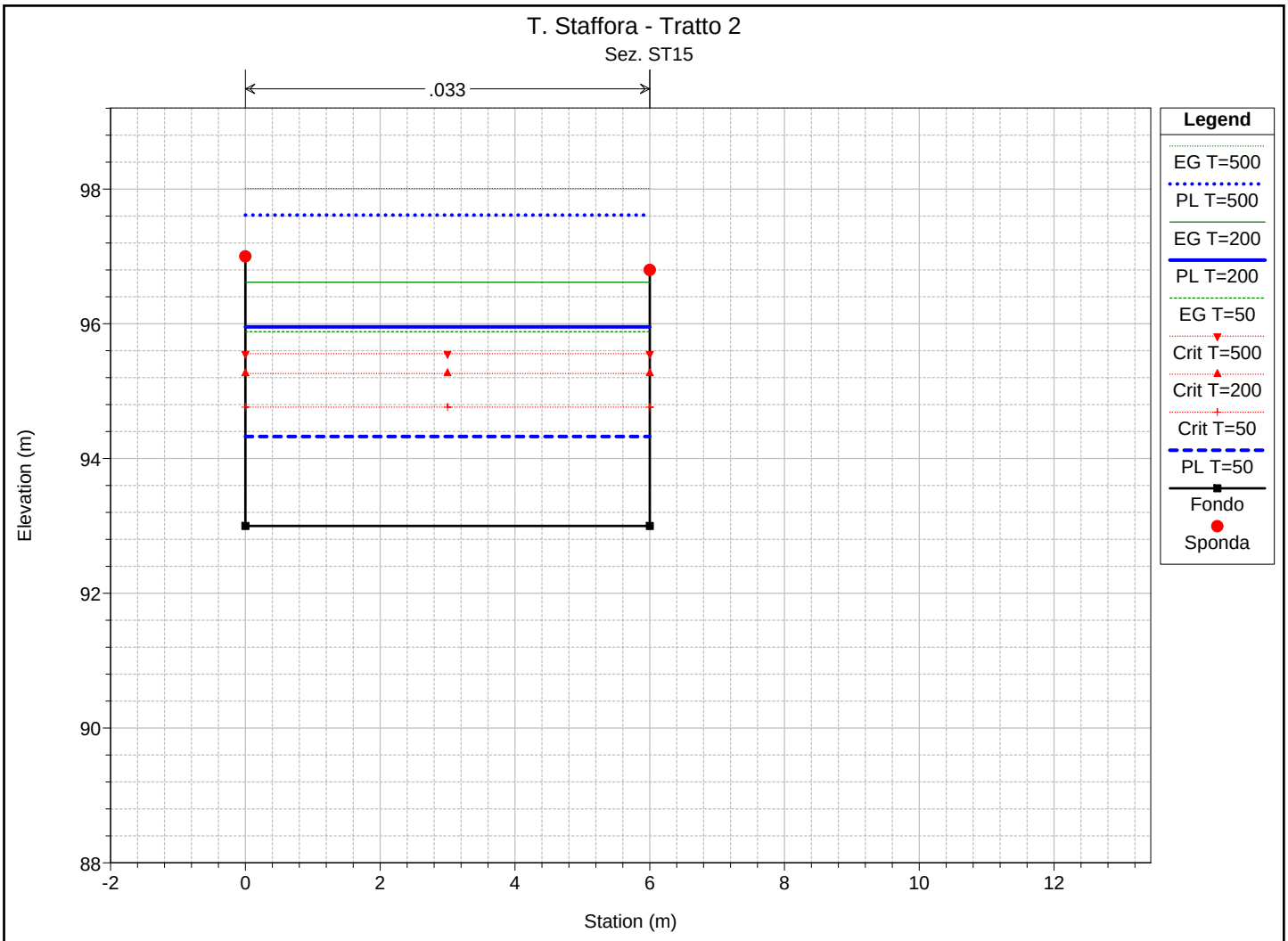
Sez. ST16

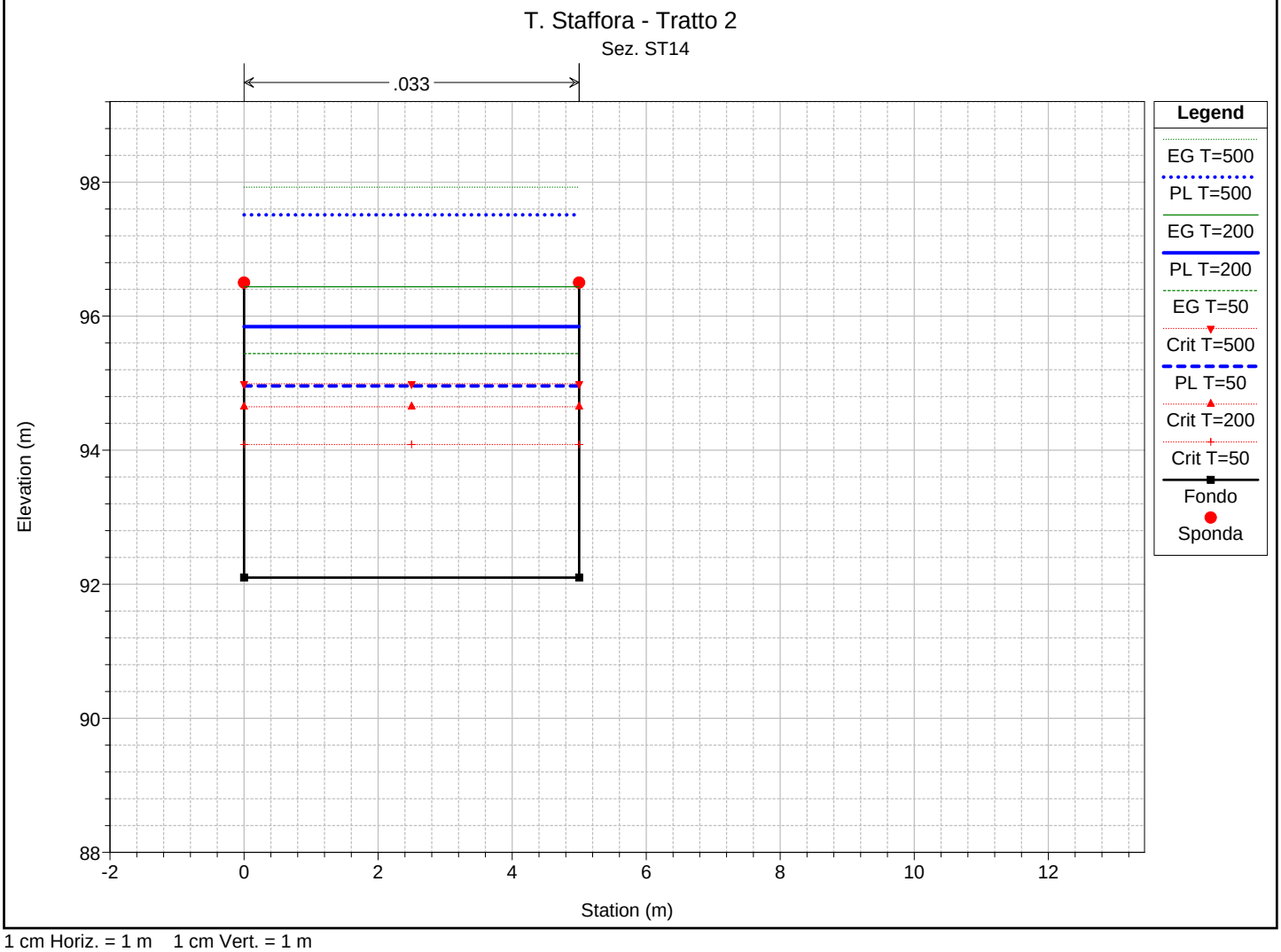


T. Staffora - Tratto 2

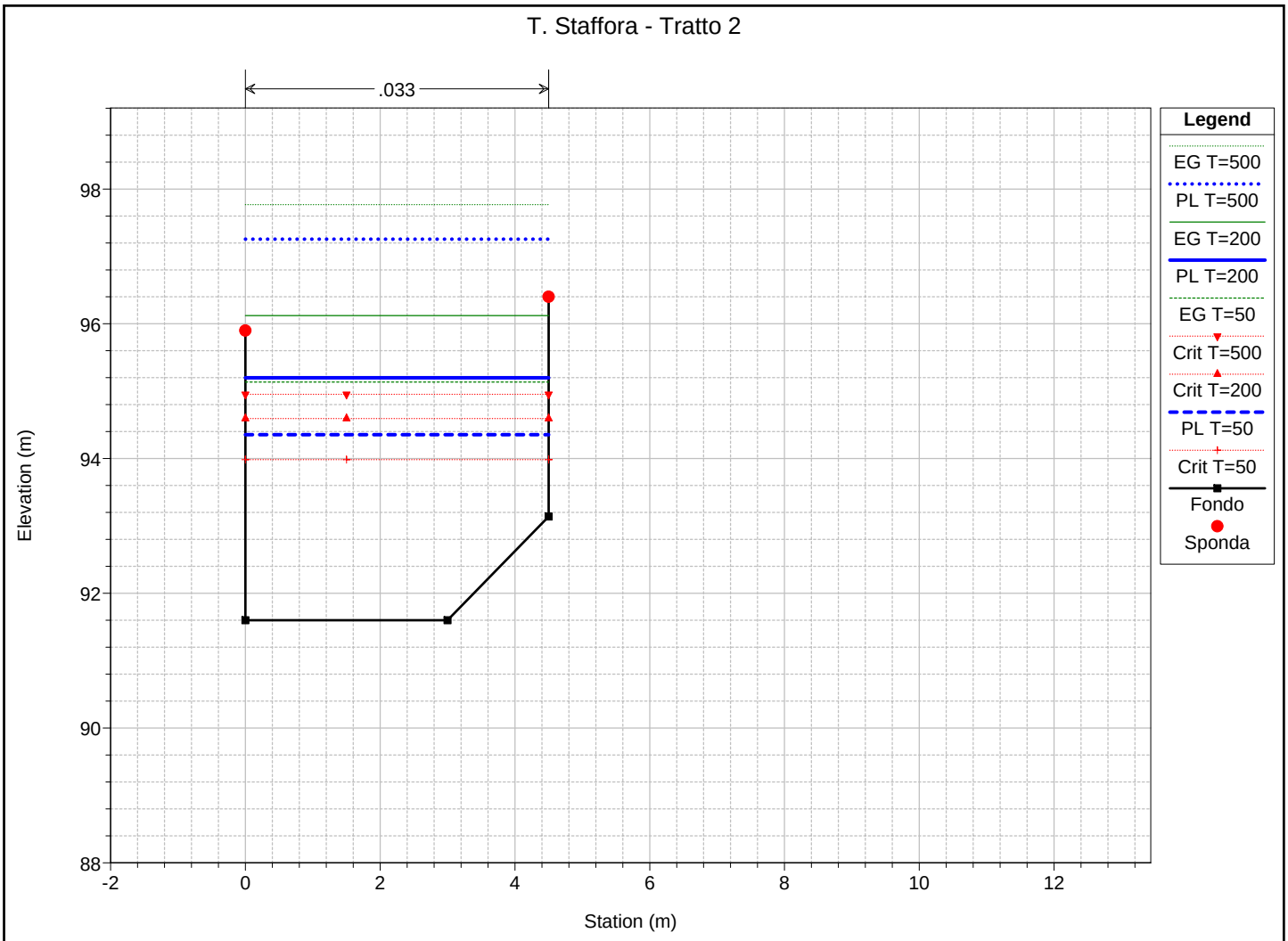


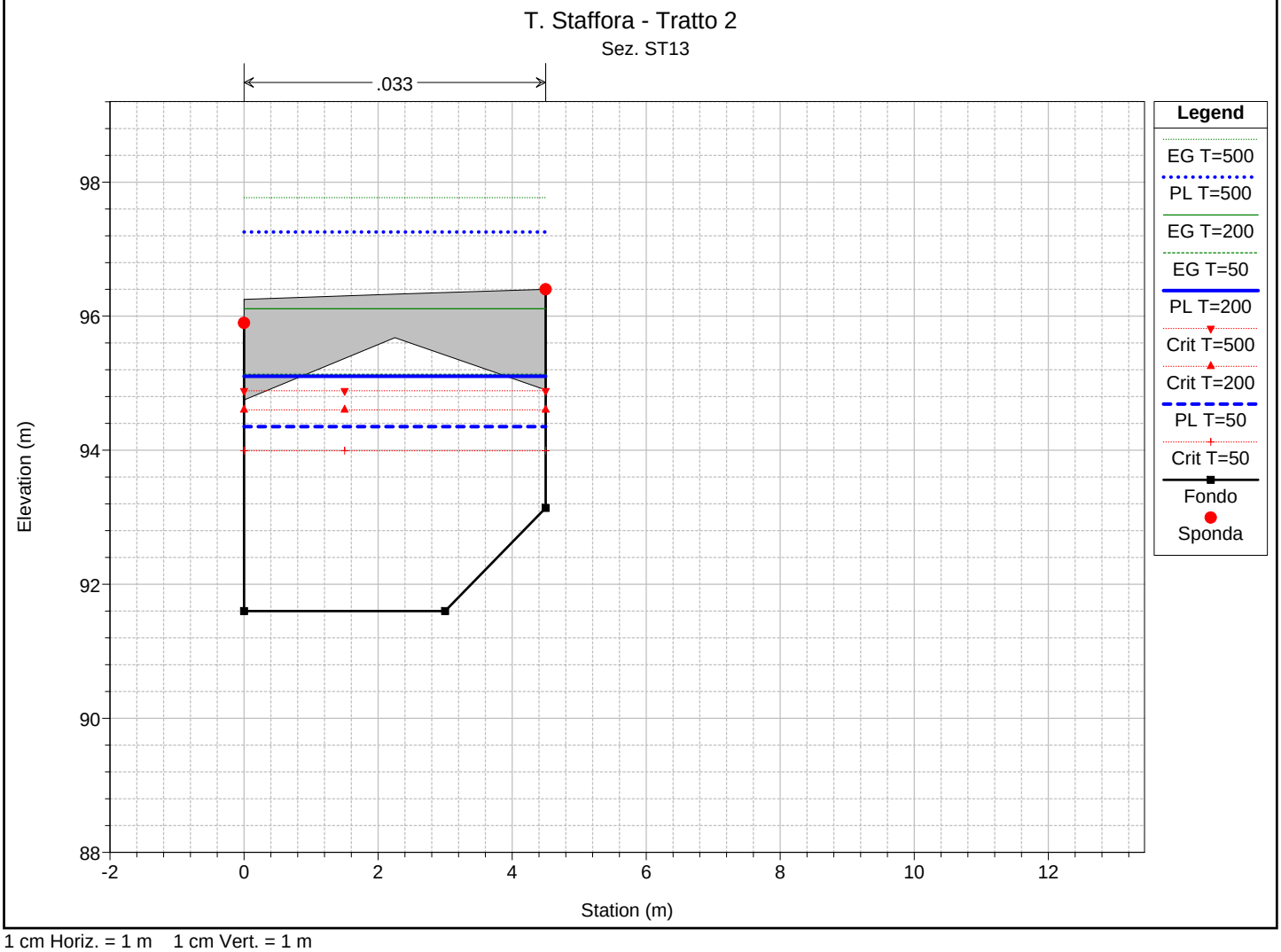
1 cm Horiz. = 1 m 1 cm Vert. = 1 m





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

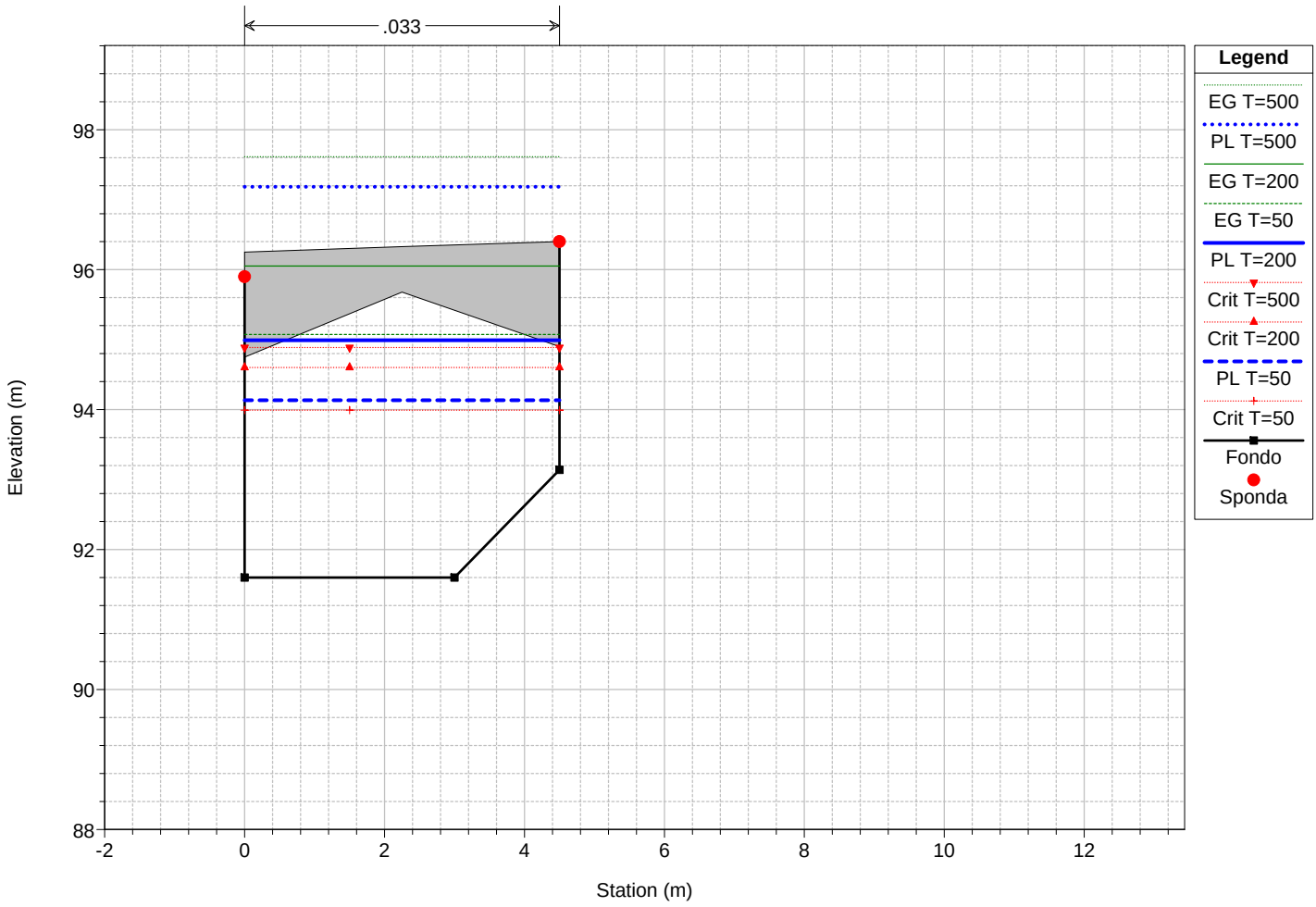




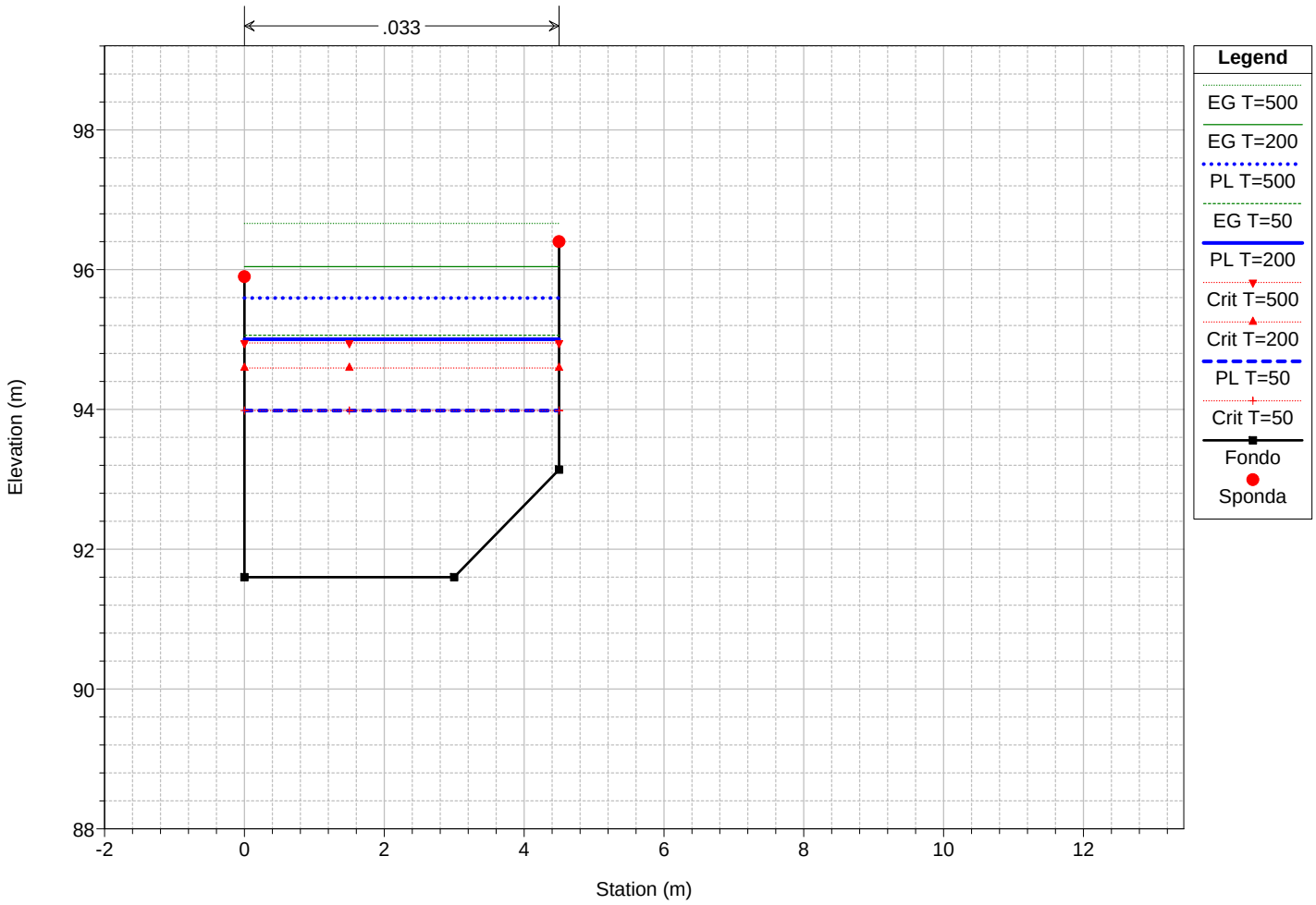
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 2

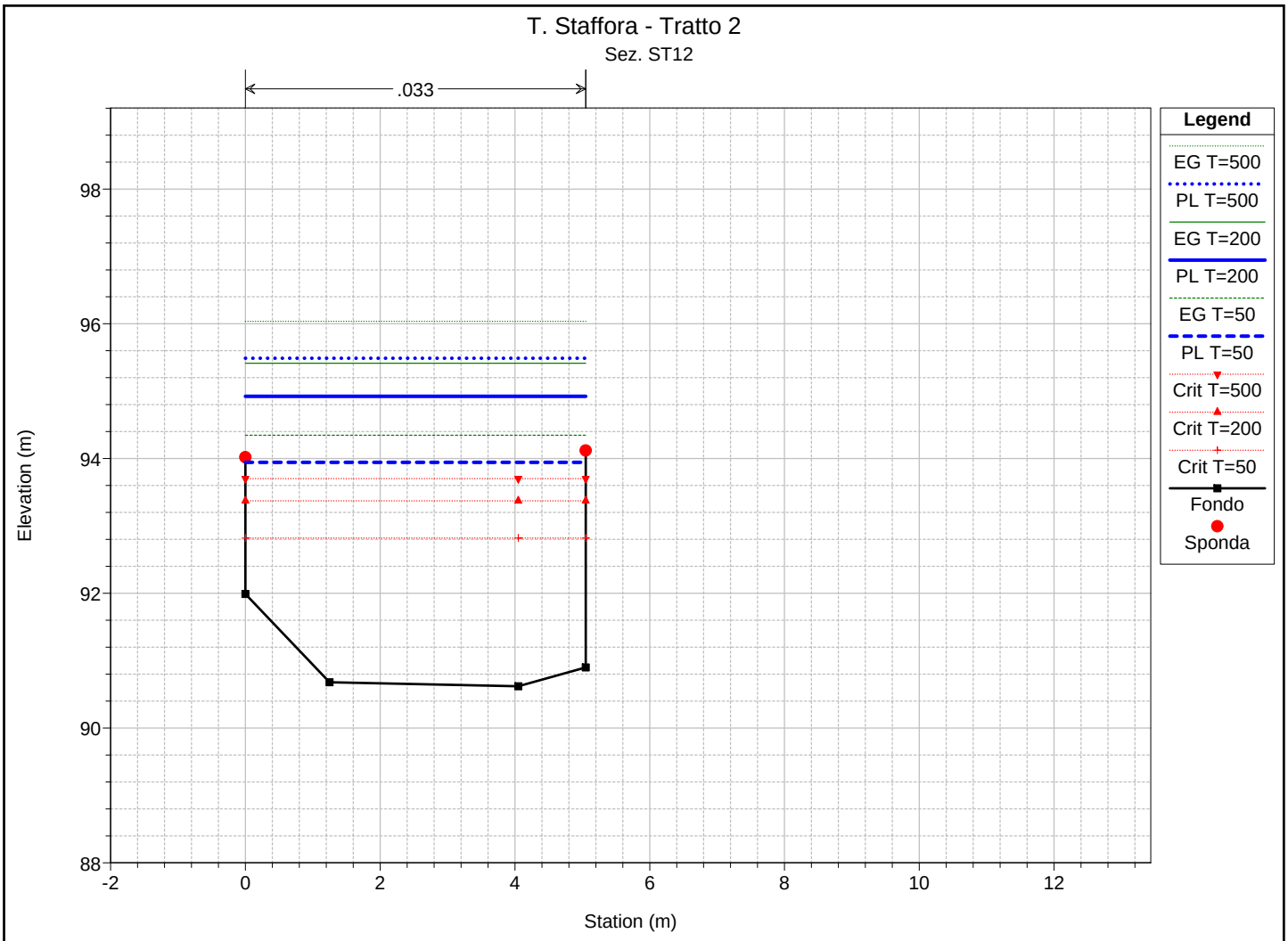
Sez. ST13

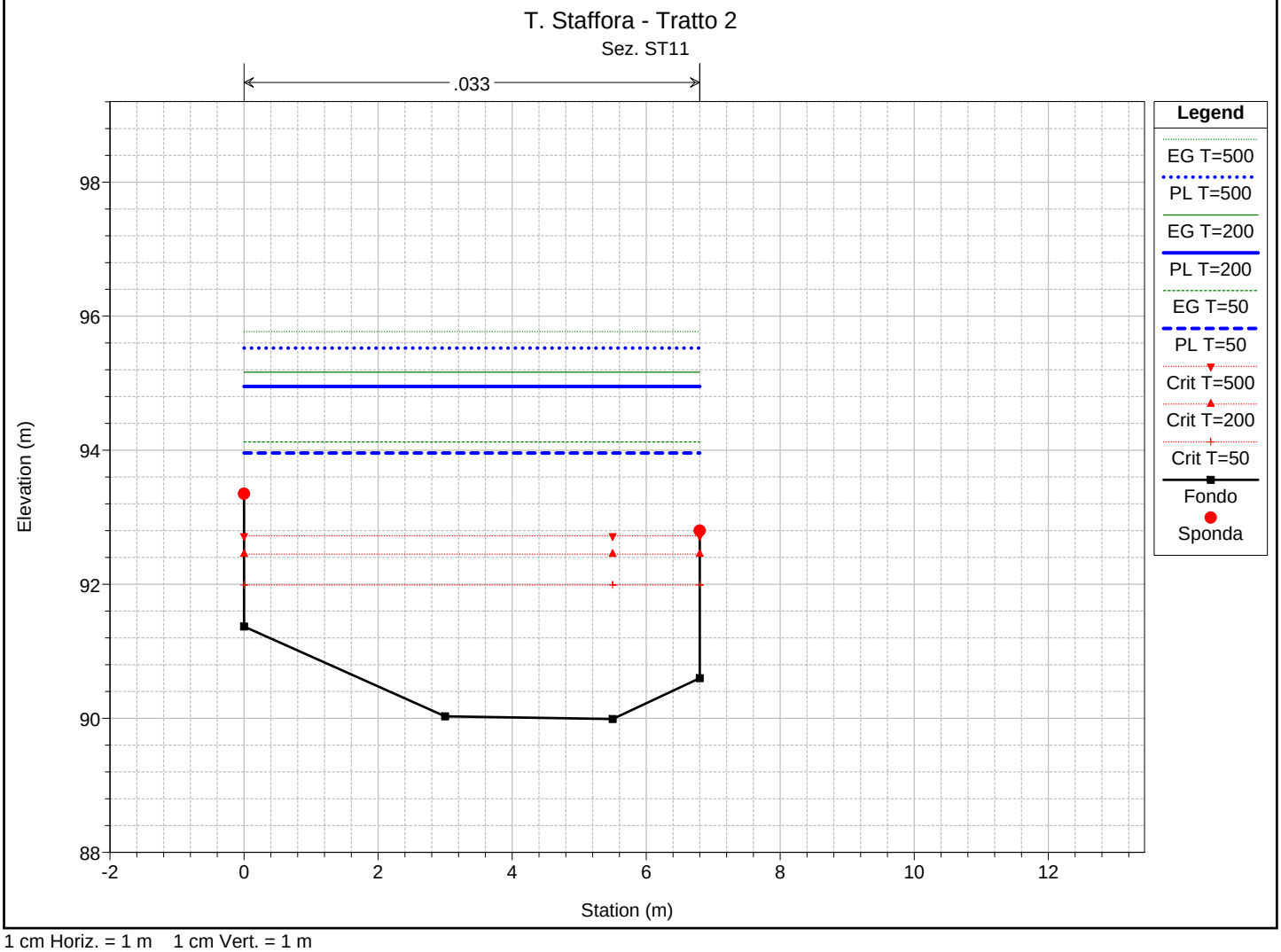


T. Staffora - Tratto 2



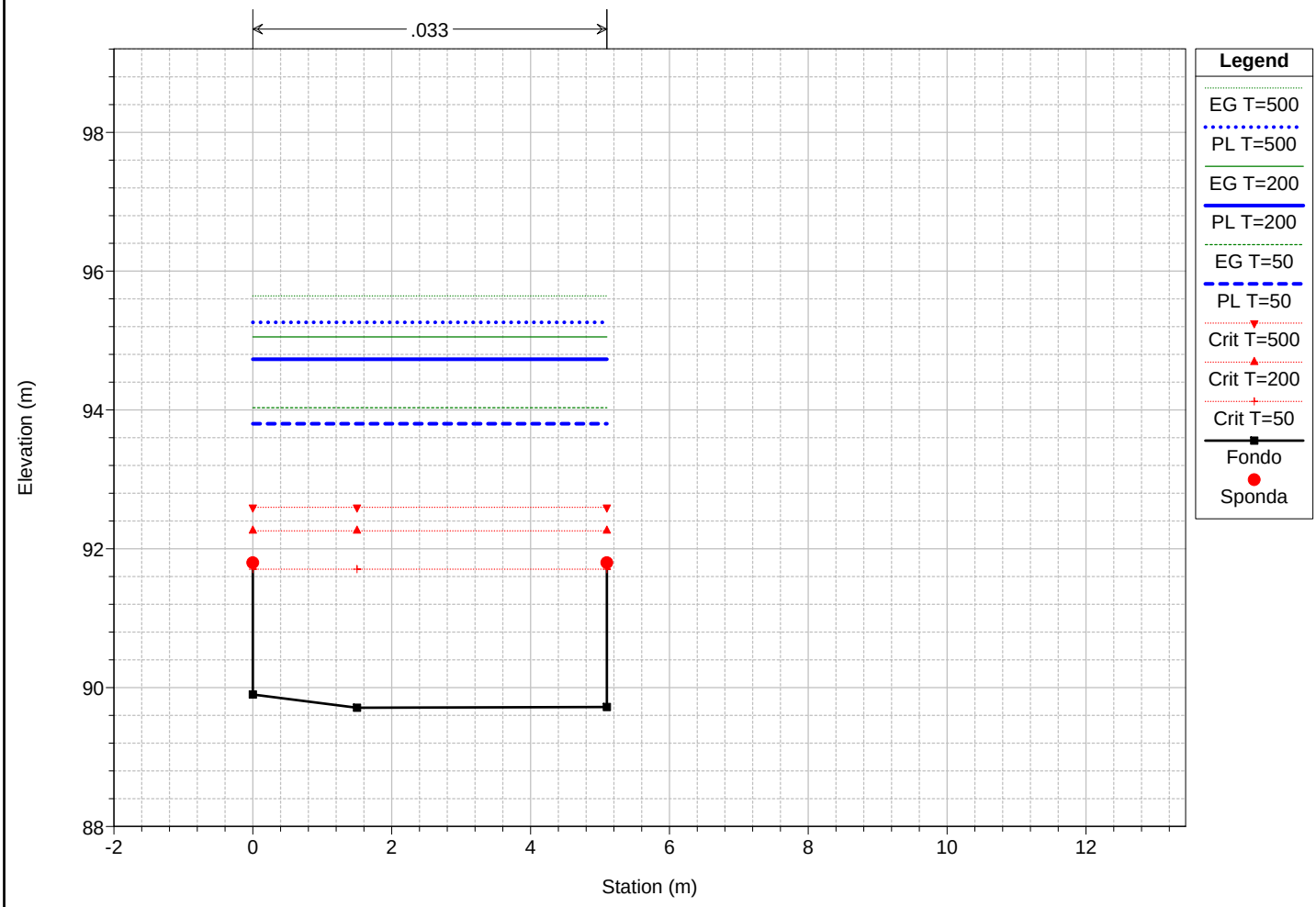
1 cm Horiz. = 1 m 1 cm Vert. = 1 m





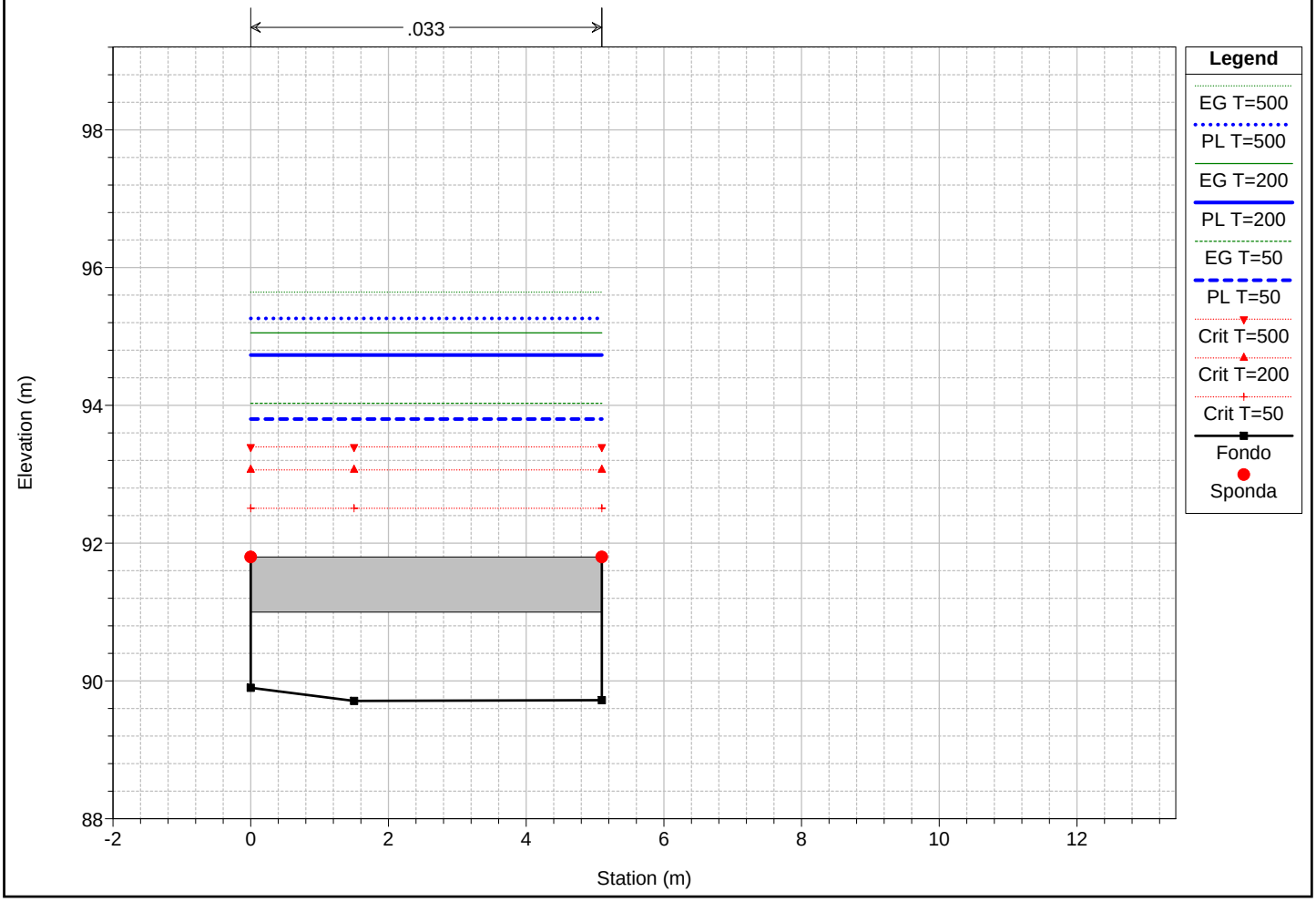
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 2



T. Staffora - Tratto 2

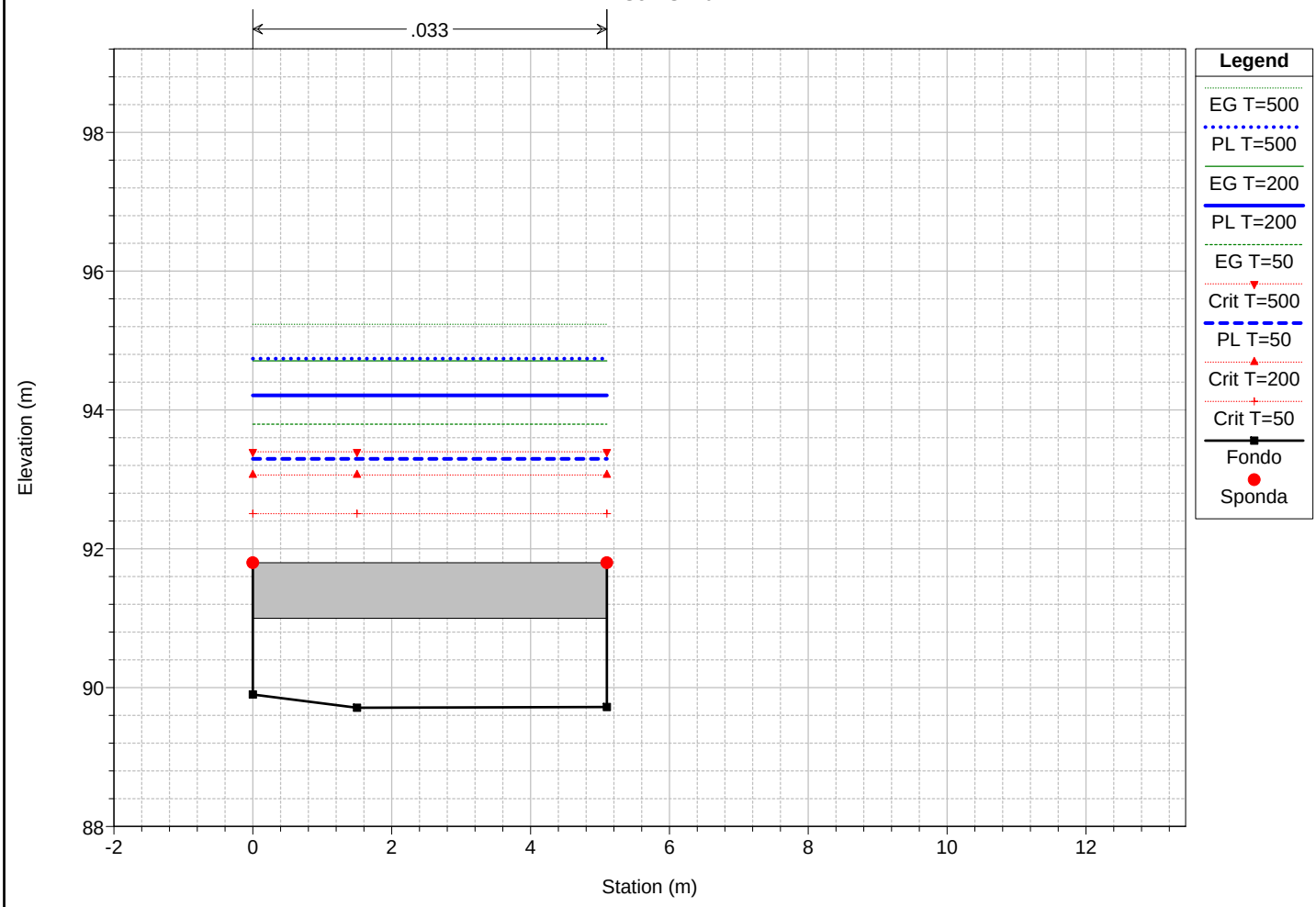
Sez. ST10



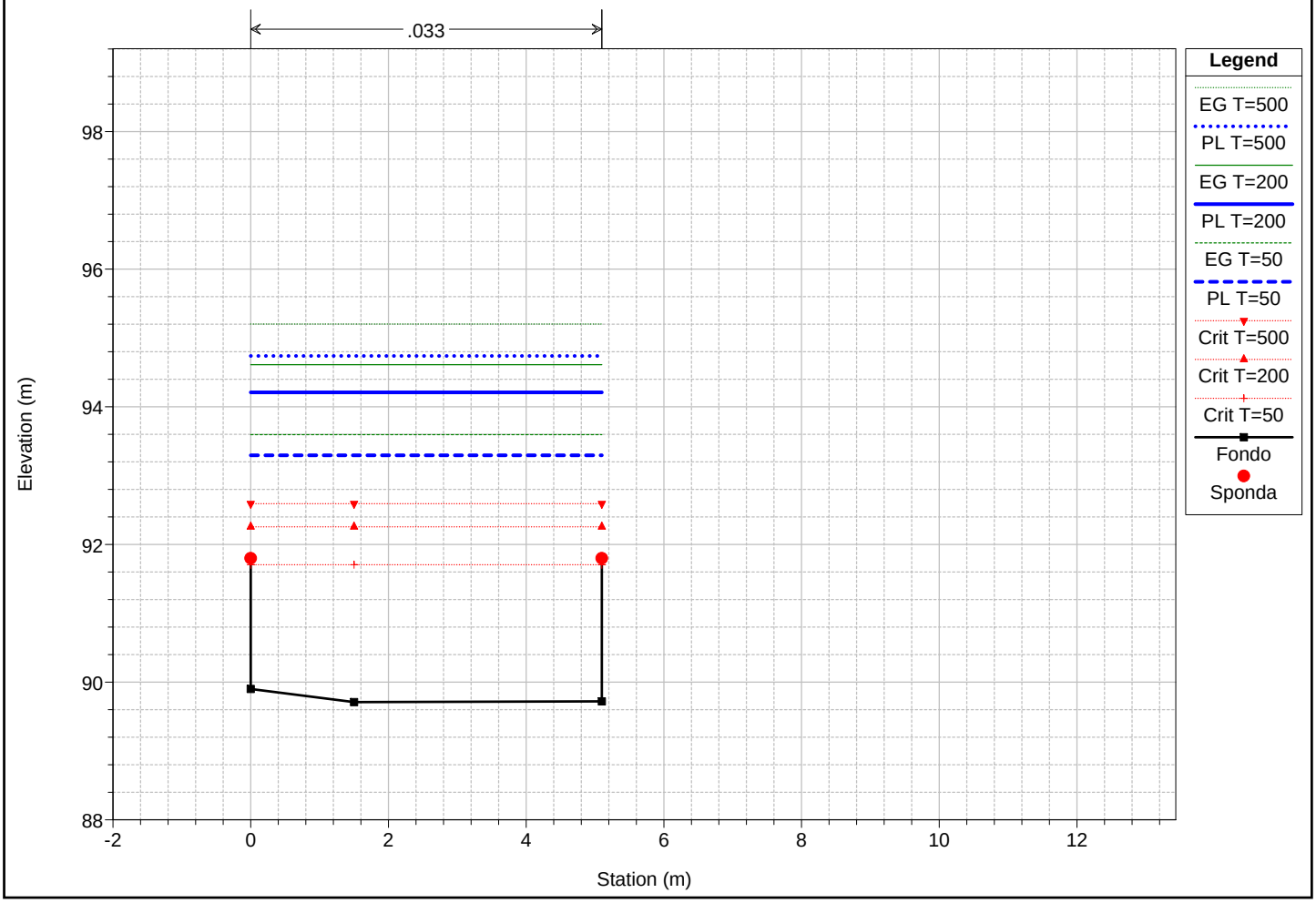
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 2

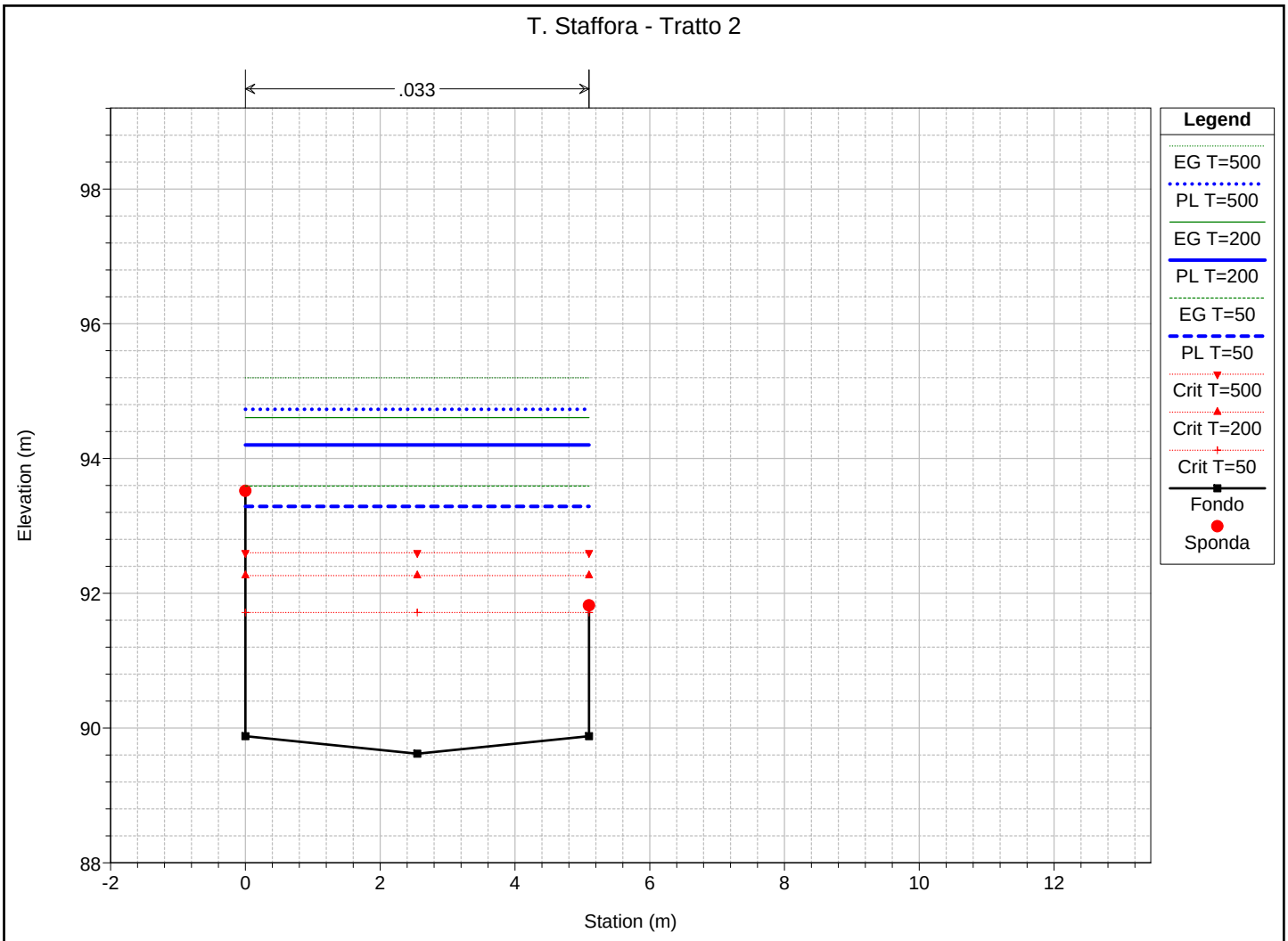
Sez. ST10

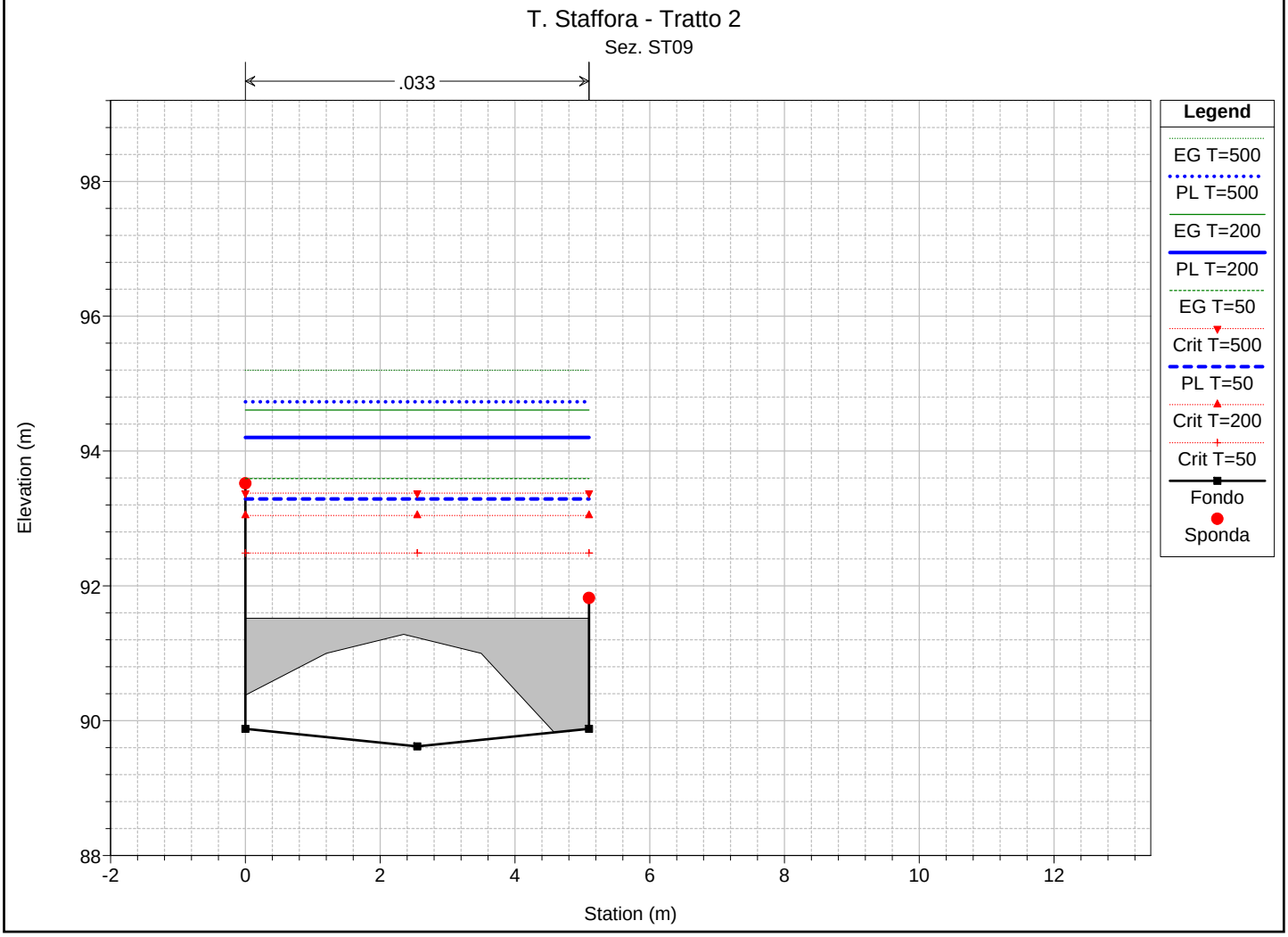


T. Staffora - Tratto 2



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

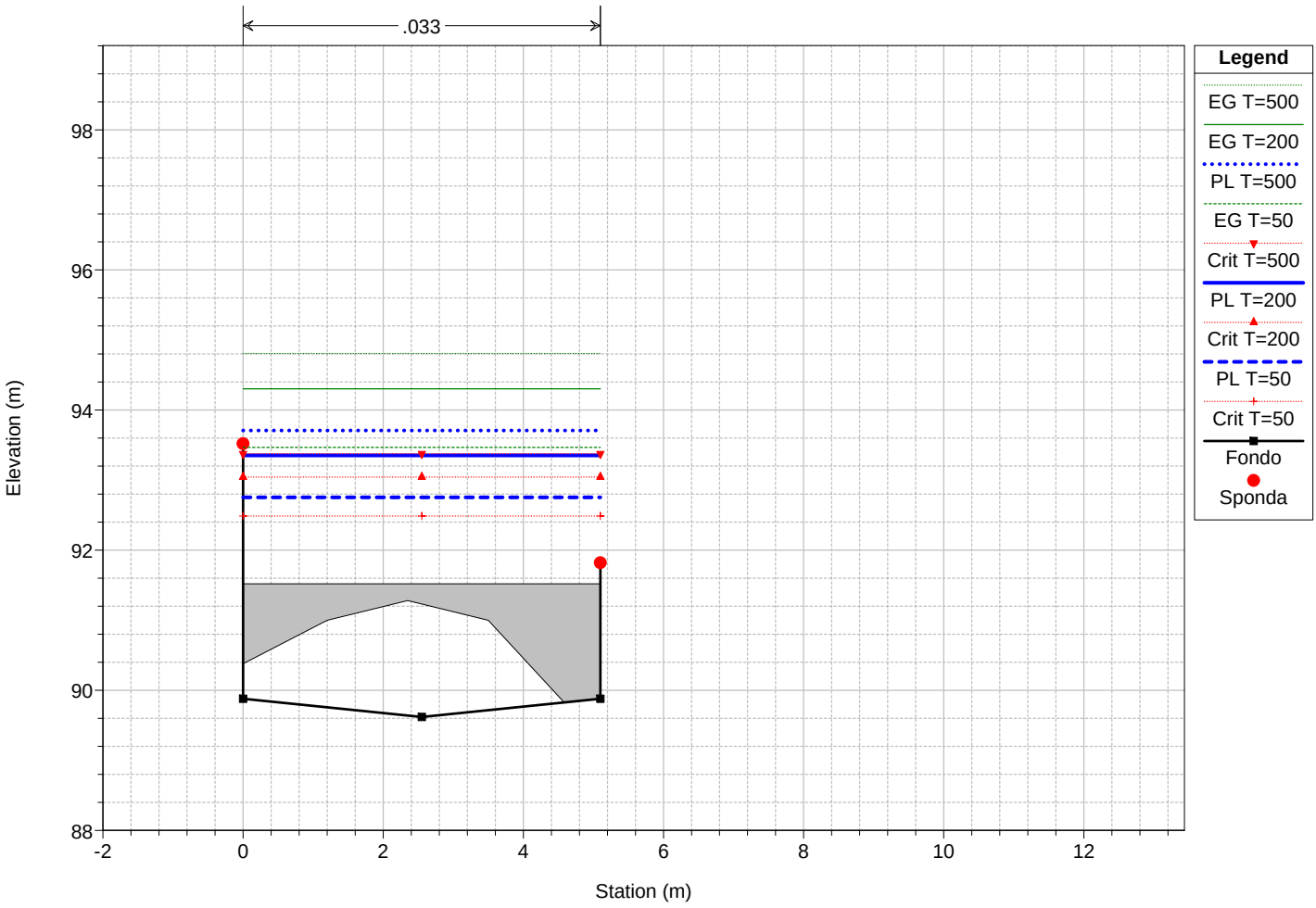




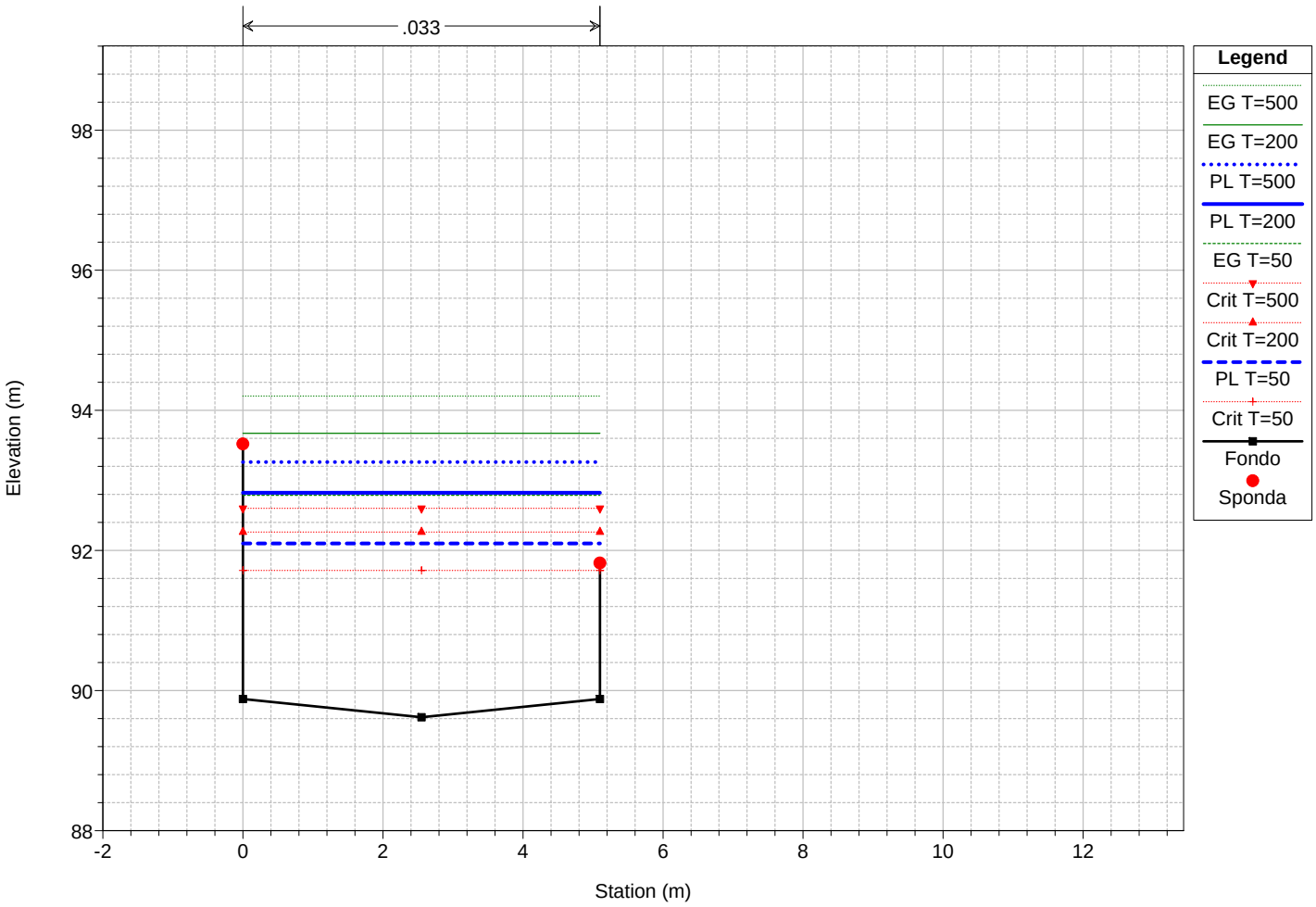
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 2

Sez. ST09



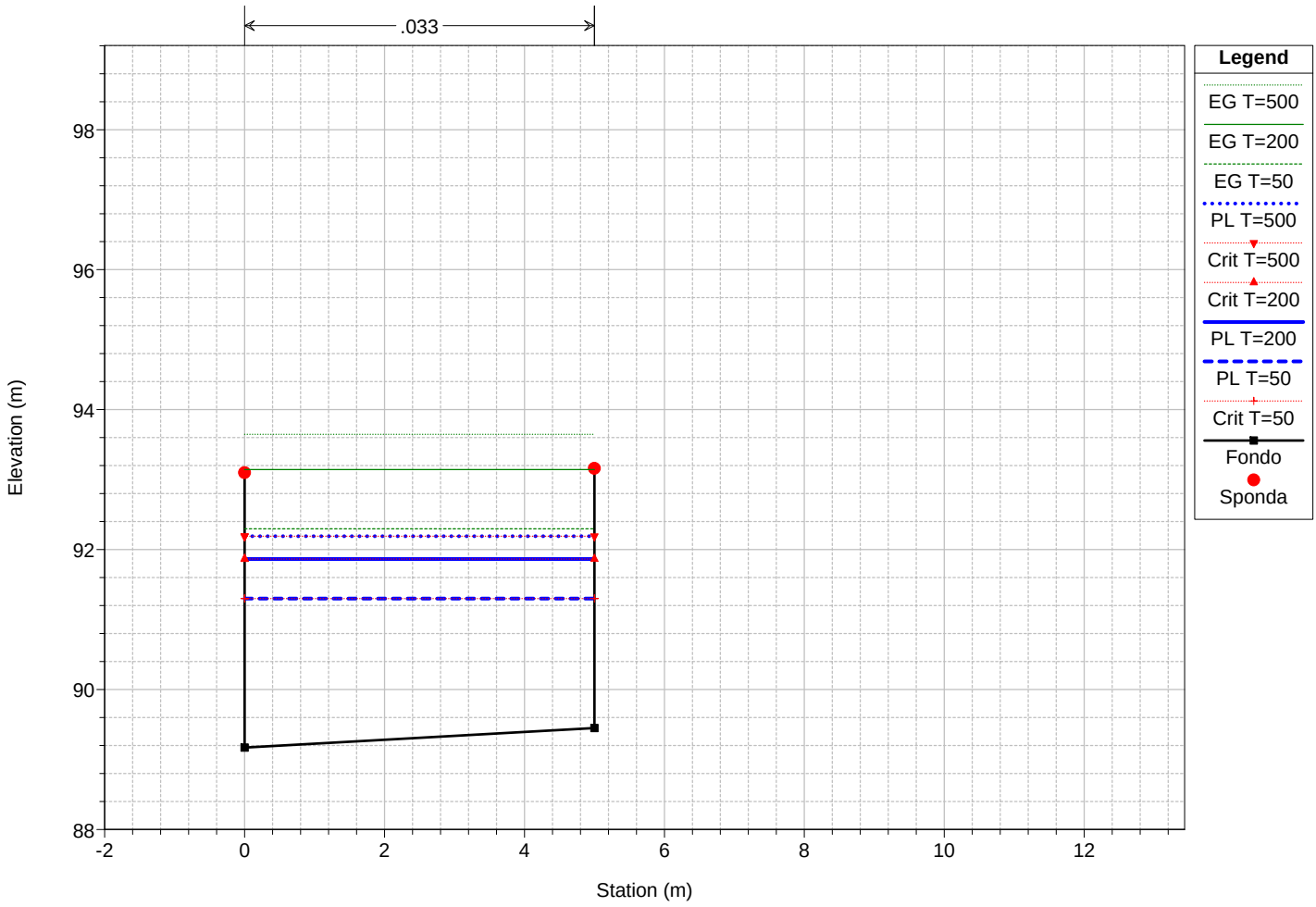
T. Staffora - Tratto 2



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

T. Staffora - Tratto 2

Sez. ST08



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

HEC-RAS Plan: Ps2 River: T. Staffora Reach: A monte Ferrovia

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	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)	(m)	(m/m)	(m/s)	(m2)	(m)	
A monte Ferrovia	27.2	T=50	44.00	102.33	104.12	107.68	3.56	104.78	0.66	104.12	104.88	0.014712	3.87	11.38	7.50	1.00
A monte Ferrovia	27.2	T=200	64.00	102.33	104.55	107.68	3.13	104.78	0.23	104.55	105.53	0.015163	4.39	14.57	7.50	1.01
A monte Ferrovia	27.2	T=500	77.00	102.33	104.80	107.68	2.88	104.78	-0.02	104.80	105.91	0.015413	4.67	16.49	7.50	1.01
A monte Ferrovia	27.1	T=50	44.00	100.56	103.57	107.68	4.11	104.78	1.21	102.07	103.76	0.002087	1.95	22.58	7.50	0.36
A monte Ferrovia	27.1	T=200	64.00	100.56	104.28	107.68	3.40	104.78	0.50	102.50	104.55	0.002494	2.29	27.89	7.50	0.38
A monte Ferrovia	27.1	T=500	77.00	100.56	104.70	107.68	2.98	104.78	0.08	102.76	105.01	0.002721	2.48	31.03	7.50	0.39
A monte Ferrovia	26	T=50	44.00	100.24	102.72	104.87	2.15	104.80	2.08	102.72	103.60	0.016787	4.16	10.57	6.00	1.00
A monte Ferrovia	26	T=200	64.00	100.24	103.22	104.87	1.65	104.80	1.58	103.22	104.35	0.017622	4.72	13.57	6.00	1.00
A monte Ferrovia	26	T=500	77.00	100.24	103.51	104.87	1.36	104.80	1.29	103.51	104.80	0.018188	5.02	15.35	6.00	1.00
A monte Ferrovia	25	T=50	44.00	98.61	99.99	103.22	3.23	104.91	4.92	100.63	102.07	0.052766	6.39	6.89	6.13	1.92
A monte Ferrovia	25	T=200	64.00	98.61	102.16	103.22	1.06	104.91	2.75	101.11	102.61	0.004590	2.96	21.63	6.98	0.54
A monte Ferrovia	25	T=500	77.00	98.61	102.75	103.22	0.47	104.91	2.16	101.37	103.20	0.004202	2.99	25.73	6.98	0.50
A monte Ferrovia	24	T=50	44.00	97.91	100.21	102.50	2.29	102.88	2.67	100.21	101.38	0.022690	4.78	9.21	4.00	1.00
A monte Ferrovia	24	T=200	64.00	97.91	100.88	102.50	1.62	102.88	2.00	100.88	102.36	0.025020	5.40	11.86	4.00	1.00
A monte Ferrovia	24	T=500	77.00	97.91	101.25	102.50	1.25	102.88	1.63	101.25	102.94	0.026746	5.76	13.38	4.00	1.00
A monte Ferrovia	23.2	T=50	44.00	97.27	98.97	101.13	2.16	101.98	3.01	99.57	100.83	0.047218	6.04	7.29	5.84	1.73
A monte Ferrovia	23.2	T=200	64.00	97.27	99.29	101.13	1.84	101.98	2.69	100.08	101.74	0.052378	6.93	9.24	6.39	1.84
A monte Ferrovia	23.2	T=500	77.00	97.27	99.47	101.13	1.66	101.98	2.51	100.34	102.27	0.055424	7.42	10.38	6.69	1.90
A monte Ferrovia	23.1	T=50	44.00	95.94	97.27	101.13	3.86	101.98	4.71	98.24	100.67	0.095781	8.16	5.39	4.62	2.41
A monte Ferrovia	23.1	T=200	64.00	95.94	97.66	101.13	3.47	101.98	4.32	98.79	101.58	0.089015	8.77	7.30	5.22	2.37
A monte Ferrovia	23.1	T=500	77.00	95.94	97.88	101.13	3.25	101.98	4.10	99.11	102.12	0.086862	9.13	8.44	5.45	2.34
A monte Ferrovia	22	T=50	44.00	95.50	97.94	99.51	1.57	101.23	3.29	97.27	98.22	0.003368	2.31	19.03	10.26	0.54
A monte Ferrovia	22	T=200	64.00	95.50	98.44	99.51	1.07	101.23	2.79	97.65	98.79	0.003595	2.64	24.24	10.77	0.56
A monte Ferrovia	22	T=500	77.00	95.50	98.97	99.51	0.54	101.23	2.26	97.87	99.30	0.002842	2.56	30.12	11.32	0.50
A monte Ferrovia	21	T=50	44.00	95.19	97.26	98.90	1.64	99.66	2.40	97.26	97.96	0.013123	3.69	11.91	8.69	1.01
A monte Ferrovia	21	T=200	64.00	95.19	98.04	98.90	0.86	99.66	1.62	97.69	98.59	0.007296	3.30	19.42	10.30	0.77
A monte Ferrovia	21	T=500	77.00	95.19	98.75	98.90	0.15	99.66	0.91	97.93	99.17	0.004162	2.88	26.73	10.30	0.57
A monte Ferrovia	20	T=50	44.00	94.85	97.35	98.53	1.18	98.36	1.01	96.68	97.62	0.003412	2.32	18.99	9.80	0.53
A monte Ferrovia	20	T=200	64.00	94.85	98.06	98.53	0.47	98.36	0.30	97.04	98.37	0.002948	2.47	25.91	9.80	0.48
A monte Ferrovia	20	T=500	77.00	94.85	98.74	98.53	-0.21	98.36	-0.38	97.26	99.03	0.002238	2.36	32.64	9.80	0.41
A monte Ferrovia	19	T=50	44.00	94.42	96.60	99.20	2.60	96.95	0.35	96.53	97.40	0.013300	3.96	11.12	6.20	0.94
A monte Ferrovia	19	T=200	64.00	94.42	97.21	99.20	1.99	96.95	-0.26	97.02	98.15	0.012495	4.29	14.91	6.20	0.88
A monte Ferrovia	19	T=500	77.00	94.42	98.20	99.20	1.00	96.95	-1.25	97.31	98.88	0.007273	3.67	20.99	6.20	0.64
A monte Ferrovia	18.2	T=50	44.00	94.17	96.46	98.25	1.79	98.40	1.94	96.20	97.14	0.010236	3.65	12.05	5.90	0.82
A monte Ferrovia	18.2	T=200	64.00	94.17	97.03	98.25	1.22	98.40	1.37	96.71	97.91	0.011173	4.16	15.39	5.90	0.82
A monte Ferrovia	18.2	T=500	77.00	94.17	98.09	98.25	0.16	98.40	0.31	97.01	98.74	0.006635	3.56	21.66	5.90	0.59
A monte Ferrovia	18.11		Bridge													

HEC-RAS Plan: Ps2 River: T. Staffora Reach: A monte Ferrovia (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	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)	(m)	(m/m)	(m/s)	(m2)	(m)	
A monte Ferrovia	18.1	T=50	44.00	94.17	96.20	98.25	2.05	98.40	2.20	96.20	97.10	0.015056	4.20	10.48	5.90	1.01
A monte Ferrovia	18.1	T=200	64.00	94.17	96.71	98.25	1.54	98.40	1.69	96.71	97.86	0.015931	4.75	13.49	5.90	1.00
A monte Ferrovia	18.1	T=500	77.00	94.17	98.06	98.25	0.19	98.40	0.34	97.01	98.72	0.006786	3.59	21.47	5.90	0.60
A monte Ferrovia	17	T=50	44.00	93.80	95.36	99.47	4.11	97.50	2.14	95.65	96.64	0.027248	5.02	8.77	5.80	1.30
A monte Ferrovia	17	T=200	64.00	93.80	95.85	99.47	3.62	97.50	1.65	96.16	97.39	0.025901	5.50	11.63	5.80	1.24
A monte Ferrovia	17	T=500	77.00	93.80	98.04	99.47	1.43	97.50	-0.54	96.46	98.55	0.005274	3.17	24.31	5.80	0.49
A monte Ferrovia	16.2	T=50	44.00	93.56	95.67	99.45	3.78	97.45	1.78	95.43	96.40	0.012127	3.77	11.67	5.60	0.83
A monte Ferrovia	16.2	T=200	64.00	93.56	96.25	99.45	3.20	97.45	1.20	95.96	97.19	0.013136	4.29	14.92	5.60	0.84
A monte Ferrovia	16.2	T=500	77.00	93.56	97.99	99.45	1.46	97.45	-0.54	96.27	98.49	0.005173	3.13	24.63	5.60	0.48
A monte Ferrovia	16.11		Bridge													
A monte Ferrovia	16.1	T=50	44.00	93.56	95.44	99.45	4.01	97.45	2.01	95.44	96.36	0.016990	4.26	10.33	5.60	1.00
A monte Ferrovia	16.1	T=200	64.00	93.56	95.96	99.45	3.49	97.45	1.49	95.96	97.14	0.018030	4.82	13.27	5.60	1.00
A monte Ferrovia	16.1	T=500	77.00	93.56	97.54	99.45	1.91	97.45	-0.09	96.27	98.16	0.006778	3.48	22.14	5.60	0.56
A monte Ferrovia	15	T=50	44.00	93.00	94.33	97.00	2.67	96.80	2.47	94.76	95.88	0.037189	5.53	7.96	6.00	1.53
A monte Ferrovia	15	T=200	64.00	93.00	95.95	97.00	1.05	96.80	0.85	95.26	96.62	0.008359	3.61	17.72	6.00	0.67
A monte Ferrovia	15	T=500	77.00	93.00	97.61	97.00	-0.61	96.80	-0.81	95.56	98.01	0.003797	2.78	27.68	6.00	0.41
A monte Ferrovia	14	T=50	44.00	92.10	94.96	96.50	1.54	96.50	1.54	94.08	95.44	0.007027	3.08	14.30	5.00	0.58
A monte Ferrovia	14	T=200	64.00	92.10	95.84	96.50	0.66	96.50	0.66	94.65	96.44	0.007414	3.42	18.72	5.00	0.56
A monte Ferrovia	14	T=500	77.00	92.10	97.51	96.50	-1.01	96.50	-1.01	94.99	97.93	0.004309	2.84	27.07	5.00	0.39
A monte Ferrovia	13.2	T=50	44.00	91.60	94.35	95.90	1.55	96.40	2.05	93.98	95.13	0.012632	3.92	11.24	4.50	0.79
A monte Ferrovia	13.2	T=200	64.00	91.60	95.20	95.90	0.70	96.40	1.20	94.59	96.12	0.012696	4.26	15.04	4.50	0.74
A monte Ferrovia	13.2	T=500	77.00	91.60	97.26	95.90	-1.36	96.40	-0.86	94.95	97.77	0.005710	3.17	24.30	4.50	0.44
A monte Ferrovia	13.11		Bridge													
A monte Ferrovia	13.1	T=50	44.00	91.60	93.98	95.90	1.92	96.40	2.42	93.98	95.06	0.019254	4.60	9.57	4.50	1.01
A monte Ferrovia	13.1	T=200	64.00	91.60	95.00	95.90	0.90	96.40	1.40	94.59	96.04	0.014771	4.52	14.16	4.50	0.81
A monte Ferrovia	13.1	T=500	77.00	91.60	95.59	95.90	0.31	96.40	0.81	94.95	96.66	0.013904	4.58	16.82	4.50	0.76
A monte Ferrovia	12	T=50	44.00	90.62	93.94	94.02	0.08	94.12	0.18	92.82	94.34	0.005136	2.81	15.66	5.05	0.51
A monte Ferrovia	12	T=200	64.00	90.62	94.92	94.02	-0.90	94.12	-0.80	93.37	95.41	0.005450	3.10	20.61	5.05	0.49
A monte Ferrovia	12	T=500	77.00	90.62	95.49	94.02	-1.47	94.12	-1.37	93.70	96.04	0.005737	3.28	23.47	5.05	0.49
A monte Ferrovia	11	T=50	44.00	89.99	93.96	93.35	-0.61	92.80	-1.16	91.99	94.12	0.001554	1.80	24.41	6.80	0.30
A monte Ferrovia	11	T=200	64.00	89.99	94.95	93.35	-1.60	92.80	-2.15	92.45	95.17	0.001758	2.05	31.16	6.80	0.31
A monte Ferrovia	11	T=500	77.00	89.99	95.52	93.35	-2.17	92.80	-2.72	92.72	95.77	0.001893	2.20	35.06	6.80	0.31
A monte Ferrovia	10.2	T=50	44.00	89.71	93.80	91.80	-2.00	91.80	-2.00	91.71	94.03	0.002670	2.13	20.71	5.10	0.34
A monte Ferrovia	10.2	T=200	64.00	89.71	94.73	91.80	-2.93	91.80	-2.93	92.26	95.05	0.003392	2.52	25.44	5.10	0.36
A monte Ferrovia	10.2	T=500	77.00	89.71	95.26	91.80	-3.46	91.80	-3.46	92.60	95.64	0.003837	2.73	28.16	5.10	0.37
A monte Ferrovia	10.11		Bridge													

HEC-RAS Plan: Ps2 River: T. Staffora Reach: A monte Ferrovia (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	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)	(m)	(m/m)	(m/s)	(m2)	(m)	
A monte Ferrovia	10.1	T=50	44.00	89.71	93.30	91.80	-1.50	91.80	-1.50	91.71	93.60	0.003735	2.43	18.13	5.10	0.41
A monte Ferrovia	10.1	T=200	64.00	89.71	94.21	91.80	-2.41	91.80	-2.41	92.26	94.61	0.004447	2.81	22.79	5.10	0.42
A monte Ferrovia	10.1	T=500	77.00	89.71	94.74	91.80	-2.94	91.80	-2.94	92.59	95.20	0.004890	3.02	25.49	5.10	0.43
A monte Ferrovia	9.2	T=50	44.00	89.62	93.29	93.52	0.23	91.82	-1.47	91.71	93.59	0.003731	2.44	18.05	5.10	0.41
A monte Ferrovia	9.2	T=200	64.00	89.62	94.20	93.52	-0.68	91.82	-2.38	92.26	94.61	0.004440	2.82	22.71	5.10	0.43
A monte Ferrovia	9.2	T=500	77.00	89.62	94.73	93.52	-1.21	91.82	-2.91	92.60	95.20	0.004883	3.03	25.40	5.10	0.43
A monte Ferrovia	9.11		Bridge													
A monte Ferrovia	9.1	T=50	44.00	89.62	92.10	93.52	1.42	91.82	-0.28	91.71	92.79	0.010859	3.67	11.99	5.10	0.76
A monte Ferrovia	9.1	T=200	64.00	89.62	92.82	93.52	0.70	91.82	-1.00	92.26	93.67	0.011330	4.08	15.68	5.10	0.74
A monte Ferrovia	9.1	T=500	77.00	89.62	93.26	93.52	0.26	91.82	-1.44	92.60	94.20	0.011648	4.30	17.92	5.10	0.73
A monte Ferrovia	8	T=50	44.00	89.17	91.30	93.10	1.80	93.16	1.86	91.30	92.30	0.018596	4.42	9.95	5.00	1.00
A monte Ferrovia	8	T=200	64.00	89.17	91.87	93.10	1.23	93.16	1.29	91.87	93.14	0.020022	5.01	12.78	5.00	1.00
A monte Ferrovia	8	T=500	77.00	89.17	92.19	93.10	0.91	93.16	0.97	92.19	93.65	0.021111	5.35	14.41	5.00	1.01

Plan: Ps2 T. Staffora A monte Ferrovia RS: 18.11 Profile: T=50

E.G. US. (m)	97.14	Element	Inside BR US	Inside BR DS
W.S. US. (m)	96.46	E.G. Elev (m)	97.14	97.11
Q Total (m3/s)	44.00	W.S. Elev (m)	96.46	96.31
Q Bridge (m3/s)	44.00	Crit W.S. (m)	96.21	96.21
Q Weir (m3/s)		Max Chl Dpth (m)	2.29	2.14
Weir Sta Lft (m)		Vel Total (m/s)	3.65	3.94
Weir Sta Rgt (m)		Flow Area (m2)	12.04	11.17
Weir Submerg		Froude # Chl	0.82	0.91
Weir Max Depth (m)		Specif Force (m3)	29.03	28.59
Min El Weir Flow (m)	98.25	Hydr Depth (m)	2.04	1.89
Min El Prs (m)	98.20	W.P. Total (m)	9.27	8.97
Delta EG (m)	0.05	Conv. Total (m3/s)	434.4	391.5
Delta WS (m)	0.27	Top Width (m)	5.90	5.90
BR Open Area (m2)	21.85	Frctn Loss (m)	0.03	0.00
BR Open Vel (m/s)	3.94	C & E Loss (m)	0.01	0.01
Coef of Q		Shear Total (N/m2)	130.72	154.18
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 18.11 Profile: T=200

E.G. US. (m)	97.91	Element	Inside BR US	Inside BR DS
W.S. US. (m)	97.03	E.G. Elev (m)	97.91	97.87
Q Total (m3/s)	64.00	W.S. Elev (m)	97.03	96.85
Q Bridge (m3/s)	64.00	Crit W.S. (m)	96.71	96.71
Q Weir (m3/s)		Max Chl Dpth (m)	2.86	2.68
Weir Sta Lft (m)		Vel Total (m/s)	4.16	4.47
Weir Sta Rgt (m)		Flow Area (m2)	15.38	14.33
Weir Submerg		Froude # Chl	0.82	0.91
Weir Max Depth (m)		Specif Force (m3)	47.54	46.88
Min El Weir Flow (m)	98.25	Hydr Depth (m)	2.61	2.43
Min El Prs (m)	98.20	W.P. Total (m)	10.40	10.04
Delta EG (m)	0.06	Conv. Total (m3/s)	604.9	550.2
Delta WS (m)	0.32	Top Width (m)	5.90	5.90
BR Open Area (m2)	21.85	Frctn Loss (m)	0.03	0.00
BR Open Vel (m/s)	4.47	C & E Loss (m)	0.01	0.01
Coef of Q		Shear Total (N/m2)	162.35	189.28
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 18.11 Profile: T=500

E.G. US. (m)	98.74	Element	Inside BR US	Inside BR DS
W.S. US. (m)	98.09	E.G. Elev (m)	98.74	98.72
Q Total (m3/s)	77.00	W.S. Elev (m)	98.09	98.06
Q Bridge (m3/s)	77.00	Crit W.S. (m)	97.01	97.01
Q Weir (m3/s)		Max Chl Dpth (m)	3.92	3.89
Weir Sta Lft (m)		Vel Total (m/s)	3.56	3.59
Weir Sta Rgt (m)		Flow Area (m2)	21.60	21.47
Weir Submerg		Froude # Chl	0.57	0.58
Weir Max Depth (m)		Specif Force (m3)	67.99	67.57
Min El Weir Flow (m)	98.25	Hydr Depth (m)	4.95	3.94
Min El Prs (m)	98.20	W.P. Total (m)	14.01	12.90
Delta EG (m)	0.02	Conv. Total (m3/s)	873.7	913.7
Delta WS (m)	0.03	Top Width (m)	4.37	5.45
BR Open Area (m2)	21.85	Frctn Loss (m)	0.02	0.00
BR Open Vel (m/s)	3.59	C & E Loss (m)	0.00	0.00
Coef of Q		Shear Total (N/m2)	117.43	115.92
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 16.11 Profile: T=50

E.G. US. (m)	96.40	Element	Inside BR US	Inside BR DS
W.S. US. (m)	95.67	E.G. Elev (m)	96.40	96.37
Q Total (m3/s)	44.00	W.S. Elev (m)	95.67	95.54
Q Bridge (m3/s)	44.00	Crit W.S. (m)	95.44	95.44
Q Weir (m3/s)		Max Chl Dpth (m)	2.11	1.98
Weir Sta Lft (m)		Vel Total (m/s)	3.78	4.02
Weir Sta Rgt (m)		Flow Area (m2)	11.65	10.94
Weir Submerg		Froude # Chl	0.84	0.92
Weir Max Depth (m)		Specif Force (m3)	29.05	28.72
Min El Weir Flow (m)	97.10	Hydr Depth (m)	2.08	1.95
Min El Prs (m)	96.90	W.P. Total (m)	9.70	9.45
Delta EG (m)	0.04	Conv. Total (m3/s)	399.0	365.6
Delta WS (m)	0.24	Top Width (m)	5.60	5.60
BR Open Area (m2)	18.54	Frctn Loss (m)	0.02	0.00
BR Open Vel (m/s)	4.02	C & E Loss (m)	0.01	0.01
Coef of Q		Shear Total (N/m2)	143.24	164.44
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 16.11 Profile: T=200

E.G. US. (m)	97.19	Element	Inside BR US	Inside BR DS
W.S. US. (m)	96.25	E.G. Elev (m)	97.19	97.16
Q Total (m3/s)	64.00	W.S. Elev (m)	96.25	96.10
Q Bridge (m3/s)	64.00	Crit W.S. (m)	95.96	95.96
Q Weir (m3/s)		Max Chl Dpth (m)	2.69	2.54
Weir Sta Lft (m)		Vel Total (m/s)	4.29	4.55
Weir Sta Rgt (m)		Flow Area (m2)	14.91	14.08
Weir Submerg		Froude # Chl	0.84	0.92
Weir Max Depth (m)		Specif Force (m3)	47.84	47.34
Min El Weir Flow (m)	97.10	Hydr Depth (m)	2.66	2.51
Min El Prs (m)	96.90	W.P. Total (m)	10.86	10.57
Delta EG (m)	0.05	Conv. Total (m3/s)	557.7	516.4
Delta WS (m)	0.29	Top Width (m)	5.60	5.60
BR Open Area (m2)	18.54	Frctn Loss (m)	0.02	0.00
BR Open Vel (m/s)	4.55	C & E Loss (m)	0.01	0.01
Coef of Q		Shear Total (N/m2)	177.16	200.63
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 16.11 Profile: T=500

E.G. US. (m)	98.49	Element	Inside BR US	Inside BR DS
W.S. US. (m)	97.99	E.G. Elev (m)	98.49	98.34
Q Total (m3/s)	77.00	W.S. Elev (m)	97.99	97.92
Q Bridge (m3/s)	63.81	Crit W.S. (m)	96.27	96.27
Q Weir (m3/s)	13.19	Max Chl Dpth (m)	4.43	4.36
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.60	Flow Area (m2)		
Weir Submerg	0.32	Froude # Chl	0.50	0.51
Weir Max Depth (m)	1.39	Specif Force (m3)	78.75	77.64
Min El Weir Flow (m)	97.10	Hydr Depth (m)		
Min El Prs (m)	96.90	W.P. Total (m)	24.60	24.53
Delta EG (m)	0.33	Conv. Total (m3/s)		
Delta WS (m)	0.45	Top Width (m)	5.60	5.60
BR Open Area (m2)	18.54	Frctn Loss (m)		
BR Open Vel (m/s)	3.44	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: Ps2 T. Staffora A monte Ferrovia RS: 13.11 Profile: T=50

E.G. US. (m)	95.13	Element	Inside BR US	Inside BR DS
W.S. US. (m)	94.35	E.G. Elev (m)	95.13	95.07
Q Total (m3/s)	44.00	W.S. Elev (m)	94.35	94.13
Q Bridge (m3/s)	44.00	Crit W.S. (m)	93.99	93.99
Q Weir (m3/s)		Max Chl Dpth (m)	2.75	2.53
Weir Sta Lft (m)		Vel Total (m/s)	3.92	4.30
Weir Sta Rgt (m)		Flow Area (m2)	11.23	10.24
Weir Submerg		Froude # Chl	0.79	0.91
Weir Max Depth (m)		Specif Force (m3)	32.02	31.36
Min El Weir Flow (m)	96.25	Hydr Depth (m)	2.50	2.28
Min El Prs (m)	95.68	W.P. Total (m)	9.11	8.68
Delta EG (m)	0.07	Conv. Total (m3/s)	391.0	346.8
Delta WS (m)	0.37	Top Width (m)	4.50	4.50
BR Open Area (m2)	15.28	Frctn Loss (m)	0.05	0.00
BR Open Vel (m/s)	4.30	C & E Loss (m)	0.02	0.01
Coef of Q		Shear Total (N/m2)	152.98	186.40
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 13.11 Profile: T=200

E.G. US. (m)	96.12	Element	Inside BR US	Inside BR DS
W.S. US. (m)	95.20	E.G. Elev (m)	96.11	96.05
Q Total (m3/s)	64.00	W.S. Elev (m)	95.10	94.99
Q Bridge (m3/s)	64.00	Crit W.S. (m)	94.60	94.60
Q Weir (m3/s)		Max Chl Dpth (m)	3.50	3.39
Weir Sta Lft (m)		Vel Total (m/s)	4.44	4.56
Weir Sta Rgt (m)		Flow Area (m2)	14.40	14.02
Weir Submerg		Froude # Chl	0.76	0.79
Weir Max Depth (m)		Specif Force (m3)	53.13	52.30
Min El Weir Flow (m)	96.25	Hydr Depth (m)	4.72	3.83
Min El Prs (m)	95.68	W.P. Total (m)	11.61	10.96
Delta EG (m)	0.08	Conv. Total (m3/s)	503.9	500.5
Delta WS (m)	0.19	Top Width (m)	3.05	3.66
BR Open Area (m2)	15.28	Frctn Loss (m)	0.05	0.00
BR Open Vel (m/s)	4.56	C & E Loss (m)	0.01	0.01
Coef of Q		Shear Total (N/m2)	196.25	205.02
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps2 T. Staffora A monte Ferrovia RS: 13.11 Profile: T=500

E.G. US. (m)	97.77	Element	Inside BR US	Inside BR DS
W.S. US. (m)	97.26	E.G. Elev (m)	97.77	97.61
Q Total (m3/s)	77.00	W.S. Elev (m)	97.26	97.18
Q Bridge (m3/s)	65.81	Crit W.S. (m)	94.89	94.89
Q Weir (m3/s)	11.19	Max Chl Dpth (m)	5.66	5.58
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	4.50	Flow Area (m2)		
Weir Submerg	0.00	Froude # Chl	0.53	0.54
Weir Max Depth (m)	1.52	Specif Force (m3)	89.85	88.99
Min El Weir Flow (m)	96.25	Hydr Depth (m)		
Min El Prs (m)	95.68	W.P. Total (m)	19.38	19.38
Delta EG (m)	1.11	Conv. Total (m3/s)		
Delta WS (m)	1.66	Top Width (m)	4.50	4.50
BR Open Area (m2)	15.28	Frctn Loss (m)		
BR Open Vel (m/s)	4.31	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: Ps2 T. Staffora A monte Ferrovia RS: 10.11 Profile: T=50

E.G. US. (m)	94.03	Element	Inside BR US	Inside BR DS
W.S. US. (m)	93.80	E.G. Elev (m)	94.03	93.79
Q Total (m3/s)	44.00	W.S. Elev (m)	93.80	93.30
Q Bridge (m3/s)	19.50	Crit W.S. (m)	92.51	92.51
Q Weir (m3/s)	24.50	Max Chl Dpth (m)	4.09	3.59
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.67	Froude # Chl	0.42	0.53
Weir Max Depth (m)	2.23	Specif Force (m3)	44.10	38.53
Min El Weir Flow (m)	91.80	Hydr Depth (m)		
Min El Prs (m)	91.00	W.P. Total (m)	17.69	17.69
Delta EG (m)	0.44	Conv. Total (m3/s)		
Delta WS (m)	0.51	Top Width (m)	5.10	5.10
BR Open Area (m2)	6.42	Frctn Loss (m)		
BR Open Vel (m/s)	3.04	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: Ps2 T. Staffora A monte Ferrovia RS: 10.11 Profile: T=200

E.G. US. (m)	95.05	Element	Inside BR US	Inside BR DS
W.S. US. (m)	94.73	E.G. Elev (m)	95.05	94.71
Q Total (m3/s)	64.00	W.S. Elev (m)	94.73	94.21
Q Bridge (m3/s)	20.87	Crit W.S. (m)	93.06	93.06
Q Weir (m3/s)	43.13	Max Chl Dpth (m)	5.02	4.50
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.74	Froude # Chl	0.43	0.51
Weir Max Depth (m)	3.25	Specif Force (m3)	69.42	61.77
Min El Weir Flow (m)	91.80	Hydr Depth (m)		
Min El Prs (m)	91.00	W.P. Total (m)	17.69	17.69
Delta EG (m)	0.44	Conv. Total (m3/s)		
Delta WS (m)	0.52	Top Width (m)	5.10	5.10
BR Open Area (m2)	6.42	Frctn Loss (m)		
BR Open Vel (m/s)	3.25	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: Ps2 T. Staffora A monte Ferrovia RS: 10.11 Profile: T=500

E.G. US. (m)	95.64	Element	Inside BR US	Inside BR DS
W.S. US. (m)	95.26	E.G. Elev (m)	95.64	95.23
Q Total (m3/s)	77.00	W.S. Elev (m)	95.26	94.74
Q Bridge (m3/s)	21.64	Crit W.S. (m)	93.40	93.40
Q Weir (m3/s)	55.36	Max Chl Dpth (m)	5.55	5.03
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.76	Froude # Chl	0.43	0.51
Weir Max Depth (m)	3.84	Specif Force (m3)	87.08	78.29
Min El Weir Flow (m)	91.80	Hydr Depth (m)		
Min El Prs (m)	91.00	W.P. Total (m)	17.69	17.69
Delta EG (m)	0.44	Conv. Total (m3/s)		
Delta WS (m)	0.52	Top Width (m)	5.10	5.10
BR Open Area (m2)	6.42	Frctn Loss (m)		
BR Open Vel (m/s)	3.37	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: Ps2 T. Staffora A monte Ferrovia RS: 9.11 Profile: T=50

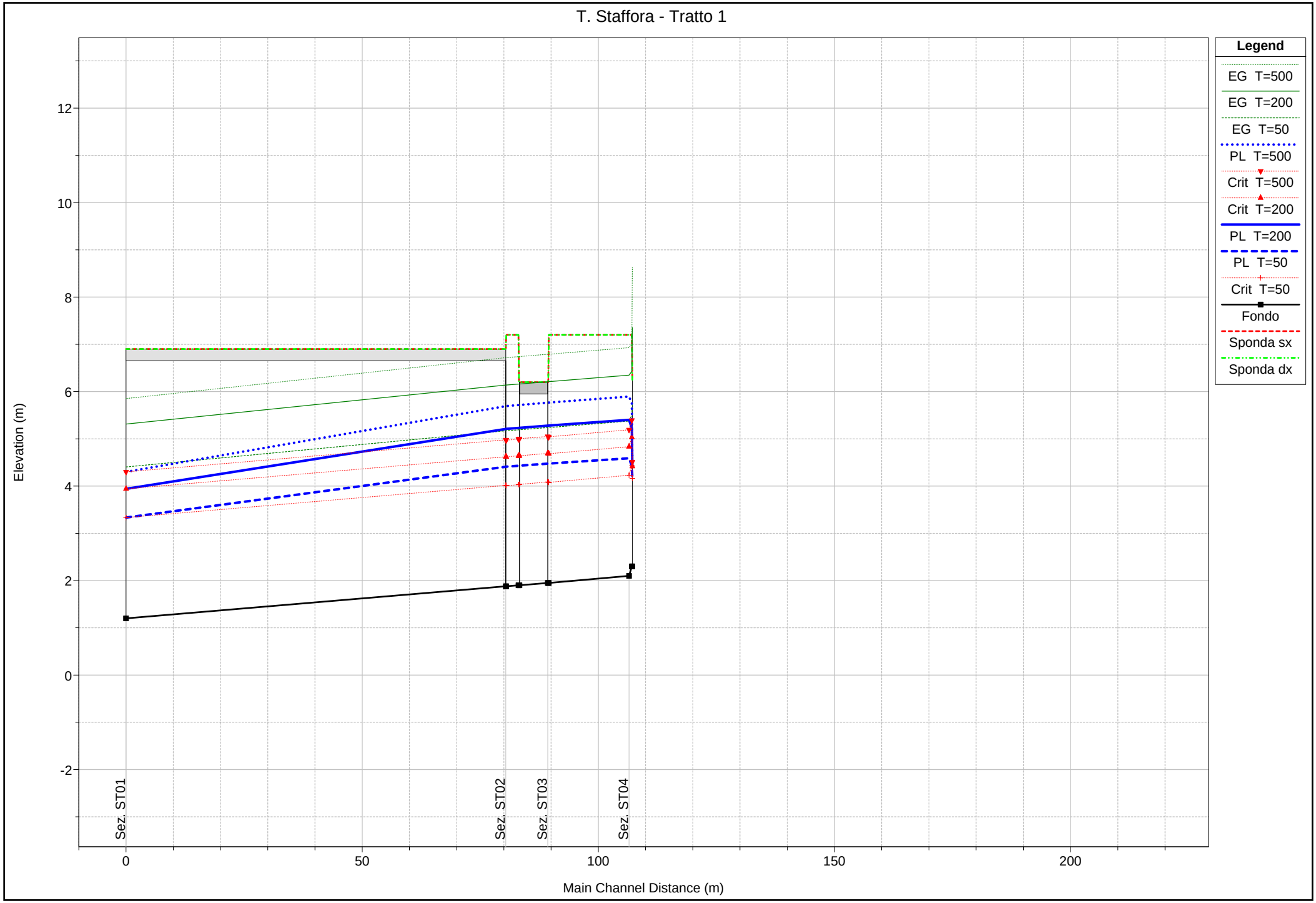
E.G. US. (m)	93.59	Element	Inside BR US	Inside BR DS
W.S. US. (m)	93.29	E.G. Elev (m)	93.59	93.47
Q Total (m3/s)	44.00	W.S. Elev (m)	93.29	92.75
Q Bridge (m3/s)	22.07	Crit W.S. (m)	92.49	92.49
Q Weir (m3/s)	21.93	Max Chl Dpth (m)	3.67	3.13
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.28	Froude # Chl	0.52	0.70
Weir Max Depth (m)	2.07	Specif Force (m3)	36.93	33.45
Min El Weir Flow (m)	91.52	Hydr Depth (m)		
Min El Prs (m)	91.28	W.P. Total (m)	19.06	17.99
Delta EG (m)	0.26	Conv. Total (m3/s)		
Delta WS (m)	1.19	Top Width (m)	5.10	5.10
BR Open Area (m2)	5.10	Frctn Loss (m)		
BR Open Vel (m/s)	4.33	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: Ps2 T. Staffora A monte Ferrovia RS: 9.11 Profile: T=200

E.G. US. (m)	94.61	Element	Inside BR US	Inside BR DS
W.S. US. (m)	94.20	E.G. Elev (m)	94.61	94.30
Q Total (m3/s)	64.00	W.S. Elev (m)	94.20	93.35
Q Bridge (m3/s)	24.13	Crit W.S. (m)	93.04	93.04
Q Weir (m3/s)	39.87	Max Chl Dpth (m)	4.58	3.73
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.42	Froude # Chl	0.51	0.73
Weir Max Depth (m)	3.09	Specif Force (m3)	60.20	52.76
Min El Weir Flow (m)	91.52	Hydr Depth (m)		
Min El Prs (m)	91.28	W.P. Total (m)	20.89	19.19
Delta EG (m)	0.45	Conv. Total (m3/s)		
Delta WS (m)	1.38	Top Width (m)	5.10	5.10
BR Open Area (m2)	5.10	Frctn Loss (m)		
BR Open Vel (m/s)	4.73	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: Ps2 T. Staffora A monte Ferrovia RS: 9.11 Profile: T=500

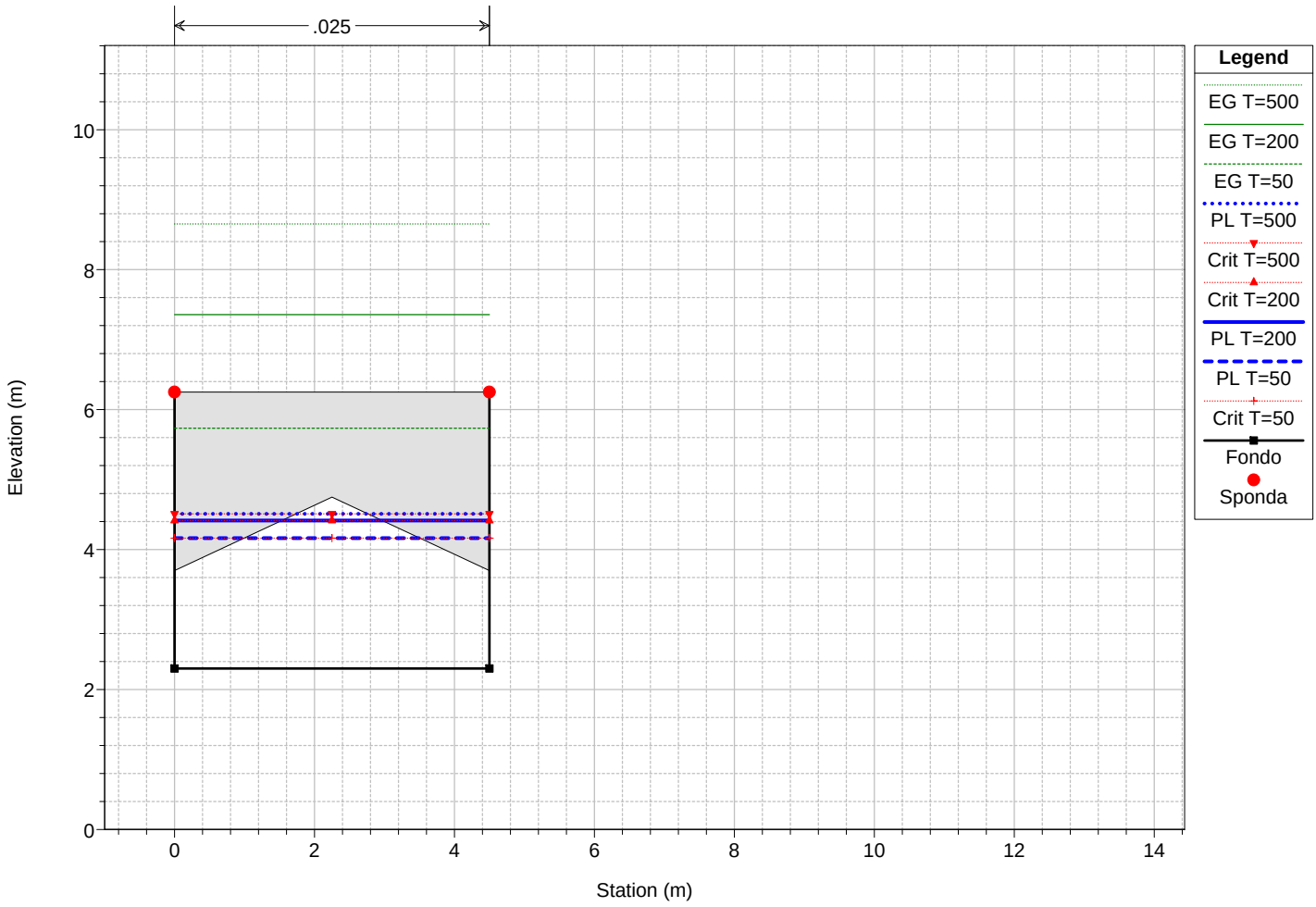
E.G. US. (m)	95.20	Element	Inside BR US	Inside BR DS
W.S. US. (m)	94.73	E.G. Elev (m)	95.20	94.81
Q Total (m3/s)	77.00	W.S. Elev (m)	94.73	93.71
Q Bridge (m3/s)	25.15	Crit W.S. (m)	93.38	93.38
Q Weir (m3/s)	51.85	Max Chl Dpth (m)	5.11	4.09
Weir Sta Lft (m)	0.00	Vel Total (m/s)	0.00	0.00
Weir Sta Rgt (m)	5.10	Flow Area (m2)		
Weir Submerg	0.47	Froude # Chl	0.51	0.75
Weir Max Depth (m)	3.68	Specif Force (m3)	76.74	66.48
Min El Weir Flow (m)	91.52	Hydr Depth (m)		
Min El Prs (m)	91.28	W.P. Total (m)	21.94	19.90
Delta EG (m)	0.55	Conv. Total (m3/s)		
Delta WS (m)	1.47	Top Width (m)	5.10	5.10
BR Open Area (m2)	5.10	Frctn Loss (m)		
BR Open Vel (m/s)	4.93	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



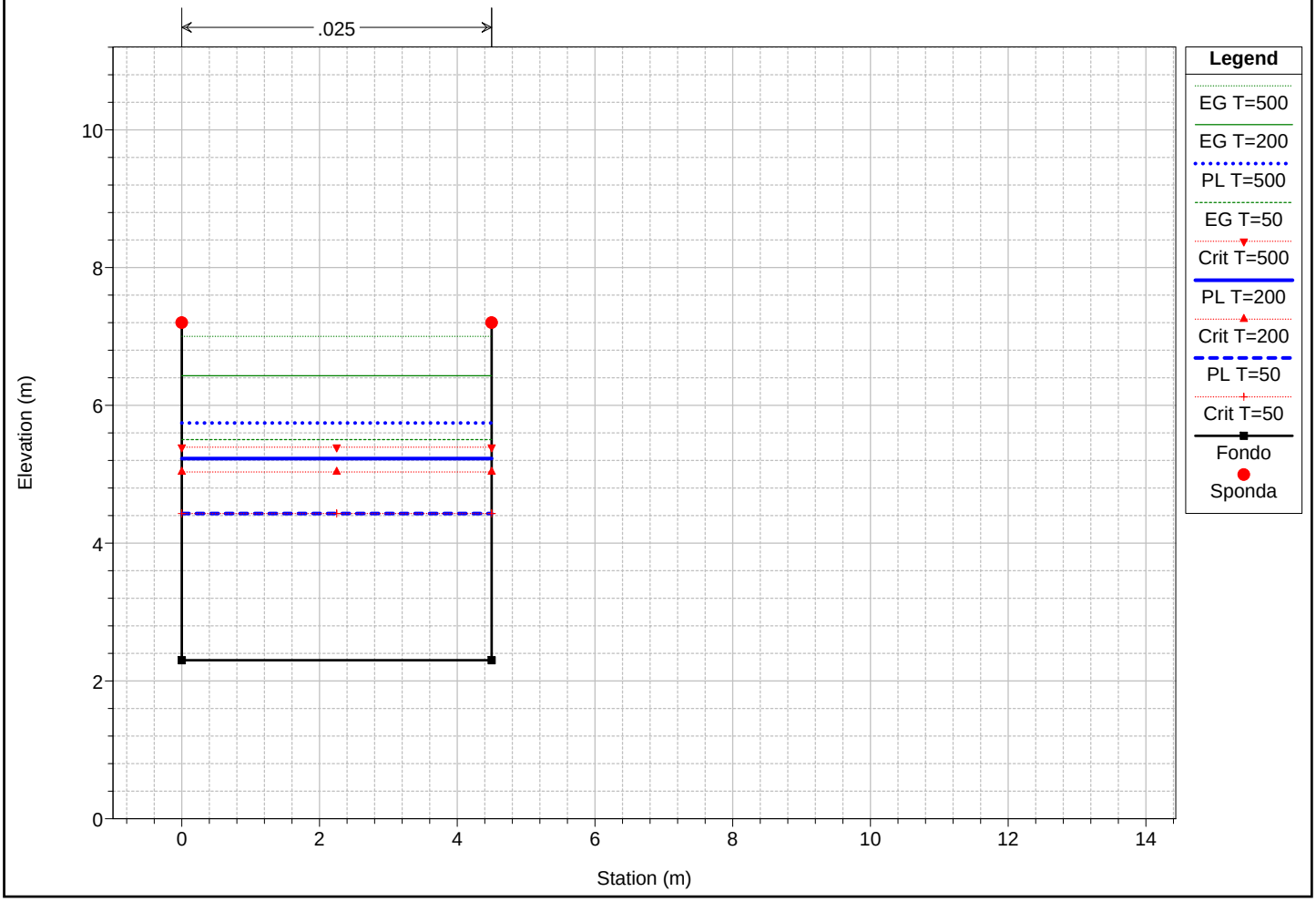
1 cm Horiz. = 10 m 1 cm Vert. = 1 m

T. Staffora - Tratto 1

Sez. ST05



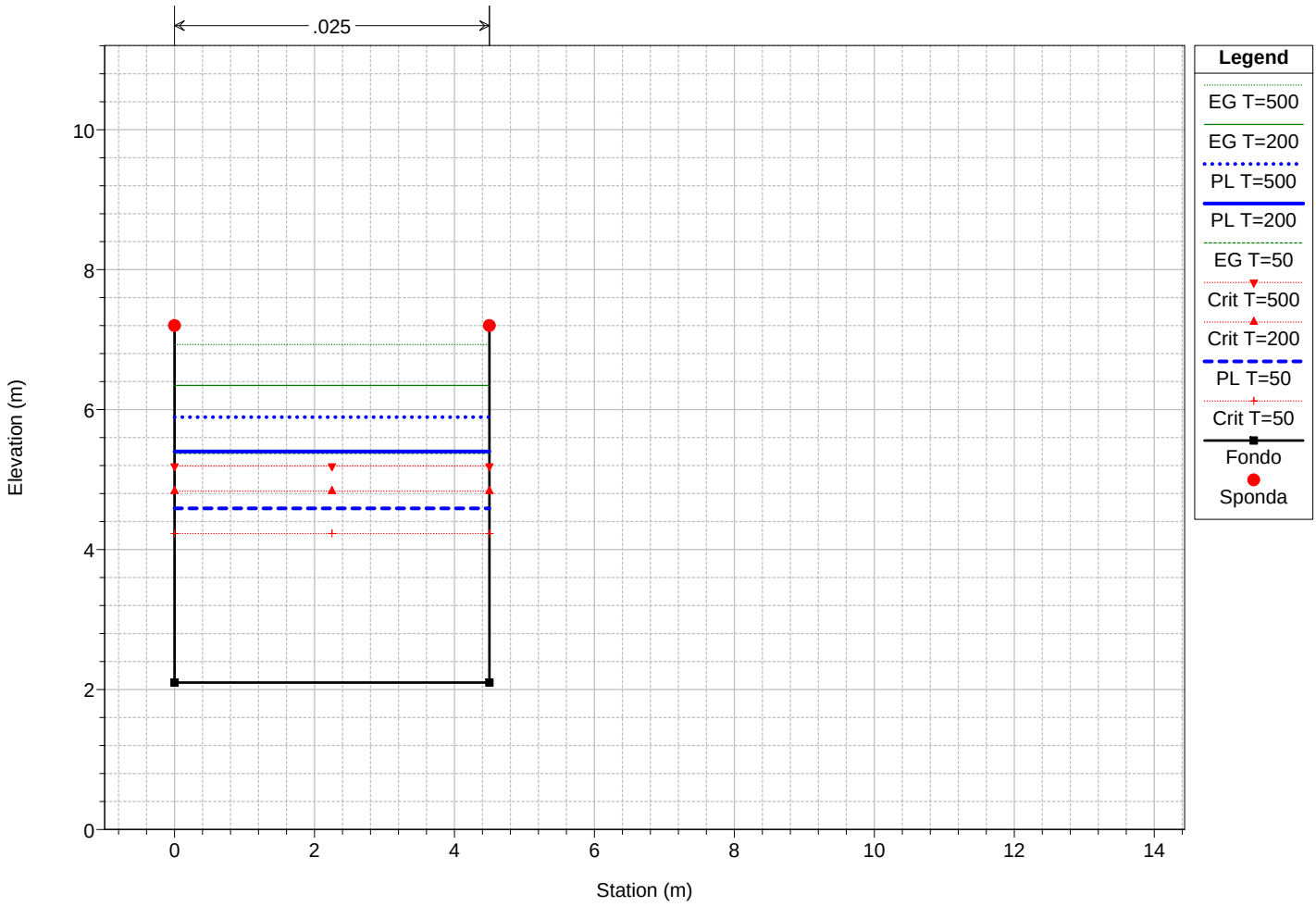
T. Staffora - Tratto 1



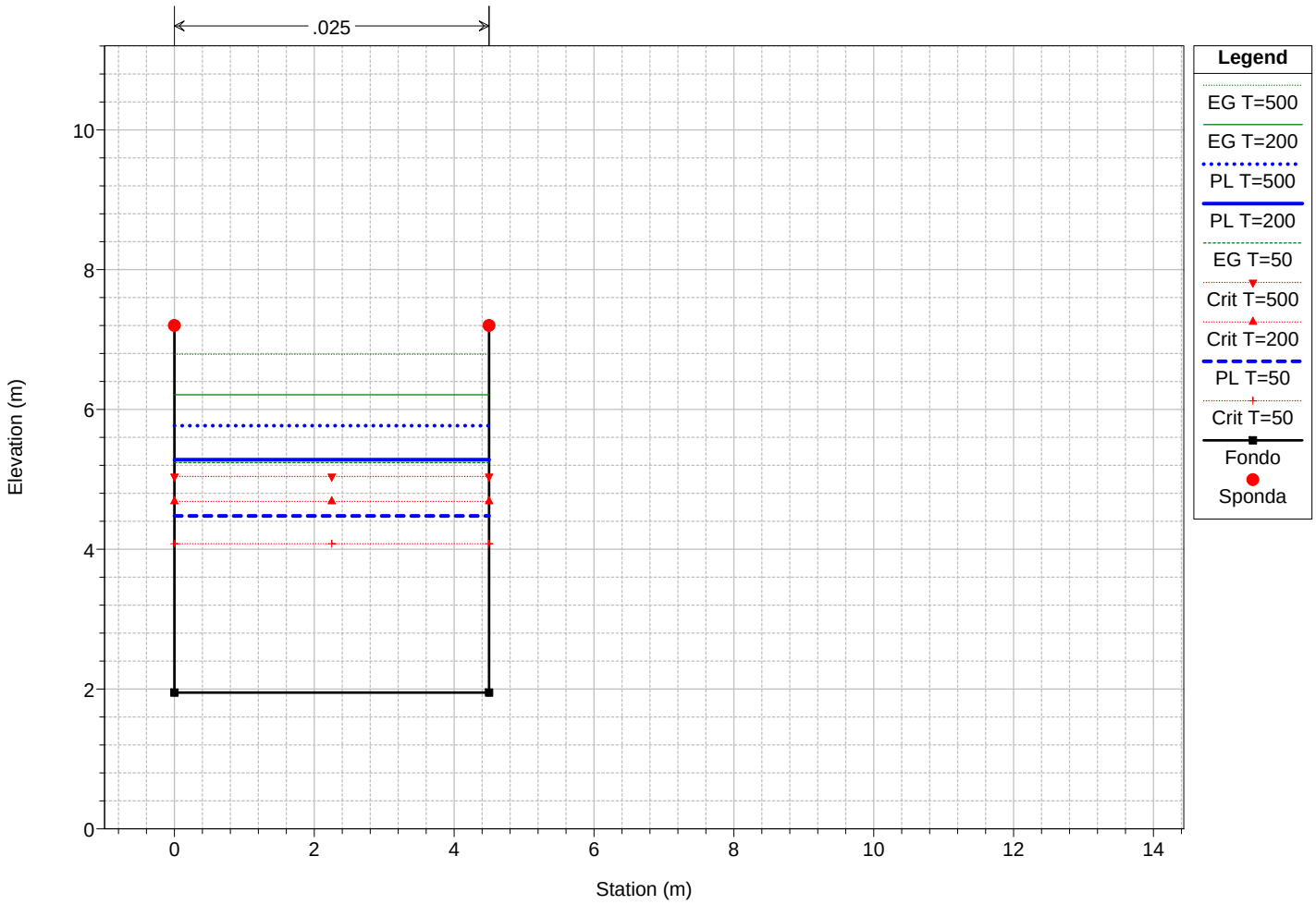
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 1

Sez. ST04

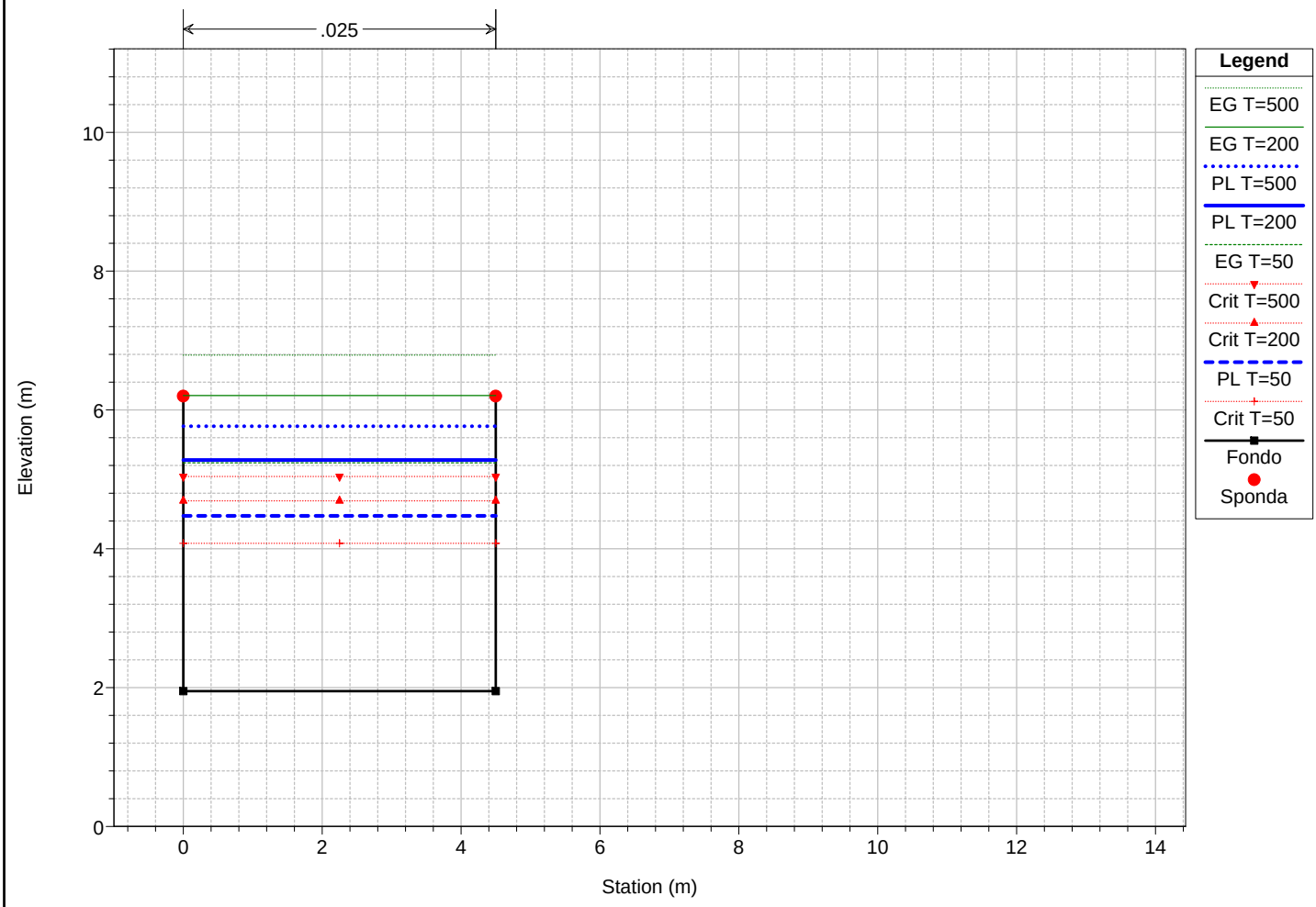


T. Staffora - Tratto 1



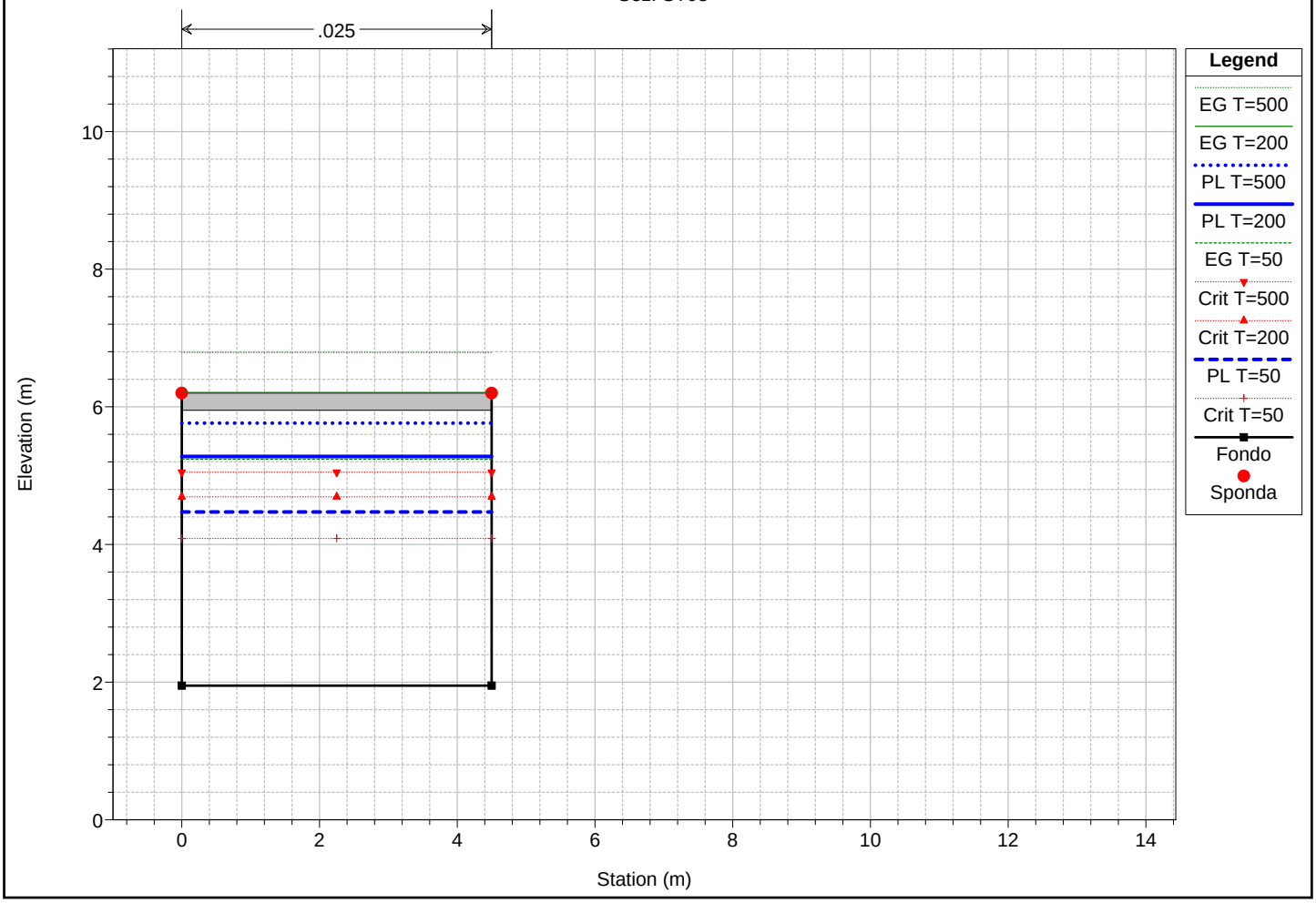
1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 1



T. Staffora - Tratto 1

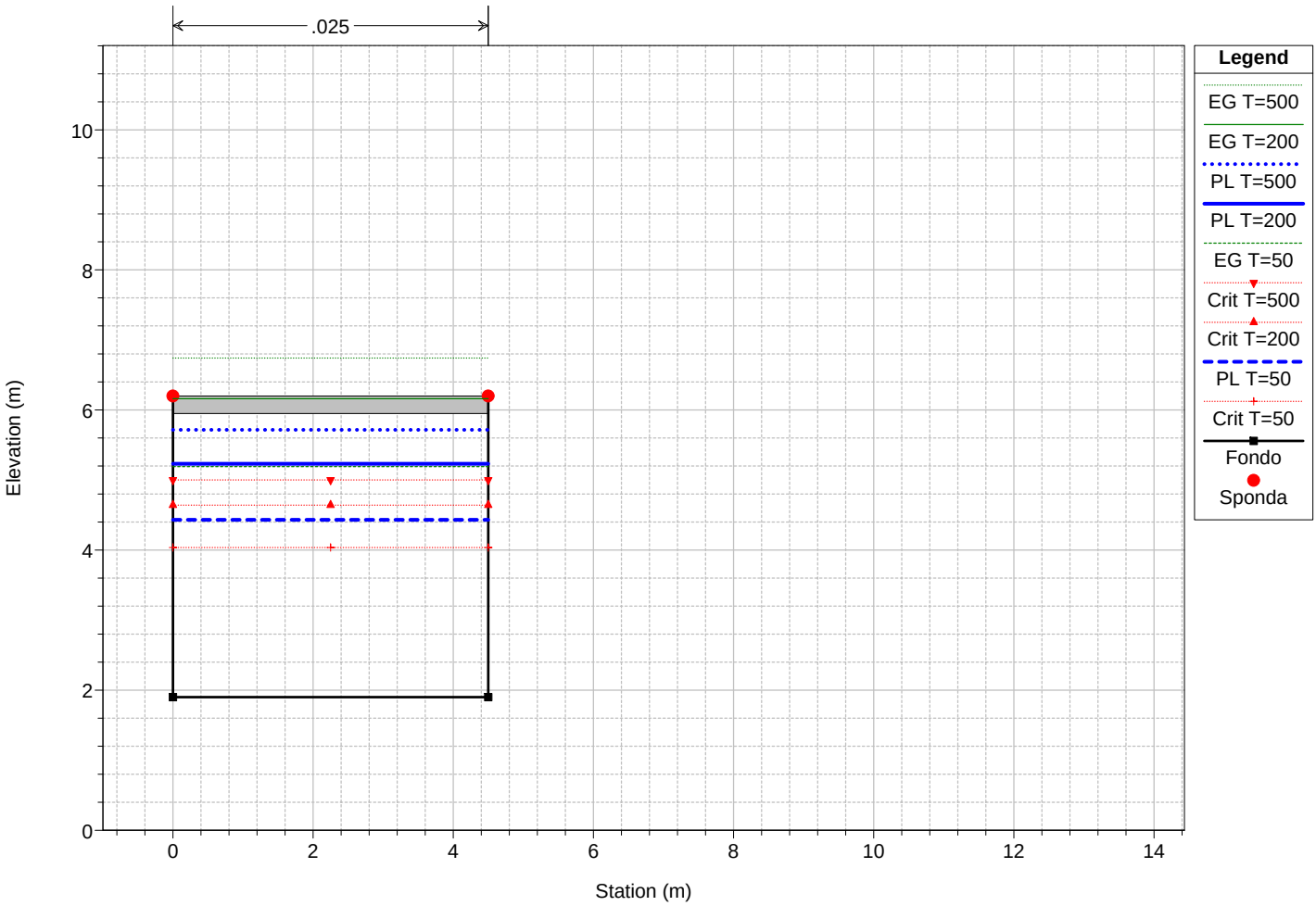
Sez. ST03



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

T. Staffora - Tratto 1

Sez. ST03



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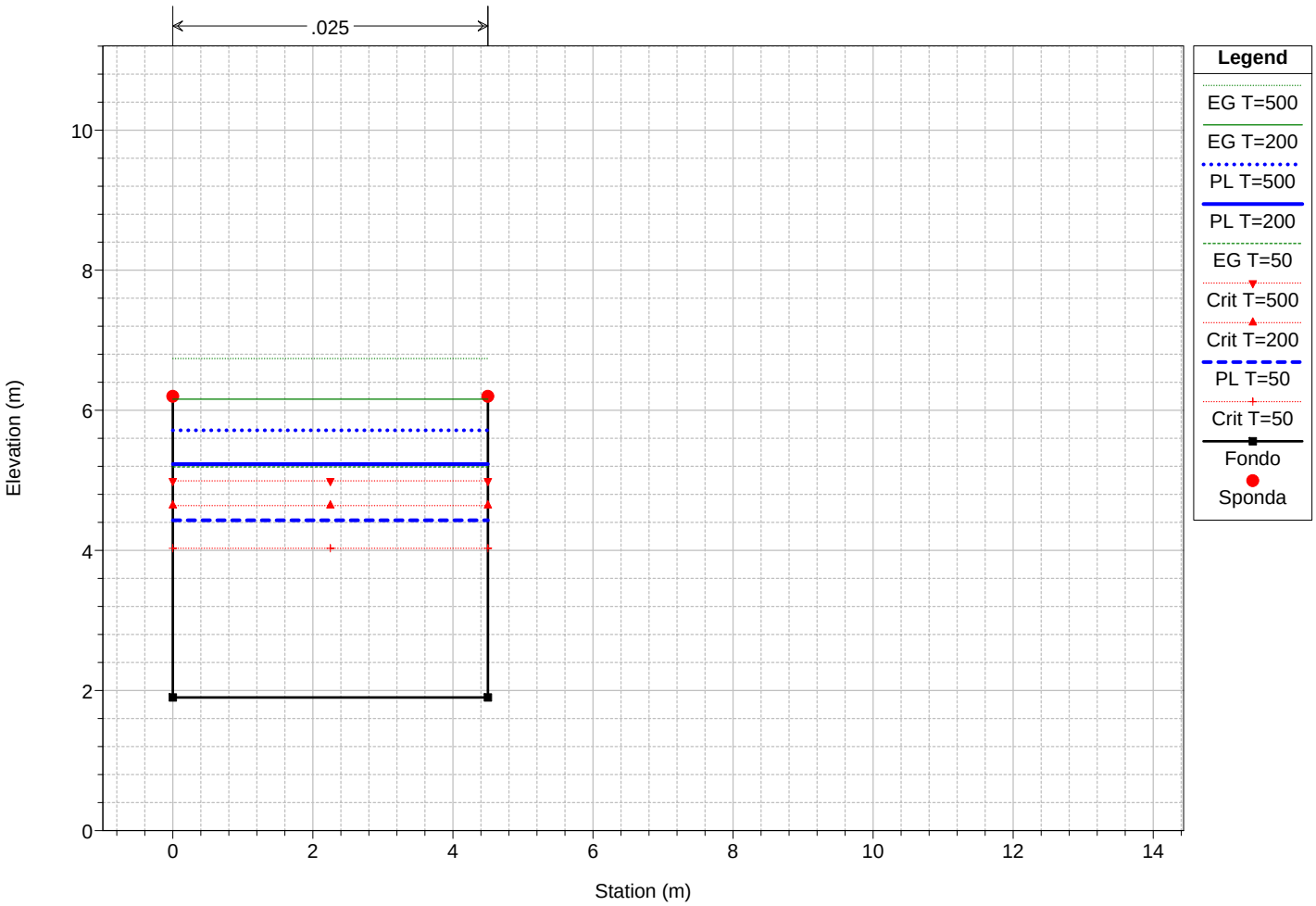
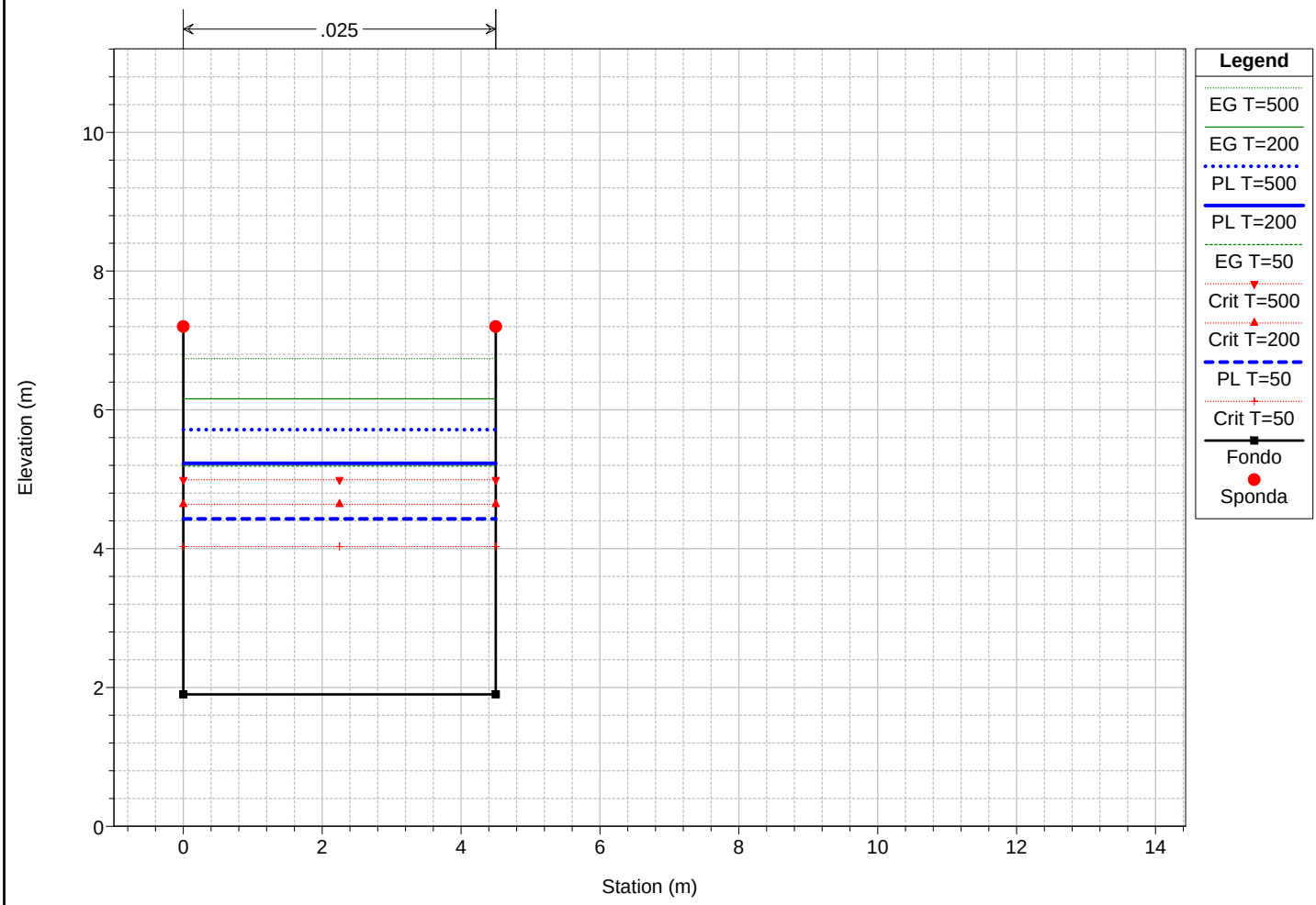
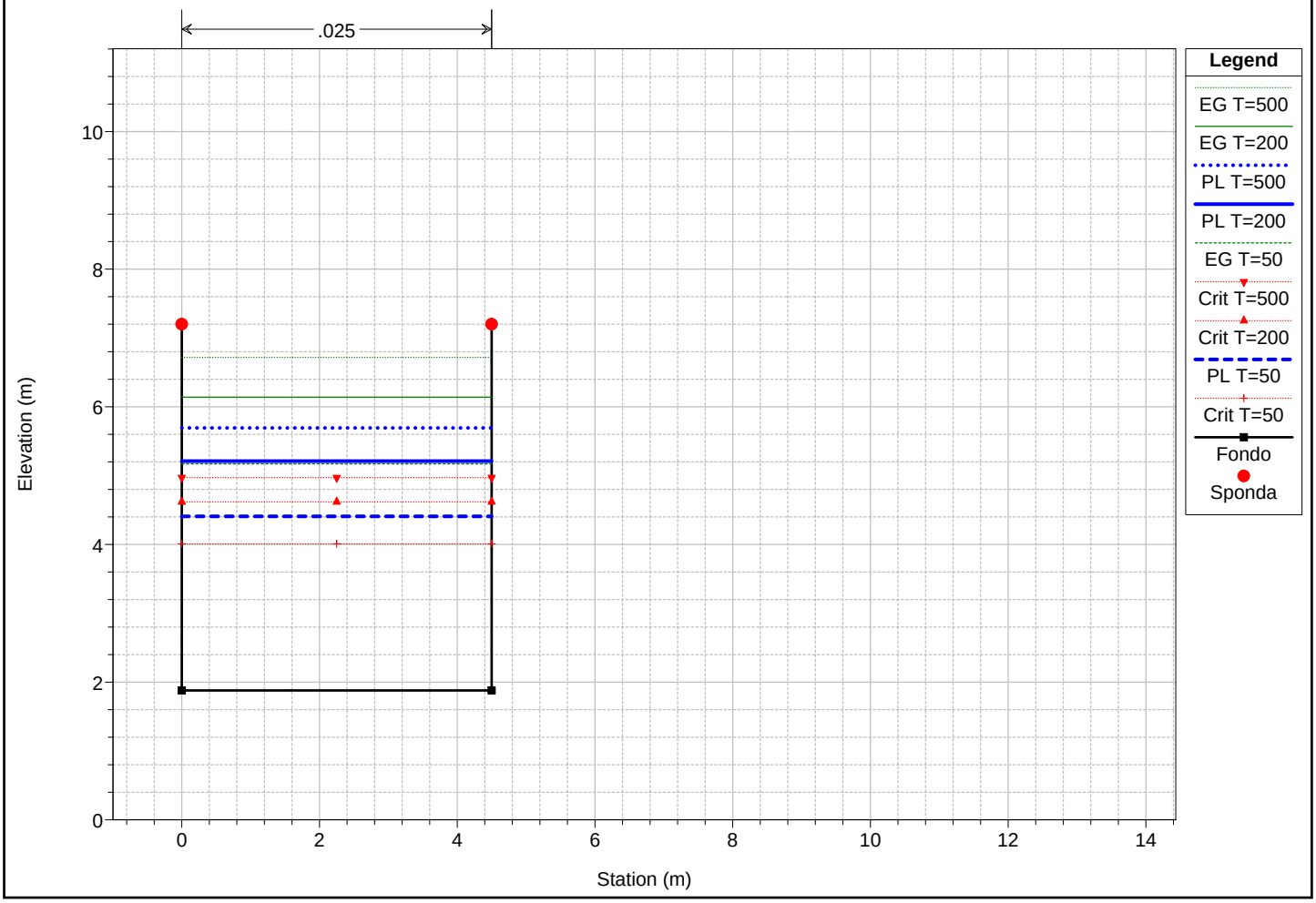


1 cm Horiz. = 1 m 1 cm Vert. = 1 m

T. Staffora - Tratto 1



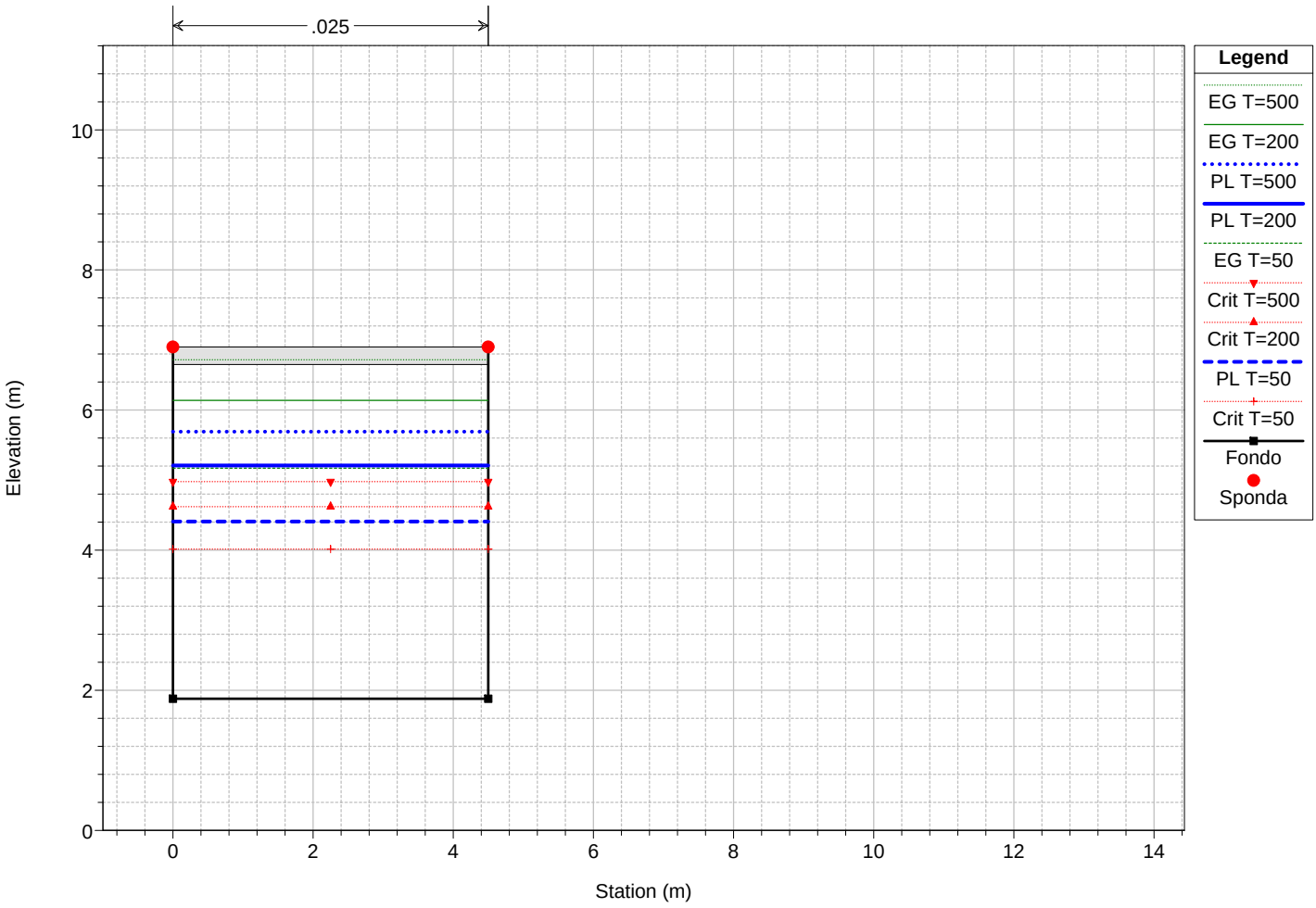
T. Staffora - Tratto 1



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

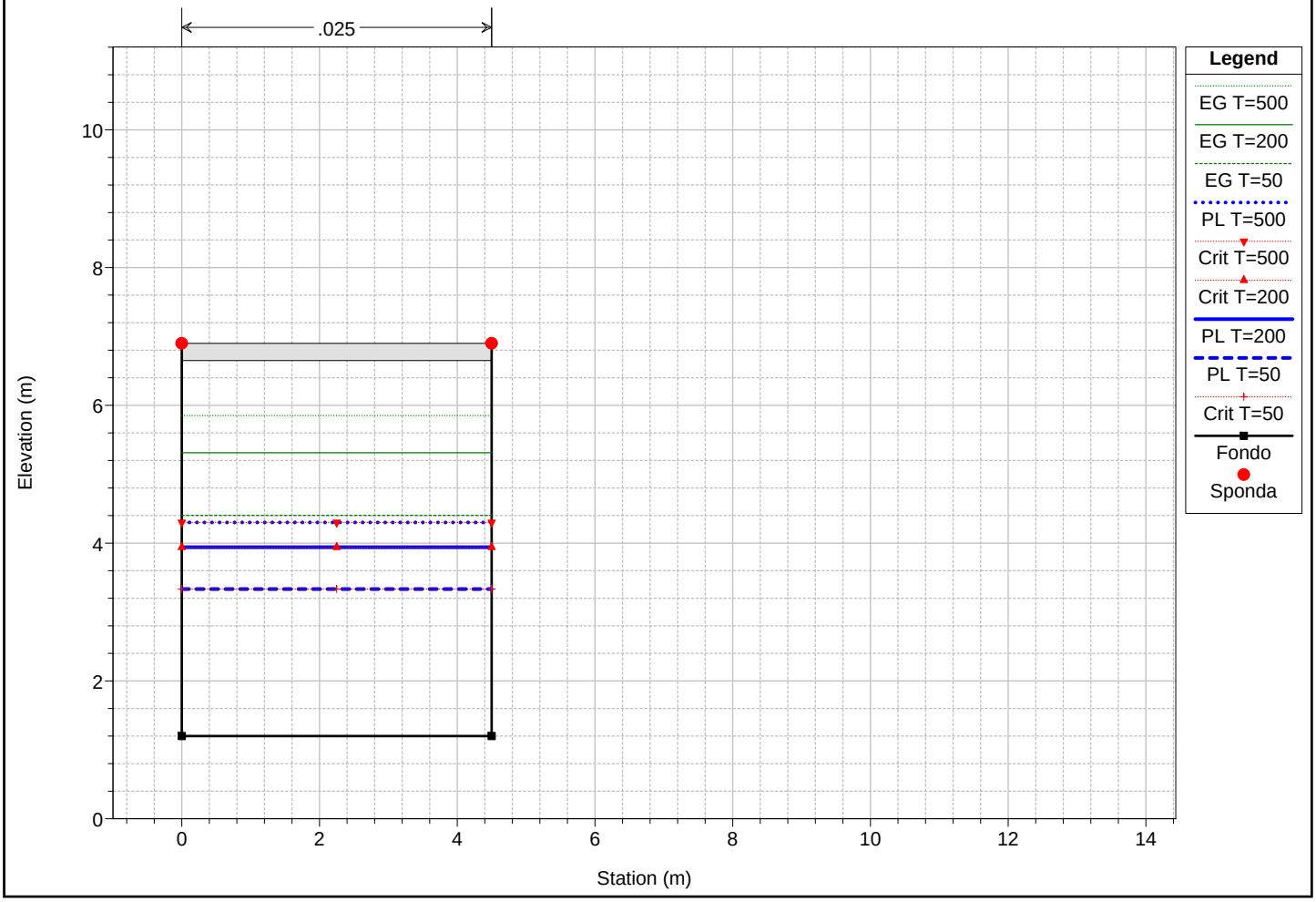
T. Staffora - Tratto 1

Sez. ST02



T. Staffora - Tratto 1

Sez. ST01



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

HEC-RAS Plan: Ps1 River: T. Staffora Reach: A valle Ferrovia

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	LOB Elev	L. Freeboard	ROB Elev	R. Freeboard	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)	(m)	(m/m)	(m/s)	(m2)	(m)	
A valle Ferrovia	5.1	T=50	44.00	2.30	4.16	3.70	-0.46	3.70	-0.46	4.16	5.73	0.024508	5.55	7.92	2.52	1.30
A valle Ferrovia	5.1	T=200	64.00	2.30	4.42	3.70	-0.72	3.70	-0.72	4.42	7.36	0.049551	7.60	8.42	1.43	1.67
A valle Ferrovia	5.1	T=500	77.00	2.30	4.51	3.70	-0.81	3.70	-0.81	4.51	8.65	0.072372	9.02	8.54	1.03	1.94
A valle Ferrovia	5.0	T=50	44.00	2.30	4.43	7.20	2.77	7.20	2.77	4.43	5.50	0.011693	4.59	9.58	4.50	1.00
A valle Ferrovia	5.0	T=200	64.00	2.30	5.23	7.20	1.97	7.20	1.97	5.03	6.43	0.010689	4.86	13.18	4.50	0.91
A valle Ferrovia	5.0	T=500	77.00	2.30	5.75	7.20	1.45	7.20	1.45	5.39	7.00	0.010219	4.97	15.50	4.50	0.85
A valle Ferrovia	4	T=50	44.00	2.10	4.59	7.20	2.61	7.20	2.61	4.23	5.38	0.007723	3.93	11.20	4.50	0.80
A valle Ferrovia	4	T=200	64.00	2.10	5.40	7.20	1.80	7.20	1.80	4.83	6.35	0.007868	4.31	14.86	4.50	0.76
A valle Ferrovia	4	T=500	77.00	2.10	5.89	7.20	1.31	7.20	1.31	5.19	6.93	0.008024	4.51	17.07	4.50	0.74
A valle Ferrovia	3.3	T=50	44.00	1.95	4.48	7.20	2.72	7.20	2.72	4.08	5.24	0.007427	3.87	11.37	4.50	0.78
A valle Ferrovia	3.3	T=200	64.00	1.95	5.28	7.20	1.92	7.20	1.92	4.68	6.21	0.007693	4.27	14.99	4.50	0.75
A valle Ferrovia	3.3	T=500	77.00	1.95	5.77	7.20	1.43	7.20	1.43	5.04	6.79	0.007902	4.48	17.18	4.50	0.73
A valle Ferrovia	3.2	T=50	44.00	1.95	4.47	6.20	1.73	6.20	1.73	4.08	5.24	0.007436	3.87	11.36	4.50	0.78
A valle Ferrovia	3.2	T=200	64.00	1.95	5.28	6.20	0.92	6.20	0.92	4.69	6.21	0.007701	4.27	14.98	4.50	0.75
A valle Ferrovia	3.2	T=500	77.00	1.95	5.77	6.20	0.43	6.20	0.43	5.04	6.79	0.007908	4.48	17.17	4.50	0.73
A valle Ferrovia	3.11		Bridge													
A valle Ferrovia	3.1	T=50	44.00	1.90	4.43	6.20	1.77	6.20	1.77	4.03	5.19	0.007392	3.86	11.39	4.50	0.78
A valle Ferrovia	3.1	T=200	64.00	1.90	5.23	6.20	0.97	6.20	0.97	4.64	6.16	0.007686	4.27	14.99	4.50	0.75
A valle Ferrovia	3.1	T=500	77.00	1.90	5.72	6.20	0.48	6.20	0.48	4.99	6.74	0.007908	4.48	17.17	4.50	0.73
A valle Ferrovia	3.0	T=50	44.00	1.90	4.43	7.20	2.77	7.20	2.77	4.03	5.19	0.007401	3.87	11.38	4.50	0.78
A valle Ferrovia	3.0	T=200	64.00	1.90	5.23	7.20	1.97	7.20	1.97	4.64	6.16	0.007693	4.27	14.99	4.50	0.75
A valle Ferrovia	3.0	T=500	77.00	1.90	5.71	7.20	1.49	7.20	1.49	4.99	6.74	0.007914	4.49	17.17	4.50	0.73
A valle Ferrovia	2.1	T=50	44.00	1.88	4.41	7.20	2.79	7.20	2.79	4.01	5.17	0.007395	3.86	11.39	4.50	0.78
A valle Ferrovia	2.1	T=200	64.00	1.88	5.21	7.20	1.99	7.20	1.99	4.62	6.14	0.007693	4.27	14.99	4.50	0.75
A valle Ferrovia	2.1	T=500	77.00	1.88	5.69	7.20	1.51	7.20	1.51	4.97	6.72	0.007918	4.49	17.16	4.50	0.73
A valle Ferrovia	2.0	T=50	44.00	1.88	4.41	6.65	2.24	6.65	2.24	4.02	5.17	0.007405	3.87	11.38	4.50	0.78
A valle Ferrovia	2.0	T=200	64.00	1.88	5.21	6.65	1.44	6.65	1.44	4.62	6.14	0.007701	4.27	14.98	4.50	0.75
A valle Ferrovia	2.0	T=500	77.00	1.88	5.69	6.65	0.96	6.65	0.96	4.98	6.72	0.007926	4.49	17.16	4.50	0.73
A valle Ferrovia	1	T=50	44.00	1.20	3.33	6.65	3.32	6.65	3.32	3.33	4.40	0.011617	4.58	9.60	4.50	1.00
A valle Ferrovia	1	T=200	64.00	1.20	3.94	6.65	2.71	6.65	2.71	3.94	5.31	0.012678	5.19	12.34	4.50	1.00
A valle Ferrovia	1	T=500	77.00	1.20	4.30	6.65	2.35	6.65	2.35	4.30	5.85	0.013356	5.52	13.96	4.50	1.00

Plan: Ps1 T. Staffora A valle Ferrovia RS: 3.11 Profile: T=50

E.G. US. (m)	5.24	Element	Inside BR US	Inside BR DS
W.S. US. (m)	4.47	E.G. Elev (m)	5.24	5.19
Q Total (m3/s)	44.00	W.S. Elev (m)	4.47	4.43
Q Bridge (m3/s)	44.00	Crit W.S. (m)	4.09	4.04
Q Weir (m3/s)		Max Chl Dpth (m)	2.52	2.53
Weir Sta Lft (m)		Vel Total (m/s)	3.87	3.86
Weir Sta Rgt (m)		Flow Area (m2)	11.36	11.39
Weir Submerg		Froude # Chl	0.78	0.77
Weir Max Depth (m)		Specif Force (m3)	31.70	31.74
Min El Weir Flow (m)	6.20	Hydr Depth (m)	2.52	2.53
Min El Prs (m)	5.95	W.P. Total (m)	9.55	9.56
Delta EG (m)	0.05	Conv. Total (m3/s)	509.9	512.1
Delta WS (m)	0.04	Top Width (m)	4.50	4.50
BR Open Area (m2)	18.00	Frctn Loss (m)	0.04	0.00
BR Open Vel (m/s)	3.87	C & E Loss (m)	0.00	0.00
Coef of Q		Shear Total (N/m2)	86.85	86.24
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps1 T. Staffora A valle Ferrovia RS: 3.11 Profile: T=200

E.G. US. (m)	6.21	Element	Inside BR US	Inside BR DS
W.S. US. (m)	5.28	E.G. Elev (m)	6.21	6.16
Q Total (m3/s)	64.00	W.S. Elev (m)	5.28	5.23
Q Bridge (m3/s)	64.00	Crit W.S. (m)	4.69	4.64
Q Weir (m3/s)		Max Chl Dpth (m)	3.33	3.33
Weir Sta Lft (m)		Vel Total (m/s)	4.27	4.27
Weir Sta Rgt (m)		Flow Area (m2)	14.98	15.00
Weir Submerg		Froude # Chl	0.75	0.75
Weir Max Depth (m)		Specif Force (m3)	52.79	52.82
Min El Weir Flow (m)	6.20	Hydr Depth (m)	3.33	3.33
Min El Prs (m)	5.95	W.P. Total (m)	11.16	11.17
Delta EG (m)	0.05	Conv. Total (m3/s)	729.0	730.3
Delta WS (m)	0.05	Top Width (m)	4.50	4.50
BR Open Area (m2)	18.00	Frctn Loss (m)	0.05	0.00
BR Open Vel (m/s)	4.27	C & E Loss (m)	0.00	0.00
Coef of Q		Shear Total (N/m2)	101.47	101.15
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

Plan: Ps1 T. Staffora A valle Ferrovia RS: 3.11 Profile: T=500

E.G. US. (m)	6.79	Element	Inside BR US	Inside BR DS
W.S. US. (m)	5.77	E.G. Elev (m)	6.79	6.74
Q Total (m3/s)	77.00	W.S. Elev (m)	5.76	5.72
Q Bridge (m3/s)	77.00	Crit W.S. (m)	5.05	5.00
Q Weir (m3/s)		Max Chl Dpth (m)	3.81	3.82
Weir Sta Lft (m)		Vel Total (m/s)	4.49	4.48
Weir Sta Rgt (m)		Flow Area (m2)	17.17	17.18
Weir Submerg		Froude # Chl	0.73	0.73
Weir Max Depth (m)		Specif Force (m3)	67.93	67.95
Min El Weir Flow (m)	6.20	Hydr Depth (m)	3.81	3.82
Min El Prs (m)	5.95	W.P. Total (m)	12.13	12.13
Delta EG (m)	0.05	Conv. Total (m3/s)	865.5	866.2
Delta WS (m)	0.05	Top Width (m)	4.50	4.50
BR Open Area (m2)	18.00	Frctn Loss (m)	0.05	0.00
BR Open Vel (m/s)	4.49	C & E Loss (m)	0.00	0.00
Coef of Q		Shear Total (N/m2)	109.85	109.69
Br Sel Method	Energy only	Power Total (N/m s)	0.00	0.00

SCHEDA VERIFICA IDRAULICA DI TIPO PUNTUALE

Bacino:	T. Gromolo
Sottobacino:	Rio Staffora
Corso d'acqua:	**Rio Staffora**
Località:	
Codice opera:	GRST03TB02
Descrizione:	Imbocco tombinatura
Sezione di riferimento:	**ST06**

Calcolo delle condizioni critiche

Periodo di ritorno [anni]	T =	50	200	500
Larghezza di calcolo [m]	B=	4,90	4,90	4,90
Numero pile	np=	0	0	0
Spessore pile [m]	sp=	0,00	0,00	0,00
Larghezza netta [m]	Bo=	4,90	4,90	4,90
Portata [mc/s]	Q=	44	64	77
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=	2,02	2,59	2,93
Area [mq]	A=	9,89	12,69	14,36
Perimetro bagnato [m]	P=	8,94	10,08	10,76
Raggio idraulico [m]	R=	1,11	1,26	1,33
Velocità media [m/s]	V=	4,45	5,04	5,36
Carico specifico [m]	E=	3,03	3,89	4,40
Numero di Froude	Fr=	1,00	1,00	1,00
Luce libera media [m]	H=	2,35	2,35	2,35
Franco [m]	f=	0,33	-0,24	-0,58
Verificata		NO	NO	NO

SCHEDA VERIFICA IDRAULICA DI TIPO PUNTUALE

Bacino:	T. Gromolo
Sottobacino:	Rio Staffora
Corso d'acqua:	**Rio Staffora**
Località:	
Codice opera:	GRST04PT02
Descrizione:	Ponte in c.a.
Sezione di riferimento:	**ST07**

Calcolo delle condizioni critiche

Periodo di ritorno [anni]	T =	50	200	500
Larghezza di calcolo [m]	B=	4,70	4,70	4,70
Numero pile	np=	0	0	0
Spessore pile [m]	sp=	0,00	0,00	0,00
Larghezza netta [m]	Bo=	4,70	4,70	4,70
Portata [mc/s]	Q=	44	64	77
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=	2,07	2,66	3,01
Area [mq]	A=	9,75	12,52	14,16
Perimetro bagnato [m]	P=	8,85	10,03	10,73
Raggio idraulico [m]	R=	1,10	1,25	1,32
Velocità media [m/s]	V=	4,51	5,11	5,44
Carico specifico [m]	E=	3,11	4,00	4,52
Numero di Froude	Fr=	1,00	1,00	1,00
Luce libera media [m]	H=	1,80	1,80	1,80
Franco [m]	f=	-0,27	-0,86	-1,21
Verificata		NO	NO	NO