Distance [m]	% of force from start	% of force from end
33,00	87,69	98,64
34,00	87,48	98,89
35,00	87,26	99,13
36,00	87,05	99,37
37,00	86,88	99,56
37,38	86,84	99,61
38,00	86,74	99,73
39,00	86,64	99,84
40,00	86,54	99,96
40,38	86,50	100,00

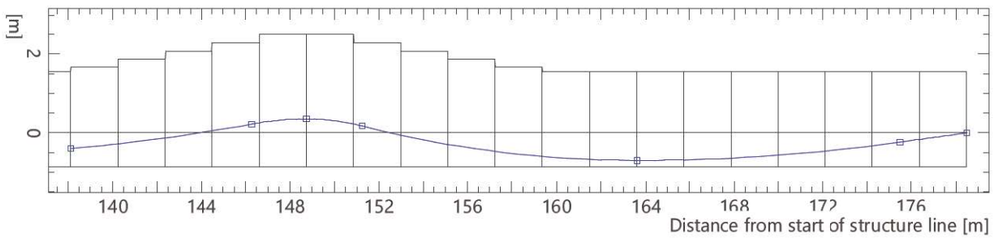
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_2_F1 - Attributes of tendon points

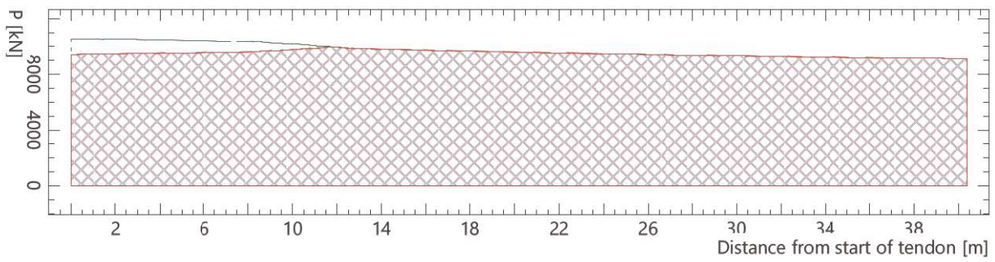
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	138,12	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	146,28	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	148,75	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	151,25	FL2	explic	0,17	0	-8,0	0,83	1,90	0	0
5	163,62	FL2	explic	-0,70	0	0	4,13	1,82	0	0
6	175,50	FL2	explic	-0,23	0	4,5	3,96	1,00	0	0
7	178,50	FL2	explic	0	0	4,5	1,00	0	0	0

Tendon
V1-1.J1_2_F1

Side view of tendon profile
Side view of structure line



Force diagram



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Tendon J2_1_F1 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	242,2	0,564	18224,80	40,38
		anchoring	0,661	21327,37	**-6,0**	0,704	22726,43	9,80
End	40,38	Tensioning	**0,750**	24217,20	33,0	0,651	21008,45	12,37
		anchoring	0,687	22186,50	**-6,0**	0,718	23179,70	23,72

Distance : from start of tendon

Tendon: J2_1_F1 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
138,12	*** 0,00**	0	1,35	0,12	0,9791	0,0503	0,1972	---	21327,38
139,12	1,00	1,02	1,40	0,33	0,9769	0,0529	0,2073	100,47	21395,22
140,12	2,00	2,05	1,46	0,54	0,9745	0,0555	0,2174	100,24	21463,87
141,12	3,00	3,07	1,52	0,77	0,9721	0,0580	0,2274	101,27	21532,45
142,12	4,00	4,10	1,58	1,01	0,9696	0,0605	0,2373	102,54	21600,79
143,12	5,00	5,14	1,64	1,25	0,9670	0,0630	0,2470	103,75	21668,91
144,12	6,00	6,17	1,71	1,51	0,9643	0,0654	0,2566	104,81	21736,90
145,12	7,00	7,21	1,77	1,78	0,9615	0,0679	0,2662	105,69	21804,85
146,12	8,00	8,25	1,85	2,06	0,9597	0,0694	0,2722	106,37	21857,78
146,28	*** 8,16**	8,42	1,86	2,11	0,9597	0,0694	0,2722	106,47	21861,94
147,12	9,00	9,28	1,91	2,31	0,9829	0,0456	0,1780	-9,11	22303,00
148,12	10,00	10,29	1,94	2,44	0,9978	0,0166	0,0642	-8,72	22616,31
148,74	*** 10,63**	10,92	1,95	2,46	0,9999	0,0026	0,0097	-8,40	22359,44
149,12	11,00	11,29	1,94	2,45	0,9972	-0,0186	-0,0723	**# -5,90**	21992,79
150,12	12,00	12,30	1,91	2,30	0,9694	-0,0608	-0,2377	**# -6,37**	21256,46
151,12	13,00	13,36	1,82	1,98	0,9203	-0,0969	-0,3791	**# -7,38**	21405,90
151,24	*** 13,13**	13,49	1,81	1,93	0,9203	-0,0969	-0,3791	**# -7,54**	21409,22
152,12	14,00	14,44	1,72	1,57	0,9286	-0,0917	-0,3596	35,71	21521,63
153,12	15,00	15,52	1,62	1,19	0,9401	-0,0842	-0,3302	34,40	21681,12
154,12	16,00	16,58	1,54	0,85	0,9508	-0,0766	-0,3001	33,62	21843,03
155,12	17,00	17,63	1,46	0,54	0,9605	-0,0688	-0,2695	32,96	22007,00
156,12	18,00	18,67	1,39	0,27	0,9692	-0,0608	-0,2383	32,34	22173,32
157,12	19,00	19,70	1,33	0,03	0,9770	-0,0527	-0,2065	31,72	22342,14
158,12	20,00	20,72	1,27	-0,18	0,9837	-0,0444	-0,1741	31,12	22513,71
159,12	21,00	21,73	1,23	-0,35	0,9893	-0,0360	-0,1410	30,54	22688,32
160,12	22,00	22,74	1,20	-0,48	0,9938	-0,0274	-0,1073	29,99	22866,23
161,12	23,00	23,75	1,17	-0,59	0,9971	-0,0187	-0,0731	29,48	23047,24
162,12	24,00	24,75	1,15	-0,66	0,9992	-0,0098	-0,0383	29,01	23127,67
163,12	25,00	25,75	1,14	-0,69	0,9999	-0,0037	-0,0143	28,61	22992,62
163,62	*** 25,50**	26,25	1,14	-0,70	0,9999	-0,0037	-0,0143	28,42	22979,51
164,12	26,00	26,75	1,14	-0,70	1,0000	0,0011	0,0044	156,73	22882,06
165,12	27,00	27,75	1,14	-0,69	0,9999	0,0029	0,0112	149,97	22825,51
166,12	28,00	28,75	1,15	-0,68	0,9998	0,0046	0,0181	149,10	22768,81
167,12	29,00	29,75	1,15	-0,66	0,9997	0,0064	0,0249	149,76	22712,43
168,12	30,00	30,75	1,16	-0,63	0,9995	0,0081	0,0317	150,76	22656,43
169,12	31,00	31,76	1,17	-0,60	0,9992	0,0098	0,0384	151,72	22600,80
170,12	32,00	32,76	1,18	-0,56	0,9989	0,0115	0,0451	152,48	22545,53
171,12	33,00	33,76	1,19	-0,51	0,9986	0,0132	0,0517	153,01	22490,50
172,12	34,00	34,76	1,20	-0,46	0,9982	0,0149	0,0583	153,27	22435,70
173,12	35,00	35,76	1,22	-0,40	0,9978	0,0166	0,0649	153,32	22381,03
174,12	36,00	36,76	1,23	-0,34	0,9973	0,0183	0,0715	153,14	22326,49
175,12	37,00	37,77	1,25	-0,26	0,9970	0,0193	0,0755	152,75	22283,64
175,50	*** 37,38**	38,15	1,26	-0,23	0,9970	0,0193	0,0755	152,56	22273,95
176,12	38,00	38,77	1,27	-0,19	0,9968	0,0199	0,0780	---	22246,97
177,12	39,00	39,77	1,29	-0,11	0,9968	0,0199	0,0780	---	22221,54
178,12	40,00	40,78	1,31	-0,03	0,9968	0,0199	0,0780	---	22196,14
178,50	*** 40,38**	41,16	1,32	0,00	0,9968	0,0199	0,0780	---	22186,50

Emma Garrido Reyes
Cap del Servei Jurídic
i d'Administració General de
l'Àmbit de Territori i Sostenibilitat
(Per delegació de signatura.
Resolució de data 14/03/24)

Signat electrònicament

Aprovat inicialment per
Acord de la Junta de Govern
Local de data 24-4-2026
2026.05.07 10:50:23 +02'00'

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Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL2
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point
#	:	Radius of curvature below minimum

Tendon: J2_1_F1 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	75,26
1,00	99,68	75,49
2,00	99,36	75,74
3,00	99,05	75,98
4,00	98,73	76,22
5,00	98,42	76,46
6,00	98,12	76,70
7,00	97,81	76,94
8,00	97,57	77,13
8,16	97,55	77,14
9,00	95,63	78,70
10,00	93,39	80,58
10,63	92,33	81,51
11,00	90,81	82,87
12,00	87,77	85,74
13,00	85,14	88,39
13,13	85,13	88,41
14,00	84,68	88,87
15,00	84,06	89,53
16,00	83,44	90,20
17,00	82,81	90,87
18,00	82,19	91,56
19,00	81,57	92,26
20,00	80,95	92,97
21,00	80,33	93,69
22,00	79,70	94,42
23,00	79,08	95,17
24,00	78,45	95,93
25,00	77,99	96,49
25,50	77,95	96,55
26,00	77,61	96,96
27,00	77,42	97,20
28,00	77,23	97,44
29,00	77,04	97,68
30,00	76,85	97,93
31,00	76,66	98,17
32,00	76,47	98,41
33,00	76,29	98,65
34,00	76,10	98,89
35,00	75,92	99,13
36,00	75,73	99,37
37,00	75,59	99,56
37,38	75,55	99,61
38,00	75,46	99,73
39,00	75,37	99,84
40,00	75,29	99,96
40,38	75,26	100,00

Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_1_F1 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	138,12	FL1	explic	0,12	0	11,3	0	1,41	0	0
2	146,28	FL1	explic	2,11	0	16,0	2,72	0,38	0	0
3	148,75	FL1	explic	2,46	0	0	0,82	0,47	0	0
4	151,25	FL1	explic	1,93	0	-23,0	0,83	1,98	0	0
5	163,62	FL1	explic	-0,70	0	0	4,13	1,82	0	0
6	175,50	FL1	explic	-0,23	0	4,5	3,96	1,00	0	0
7	178,50	FL1	explic	0	0	4,5	1,00	0	0	0

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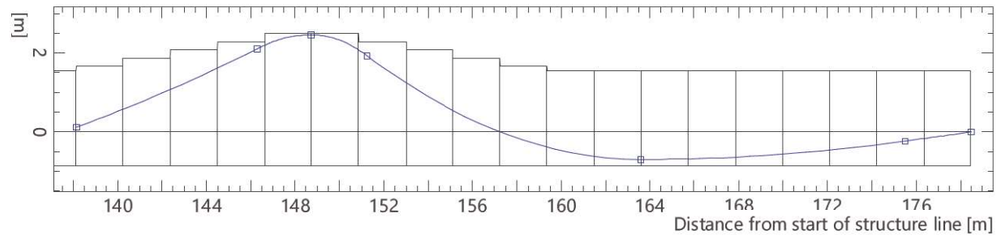
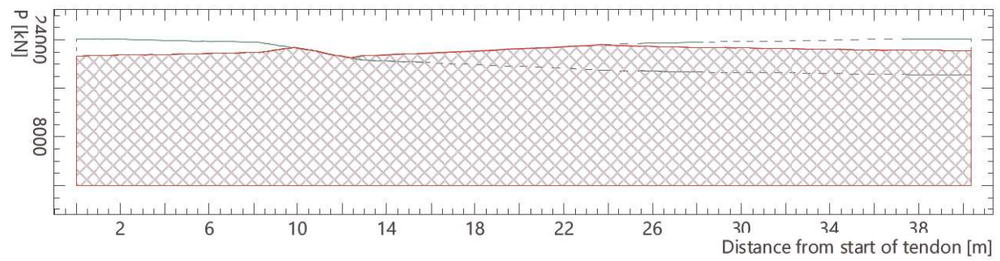
Tendon
V1-1.J2_1_F1

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_2_F1 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	10546,20	260,0	0,648	9105,08	40,38
		anchoring	0,670	9414,92	**-6,0**	0,709	9964,52	11,77

Distance : from start of tendon

Tendon: J2_2_F1 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
138,12	*** 0,00**	0	-0,56	-0,40	0,9986	0,0147	0,0507	---	9414,92
139,12	1,00	1,00	-0,54	-0,35	0,9982	0,0166	0,0573	153,47	9438,01
140,12	2,00	2,00	-0,53	-0,29	0,9978	0,0185	0,0640	153,46	9461,32
141,12	3,00	3,01	-0,51	-0,22	0,9973	0,0204	0,0706	155,05	9484,53
142,12	4,00	4,01	-0,49	-0,15	0,9968	0,0223	0,0771	156,41	9507,65
143,12	5,00	5,01	-0,46	-0,07	0,9962	0,0241	0,0836	157,17	9530,75
144,12	6,00	6,02	-0,44	0,02	0,9956	0,0260	0,0900	157,29	9553,86
145,12	7,00	7,02	-0,41	0,11	0,9949	0,0279	0,0964	156,84	9577,05
146,12	8,00	8,03	-0,38	0,21	0,9945	0,0290	0,1005	155,86	9595,72
146,28	*** 8,16**	8,19	-0,38	0,22	0,9945	0,0290	0,1005	155,67	9597,48
147,12	9,00	9,03	-0,36	0,30	0,9977	0,0188	0,0650	-23,84	9674,62
148,12	10,00	10,03	-0,35	0,34	0,9997	0,0066	0,0228	-24,14	9766,89
148,74	*** 10,63**	10,66	-0,34	0,35	1,0000	0,0010	0,0034	-23,96	9811,48
149,12	11,00	11,03	-0,34	0,35	0,9997	-0,0070	-0,0241	-17,47	9869,20
150,12	12,00	12,03	-0,36	0,30	0,9964	-0,0235	-0,0813	-18,04	9936,06
151,12	13,00	13,04	-0,39	0,19	0,9901	-0,0390	-0,1351	-17,98	9818,95
151,24	*** 13,13**	13,17	-0,39	0,17	0,9901	-0,0390	-0,1351	-17,93	9817,54
152,12	14,00	14,05	-0,43	0,05	0,9911	-0,0369	-0,1279	90,72	9793,52
153,12	15,00	15,06	-0,47	-0,07	0,9926	-0,0336	-0,1163	88,15	9759,71
154,12	16,00	16,06	-0,50	-0,19	0,9940	-0,0302	-0,1046	87,70	9725,93
155,12	17,00	17,07	-0,53	-0,29	0,9953	-0,0269	-0,0930	87,85	9692,37
156,12	18,00	18,07	-0,55	-0,38	0,9964	-0,0235	-0,0815	88,12	9659,09
157,12	19,00	19,08	-0,58	-0,46	0,9973	-0,0202	-0,0700	88,36	9626,04
158,12	20,00	20,08	-0,60	-0,53	0,9981	-0,0169	-0,0585	88,50	9593,20

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Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
159,12	21,00	21,08	-0,61	-0,58	0,9988	-0,0136	-0,0470	88,52	9560,53
160,12	22,00	22,08	-0,63	-0,63	0,9993	-0,0103	-0,0356	88,43	9528,00
161,12	23,00	23,08	-0,64	-0,66	0,9997	-0,0070	-0,0241	88,24	9495,56
162,12	24,00	24,08	-0,64	-0,69	0,9999	-0,0036	-0,0126	87,95	9463,19
163,12	25,00	25,08	-0,65	-0,70	1,0000	-0,0013	-0,0047	87,56	9437,59
163,63	*** 25,51**	25,59	-0,65	-0,70	1,0000	-0,0013	-0,0047	87,34	9432,15
164,12	26,00	26,08	-0,65	-0,70	1,0000	0,0013	0,0044	156,79	9409,93
165,12	27,00	27,08	-0,64	-0,69	0,9999	0,0032	0,0112	149,99	9386,56
166,12	28,00	28,08	-0,64	-0,68	0,9998	0,0052	0,0181	149,10	9363,14
167,12	29,00	29,09	-0,64	-0,66	0,9997	0,0072	0,0249	149,76	9339,85
168,12	30,00	30,09	-0,63	-0,63	0,9995	0,0092	0,0317	150,76	9316,72
169,12	31,00	31,09	-0,62	-0,60	0,9992	0,0111	0,0384	151,72	9293,74
170,12	32,00	32,09	-0,61	-0,56	0,9989	0,0130	0,0451	152,47	9270,90
171,12	33,00	33,09	-0,59	-0,51	0,9986	0,0149	0,0517	153,01	9248,17
172,12	34,00	34,09	-0,58	-0,46	0,9982	0,0168	0,0583	153,27	9225,53
173,12	35,00	35,09	-0,56	-0,40	0,9977	0,0187	0,0649	153,32	9202,96
174,12	36,00	36,09	-0,54	-0,34	0,9972	0,0207	0,0715	153,14	9180,42
175,12	37,00	37,10	-0,52	-0,26	0,9969	0,0218	0,0755	152,75	9162,68
175,51	*** 37,39**	37,48	-0,51	-0,23	0,9969	0,0218	0,0755	152,56	9158,65
176,12	38,00	38,10	-0,50	-0,19	0,9967	0,0226	0,0782	---	9147,35
177,12	39,00	39,10	-0,48	-0,11	0,9967	0,0226	0,0783	---	9136,68
178,12	40,00	40,11	-0,45	-0,03	0,9967	0,0220	0,0781	---	9125,07
178,50	*** 40,38**	40,49	-0,44	0,00	0,9965	0,0312	0,0780	---	9105,08

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL2
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J2_2_F1 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	86,34
1,00	99,76	86,55
2,00	99,51	86,76
3,00	99,27	86,97
4,00	99,02	87,19
5,00	98,78	87,40
6,00	98,55	87,61
7,00	98,31	87,82
8,00	98,12	87,99
8,16	98,10	88,01
9,00	97,32	88,72
10,00	96,40	89,56
10,63	95,96	89,97
11,00	95,40	90,50
12,00	94,21	91,64
13,00	93,10	92,73
13,13	93,09	92,74
14,00	92,86	92,97
15,00	92,54	93,29
16,00	92,22	93,62
17,00	91,90	93,94
18,00	91,59	94,26
19,00	91,27	94,59
20,00	90,96	94,91
21,00	90,65	95,24
22,00	90,35	95,56
23,00	90,04	95,89
24,00	89,73	96,22
25,00	89,49	96,48
25,51	89,44	96,53
26,00	89,23	96,76
27,00	89,00	97,00
28,00	88,78	97,24
29,00	88,56	97,49
30,00	88,34	97,73
31,00	88,12	97,97
32,00	87,91	98,21

Nr.:

Distance [m]	% of force from start	% of force from end
33,00	87,69	98,45
34,00	87,48	98,69
35,00	87,26	98,94
36,00	87,05	99,18
37,00	86,88	99,37
37,39	86,84	99,42
38,00	86,74	99,54
39,00	86,63	99,65
40,00	86,52	99,78
40,38	86,34	100,00

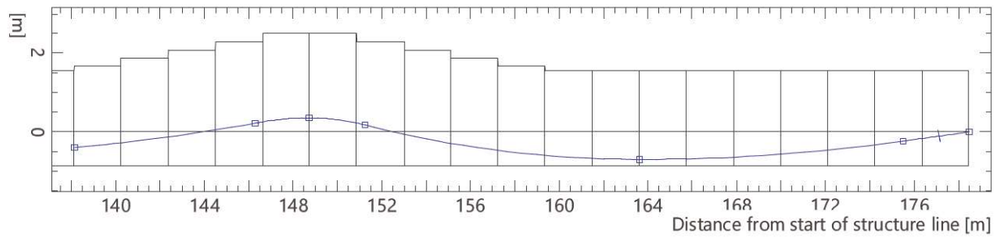
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_2_F1 - Attributes of tendon points

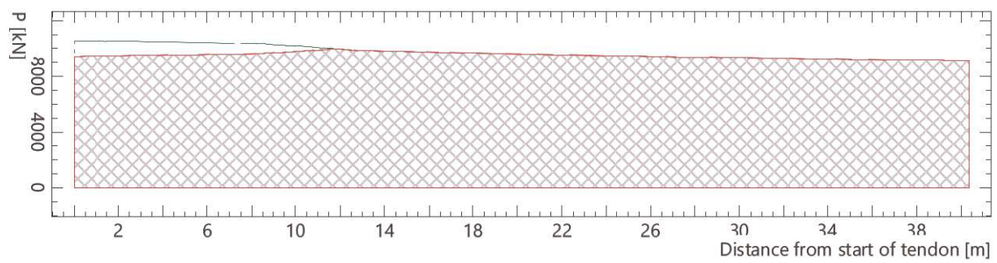
point	distance [m]	Eccentricity Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	138,12	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	146,28	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	148,75	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	151,25	FL2	explic	0,17	0	-8,0	0,83	1,90	0	0
5	163,63	FL2	explic	-0,70	0	0	4,13	1,82	0	0
6	175,50	FL2	explic	-0,23	0	4,5	3,96	1,00	0	0
7	178,50	FL2	explic	0	0	4,5	1,00	0	0	0

Tendon
V1-1.J2_2_F1

Side view of tendon profile
Side view of structure line

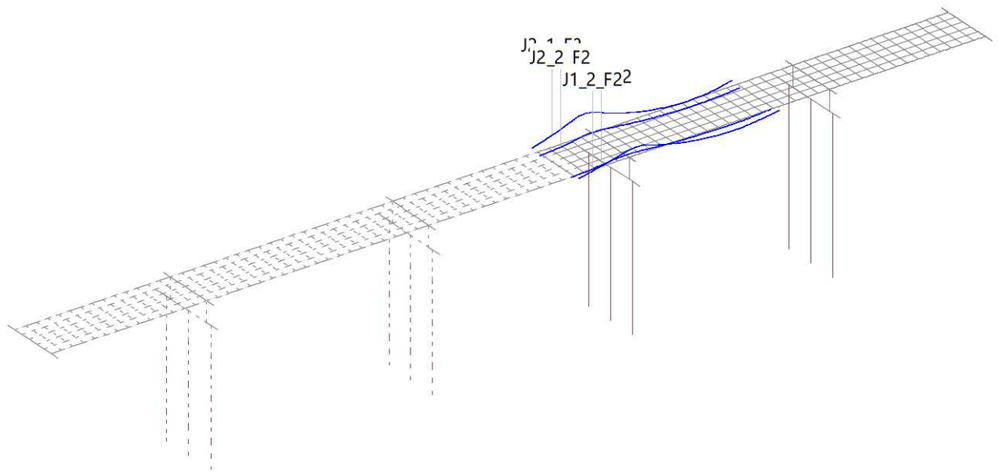


Force diagram



Nr.:

Tendons



Tendon group: V1-2 (Longitudinals F2, LLOSA-F2)

Tendon	Area [mm²]	Material	μ [1/rad]	Δα [rad/m]	Length [m]	Structure line(s)	Bond
J2_1_F2	17360,0	P	0,190	0,0060	38,98	SL2	+
J1_1_F2	17360,0	P	0,190	0,0060	38,97	SL1	+
J2_2_F2	13020,0	P	0,190	0,0060	38,35	SL2	+
J1_2_F2	13020,0	P	0,190	0,0060	38,35	SL1	+

Tendon J1_1_F2 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	235,1	0,574	18545,02	38,26
		anchoring	0,661	21327,37	**-6,0**	0,704	22726,43	9,80

Distance : from start of tendon

Tendon: J1_1_F2 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
99,87	*** -0,00**	0	-1,35	0,12	0,9791	-0,0503	0,1972	---	21327,37
100,87	1,00	1,02	-1,40	0,33	0,9769	-0,0529	0,2073	100,47	21395,22
101,87	2,00	2,05	-1,46	0,54	0,9745	-0,0555	0,2174	100,24	21463,87
102,87	3,00	3,07	-1,52	0,77	0,9721	-0,0580	0,2274	101,27	21532,45
103,87	4,00	4,10	-1,58	1,01	0,9695	-0,0605	0,2373	102,54	21600,79
104,87	5,00	5,14	-1,64	1,25	0,9670	-0,0630	0,2470	103,75	21668,91
105,87	6,00	6,17	-1,71	1,51	0,9643	-0,0654	0,2566	104,81	21736,90
106,87	7,00	7,21	-1,77	1,78	0,9615	-0,0679	0,2662	105,69	21804,85
107,87	8,00	8,25	-1,85	2,06	0,9597	-0,0694	0,2722	106,37	21857,78
108,03	*** 8,16**	8,42	-1,86	2,11	0,9597	-0,0694	0,2722	106,47	21861,94
108,87	9,00	9,28	-1,91	2,31	0,9829	-0,0456	0,1780	-9,11	22303,00
109,87	10,00	10,29	-1,94	2,44	0,9978	-0,0166	0,0642	-8,72	22616,31
110,49	*** 10,62**	10,92	-1,95	2,46	0,9999	-0,0026	0,0097	-8,40	22359,45
110,87	11,00	11,29	-1,94	2,45	0,9983	0,0145	-0,0563	**# -7,54**	22062,25
111,87	12,00	12,30	-1,91	2,33	0,9811	0,0479	-0,1873	**# -7,97**	21473,36
112,87	13,00	13,33	-1,85	2,09	0,9495	0,0777	-0,3039	-8,68	20946,60
112,99	*** 13,12**	13,46	-1,84	2,05	0,9495	0,0777	-0,3039	-8,78	20943,45
113,87	14,00	14,39	-1,77	1,77	0,9529	0,0749	-0,2937	59,30	20877,47
114,87	15,00	15,43	-1,69	1,46	0,9586	0,0703	-0,2758	56,44	20775,91
115,87	16,00	16,48	-1,62	1,18	0,9641	0,0657	-0,2573	55,06	20673,36
116,87	17,00	17,51	-1,55	0,91	0,9692	0,0609	-0,2386	54,26	20570,73

Nr.:

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
117,87	18,00	18,54	-1,49	0,67	0,9739	0,0561	-0,2197	53,71	20468,35
118,87	19,00	19,57	-1,43	0,45	0,9783	0,0512	-0,2007	53,27	20366,34
119,87	20,00	20,59	-1,38	0,24	0,9823	0,0463	-0,1815	52,88	20264,76
120,87	21,00	21,61	-1,33	0,06	0,9859	0,0414	-0,1622	52,53	20163,61
121,87	22,00	22,62	-1,29	-0,10	0,9890	0,0364	-0,1428	52,20	20062,83
122,87	23,00	23,63	-1,26	-0,25	0,9918	0,0315	-0,1233	51,88	19962,41
123,87	24,00	24,64	-1,22	-0,37	0,9942	0,0265	-0,1036	51,57	19862,31
124,87	25,00	25,65	-1,20	-0,47	0,9962	0,0214	-0,0839	51,28	19762,53
125,87	26,00	26,65	-1,18	-0,56	0,9978	0,0163	-0,0640	51,00	19663,02
126,87	27,00	27,65	-1,16	-0,62	0,9989	0,0113	-0,0441	50,73	19563,79
127,87	28,00	28,66	-1,15	-0,67	0,9996	0,0061	-0,0240	50,49	19464,81
128,87	29,00	29,66	-1,14	-0,69	0,9999	0,0028	-0,0109	50,27	19392,60
129,62	*** 29,75**	30,41	-1,14	-0,70	0,9999	0,0028	-0,0109	50,11	19376,02
129,87	30,00	30,66	-1,14	-0,70	1,0000	-0,0022	0,0087	42,47	19296,20
130,87	31,00	31,66	-1,15	-0,68	0,9994	-0,0084	0,0331	42,24	19182,14
131,87	32,00	32,66	-1,16	-0,64	0,9983	-0,0146	0,0570	43,01	19070,62
132,87	33,00	33,66	-1,17	-0,58	0,9966	-0,0205	0,0804	43,57	18961,29
133,87	34,00	34,66	-1,19	-0,49	0,9943	-0,0265	0,1036	43,81	18853,36
134,87	35,00	35,67	-1,22	-0,38	0,9914	-0,0323	0,1266	43,81	18746,11
135,87	36,00	36,68	-1,26	-0,24	0,9880	-0,0382	0,1498	43,60	18639,02
136,63	*** 36,76**	37,45	-1,29	-0,12	0,9868	-0,0400	0,1568	43,33	18596,71
136,87	37,00	37,69	-1,30	-0,08	0,9859	-0,0414	0,1620	---	18572,13
137,87	38,00	38,71	-1,34	0,08	0,9859	-0,0414	0,1620	---	18550,61
138,13	*** 38,26**	38,97	-1,35	0,12	0,9859	-0,0414	0,1620	---	18545,02

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point
\# : Radius of curvature below minimum

Tendon: J1_1_F2 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	76,58
1,00	99,68	76,82
2,00	99,36	77,07
3,00	99,05	77,31
4,00	98,73	77,56
5,00	98,42	77,80
6,00	98,12	78,05
7,00	97,81	78,29
8,00	97,57	78,48
8,16	97,55	78,50
9,00	95,63	80,08
10,00	93,39	82,00
10,62	92,33	82,94
11,00	91,10	84,06
12,00	88,67	86,36
13,00	86,49	88,53
13,12	86,48	88,55
14,00	86,21	88,83
15,00	85,79	89,26
16,00	85,37	89,71
17,00	84,94	90,15
18,00	84,52	90,60
19,00	84,10	91,06
20,00	83,68	91,51
21,00	83,26	91,97
22,00	82,85	92,43
23,00	82,43	92,90
24,00	82,02	93,37
25,00	81,61	93,84
26,00	81,19	94,31
27,00	80,78	94,79
28,00	80,38	95,27
29,00	80,08	95,63
29,75	80,01	95,71
30,00	79,68	96,11

Nr.:

Distance [m]	% of force from start	end
31,00	79,21	96,68
32,00	78,75	97,24
33,00	78,30	97,80
34,00	77,85	98,36
35,00	77,41	98,93
36,00	76,97	99,50
36,76	76,79	99,72
37,00	76,69	99,85
38,00	76,60	99,97
38,26	76,58	100,00

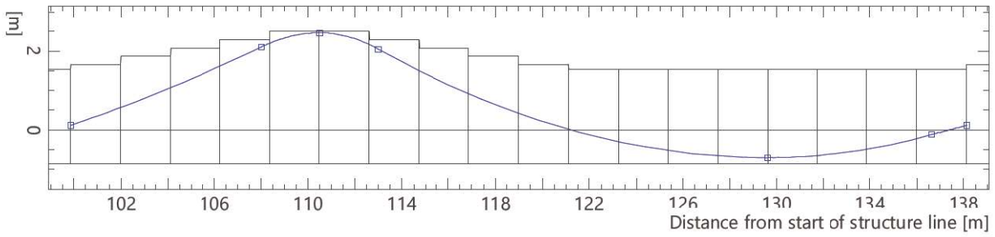
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_1_F2 - Attributes of tendon points

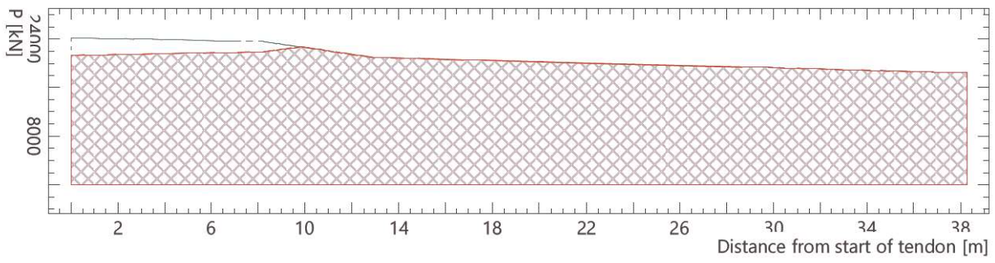
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	99,87	FL1	explic	0,12	0	11,3	0	1,41	0	0
2	108,03	FL1	explic	2,11	0	16,0	2,72	0,38	0	0
3	110,50	FL1	explic	2,46	0	0	0,82	0,43	0	0
4	113,00	FL1	explic	2,05	0	-18,3	0,83	2,66	0	0
5	129,62	FL1	explic	-0,70	0	0	5,54	1,07	0	0
6	136,63	FL1	explic	-0,12	0	9,3	2,34	0,50	0	0
7	138,13	FL1	explic	0,12	0	9,3	0,50	0	0	0

Tendon
V1-2.J1_1_F2

Side view of tendon profile
Side view of structure line



Force diagram



Nr.:

Tendon J1_2_F2 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	18162,90	249,2	0,660	15983,67	38,27
		anchoring	0,669	16210,87	**-6,0**	0,709	17159,15	12,01

Distance : from start of tendon

Tendon: J1_2_F2 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
99,87	*** -0,00**	0	0,56	-0,40	0,9986	-0,0144	0,0499	---	16210,87
100,87	1,00	1,00	0,55	-0,35	0,9986	-0,0144	0,0499	---	16229,38
101,87	/ 2,00	2,00	0,53	-0,30	0,9986	-0,0148	0,0511	---	16251,57
101,87	2,00	2,00	0,53	-0,30	0,9986	-0,0148	0,0511	---	16251,69
102,87	3,00	3,00	0,52	-0,25	0,9978	-0,0185	0,0640	61,24	16311,89
103,87	4,00	4,01	0,49	-0,17	0,9964	-0,0234	0,0811	64,29	16386,08
104,87	5,00	5,01	0,47	-0,09	0,9954	-0,0267	0,0924	115,30	16441,72
105,87	6,00	6,02	0,44	0,01	0,9948	-0,0283	0,0981	230,80	16479,05
106,87	7,00	7,02	0,41	0,11	0,9945	-0,0292	0,1009	446,57	16507,27
107,87	8,00	8,03	0,38	0,21	0,9944	-0,0294	0,1018	830,46	16528,97
108,03	*** 8,16**	8,19	0,38	0,22	0,9944	-0,0294	0,1018	902,47	16532,00
108,87	9,00	9,03	0,36	0,30	0,9977	-0,0188	0,0650	-23,84	16669,11
109,87	10,00	10,03	0,35	0,34	0,9997	-0,0066	0,0228	-24,14	16828,09
110,49	*** 10,62**	10,66	0,34	0,35	1,0000	-0,0010	0,0034	-23,96	16904,92
110,87	11,00	11,03	0,34	0,35	0,9998	0,0054	-0,0186	-22,44	16985,86
111,87	12,00	12,03	0,36	0,31	0,9978	0,0183	-0,0634	-23,02	17156,73
112,87	13,00	13,04	0,38	0,23	0,9940	0,0305	-0,1055	-23,02	16999,21
112,99	*** 13,12**	13,16	0,38	0,21	0,9940	0,0305	-0,1055	-22,97	16996,77
113,87	14,00	14,04	0,41	0,12	0,9944	0,0294	-0,1018	158,14	16967,36
114,87	15,00	15,05	0,44	0,02	0,9951	0,0275	-0,0951	152,37	16925,33
115,87	16,00	16,05	0,47	-0,08	0,9958	0,0255	-0,0883	150,55	16883,14
116,87	17,00	17,06	0,49	-0,16	0,9964	0,0236	-0,0815	150,22	16841,06
117,87	18,00	18,06	0,52	-0,24	0,9970	0,0216	-0,0747	150,47	16799,18
118,87	19,00	19,06	0,54	-0,32	0,9975	0,0196	-0,0680	150,91	16757,51
119,87	20,00	20,07	0,56	-0,39	0,9980	0,0177	-0,0613	151,39	16716,08
120,87	21,00	21,07	0,57	-0,45	0,9984	0,0158	-0,0546	151,82	16674,86
121,87	22,00	22,07	0,59	-0,50	0,9988	0,0138	-0,0479	152,17	16633,83
122,87	23,00	23,07	0,60	-0,55	0,9991	0,0119	-0,0412	152,41	16592,97
123,87	24,00	24,07	0,61	-0,59	0,9993	0,0100	-0,0346	152,53	16552,26
124,87	25,00	25,07	0,62	-0,62	0,9996	0,0081	-0,0280	152,55	16511,67
125,87	26,00	26,07	0,63	-0,65	0,9997	0,0062	-0,0213	152,45	16471,20
126,87	27,00	27,07	0,64	-0,67	0,9999	0,0042	-0,0147	152,26	16430,81
127,87	28,00	28,07	0,64	-0,69	1,0000	0,0023	-0,0080	151,96	16390,49
128,87	29,00	29,07	0,65	-0,70	1,0000	0,0010	-0,0036	151,58	16357,62
129,63	*** 29,75**	29,83	0,65	-0,70	1,0000	0,0010	-0,0036	151,24	16343,54
129,87	30,00	30,07	0,65	-0,70	1,0000	-0,0009	0,0029	122,27	16317,77
130,87	31,00	31,07	0,64	-0,69	0,9999	-0,0034	0,0118	114,82	16270,68
131,87	32,00	32,07	0,64	-0,68	0,9998	-0,0060	0,0207	115,39	16223,62
132,87	33,00	33,07	0,63	-0,66	0,9995	-0,0085	0,0294	116,65	16177,08
133,87	34,00	34,08	0,62	-0,62	0,9992	-0,0110	0,0381	117,55	16131,00
134,87	35,00	35,08	0,61	-0,58	0,9988	-0,0135	0,0467	117,95	16085,20
135,87	36,00	36,08	0,60	-0,53	0,9983	-0,0160	0,0553	117,83	16039,58
136,63	*** 36,76**	36,84	0,59	-0,49	0,9982	-0,0167	0,0579	117,45	16017,30
136,87	37,00	37,08	0,58	-0,48	0,9981	-0,0173	0,0598	---	16006,78
137,87	38,00	38,08	0,56	-0,42	0,9981	-0,0173	0,0598	---	15988,51
138,13	*** 38,26**	38,35	0,56	-0,40	0,9981	-0,0173	0,0598	---	15983,67

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point
/ : transition point

Nr.:

Tendon: J1_2_F2 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	88,00
1,00	99,89	88,10
2,00	99,75	88,22
2,00	99,75	88,22
3,00	99,38	88,55
4,00	98,93	88,95
5,00	98,60	89,25
6,00	98,37	89,46
7,00	98,20	89,61
8,00	98,08	89,73
8,16	98,06	89,75
9,00	97,25	90,49
10,00	96,33	91,35
10,62	95,89	91,77
11,00	95,44	92,21
12,00	94,49	93,14
13,00	93,59	94,03
13,12	93,58	94,04
14,00	93,42	94,20
15,00	93,19	94,44
16,00	92,95	94,67
17,00	92,72	94,91
18,00	92,49	95,15
19,00	92,26	95,38
20,00	92,03	95,62
21,00	91,81	95,85
22,00	91,58	96,09
23,00	91,36	96,33
24,00	91,13	96,56
25,00	90,91	96,80
26,00	90,69	97,04
27,00	90,46	97,28
28,00	90,24	97,52
29,00	90,06	97,71
29,75	89,98	97,80
30,00	89,84	97,95
31,00	89,58	98,24
32,00	89,32	98,52
33,00	89,07	98,80
34,00	88,81	99,09
35,00	88,56	99,37
36,00	88,31	99,65
36,76	88,19	99,79
37,00	88,13	99,86
38,00	88,03	99,97
38,26	88,00	100,00

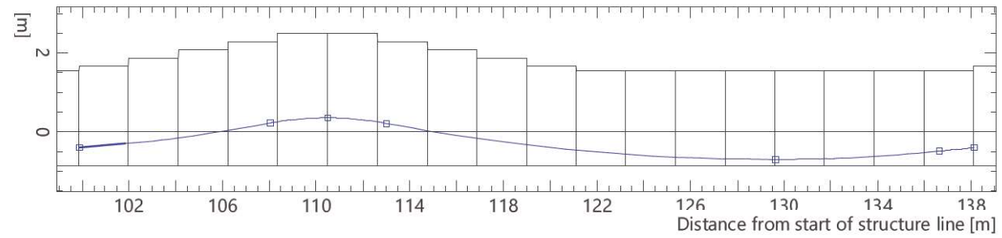
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_2_F2 - Attributes of tendon points

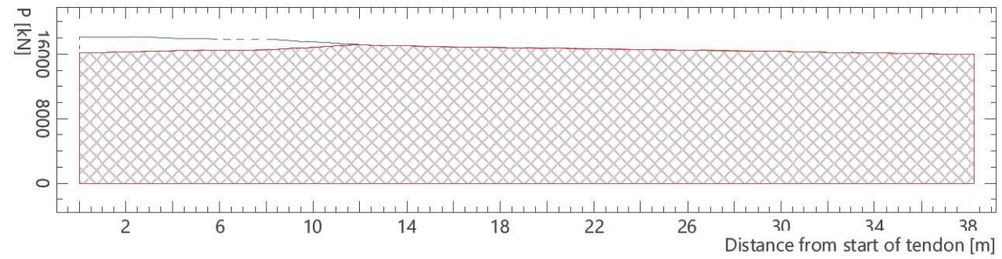
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	99,87	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	108,03	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	110,50	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	113,00	FL2	explic	0,21	0	-6,3	0,83	2,55	0	0
5	129,63	FL2	explic	-0,70	0	0	5,54	1,07	0	0
6	136,63	FL2	explic	-0,49	0	3,4	2,34	0,50	0	0
7	138,13	FL2	explic	-0,40	0	3,4	0,50	0	0	0

Tendon
V1-2.J1_2_F2

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_1_F2 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	235,2	0,574	18546,23	38,27
		anchoring	0,661	21328,31	**-6,0**	0,704	22726,93	9,80

Distance : from start of tendon

Tendon: J2_1_F2 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
99,87	*** -0,00**	0	1,35	0,12	0,9791	0,0503	0,1972	---	21328,31
100,87	1,00	1,02	1,40	0,33	0,9769	0,0529	0,2072	100,63	21396,09
101,87	2,00	2,05	1,46	0,54	0,9745	0,0555	0,2173	100,39	21464,68
102,87	3,00	3,07	1,52	0,77	0,9721	0,0580	0,2274	101,42	21533,20
103,87	4,00	4,10	1,58	1,01	0,9696	0,0605	0,2372	102,69	21601,47
104,87	5,00	5,14	1,64	1,25	0,9670	0,0630	0,2470	103,90	21669,53
105,87	6,00	6,17	1,71	1,51	0,9643	0,0654	0,2566	104,97	21737,46
106,87	7,00	7,21	1,77	1,78	0,9616	0,0678	0,2661	105,85	21805,34
107,87	8,00	8,25	1,84	2,06	0,9598	0,0694	0,2721	106,54	21858,24
108,03	*** 8,16**	8,42	1,86	2,11	0,9598	0,0694	0,2721	106,63	21862,39
108,87	9,00	9,28	1,91	2,31	0,9829	0,0456	0,1782	-9,13	22302,45
109,87	10,00	10,29	1,94	2,44	0,9978	0,0167	0,0646	-8,74	22619,16
110,50	*** 10,63**	10,92	1,95	2,46	1,0000	0,0026	0,0096	-8,42	22360,35
110,87	11,00	11,29	1,94	2,45	0,9983	-0,0144	-0,0556	**# -7,55**	22066,29
111,87	12,00	12,30	1,92	2,34	0,9812	-0,0478	-0,1866	**# -7,97**	21477,26
112,87	13,00	13,33	1,85	2,09	0,9496	-0,0777	-0,3038	-8,67	20947,89
113,00	*** 13,13**	13,47	1,84	2,05	0,9496	-0,0777	-0,3038	-8,78	20944,62
113,87	14,00	14,39	1,77	1,77	0,9529	-0,0749	-0,2937	59,36	20879,17
114,87	15,00	15,43	1,69	1,46	0,9586	-0,0704	-0,2758	56,48	20777,65
115,87	16,00	16,48	1,62	1,18	0,9641	-0,0657	-0,2574	55,10	20675,14
116,87	17,00	17,51	1,55	0,92	0,9692	-0,0609	-0,2387	54,30	20572,54
117,87	18,00	18,54	1,49	0,67	0,9739	-0,0561	-0,2198	53,74	20470,20
118,87	19,00	19,57	1,43	0,45	0,9783	-0,0512	-0,2007	53,30	20368,23
119,87	20,00	20,59	1,38	0,24	0,9823	-0,0463	-0,1816	52,91	20266,67

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
120,87	21,00	21,61	1,33	0,06	0,9858	-0,0414	-0,1623	52,56	20165,55
121,87	22,00	22,62	1,29	-0,10	0,9890	-0,0365	-0,1429	52,23	20064,81
122,87	23,00	23,63	1,26	-0,24	0,9918	-0,0315	-0,1234	51,91	19964,42
123,87	24,00	24,64	1,22	-0,37	0,9942	-0,0265	-0,1037	51,60	19864,36
124,87	25,00	25,65	1,20	-0,47	0,9962	-0,0214	-0,0840	51,31	19764,61
125,87	26,00	26,65	1,18	-0,56	0,9977	-0,0164	-0,0642	51,03	19665,14
126,87	27,00	27,65	1,16	-0,62	0,9989	-0,0113	-0,0442	50,76	19565,94
127,87	28,00	28,65	1,15	-0,67	0,9996	-0,0062	-0,0242	50,52	19467,00
128,87	29,00	29,66	1,14	-0,69	0,9999	-0,0028	-0,0109	50,30	19394,07
129,63	*** 29,76**	30,42	1,14	-0,70	0,9999	-0,0028	-0,0109	50,14	19377,27
129,87	30,00	30,66	1,14	-0,70	1,0000	0,0022	0,0084	42,49	19298,60
130,87	31,00	31,66	1,14	-0,68	0,9994	0,0084	0,0328	42,24	19184,52
131,87	32,00	32,66	1,16	-0,64	0,9983	0,0145	0,0567	43,00	19072,96
132,87	33,00	33,66	1,17	-0,58	0,9966	0,0205	0,0802	43,56	18963,61
133,87	34,00	34,66	1,19	-0,49	0,9943	0,0264	0,1033	43,81	18855,66
134,87	35,00	35,67	1,22	-0,38	0,9915	0,0323	0,1264	43,82	18748,40
135,87	36,00	36,68	1,26	-0,24	0,9880	0,0382	0,1495	43,60	18641,31
136,64	*** 36,77**	37,46	1,29	-0,12	0,9868	0,0400	0,1568	43,33	18597,92
136,87	37,00	37,69	1,30	-0,09	0,9859	0,0414	0,1620	---	18573,55
137,87	38,00	38,71	1,34	0,08	0,9859	0,0414	0,1620	---	18552,03
138,14	*** 38,27**	38,98	1,35	0,12	0,9859	0,0414	0,1620	---	18546,23

Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL2
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point
#	:	Radius of curvature below minimum

Tendon: J2_1_F2 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	76,58
1,00	99,68	76,83
2,00	99,36	77,07
3,00	99,05	77,32
4,00	98,74	77,56
5,00	98,43	77,81
6,00	98,12	78,05
7,00	97,81	78,30
8,00	97,58	78,49
8,16	97,56	78,50
9,00	95,63	80,08
10,00	93,40	81,99
10,63	92,33	82,94
11,00	91,12	84,05
12,00	88,69	86,35
13,00	86,50	88,54
13,13	86,49	88,55
14,00	86,22	88,83
15,00	85,80	89,26
16,00	85,37	89,70
17,00	84,95	90,15
18,00	84,53	90,60
19,00	84,11	91,05
20,00	83,69	91,51
21,00	83,27	91,97
22,00	82,85	92,43
23,00	82,44	92,90
24,00	82,03	93,36
25,00	81,61	93,84
26,00	81,20	94,31
27,00	80,79	94,79
28,00	80,38	95,27
29,00	80,08	95,63
29,76	80,01	95,71
30,00	79,69	96,10
31,00	79,22	96,67
32,00	78,76	97,24
33,00	78,31	97,80

Nr.:

Distance [m]	% of force from start	% of force from end
34,00	77,86	98,36
35,00	77,42	98,92
36,00	76,98	99,49
36,77	76,80	99,72
37,00	76,70	99,85
38,00	76,61	99,97
38,27	76,58	100,00

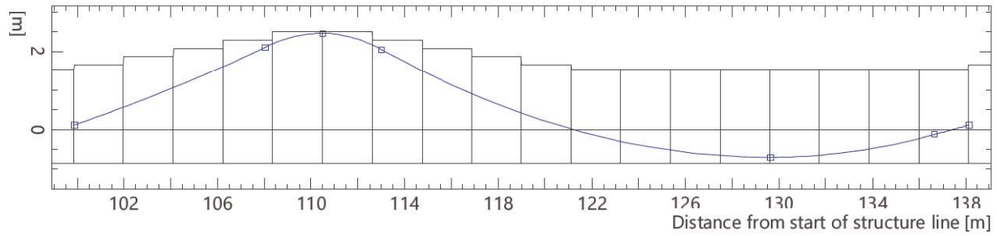
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_1_F2 - Attributes of tendon points

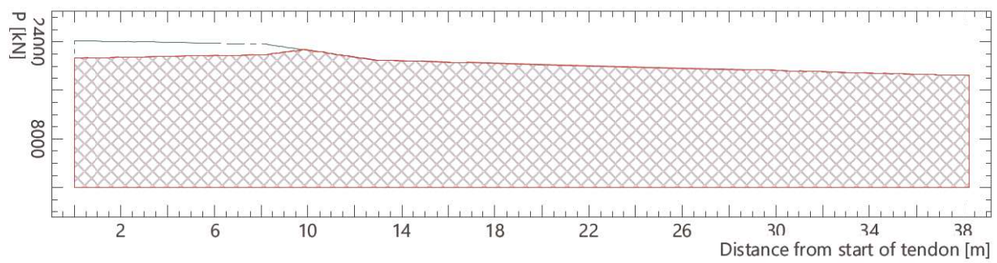
point	distance [m]	Eccentricity Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	99,87	FL1	explic	0,12	0	11,3	0	1,41	0	0
2	108,03	FL1	explic	2,11	0	16,0	2,72	0,38	0	0
3	110,50	FL1	explic	2,46	0	0	0,82	0,43	0	0
4	113,00	FL1	explic	2,05	0	-18,3	0,83	2,66	0	0
5	129,63	FL1	explic	-0,70	0	0	5,54	1,07	0	0
6	136,64	FL1	explic	-0,12	0	9,3	2,34	0,50	0	0
7	138,14	FL1	explic	0,12	0	9,3	0,50	0	0	0

Tendon
V1-2.J2_1_F2

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_2_F2 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	18162,90	249,2	0,660	15983,67	38,27
		anchoring	0,669	16210,87	**-6,0**	0,709	17159,15	12,01

Distance : from start of tendon

Nr.:

Tendon: J2_2_F2 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
99,87	*** -0,00**	0	-0,56	-0,40	0,9986	0,0144	0,0499	---	16210,87
100,87	1,00	1,00	-0,55	-0,35	0,9986	0,0144	0,0499	---	16229,38
101,87	/ 2,00	2,00	-0,53	-0,30	0,9986	0,0148	0,0511	---	16251,57
101,87	2,00	2,00	-0,53	-0,30	0,9986	0,0148	0,0511	---	16251,69
102,87	3,00	3,00	-0,52	-0,25	0,9978	0,0185	0,0640	61,24	16311,89
103,87	4,00	4,01	-0,49	-0,17	0,9964	0,0234	0,0811	64,29	16386,08
104,87	5,00	5,01	-0,47	-0,09	0,9954	0,0267	0,0924	115,30	16441,72
105,87	6,00	6,02	-0,44	0,01	0,9948	0,0283	0,0981	230,80	16479,05
106,87	7,00	7,02	-0,41	0,11	0,9945	0,0292	0,1009	446,57	16507,27
107,87	8,00	8,03	-0,38	0,21	0,9944	0,0294	0,1018	830,46	16528,97
108,03	*** 8,16**	8,19	-0,38	0,22	0,9944	0,0294	0,1018	902,47	16532,00
108,87	9,00	9,03	-0,36	0,30	0,9977	0,0188	0,0650	-23,84	16669,11
109,87	10,00	10,03	-0,35	0,34	0,9997	0,0066	0,0228	-24,14	16828,09
110,49	*** 10,62**	10,66	-0,34	0,35	1,0000	0,0010	0,0034	-23,96	16904,92
110,87	11,00	11,03	-0,34	0,35	0,9998	-0,0054	-0,0186	-22,44	16985,86
111,87	12,00	12,03	-0,36	0,31	0,9978	-0,0183	-0,0634	-23,02	17156,73
112,87	13,00	13,04	-0,38	0,23	0,9940	-0,0305	-0,1055	-23,02	16999,21
112,99	*** 13,12**	13,16	-0,38	0,21	0,9940	-0,0305	-0,1055	-22,97	16996,77
113,87	14,00	14,04	-0,41	0,12	0,9944	-0,0294	-0,1018	158,14	16967,36
114,87	15,00	15,05	-0,44	0,02	0,9951	-0,0275	-0,0951	152,37	16925,33
115,87	16,00	16,05	-0,47	-0,08	0,9958	-0,0255	-0,0883	150,55	16883,14
116,87	17,00	17,06	-0,49	-0,16	0,9964	-0,0236	-0,0815	150,22	16841,06
117,87	18,00	18,06	-0,52	-0,24	0,9970	-0,0216	-0,0747	150,47	16799,18
118,87	19,00	19,06	-0,54	-0,32	0,9975	-0,0196	-0,0680	150,91	16757,51
119,87	20,00	20,07	-0,56	-0,39	0,9980	-0,0177	-0,0613	151,39	16716,08
120,87	21,00	21,07	-0,57	-0,45	0,9984	-0,0158	-0,0546	151,82	16674,86
121,87	22,00	22,07	-0,59	-0,50	0,9988	-0,0138	-0,0479	152,17	16633,83
122,87	23,00	23,07	-0,60	-0,55	0,9991	-0,0119	-0,0412	152,41	16592,97
123,87	24,00	24,07	-0,61	-0,59	0,9993	-0,0100	-0,0346	152,53	16552,26
124,87	25,00	25,07	-0,62	-0,62	0,9996	-0,0081	-0,0280	152,55	16511,67
125,87	26,00	26,07	-0,63	-0,65	0,9997	-0,0062	-0,0213	152,45	16471,20
126,87	27,00	27,07	-0,64	-0,67	0,9999	-0,0042	-0,0147	152,26	16430,81
127,87	28,00	28,07	-0,64	-0,69	1,0000	-0,0023	-0,0080	151,96	16390,49
128,87	29,00	29,07	-0,65	-0,70	1,0000	-0,0010	-0,0036	151,58	16357,62
129,63	*** 29,75**	29,83	-0,65	-0,70	1,0000	-0,0010	-0,0036	151,24	16343,54
129,87	30,00	30,07	-0,65	-0,70	1,0000	0,0009	0,0029	122,27	16317,77
130,87	31,00	31,07	-0,64	-0,69	0,9999	0,0034	0,0118	114,82	16270,68
131,87	32,00	32,07	-0,64	-0,68	0,9998	0,0060	0,0207	115,39	16223,62
132,87	33,00	33,07	-0,63	-0,66	0,9995	0,0085	0,0294	116,65	16177,08
133,87	34,00	34,08	-0,62	-0,62	0,9992	0,0110	0,0381	117,55	16131,00
134,87	35,00	35,08	-0,61	-0,58	0,9988	0,0135	0,0467	117,95	16085,20
135,87	36,00	36,08	-0,60	-0,53	0,9983	0,0160	0,0553	117,83	16039,58
136,63	*** 36,76**	36,84	-0,59	-0,49	0,9982	0,0167	0,0579	117,45	16017,30
136,87	37,00	37,08	-0,58	-0,48	0,9981	0,0173	0,0598	---	16006,78
137,87	38,00	38,08	-0,56	-0,42	0,9981	0,0173	0,0598	---	15988,51
138,13	*** 38,26**	38,35	-0,56	-0,40	0,9981	0,0173	0,0598	---	15983,67

Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL2
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point
/	:	transition point

Tendon: J2_2_F2 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	88,00
1,00	99,89	88,10
2,00	99,75	88,22
2,00	99,75	88,22
3,00	99,38	88,55
4,00	98,93	88,95
5,00	98,60	89,25
6,00	98,37	89,46
7,00	98,20	89,61
8,00	98,08	89,73
8,16	98,06	89,75

Distance [m]	% of force from start	% of force from end
9,00	97,25	90,49
10,00	96,33	91,35
10,62	95,89	91,77
11,00	95,44	92,21
12,00	94,49	93,14
13,00	93,59	94,03
13,12	93,58	94,04
14,00	93,42	94,20
15,00	93,19	94,44
16,00	92,95	94,67
17,00	92,72	94,91
18,00	92,49	95,15
19,00	92,26	95,38
20,00	92,03	95,62
21,00	91,81	95,85
22,00	91,58	96,09
23,00	91,36	96,33
24,00	91,13	96,56
25,00	90,91	96,80
26,00	90,69	97,04
27,00	90,46	97,28
28,00	90,24	97,52
29,00	90,06	97,71
29,75	89,98	97,80
30,00	89,84	97,95
31,00	89,58	98,24
32,00	89,32	98,52
33,00	89,07	98,80
34,00	88,81	99,09
35,00	88,56	99,37
36,00	88,31	99,65
36,76	88,19	99,79
37,00	88,13	99,86
38,00	88,03	99,97
38,26	88,00	100,00

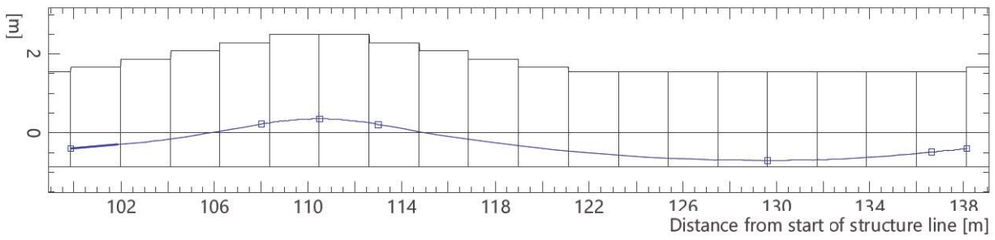
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_2_F2 - Attributes of tendon points

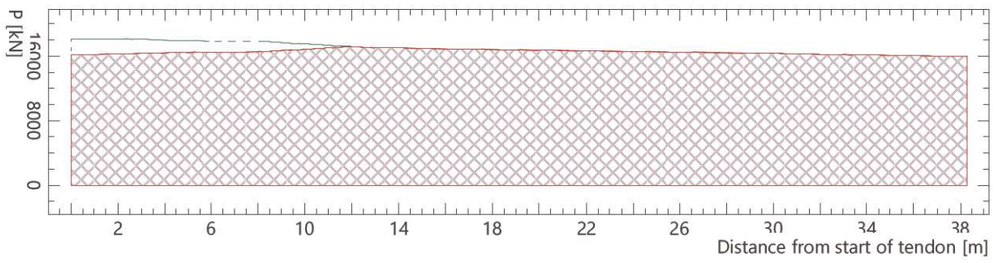
point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	99,87	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	108,03	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	110,50	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	113,00	FL2	explic	0,21	0	-6,3	0,83	2,55	0	0
5	129,63	FL2	explic	-0,70	0	0	5,54	1,07	0	0
6	136,63	FL2	explic	-0,49	0	3,4	2,34	0,50	0	0
7	138,13	FL2	explic	-0,40	0	3,4	0,50	0	0	0

Tendon
V1-2.J2_2_F2

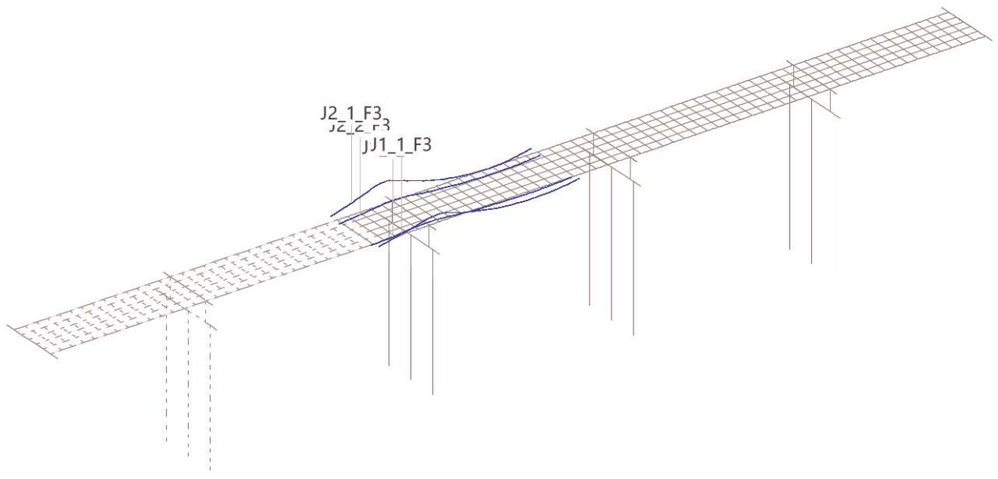
Side view of tendon profile
Side view of structure line



Force diagram



Tendons



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Tendon group: V1-3 (Longitudinals F3, LLOSA-F3)

Tendon	Area [mm²]	Material	μ [1/rad]	Δα [rad/m]	Length [m]	Structure line(s)	Bond
J2_2_F3	13020,0	P	0,190	0,0060	38,35	SL2	+
J1_2_F3	13020,0	P	0,190	0,0060	38,35	SL1	+
J2_1_F3	17360,0	P	0,190	0,0060	38,98	SL2	+
J1_1_F3	17360,0	P	0,190	0,0060	38,97	SL1	+

Tendon J1_1_F3 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	235,1	0,574	18541,99	38,26
		anchoring	0,660	21325,07	**-6,0**	0,704	22725,20	9,79

Distance : from start of tendon

Tendon: J1_1_F3 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
61,62	*** 0,00**	0	-1,35	0,12	0,9791	-0,0503	0,1972	---	21325,07
62,62	1,00	1,02	-1,40	0,33	0,9768	-0,0529	0,2073	99,93	21393,15
63,62	2,00	2,05	-1,46	0,54	0,9745	-0,0555	0,2175	99,72	21462,03
64,62	3,00	3,07	-1,52	0,77	0,9720	-0,0581	0,2276	100,75	21530,83
65,62	4,00	4,10	-1,58	1,01	0,9695	-0,0606	0,2375	102,01	21599,39
66,62	5,00	5,14	-1,64	1,25	0,9669	-0,0631	0,2473	103,22	21667,73
67,62	6,00	6,17	-1,70	1,51	0,9642	-0,0655	0,2570	104,27	21735,93
68,62	7,00	7,21	-1,77	1,78	0,9614	-0,0679	0,2665	105,14	21804,11
69,62	8,00	8,25	-1,84	2,06	0,9596	-0,0695	0,2726	105,81	21857,19
69,78	*** 8,16**	8,42	-1,86	2,11	0,9596	-0,0695	0,2726	105,91	21861,35
70,62	9,00	9,28	-1,91	2,31	0,9829	-0,0457	0,1783	-9,09	22302,99
71,62	10,00	10,29	-1,94	2,44	0,9978	-0,0166	0,0643	-8,71	22613,09
72,24	*** 10,63**	10,92	-1,95	2,46	0,9999	-0,0026	0,0097	-8,39	22355,87
72,62	11,00	11,29	-1,94	2,45	0,9983	0,0145	-0,0563	**# -7,54**	22058,64
73,62	12,00	12,30	-1,91	2,33	0,9811	0,0479	-0,1873	**# -7,97**	21469,85
74,62	13,00	13,33	-1,85	2,09	0,9495	0,0777	-0,3039	-8,68	20943,17
74,74	*** 13,13**	13,46	-1,84	2,05	0,9495	0,0777	-0,3039	-8,78	20940,03
75,62	14,00	14,39	-1,77	1,77	0,9529	0,0749	-0,2937	59,30	20874,06
76,62	15,00	15,43	-1,69	1,46	0,9586	0,0703	-0,2758	56,44	20772,51
77,62	16,00	16,48	-1,62	1,18	0,9641	0,0657	-0,2573	55,06	20669,98
78,62	17,00	17,51	-1,55	0,91	0,9692	0,0609	-0,2386	54,26	20567,36
79,62	18,00	18,54	-1,49	0,67	0,9739	0,0561	-0,2197	53,71	20465,01
80,62	19,00	19,57	-1,43	0,45	0,9783	0,0512	-0,2007	53,27	20363,01
81,62	20,00	20,59	-1,38	0,24	0,9823	0,0463	-0,1815	52,88	20261,45
82,62	21,00	21,61	-1,33	0,06	0,9859	0,0414	-0,1622	52,53	20160,31
83,62	22,00	22,62	-1,29	-0,10	0,9890	0,0364	-0,1428	52,20	20059,55
84,62	23,00	23,63	-1,26	-0,25	0,9918	0,0315	-0,1233	51,88	19959,14
85,62	24,00	24,64	-1,22	-0,37	0,9942	0,0265	-0,1036	51,57	19859,07
86,62	25,00	25,65	-1,20	-0,47	0,9962	0,0214	-0,0839	51,28	19759,29
87,62	26,00	26,65	-1,18	-0,56	0,9978	0,0163	-0,0640	51,00	19659,81
88,62	27,00	27,65	-1,16	-0,62	0,9989	0,0113	-0,0441	50,73	19560,59
89,62	28,00	28,66	-1,15	-0,67	0,9996	0,0061	-0,0240	50,49	19461,63
90,62	29,00	29,66	-1,14	-0,69	0,9999	0,0028	-0,0109	50,27	19389,43
91,37	*** 29,75**	30,41	-1,14	-0,70	0,9999	0,0028	-0,0109	50,11	19372,85
91,62	30,00	30,66	-1,14	-0,70	1,0000	-0,0022	0,0087	42,47	19293,04
92,62	31,00	31,66	-1,15	-0,68	0,9994	-0,0084	0,0331	42,24	19179,01
93,62	32,00	32,66	-1,16	-0,64	0,9983	-0,0146	0,0570	43,01	19067,51
94,62	33,00	33,66	-1,17	-0,58	0,9966	-0,0205	0,0804	43,57	18958,19
95,62	34,00	34,66	-1,19	-0,49	0,9943	-0,0265	0,1036	43,81	18850,28
96,62	35,00	35,67	-1,22	-0,38	0,9914	-0,0323	0,1266	43,81	18743,04
97,62	36,00	36,68	-1,26	-0,24	0,9880	-0,0382	0,1498	43,60	18635,98
98,38	*** 36,76**	37,45	-1,29	-0,12	0,9868	-0,0400	0,1568	43,33	18593,67
98,62	37,00	37,69	-1,30	-0,08	0,9859	-0,0414	0,1620	---	18569,09
99,62	38,00	38,71	-1,34	0,08	0,9859	-0,0414	0,1620	---	18547,58
99,88	*** 38,26**	38,97	-1,35	0,12	0,9859	-0,0414	0,1620	---	18541,99

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Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL1
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point
#	:	Radius of curvature below minimum

Tendon: J1_1_F3 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	76,57
1,00	99,68	76,81
2,00	99,36	77,06
3,00	99,04	77,30
4,00	98,73	77,55
5,00	98,42	77,80
6,00	98,11	78,04
7,00	97,80	78,29
8,00	97,57	78,48
8,16	97,55	78,49
9,00	95,62	80,08
10,00	93,38	82,00
10,63	92,31	82,94
11,00	91,09	84,06
12,00	88,66	86,36
13,00	86,48	88,53
13,13	86,47	88,55
14,00	86,20	88,83
15,00	85,78	89,26
16,00	85,35	89,71
17,00	84,93	90,15
18,00	84,51	90,60
19,00	84,08	91,06
20,00	83,67	91,51
21,00	83,25	91,97
22,00	82,83	92,43
23,00	82,42	92,90
24,00	82,00	93,37
25,00	81,59	93,84
26,00	81,18	94,31
27,00	80,77	94,79
28,00	80,36	95,27
29,00	80,06	95,63
29,75	80,00	95,71
30,00	79,67	96,11
31,00	79,20	96,68
32,00	78,74	97,24
33,00	78,28	97,80
34,00	77,84	98,36
35,00	77,40	98,93
36,00	76,95	99,50
36,76	76,78	99,72
37,00	76,68	99,85
38,00	76,59	99,97
38,26	76,57	100,00

Distance : Measured along plan view of structure line from start of tendon

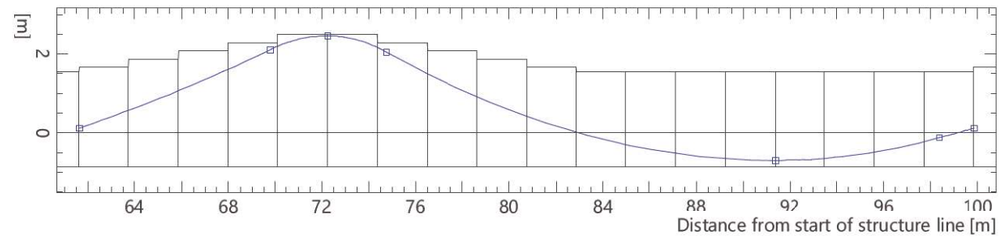
Tendon: J1_1_F3 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	61,62	FL1	explic	0,12	0	11,3	0	1,41	0	0
2	69,78	FL1	explic	2,11	0	16,0	2,72	0,38	0	0
3	72,25	FL1	explic	2,46	0	0	0,82	0,43	0	0
4	74,75	FL1	explic	2,05	0	-18,3	0,83	2,66	0	0
5	91,37	FL1	explic	-0,70	0	0	5,54	1,07	0	0
6	98,38	FL1	explic	-0,12	0	9,3	2,34	0,50	0	0
7	99,88	FL1	explic	0,12	0	9,3	0,50	0	0	0

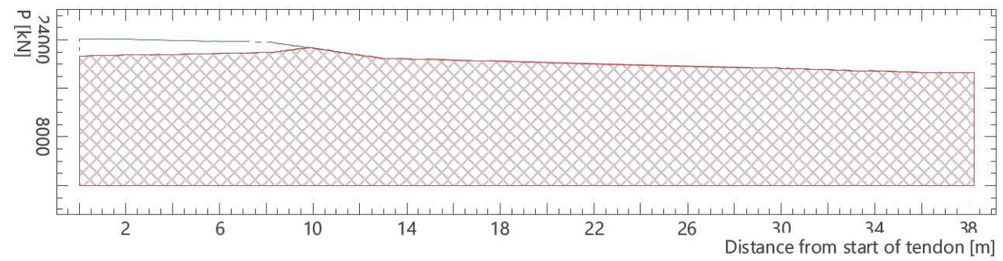
Nr.:

Tendon
V1-3.J1_1_F3

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J1_2_F3 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	18162,90	249,3	0,660	15994,30	38,27
		anchoring	0,670	16220,83	**-6,0**	0,709	17164,42	12,05

Distance : from start of tendon

Tendon: J1_2_F3 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
61,62	* 0,00	0	0,56	-0,40	0,9986	-0,0147	0,0507	---	16220,83
62,62	1,00	1,00	0,54	-0,35	0,9982	-0,0166	0,0573	153,47	16260,63
63,62	2,00	2,00	0,53	-0,29	0,9978	-0,0185	0,0640	153,46	16300,78
64,62	3,00	3,01	0,51	-0,22	0,9973	-0,0204	0,0706	155,05	16340,77
65,62	4,00	4,01	0,49	-0,15	0,9968	-0,0223	0,0771	156,41	16380,61
66,62	5,00	5,01	0,46	-0,07	0,9962	-0,0241	0,0836	157,17	16420,39
67,62	6,00	6,02	0,44	0,02	0,9956	-0,0260	0,0900	157,29	16460,22
68,62	7,00	7,02	0,41	0,11	0,9949	-0,0279	0,0964	156,84	16500,18
69,62	8,00	8,03	0,38	0,21	0,9945	-0,0290	0,1005	155,86	16532,34
69,78	* 8,16	8,19	0,38	0,22	0,9945	-0,0290	0,1005	155,67	16535,37
70,62	9,00	9,03	0,36	0,30	0,9977	-0,0188	0,0650	-23,84	16668,27
71,62	10,00	10,03	0,35	0,34	0,9997	-0,0066	0,0228	-24,14	16827,25
72,24	* 10,63	10,66	0,34	0,35	1,0000	-0,0010	0,0034	-23,96	16904,07
72,62	11,00	11,03	0,34	0,35	0,9998	0,0054	-0,0186	-22,44	16985,01
73,62	12,00	12,03	0,36	0,31	0,9978	0,0183	-0,0634	-23,02	17155,87
74,62	13,00	13,04	0,38	0,23	0,9940	0,0305	-0,1055	-23,02	17010,52
74,74	* 13,13	13,16	0,38	0,21	0,9940	0,0305	-0,1055	-22,97	17008,08
75,62	14,00	14,04	0,41	0,12	0,9944	0,0294	-0,1018	158,14	16978,64
76,62	15,00	15,05	0,44	0,02	0,9951	0,0275	-0,0951	152,37	16936,59
77,62	16,00	16,05	0,47	-0,08	0,9958	0,0255	-0,0883	150,55	16894,37
78,62	17,00	17,06	0,49	-0,16	0,9964	0,0236	-0,0815	150,22	16852,26
79,62	18,00	18,06	0,52	-0,24	0,9970	0,0216	-0,0747	150,47	16810,35
80,62	19,00	19,06	0,54	-0,32	0,9975	0,0196	-0,0680	150,91	16768,66
81,62	20,00	20,07	0,56	-0,39	0,9980	0,0177	-0,0613	151,39	16727,20

Nr.:

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
82,62	21,00	21,07	0,57	-0,45	0,9984	0,0158	-0,0546	151,82	16685,95
83,62	22,00	22,07	0,59	-0,50	0,9988	0,0138	-0,0479	152,17	16644,90
84,62	23,00	23,07	0,60	-0,55	0,9991	0,0119	-0,0412	152,41	16604,01
85,62	24,00	24,07	0,61	-0,59	0,9993	0,0100	-0,0346	152,53	16563,27
86,62	25,00	25,07	0,62	-0,62	0,9996	0,0081	-0,0280	152,55	16522,66
87,62	26,00	26,07	0,63	-0,65	0,9997	0,0062	-0,0213	152,45	16482,15
88,62	27,00	27,07	0,64	-0,67	0,9999	0,0042	-0,0147	152,26	16441,74
89,62	28,00	28,07	0,64	-0,69	1,0000	0,0023	-0,0080	151,96	16401,39
90,62	29,00	29,07	0,65	-0,70	1,0000	0,0010	-0,0036	151,58	16368,50
91,38	*** 29,76**	29,83	0,65	-0,70	1,0000	0,0010	-0,0036	151,24	16354,41
91,62	30,00	30,07	0,65	-0,70	1,0000	-0,0009	0,0029	122,27	16328,62
92,62	31,00	31,07	0,64	-0,69	0,9999	-0,0034	0,0118	114,82	16281,50
93,62	32,00	32,07	0,64	-0,68	0,9998	-0,0060	0,0207	115,39	16234,41
94,62	33,00	33,07	0,63	-0,66	0,9995	-0,0085	0,0294	116,65	16187,84
95,62	34,00	34,07	0,62	-0,62	0,9992	-0,0110	0,0381	117,55	16141,73
96,62	35,00	35,07	0,61	-0,58	0,9988	-0,0135	0,0467	117,95	16095,90
97,62	36,00	36,08	0,60	-0,53	0,9983	-0,0160	0,0553	117,83	16050,25
98,38	*** 36,76**	36,84	0,59	-0,49	0,9982	-0,0167	0,0579	117,45	16027,96
98,62	37,00	37,08	0,58	-0,48	0,9981	-0,0173	0,0598	---	16017,42
99,62	38,00	38,08	0,56	-0,42	0,9981	-0,0173	0,0598	---	15999,14
99,88	*** 38,26**	38,35	0,56	-0,40	0,9981	-0,0173	0,0598	---	15994,30

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J1_2_F3 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	88,06
1,00	99,76	88,28
2,00	99,51	88,49
3,00	99,27	88,71
4,00	99,02	88,93
5,00	98,78	89,14
6,00	98,55	89,36
7,00	98,31	89,58
8,00	98,12	89,75
8,16	98,10	89,77
9,00	97,32	90,49
10,00	96,40	91,35
10,63	95,96	91,77
11,00	95,50	92,21
12,00	94,55	93,14
13,00	93,66	94,03
13,13	93,64	94,04
14,00	93,48	94,20
15,00	93,25	94,44
16,00	93,02	94,67
17,00	92,78	94,91
18,00	92,55	95,15
19,00	92,32	95,38
20,00	92,10	95,62
21,00	91,87	95,85
22,00	91,64	96,09
23,00	91,42	96,33
24,00	91,19	96,56
25,00	90,97	96,80
26,00	90,75	97,04
27,00	90,52	97,28
28,00	90,30	97,52
29,00	90,12	97,71
29,76	90,04	97,80
30,00	89,90	97,95
31,00	89,64	98,24
32,00	89,38	98,52
33,00	89,13	98,80
34,00	88,87	99,09

Nr.:

Distance [m]	% of force from start	% of force from end
35,00	88,62	99,37
36,00	88,37	99,65
36,76	88,25	99,79
37,00	88,19	99,86
38,00	88,09	99,97
38,26	88,06	100,00

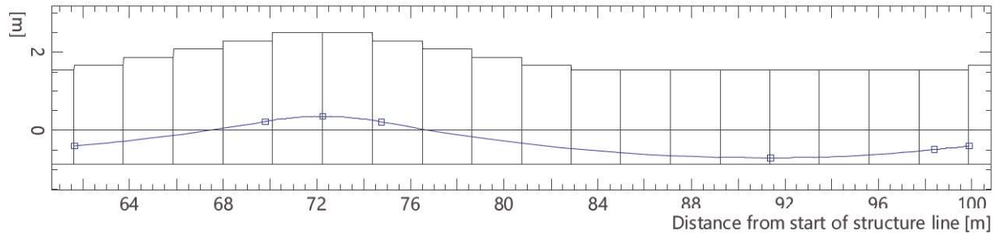
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_2_F3 - Attributes of tendon points

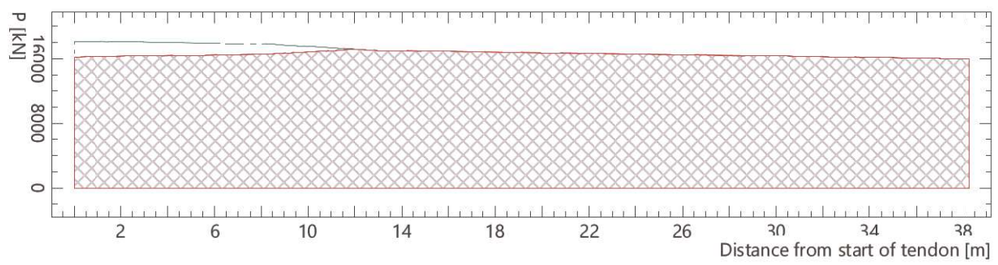
point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	61,62	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	69,78	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	72,25	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	74,75	FL2	explic	0,21	0	-6,3	0,83	2,55	0	0
5	91,38	FL2	explic	-0,70	0	0	5,54	1,07	0	0
6	98,39	FL2	explic	-0,49	0	3,4	2,34	0,50	0	0
7	99,89	FL2	explic	-0,40	0	3,4	0,50	0	0	0

Tendon
V1-3.J1_2_F3

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_1_F3 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	235,1	0,574	18545,47	38,27
		anchoring	0,661	21327,37	**-6,0**	0,704	22726,43	9,80

Distance : from start of tendon

Nr.:

Tendon: J2_1_F3 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
61,62	*** 0,00**	0	1,35	0,12	0,9791	0,0503	0,1972	---	21327,37
62,62	1,00	1,02	1,40	0,33	0,9769	0,0529	0,2073	100,47	21395,22
63,62	2,00	2,05	1,46	0,54	0,9745	0,0555	0,2174	100,24	21463,87
64,62	3,00	3,07	1,52	0,77	0,9721	0,0580	0,2274	101,27	21532,45
65,62	4,00	4,10	1,58	1,01	0,9695	0,0605	0,2373	102,54	21600,79
66,62	5,00	5,14	1,64	1,25	0,9670	0,0630	0,2470	103,75	21668,91
67,62	6,00	6,17	1,71	1,51	0,9643	0,0654	0,2566	104,81	21736,90
68,62	7,00	7,21	1,77	1,78	0,9615	0,0679	0,2662	105,69	21804,85
69,62	8,00	8,25	1,85	2,06	0,9597	0,0694	0,2722	106,37	21857,78
69,78	*** 8,16**	8,42	1,86	2,11	0,9597	0,0694	0,2722	106,47	21861,94
70,62	9,00	9,28	1,91	2,31	0,9829	0,0456	0,1780	-9,11	22303,00
71,62	10,00	10,29	1,94	2,44	0,9978	0,0166	0,0642	-8,72	22616,31
72,24	*** 10,63**	10,92	1,95	2,46	0,9999	0,0026	0,0097	-8,40	22359,45
72,62	11,00	11,29	1,94	2,45	0,9983	-0,0145	-0,0563	**# -7,54**	22062,32
73,62	12,00	12,30	1,91	2,33	0,9811	-0,0479	-0,1872	**# -7,97**	21473,56
74,62	13,00	13,33	1,85	2,09	0,9496	-0,0777	-0,3038	-8,68	20946,90
74,74	*** 13,13**	13,46	1,84	2,05	0,9496	-0,0777	-0,3038	-8,78	20943,76
75,62	14,00	14,39	1,77	1,77	0,9530	-0,0749	-0,2936	59,34	20877,81
76,62	15,00	15,43	1,69	1,46	0,9586	-0,0703	-0,2757	56,47	20776,29
77,62	16,00	16,48	1,62	1,18	0,9641	-0,0656	-0,2573	55,09	20673,78
78,62	17,00	17,51	1,55	0,91	0,9692	-0,0609	-0,2386	54,29	20571,19
79,62	18,00	18,54	1,49	0,67	0,9739	-0,0561	-0,2197	53,74	20468,85
80,62	19,00	19,57	1,43	0,45	0,9783	-0,0512	-0,2007	53,29	20366,88
81,62	20,00	20,59	1,38	0,24	0,9823	-0,0463	-0,1815	52,91	20265,33
82,62	21,00	21,61	1,33	0,06	0,9859	-0,0414	-0,1622	52,56	20164,22
83,62	22,00	22,62	1,29	-0,10	0,9890	-0,0364	-0,1428	52,23	20063,48
84,62	23,00	23,63	1,26	-0,25	0,9918	-0,0315	-0,1233	51,91	19963,10
85,62	24,00	24,64	1,22	-0,37	0,9942	-0,0265	-0,1036	51,60	19863,05
86,62	25,00	25,65	1,20	-0,47	0,9962	-0,0214	-0,0839	51,31	19763,30
87,62	26,00	26,65	1,18	-0,56	0,9978	-0,0164	-0,0641	51,03	19663,84
88,62	27,00	27,65	1,16	-0,62	0,9989	-0,0113	-0,0441	50,76	19564,64
89,62	28,00	28,66	1,15	-0,67	0,9996	-0,0062	-0,0241	50,52	19465,70
90,62	29,00	29,66	1,14	-0,69	0,9999	-0,0028	-0,0109	50,30	19393,16
91,38	*** 29,76**	30,41	1,14	-0,70	0,9999	-0,0028	-0,0109	50,14	19376,47
91,62	30,00	30,66	1,14	-0,70	1,0000	0,0022	0,0085	42,48	19297,23
92,62	31,00	31,66	1,14	-0,68	0,9994	0,0084	0,0330	42,24	19183,17
93,62	32,00	32,66	1,16	-0,64	0,9983	0,0145	0,0569	43,01	19071,63
94,62	33,00	33,66	1,17	-0,58	0,9966	0,0205	0,0803	43,56	18962,29
95,62	34,00	34,66	1,19	-0,49	0,9943	0,0264	0,1035	43,81	18854,35
96,62	35,00	35,67	1,22	-0,38	0,9914	0,0323	0,1265	43,82	18747,09
97,62	36,00	36,68	1,26	-0,24	0,9880	0,0382	0,1496	43,60	18640,00
98,38	*** 36,76**	37,45	1,29	-0,12	0,9868	0,0400	0,1568	43,33	18597,16
98,62	37,00	37,69	1,30	-0,09	0,9859	0,0414	0,1620	---	18572,68
99,62	38,00	38,71	1,34	0,08	0,9859	0,0414	0,1620	---	18551,16
99,88	*** 38,26**	38,98	1,35	0,12	0,9859	0,0414	0,1620	---	18545,47

Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL2
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point
#	:	Radius of curvature below minimum

Tendon: J2_1_F3 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	76,58
1,00	99,68	76,82
2,00	99,36	77,07
3,00	99,05	77,32
4,00	98,73	77,56
5,00	98,42	77,81
6,00	98,12	78,05
7,00	97,81	78,29
8,00	97,57	78,48
8,16	97,55	78,50
9,00	95,63	80,08
10,00	93,39	82,00

Nr.:

Distance [m]	% of force from start	% of force from end
10,63	92,33	82,94
11,00	91,10	84,06
12,00	88,67	86,36
13,00	86,50	88,54
13,13	86,48	88,55
14,00	86,21	88,83
15,00	85,79	89,26
16,00	85,37	89,71
17,00	84,94	90,15
18,00	84,52	90,60
19,00	84,10	91,06
20,00	83,68	91,51
21,00	83,26	91,97
22,00	82,85	92,43
23,00	82,43	92,90
24,00	82,02	93,37
25,00	81,61	93,84
26,00	81,20	94,31
27,00	80,79	94,79
28,00	80,38	95,27
29,00	80,08	95,63
29,76	80,01	95,71
30,00	79,68	96,10
31,00	79,21	96,68
32,00	78,75	97,24
33,00	78,30	97,80
34,00	77,86	98,36
35,00	77,41	98,92
36,00	76,97	99,49
36,76	76,79	99,72
37,00	76,69	99,85
38,00	76,60	99,97
38,26	76,58	100,00

Distance : Measured along plan view of structure line from start of tendon

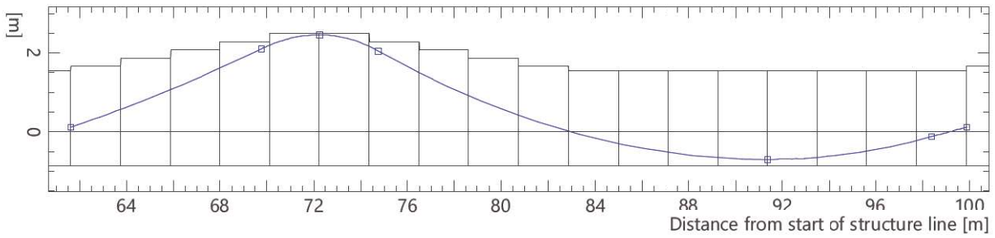
Tendon: J2_1_F3 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	61,62	FL1	explic	0,12	0	11,3	0	1,41	0	0
2	69,78	FL1	explic	2,11	0	16,0	2,72	0,38	0	0
3	72,25	FL1	explic	2,46	0	0	0,82	0,43	0	0
4	74,75	FL1	explic	2,05	0	-18,3	0,83	2,66	0	0
5	91,38	FL1	explic	-0,70	0	0	5,54	1,07	0	0
6	98,39	FL1	explic	-0,12	0	9,3	2,34	0,50	0	0
7	99,89	FL1	explic	0,12	0	9,3	0,50	0	0	0

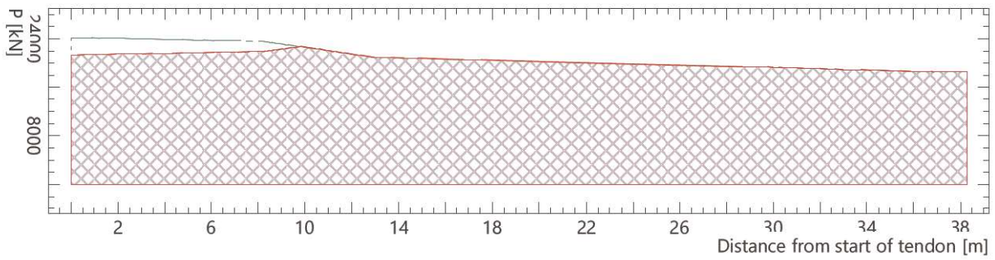
Nr.:

Tendon
V1-3.J2_1_F3

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_2_F3 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	18162,90	249,3	0,660	15994,30	38,27
		anchoring	0,670	16220,83	**-6,0**	0,709	17164,42	12,05

Distance : from start of tendon

Tendon: J2_2_F3 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
61,62	*** 0,00**	0	-0,56	-0,40	0,9986	0,0147	0,0507	---	16220,83
62,62	1,00	1,00	-0,54	-0,35	0,9982	0,0166	0,0573	153,47	16260,63
63,62	2,00	2,00	-0,53	-0,29	0,9978	0,0185	0,0640	153,46	16300,78
64,62	3,00	3,01	-0,51	-0,22	0,9973	0,0204	0,0706	155,05	16340,77
65,62	4,00	4,01	-0,49	-0,15	0,9968	0,0223	0,0771	156,41	16380,61
66,62	5,00	5,01	-0,46	-0,07	0,9962	0,0241	0,0836	157,17	16420,39
67,62	6,00	6,02	-0,44	0,02	0,9956	0,0260	0,0900	157,29	16460,22
68,62	7,00	7,02	-0,41	0,11	0,9949	0,0279	0,0964	156,84	16500,18
69,62	8,00	8,03	-0,38	0,21	0,9945	0,0290	0,1005	155,86	16532,34
69,78	*** 8,16**	8,19	-0,38	0,22	0,9945	0,0290	0,1005	155,67	16535,37
70,62	9,00	9,03	-0,36	0,30	0,9977	0,0188	0,0650	-23,84	16668,27
71,62	10,00	10,03	-0,35	0,34	0,9997	0,0066	0,0228	-24,14	16827,25
72,24	*** 10,63**	10,66	-0,34	0,35	1,0000	0,0010	0,0034	-23,96	16904,07
72,62	11,00	11,03	-0,34	0,35	0,9998	-0,0054	-0,0186	-22,44	16985,01
73,62	12,00	12,03	-0,36	0,31	0,9978	-0,0183	-0,0634	-23,02	17155,87
74,62	13,00	13,04	-0,38	0,23	0,9940	-0,0305	-0,1055	-23,02	17010,52
74,74	*** 13,13**	13,16	-0,38	0,21	0,9940	-0,0305	-0,1055	-22,97	17008,08
75,62	14,00	14,04	-0,41	0,12	0,9944	-0,0294	-0,1018	158,14	16978,64
76,62	15,00	15,05	-0,44	0,02	0,9951	-0,0275	-0,0951	152,37	16936,59
77,62	16,00	16,05	-0,47	-0,08	0,9958	-0,0255	-0,0883	150,55	16894,37
78,62	17,00	17,06	-0,49	-0,16	0,9964	-0,0236	-0,0815	150,22	16852,26
79,62	18,00	18,06	-0,52	-0,24	0,9970	-0,0216	-0,0747	150,47	16810,35
80,62	19,00	19,06	-0,54	-0,32	0,9975	-0,0196	-0,0680	150,91	16768,66
81,62	20,00	20,07	-0,56	-0,39	0,9980	-0,0177	-0,0613	151,39	16727,20

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
82,62	21,00	21,07	-0,57	-0,45	0,9984	-0,0158	-0,0546	151,82	16685,95
83,62	22,00	22,07	-0,59	-0,50	0,9988	-0,0138	-0,0479	152,17	16644,90
84,62	23,00	23,07	-0,60	-0,55	0,9991	-0,0119	-0,0412	152,41	16604,01
85,62	24,00	24,07	-0,61	-0,59	0,9993	-0,0100	-0,0346	152,53	16563,27
86,62	25,00	25,07	-0,62	-0,62	0,9996	-0,0081	-0,0280	152,55	16522,66
87,62	26,00	26,07	-0,63	-0,65	0,9997	-0,0062	-0,0213	152,45	16482,15
88,62	27,00	27,07	-0,64	-0,67	0,9999	-0,0042	-0,0147	152,26	16441,74
89,62	28,00	28,07	-0,64	-0,69	1,0000	-0,0023	-0,0080	151,96	16401,39
90,62	29,00	29,07	-0,65	-0,70	1,0000	-0,0010	-0,0036	151,58	16368,50
91,38	*** 29,76**	29,83	-0,65	-0,70	1,0000	-0,0010	-0,0036	151,24	16354,41
91,62	30,00	30,07	-0,65	-0,70	1,0000	0,0009	0,0029	122,27	16328,62
92,62	31,00	31,07	-0,64	-0,69	0,9999	0,0034	0,0118	114,82	16281,50
93,62	32,00	32,07	-0,64	-0,68	0,9998	0,0060	0,0207	115,39	16234,41
94,62	33,00	33,07	-0,63	-0,66	0,9995	0,0085	0,0294	116,65	16187,84
95,62	34,00	34,07	-0,62	-0,62	0,9992	0,0110	0,0381	117,55	16141,73
96,62	35,00	35,07	-0,61	-0,58	0,9988	0,0135	0,0467	117,95	16095,90
97,62	36,00	36,08	-0,60	-0,53	0,9983	0,0160	0,0553	117,83	16050,25
98,38	*** 36,76**	36,84	-0,59	-0,49	0,9982	0,0167	0,0579	117,45	16027,96
98,62	37,00	37,08	-0,58	-0,48	0,9981	0,0173	0,0598	---	16017,42
99,62	38,00	38,08	-0,56	-0,42	0,9981	0,0173	0,0598	---	15999,14
99,88	*** 38,26**	38,35	-0,56	-0,40	0,9981	0,0173	0,0598	---	15994,30

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL2
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J2_2_F3 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0,00	100,00	88,06
1,00	99,76	88,28
2,00	99,51	88,49
3,00	99,27	88,71
4,00	99,02	88,93
5,00	98,78	89,14
6,00	98,55	89,36
7,00	98,31	89,58
8,00	98,12	89,75
8,16	98,10	89,77
9,00	97,32	90,49
10,00	96,40	91,35
10,63	95,96	91,77
11,00	95,50	92,21
12,00	94,55	93,14
13,00	93,66	94,03
13,13	93,64	94,04
14,00	93,48	94,20
15,00	93,25	94,44
16,00	93,02	94,67
17,00	92,78	94,91
18,00	92,55	95,15
19,00	92,32	95,38
20,00	92,10	95,62
21,00	91,87	95,85
22,00	91,64	96,09
23,00	91,42	96,33
24,00	91,19	96,56
25,00	90,97	96,80
26,00	90,75	97,04
27,00	90,52	97,28
28,00	90,30	97,52
29,00	90,12	97,71
29,76	90,04	97,80
30,00	89,90	97,95
31,00	89,64	98,24
32,00	89,38	98,52
33,00	89,13	98,80
34,00	88,87	99,09

Distance [m]	% of force from start	end
35,00	88,62	99,37
36,00	88,37	99,65
36,76	88,25	99,79
37,00	88,19	99,86
38,00	88,09	99,97
38,26	88,06	100,00

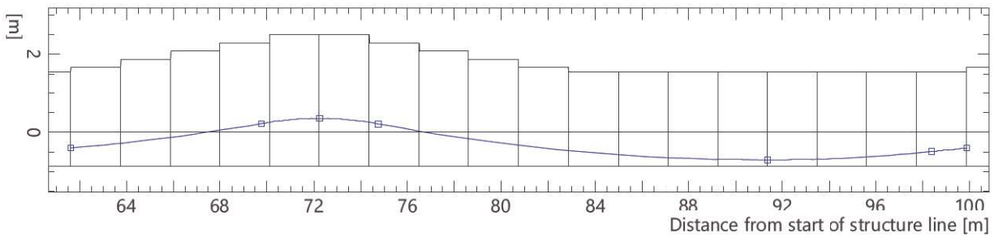
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_2_F3 - Attributes of tendon points

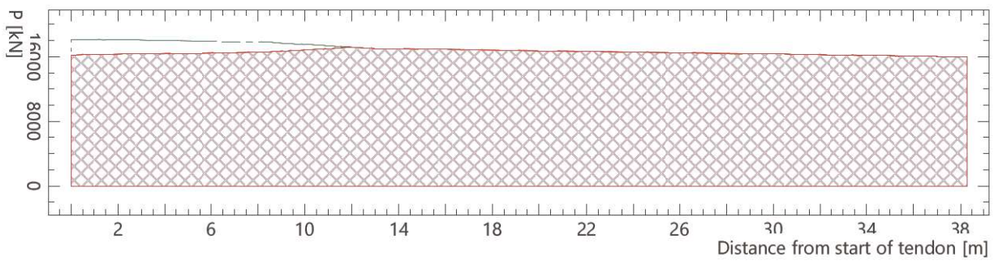
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	61,62	FL2	explic	-0,40	0	2,9	0	1,25	0	0
2	69,78	FL2	explic	0,22	0	5,9	2,72	0,38	0	0
3	72,25	FL2	explic	0,35	0	0	0,82	0,38	0	0
4	74,75	FL2	explic	0,21	0	-6,3	0,83	2,55	0	0
5	91,38	FL2	explic	-0,70	0	0	5,54	1,07	0	0
6	98,39	FL2	explic	-0,49	0	3,4	2,34	0,50	0	0
7	99,89	FL2	explic	-0,40	0	3,4	0,50	0	0	0

Tendon
V1-3.J2_2_F3

Side view of tendon profile
Side view of structure line



Force diagram



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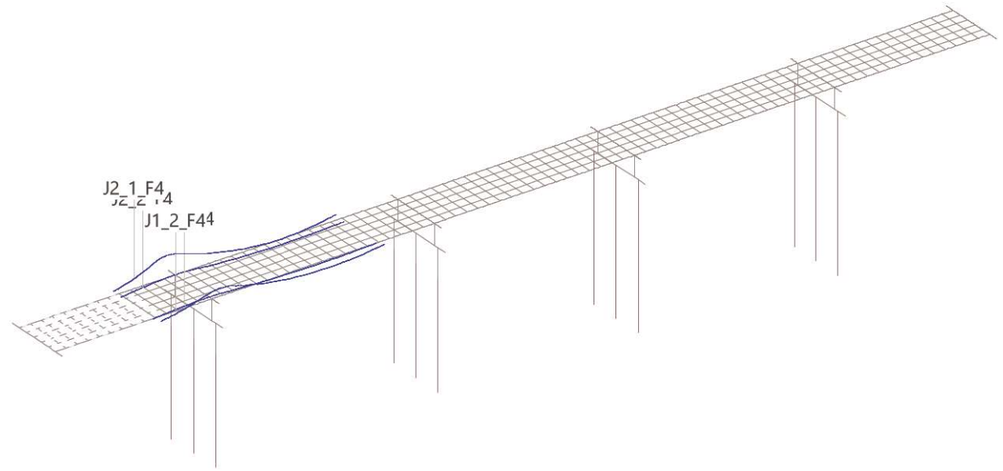
Tendons



Tendon group: V1-4 (Longitudinals F4, LLOSA-F4)

Tendon	Area [mm²]	Material	μ [1/rad]	Δα [rad/m]	Length [m]	Structure line(s)	Bond
J2_2_F4	21700,0	P	0,190	0,0060	42,55	SL2	+
J1_1_F4	17360,0	P	0,190	0,0060	43,23	SL1	+
J1_2_F4	21700,0	P	0,190	0,0060	42,55	SL1	+
J2_1_F4	17360,0	P	0,190	0,0060	43,23	SL2	+

Tendon J1_1_F4 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	252,9	0,561	18108,61	42,50
		anchoring	0,641	20711,72	**-6,0**	0,694	22396,02	9,24

Distance : from start of tendon

Tendon: J1_1_F4 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
19,12	*** -0,00**	0	-1,29	-0,10	0,9876	-0,0388	0,1520	---	20711,72
20,12	1,00	1,01	-1,34	0,06	0,9830	-0,0454	0,1779	39,28	20842,76
21,12	2,00	2,03	-1,38	0,25	0,9777	-0,0519	0,2035	39,80	20974,10
22,12	3,00	3,06	-1,44	0,47	0,9718	-0,0583	0,2285	40,61	21104,64
23,12	4,00	4,09	-1,50	0,71	0,9653	-0,0645	0,2529	41,50	21234,24
24,12	5,00	5,13	-1,57	0,98	0,9583	-0,0706	0,2768	42,41	21362,95
25,12	6,00	6,17	-1,65	1,28	0,9508	-0,0765	0,3001	43,31	21490,95
26,12	7,00	7,23	-1,73	1,60	0,9429	-0,0823	0,3228	44,21	21618,36
27,12	8,00	8,29	-1,82	1,95	0,9374	-0,0860	0,3374	45,10	21710,56
27,28	*** 8,16**	8,46	-1,83	2,01	0,9374	-0,0860	0,3374	45,25	21714,78
28,12	9,00	9,34	-1,90	2,26	0,9724	-0,0578	0,2258	**# -7,28**	22239,72
29,12	10,00	10,36	-1,94	2,43	0,9964	-0,0210	0,0816	**# -6,85**	21890,60
29,74	*** 10,62**	10,98	-1,95	2,46	0,9999	-0,0033	0,0122	**# -6,65**	21579,04
30,12	11,00	11,36	-1,94	2,45	0,9986	0,0132	-0,0512	-8,36	21302,83
31,12	12,00	12,36	-1,92	2,35	0,9846	0,0433	-0,1689	-8,84	20789,33
32,12	13,00	13,39	-1,86	2,12	0,9586	0,0705	-0,2759	-9,30	20322,04
32,24	*** 13,12**	13,52	-1,85	2,09	0,9586	0,0705	-0,2759	-9,35	20319,02
33,12	14,00	14,43	-1,79	1,83	0,9611	0,0683	-0,2677	70,37	20263,57
34,12	15,00	15,47	-1,72	1,56	0,9654	0,0645	-0,2528	68,62	20178,30
35,12	16,00	16,51	-1,65	1,30	0,9694	0,0607	-0,2377	68,00	20093,24
36,12	17,00	17,54	-1,59	1,06	0,9732	0,0568	-0,2227	67,67	20008,65

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Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
37,12	18,00	18,57	-1,53	0,83	0,9768	0,0530	-0,2076	67,43	19924,60
38,12	19,00	19,59	-1,48	0,62	0,9801	0,0491	-0,1924	67,19	19841,08
39,12	20,00	20,61	-1,43	0,42	0,9831	0,0452	-0,1772	66,93	19758,01
40,12	21,00	21,63	-1,38	0,24	0,9859	0,0413	-0,1620	66,62	19675,30
41,12	22,00	22,64	-1,34	0,08	0,9884	0,0374	-0,1467	66,26	19592,87
42,12	23,00	23,65	-1,30	-0,07	0,9908	0,0335	-0,1313	65,86	19510,67
43,12	24,00	24,66	-1,27	-0,20	0,9928	0,0296	-0,1158	65,43	19428,62
44,12	25,00	25,67	-1,24	-0,32	0,9946	0,0256	-0,1002	64,97	19346,69
45,12	26,00	26,68	-1,21	-0,42	0,9962	0,0216	-0,0845	64,49	19264,82
46,12	27,00	27,68	-1,19	-0,51	0,9975	0,0175	-0,0687	63,98	19182,97
47,12	28,00	28,68	-1,17	-0,58	0,9985	0,0135	-0,0527	63,46	19101,10
48,12	29,00	29,69	-1,16	-0,63	0,9992	0,0093	-0,0366	62,94	19019,18
49,12	30,00	30,69	-1,15	-0,67	0,9997	0,0052	-0,0204	62,42	18937,19
50,12	31,00	31,69	-1,14	-0,69	0,9999	0,0026	-0,0100	61,89	18877,11
51,00	*** 31,88**	32,56	-1,14	-0,70	0,9999	0,0026	-0,0100	61,43	18858,28
51,12	32,00	32,69	-1,14	-0,70	1,0000	0,0007	-0,0029	64,38	18829,34
52,12	33,00	33,69	-1,14	-0,69	0,9998	-0,0049	0,0194	66,38	18725,82
53,12	34,00	34,69	-1,15	-0,67	0,9994	-0,0089	0,0348	66,69	18648,07
54,12	35,00	35,69	-1,16	-0,63	0,9987	-0,0128	0,0499	67,42	18571,40
55,12	36,00	36,69	-1,17	-0,57	0,9977	-0,0166	0,0649	68,05	18495,69
56,12	37,00	37,69	-1,19	-0,50	0,9966	-0,0204	0,0798	68,45	18420,70
57,12	38,00	38,70	-1,21	-0,42	0,9952	-0,0241	0,0945	68,62	18346,21
58,12	39,00	39,70	-1,24	-0,32	0,9936	-0,0279	0,1093	68,59	18272,01
59,12	40,00	40,71	-1,27	-0,21	0,9918	-0,0317	0,1240	68,39	18197,94
60,12	*** 41,00**	41,72	-1,30	-0,08	0,9910	-0,0332	0,1300	68,04	18155,61
61,12	42,00	42,73	-1,33	0,05	0,9903	-0,0343	0,1344	---	18119,04
61,62	*** 42,50**	43,23	-1,35	0,12	0,9903	-0,0343	0,1344	---	18108,61

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point
# : Radius of curvature below minimum

Tendon: J1_1_F4 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	74,78
1,00	99,37	75,25
2,00	98,75	75,72
3,00	98,14	76,19
4,00	97,54	76,66
5,00	96,95	77,13
6,00	96,37	77,59
7,00	95,81	78,05
8,00	95,40	78,38
8,16	95,38	78,40
9,00	93,13	80,29
10,00	90,39	82,72
10,62	89,11	83,92
11,00	87,97	85,01
12,00	85,85	87,11
13,00	83,92	89,11
13,12	83,90	89,12
14,00	83,67	89,37
15,00	83,32	89,74
16,00	82,97	90,12
17,00	82,62	90,50
18,00	82,27	90,89
19,00	81,93	91,27
20,00	81,59	91,65
21,00	81,25	92,04
22,00	80,90	92,42
23,00	80,57	92,81
24,00	80,23	93,21
25,00	79,89	93,60
26,00	79,55	94,00
27,00	79,21	94,40
28,00	78,87	94,80

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Distance [m]	% of force from start	% of force from end
29,00	78,54	95,21
30,00	78,20	95,62
31,00	77,95	95,93
31,88	77,87	96,02
32,00	77,75	96,17
33,00	77,32	96,70
34,00	77,00	97,11
35,00	76,69	97,51
36,00	76,37	97,91
37,00	76,06	98,31
38,00	75,76	98,70
39,00	75,45	99,11
40,00	75,14	99,51
41,00	74,97	99,74
42,00	74,82	99,94
42,50	74,78	100,00

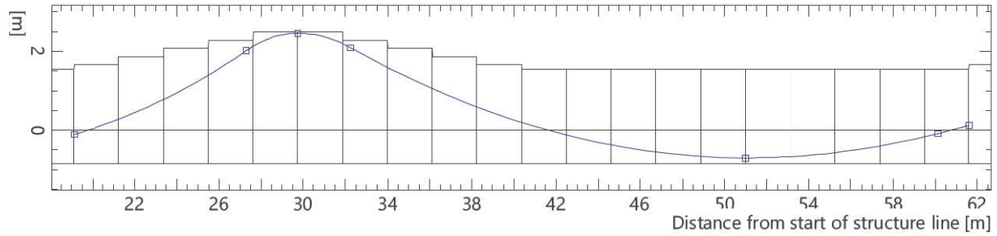
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_1_F4 - Attributes of tendon points

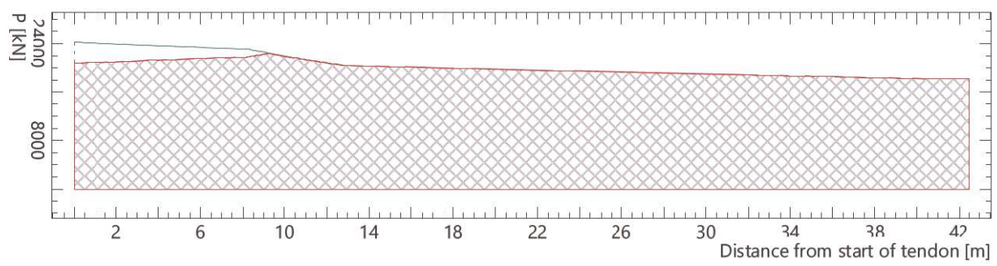
point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	19,12	FL1	explic	-0,10	0	8,5	0	1,47	0	0
2	27,28	FL1	explic	2,01	0	20,1	2,72	0,39	0	0
3	29,75	FL1	explic	2,46	0	0	0,82	0,42	0	0
4	32,24	FL1	explic	2,09	0	-16,6	0,83	2,87	0	0
5	50,99	FL1	explic	-0,70	0	0	6,25	1,40	0	0
6	60,12	FL1	explic	-0,08	0	7,7	3,04	0,50	0	0
7	61,62	FL1	explic	0,12	0	7,7	0,50	0	0	0

Tendon
V1-4.J1_1_F4

Side view of tendon profile
Side view of structure line



Force diagram



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Tendon J1_2_F4 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	30271,50	279,8	0,676	27282,01	42,50
		anchoring	0,674	27186,60	**-6,0**	0,711	28687,62	15,66

Distance : from start of tendon

Tendon: J1_2_F4 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
19,12	*** -0,00**	0	0,55	-0,37	0,9947	-0,0285	0,0985	---	27186,60
20,12	1,00	1,01	0,52	-0,27	0,9955	-0,0262	0,0907	-128,00	27260,31
21,12	2,00	2,01	0,50	-0,19	0,9963	-0,0239	0,0826	-126,84	27335,26
22,12	3,00	3,01	0,47	-0,11	0,9970	-0,0216	0,0746	-127,65	27410,05
23,12	4,00	4,02	0,45	-0,03	0,9976	-0,0193	0,0667	-128,50	27484,56
24,12	5,00	5,02	0,44	0,03	0,9981	-0,0170	0,0588	-128,99	27558,95
25,12	6,00	6,02	0,42	0,09	0,9986	-0,0147	0,0510	-129,04	27633,38
26,12	7,00	7,02	0,40	0,14	0,9990	-0,0125	0,0431	-128,65	27708,01
27,12	8,00	8,02	0,39	0,18	0,9992	-0,0110	0,0382	-127,89	27766,57
27,28	*** 8,16**	8,18	0,39	0,19	0,9992	-0,0110	0,0382	-127,74	27771,64
28,12	9,00	9,02	0,38	0,21	0,9997	-0,0066	0,0229	-67,25	27882,60
29,12	10,00	10,02	0,38	0,23	1,0000	-0,0023	0,0080	-68,60	27996,78
29,74	*** 10,62**	10,65	0,38	0,23	1,0000	-0,0003	0,0012	-68,34	28054,57
30,12	11,00	11,02	0,38	0,23	0,9999	0,0037	-0,0128	-32,29	28144,50
31,12	12,00	12,02	0,39	0,20	0,9989	0,0127	-0,0441	-32,95	28351,62
32,12	13,00	13,02	0,40	0,14	0,9971	0,0212	-0,0735	-33,03	28549,75
32,24	*** 13,12**	13,15	0,41	0,13	0,9971	0,0212	-0,0735	-32,97	28553,83
33,12	14,00	14,03	0,42	0,07	0,9972	0,0206	-0,0714	257,06	28594,32
34,12	15,00	15,03	0,44	-0,00	0,9975	0,0194	-0,0673	246,82	28650,54
35,12	16,00	16,03	0,46	-0,07	0,9978	0,0182	-0,0631	243,41	28668,00
36,12	17,00	17,04	0,48	-0,13	0,9981	0,0170	-0,0588	242,37	28611,32
37,12	18,00	18,04	0,50	-0,19	0,9984	0,0158	-0,0546	242,45	28554,81
38,12	19,00	19,04	0,51	-0,24	0,9986	0,0146	-0,0504	243,06	28498,51
39,12	20,00	20,04	0,53	-0,29	0,9988	0,0134	-0,0462	243,88	28442,46
40,12	21,00	21,04	0,54	-0,34	0,9990	0,0122	-0,0421	244,72	28386,64
41,12	22,00	22,04	0,55	-0,38	0,9992	0,0110	-0,0379	245,50	28331,04
42,12	23,00	23,04	0,57	-0,42	0,9994	0,0098	-0,0338	246,17	28275,63
43,12	24,00	24,04	0,58	-0,45	0,9995	0,0086	-0,0297	246,72	28220,41
44,12	25,00	25,04	0,58	-0,48	0,9996	0,0074	-0,0256	247,12	28165,36
45,12	26,00	26,04	0,59	-0,51	0,9997	0,0062	-0,0215	247,38	28110,46
46,12	27,00	27,04	0,60	-0,53	0,9998	0,0050	-0,0174	247,48	28055,70
47,12	28,00	28,04	0,60	-0,55	0,9999	0,0038	-0,0133	247,43	28001,07
48,12	29,00	29,04	0,61	-0,56	1,0000	0,0027	-0,0092	247,25	27946,53
49,12	30,00	30,04	0,61	-0,57	1,0000	0,0015	-0,0051	246,95	27892,08
50,12	31,00	31,04	0,61	-0,58	1,0000	0,0007	-0,0025	246,52	27845,88
51,00	*** 31,88**	31,92	0,61	-0,58	1,0000	0,0007	-0,0025	246,06	27818,12
51,12	32,00	32,04	0,61	-0,58	1,0000	0,0002	-0,0007	259,74	27804,45
52,12	33,00	33,04	0,61	-0,58	1,0000	-0,0014	0,0048	260,79	27742,12
53,12	34,00	34,04	0,61	-0,57	1,0000	-0,0025	0,0088	258,16	27688,80
54,12	35,00	35,04	0,61	-0,56	0,9999	-0,0037	0,0127	259,76	27635,73
55,12	36,00	36,05	0,60	-0,55	0,9998	-0,0048	0,0166	261,90	27582,98
56,12	37,00	37,05	0,60	-0,53	0,9998	-0,0059	0,0205	263,67	27530,53
57,12	38,00	38,05	0,59	-0,51	0,9997	-0,0070	0,0243	264,80	27478,31
58,12	39,00	39,05	0,58	-0,48	0,9996	-0,0081	0,0281	265,24	27426,26
59,12	40,00	40,05	0,58	-0,45	0,9994	-0,0092	0,0320	265,03	27374,32
60,12	*** 41,00**	41,05	0,57	-0,42	0,9994	-0,0097	0,0335	264,23	27334,88
61,12	42,00	42,05	0,56	-0,39	0,9994	-0,0100	0,0346	---	27297,57
61,62	*** 42,50**	42,55	0,55	-0,37	0,9994	-0,0100	0,0346	---	27282,01

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Nr.:

Tendon: J1_2_F4 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	90,12
1,00	99,73	90,37
2,00	99,46	90,62
3,00	99,18	90,87
4,00	98,92	91,11
5,00	98,65	91,36
6,00	98,38	91,61
7,00	98,12	91,85
8,00	97,91	92,05
8,16	97,89	92,06
9,00	97,50	92,43
10,00	97,11	92,81
10,62	96,91	93,00
11,00	96,60	93,30
12,00	95,89	93,99
13,00	95,23	94,64
13,12	95,21	94,66
14,00	95,08	94,79
15,00	94,89	94,98
16,00	94,70	95,17
17,00	94,52	95,35
18,00	94,33	95,54
19,00	94,14	95,73
20,00	93,96	95,92
21,00	93,77	96,11
22,00	93,59	96,30
23,00	93,41	96,49
24,00	93,22	96,67
25,00	93,04	96,86
26,00	92,86	97,05
27,00	92,68	97,24
28,00	92,50	97,43
29,00	92,32	97,62
30,00	92,14	97,81
31,00	91,99	97,98
31,88	91,90	98,07
32,00	91,85	98,12
33,00	91,64	98,34
34,00	91,47	98,53
35,00	91,29	98,72
36,00	91,12	98,91
37,00	90,95	99,10
38,00	90,77	99,29
39,00	90,60	99,47
40,00	90,43	99,66
41,00	90,30	99,81
42,00	90,18	99,94
42,50	90,12	100,00

Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_2_F4 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	19,12	FL2	explic	-0,37	0	5,7	0	1,25	0	0
2	27,28	FL2	explic	0,19	0	2,1	2,72	0,38	0	0
3	29,75	FL2	explic	0,23	0	0	0,82	0,38	0	0
4	32,24	FL2	explic	0,13	0	-4,4	0,83	2,87	0	0
5	50,99	FL2	explic	-0,58	0	0	6,25	1,40	0	0
6	60,12	FL2	explic	-0,42	0	2,0	3,04	0,50	0	0
7	61,62	FL2	explic	-0,37	0	2,0	0,50	0	0	0

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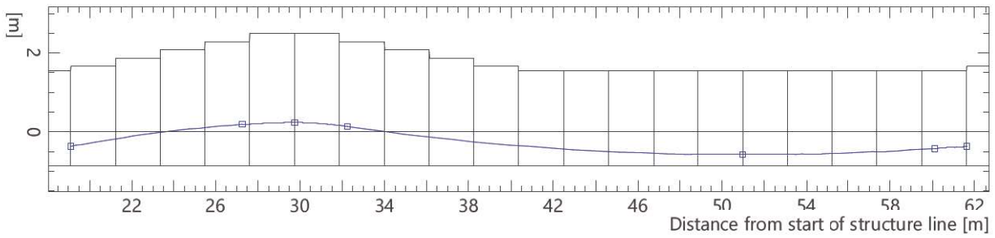
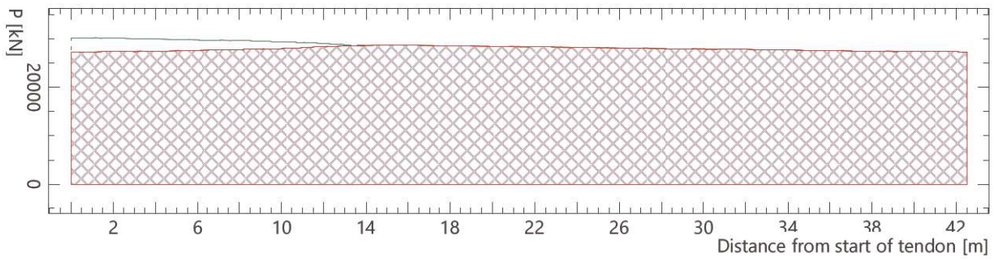
Tendon
V1-4.J1_2_F4

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_1_F4 - Stressing steps

Anchor			At anchor			1st extremum after anchor		
Position	Distance [m]	Stress Process	σ_p/f_{pk}	Force [kN]	Elongation [mm]	σ_p/f_{pk}	Force [kN]	Distance [m]
Start	0	Tensioning	**0,750**	24217,20	252,8	0,561	18106,09	42,50
		anchoring	0,641	20704,28	**-6,0**	0,693	22391,99	9,23

Distance : from start of tendon

Tendon: J2_1_F4 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
19,12	*** -0,00**	0	1,29	-0,10	0,9876	0,0388	0,1520	---	20704,28
20,12	1,00	1,01	1,34	0,06	0,9830	0,0454	0,1780	39,06	20835,90
21,12	2,00	2,03	1,38	0,25	0,9776	0,0520	0,2038	39,59	20967,78
22,12	3,00	3,06	1,44	0,47	0,9717	0,0584	0,2289	40,40	21098,84
23,12	4,00	4,09	1,50	0,71	0,9652	0,0647	0,2535	41,29	21228,95
24,12	5,00	5,13	1,57	0,98	0,9581	0,0708	0,2774	42,20	21358,17
25,12	6,00	6,17	1,65	1,28	0,9506	0,0767	0,3008	43,10	21486,66
26,12	7,00	7,23	1,73	1,60	0,9425	0,0825	0,3237	43,99	21614,59
27,12	8,00	8,29	1,82	1,96	0,9373	0,0861	0,3377	44,88	21704,28
27,25	*** 8,13**	8,43	1,83	2,00	0,9373	0,0861	0,3377	45,00	21707,71
28,12	9,00	9,34	1,90	2,27	0,9731	0,0571	0,2233	**# -7,35**	22246,00
29,12	10,00	10,36	1,94	2,43	0,9965	0,0207	0,0806	**# -6,92**	21883,15
29,74	*** 10,62**	10,98	1,95	2,46	0,9999	0,0033	0,0122	**# -6,72**	21576,10
30,12	11,00	11,36	1,94	2,45	0,9986	-0,0132	-0,0512	-8,36	21299,86
31,12	12,00	12,36	1,92	2,35	0,9846	-0,0433	-0,1689	-8,84	20786,43
32,12	13,00	13,39	1,86	2,12	0,9586	-0,0705	-0,2759	-9,30	20319,21
32,24	*** 13,12**	13,52	1,85	2,09	0,9586	-0,0705	-0,2759	-9,35	20316,19
33,12	14,00	14,44	1,79	1,83	0,9611	-0,0683	-0,2677	70,37	20260,75
34,12	15,00	15,47	1,72	1,56	0,9654	-0,0645	-0,2528	68,62	20175,49
35,12	16,00	16,51	1,65	1,30	0,9694	-0,0607	-0,2377	68,00	20090,44
36,12	17,00	17,54	1,59	1,06	0,9732	-0,0568	-0,2227	67,67	20005,86
37,12	18,00	18,57	1,53	0,83	0,9768	-0,0530	-0,2076	67,43	19921,82
38,12	19,00	19,59	1,48	0,62	0,9801	-0,0491	-0,1924	67,19	19838,32
39,12	20,00	20,61	1,43	0,42	0,9831	-0,0452	-0,1772	66,93	19755,26

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Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
40,12	21,00	21,63	1,38	0,24	0,9859	-0,0413	-0,1620	66,62	19672,56
41,12	22,00	22,64	1,34	0,08	0,9884	-0,0374	-0,1467	66,26	19590,14
42,12	23,00	23,65	1,30	-0,07	0,9908	-0,0335	-0,1313	65,86	19507,95
43,12	24,00	24,66	1,27	-0,20	0,9928	-0,0296	-0,1158	65,43	19425,92
44,12	25,00	25,67	1,24	-0,32	0,9946	-0,0256	-0,1002	64,97	19343,99
45,12	26,00	26,68	1,21	-0,42	0,9962	-0,0216	-0,0845	64,49	19262,13
46,12	27,00	27,68	1,19	-0,51	0,9975	-0,0175	-0,0687	63,98	19180,29
47,12	28,00	28,68	1,17	-0,58	0,9985	-0,0135	-0,0527	63,46	19098,44
48,12	29,00	29,69	1,16	-0,63	0,9992	-0,0093	-0,0366	62,94	19016,53
49,12	30,00	30,69	1,15	-0,67	0,9997	-0,0052	-0,0204	62,42	18934,55
50,12	31,00	31,69	1,14	-0,69	0,9999	-0,0026	-0,0100	61,89	18874,48
51,00	*** 31,88**	32,56	1,14	-0,70	0,9999	-0,0026	-0,0100	61,43	18855,66
51,12	32,00	32,69	1,14	-0,70	1,0000	-0,0007	-0,0029	64,38	18826,71
52,12	33,00	33,69	1,14	-0,69	0,9998	0,0049	0,0194	66,38	18723,21
53,12	34,00	34,69	1,15	-0,67	0,9994	0,0089	0,0348	66,69	18645,47
54,12	35,00	35,69	1,16	-0,63	0,9987	0,0128	0,0499	67,42	18568,81
55,12	36,00	36,69	1,17	-0,57	0,9977	0,0166	0,0649	68,05	18493,11
56,12	37,00	37,69	1,19	-0,50	0,9966	0,0204	0,0798	68,45	18418,13
57,12	38,00	38,70	1,21	-0,42	0,9952	0,0241	0,0945	68,62	18343,65
58,12	39,00	39,70	1,24	-0,32	0,9936	0,0279	0,1093	68,59	18269,47
59,12	40,00	40,71	1,27	-0,21	0,9918	0,0317	0,1240	68,39	18195,40
60,12	*** 41,00**	41,72	1,30	-0,08	0,9910	0,0332	0,1300	68,04	18153,08
61,12	42,00	42,73	1,33	0,05	0,9903	0,0343	0,1344	---	18116,51
61,62	*** 42,50**	43,23	1,35	0,12	0,9903	0,0343	0,1344	---	18106,09

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL2
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point
# : Radius of curvature below minimum

Tendon: J2_1_F4 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	74,77
1,00	99,37	75,24
2,00	98,74	75,72
3,00	98,13	76,19
4,00	97,53	76,66
5,00	96,94	77,13
6,00	96,36	77,59
7,00	95,79	78,05
8,00	95,39	78,38
8,13	95,38	78,39
9,00	93,07	80,33
10,00	90,36	82,74
10,62	89,09	83,92
11,00	87,95	85,01
12,00	85,83	87,11
13,00	83,90	89,11
13,12	83,89	89,12
14,00	83,66	89,37
15,00	83,31	89,74
16,00	82,96	90,12
17,00	82,61	90,50
18,00	82,26	90,89
19,00	81,92	91,27
20,00	81,58	91,65
21,00	81,23	92,04
22,00	80,89	92,42
23,00	80,55	92,81
24,00	80,22	93,21
25,00	79,88	93,60
26,00	79,54	94,00
27,00	79,20	94,40
28,00	78,86	94,80
29,00	78,52	95,21
30,00	78,19	95,62
31,00	77,94	95,93

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Distance [m]	% of force from start	end
31,88	77,86	96,02
32,00	77,74	96,17
33,00	77,31	96,70
34,00	76,99	97,11
35,00	76,68	97,51
36,00	76,36	97,91
37,00	76,05	98,31
38,00	75,75	98,70
39,00	75,44	99,11
40,00	75,13	99,51
41,00	74,96	99,74
42,00	74,81	99,94
42,50	74,77	100,00

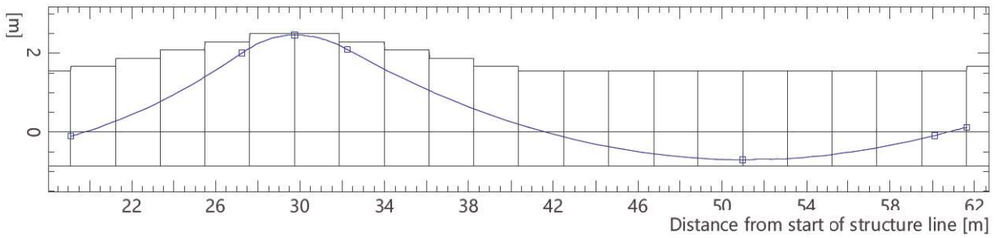
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_1_F4 - Attributes of tendon points

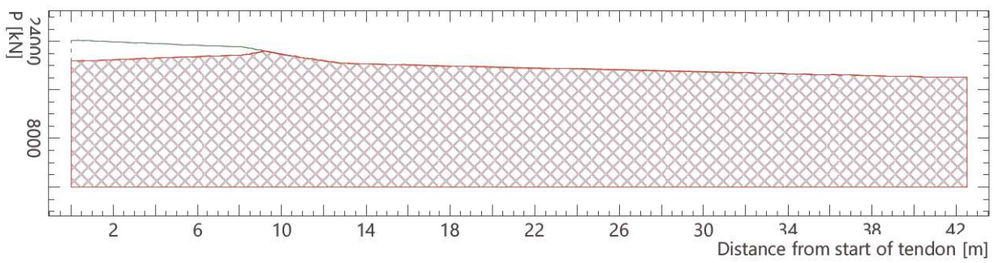
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	19,12	FL1	explic	-0,10	0	8,5	0	1,46	0	0
2	27,25	FL1	explic	2,00	0	20,2	2,71	0,40	0	0
3	29,75	FL1	explic	2,46	0	0	0,83	0,42	0	0
4	32,24	FL1	explic	2,09	0	-16,6	0,83	2,87	0	0
5	50,99	FL1	explic	-0,70	0	0	6,25	1,40	0	0
6	60,12	FL1	explic	-0,08	0	7,7	3,04	0,50	0	0
7	61,62	FL1	explic	0,12	0	7,7	0,50	0	0	0

Tendon
V1-4.J2_1_F4

Side view of tendon profile
Side view of structure line



Force diagram



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Tendon J2_2_F4 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	30271,50	279,8	0,676	27282,01	42,50
		anchoring	0,674	27186,60	**-6,0**	0,711	28687,62	15,66

Distance : from start of tendon

Tendon: J2_2_F4 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
19,12	*** -0,00**	0	-0,55	-0,37	0,9947	0,0285	0,0985	---	27186,60
20,12	1,00	1,01	-0,52	-0,27	0,9955	0,0262	0,0907	-128,00	27260,31
21,12	2,00	2,01	-0,50	-0,19	0,9963	0,0239	0,0826	-126,84	27335,26
22,12	3,00	3,01	-0,47	-0,11	0,9970	0,0216	0,0746	-127,65	27410,05
23,12	4,00	4,02	-0,45	-0,03	0,9976	0,0193	0,0667	-128,50	27484,56
24,12	5,00	5,02	-0,44	0,03	0,9981	0,0170	0,0588	-128,99	27558,95
25,12	6,00	6,02	-0,42	0,09	0,9986	0,0147	0,0510	-129,04	27633,38
26,12	7,00	7,02	-0,40	0,14	0,9990	0,0125	0,0431	-128,65	27708,01
27,12	8,00	8,02	-0,39	0,18	0,9992	0,0110	0,0382	-127,89	27766,57
27,28	*** 8,16**	8,18	-0,39	0,19	0,9992	0,0110	0,0382	-127,74	27771,64
28,12	9,00	9,02	-0,38	0,21	0,9997	0,0066	0,0229	-67,25	27882,60
29,12	10,00	10,02	-0,38	0,23	1,0000	0,0023	0,0080	-68,60	27996,78
29,74	*** 10,62**	10,65	-0,38	0,23	1,0000	0,0003	0,0012	-68,34	28054,57
30,12	11,00	11,02	-0,38	0,23	0,9999	-0,0037	-0,0128	-32,29	28144,50
31,12	12,00	12,02	-0,39	0,20	0,9989	-0,0127	-0,0441	-32,95	28351,62
32,12	13,00	13,02	-0,40	0,14	0,9971	-0,0212	-0,0735	-33,03	28549,75
32,24	*** 13,12**	13,15	-0,41	0,13	0,9971	-0,0212	-0,0735	-32,97	28553,83
33,12	14,00	14,03	-0,42	0,07	0,9972	-0,0206	-0,0714	257,06	28594,32
34,12	15,00	15,03	-0,44	-0,00	0,9975	-0,0194	-0,0673	246,82	28650,54
35,12	16,00	16,03	-0,46	-0,07	0,9978	-0,0182	-0,0631	243,41	28668,00
36,12	17,00	17,04	-0,48	-0,13	0,9981	-0,0170	-0,0588	242,37	28611,32
37,12	18,00	18,04	-0,50	-0,19	0,9984	-0,0158	-0,0546	242,45	28554,81
38,12	19,00	19,04	-0,51	-0,24	0,9986	-0,0146	-0,0504	243,06	28498,51
39,12	20,00	20,04	-0,53	-0,29	0,9988	-0,0134	-0,0462	243,88	28442,46
40,12	21,00	21,04	-0,54	-0,34	0,9990	-0,0122	-0,0421	244,72	28386,64
41,12	22,00	22,04	-0,55	-0,38	0,9992	-0,0110	-0,0379	245,50	28331,04
42,12	23,00	23,04	-0,57	-0,42	0,9994	-0,0098	-0,0338	246,17	28275,63
43,12	24,00	24,04	-0,58	-0,45	0,9995	-0,0086	-0,0297	246,72	28220,41
44,12	25,00	25,04	-0,58	-0,48	0,9996	-0,0074	-0,0256	247,12	28165,36
45,12	26,00	26,04	-0,59	-0,51	0,9997	-0,0062	-0,0215	247,38	28110,46
46,12	27,00	27,04	-0,60	-0,53	0,9998	-0,0050	-0,0174	247,48	28055,70
47,12	28,00	28,04	-0,60	-0,55	0,9999	-0,0038	-0,0133	247,43	28001,07
48,12	29,00	29,04	-0,61	-0,56	1,0000	-0,0027	-0,0092	247,25	27946,53
49,12	30,00	30,04	-0,61	-0,57	1,0000	-0,0015	-0,0051	246,95	27892,08
50,12	31,00	31,04	-0,61	-0,58	1,0000	-0,0007	-0,0025	246,52	27845,88
51,00	*** 31,88**	31,92	-0,61	-0,58	1,0000	-0,0007	-0,0025	246,06	27818,12
51,12	32,00	32,04	-0,61	-0,58	1,0000	-0,0002	-0,0007	259,74	27804,45
52,12	33,00	33,04	-0,61	-0,58	1,0000	0,0014	0,0048	260,79	27742,12
53,12	34,00	34,04	-0,61	-0,57	1,0000	0,0025	0,0088	258,16	27688,80
54,12	35,00	35,04	-0,61	-0,56	0,9999	0,0037	0,0127	259,76	27635,73
55,12	36,00	36,05	-0,60	-0,55	0,9998	0,0048	0,0166	261,90	27582,98
56,12	37,00	37,05	-0,60	-0,53	0,9998	0,0059	0,0205	263,67	27530,53
57,12	38,00	38,05	-0,59	-0,51	0,9997	0,0070	0,0243	264,80	27478,31
58,12	39,00	39,05	-0,58	-0,48	0,9996	0,0081	0,0281	265,24	27426,26
59,12	40,00	40,05	-0,58	-0,45	0,9994	0,0092	0,0320	265,03	27374,32
60,12	*** 41,00**	41,05	-0,57	-0,42	0,9994	0,0097	0,0335	264,23	27334,88
61,12	42,00	42,05	-0,56	-0,39	0,9994	0,0100	0,0346	---	27297,57
61,62	*** 42,50**	42,55	-0,55	-0,37	0,9994	0,0100	0,0346	---	27282,01

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL2
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

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Tendon: J2_2_F4 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
-0,00	100,00	90,12
1,00	99,73	90,37
2,00	99,46	90,62
3,00	99,18	90,87
4,00	98,92	91,11
5,00	98,65	91,36
6,00	98,38	91,61
7,00	98,12	91,85
8,00	97,91	92,05
8,16	97,89	92,06
9,00	97,50	92,43
10,00	97,11	92,81
10,62	96,91	93,00
11,00	96,60	93,30
12,00	95,89	93,99
13,00	95,23	94,64
13,12	95,21	94,66
14,00	95,08	94,79
15,00	94,89	94,98
16,00	94,70	95,17
17,00	94,52	95,35
18,00	94,33	95,54
19,00	94,14	95,73
20,00	93,96	95,92
21,00	93,77	96,11
22,00	93,59	96,30
23,00	93,41	96,49
24,00	93,22	96,67
25,00	93,04	96,86
26,00	92,86	97,05
27,00	92,68	97,24
28,00	92,50	97,43
29,00	92,32	97,62
30,00	92,14	97,81
31,00	91,99	97,98
31,88	91,90	98,07
32,00	91,85	98,12
33,00	91,64	98,34
34,00	91,47	98,53
35,00	91,29	98,72
36,00	91,12	98,91
37,00	90,95	99,10
38,00	90,77	99,29
39,00	90,60	99,47
40,00	90,43	99,66
41,00	90,30	99,81
42,00	90,18	99,94
42,50	90,12	100,00

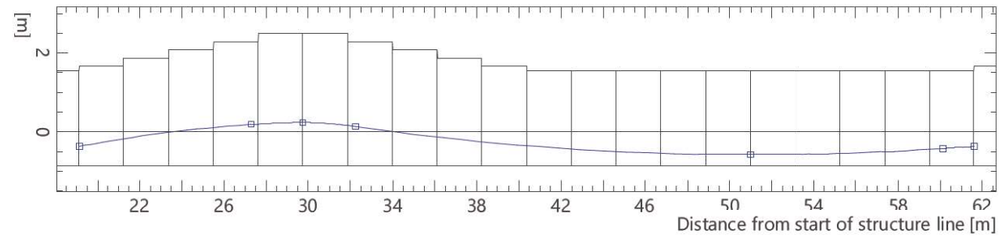
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_2_F4 - Attributes of tendon points

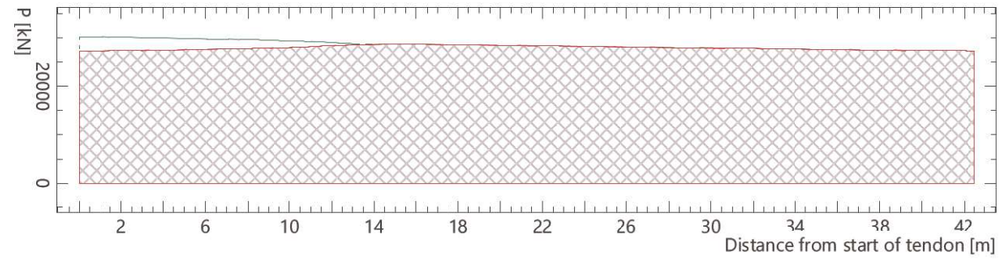
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	19,12	FL2	explic	-0,37	0	5,7	0	1,25	0	0
2	27,28	FL2	explic	0,19	0	2,1	2,72	0,38	0	0
3	29,75	FL2	explic	0,23	0	0	0,82	0,38	0	0
4	32,24	FL2	explic	0,13	0	-4,4	0,83	2,87	0	0
5	50,99	FL2	explic	-0,58	0	0	6,25	1,40	0	0
6	60,12	FL2	explic	-0,42	0	2,0	3,04	0,50	0	0
7	61,62	FL2	explic	-0,37	0	2,0	0,50	0	0	0

Tendon
V1-4.J2_2_F4

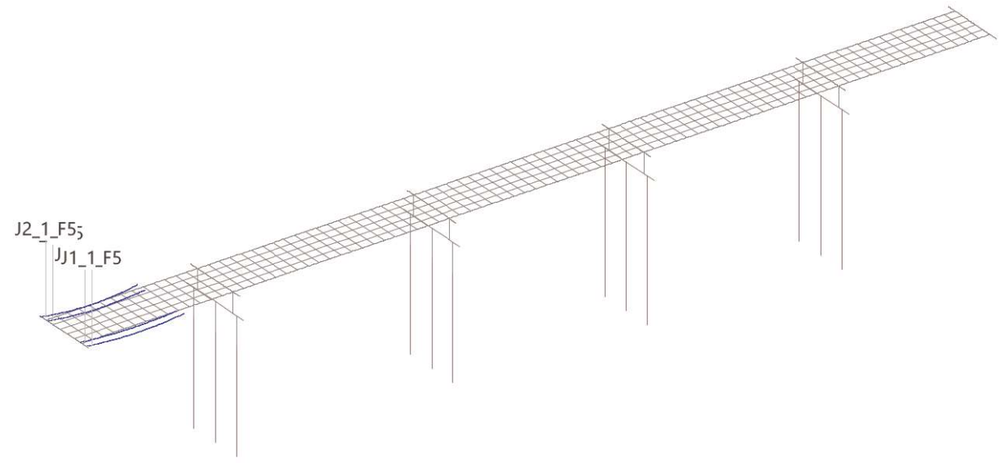
Side view of tendon profile
Side view of structure line



Force diagram



Tendons



Tendon group: V1-5 (Longitudinals F5, LLOSA-F5)

Tendon	Area [mm²]	Material	μ [1/rad]	Δα [rad/m]	Length [m]	Structure line(s)	Bond
J2_2_F5	7560,0	P	0,190	0,0060	19,17	SL2	+
J1_2_F5	7560,0	P	0,190	0,0060	19,17	SL1	+
J2_1_F5	17360,0	P	0,190	0,0060	19,19	SL2	+
J1_1_F5	17360,0	P	0,190	0,0060	19,19	SL1	+

Tendon J1_1_F5 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	129,6	0,701	22649,15	19,12
		anchoring	0,673	21744,36	**-6,0**	0,711	22947,50	14,93

Distance : from start of tendon

Tendon: J1_1_F5 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	y	z	Radius ρz [m]	P_o [kN]
0	*** 0**	0	-1,32	0	0,9935	0,0281	-0,1102	---	21744,36
1,00	1,00	1,01	-1,29	-0,11	0,9935	0,0281	-0,1102	---	21769,32
2,00	*** 2,00**	2,01	-1,26	-0,22	0,9935	0,0281	-0,1102	---	21794,31
3,00	3,00	3,02	-1,24	-0,33	0,9951	0,0245	-0,0957	78,18	21881,54
4,00	4,00	4,02	-1,21	-0,42	0,9964	0,0211	-0,0825	77,15	21963,83
5,00	5,00	5,03	-1,19	-0,50	0,9974	0,0177	-0,0693	77,47	22046,07
6,00	6,00	6,03	-1,18	-0,56	0,9983	0,0144	-0,0562	77,93	22128,07
7,00	7,00	7,03	-1,16	-0,62	0,9990	0,0110	-0,0432	78,24	22209,92
8,00	8,00	8,03	-1,15	-0,66	0,9995	0,0077	-0,0303	78,33	22291,83
9,00	9,00	9,03	-1,14	-0,68	0,9998	0,0044	-0,0174	78,22	22373,98
10,00	10,00	10,03	-1,14	-0,70	1,0000	0,0011	-0,0044	77,92	22456,54
10,63	*** 10,63**	10,66	-1,14	-0,70	1,0000	0,0009	-0,0037	77,64	22475,75
11,00	11,00	11,03	-1,14	-0,70	1,0000	-0,0021	0,0084	58,87	22538,42
12,00	12,00	12,03	-1,14	-0,68	0,9996	-0,0067	0,0262	57,55	22643,07
13,00	13,00	13,03	-1,15	-0,65	0,9990	-0,0112	0,0438	58,24	22747,37
14,00	14,00	14,03	-1,17	-0,60	0,9980	-0,0156	0,0611	58,89	22850,97
15,00	15,00	15,04	-1,18	-0,54	0,9967	-0,0200	0,0782	59,26	22940,68
16,00	16,00	16,04	-1,20	-0,45	0,9951	-0,0243	0,0953	59,32	22837,59
17,00	17,00	17,05	-1,23	-0,35	0,9932	-0,0287	0,1124	59,13	22734,78
17,63	*** 17,63**	17,67	-1,25	-0,28	0,9929	-0,0294	0,1152	58,90	22705,72
18,00	18,00	18,05	-1,26	-0,23	0,9924	-0,0304	0,1191	---	22678,49
19,00	19,00	19,06	-1,29	-0,11	0,9924	-0,0305	0,1191	---	22652,41
19,13	*** 19,13**	19,19	-1,29	-0,10	0,9924	-0,0305	0,1191	---	22649,15

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J1_1_F5 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0	100,00	93,53
1,00	99,89	93,53
2,00	99,77	93,74
3,00	99,37	94,12
4,00	99,00	94,47
5,00	98,63	94,82
6,00	98,27	95,18
7,00	97,90	95,53
8,00	97,54	95,88
9,00	97,19	96,23
10,00	96,83	96,59
10,63	96,75	96,67
11,00	96,48	96,94
12,00	96,03	97,39

Nr.:

Distance [m]	% of force from start	% of force from end
13,00	95,59	97,84
14,00	95,16	98,28
15,00	94,73	98,73
16,00	94,30	99,17
17,00	93,88	99,62
17,63	93,76	99,75
18,00	93,65	99,87
19,00	93,54	99,99
19,13	93,53	100,00

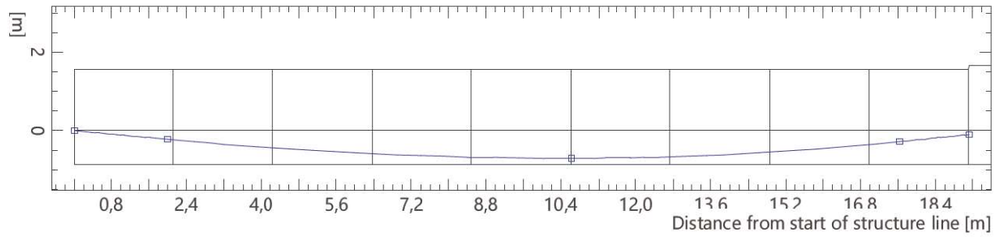
Distance : Measured along plan view of structure line from start of tendon

Tendon: J1_1_F5 - Attributes of tendon points

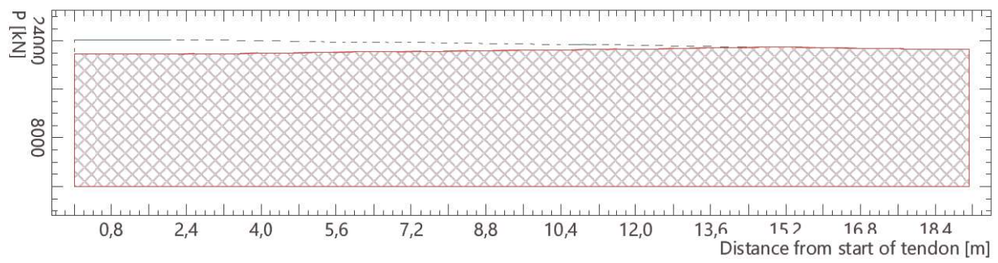
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	0	FL1	explic	0	0	-6,3	0	0,67	0	0
2	2,00	FL1	explic	-0,22	0	-6,3	0,67	1,32	0	0
3	10,63	FL1	explic	-0,70	0	0	2,88	1,07	0	0
4	17,63	FL1	explic	-0,28	0	6,8	2,33	0,50	0	0
5	19,13	FL1	explic	-0,10	0	6,8	0,50	0	0	0

Tendon
V1-5.J1_1_F5

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J1_2_F5 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	10546,20	129,8	0,707	9947,05	19,12
		anchoring	0,675	9487,37	**-6,0**	0,711	10002,79	16,29

Distance : from start of tendon

Nr.:

Tendon: J1_2_F5 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
0	*** 0**	0	0,44	0	0,9934	0,0318	-0,1102	---	9487,37
1,00	1,00	1,01	0,48	-0,11	0,9934	0,0318	-0,1102	---	9498,27
2,00	*** 2,00**	2,01	0,51	-0,22	0,9934	0,0318	-0,1102	---	9509,17
3,00	3,00	3,02	0,54	-0,33	0,9950	0,0277	-0,0957	78,18	9547,46
4,00	4,00	4,02	0,57	-0,42	0,9963	0,0238	-0,0825	77,15	9583,57
5,00	5,00	5,03	0,59	-0,50	0,9974	0,0200	-0,0693	77,47	9619,67
6,00	6,00	6,03	0,61	-0,56	0,9983	0,0162	-0,0562	77,93	9655,66
7,00	7,00	7,03	0,62	-0,62	0,9990	0,0125	-0,0432	78,24	9691,58
8,00	8,00	8,03	0,63	-0,66	0,9995	0,0088	-0,0303	78,33	9727,54
9,00	9,00	9,03	0,64	-0,68	0,9998	0,0050	-0,0174	78,22	9763,59
10,00	10,00	10,03	0,65	-0,70	1,0000	0,0013	-0,0044	77,92	9799,83
10,63	*** 10,63**	10,66	0,65	-0,70	1,0000	0,0011	-0,0037	77,64	9808,23
11,00	11,00	11,03	0,65	-0,70	1,0000	-0,0015	0,0051	95,48	9829,49
12,00	12,00	12,03	0,64	-0,69	0,9999	-0,0047	0,0163	91,69	9862,38
13,00	13,00	13,03	0,64	-0,67	0,9996	-0,0079	0,0273	92,40	9895,31
14,00	14,00	14,03	0,63	-0,64	0,9992	-0,0111	0,0383	93,40	9928,05
15,00	15,00	15,03	0,62	-0,60	0,9987	-0,0142	0,0491	94,06	9960,68
16,00	16,00	16,04	0,60	-0,55	0,9981	-0,0173	0,0598	94,28	9993,30
17,00	17,00	17,04	0,58	-0,48	0,9973	-0,0204	0,0706	94,11	9979,59
17,63	*** 17,63**	17,66	0,57	-0,44	0,9972	-0,0209	0,0723	93,82	9968,97
18,00	18,00	18,04	0,56	-0,41	0,9970	-0,0216	0,0748	---	9959,85
19,00	19,00	19,04	0,54	-0,33	0,9970	-0,0216	0,0748	---	9948,47
19,13	*** 19,13**	19,17	0,54	-0,33	0,9970	-0,0216	0,0748	---	9947,05

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL1
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J1_2_F5 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0	100,00	94,32
1,00	99,89	94,43
2,00	99,77	94,54
3,00	99,37	94,92
4,00	99,00	95,28
5,00	98,62	95,63
6,00	98,26	95,99
7,00	97,89	96,35
8,00	97,53	96,71
9,00	97,17	97,06
10,00	96,81	97,43
10,63	96,73	97,51
11,00	96,52	97,72
12,00	96,20	98,05
13,00	95,88	98,37
14,00	95,56	98,70
15,00	95,25	99,02
16,00	94,94	99,35
17,00	94,63	99,67
17,63	94,53	99,78
18,00	94,44	99,87
19,00	94,33	99,99
19,13	94,32	100,00

Distance : Measured along plan view of structure line from start of tendon

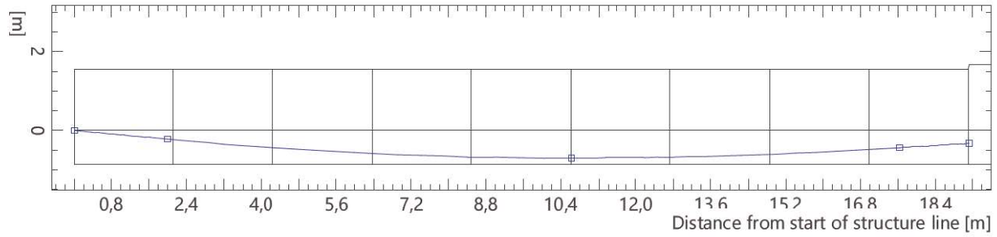
Tendon: J1_2_F5 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	0	FL2	explic	0	0	-6,3	0	0,67	0	0
2	2,00	FL2	explic	-0,22	0	-6,3	0,67	1,32	0	0
3	10,63	FL2	explic	-0,70	0	0	2,88	1,07	0	0
4	17,63	FL2	explic	-0,44	0	4,3	2,33	0,50	0	0
5	19,13	FL2	explic	-0,33	0	4,3	0,50	0	0	0

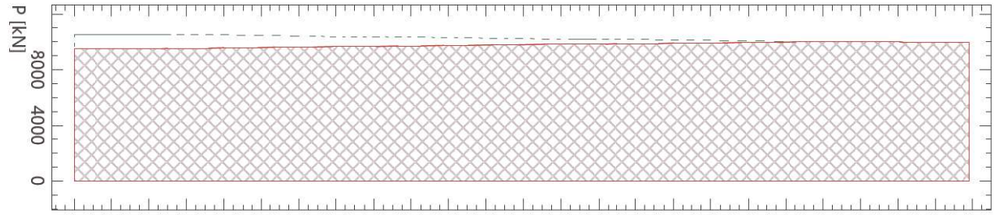
Nr.:

Tendon
V1-5.J1_2_F5

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_1_F5 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	24217,20	129,6	0,701	22649,15	19,12
		anchoring	0,673	21744,36	**-6,0**	0,711	22947,50	14,93

Distance : from start of tendon

Tendon: J2_1_F5 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	Tangent (unit vector) y	Tangent (unit vector) z	Radius ρz [m]	P_o [kN]
0	*** 0**	0	1,32	0	0,9935	-0,0281	-0,1102	---	21744,36
1,00	1,00	1,01	1,29	-0,11	0,9935	-0,0281	-0,1102	---	21769,32
2,00	*** 2,00**	2,01	1,26	-0,22	0,9935	-0,0281	-0,1102	---	21794,31
3,00	3,00	3,02	1,24	-0,33	0,9951	-0,0245	-0,0957	78,18	21881,54
4,00	4,00	4,02	1,21	-0,42	0,9964	-0,0211	-0,0825	77,15	21963,83
5,00	5,00	5,03	1,19	-0,50	0,9974	-0,0177	-0,0693	77,47	22046,07
6,00	6,00	6,03	1,18	-0,56	0,9983	-0,0144	-0,0562	77,93	22128,07
7,00	7,00	7,03	1,16	-0,62	0,9990	-0,0110	-0,0432	78,24	22209,92
8,00	8,00	8,03	1,15	-0,66	0,9995	-0,0077	-0,0303	78,33	22291,83
9,00	9,00	9,03	1,14	-0,68	0,9998	-0,0044	-0,0174	78,22	22373,98
10,00	10,00	10,03	1,14	-0,70	1,0000	-0,0011	-0,0044	77,92	22456,54
10,63	*** 10,63**	10,66	1,14	-0,70	1,0000	-0,0009	-0,0037	77,64	22475,75
11,00	11,00	11,03	1,14	-0,70	1,0000	0,0021	0,0084	58,87	22538,42
12,00	12,00	12,03	1,14	-0,68	0,9996	0,0067	0,0262	57,55	22643,07
13,00	13,00	13,03	1,15	-0,65	0,9990	0,0112	0,0438	58,24	22747,37
14,00	14,00	14,03	1,17	-0,60	0,9980	0,0156	0,0611	58,89	22850,97
15,00	15,00	15,04	1,18	-0,54	0,9967	0,0200	0,0782	59,26	22940,68
16,00	16,00	16,04	1,20	-0,45	0,9951	0,0243	0,0953	59,32	22837,59
17,00	17,00	17,05	1,23	-0,35	0,9932	0,0287	0,1124	59,13	22734,78
17,63	*** 17,63**	17,67	1,25	-0,28	0,9929	0,0294	0,1152	58,90	22705,72
18,00	18,00	18,05	1,26	-0,23	0,9924	0,0304	0,1191	---	22678,49

Nr.:

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	y	z	Radius ρz [m]	P_o [kN]
19,00	19,00	19,06	1,29	-0,11	0,9924	0,0305	0,1191	---	22652,41
19,13	*** 19,13**	19,19	1,29	-0,10	0,9924	0,0305	0,1191	---	22649,15

Distances : Measured along plan view of structure line
Eccentricities : local (with reference to structure line)
Tangent (unit vector) : Tangent to tendon (unit vector in local coordinates)
(1) : from start of structure line SL2
(2) : from start of tendon
Length : Effective tendon length
Radius ρz : Radius of curvature (without influence of y-eccentricities)
P_o : Force (Final state)
* : Definition point

Tendon: J2_1_F5 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0	100,00	93,53
1,00	99,89	93,53
2,00	99,77	93,74
3,00	99,37	94,12
4,00	99,00	94,47
5,00	98,63	94,82
6,00	98,27	95,18
7,00	97,90	95,53
8,00	97,54	95,88
9,00	97,19	96,23
10,00	96,83	96,59
10,63	96,75	96,67
11,00	96,48	96,94
12,00	96,03	97,39
13,00	95,59	97,84
14,00	95,16	98,28
15,00	94,73	98,73
16,00	94,30	99,17
17,00	93,88	99,62
17,63	93,76	99,75
18,00	93,65	99,87
19,00	93,54	99,99
19,13	93,53	100,00

Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_1_F5 - Attributes of tendon points

point	distance [m]	Guidance line	Eccentricity Relation	Eccentricity ez [m]	Eccentricity ey [m]	Tangent Direction [°]	Tangent Length L [m]	Tangent Length R [m]	arc left [°]	arc right [°]
1	0	FL1	explic	0	0	-6,3	0	0,67	0	0
2	2,00	FL1	explic	-0,22	0	-6,3	0,67	1,32	0	0
3	10,63	FL1	explic	-0,70	0	0	2,88	1,07	0	0
4	17,63	FL1	explic	-0,28	0	6,8	2,33	0,50	0	0
5	19,13	FL1	explic	-0,10	0	6,8	0,50	0	0	0

Nr.:

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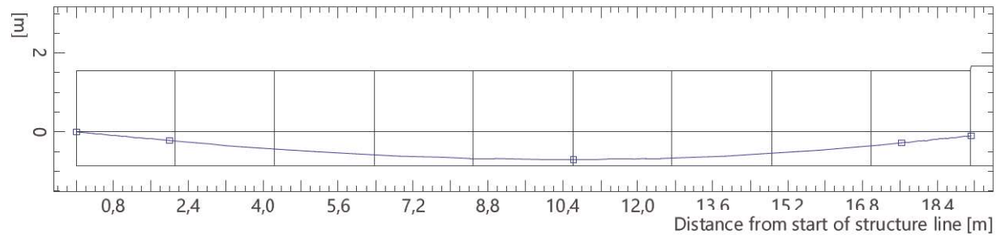
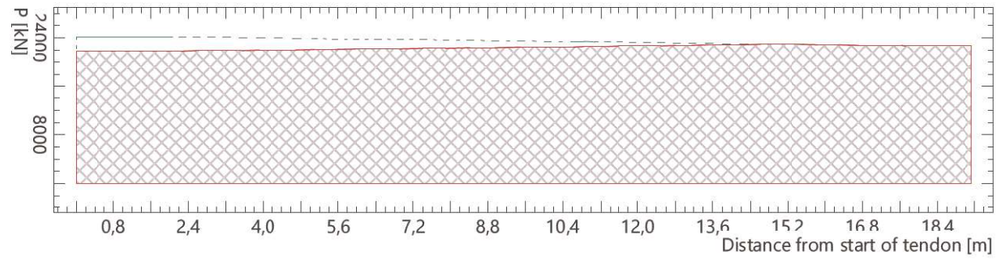
Tendon
V1-5.J2_1_F5

Side view of tendon profile
Side view of structure line



Force diagram



Tendon J2_2_F5 - Stressing steps

Anchor Position	Anchor Distance [m]	Stress Process	At anchor σ_p/f_{pk}	At anchor Force [kN]	Elongation [mm]	1st extremum after anchor σ_p/f_{pk}	1st extremum after anchor Force [kN]	1st extremum after anchor Distance [m]
Start	0	Tensioning	**0,750**	10546,20	129,8	0,708	9960,40	19,12
		anchoring	0,675	9485,09	**-6,0**	0,711	10001,58	16,12

Distance : from start of tendon

Tendon: J2_2_F5 - Geometry and tendon forces

Distances (1) [m]	Distances (2) [m]	Length [m]	Eccentricities ey [m]	Eccentricities ez [m]	Tangent (unit vector) x	y	z	Radius ρz [m]	P_o [kN]
0	*** 0**	0	-0,44	0	0,9934	-0,0318	-0,1102	---	9485,09
1,00	1,00	1,01	-0,48	-0,11	0,9934	-0,0318	-0,1102	---	9495,98
2,00	*** 2,00**	2,01	-0,51	-0,22	0,9934	-0,0318	-0,1102	---	9506,88
3,00	3,00	3,02	-0,54	-0,33	0,9950	-0,0277	-0,0957	78,18	9545,16
4,00	4,00	4,02	-0,57	-0,42	0,9963	-0,0238	-0,0825	77,15	9581,26
5,00	5,00	5,03	-0,59	-0,50	0,9974	-0,0200	-0,0693	77,47	9617,35
6,00	6,00	6,03	-0,61	-0,56	0,9983	-0,0162	-0,0562	77,93	9653,33
7,00	7,00	7,03	-0,62	-0,62	0,9990	-0,0125	-0,0432	78,24	9689,25
8,00	8,00	8,03	-0,63	-0,66	0,9995	-0,0088	-0,0303	78,33	9725,19
9,00	9,00	9,03	-0,64	-0,68	0,9998	-0,0050	-0,0174	78,22	9761,24
10,00	10,00	10,03	-0,65	-0,70	1,0000	-0,0013	-0,0044	77,92	9797,47
10,63	*** 10,63**	10,66	-0,65	-0,70	1,0000	-0,0011	-0,0037	77,64	9805,87
11,00	11,00	11,03	-0,65	-0,70	1,0000	0,0015	0,0053	89,39	9827,40
12,00	12,00	12,03	-0,64	-0,69	0,9998	0,0049	0,0171	86,43	9861,63
13,00	13,00	13,03	-0,64	-0,67	0,9995	0,0083	0,0288	87,43	9895,80
14,00	14,00	14,03	-0,63	-0,64	0,9991	0,0117	0,0403	88,38	9929,73
15,00	15,00	15,03	-0,62	-0,59	0,9985	0,0150	0,0518	88,81	9963,58
16,00	16,00	16,04	-0,60	-0,54	0,9978	0,0182	0,0632	88,71	9997,50
16,63	*** 16,63**	16,66	-0,59	-0,50	0,9977	0,0190	0,0658	88,42	9993,32
17,00	17,00	17,04	-0,58	-0,47	0,9975	0,0196	0,0680	---	9984,62
18,00	18,00	18,04	-0,56	-0,40	0,9975	0,0196	0,0680	---	9973,22
19,00	19,00	19,04	-0,54	-0,33	0,9975	0,0196	0,0680	---	9961,82
19,13	*** 19,13**	19,17	-0,54	-0,32	0,9975	0,0196	0,0680	---	9960,40

Nr.:

C:\Users\usu2\Documents\PROJECTES\BADALONA\MODEL_LLOSA_23.S8P

Distances	:	Measured along plan view of structure line
Eccentricities	:	local (with reference to structure line)
Tangent (unit vector)	:	Tangent to tendon (unit vector in local coordinates)
(1)	:	from start of structure line SL2
(2)	:	from start of tendon
Length	:	Effective tendon length
Radius ρz	:	Radius of curvature (without influence of y-eccentricities)
P_o	:	Force (Final state)
*	:	Definition point

Tendon: J2_2_F5 - Losses (% of force from start/end)

Distance [m]	% of force from start	% of force from end
0	100,00	94,45
1,00	99,89	94,55
2,00	99,77	94,66
3,00	99,37	95,04
4,00	99,00	95,40
5,00	98,62	95,76
6,00	98,26	96,12
7,00	97,89	96,48
8,00	97,53	96,84
9,00	97,17	97,20
10,00	96,81	97,56
10,63	96,73	97,64
11,00	96,52	97,85
12,00	96,18	98,19
13,00	95,85	98,53
14,00	95,52	98,87
15,00	95,20	99,21
16,00	94,87	99,55
16,63	94,76	99,67
17,00	94,68	99,76
18,00	94,57	99,87
19,00	94,46	99,99
19,13	94,45	100,00

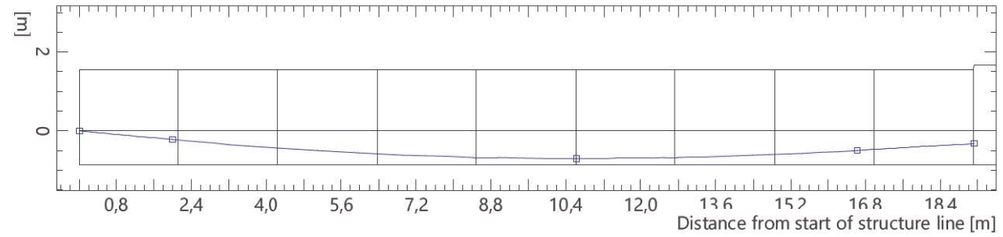
Distance : Measured along plan view of structure line from start of tendon

Tendon: J2_2_F5 - Attributes of tendon points

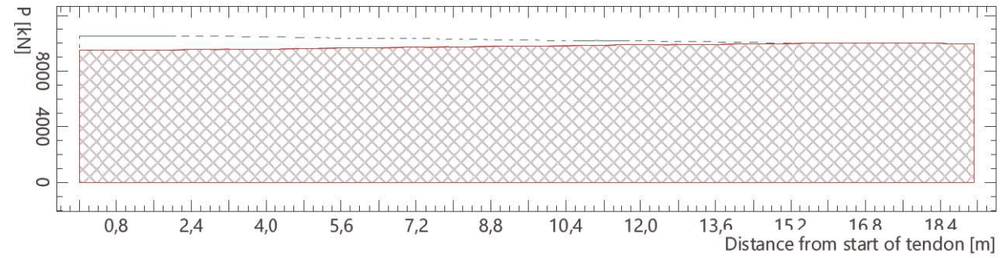
point	distance [m]	Guidance line	Eccentricity Relation	ez [m]	ey [m]	Tangent Direction [°]	Length L [m]	Length R [m]	arc left [°]	arc right [°]
1	0	FL2	explic	0	0	-6,3	0	0,67	0	0
2	2,00	FL2	explic	-0,22	0	-6,3	0,67	1,32	0	0
3	10,63	FL2	explic	-0,70	0	0	2,88	0,92	0	0
4	16,63	FL2	explic	-0,50	0	3,9	2,00	0,83	0	0
5	19,13	FL2	explic	-0,33	0	3,9	0,83	0	0	0

Tendon
V1-5.J2_2_F5

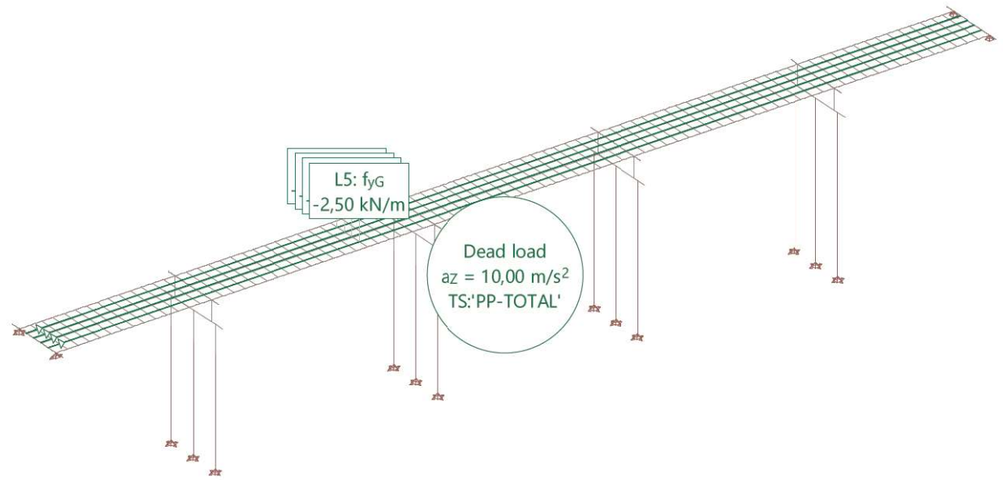
Side view of tendon profile
Side view of structure line



Force diagram



Loading G1-PP: PP LLOSA DE FORMIGO. TOT DE COP



Loading 'G1-PP': PP LLOSA DE FORMIGO. TOT DE COP Construction stage: 'Initial stage'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (79 Members, 210 SLA)			10,00	0	0	-56348,92

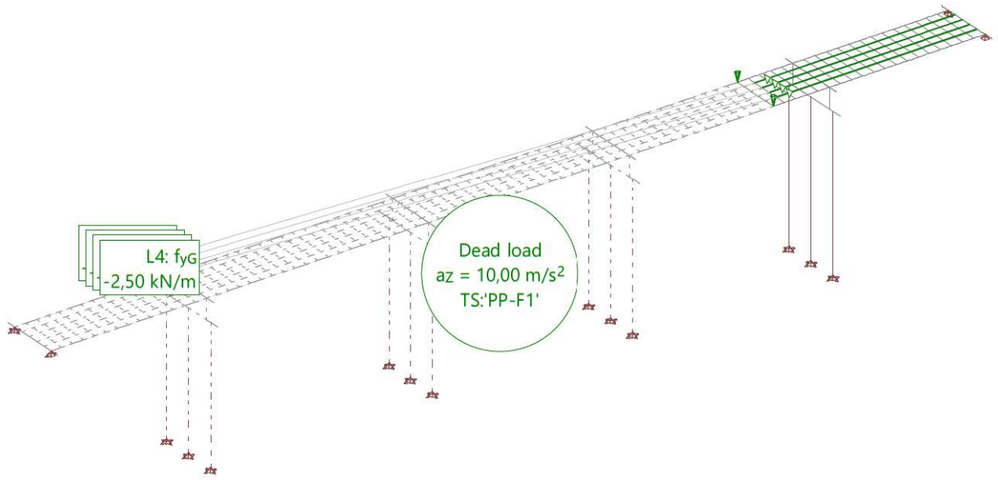
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L2	Y Global	178,50	-2,50		0	-446,25	0
L3	Y Global	178,50	-2,50		0	-446,25	0
L4	Y Global	178,50	-2,50		0	-446,25	0
L5	Y Global	178,50	-2,50		0	-446,25	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP	0	-1785,00	-56348,92

Loading G1-PP1: PP LLOSA DE FORMIGO. F1



Loading 'G1-PP1': PP LLOSA DE FORMIGO. F1 Construction stage: 'LLOSA-F1'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (32 Members, 52 SLA)			10,00	0	0	-19258,23

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	38,25	-2,50		0	-95,63	0
L2	Y Global	38,25	-2,50		0	-95,63	0
L3	Y Global	38,25	-2,50		0	-95,63	0
L4	Y Global	38,25	-2,50		0	-95,63	0

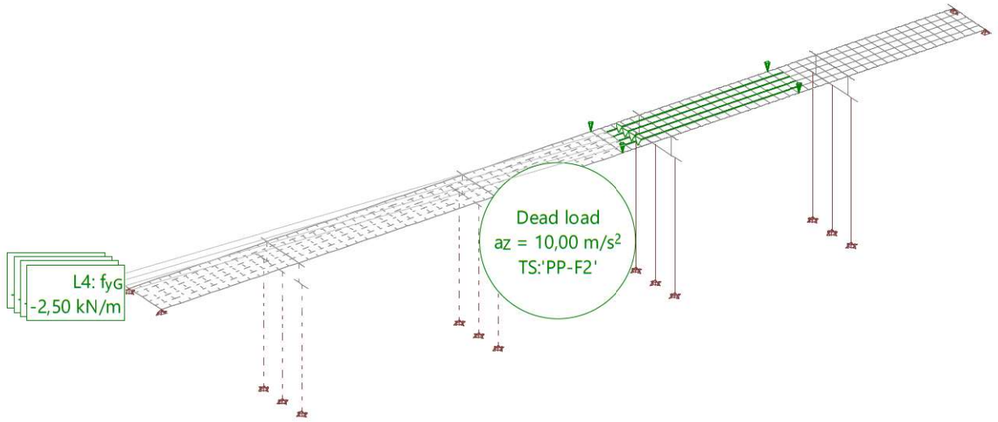
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P2	Z Global Member force	-27,00		0	0	-27,00
P3	Z Global Member force	-27,00		0	0	-27,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP1	0	-382,50	-19312,23

Loading G1-PP2: PP LLOSA DE FORMIGO. F2



Loading 'G1-PP2': PP LLOSA DE FORMIGO. F2 Construction stage: 'LLOSA-F2'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (31 Members, 43 SLA)			10,00	0	0	-17582,57

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	38,25	-2,50		0	-95,62	0
L2	Y Global	38,25	-2,50		0	-95,63	0
L3	Y Global	38,25	-2,50		0	-95,62	0
L4	Y Global	38,25	-2,50		0	-95,63	0

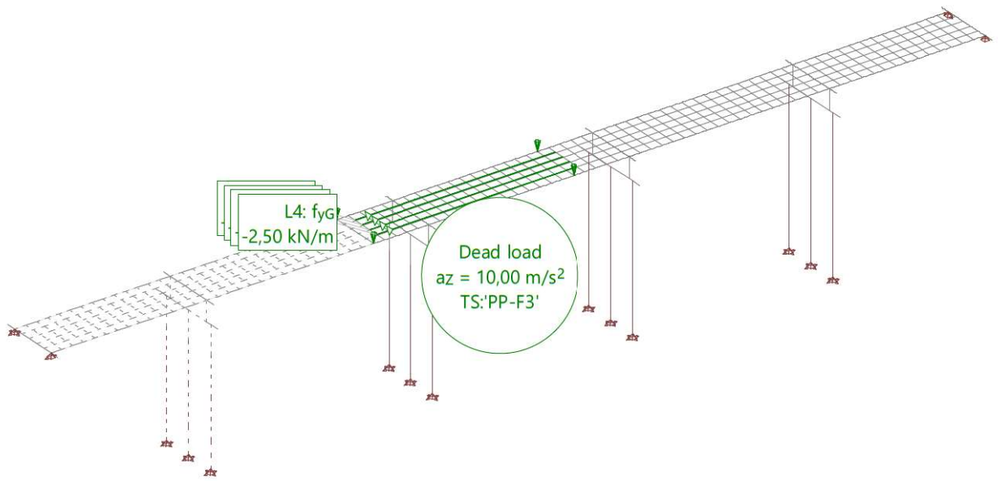
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-27,00		0	0	-27,00
P2	Z Global Member force	-27,00		0	0	-27,00
P3	Z Global Member force	-27,00		0	0	-27,00
P4	Z Global Member force	-27,00		0	0	-27,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP2	0	-382,50	-17690,57

Loading G1-PP3: PP LLOSA DE FORMIGO. F3



Loading 'G1-PP3': PP LLOSA DE FORMIGO. F3 Construction stage: 'LLOSA-F3'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (25 Members, 43 SLA)			10,00	0	0	-16216,90

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	38,25	-2,50		0	-95,62	0
L2	Y Global	38,25	-2,50		0	-95,62	0
L3	Y Global	38,25	-2,50		0	-95,62	0
L4	Y Global	38,25	-2,50		0	-95,62	0

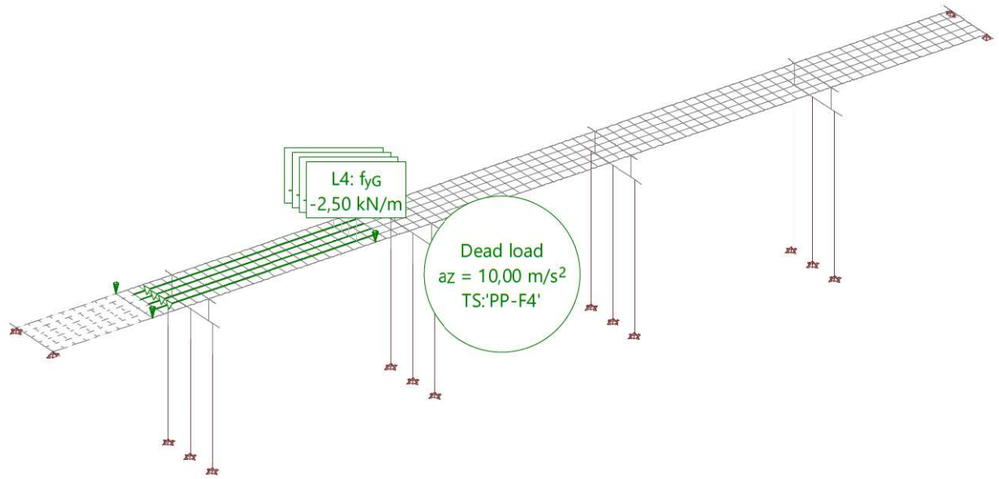
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-27,00		0	0	-27,00
P2	Z Global Member force	-27,00		0	0	-27,00
P3	Z Global Member force	-27,00		0	0	-27,00
P4	Z Global Member force	-27,00		0	0	-27,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP3	0	-382,50	-16324,90

Loading G1-PP4: PP LLOSA DE FORMIGO. F4



Loading 'G1-PP4': PP LLOSA DE FORMIGO. F4 Construction stage: 'LLOSA-F4'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (63 Members, 47 SLA)			10,00	0	0	-27589,81

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	42,50	-2,50	0		-106,25	0
L2	Y Global	42,50	-2,50	0		-106,25	0
L3	Y Global	42,50	-2,50	0		-106,25	0
L4	Y Global	42,50	-2,50	0		-106,25	0

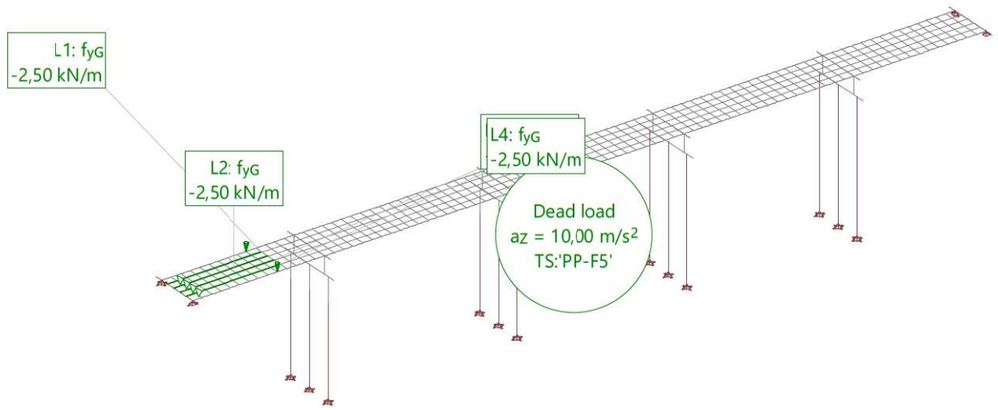
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-27,00		0	0	-27,00
P2	Z Global Member force	-27,00		0	0	-27,00
P3	Z Global Member force	-27,00		0	0	-27,00
P4	Z Global Member force	-27,00		0	0	-27,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP4	0	-425,00	-27697,81

Loading G1-PP5: PP LLOSA DE FORMIGO. F5



Loading 'G1-PP5': PP LLOSA DE FORMIGO. F5 Construction stage: 'LLOSA-F5'

Acceleration loads: Dead load

Id	Accelerations a_X [m/s²]	a_Y [m/s²]	a_Z [m/s²]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
G1 (8 Members, 25 SLA)			10,00	0	0	-5886,99

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	21,25	-2,50		0	-53,12	0
L2	Y Global	21,25	-2,50		0	-53,12	0
L3	Y Global	21,25	-2,50		0	-53,12	0
L4	Y Global	21,25	-2,50		0	-53,12	0

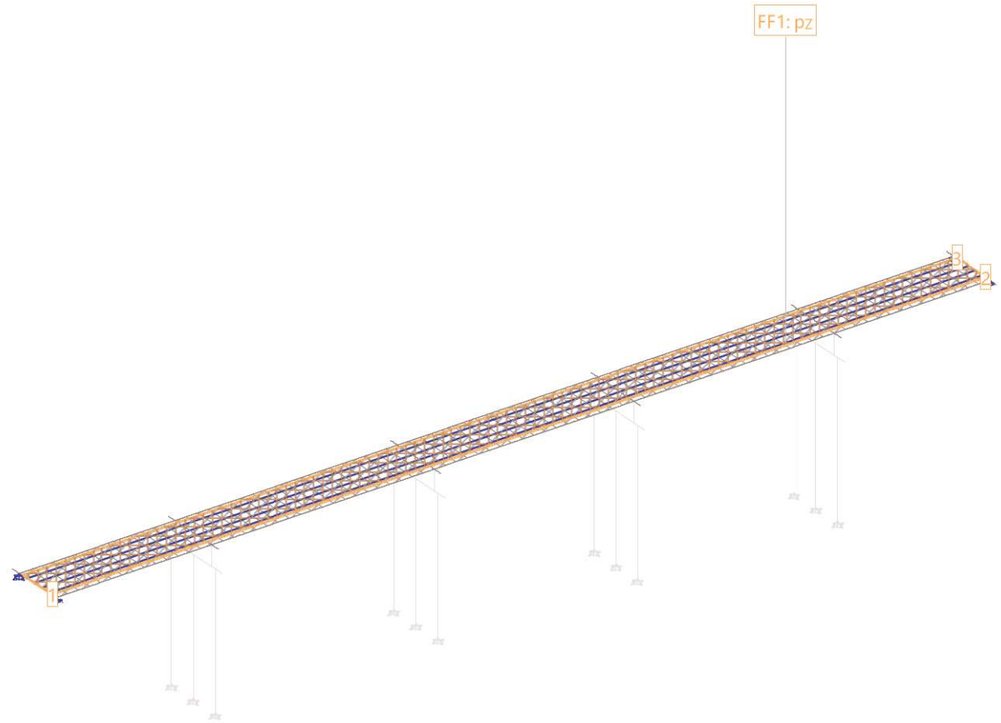
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-27,00		0	0	-27,00
P2	Z Global Member force	-27,00		0	0	-27,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G1-PP5	0	-212,50	-5940,99

Loading G2: BALAST 65 CM



Surface loading 'G2': BALAST 65 CM Construction stage: 'Initial stage'

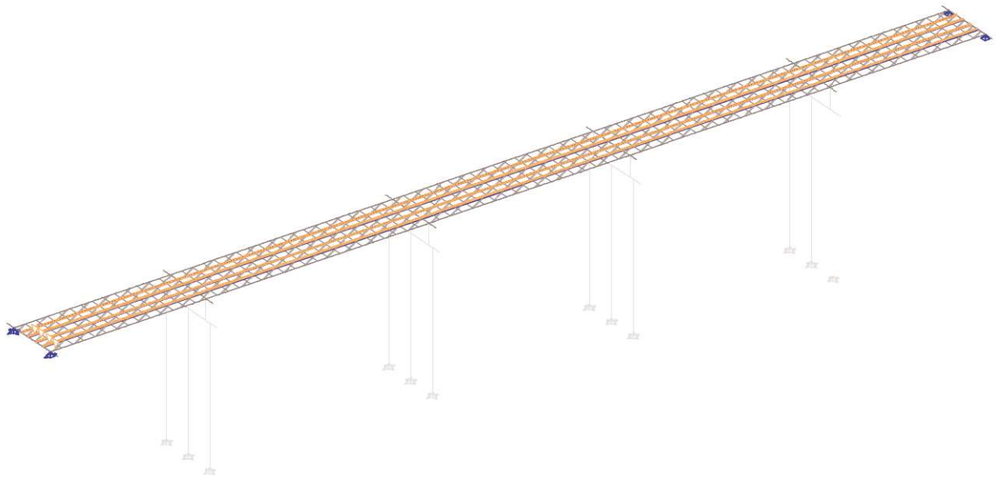
Surface loads

Id	Type	Surface name	Area [m²]	p [kN/m²]	p_1 [kN/m²]	p_2 [kN/m²]	p_3 [kN/m²]
FF1	Z Global	TAULER LLOSA 3	1427,59	-11,700			

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G2	0,00	-0,00	-16700,27

Loading G3: CARRIL + TRAV



Surface loading 'G3': CARRIL + TRAV Construction stage: 'Initial stage'

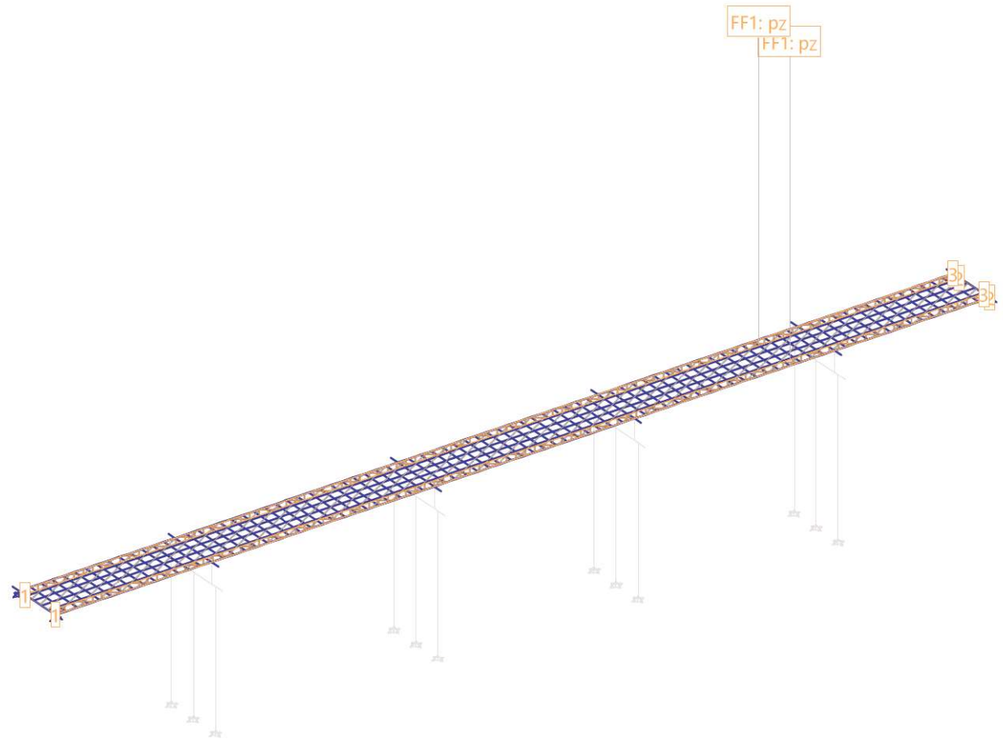
Line loads

Id	Type	Surface name	Length [m]	p [kN/m]	p_1 [kN/m]	p_2 [kN/m]
FL1	Z Global	TAULER LLOSA 35 CM	178,50	-3,25		
FL2	Z Global	TAULER LLOSA 35 CM	178,58	-3,25		
FL3	Z Global	TAULER LLOSA 35 CM	178,50	-3,25		
FL4	Z Global	TAULER LLOSA 35 CM	178,51	-3,25		

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G3	-0,00	0,00	-2320,14

Loading G4: SERVEIS



Surface loading 'G4': SERVEIS Construction stage: 'Initial stage'

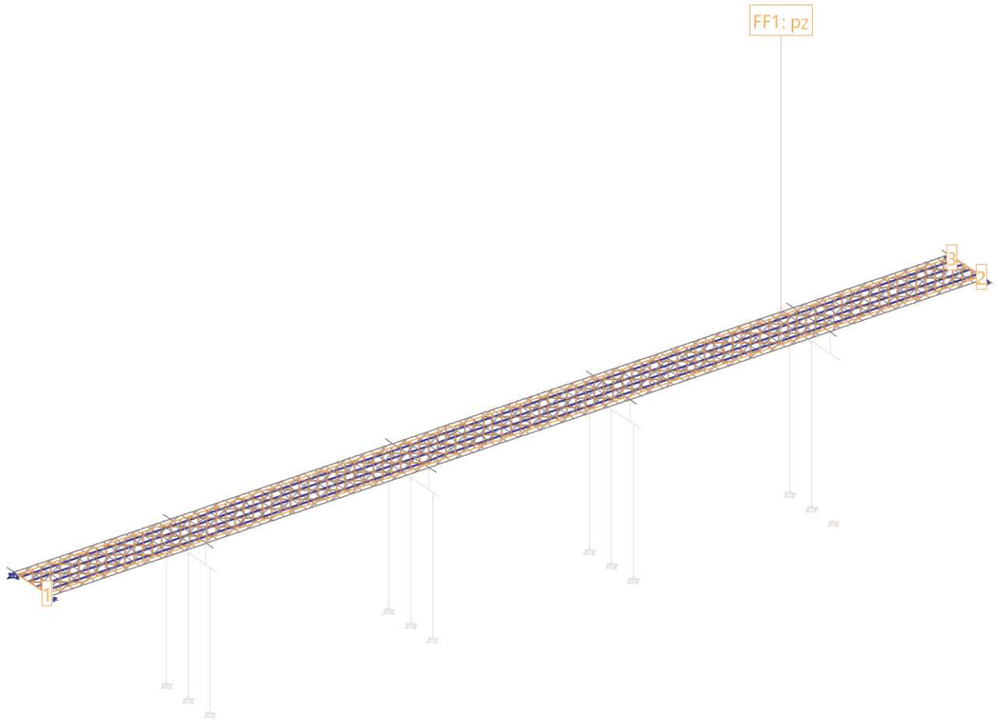
Surface loads

Id	Type	Surface name	Area [m^2]	p [kN/m^2]	p_1 [kN/m^2]	p_2 [kN/m^2]	p_3 [kN/m^2]
FF1	Z Global	TOTL	281,81	-1,000			
FF1	Z Global	TOTL	285,60	-1,000			

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G4	0	0	-567,42

Loading G5: IMPERMEABILITZACIÓ 5 CM



Surface loading 'G5': IMPERMEABILITZACIÓ 5 CM Construction stage: 'Initial stage'

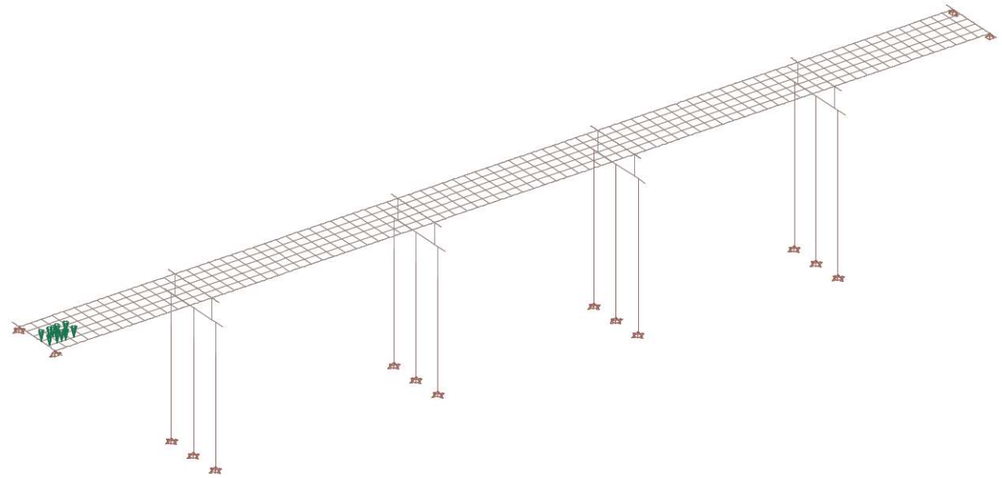
Surface loads

Id	Type	Surface name	Area [m²]	p [kN/m²]	p_1 [kN/m²]	p_2 [kN/m²]	p_3 [kN/m²]
FF1	Z Global	TAULER LLOSA 3	1427,54	-1,150			

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading G5	0,00	-0,00	-1641,01

Loading Q1-1: TREN DE CARREGUES VIA 1



Loading 'Q1-1': TREN DE CARREGUES VIA 1 Construction stage: 'Initial stage'

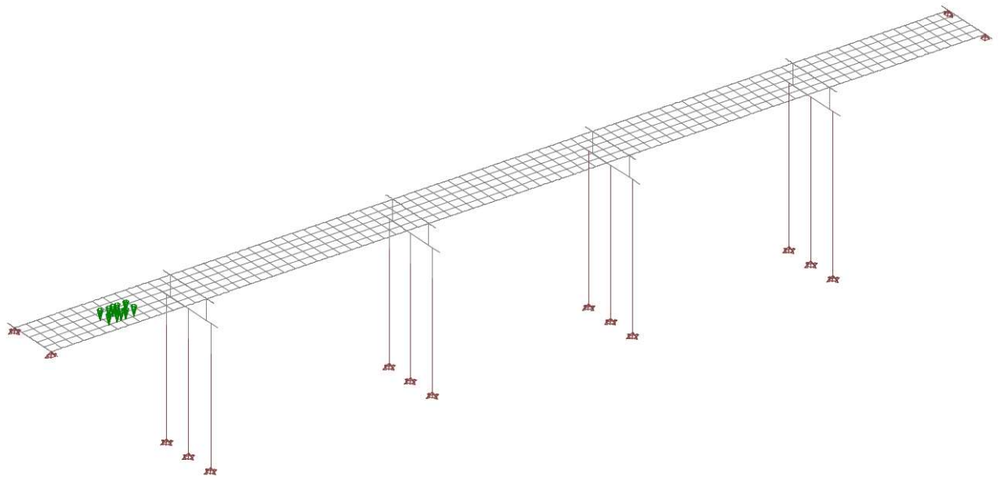
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-1,00		0	0	-1,00
P2	Z Global Member force	-1,00		0	0	-1,00
P3	Z Global Member force	-82,20		0	0	-82,20
P4	Z Global Member force	-82,20		0	0	-82,20
P5	Z Global Member force	-82,20		0	0	-82,20
P6	Z Global Member force	-82,20		0	0	-82,20
P7	Z Global Member force	-65,80		0	0	-65,80
P8	Z Global Member force	-65,80		0	0	-65,80
P9	Z Global Member force	-65,80		0	0	-65,80
P10	Z Global Member force	-65,80		0	0	-65,80

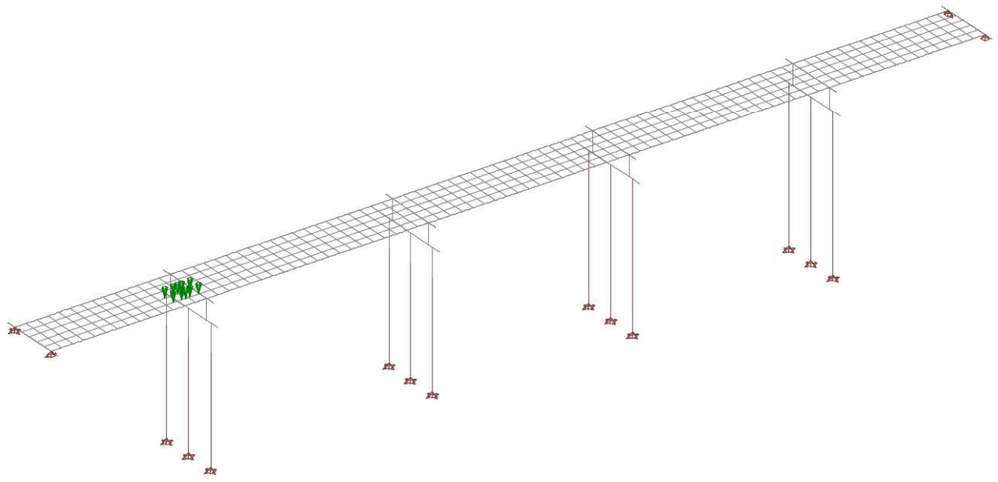
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Q1-1	0	0	-594,00

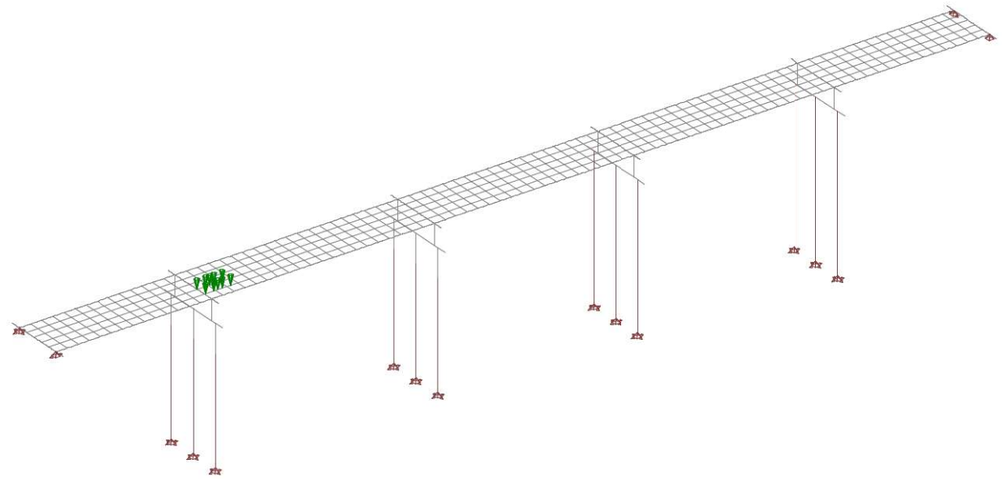
Loading Q1-2: TREN DE CARREGUES VIA 1



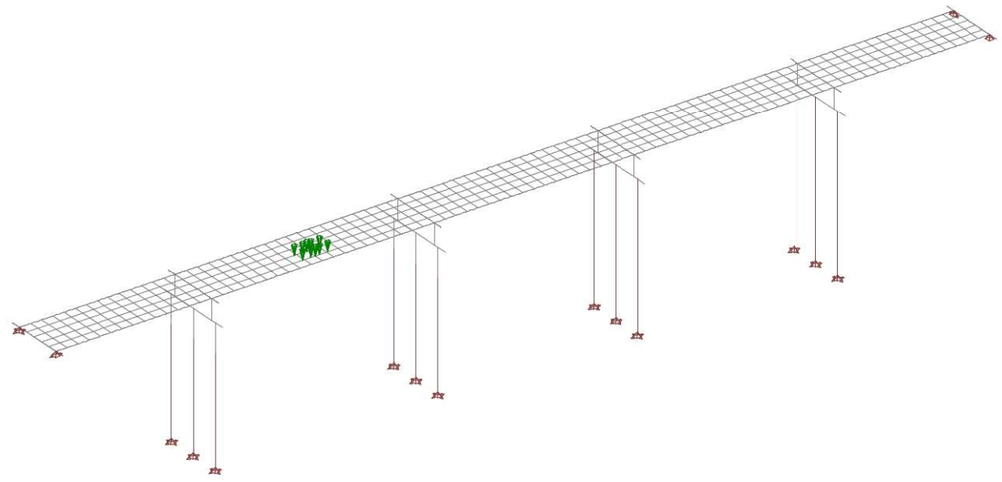
Loading Q1-3: TREN DE CARREGUES VIA 1



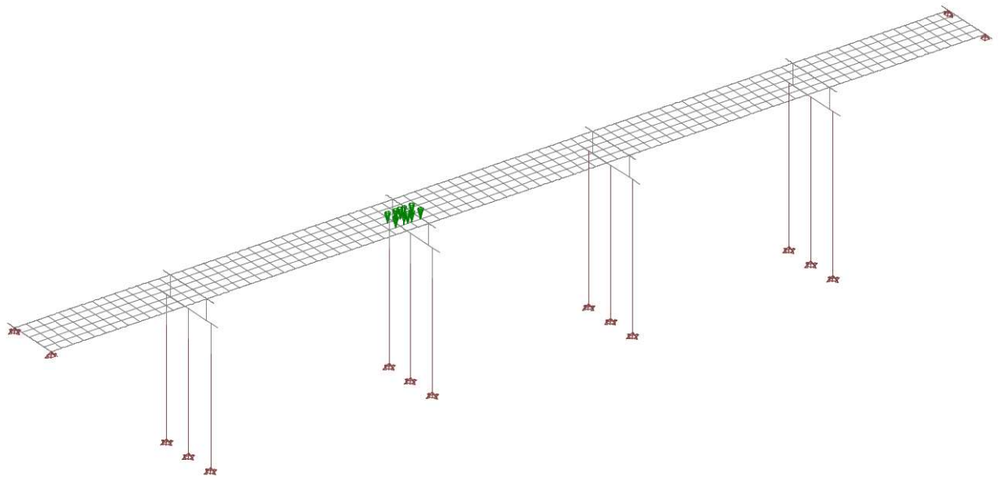
Loading Q1-4: TREN DE CARREGUES VIA 1



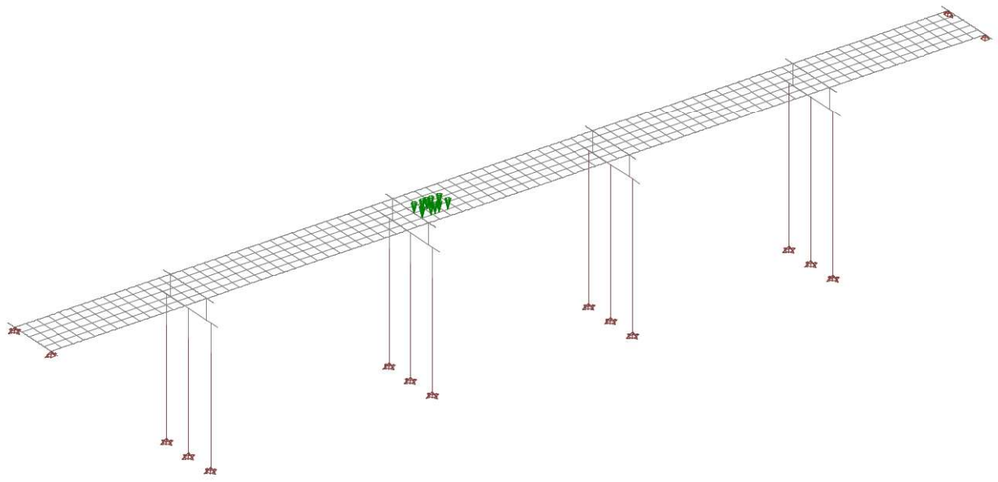
Loading Q1-5: TREN DE CARREGUES VIA 1



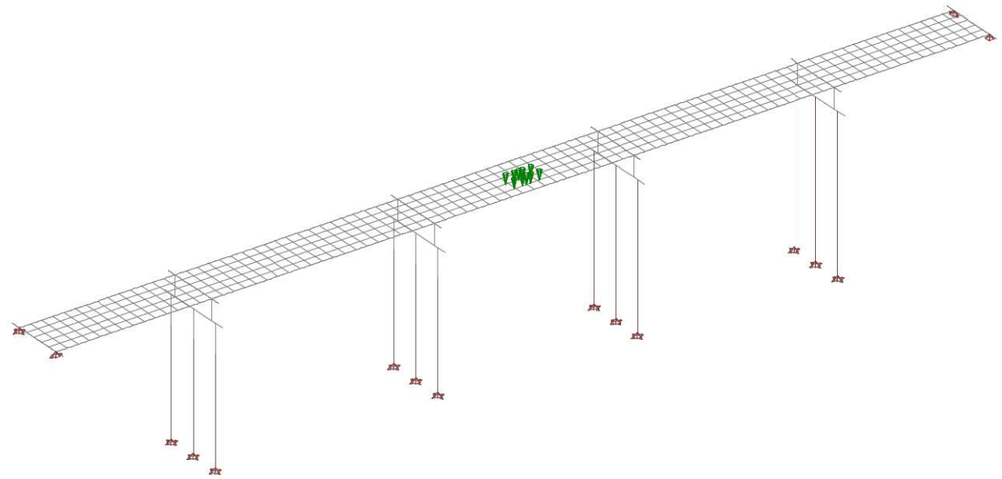
Loading Q1-6: TREN DE CARREGUES VIA 1



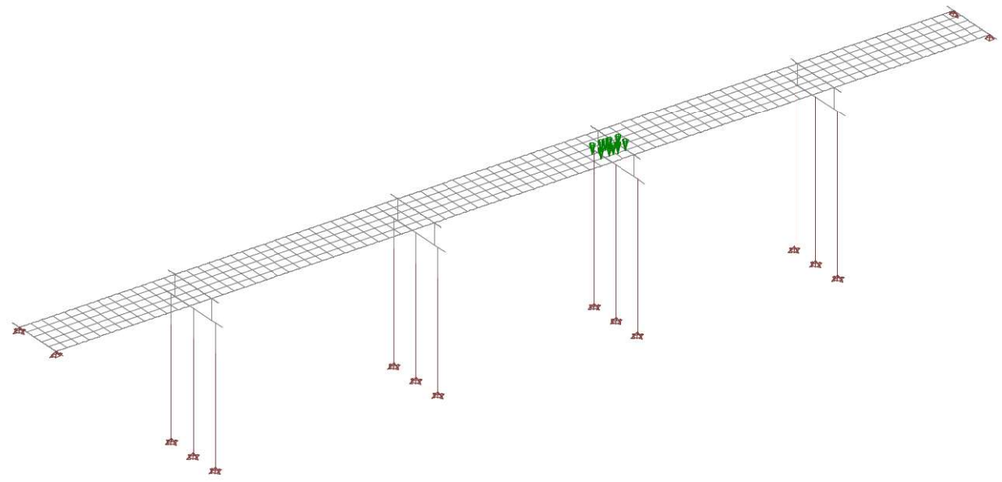
Loading Q1-7: TREN DE CARREGUES VIA 1



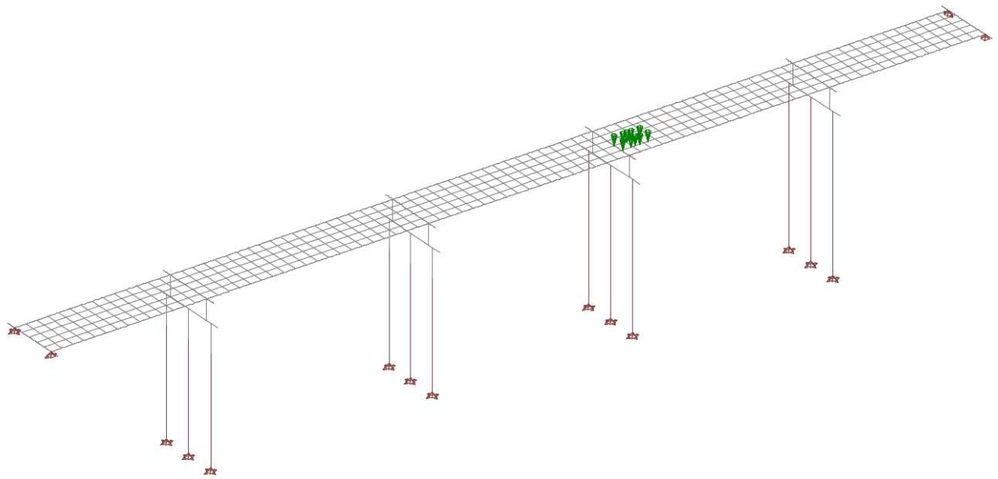
Loading Q1-8: TREN DE CARREGUES VIA 1



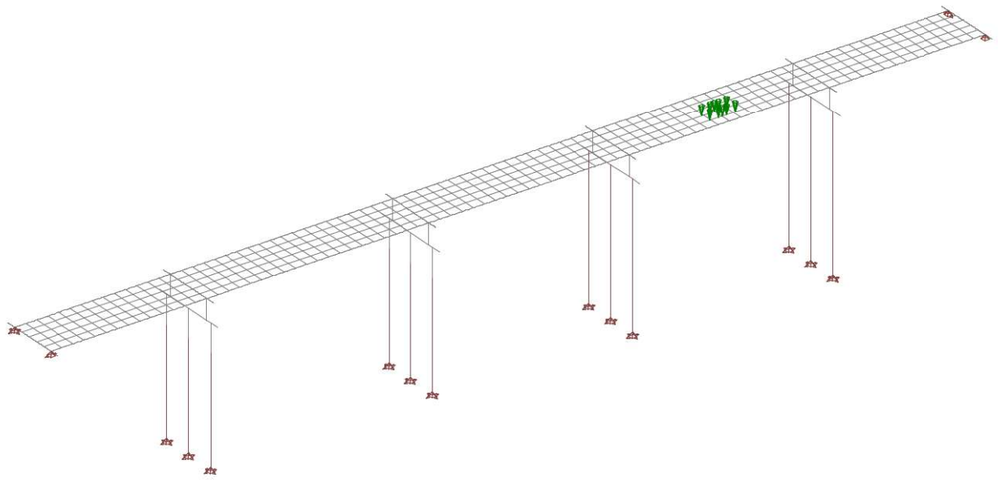
Loading Q1-9: TREN DE CARREGUES VIA 1



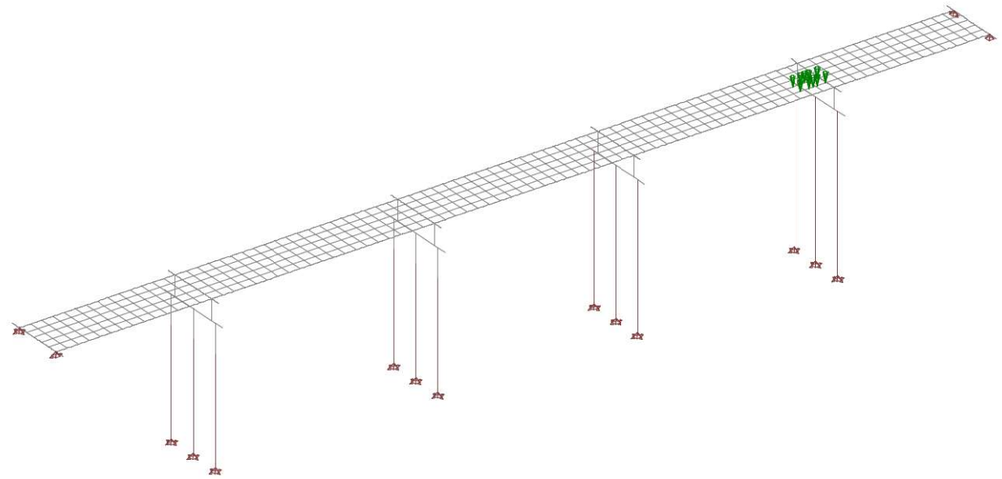
Loading Q1-10: TREN DE CARREGUES VIA 1



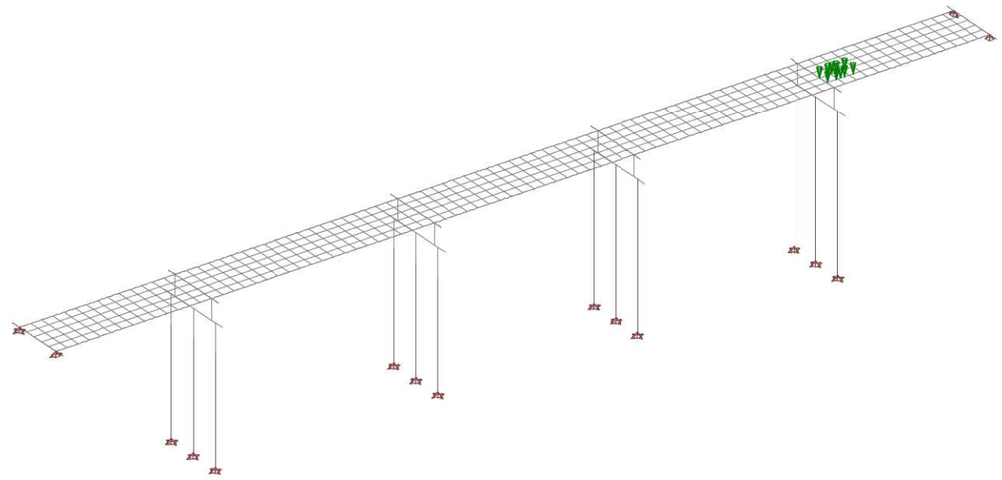
Loading Q1-11: TREN DE CARREGUES VIA 1



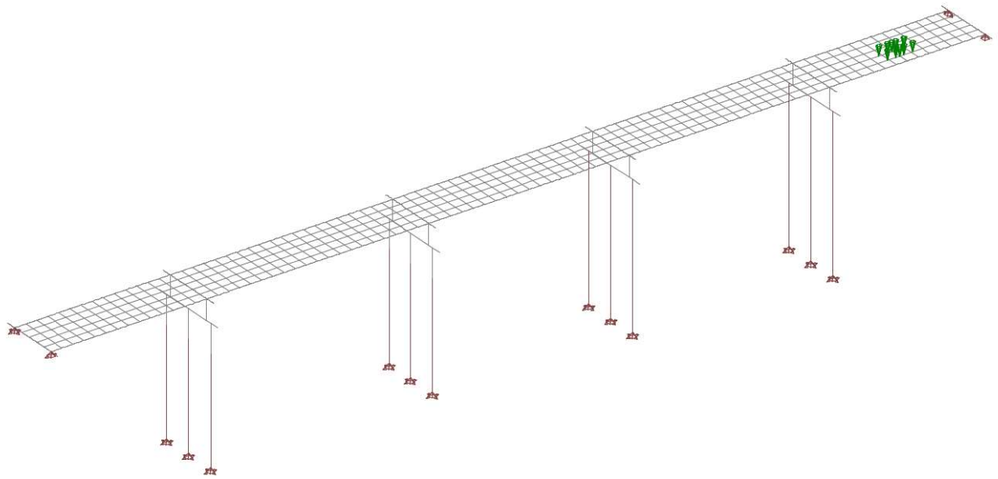
Loading Q1-12: TREN DE CARREGUES VIA 1



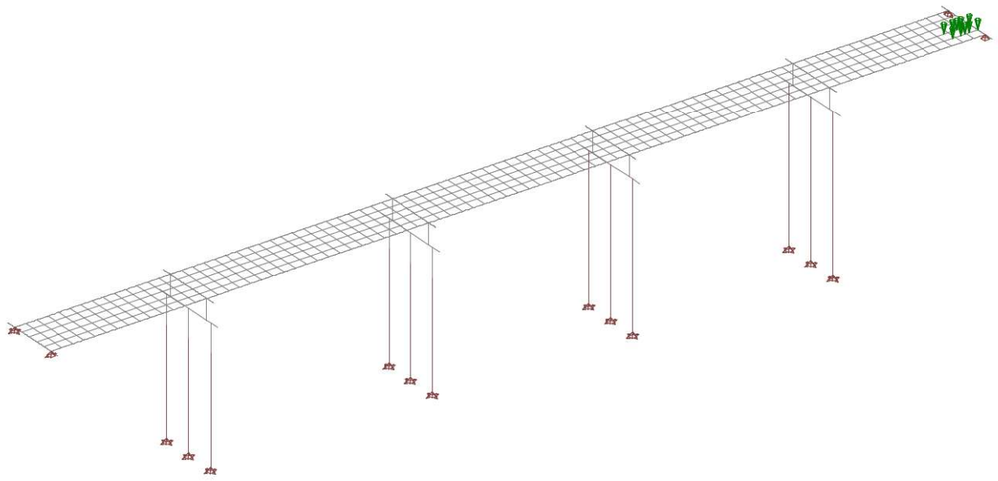
Loading Q1-13: TREN DE CARREGUES VIA 1



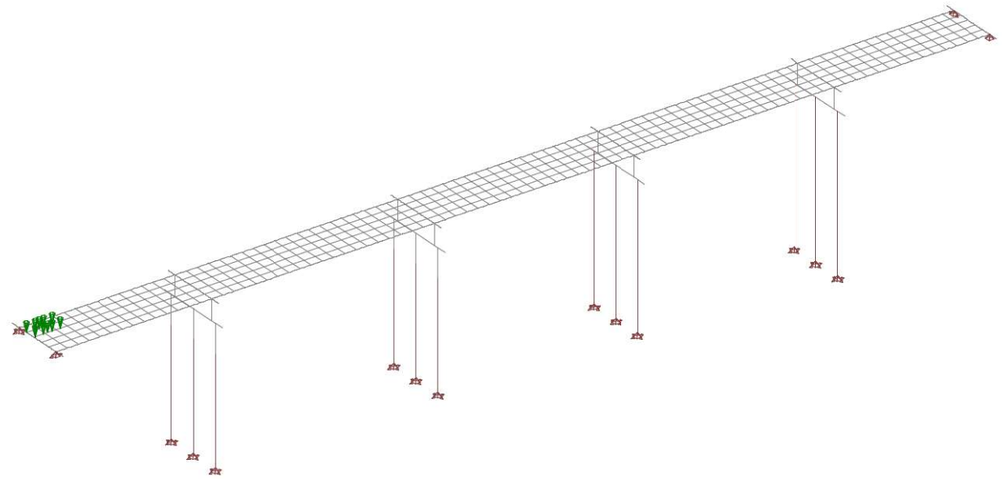
Loading Q1-14: TREN DE CARREGUES VIA 1



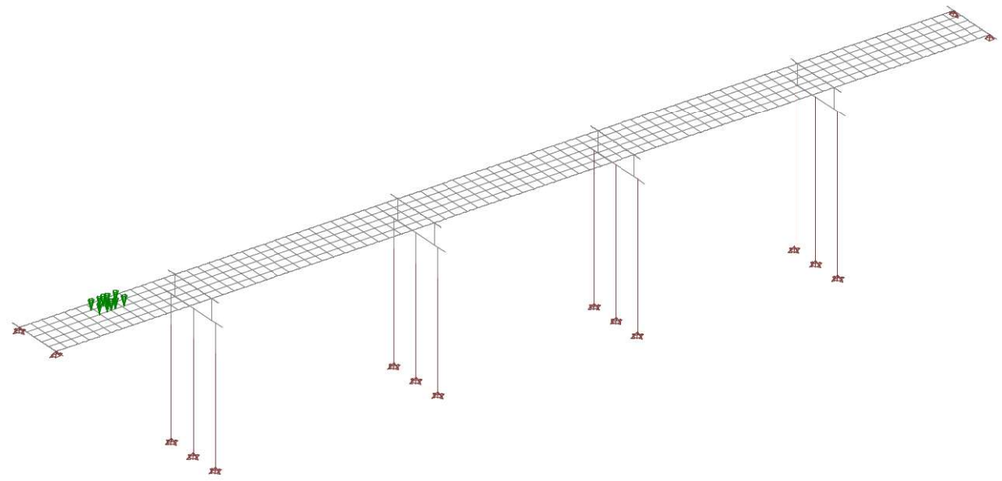
Loading Q1-15: TREN DE CARREGUES VIA 1



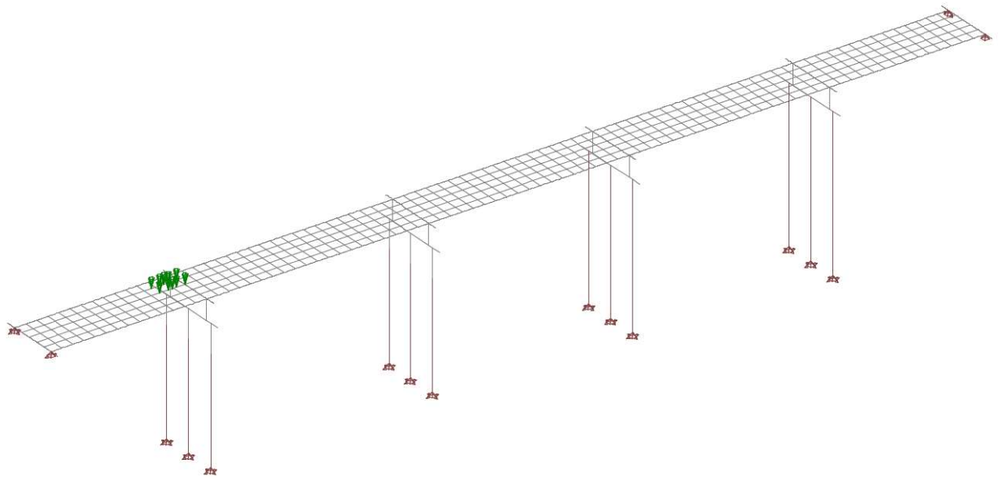
Loading Q2-1: TREN DE CARREGUES VIA 2



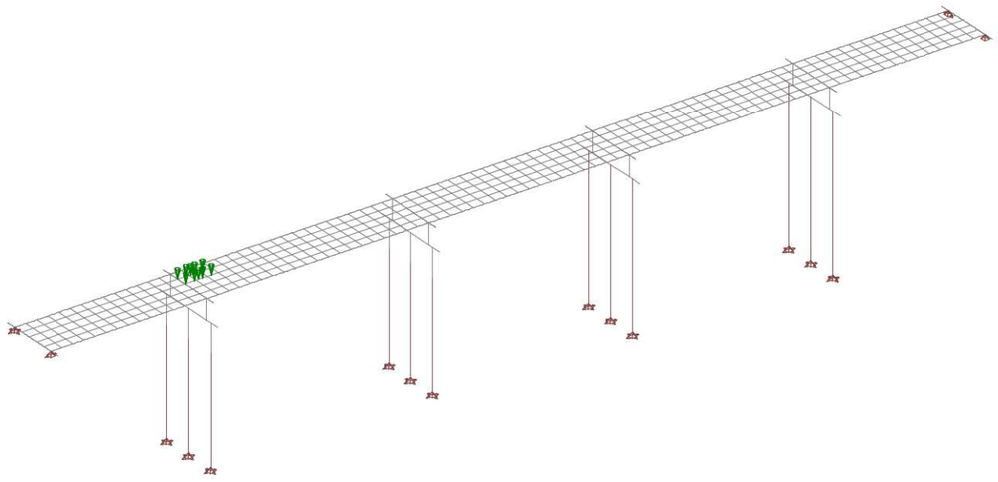
Loading Q2-2: TREN DE CARREGUES VIA 2



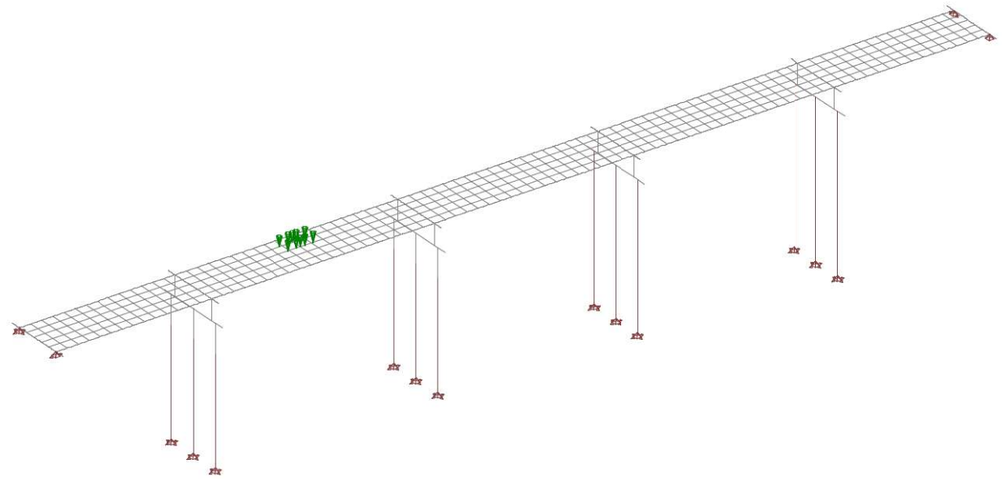
Loading Q2-3: TREN DE CARREGUES VIA 2



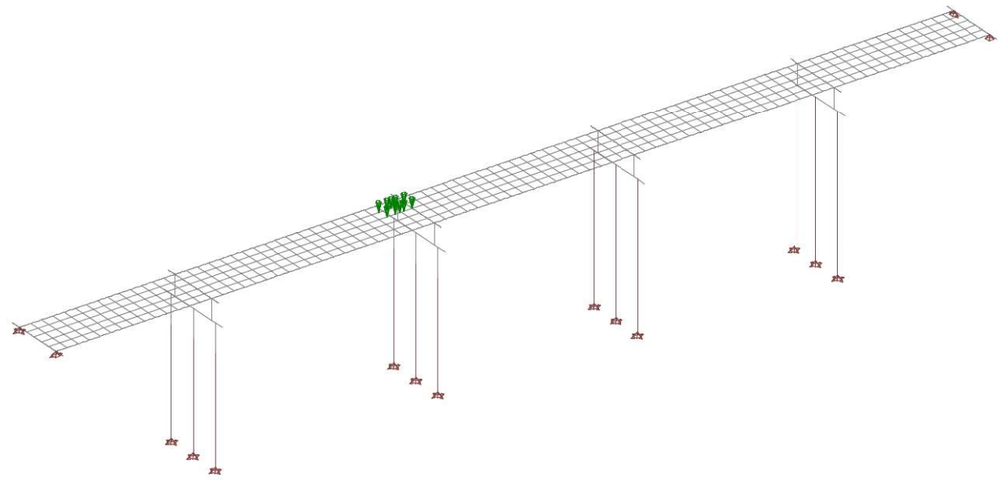
Loading Q2-4: TREN DE CARREGUES VIA 2



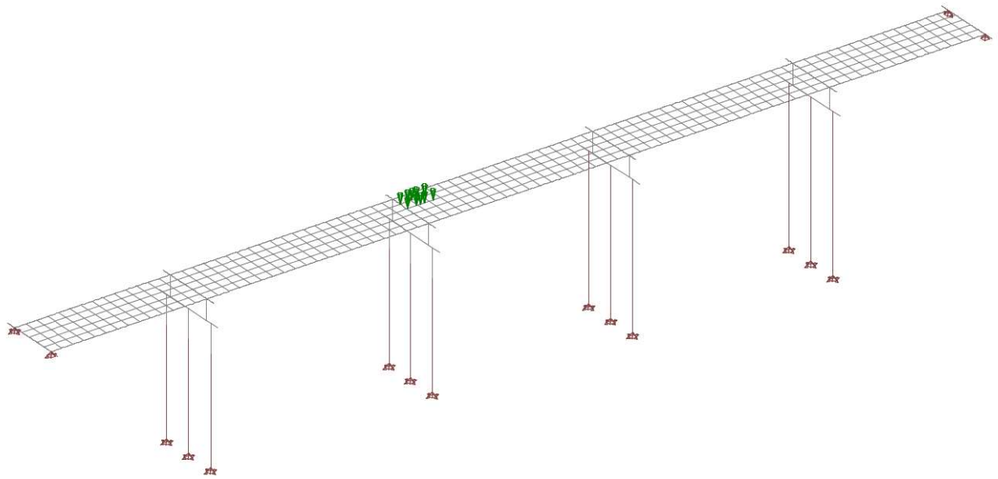
Loading Q2-5: TREN DE CARREGUES VIA 2



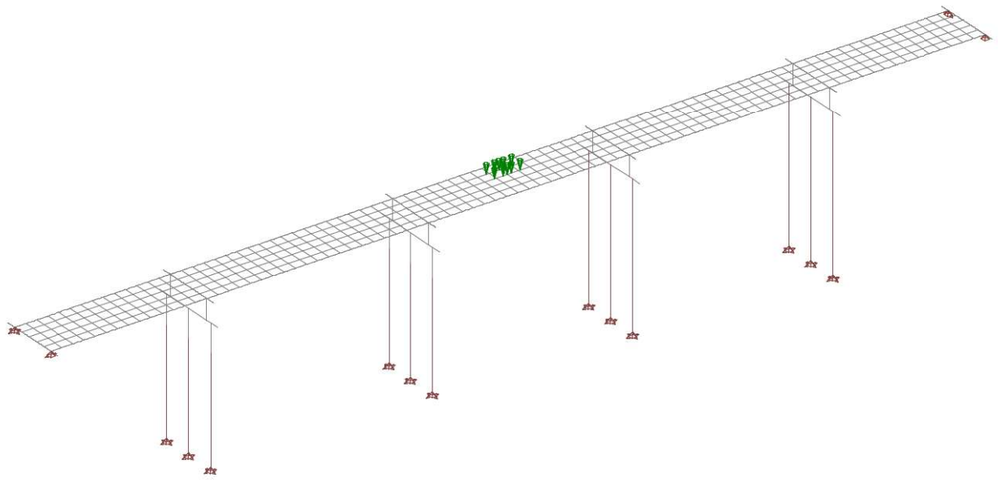
Loading Q2-6: TREN DE CARREGUES VIA 2



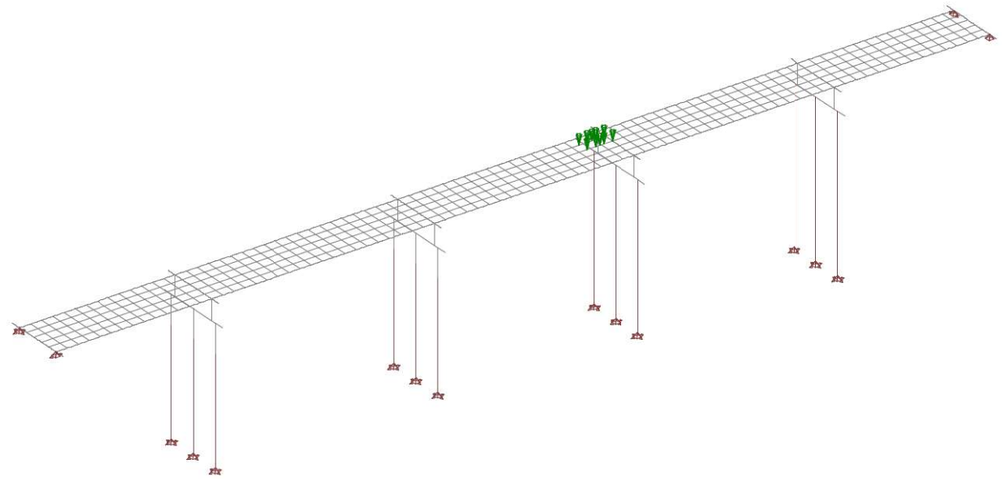
Loading Q2-7: TREN DE CARREGUES VIA 2



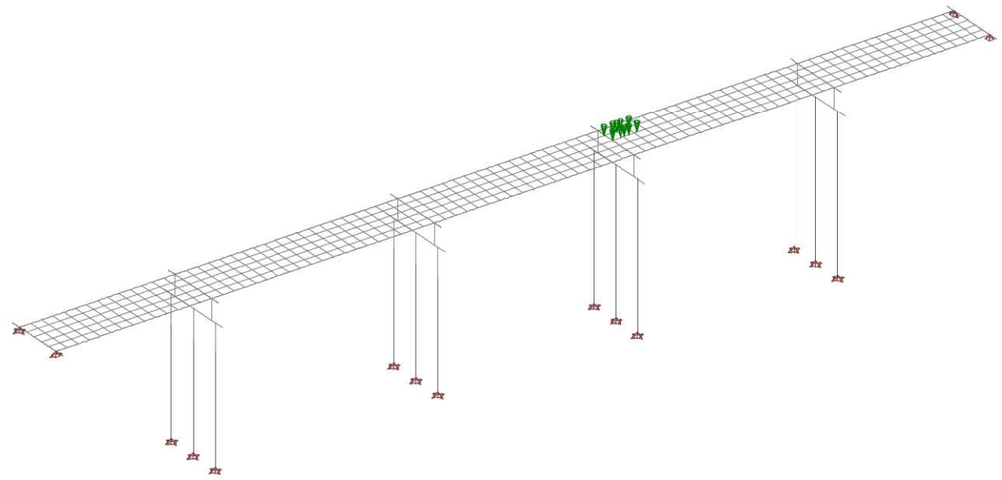
Loading Q2-8: TREN DE CARREGUES VIA 2



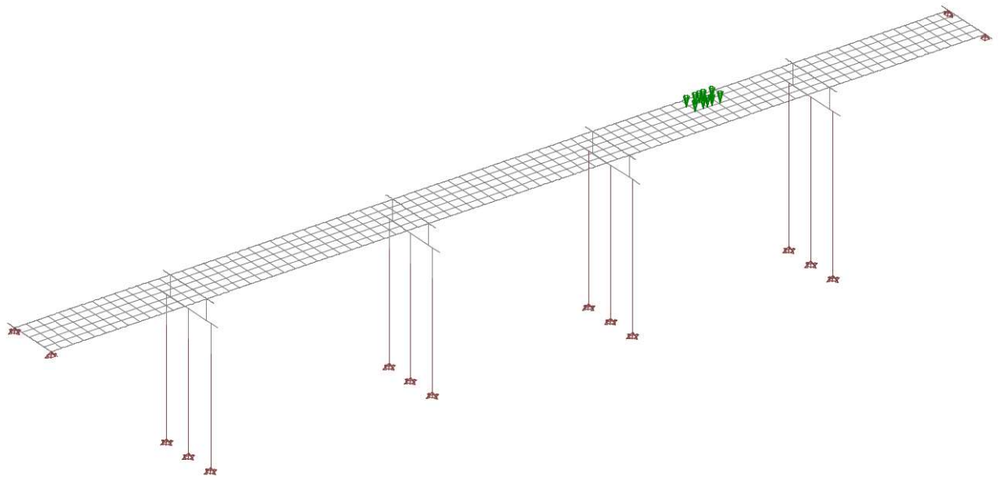
Loading Q2-9: TREN DE CARREGUES VIA 2



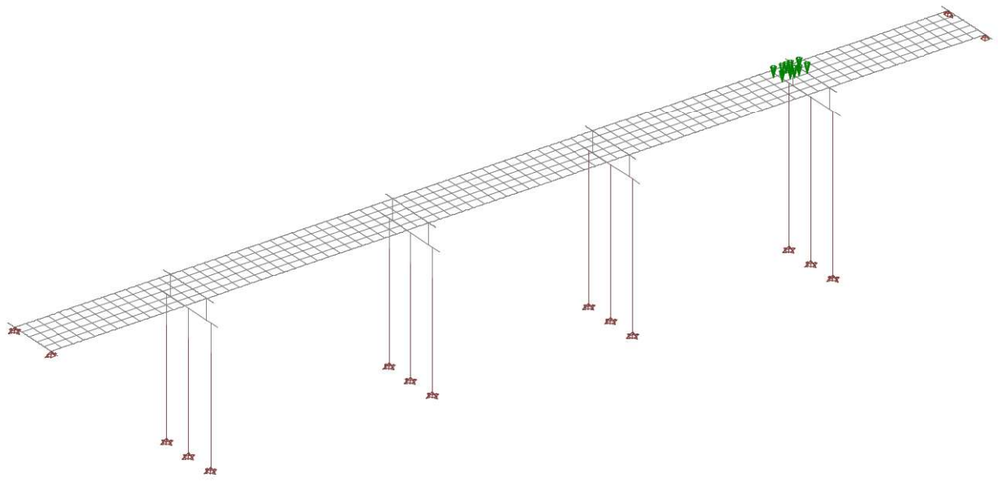
Loading Q2-10: TREN DE CARREGUES VIA 2



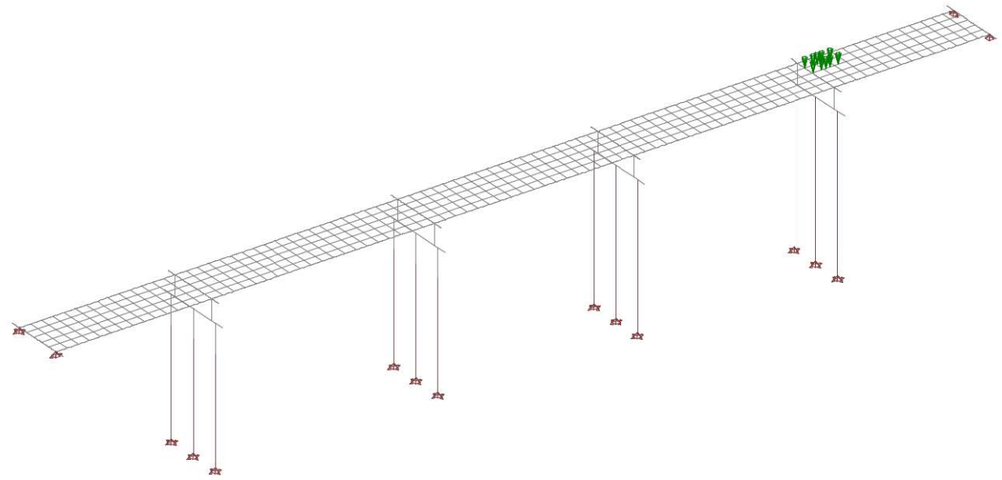
Loading Q2-11: TREN DE CARREGUES VIA 2



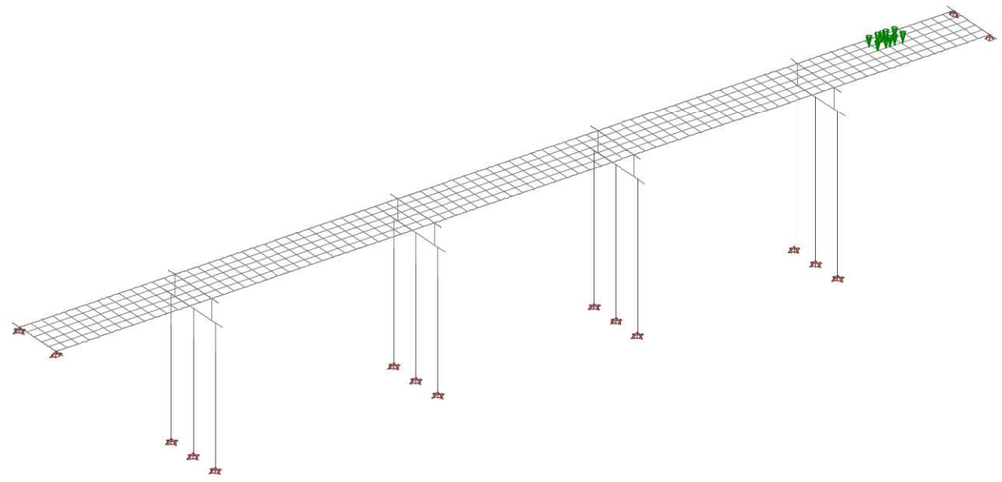
Loading Q2-12: TREN DE CARREGUES VIA 2



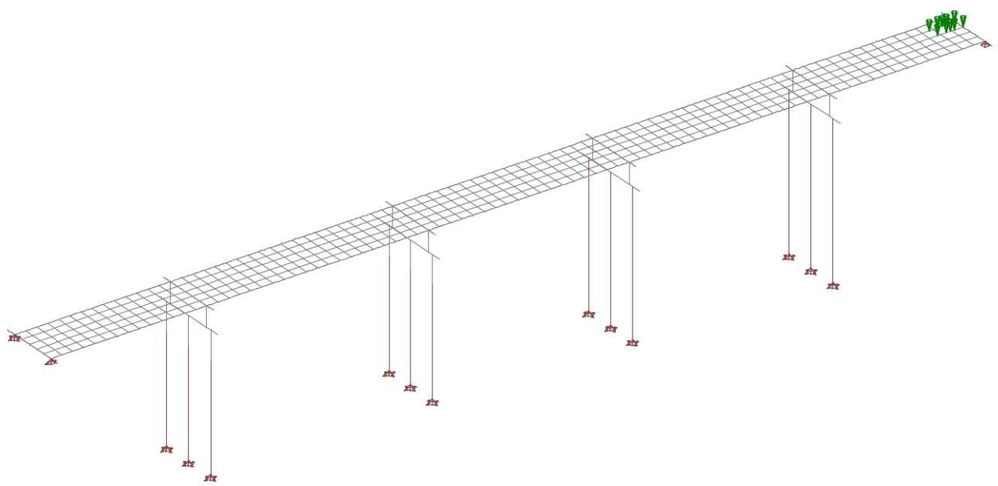
Loading Q2-13: TREN DE CARREGUES VIA 2



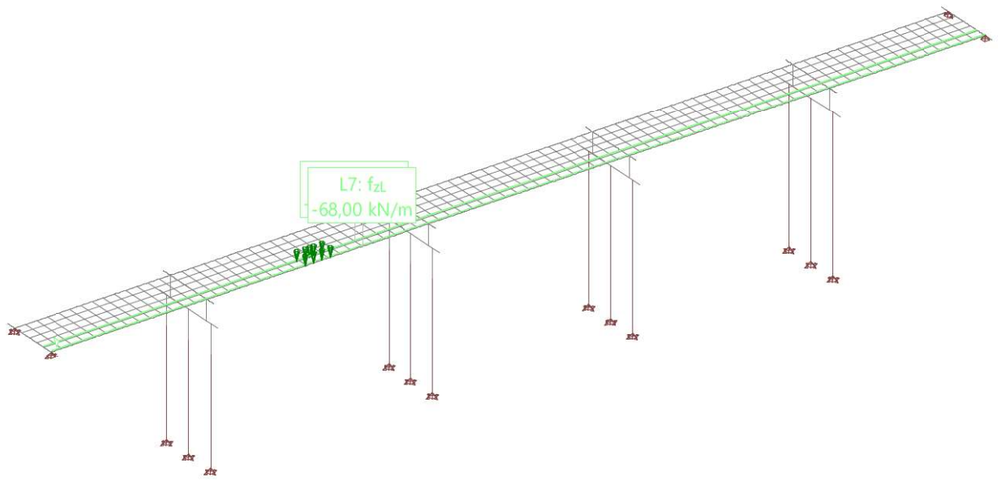
Loading Q2-14: TREN DE CARREGUES VIA 2



Loading Q2-15: TREN DE CARREGUES VIA 2



Loading Qa11: DESCARRILAMIENTO SITUACION 1



Loading 'Qa11': DESCARRILAMIENTO SITUACION 1 Construction stage: 'Initial stage'

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L6	Z Local	178,29	-68,00		0	0	-12124,02
L7	Z Local	178,50	-68,00		0	0	-12138,00

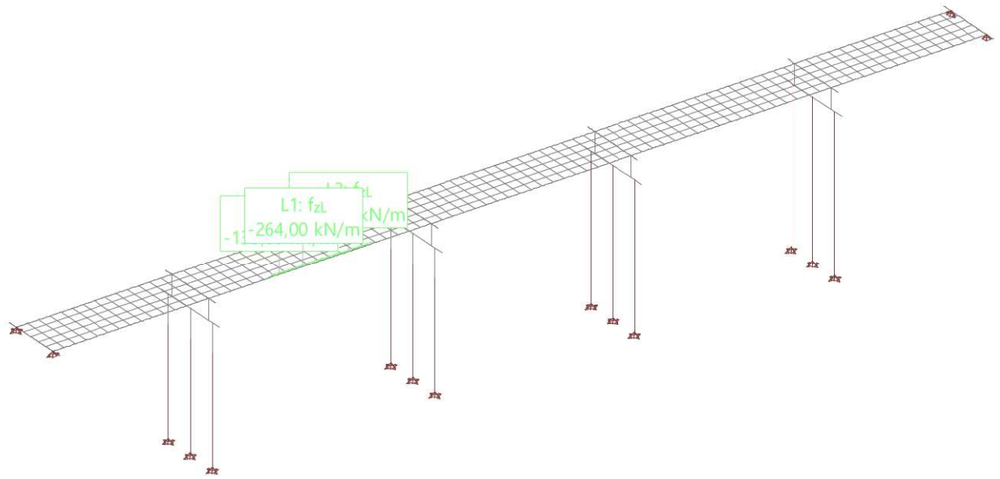
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-1,00		0	0	-1,00
P2	Z Global Member force	-105,00		0	0	-105,00
P3	Z Global Member force	-105,00		0	0	-105,00
P4	Z Global Member force	-105,00		0	0	-105,00
P5	Z Global Member force	-105,00		0	0	-105,00
P6	Z Global Member force	-105,00		0	0	-105,00
P7	Z Global Member force	-105,00		0	0	-105,00
P8	Z Global Member force	-105,00		0	0	-105,00
P9	Z Global Member force	-105,00		0	0	-105,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa11	0	0	-25103,02

Loading Qa21: DESCARRILAMIENTO SITUACION 2



Loading 'Qa21': DESCARRILAMIENTO SITUACION 2 Construction stage: 'Initial stage'

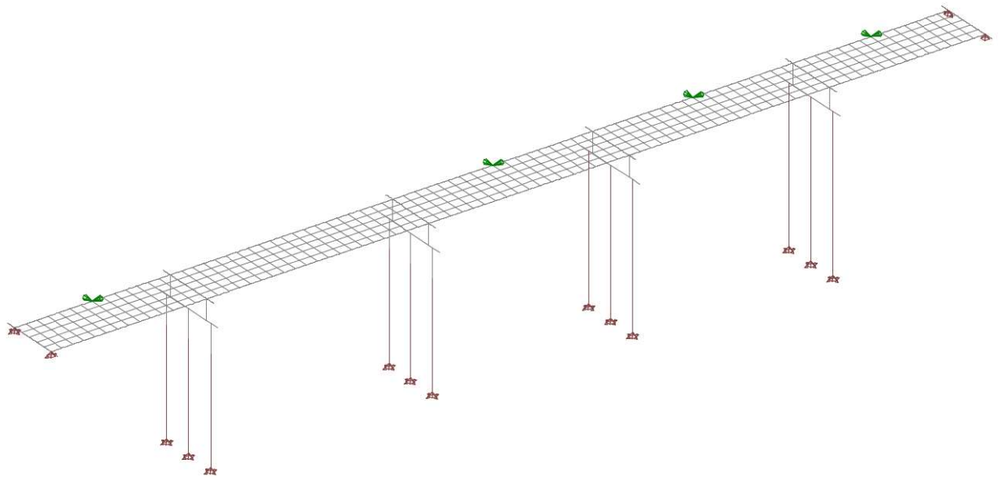
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Z Local	6,40	-264,00		0	0	-1689,60
L2	Z Local	6,80	-135,00		0	0	-918,00
L3	Z Local	6,80	-135,00		0	0	-918,00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa21	0	0	-3525,60

Loading Qa31: IMPACTO DE VEHICULO CARRETERA SOBRE TABLERO



Loading 'Qa31': IMPACTO DE VEHICULO CARRETERA SOBRE TABLERO Construction stage: 'Initial stage

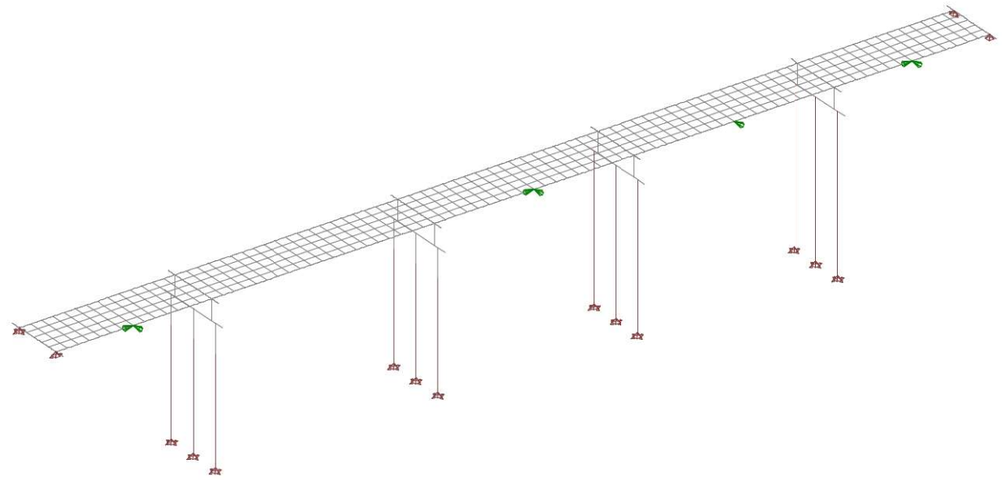
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Y Global Member force	-500,00		0	-500,00	0
P2	Y Global Member force	-500,00		0	-500,00	0
P3	Y Global Member force	-500,00		0	-500,00	0
P4	Y Global Member force	-500,00		0	-500,00	0
P5	X Global Member force	-250,00		-250,00	0	0
P6	X Global Member force	-250,00		-250,00	0	0
P7	X Global Member force	-250,00		-250,00	0	0
P8	X Global Member force	-250,00		-250,00	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa31	-1000,00	-2000,00	0

Loading Qa32: IMPACTO DE VEHICULO CARRETERA SOBRE TABLERO



Loading 'Qa32': IMPACTO DE VEHICULO CARRETERA SOBRE TABLERO Construction stage: 'Initial stage

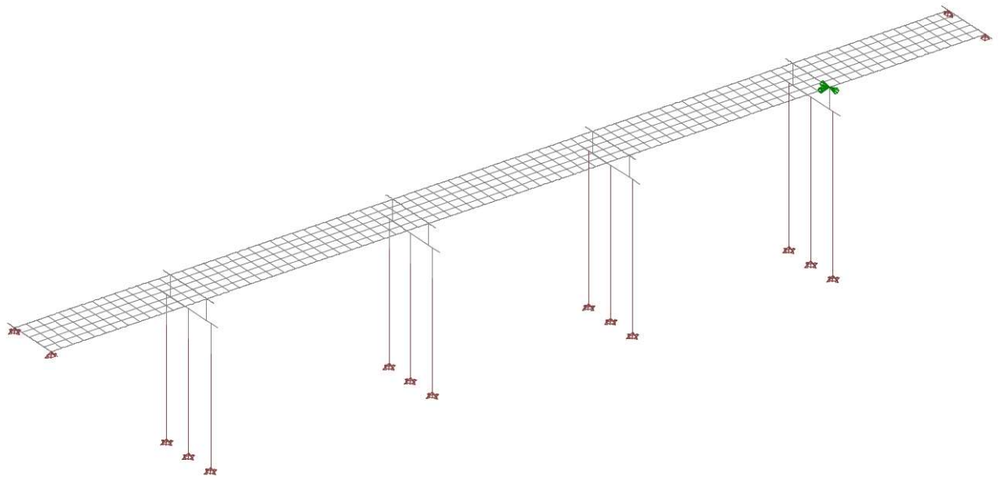
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Y Global Member force	500,00		0	500,00	0
P2	Y Global Member force	500,00		0	500,00	0
P3	Y Global Member force	500,00		0	500,00	0
P4	Y Global Member force	500,00		0	500,00	0
P5	X Global Member force	250,00		250,00	0	0
P6	X Global Member force	250,00		250,00	0	0
P7	X Global Member force	250,00		250,00	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa32	750,00	2000,00	0

Loading Qa41: IMPACTO DE TREN 01



Loading 'Qa41': IMPACTO DE TREN 01 Construction stage: 'Initial stage'

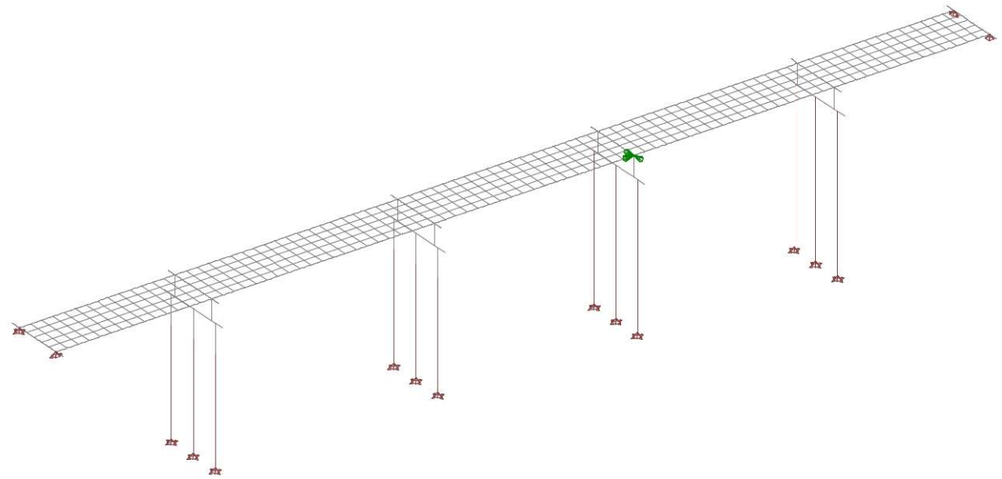
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P4	Y Global Member force	-1815,00		0	-1815,00	0
P7	X Global Member force	4840,00		4840,00	0	0
P1	Member moment Global X		4719,00			
P2	Member moment Global Y		12584,00			

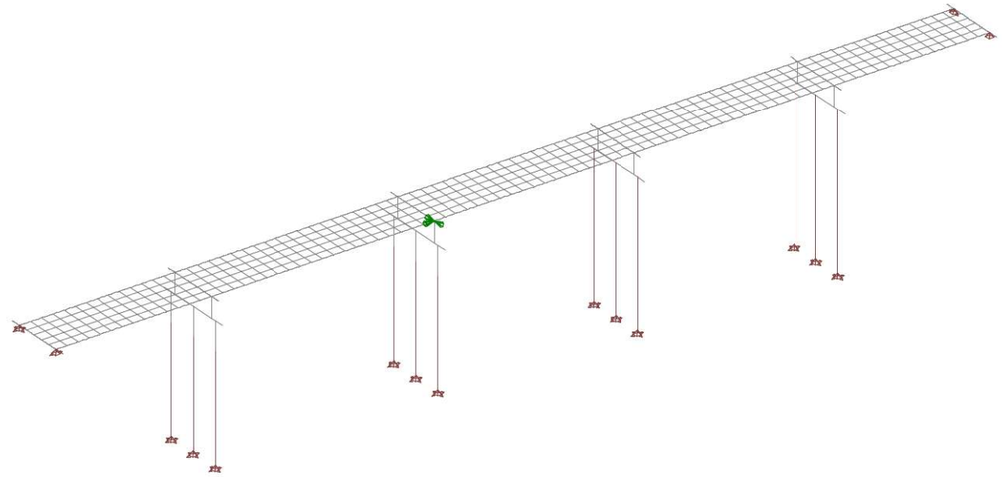
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa41	4840,00	-1815,00	0

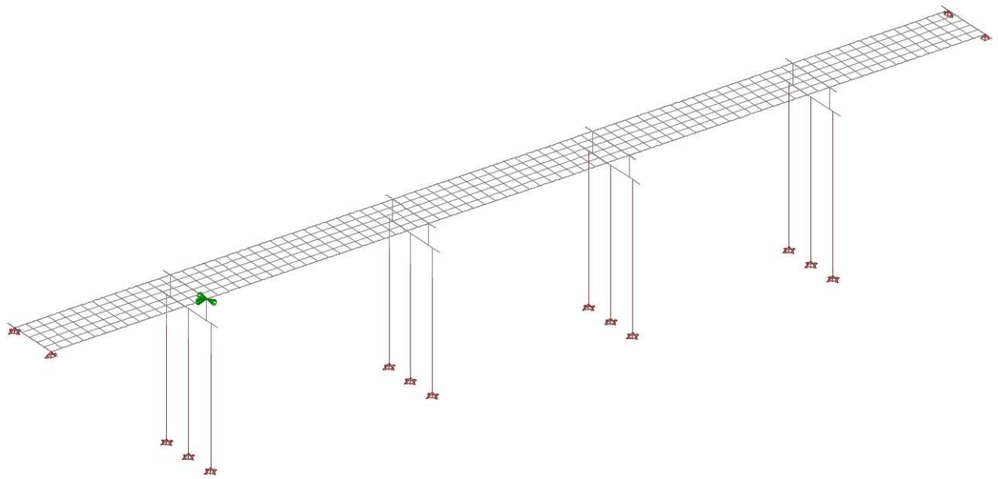
Loading Qa42: IMPACTO DE TREN 02



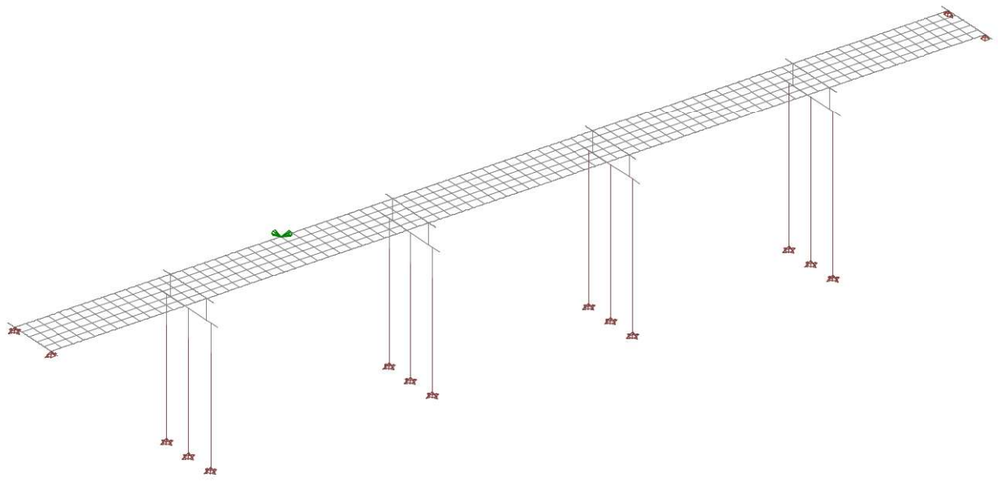
Loading Qa43: IMPACTO DE TREN 03



Loading Qa44: IMPACTO DE TREN 04



Loading Qa51: IMPACTO DE EMBARCACIÓN



Loading 'Qa51': IMPACTO DE EMBARCACIÓN Construction stage: 'Initial stage'

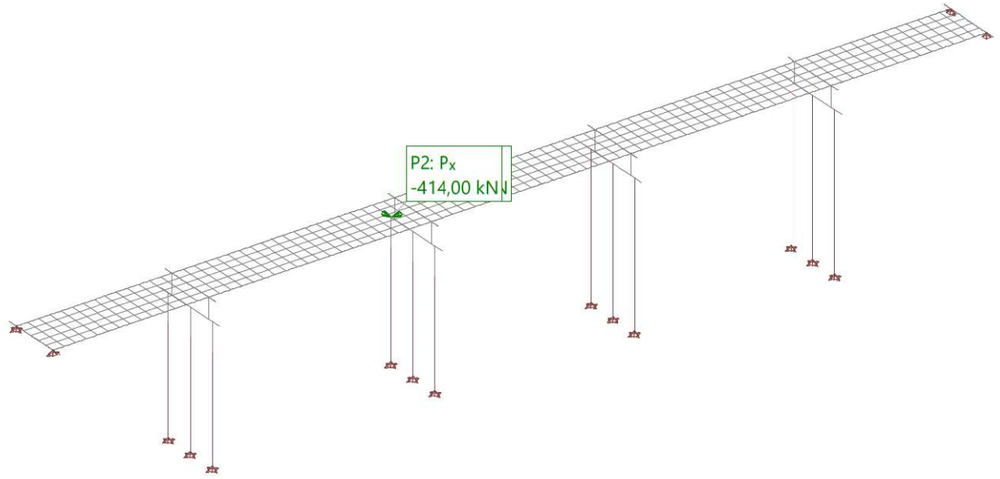
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Y Global Member force	-1033,00		0	-1033,00	0
P5	X Global Member force	-414,00		-414,00	0	0

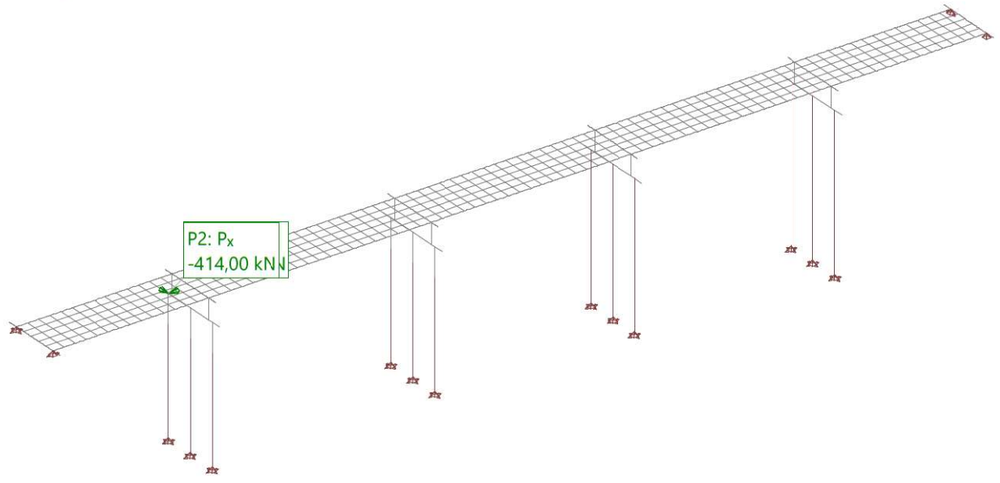
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qa51	-414,00	-1033,00	0

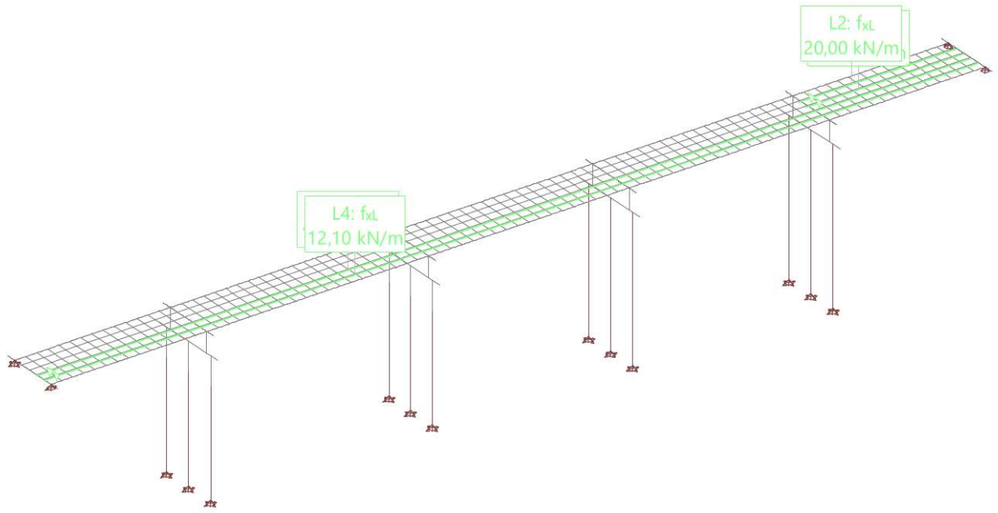
Loading Qa52: IMPACTO DE EMBARCACIÓN



Loading Qa53: IMPACTO DE EMBARCACIÓN



Loading Ql1: FRENADO + ARRANQUE 1



Loading 'Ql1': FRENADO + ARRANQUE 1 Construction stage: 'Initial stage'

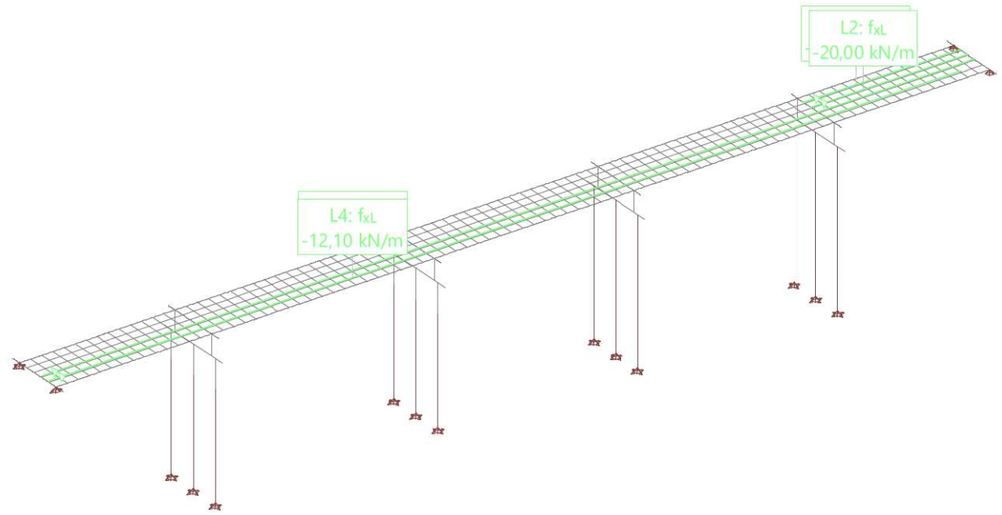
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	X Local	30,00	20,00		600,00	0	0
L2	X Local	30,00	20,00		600,00	0	0
L3	X Local	178,50	12,10		2159,85	0	0
L4	X Local	178,50	12,10		2159,85	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Ql1	5519,70	0	0

Loading Ql2: FRENADO + ARRANQUE 2



Loading 'Ql2': FRENADO + ARRANQUE 2 Construction stage: 'Initial stage'

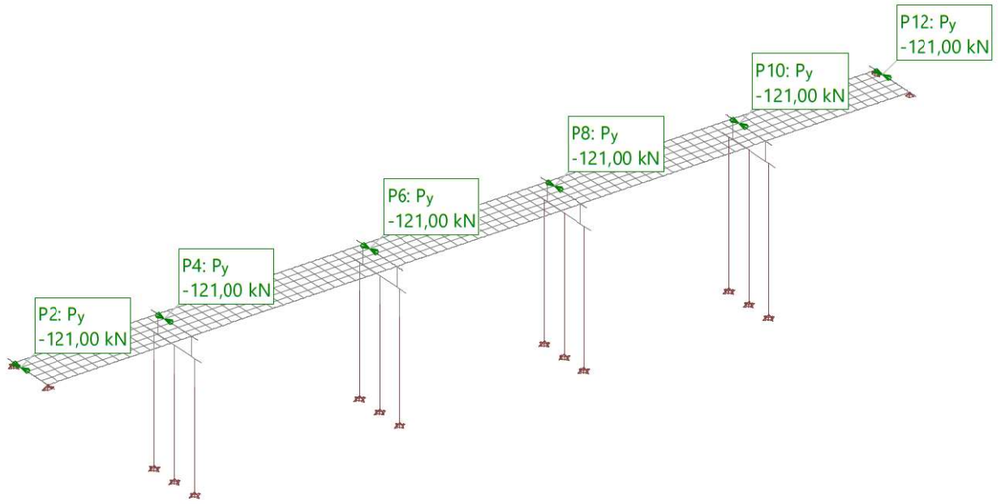
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	X Local	30,00	-20,00		-600,00	0	0
L2	X Local	30,00	-20,00		-600,00	0	0
L3	X Local	178,50	-12,10		-2159,85	0	0
L4	X Local	174,25	-12,10		-2108,43	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Ql2	-5468,28	0	0

Generator Qs: EFECTO LAZO



Loading 'Qs': EFECTO LAZO Construction stage: 'Initial stage'

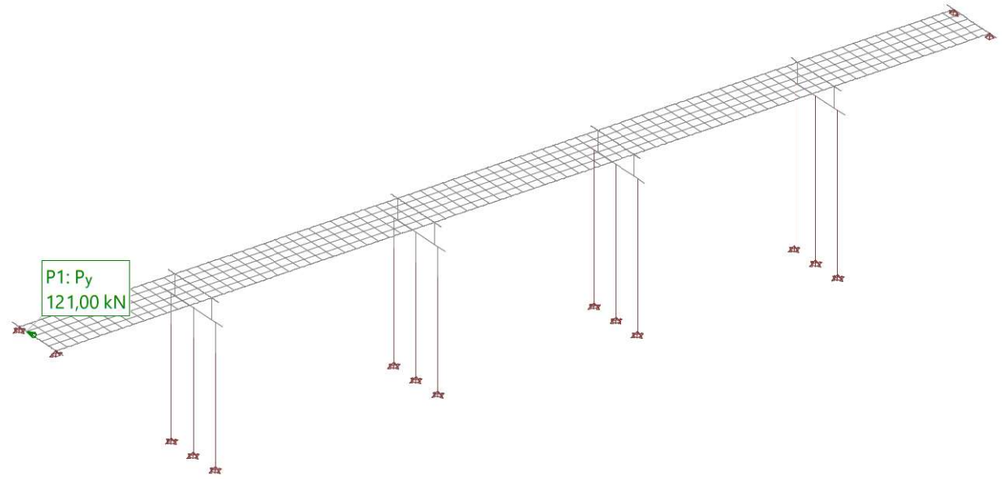
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Y Global Member force	121,00		0	121,00	0
P2	Y Global Member force	-121,00		0	-121,00	0
P3	Y Global Member force	121,00		0	121,00	0
P4	Y Global Member force	-121,00		0	-121,00	0
P5	Y Global Member force	121,00		0	121,00	0
P6	Y Global Member force	-121,00		0	-121,00	0
P7	Y Global Member force	121,00		0	121,00	0
P8	Y Global Member force	-121,00		0	-121,00	0
P9	Y Global Member force	121,00		0	121,00	0
P10	Y Global Member force	-121,00		0	-121,00	0
P11	Y Global Member force	121,00		0	121,00	0
P12	Y Global Member force	-121,00		0	-121,00	0

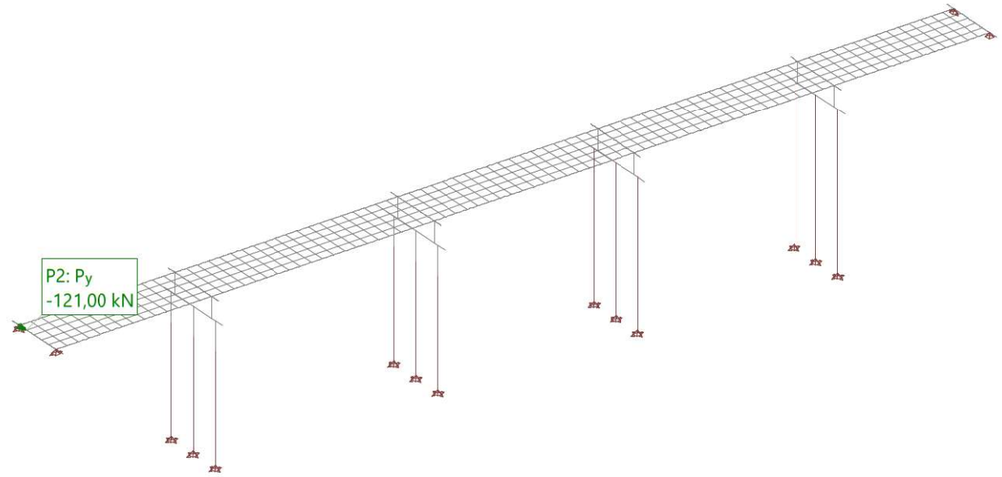
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Qs	0	0	0

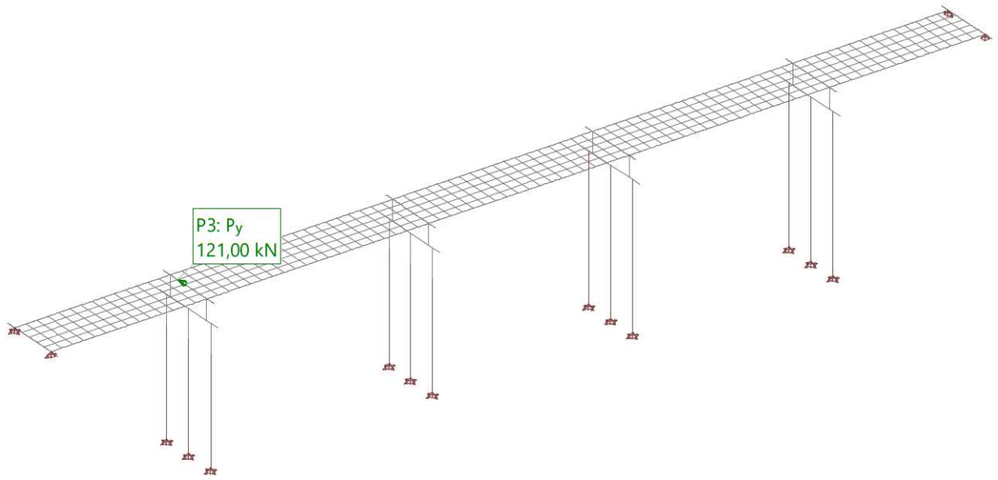
Loading Qs%P1: Load position: P1



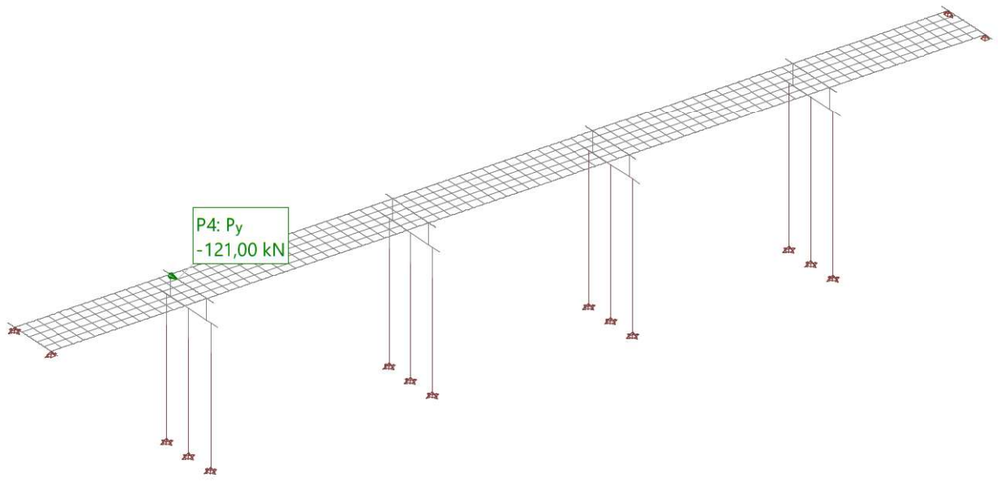
Loading Qs%P2: Load position: P2



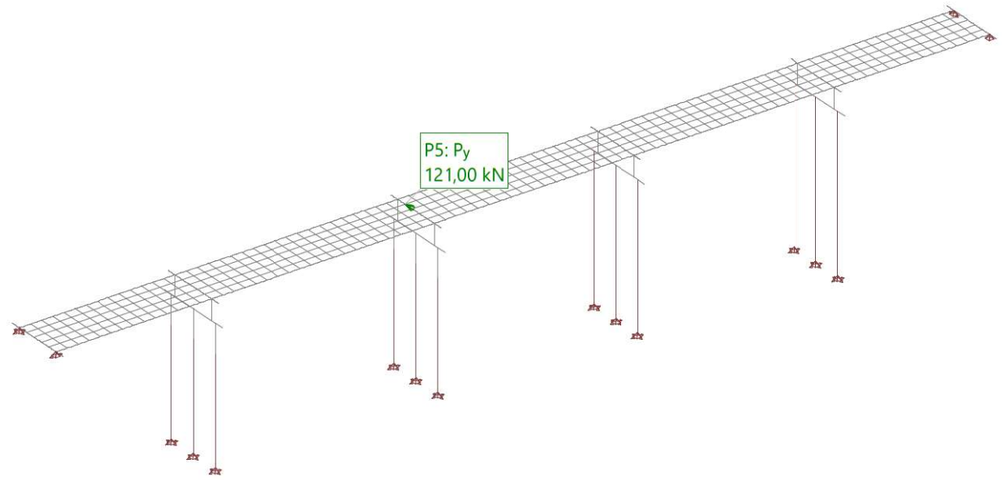
Loading Qs%P3: Load position: P3



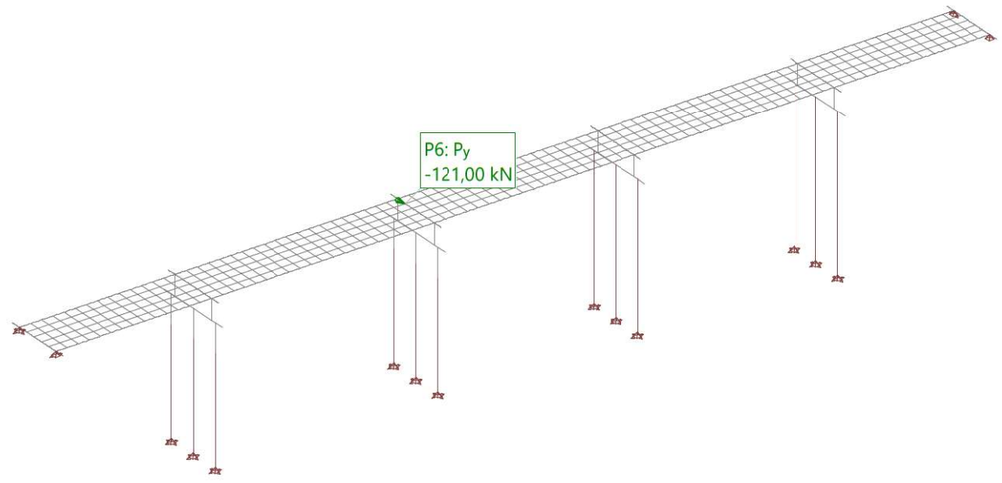
Loading Qs%P4: Load position: P4



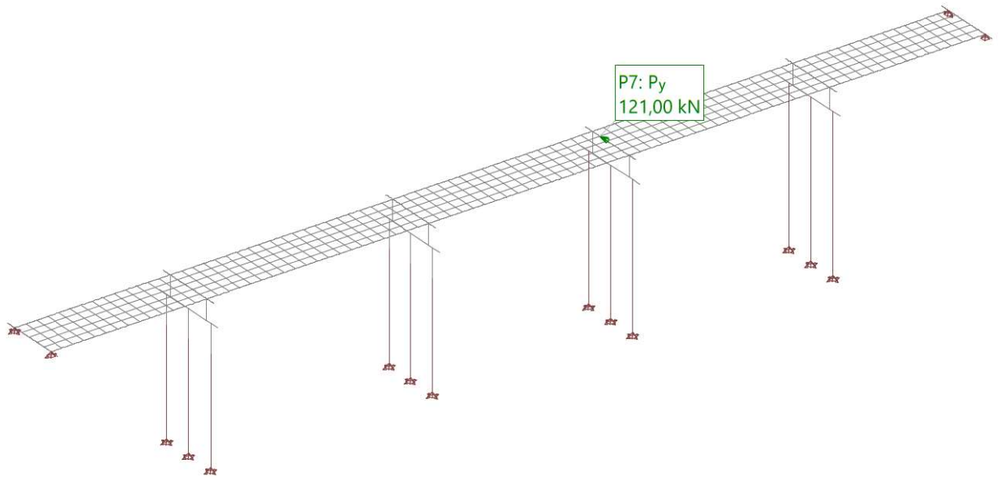
Loading Qs%P5: Load position: P5



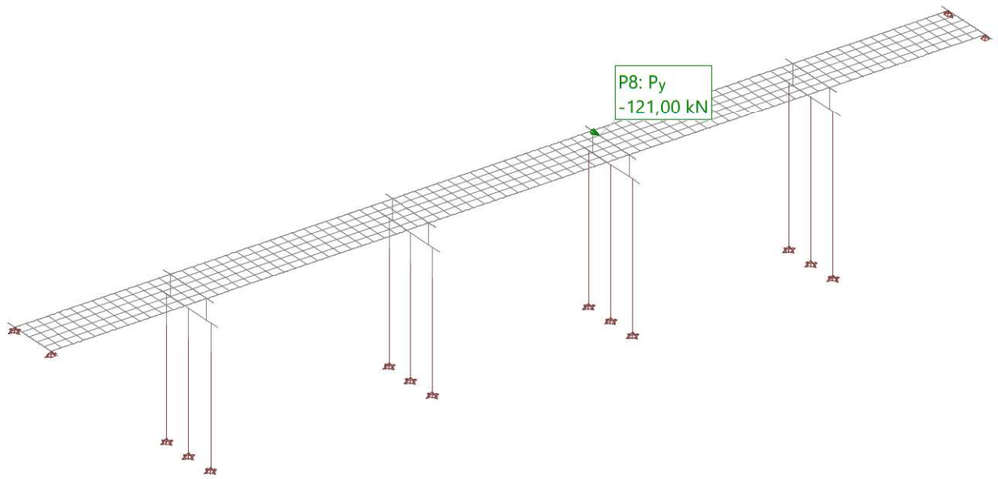
Loading Qs%P6: Load position: P6



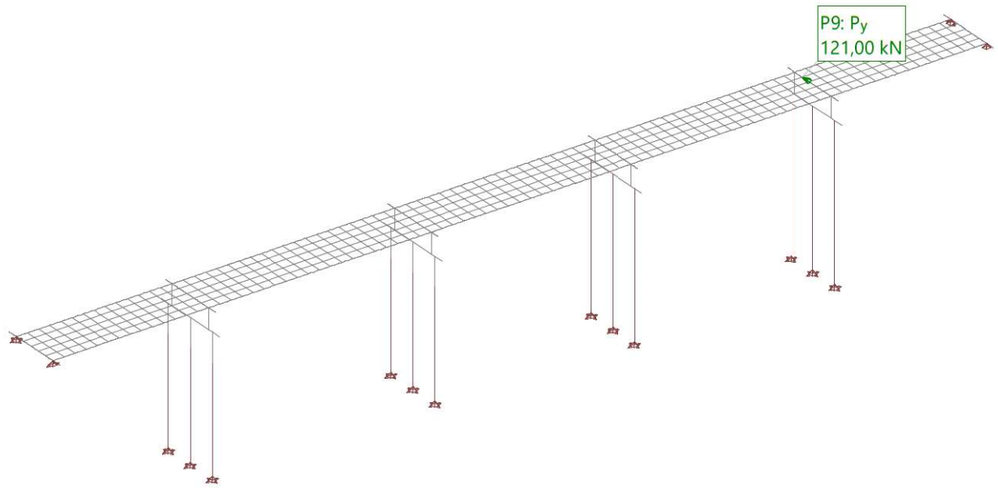
Loading Qs%P7: Load position: P7



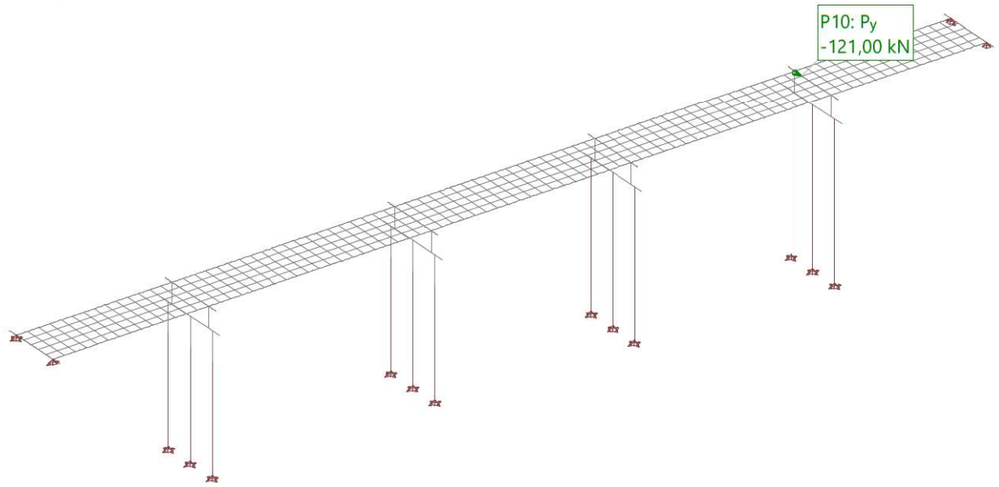
Loading Qs%P8: Load position: P8



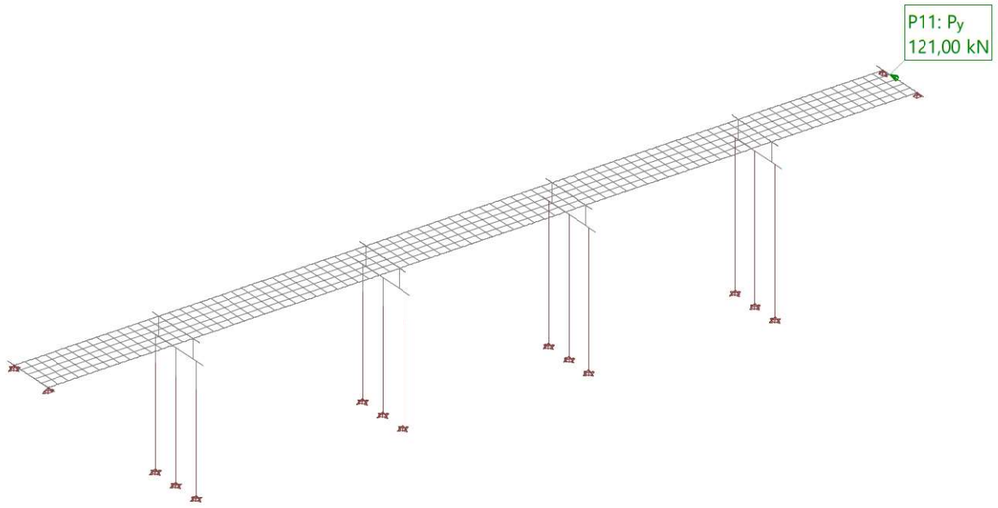
Loading Qs%P9: Load position: P9



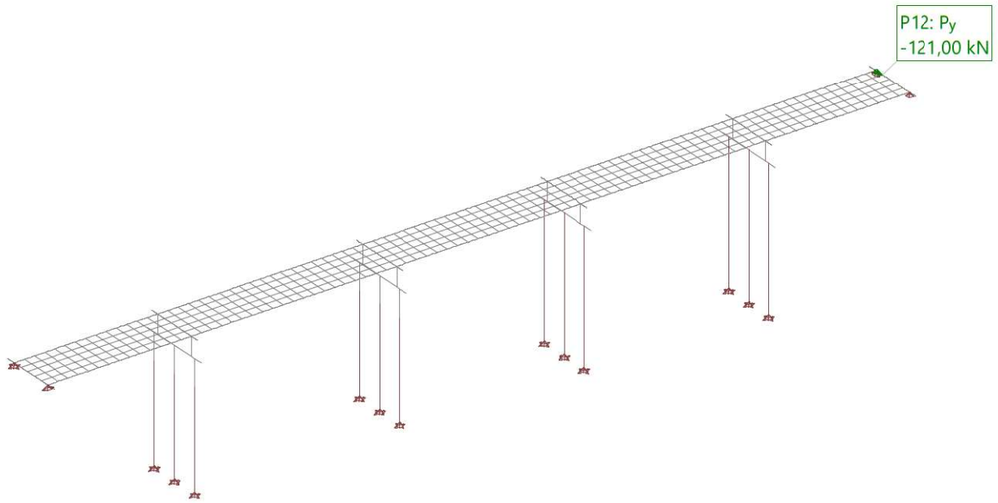
Loading Qs%P10: Load position: P10



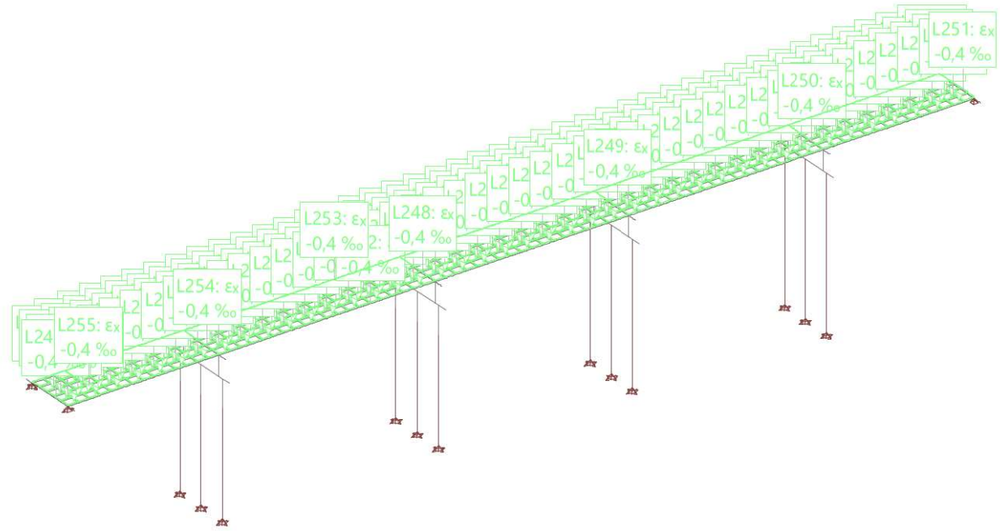
Loading Qs%P11: Load position: P11



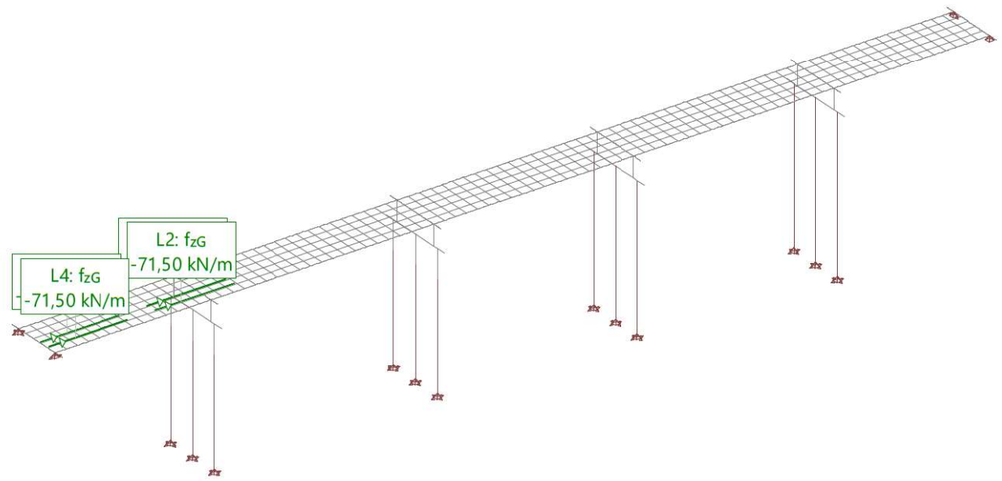
Loading Qs%P12: Load position: P12



Loading RET: RETRACCIÓN 0,367 MM/M



Loading SW01-1: SC DE EC. TREN TRÁFICO NORMAL. VIA 1-1



Loading 'SW01-1': SC DE EC. TREN TRÁFICO NORMAL. VIA 1-1 Construction stage: 'SERVICIO T=0'

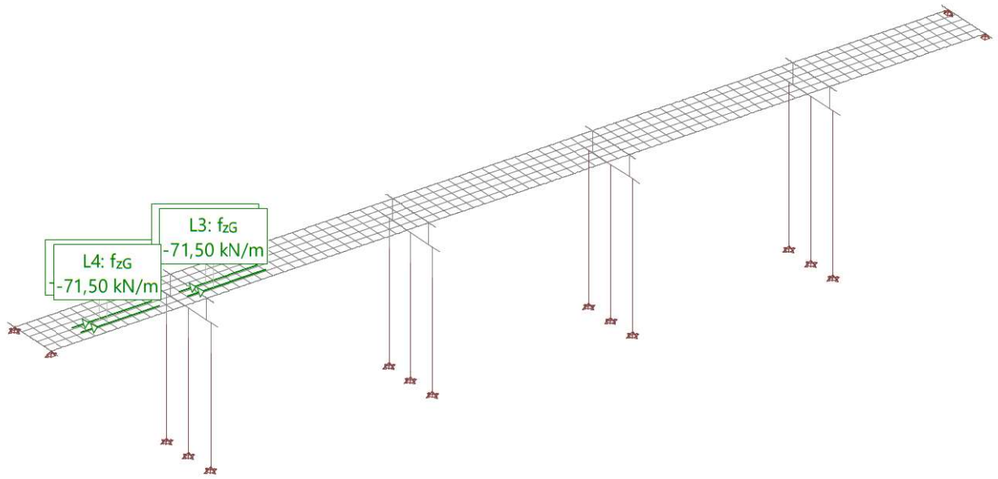
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Z Global	15,00	-89,40	0	0	0	-1341,00
L2	Z Global	15,00	-71,50	0	0	0	-1072,50
L3	Z Global	15,00	-89,40	0	0	0	-1341,00
L4	Z Global	15,00	-71,50	0	0	0	-1072,50

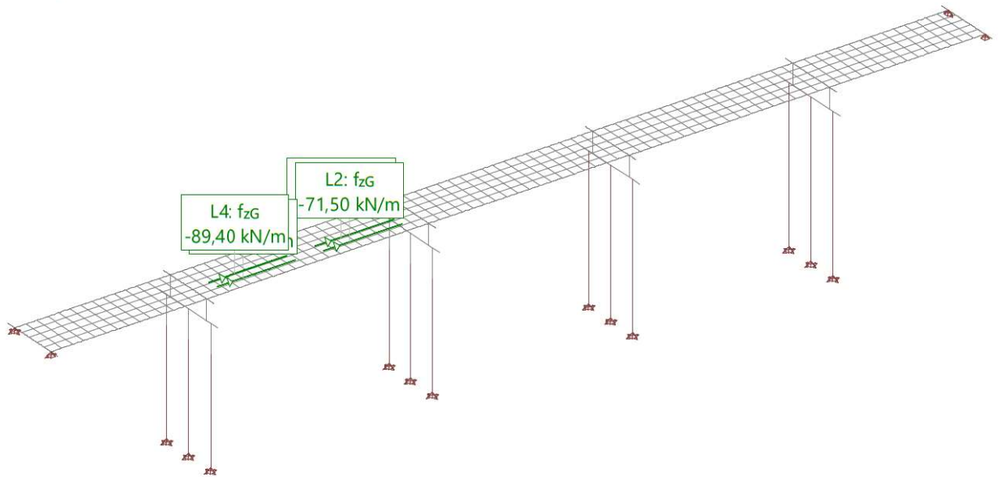
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading SW01-1	0	0	-4827,00

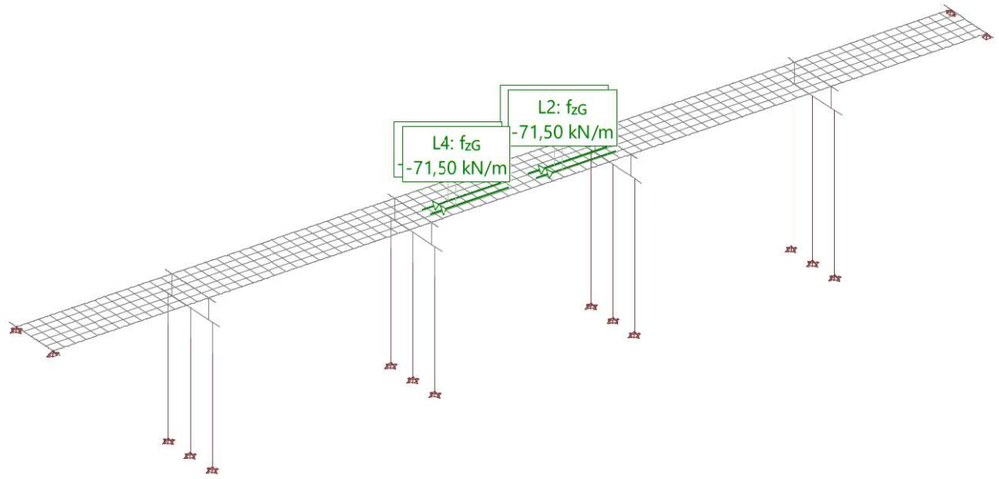
Loading SW01-2: SC DE EC. TRENTRÁFICO NORMAL. VIA 1-2



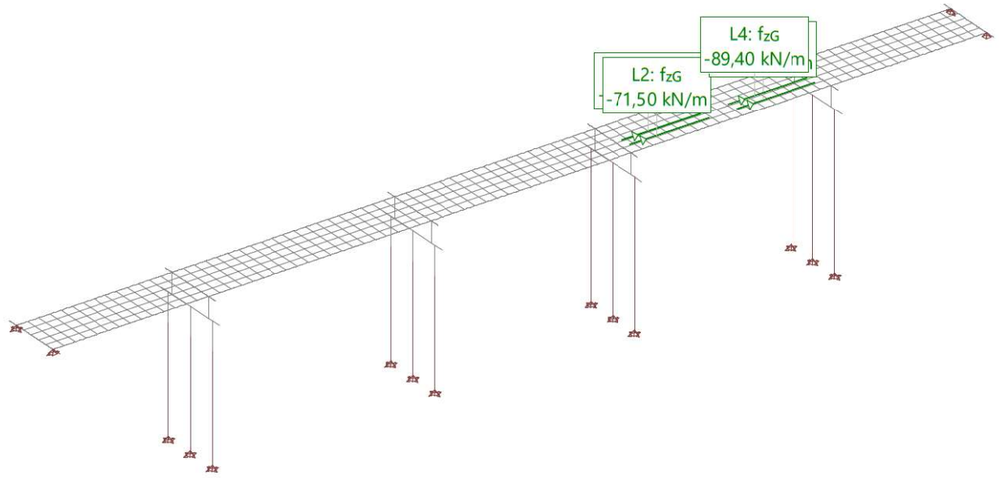
Loading SW01-3: SC DE EC. TRENTRÁFICO NORMAL. VIA 1-3



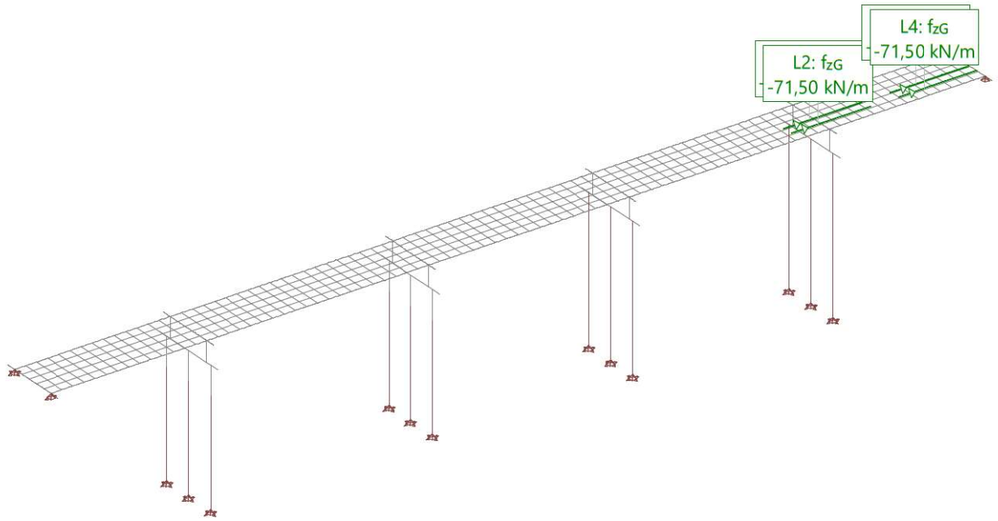
Loading SW01-4: SC DE EC. TRENTRÁFICO NORMAL. VIA 1-4



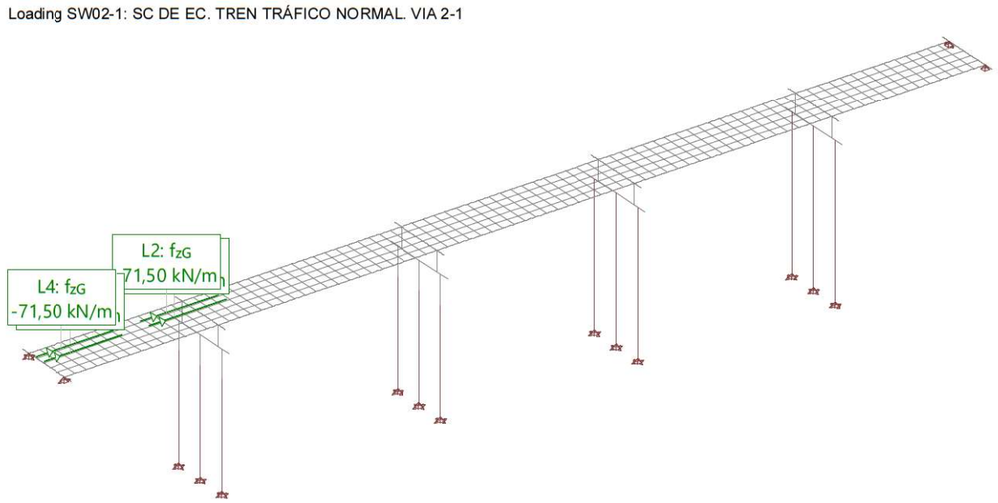
Loading SW01-5: SC DE EC. TRENTRÁFICO NORMAL. VIA 1-5



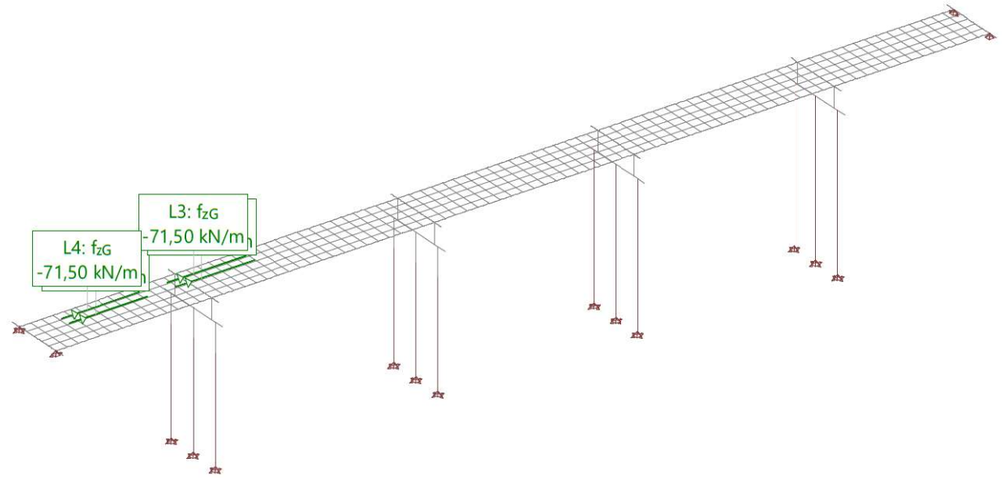
Loading SW01-6: SC DE EC. TREN TRÁFICO NORMAL. VIA 1-6



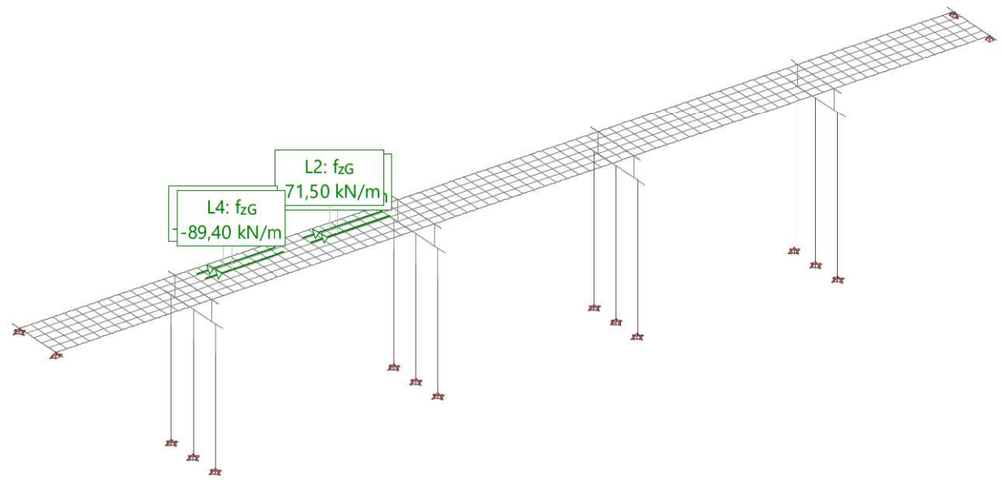
Loading SW02-1: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-1



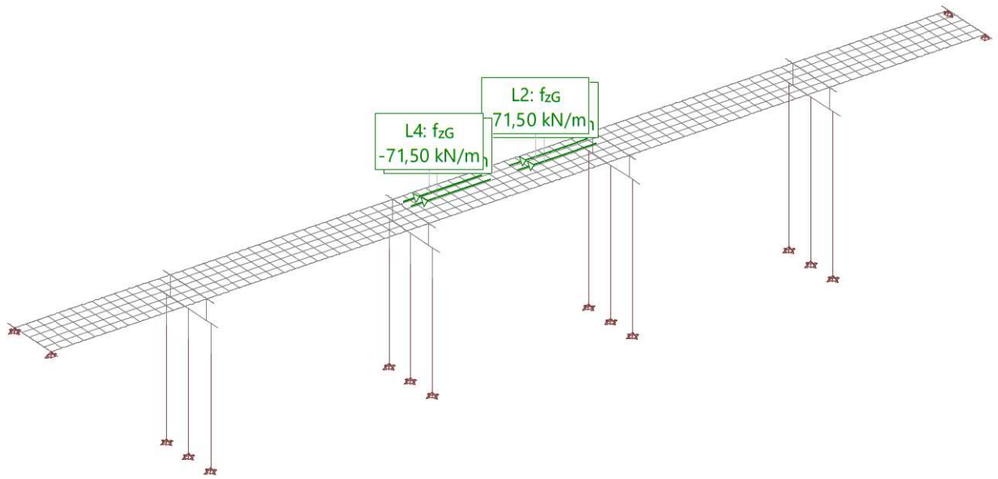
Loading SW02-2: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-2



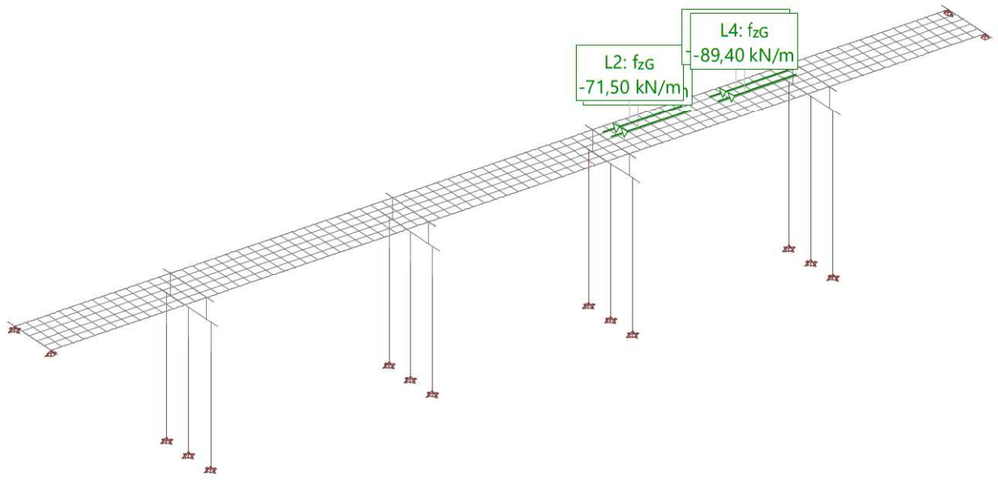
Loading SW02-3: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-3



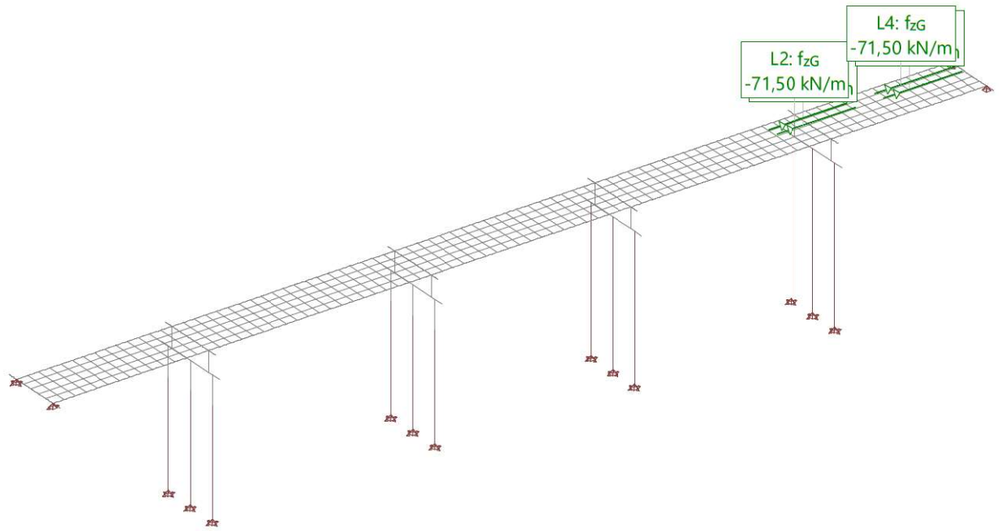
Loading SW02-4: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-4



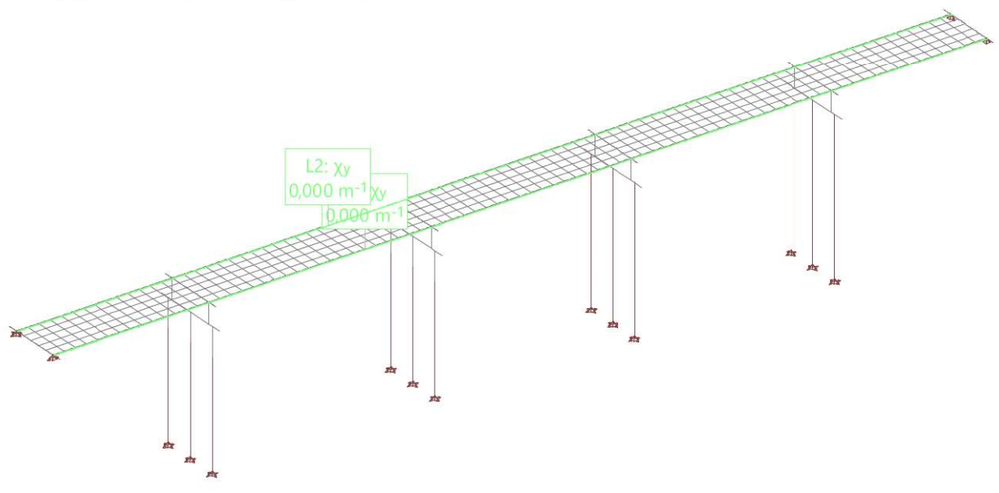
Loading SW02-5: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-5



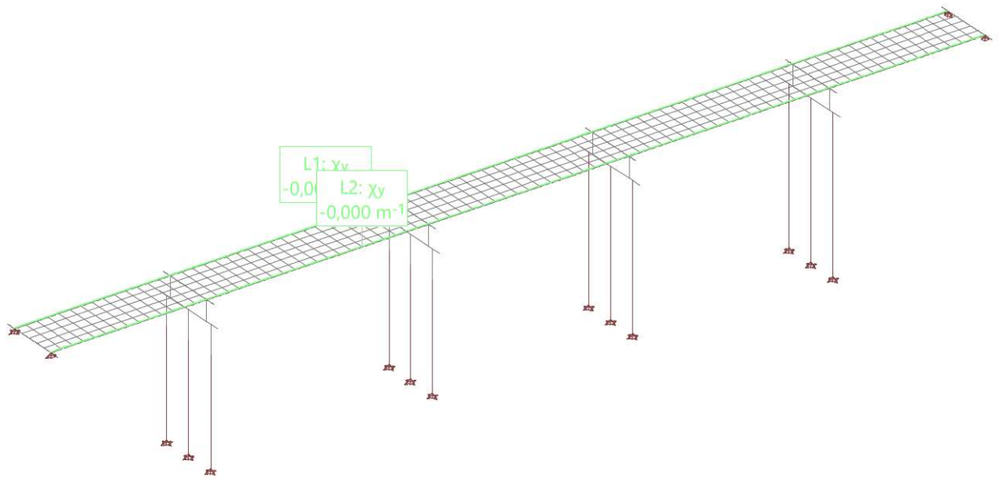
Loading SW02-6: SC DE EC. TREN TRÁFICO NORMAL. VIA 2-6



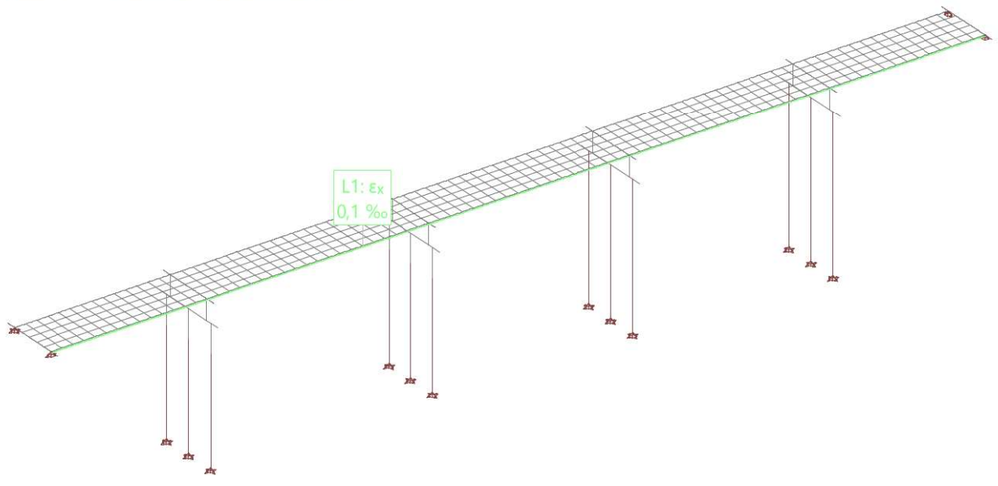
Loading Tg+: Gradiente térmico vertical positivo +12 ºC



Loading Tg-: Gradiente térmico vertical negativo -8.8 °C



Loading Tgt+: Gradiente térmico transversal 5 °C



Nr.:

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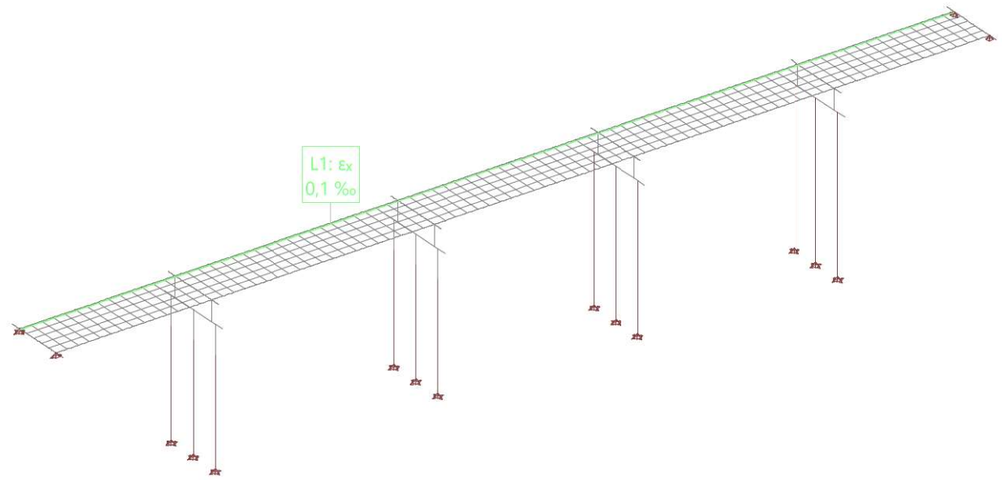
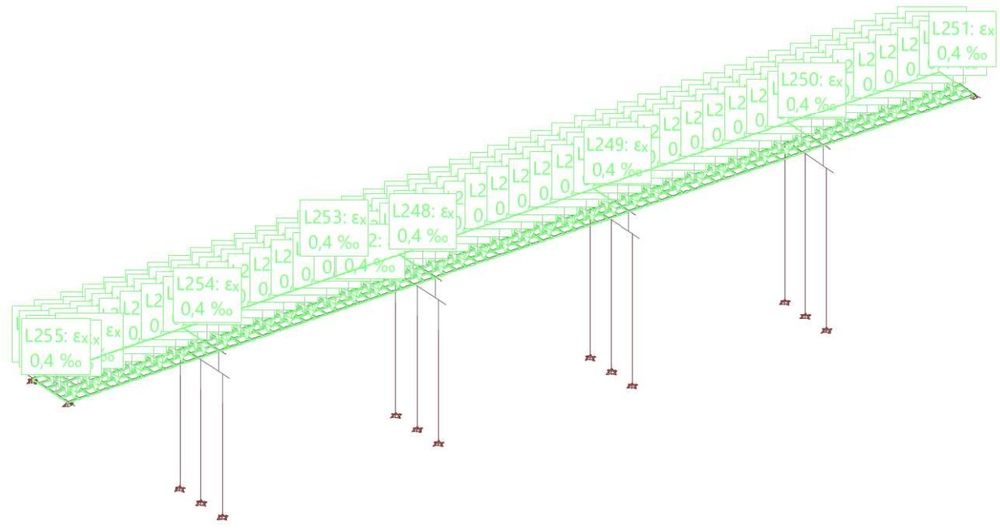
Loading Tgt-: Gradiente térmico transversal -5 °C



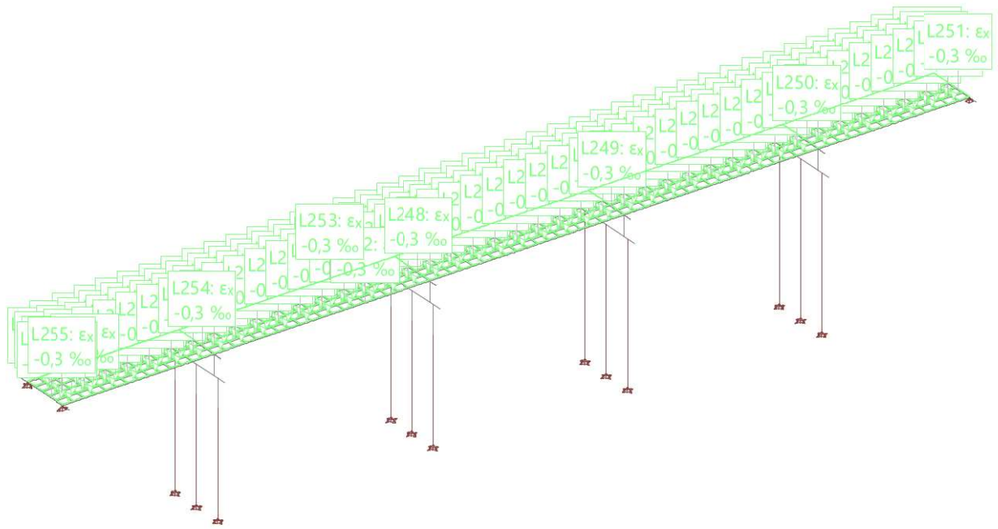
Loading Tu+: Variación térmica uniforme dilatación 32ºC



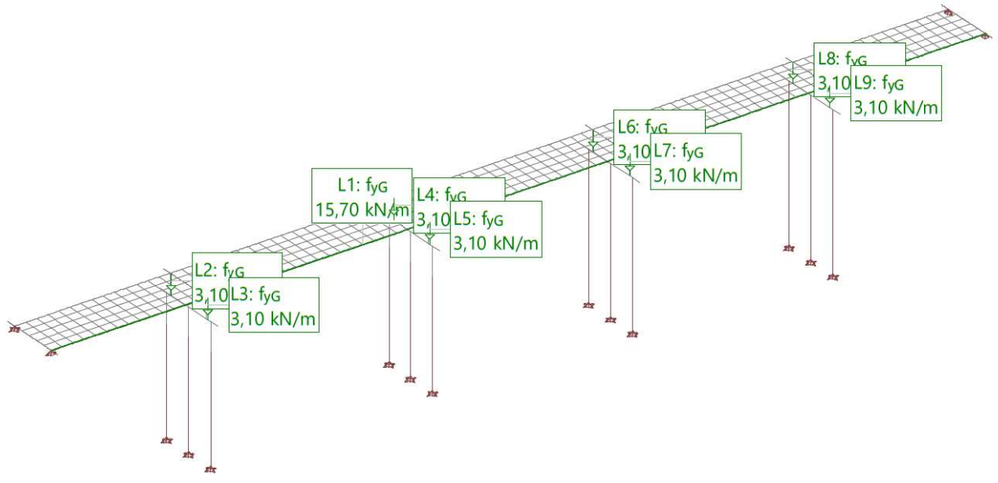
Nr.:

C:\Users\usu2\Documents\PROJECTES\BADALONA\MODEL_LLOSA_23.S8P

Loading Tu-: Variación térmica uniforme contracción 32ºC



Loading Vt1: Viento transversal dirección 1



Loading 'Vt1': Viento transversal dirección 1 Construction stage: 'Initial stage'

Line loads: Forces

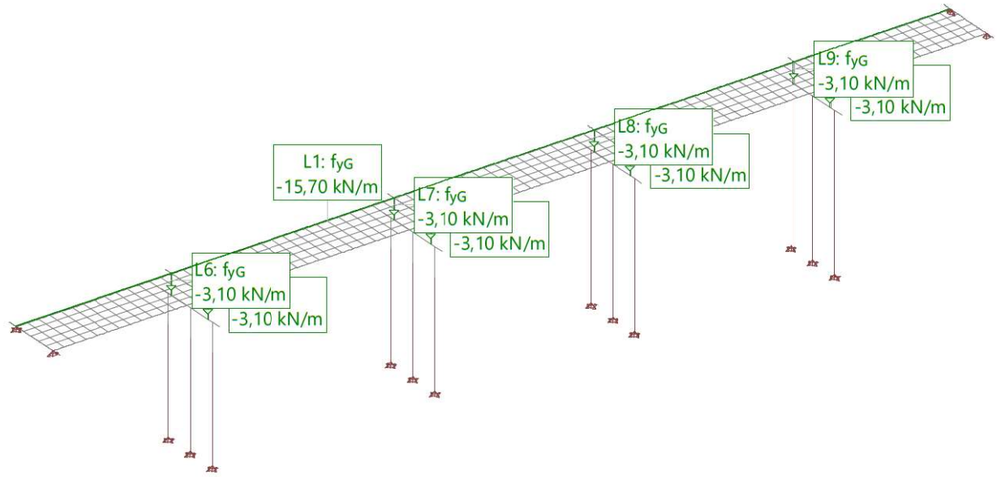
Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	178,50	15,70		0	2802,45	0
L2	Y Global	3,60	3,10		0	11,16	0
L3	Y Global	3,60	3,10		0	11,16	0
L4	Y Global	3,60	3,10		0	11,16	0
L5	Y Global	3,60	3,10		0	11,16	0
L6	Y Global	3,60	3,10		0	11,16	0
L7	Y Global	3,60	3,10		0	11,16	0
L8	Y Global	3,60	3,10		0	11,16	0

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L9	Y Global	3,60	3,10		0	11,16	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Vt1	0	2891,73	0

Loading Vt2: Viento transversal dirección 2



Loading 'Vt2': Viento transversal dirección 2 Construction stage: 'Initial stage'

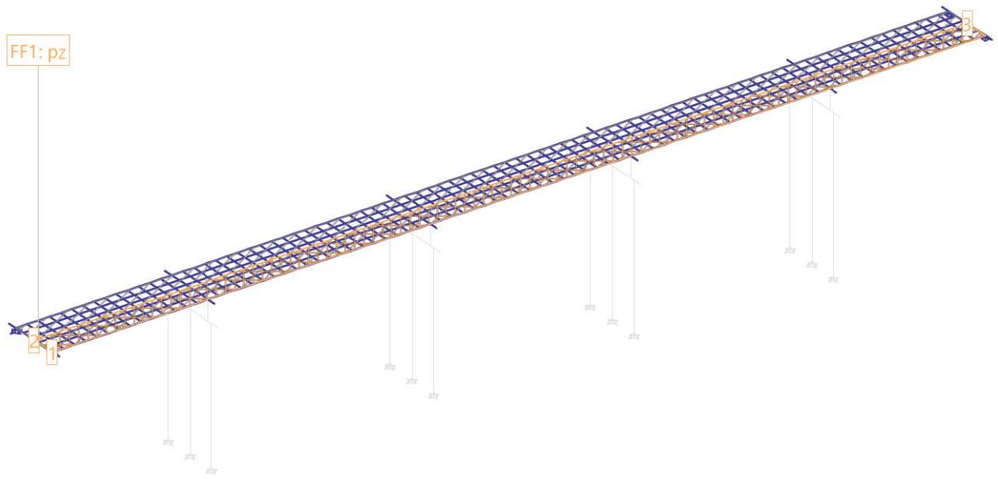
Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Y Global	178,50	-15,70		0	-2802,45	0
L2	Y Global	3,60	-3,10		0	-11,16	0
L3	Y Global	3,60	-3,10		0	-11,16	0
L4	Y Global	3,60	-3,10		0	-11,16	0
L5	Y Global	3,60	-3,10		0	-11,16	0
L6	Y Global	3,60	-3,10		0	-11,16	0
L7	Y Global	3,60	-3,10		0	-11,16	0
L8	Y Global	3,60	-3,10		0	-11,16	0
L9	Y Global	3,60	-3,10		0	-11,16	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Vt2	0	-2891,73	0

Loading Vv1+: Viento vertical 1 positivo



Surface loading 'Vv1+': Viento vertical 1 positivo Construction stage: 'Initial stage'

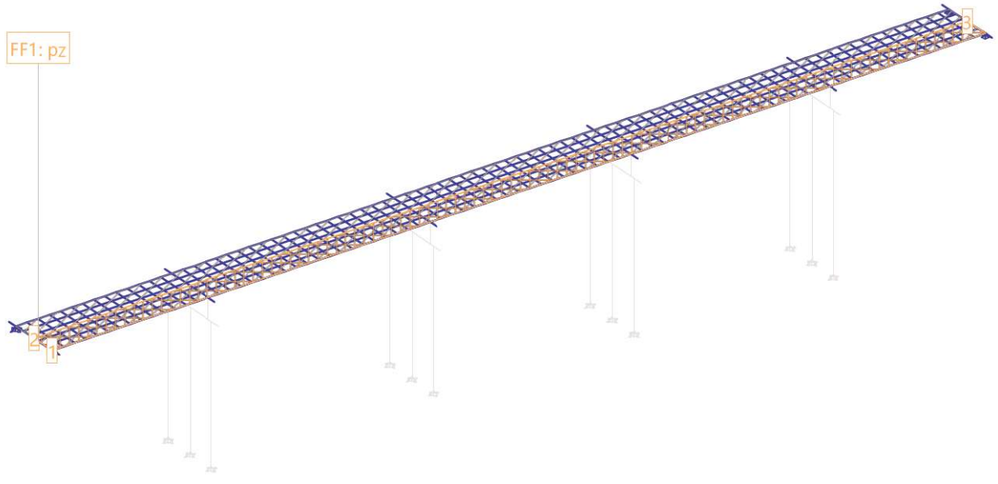
Surface loads

Id	Type	Surface name	Area [m^2]	p [kN/m^2]	p_1 [kN/m^2]	p_2 [kN/m^2]	p_3 [kN/m^2]
FF1	Z Global	TOTL	892,50	1,390			

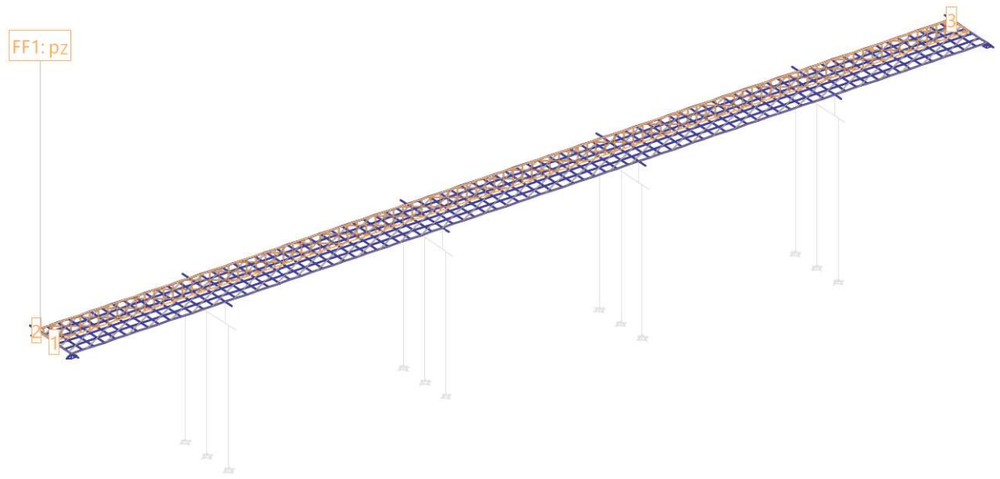
Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading Vv1+	0	0	1240,57

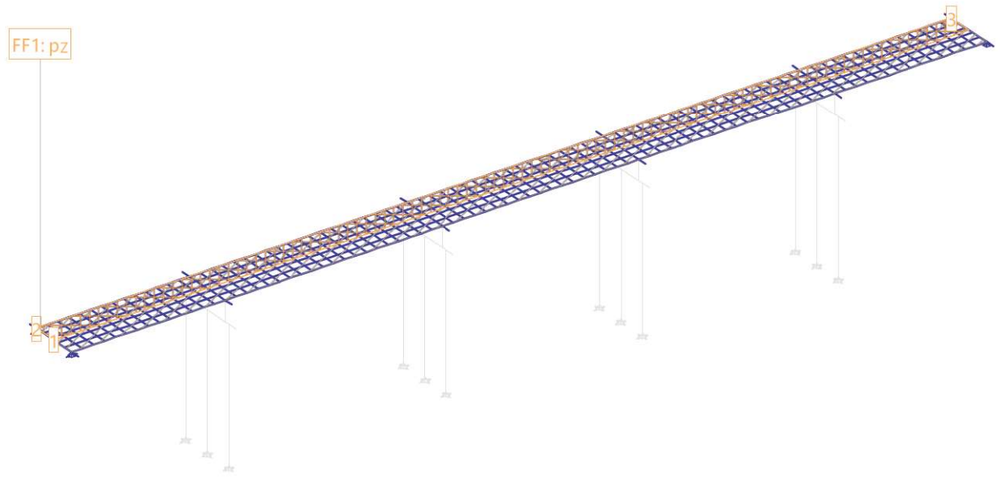
Loading Vv1-: Viento vertical 1 negativo



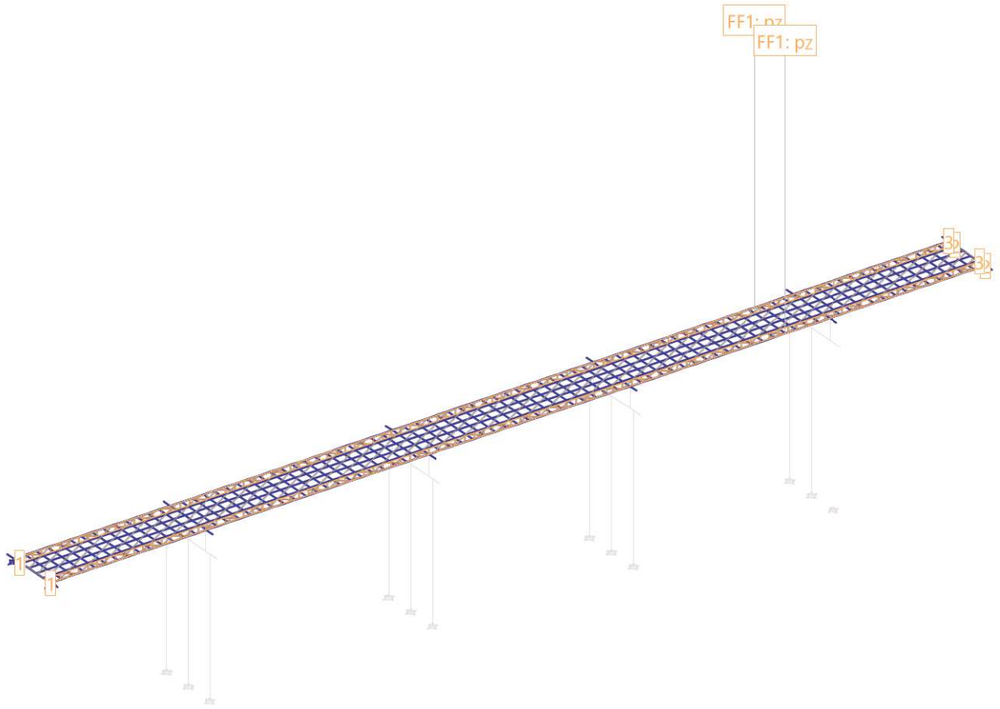
Loading Vv2+: Viento vertical 2 positivo



Loading Vv2-: Viento vertical 2 negativo



Loading nk: SOBRECARGA DE NIEVE



Surface loading 'nk': SOBRECARGA DE NIEVE Construction stage: 'Initial stage'

Surface loads

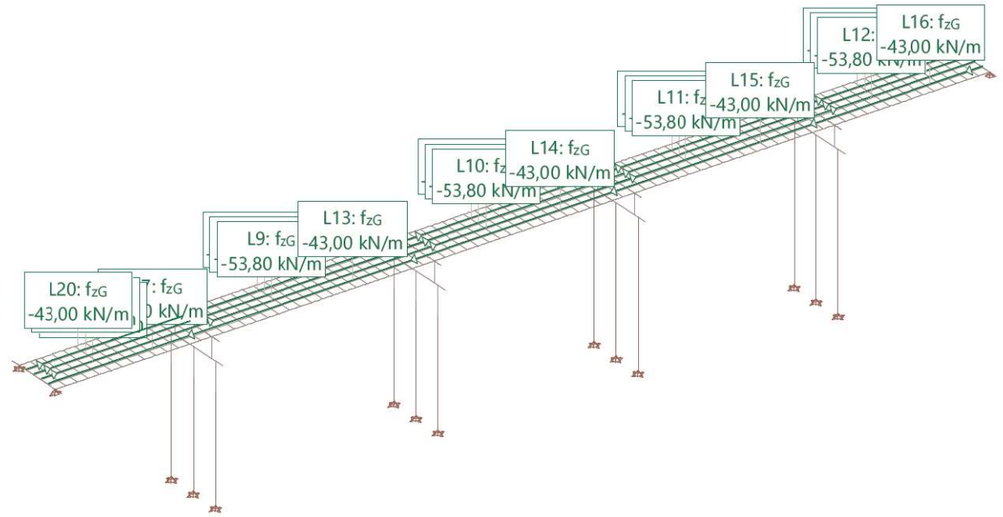
Id	Type	Surface name	Area [m²]	p [kN/m²]	p_1 [kN/m²]	p_2 [kN/m²]	p_3 [kN/m²]
FF1	Z Global	TOTL	285,68	-0,290			
FF1	Z Global	TOTL	281,90	-0,290			

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading nk	0	0	-164,56

Nr.:

Generator qu: TREN DE CARREGUES UNIFORME



Loading 'qu': TREN DE CARREGUES UNIFORME Construction stage: 'Initial stage'

Line loads: Forces

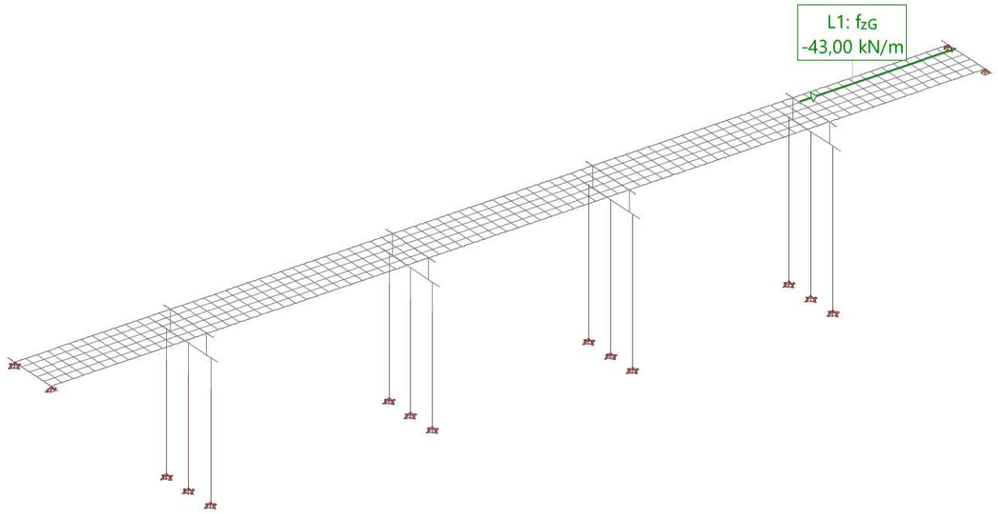
Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Z Global	29,75	-43,00		0	0	-1279,25
L2	Z Global	38,25	-43,00		0	0	-1644,75
L3	Z Global	38,25	-43,00		0	0	-1644,75
L4	Z Global	42,50	-43,00		0	0	-1827,50
L5	Z Global	42,50	-53,80		0	0	-2286,50
L6	Z Global	38,25	-53,80		0	0	-2057,85
L7	Z Global	38,25	-53,80		0	0	-2057,85
L8	Z Global	29,75	-53,80		0	0	-1600,55
L9	Z Global	42,50	-53,80		0	0	-2286,50
L10	Z Global	38,25	-53,80		0	0	-2057,85
L11	Z Global	38,25	-53,80		0	0	-2057,85
L12	Z Global	29,75	-53,80		0	0	-1600,55
L13	Z Global	42,50	-43,00		0	0	-1827,50
L14	Z Global	38,25	-43,00		0	0	-1644,75
L15	Z Global	38,25	-43,00		0	0	-1644,75
L16	Z Global	29,75	-43,00		0	0	-1279,25
L17	Z Global	29,75	-43,00		0	0	-1279,25
L18	Z Global	29,75	-53,80		0	0	-1600,55
L19	Z Global	29,75	-53,80		0	0	-1600,55
L20	Z Global	29,75	-43,00		0	0	-1279,25

Summed load

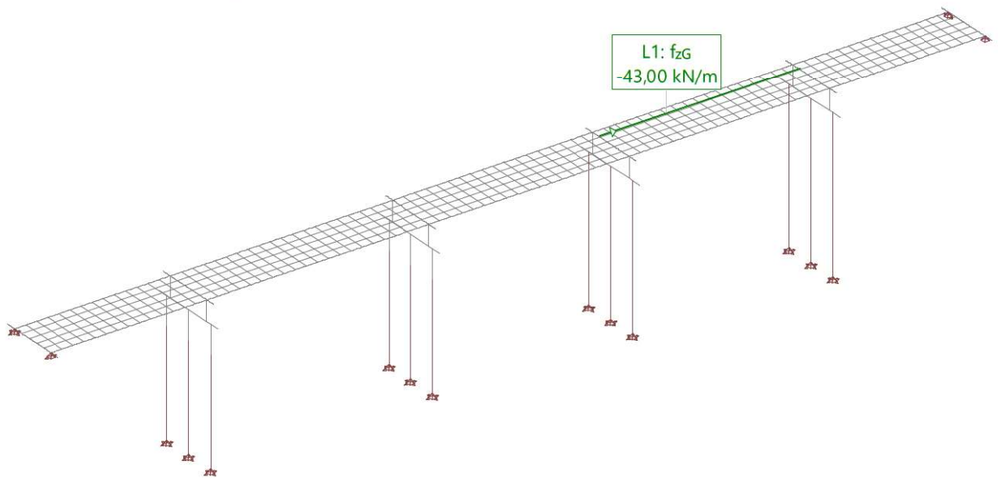
	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading qu	0	0	-34557,60

Nr.:

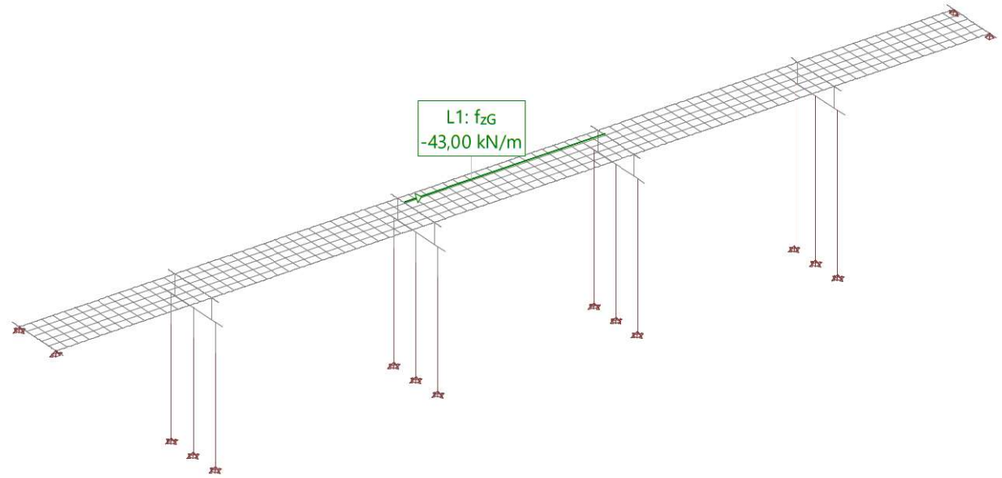
Loading qu%L1: Load position: L1



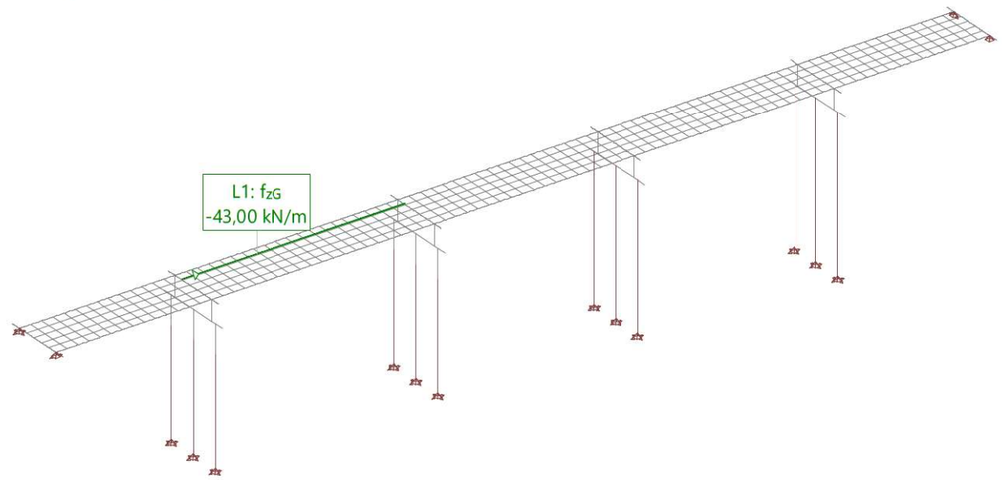
Loading qu%L2: Load position: L2



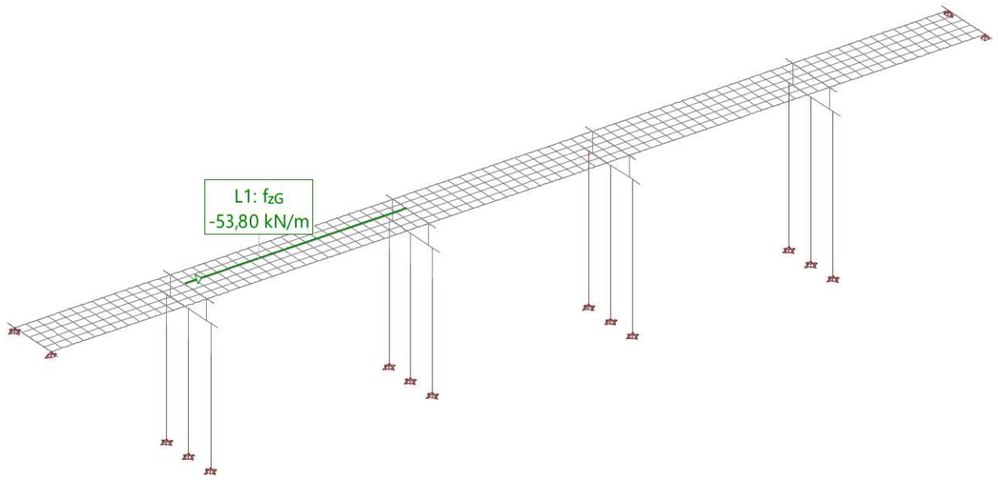
Loading qu%L3: Load position: L3



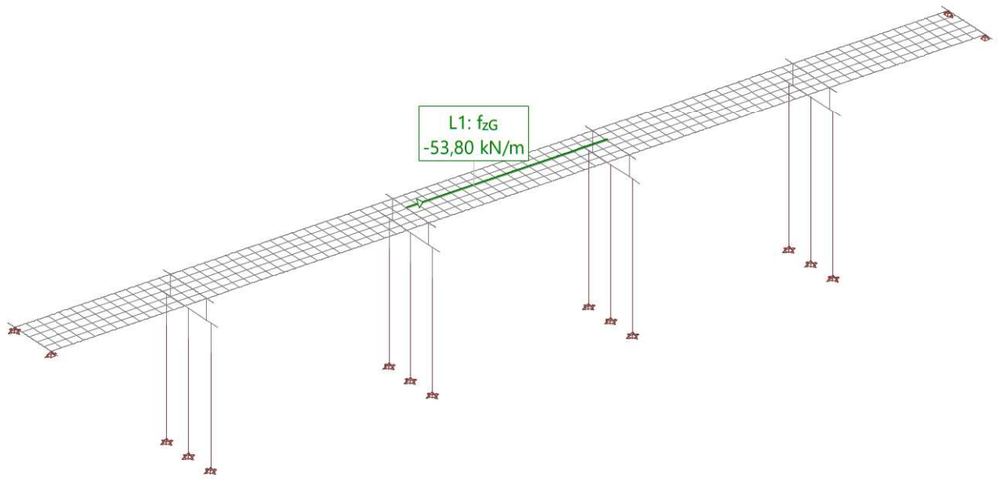
Loading qu%L4: Load position: L4



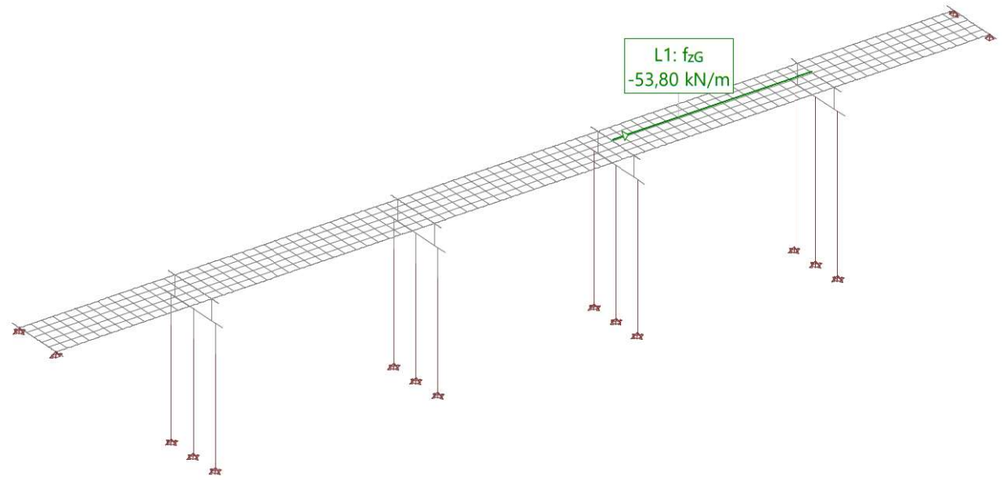
Loading qu%L5: Load position: L5



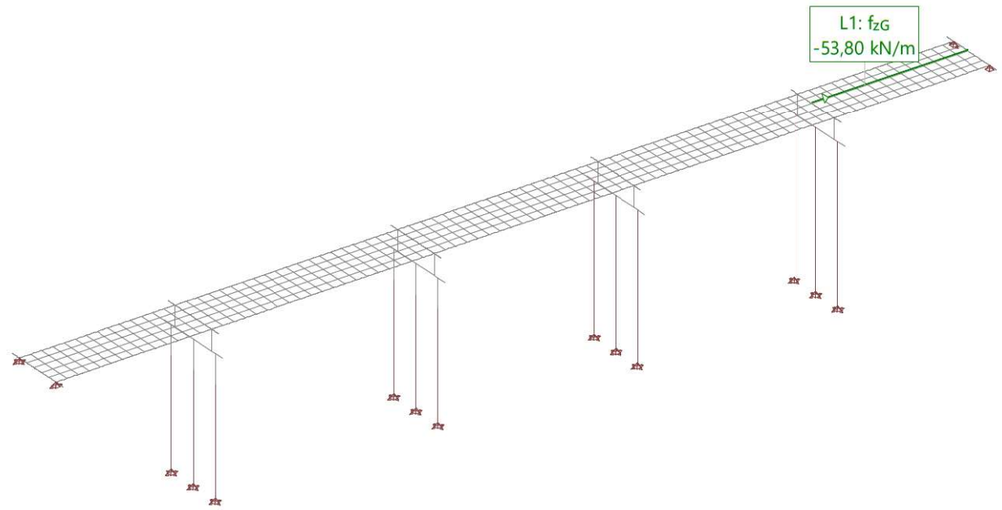
Loading qu%L6: Load position: L6



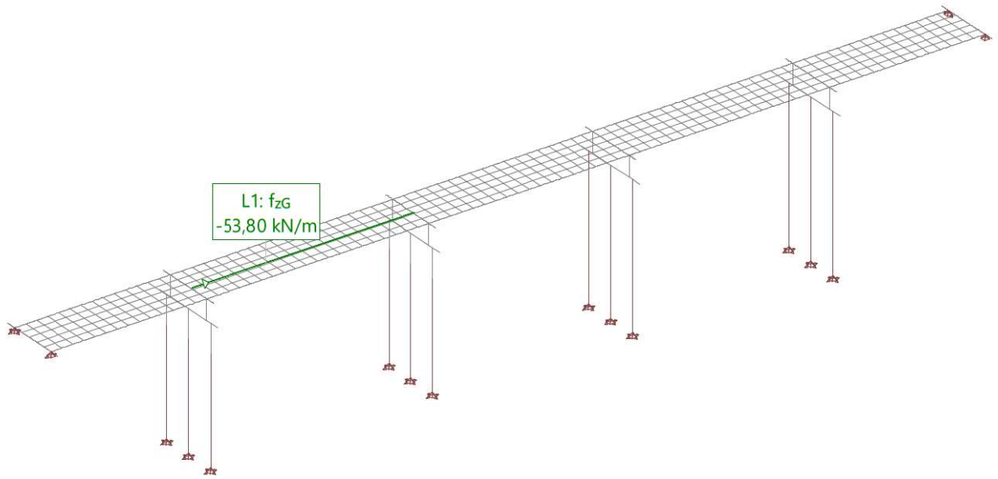
Loading qu%L7: Load position: L7



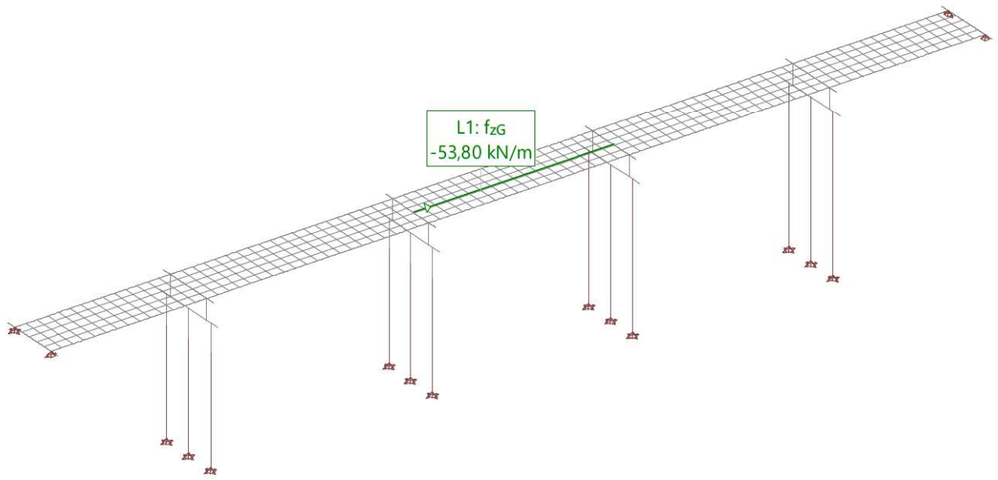
Loading qu%L8: Load position: L8



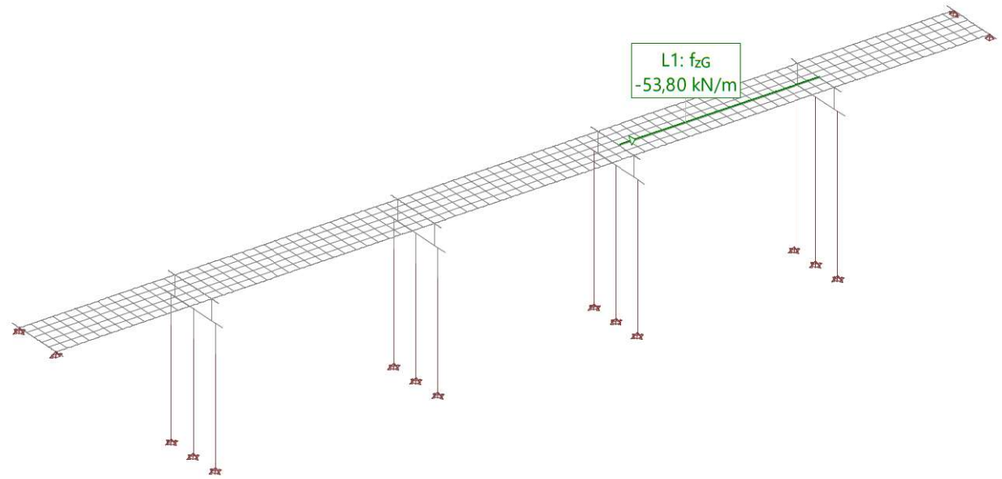
Loading qu%L9: Load position: L9



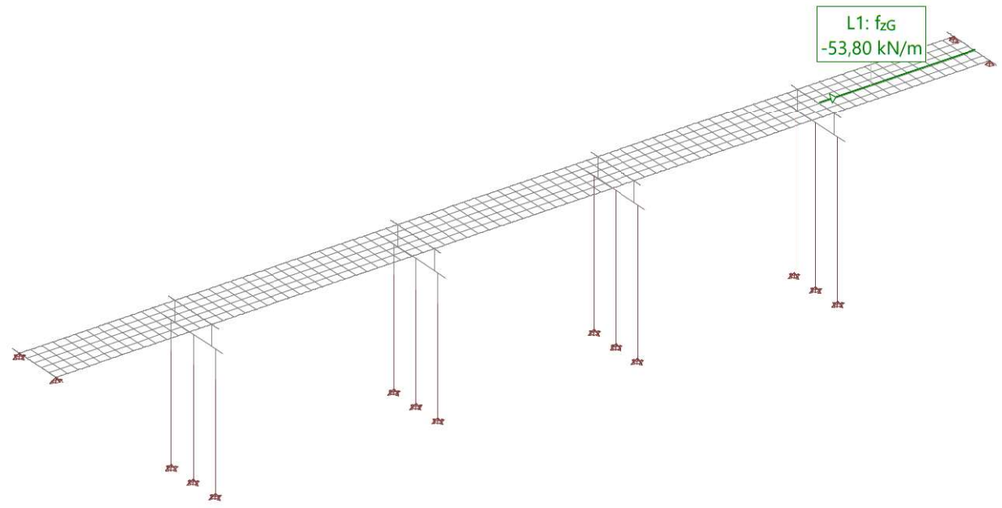
Loading qu%L10: Load position: L10



Loading qu%L11: Load position: L11



Loading qu%L12: Load position: L12



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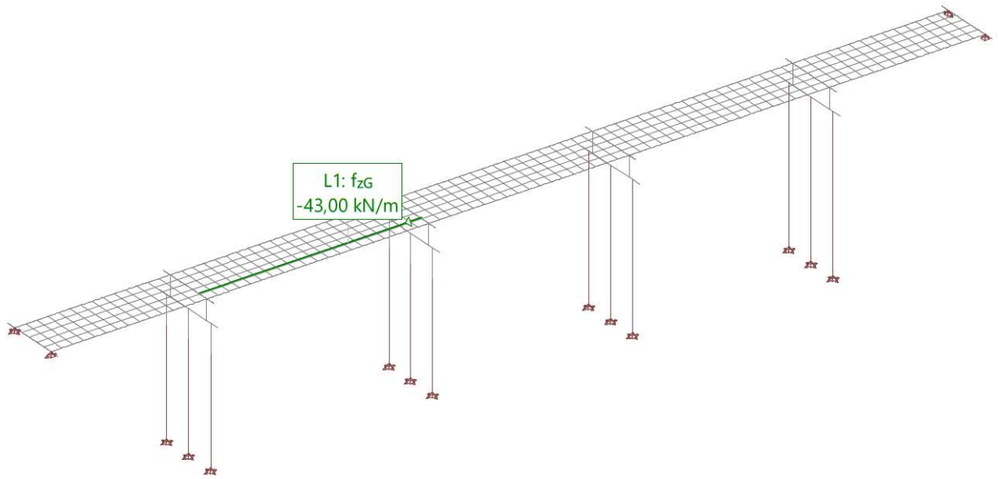

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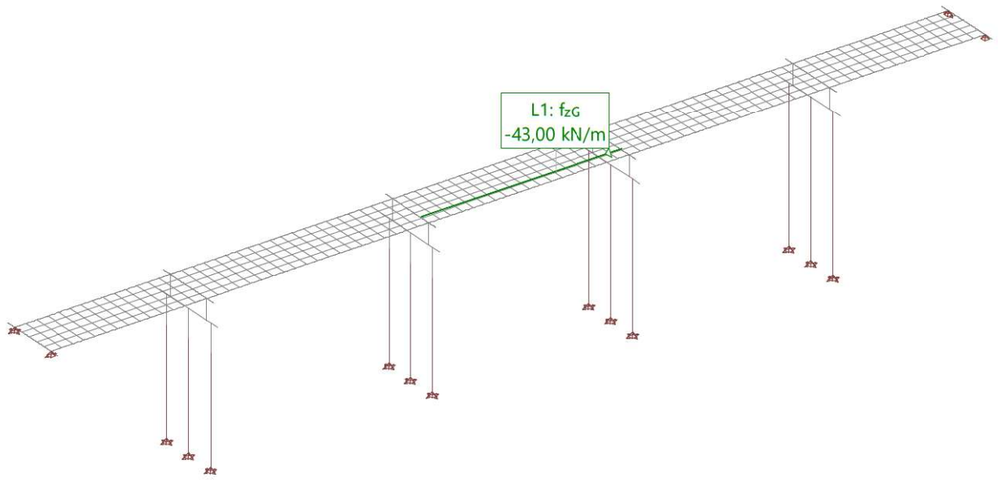

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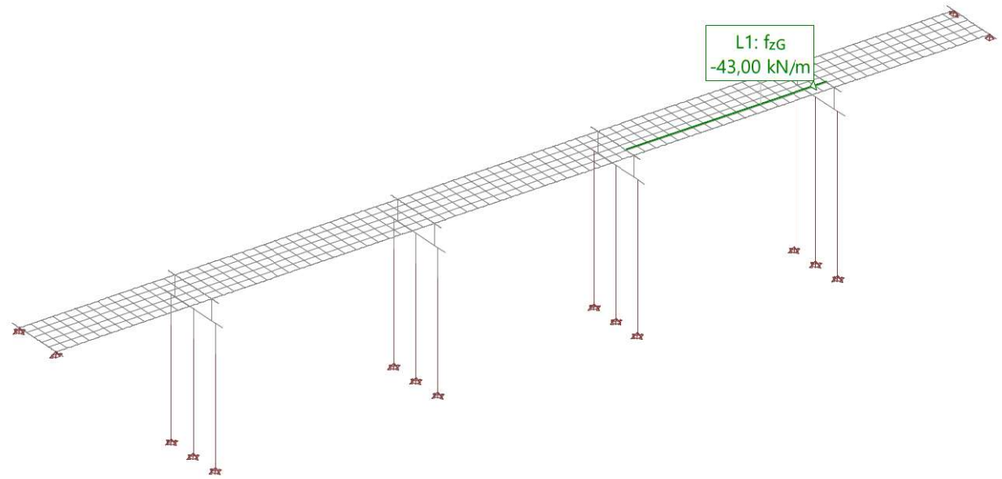
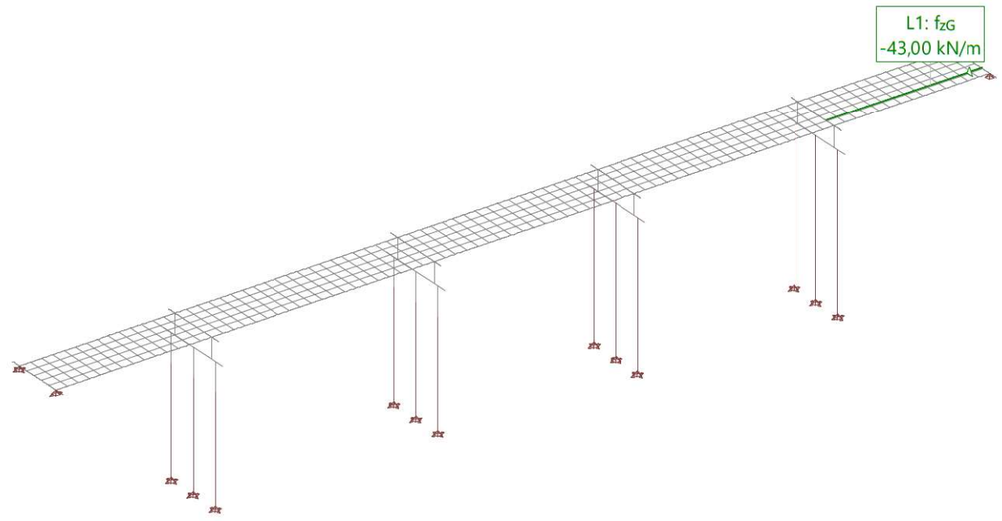
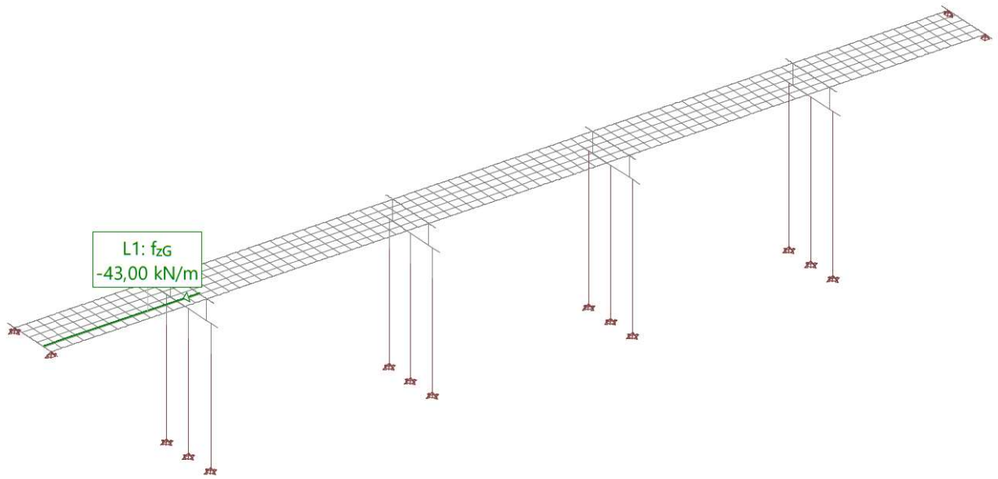


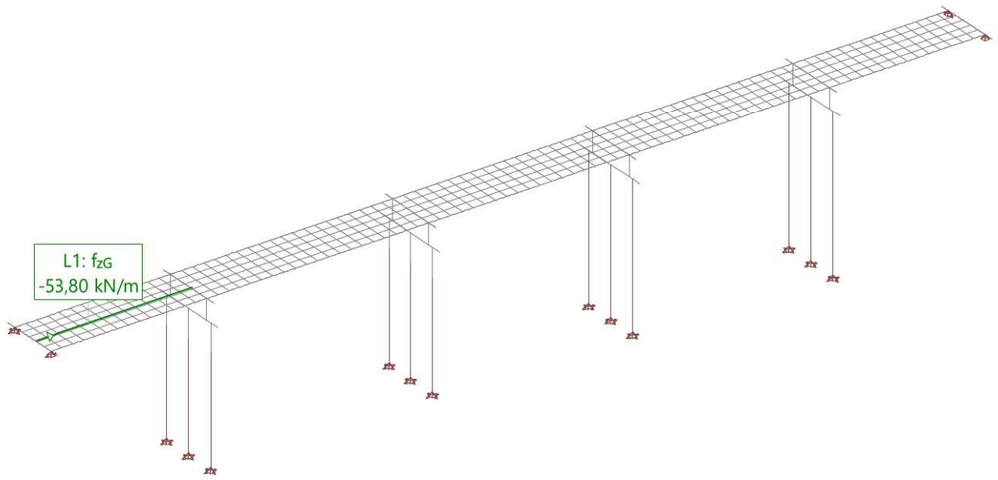
Loading qu%L16: Load position: L16



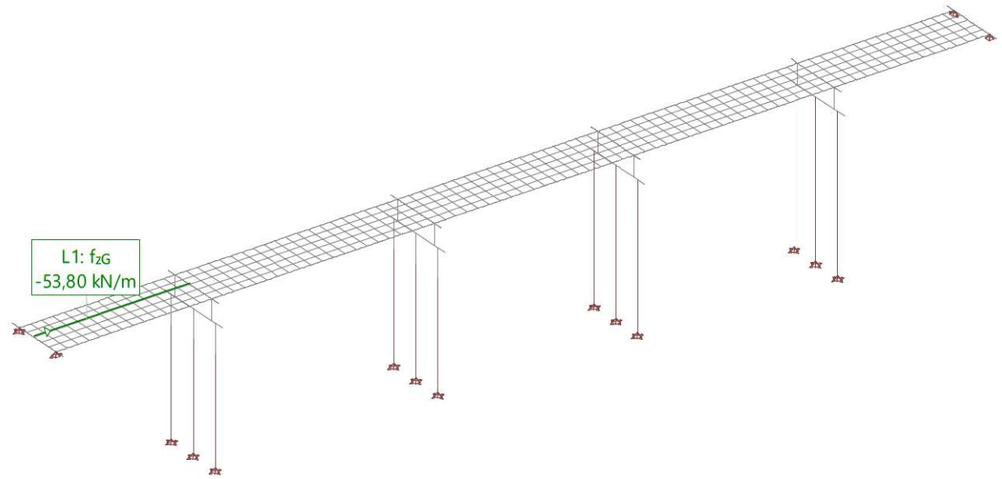
Loading qu%L17: Load position: L17



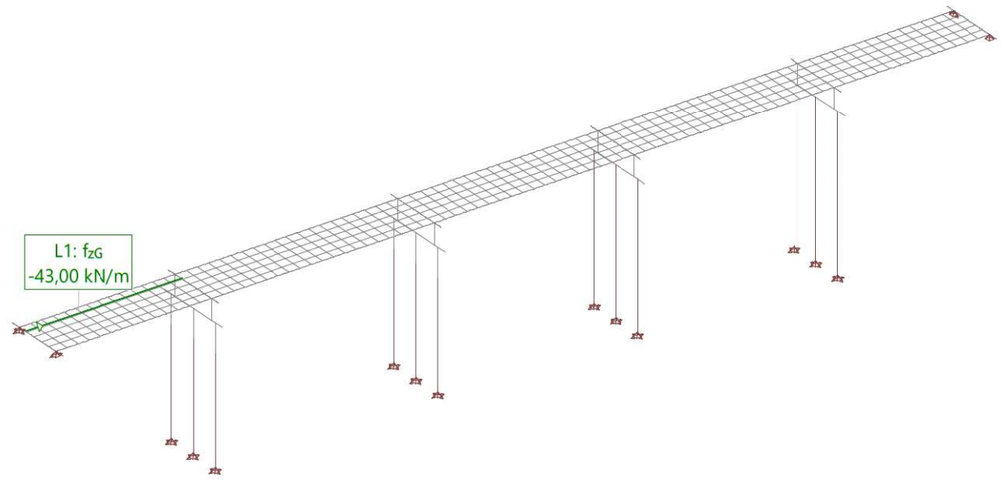
Loading qu%L18: Load position: L18



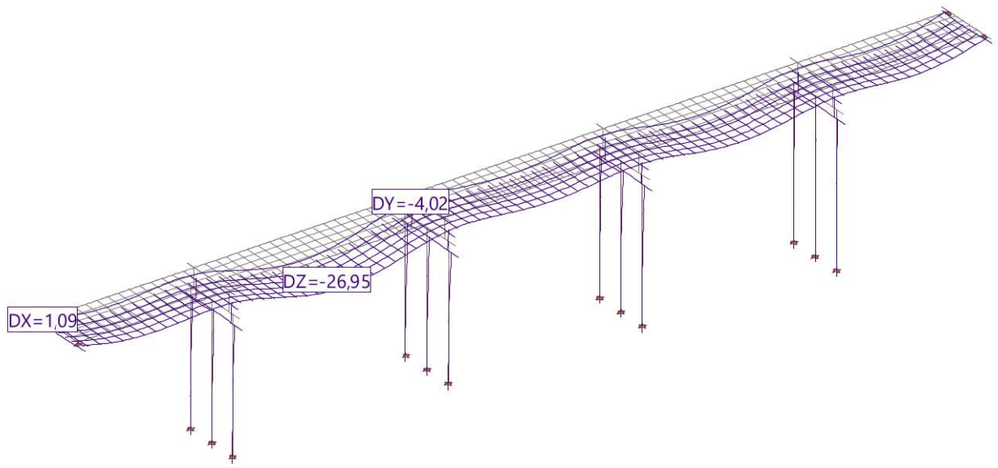
Loading qu%L19: Load position: L19



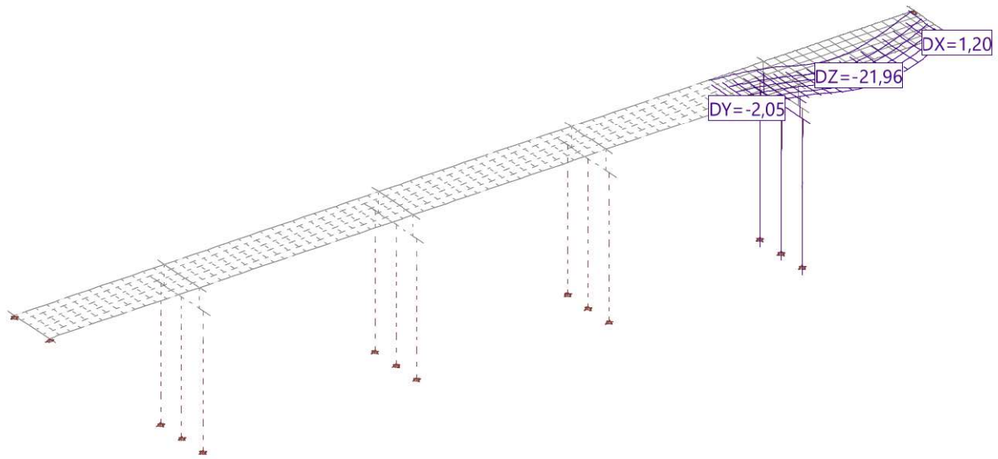
Loading qu%L20: Load position: L20



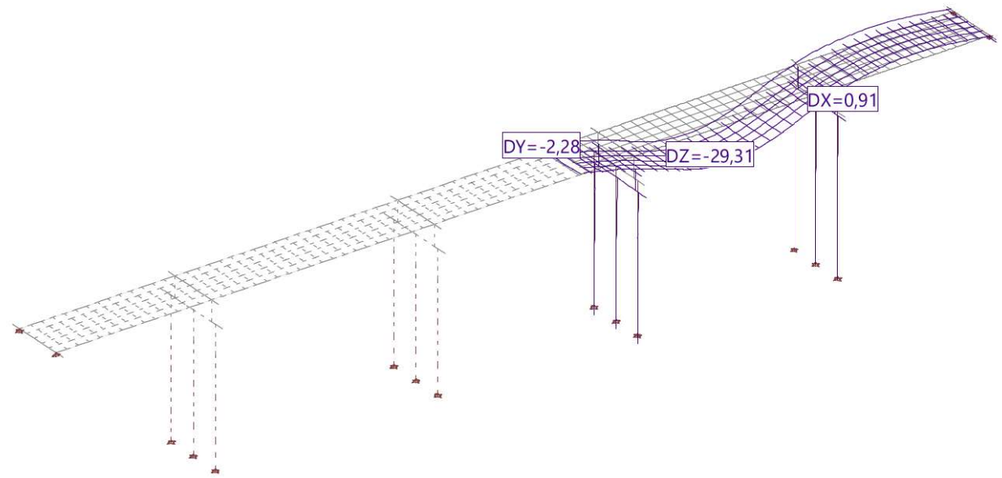
DISPLACEMENTS D (Principal axis) for: G1-PP [mm], Scaling factor: 200,0



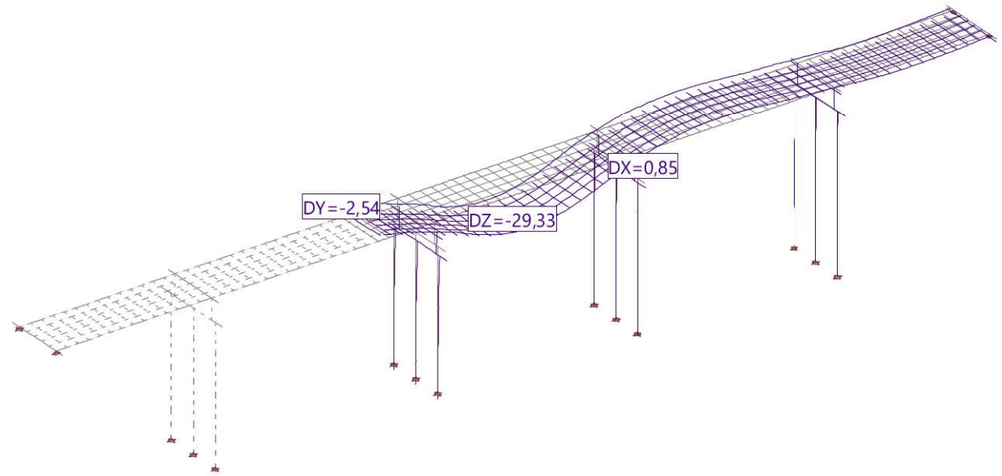
DISPLACEMENTS D (Principal axis) for: G1-PP1 [mm], Scaling factor: 189,4



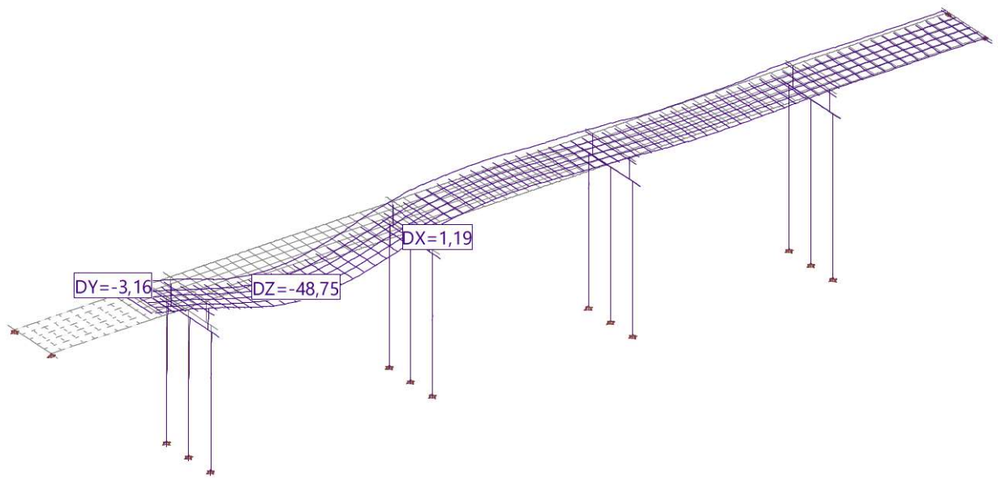
DISPLACEMENTS D (Principal axis) for: G1-PP2 [mm], Scaling factor: 200,0



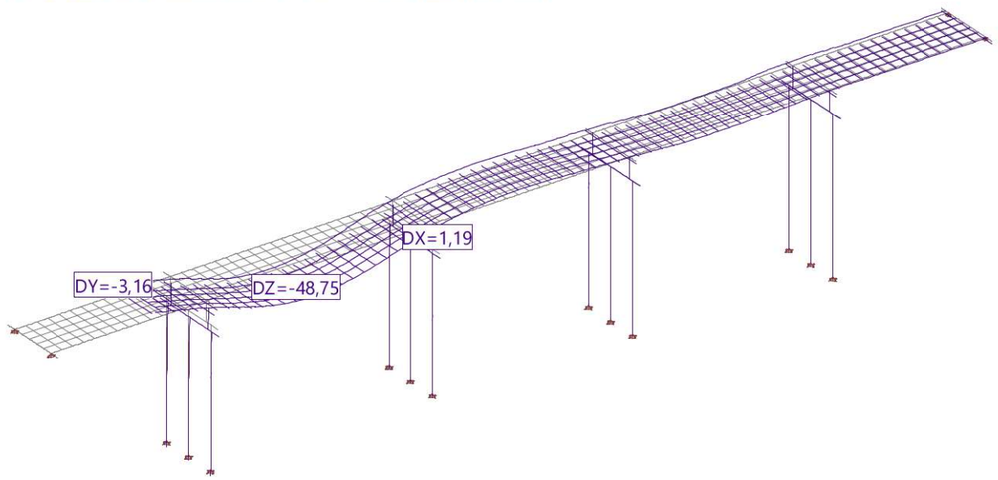
DISPLACEMENTS D (Principal axis) for: G1-PP3 [mm], Scaling factor: 200,0



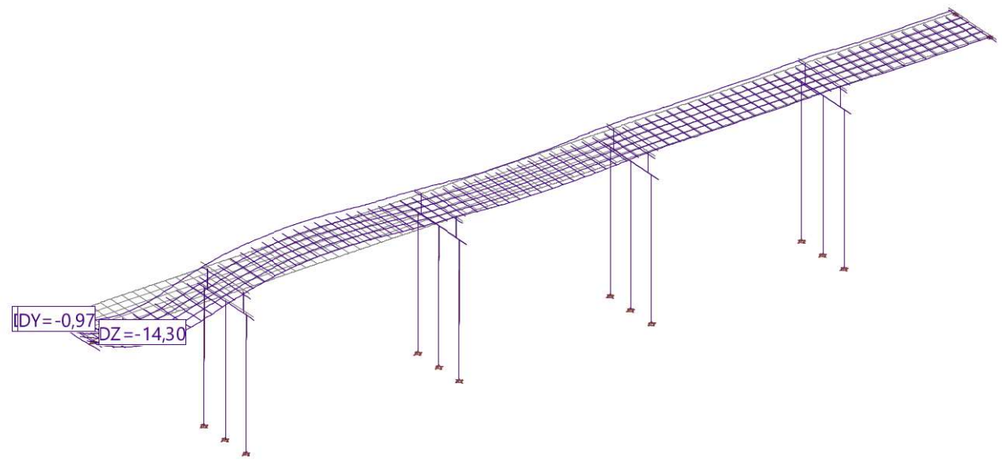
DISPLACEMENTS D (Principal axis) for: G1-PP4 [mm], Scaling factor: 100,0



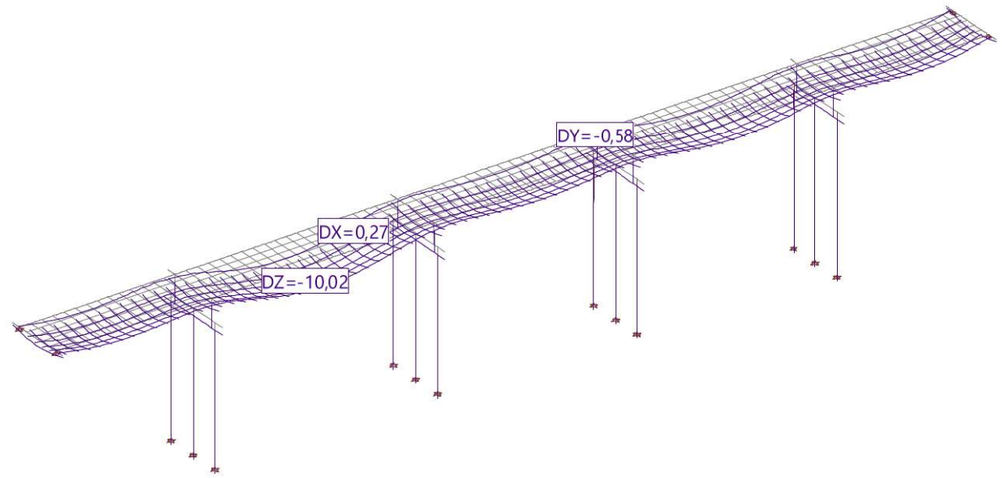
DISPLACEMENTS D (Principal axis) for: G1-PP4 [mm], Scaling factor: 100,0



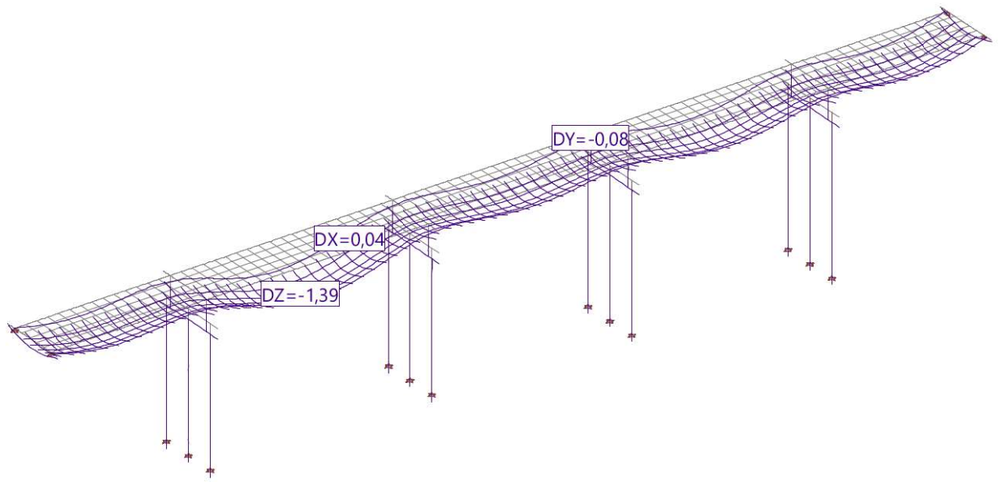
DISPLACEMENTS D (Principal axis) for: G1-PP5 [mm], Scaling factor: 270,2



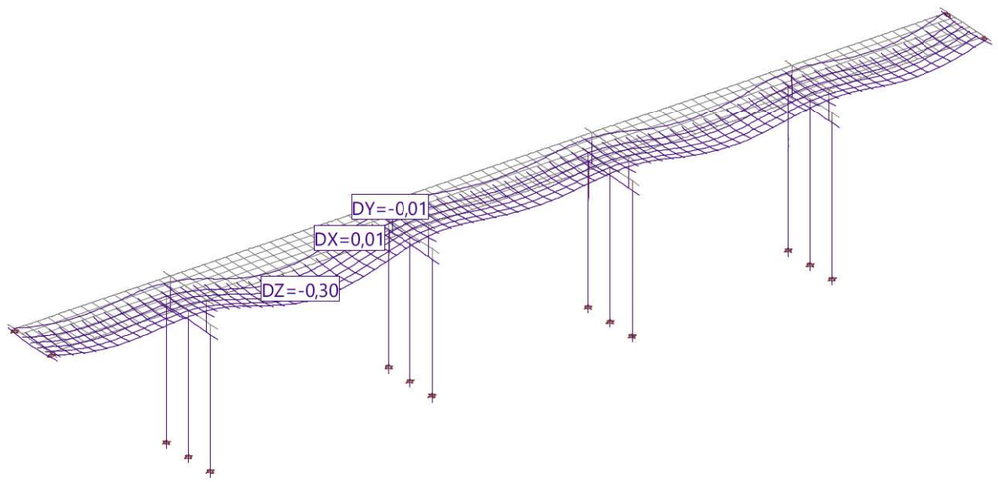
DISPLACEMENTS D (Principal axis) for: G2 [mm], Scaling factor: 500,0



DISPLACEMENTS D (Principal axis) for: G3 [mm], Scaling factor: 5000,0



DISPLACEMENTS D (Principal axis) for: G4 [mm], Scaling factor: 20000,0



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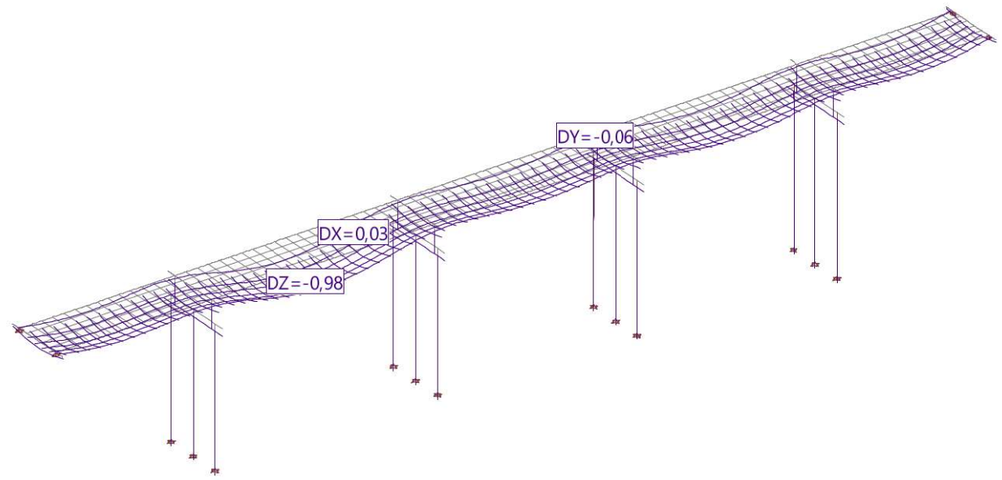
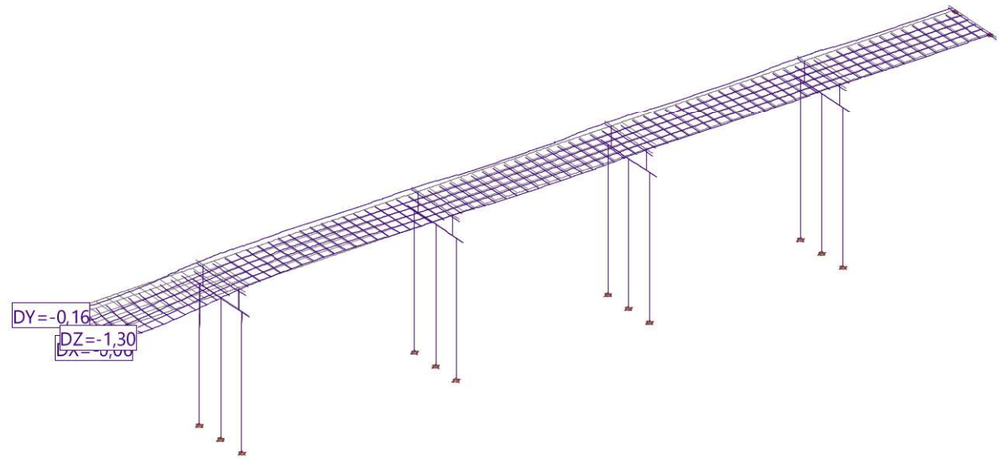
DISPLACEMENTS D (Principal axis) for: G5 [mm], Scaling factor: 5000,0

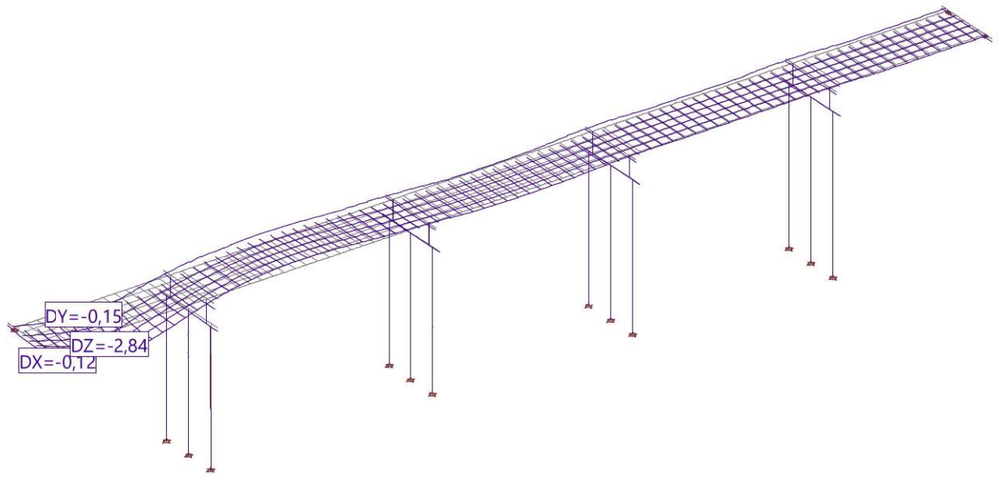


DISPLACEMENTS D (Principal axis) for: Q1-1 [mm], Scaling factor: 2005,8

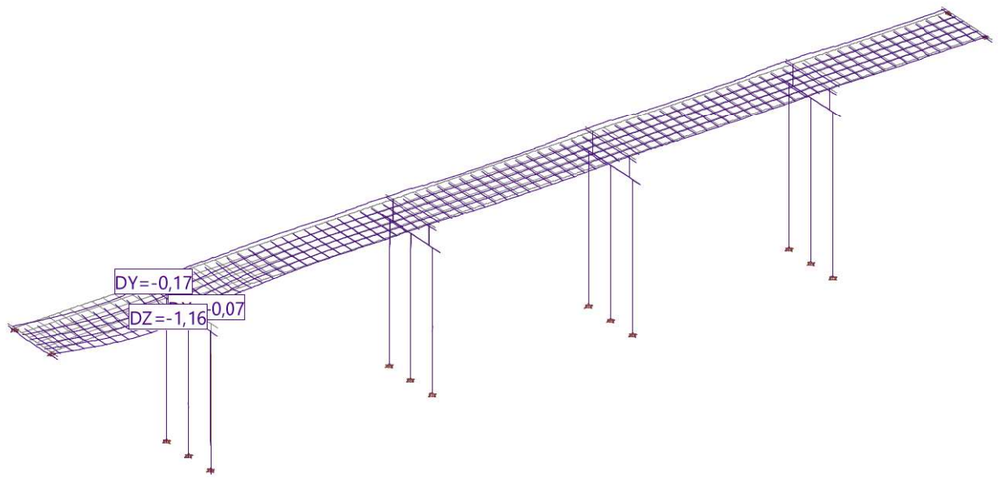


Nr.:

DISPLACEMENTS D (Principal axis) for: Q1-2 [mm], Scaling factor: 1480,7



DISPLACEMENTS D (Principal axis) for: Q1-3 [mm], Scaling factor: 2509,2



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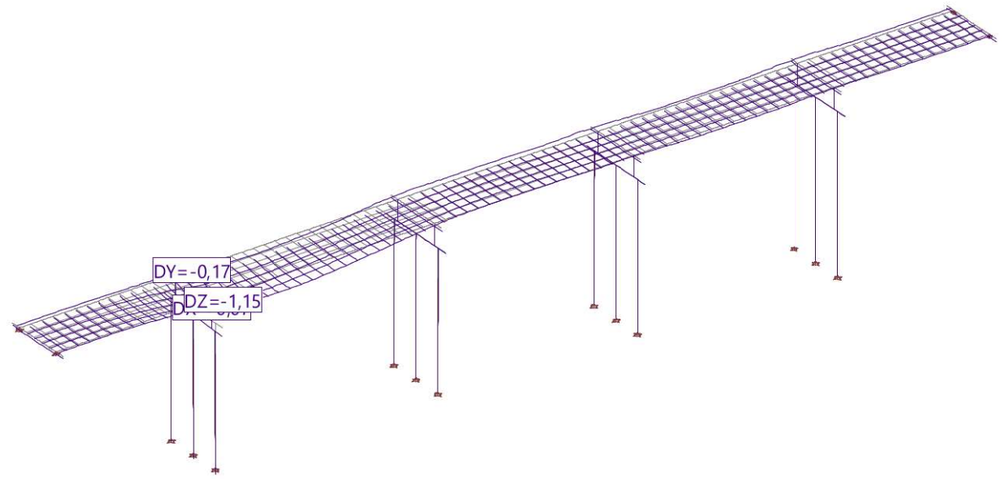
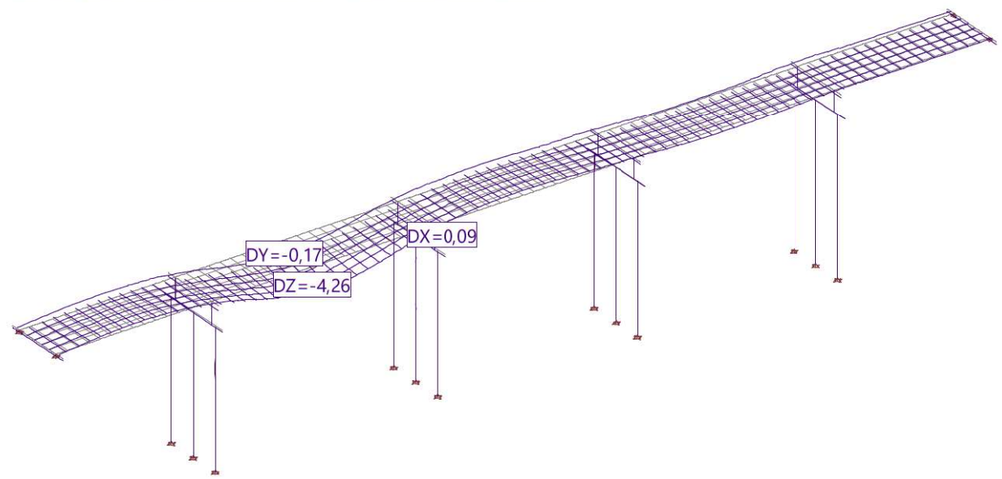
DISPLACEMENTS D (Principal axis) for: Q1-4 [mm], Scaling factor: 2475,4



DISPLACEMENTS D (Principal axis) for: Q1-5 [mm], Scaling factor: 1000,0



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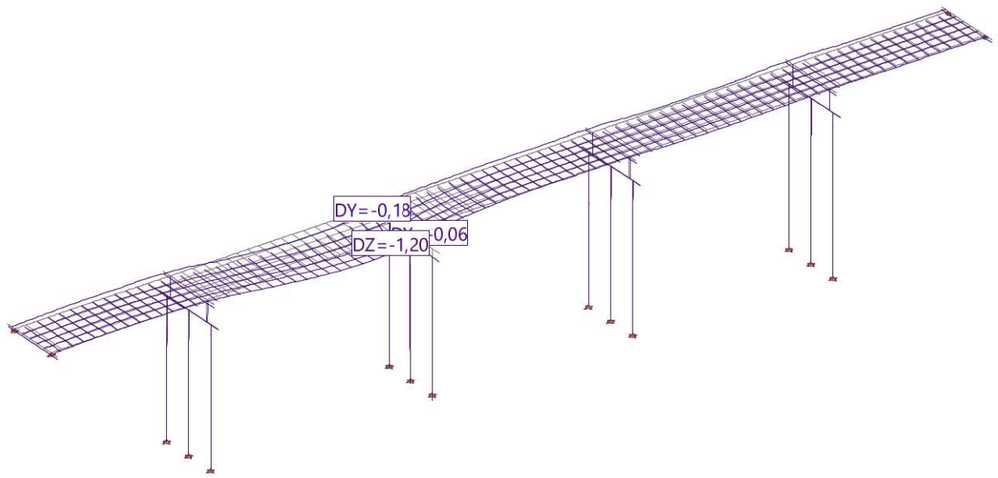
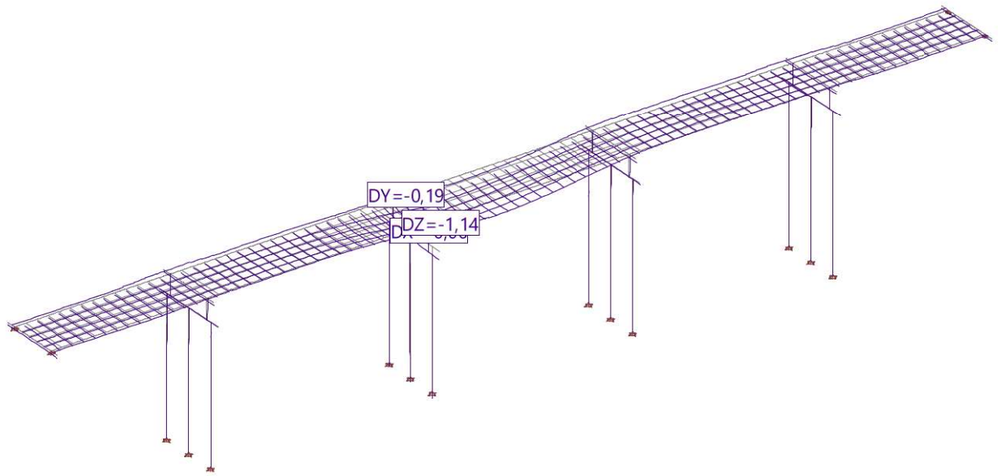
DISPLACEMENTS D (Principal axis) for: Q1-6 [mm], Scaling factor: 2517,7



DISPLACEMENTS D (Principal axis) for: Q1-7 [mm], Scaling factor: 2468,4



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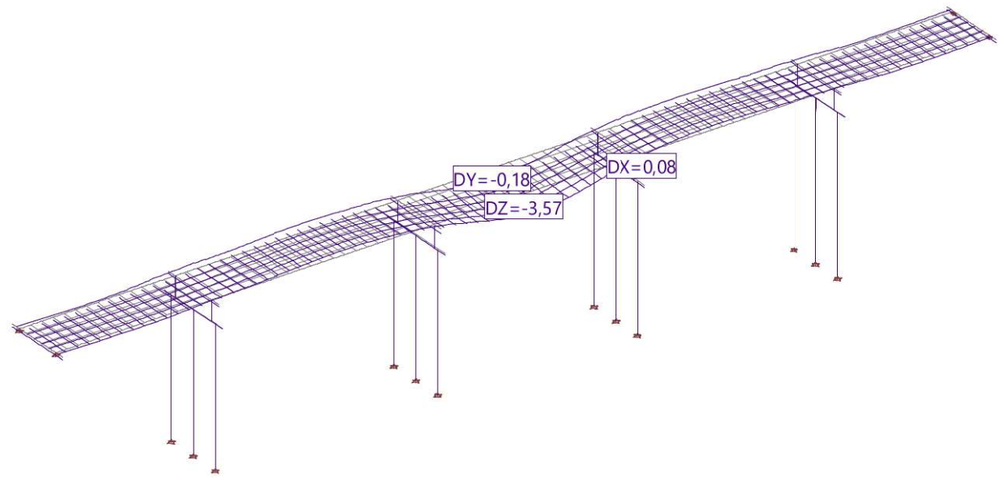
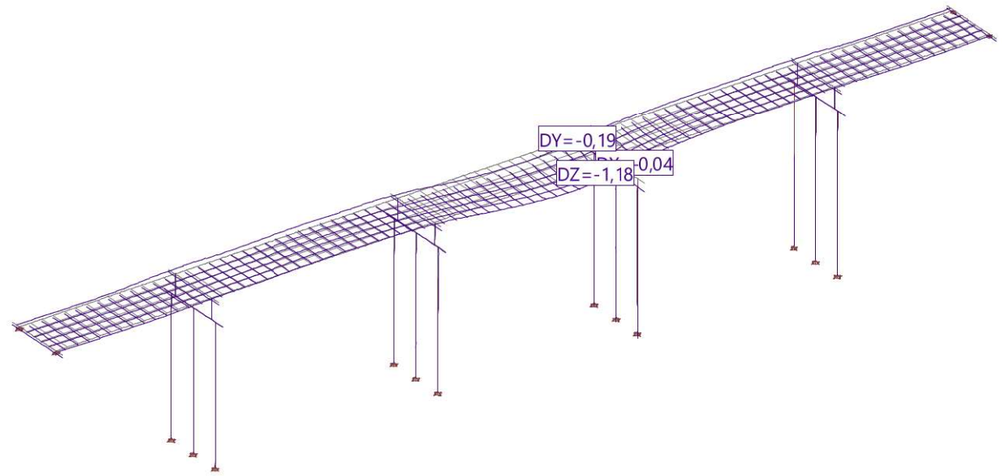
DISPLACEMENTS D (Principal axis) for: Q1-8 [mm], Scaling factor: 1000,0



DISPLACEMENTS D (Principal axis) for: Q1-9 [mm], Scaling factor: 2518,9



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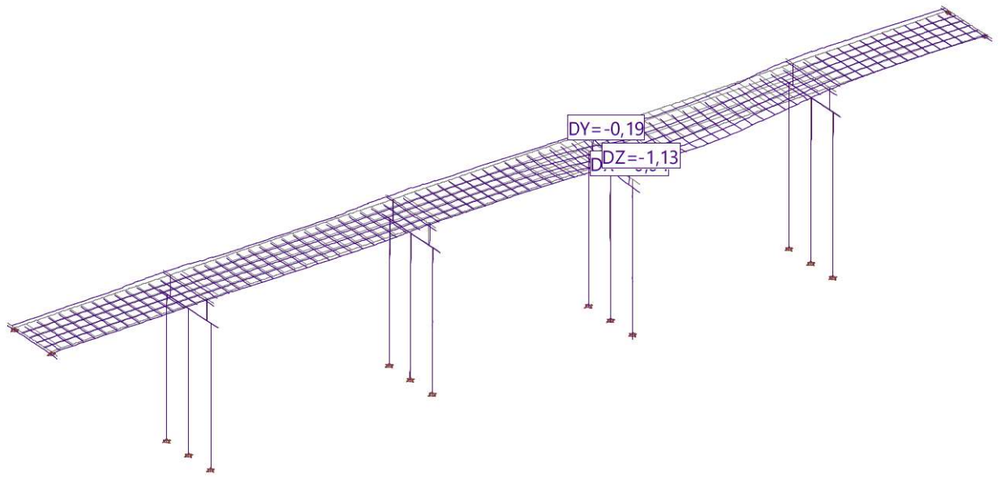
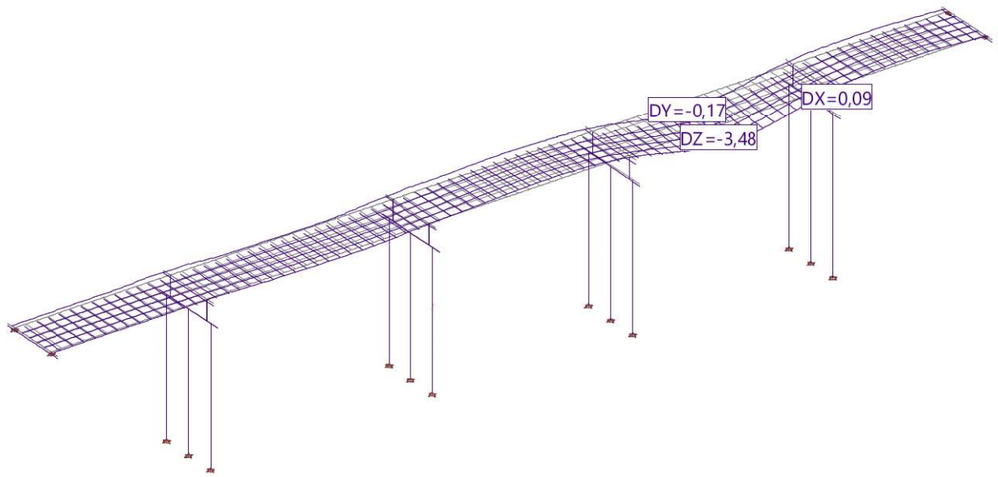
DISPLACEMENTS D (Principal axis) for: Q1-10 [mm], Scaling factor: 2488,4



DISPLACEMENTS D (Principal axis) for: Q1-11 [mm], Scaling factor: 1000,0



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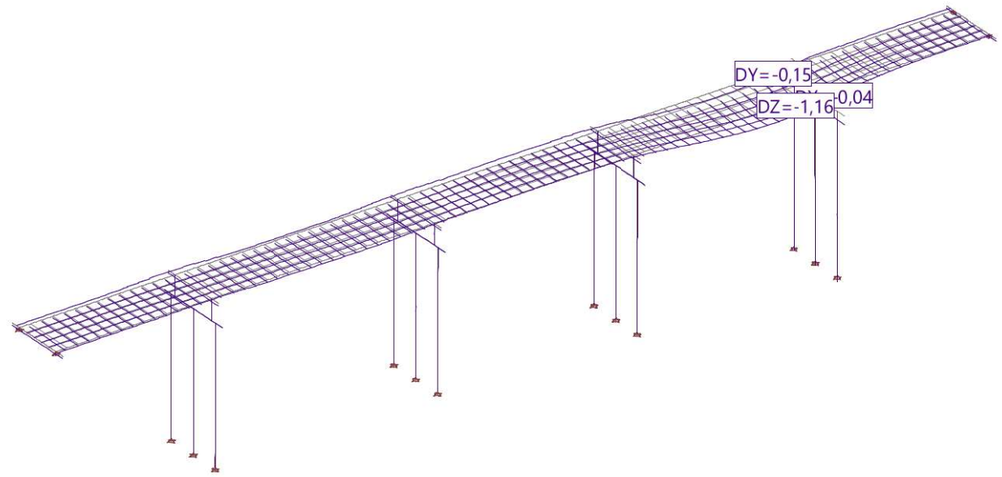
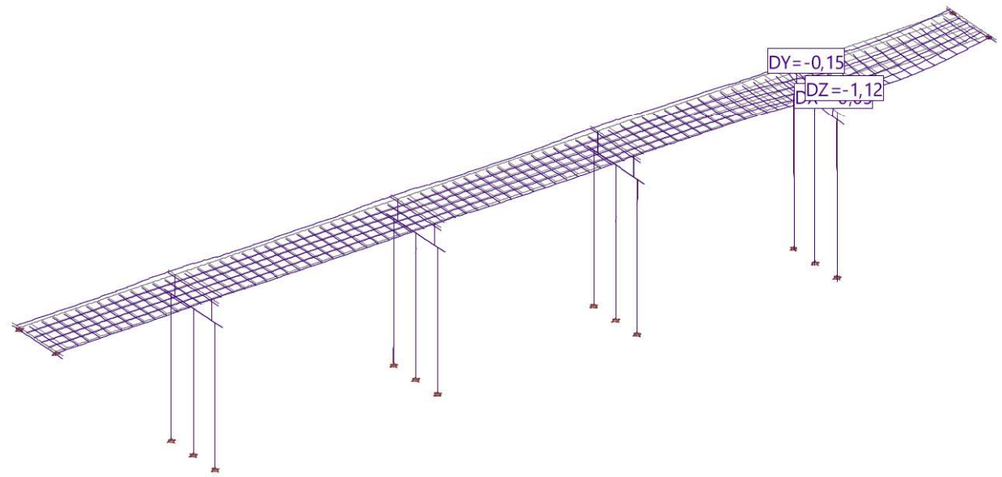
DISPLACEMENTS D (Principal axis) for: Q1-12 [mm], Scaling factor: 2558,3



DISPLACEMENTS D (Principal axis) for: Q1-13 [mm], Scaling factor: 2508,7



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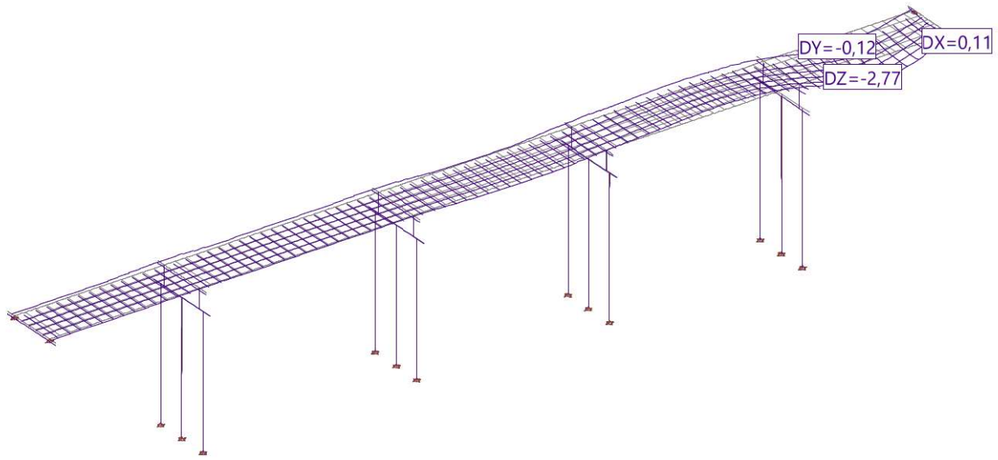
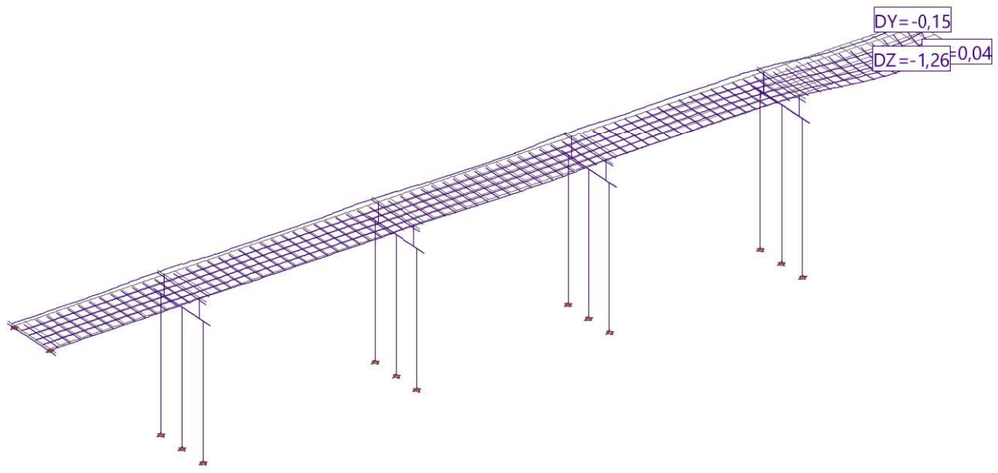
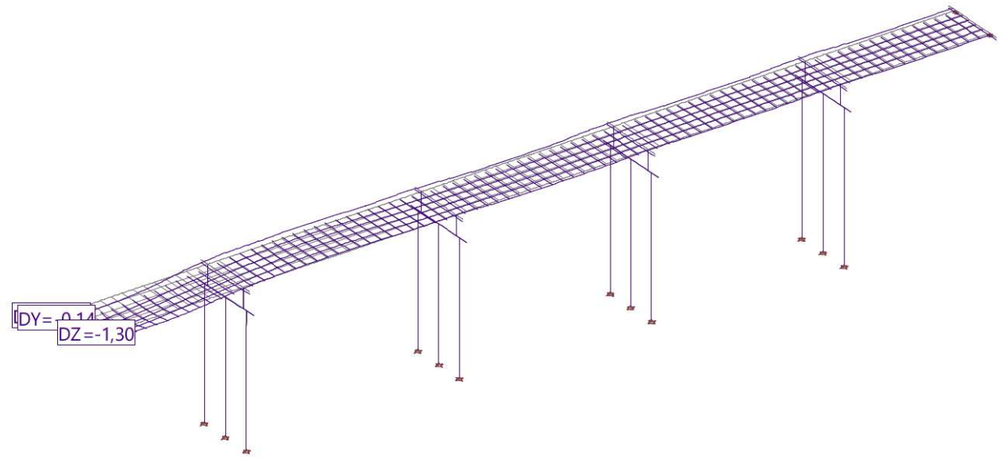
DISPLACEMENTS D (Principal axis) for: Q1-14 [mm], Scaling factor: 1478,6



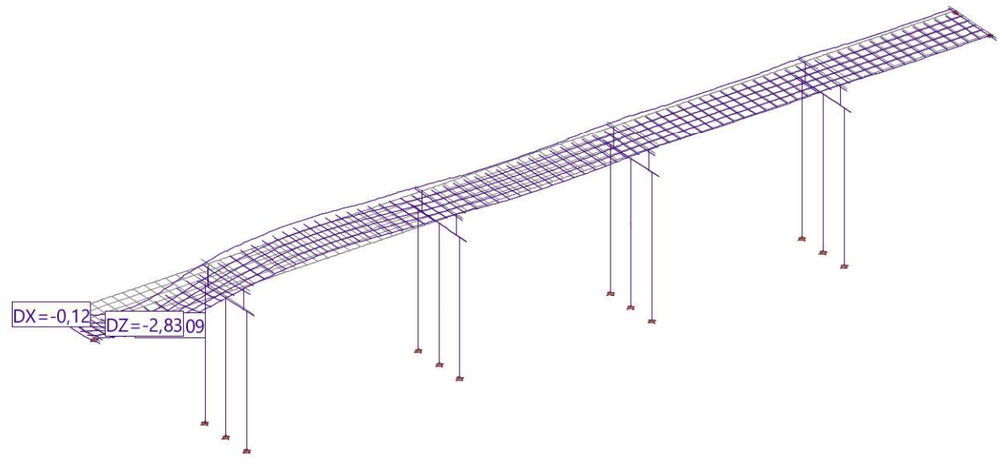
DISPLACEMENTS D (Principal axis) for: Q1-15 [mm], Scaling factor: 2042,5



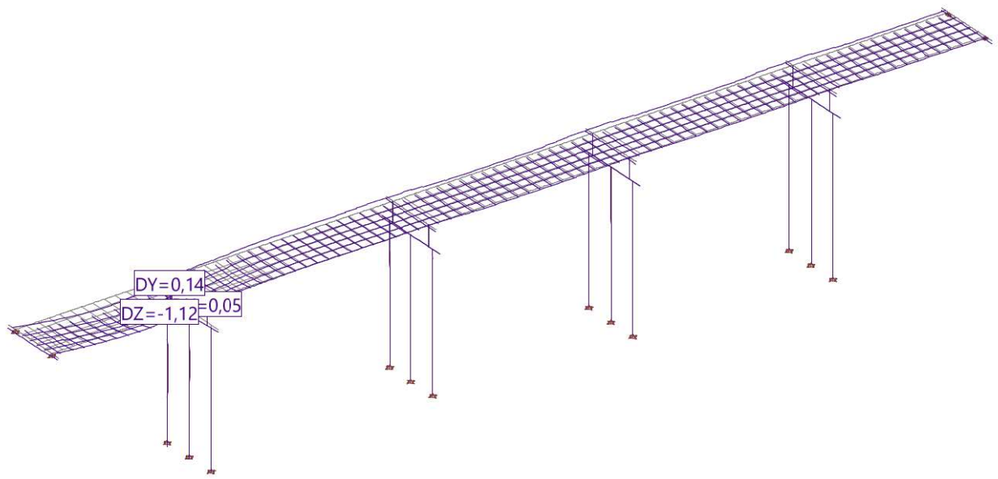
DISPLACEMENTS D (Principal axis) for: Q2-1 [mm], Scaling factor: 2059,4



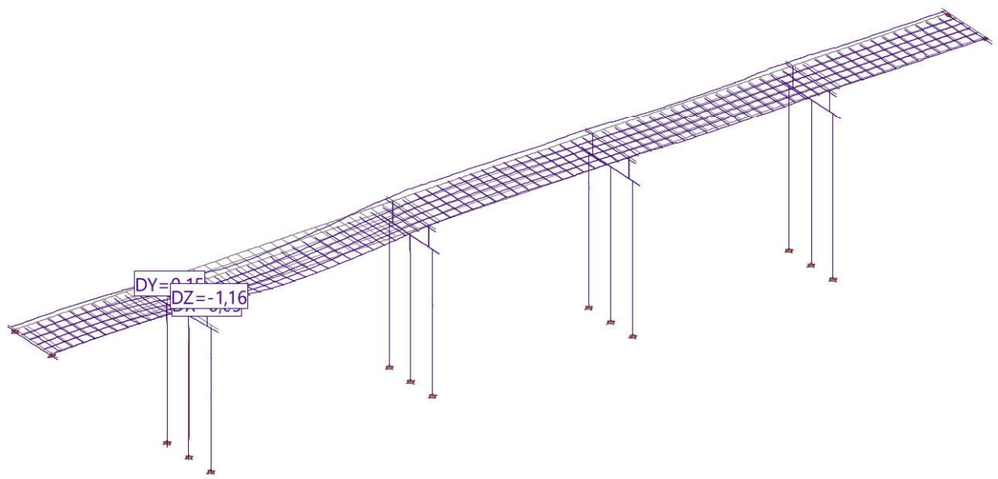
DISPLACEMENTS D (Principal axis) for: Q2-2 [mm], Scaling factor: 1472,7



DISPLACEMENTS D (Principal axis) for: Q2-3 [mm], Scaling factor: 2472,5



DISPLACEMENTS D (Principal axis) for: Q2-4 [mm], Scaling factor: 2548,3



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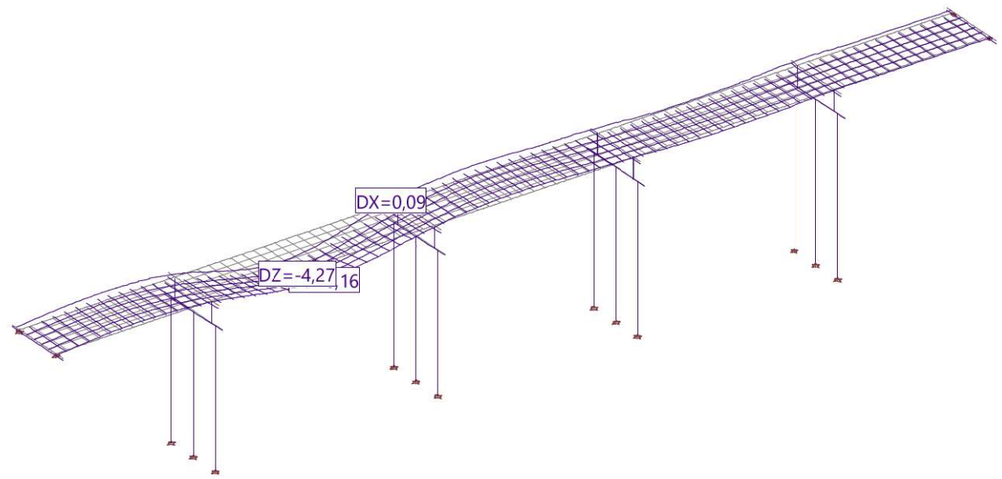
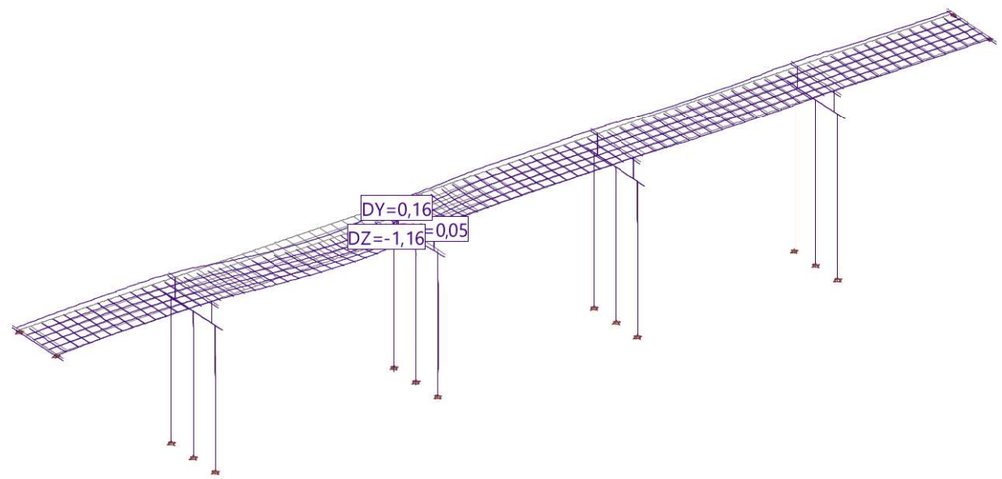
DISPLACEMENTS D (Principal axis) for: Q2-5 [mm], Scaling factor: 1000,0



DISPLACEMENTS D (Principal axis) for: Q2-6 [mm], Scaling factor: 2449,1



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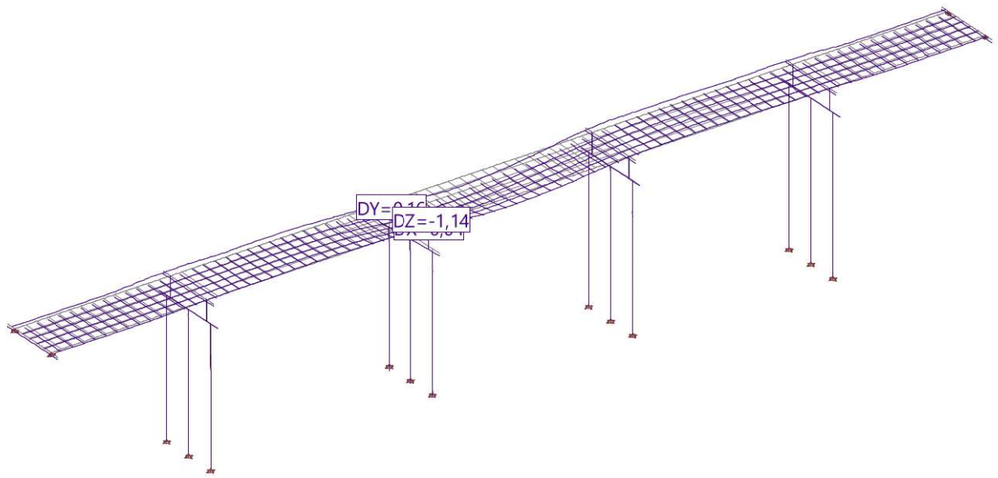
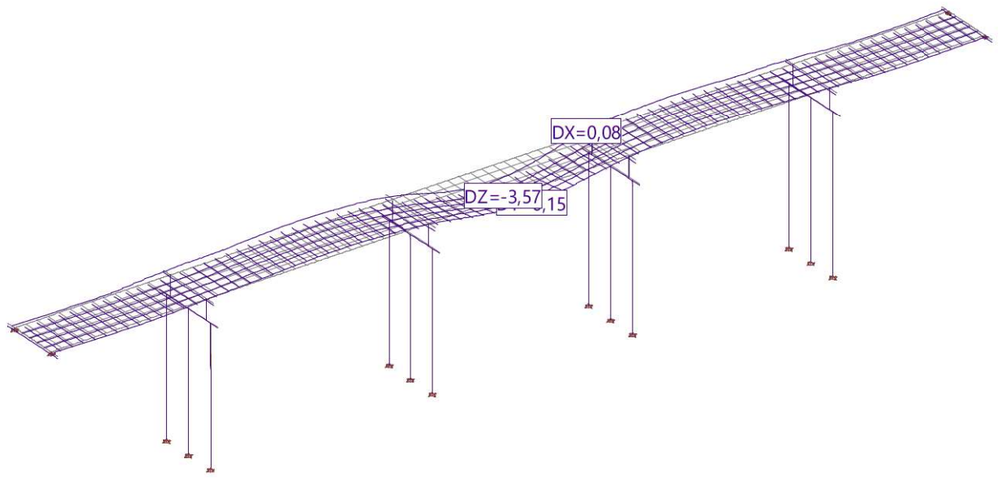
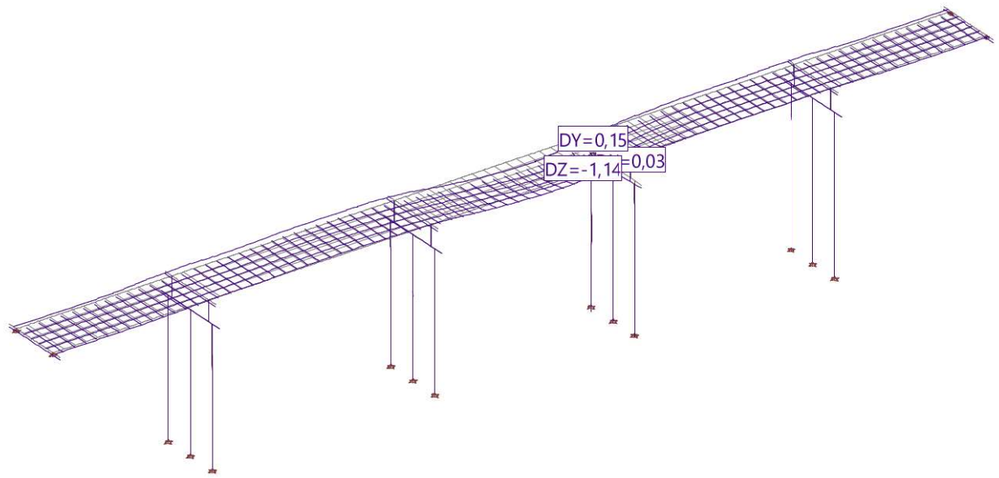
DISPLACEMENTS D (Principal axis) for: Q2-7 [mm], Scaling factor: 2549,3



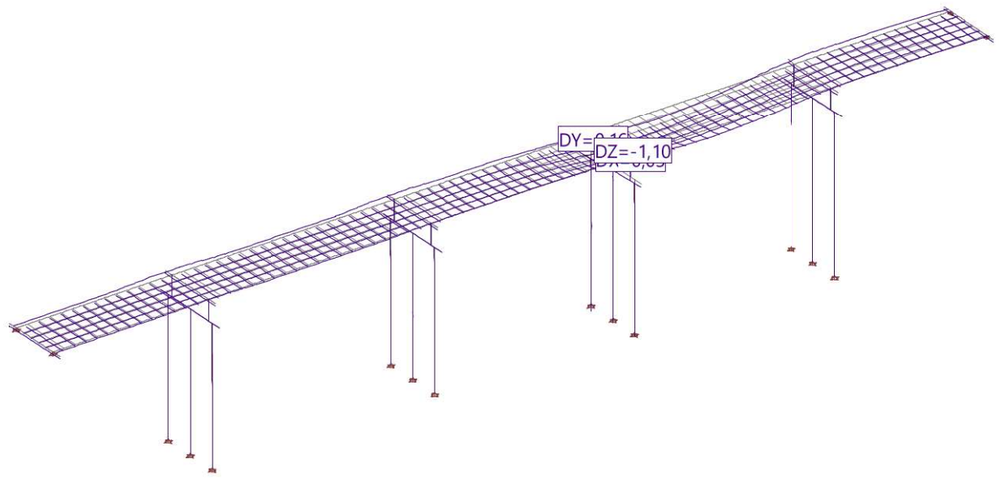
DISPLACEMENTS D (Principal axis) for: Q2-8 [mm], Scaling factor: 1000,0



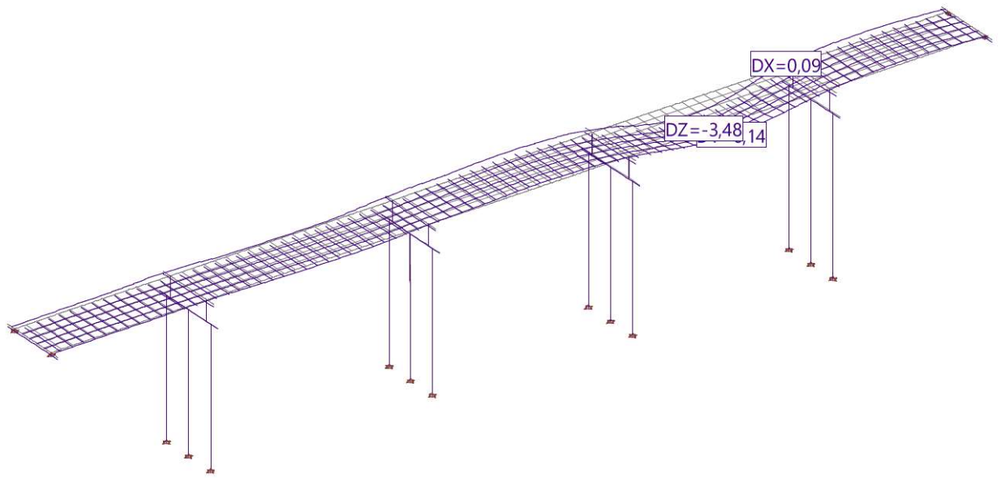
DISPLACEMENTS D (Principal axis) for: Q2-9 [mm], Scaling factor: 2464,9



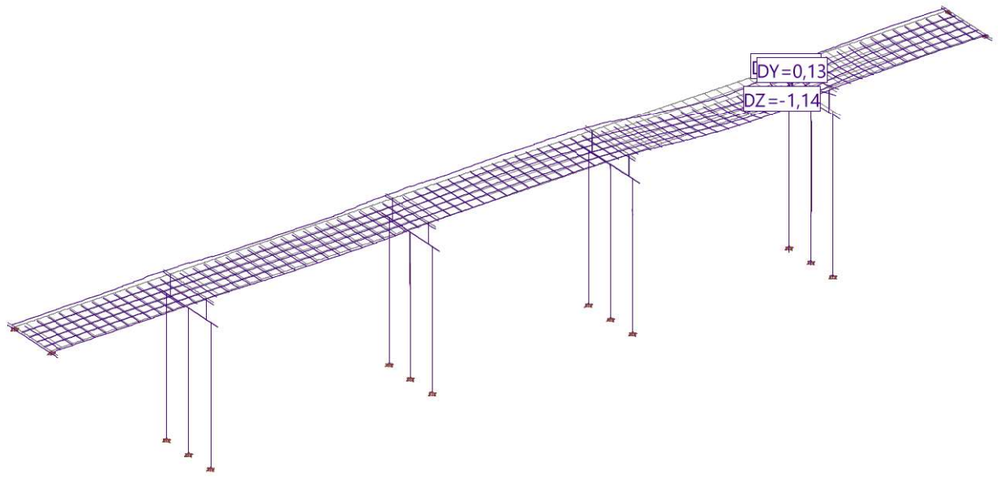
DISPLACEMENTS D (Principal axis) for: Q2-10 [mm], Scaling factor: 2614,3



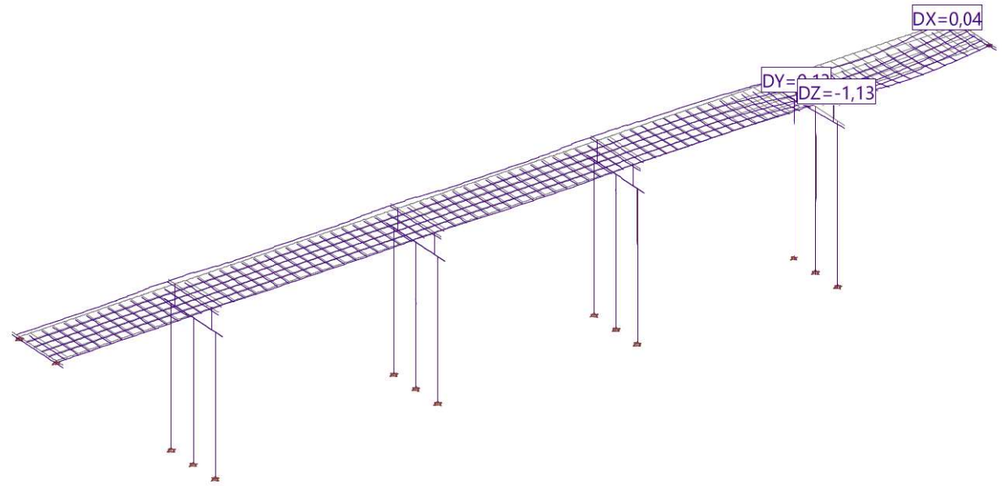
DISPLACEMENTS D (Principal axis) for: Q2-11 [mm], Scaling factor: 1000,0



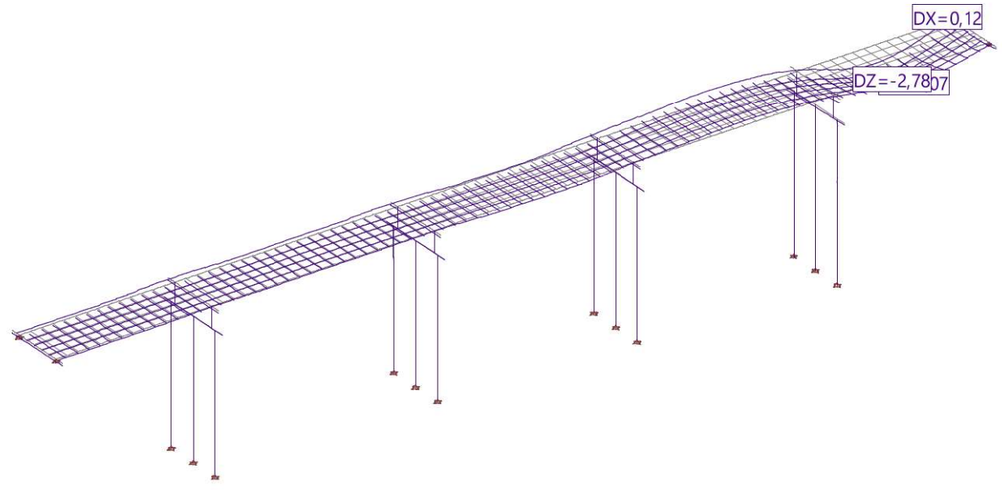
DISPLACEMENTS D (Principal axis) for: Q2-12 [mm], Scaling factor: 2474,1



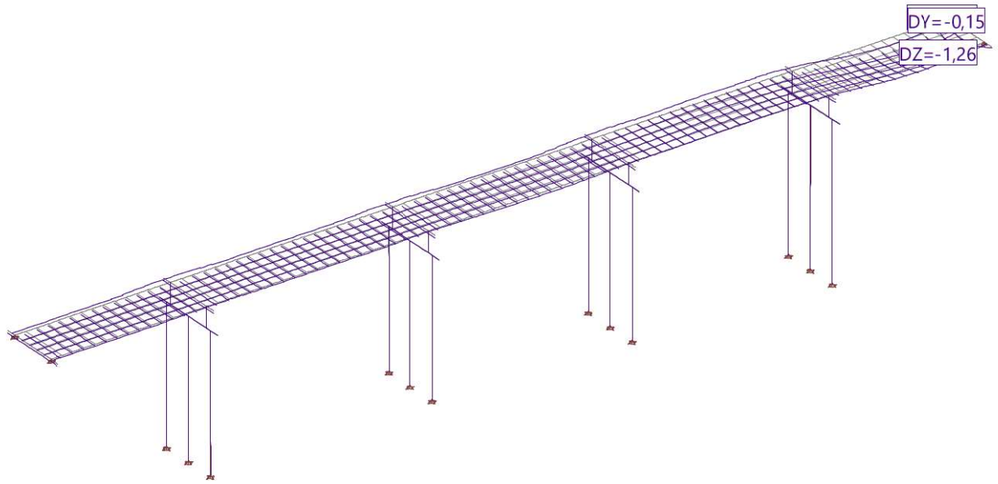
DISPLACEMENTS D (Principal axis) for: Q2-13 [mm], Scaling factor: 2548,0



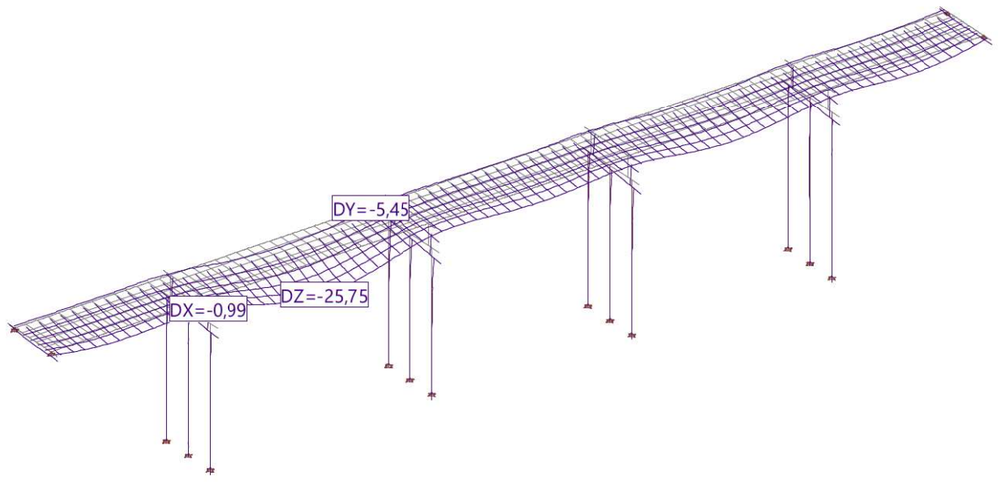
DISPLACEMENTS D (Principal axis) for: Q2-14 [mm], Scaling factor: 1484,5



DISPLACEMENTS D (Principal axis) for: Q2-15 [mm], Scaling factor: 2032,2

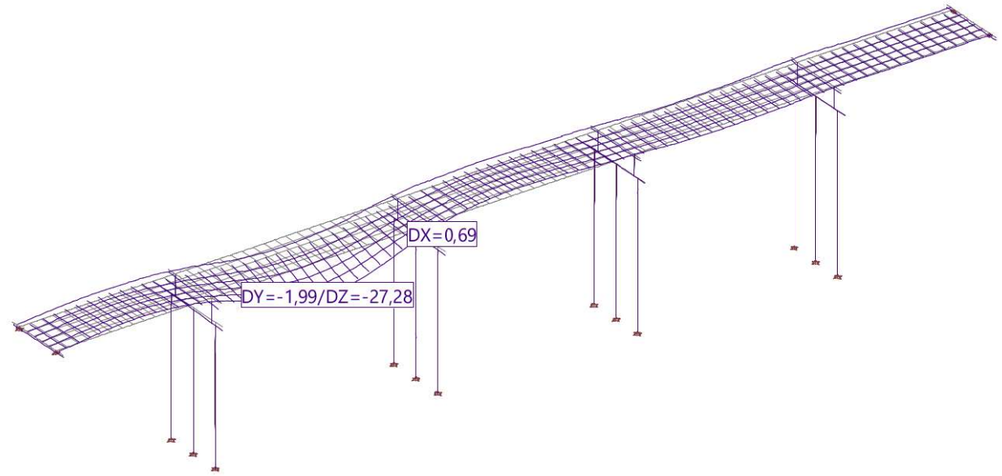


DISPLACEMENTS D (Principal axis) for: Qa11 [mm], Scaling factor: 194,0

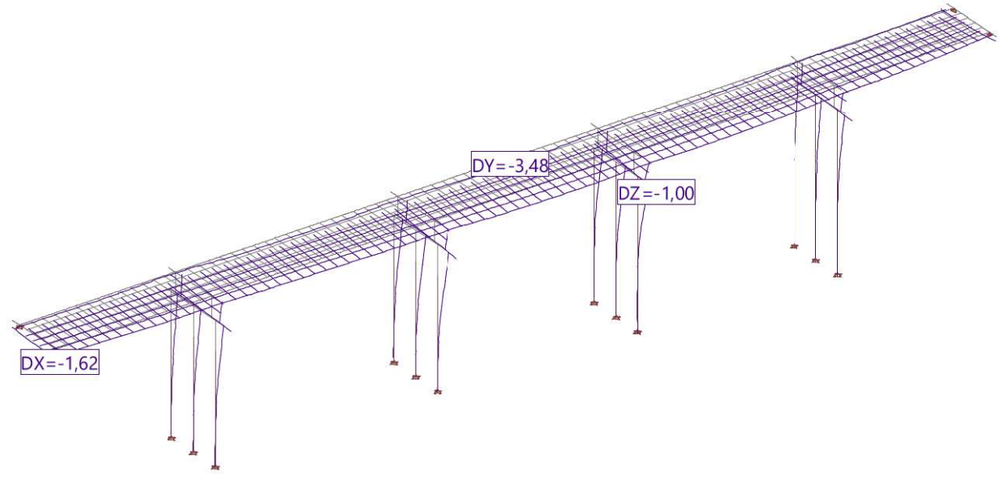


Nr.:

DISPLACEMENTS D (Principal axis) for: Qa21 [mm], Scaling factor: 200,0

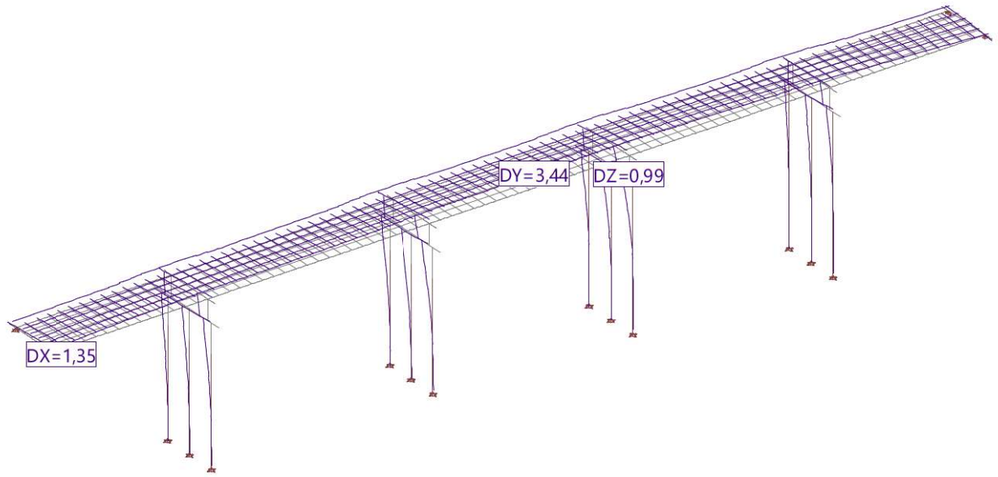


DISPLACEMENTS D (Principal axis) for: Qa31 [mm], Scaling factor: 1000,0

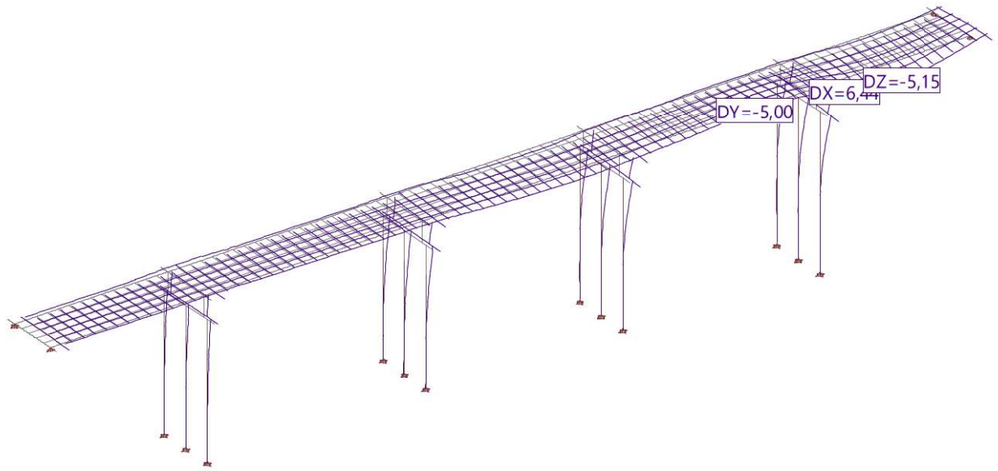


Nr.:

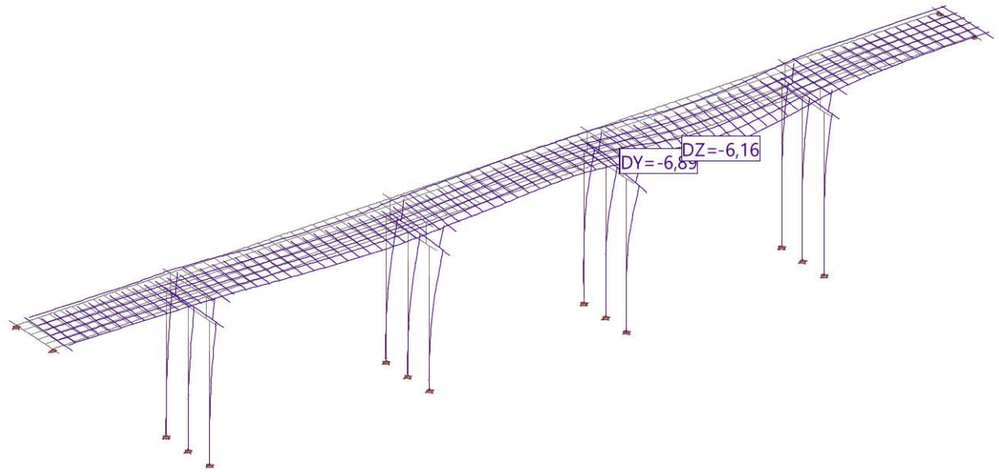
DISPLACEMENTS D (Principal axis) for: Qa32 [mm], Scaling factor: 1000,0



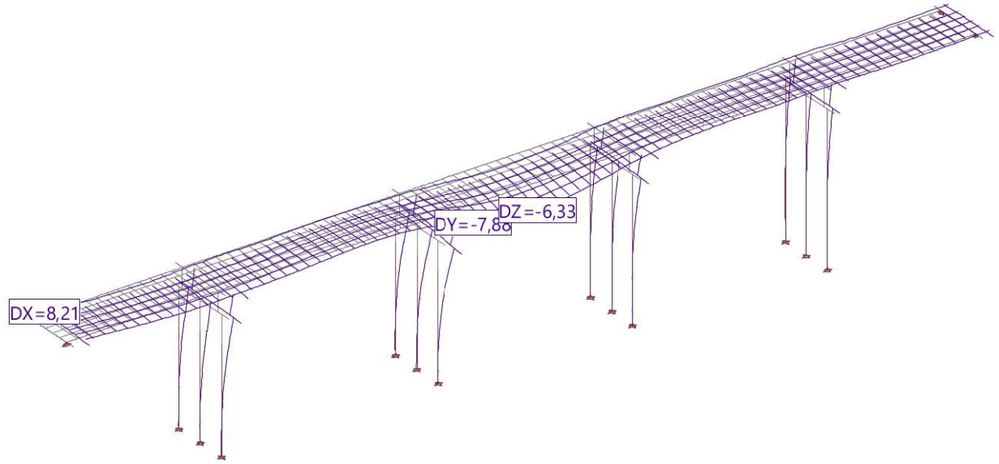
DISPLACEMENTS D (Principal axis) for: Qa41 [mm], Scaling factor: 463,1



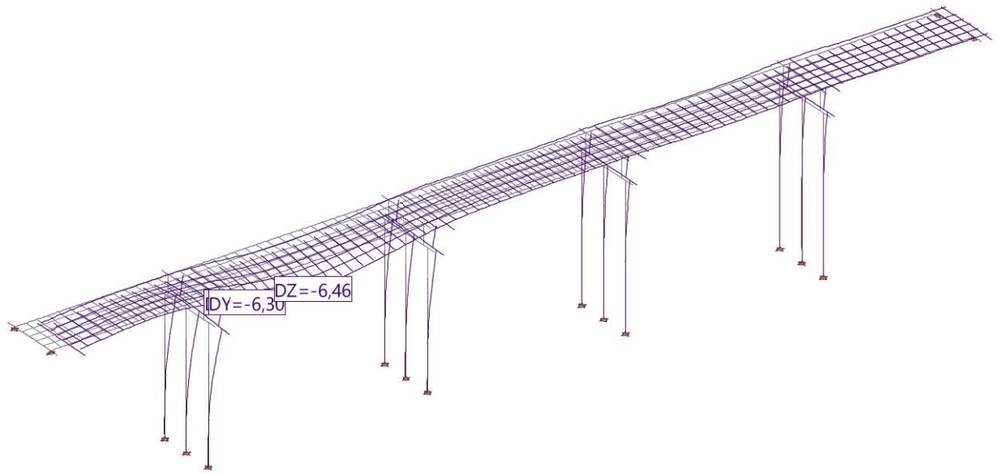
DISPLACEMENTS D (Principal axis) for: Qa42 [mm], Scaling factor: 437,0



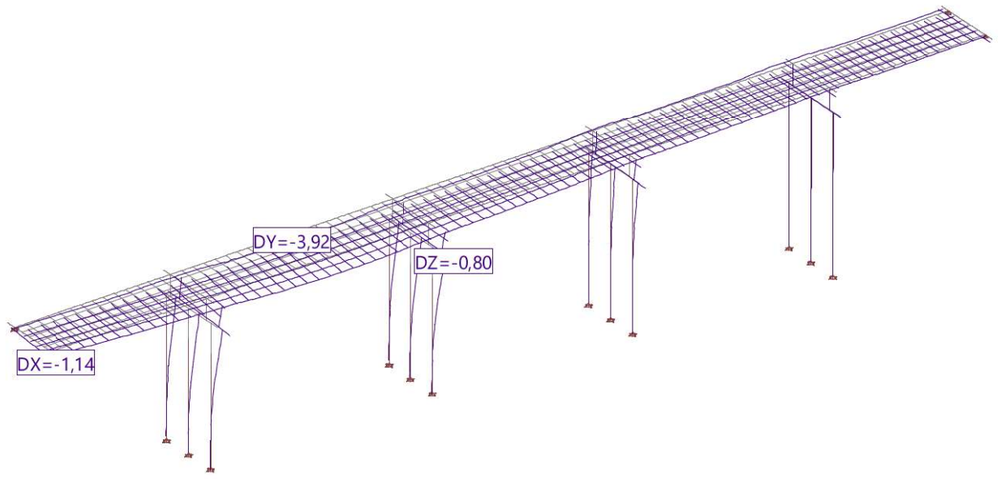
DISPLACEMENTS D (Principal axis) for: Qa43 [mm], Scaling factor: 436,7



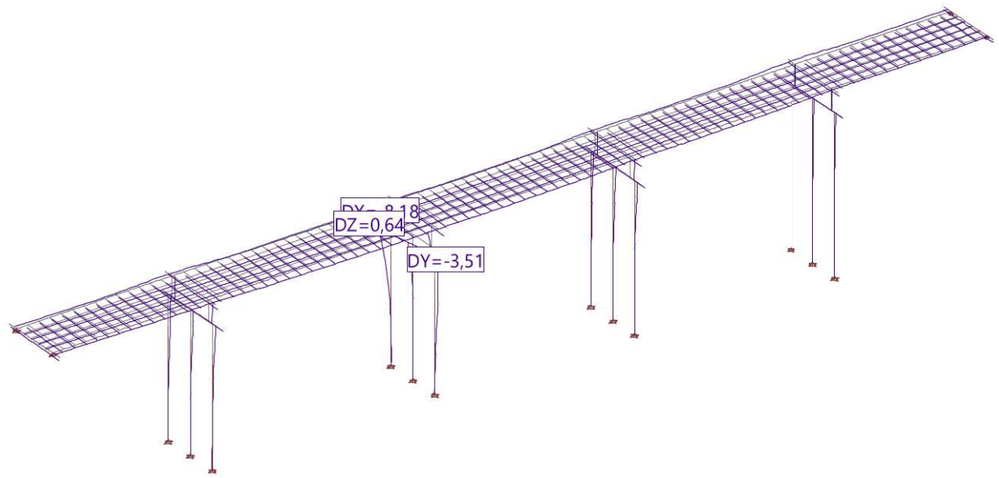
DISPLACEMENTS D (Principal axis) for: Qa44 [mm], Scaling factor: 451,9



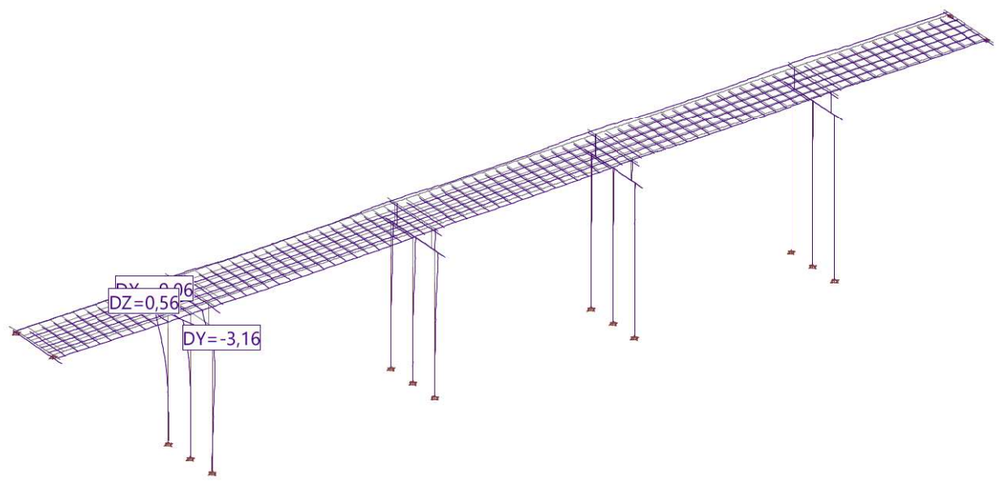
DISPLACEMENTS D (Principal axis) for: Qa51 [mm], Scaling factor: 1000,0



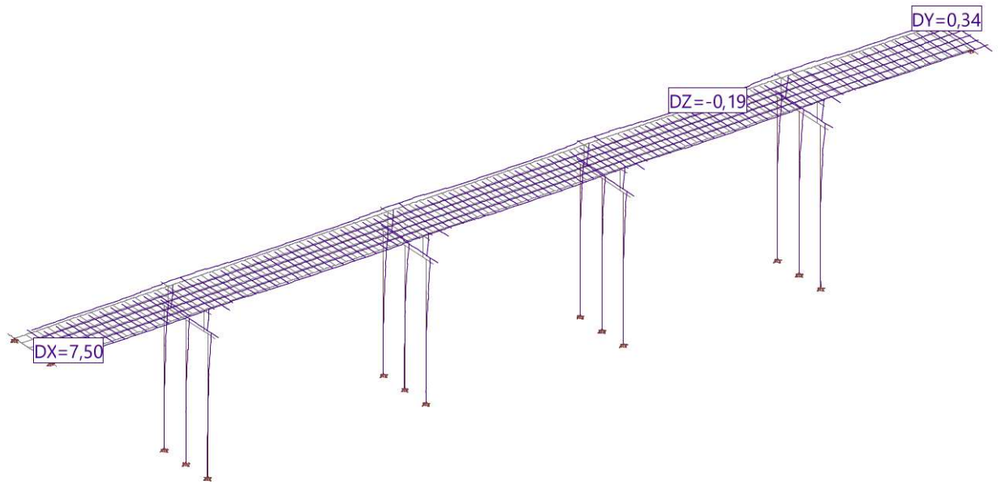
DISPLACEMENTS D (Principal axis) for: Qa52 [mm], Scaling factor: 500,0



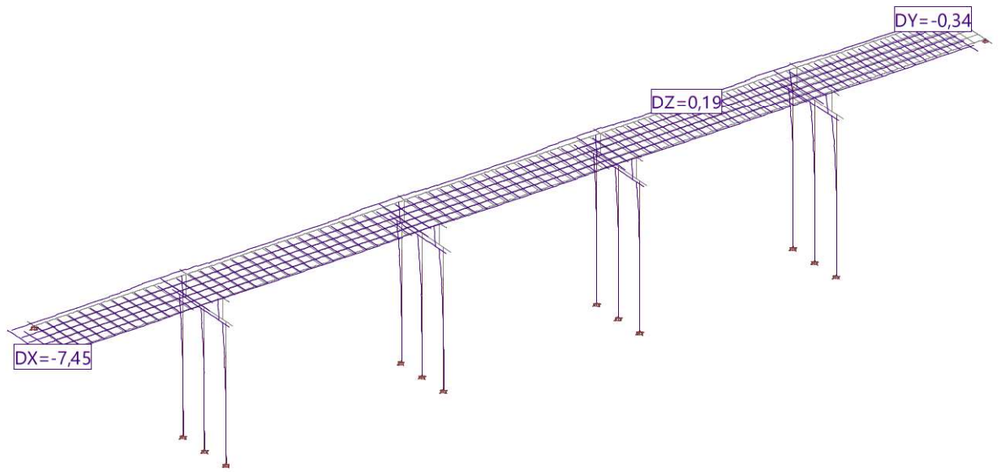
DISPLACEMENTS D (Principal axis) for: Qa53 [mm], Scaling factor: 500,0



DISPLACEMENTS D (Principal axis) for: QI1 [mm], Scaling factor: 500,0



DISPLACEMENTS D (Principal axis) for: QI2 [mm], Scaling factor: 500,0



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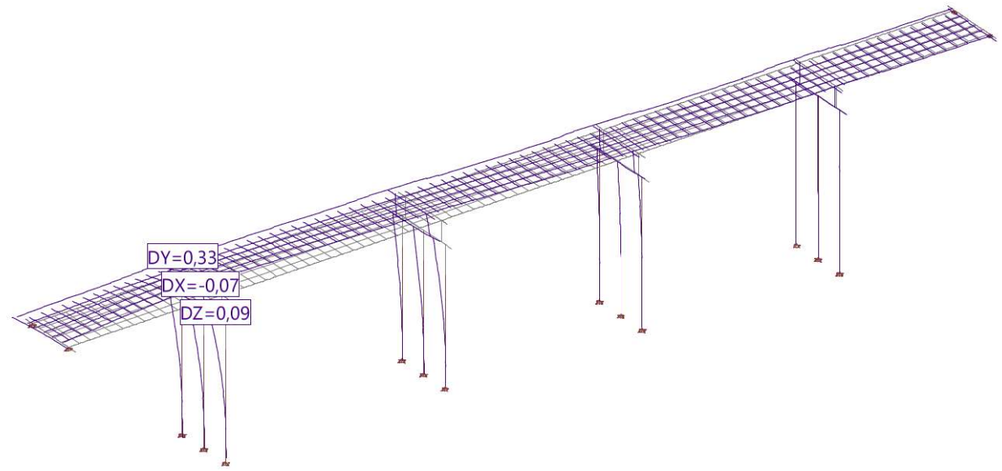
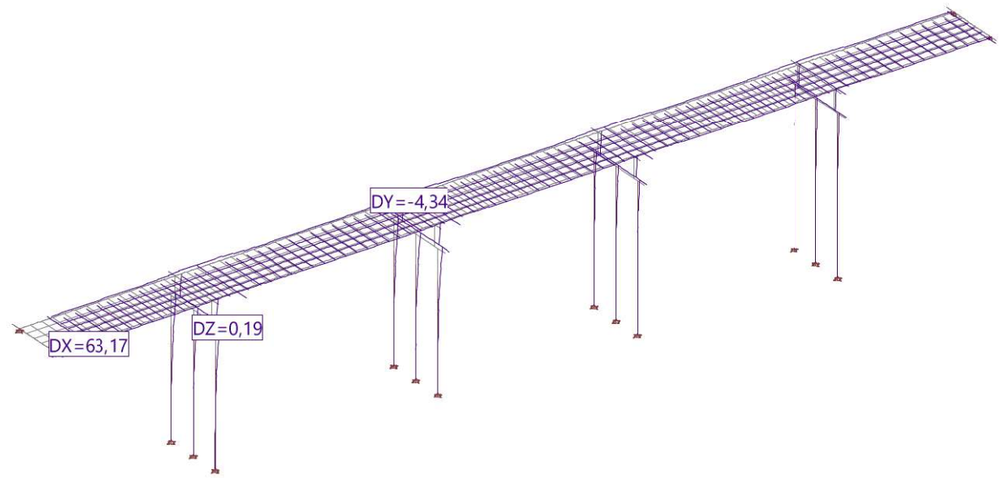
DISPLACEMENTS D (Principal axis) for: Qs1 [mm], Scaling factor: 12907,2



DISPLACEMENTS D (Principal axis) for: RET [mm], Scaling factor: 100,0



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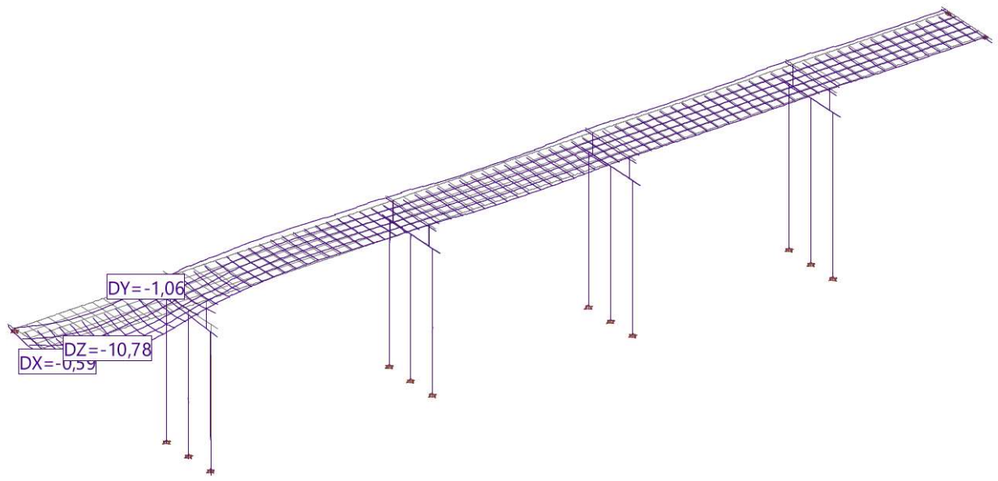
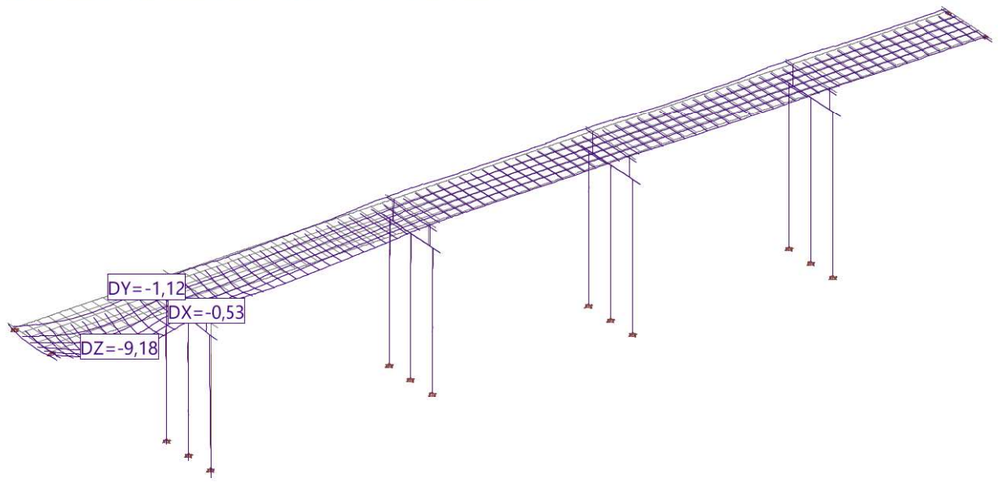
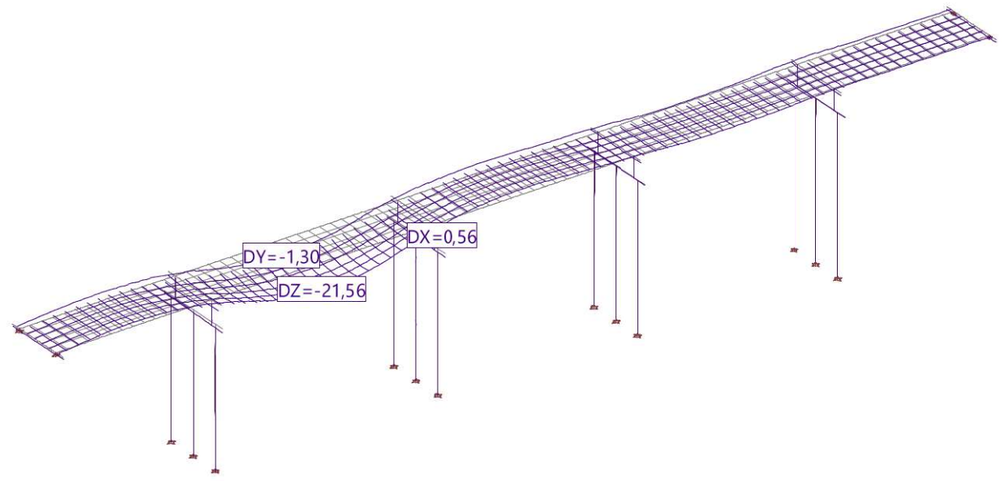
DISPLACEMENTS D (Principal axis) for: SW01-1 [mm], Scaling factor: 353,1



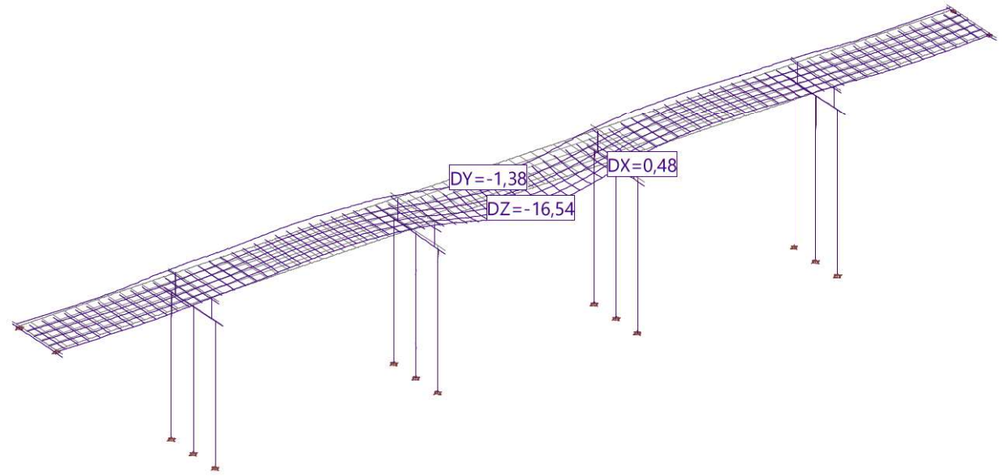
DISPLACEMENTS D (Principal axis) for: SW01-2 [mm], Scaling factor: 469,1



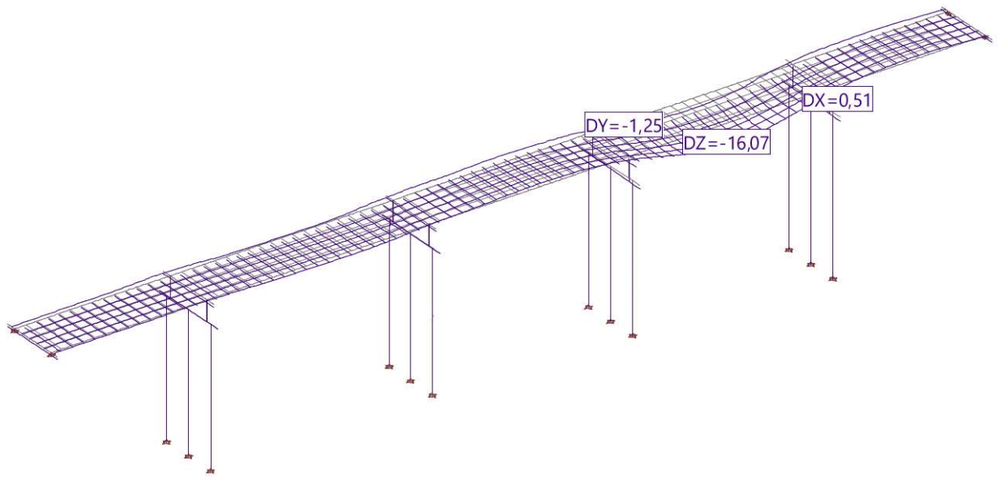
DISPLACEMENTS D (Principal axis) for: SW01-3 [mm], Scaling factor: 200,0



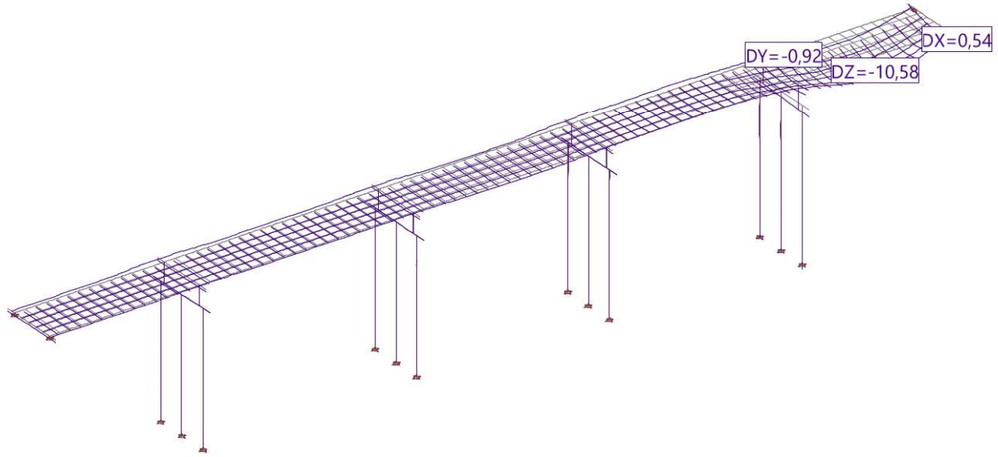
DISPLACEMENTS D (Principal axis) for: SW01-4 [mm], Scaling factor: 200,0



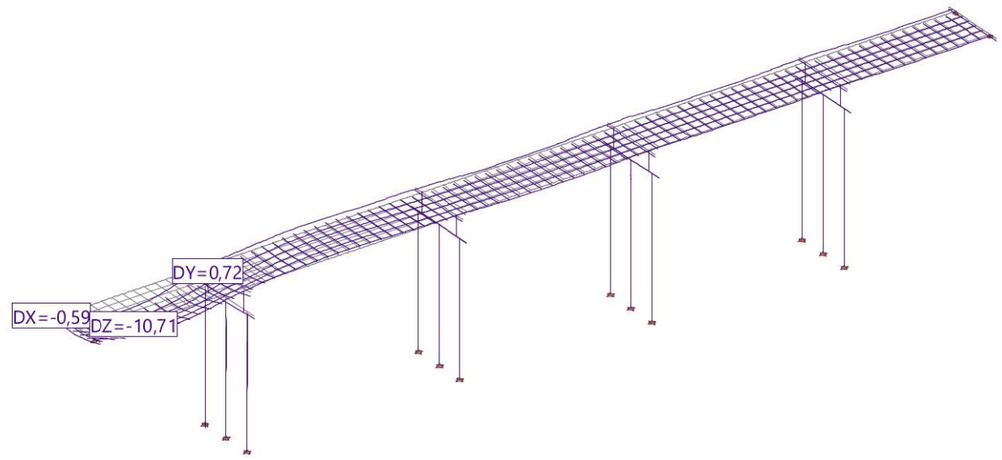
DISPLACEMENTS D (Principal axis) for: SW01-5 [mm], Scaling factor: 200,0



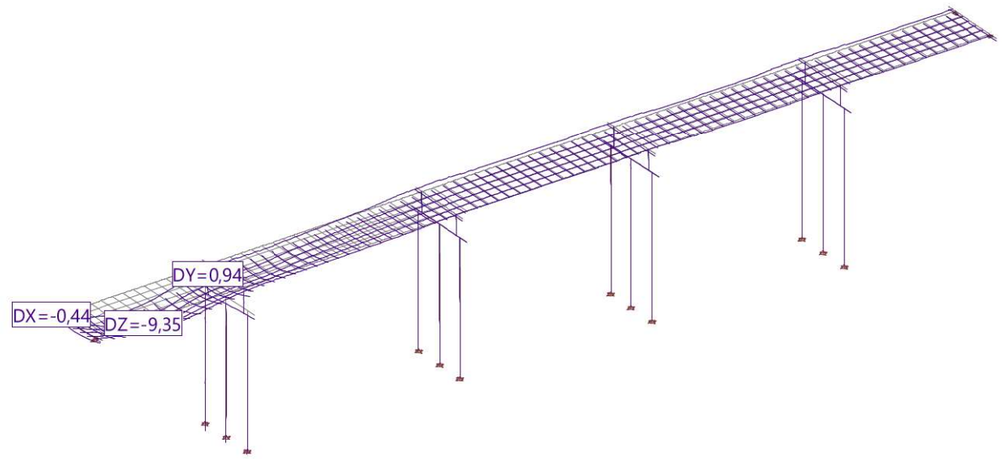
DISPLACEMENTS D (Principal axis) for: SW01-6 [mm], Scaling factor: 357,3



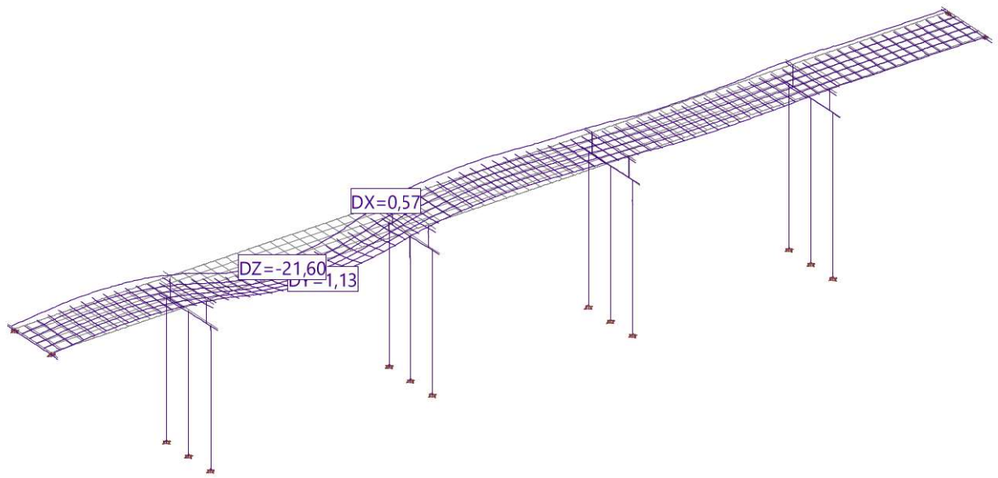
DISPLACEMENTS D (Principal axis) for: SW02-1 [mm], Scaling factor: 359,0



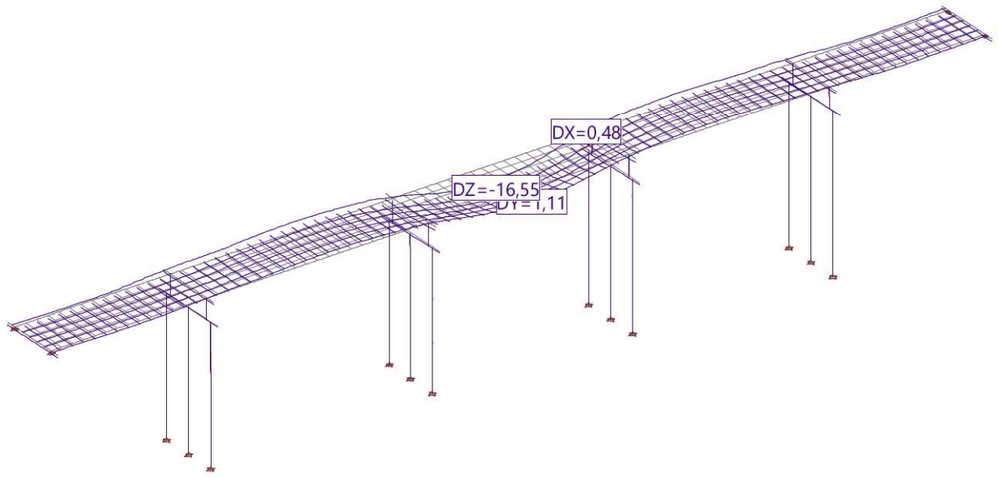
DISPLACEMENTS D (Principal axis) for: SW02-2 [mm], Scaling factor: 464,6



DISPLACEMENTS D (Principal axis) for: SW02-3 [mm], Scaling factor: 200,0



DISPLACEMENTS D (Principal axis) for: SW02-4 [mm], Scaling factor: 200,0



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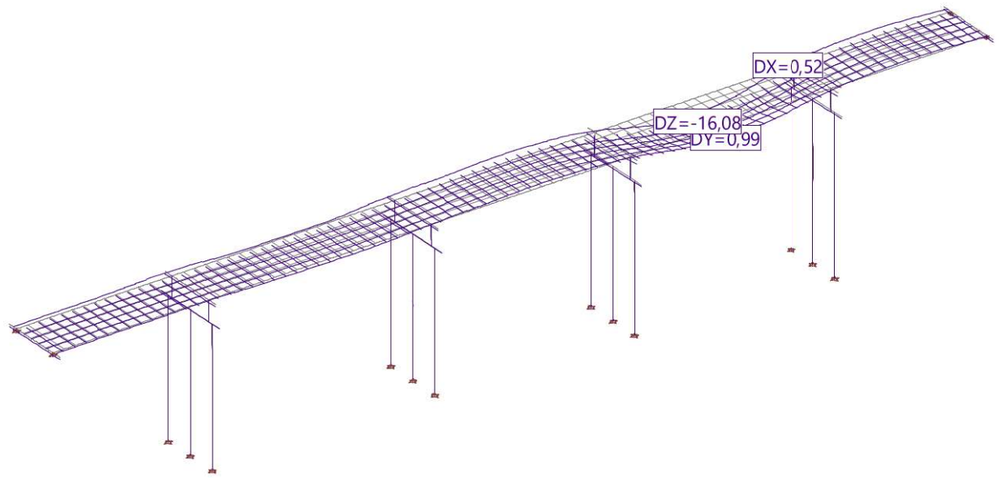
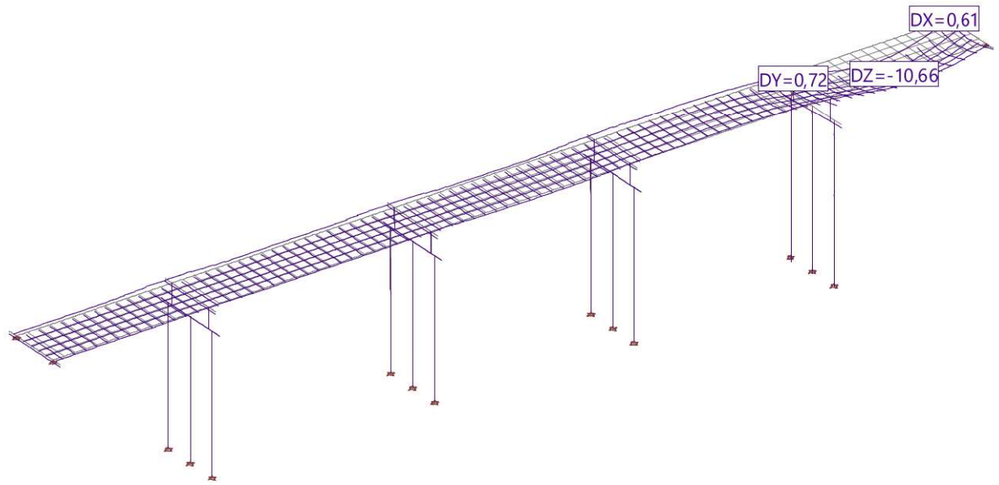
DISPLACEMENTS D (Principal axis) for: SW02-5 [mm], Scaling factor: 200,0



DISPLACEMENTS D (Principal axis) for: SW02-6 [mm], Scaling factor: 353,4



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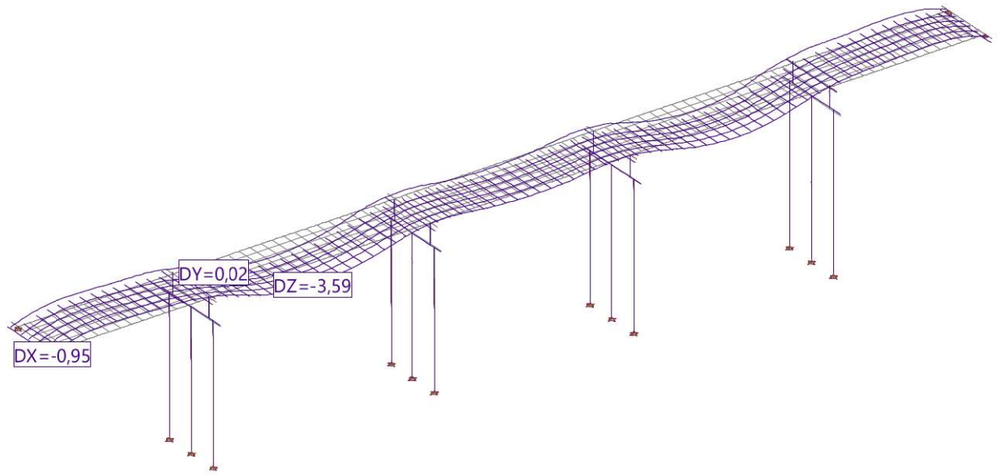
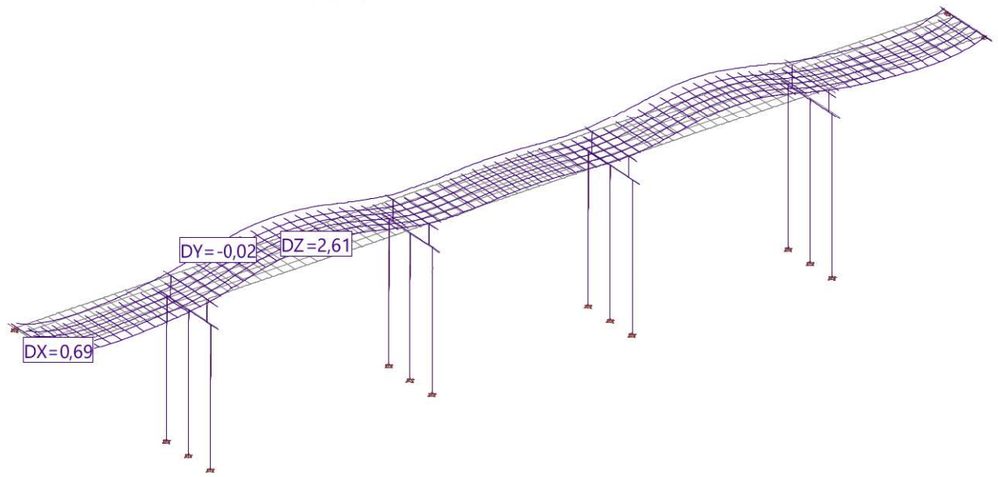
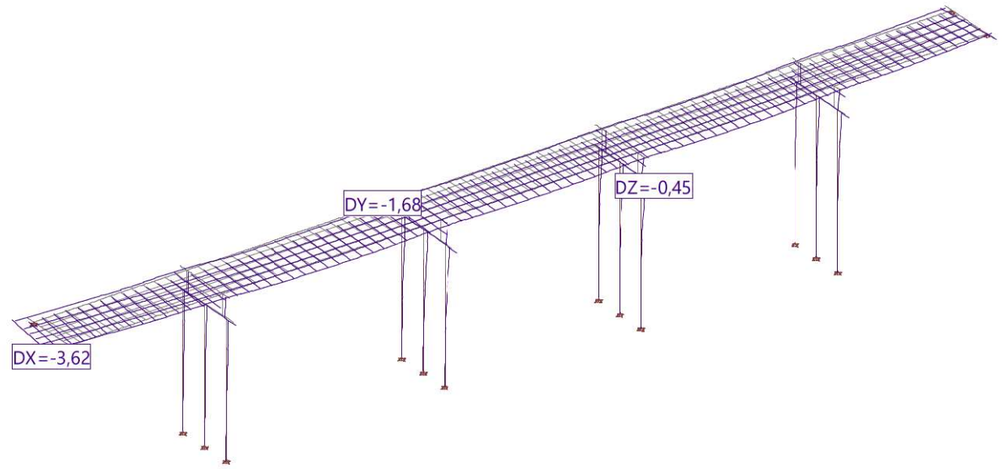
DISPLACEMENTS D (Principal axis) for: Tg+ [mm], Scaling factor: 920,4



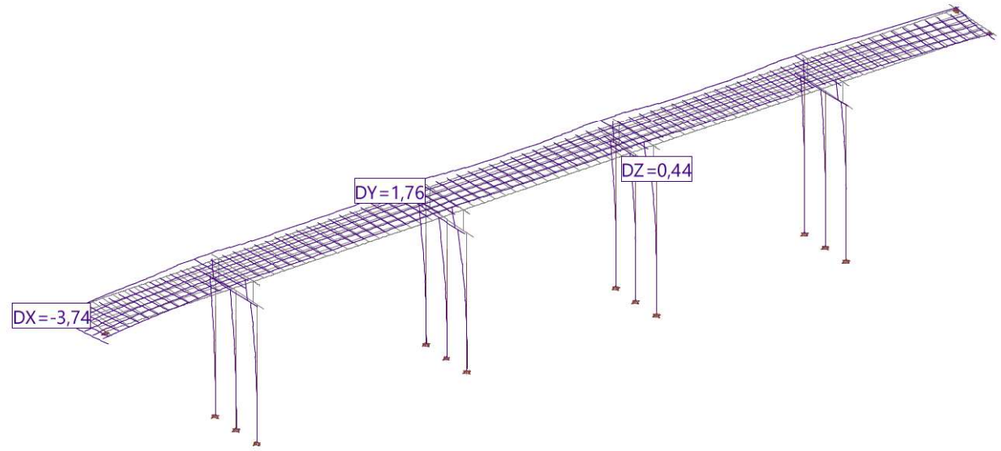
DISPLACEMENTS D (Principal axis) for: Tg- [mm], Scaling factor: 1265,6



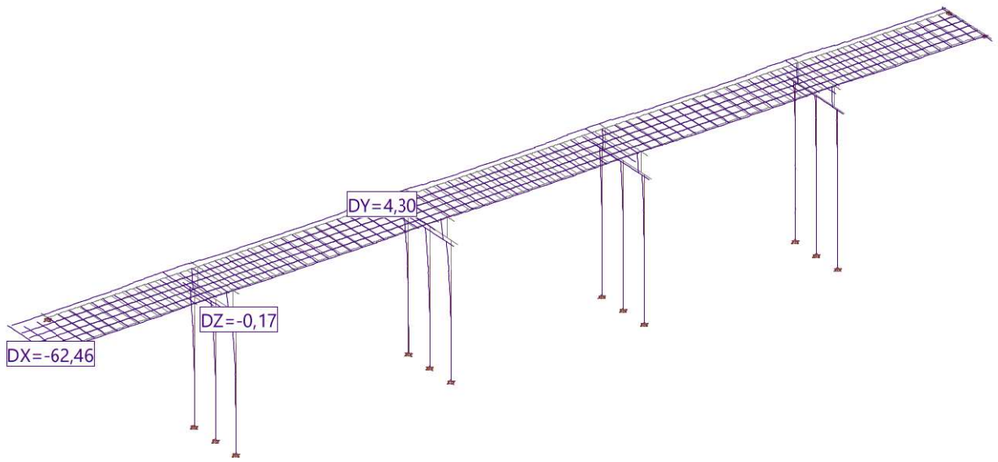
DISPLACEMENTS D (Principal axis) for: Tgt+ [mm], Scaling factor: 1000,0



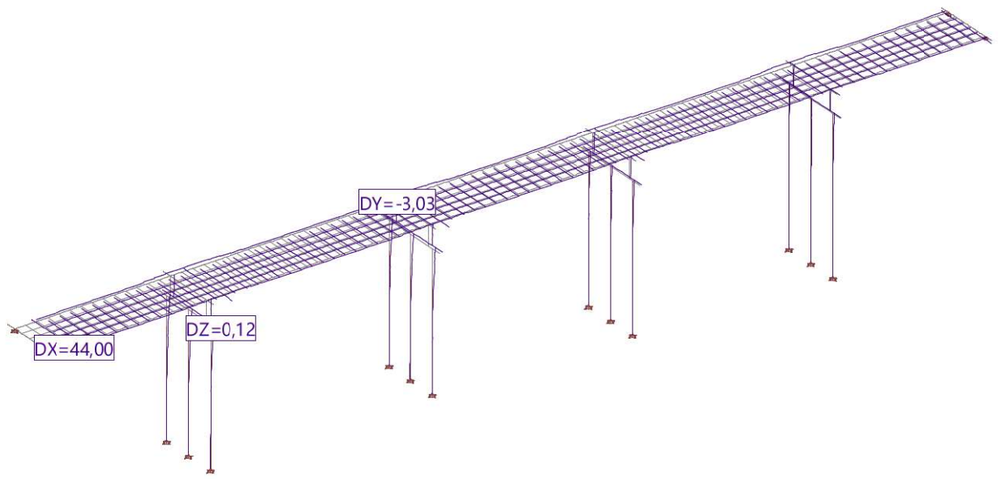
DISPLACEMENTS D (Principal axis) for: Tgt- [mm], Scaling factor: 1000,0



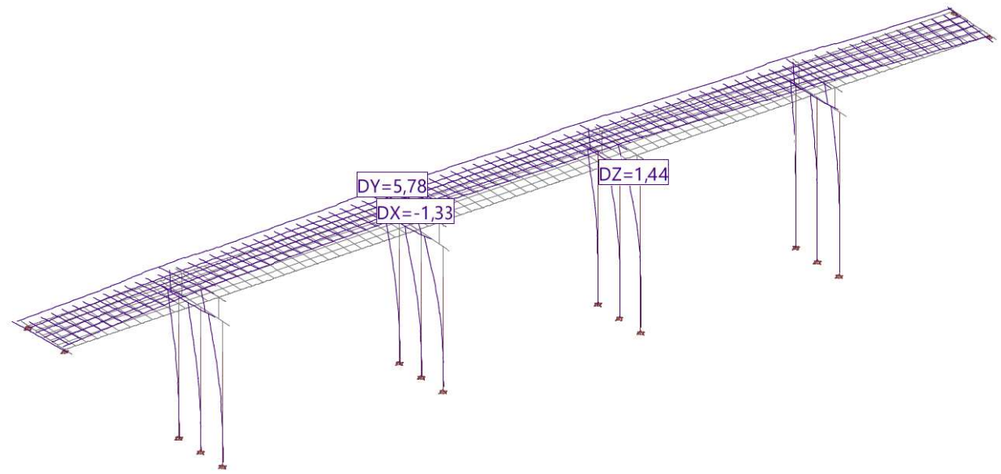
DISPLACEMENTS D (Principal axis) for: Tu+ [mm], Scaling factor: 100,0



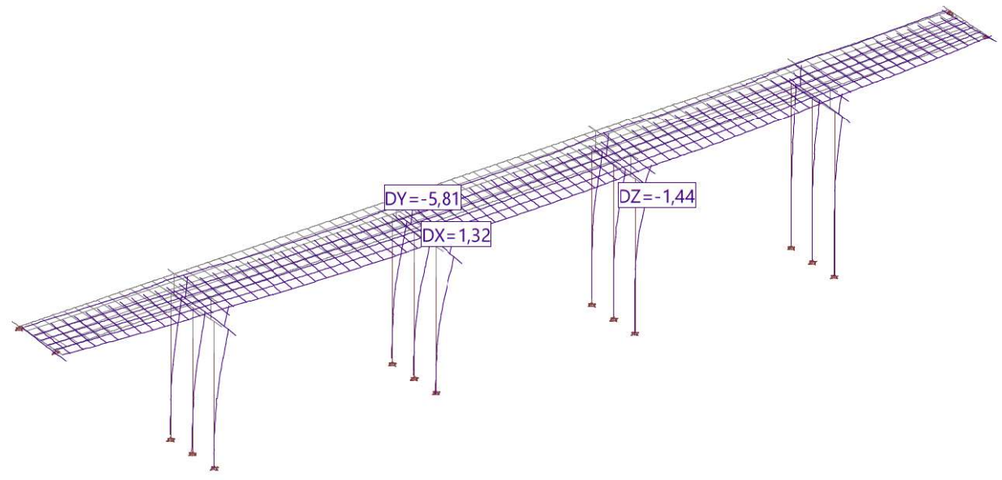
DISPLACEMENTS D (Principal axis) for: Tu- [mm], Scaling factor: 100,0



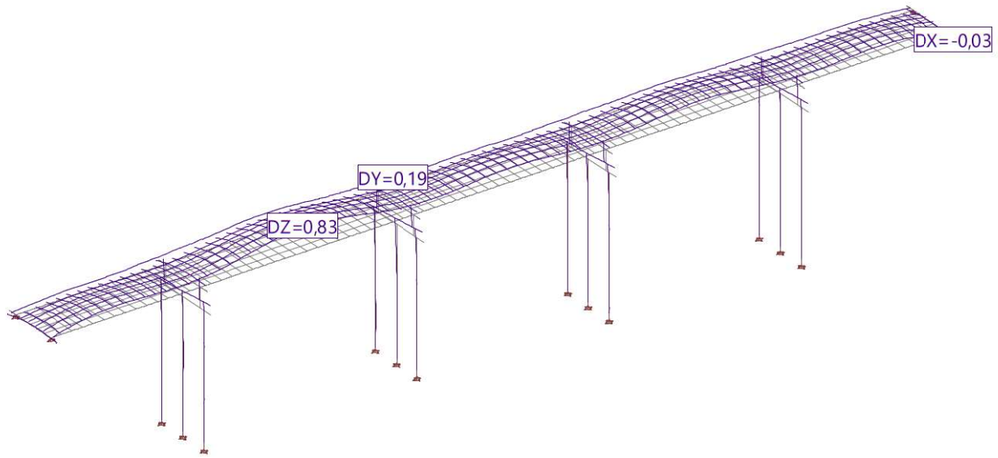
DISPLACEMENTS D (Principal axis) for: Vt1 [mm], Scaling factor: 774,5



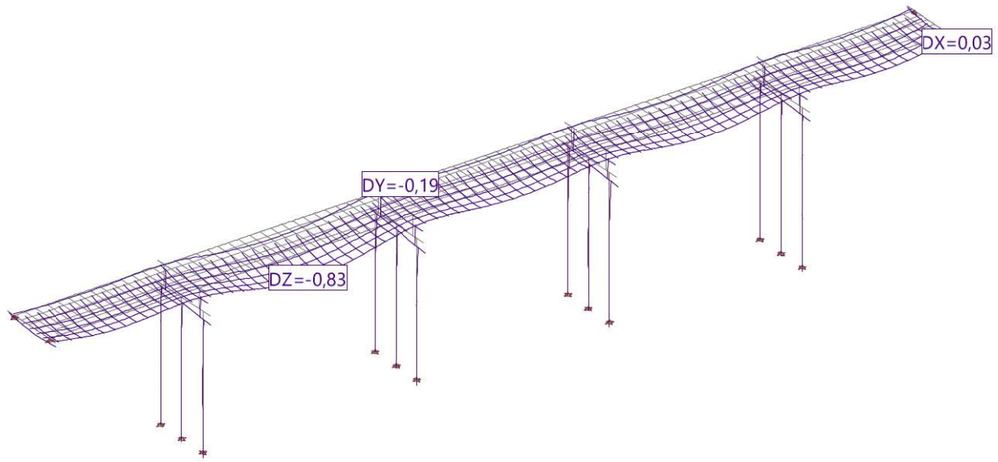
DISPLACEMENTS D (Principal axis) for: Vt2 [mm], Scaling factor: 773,9



DISPLACEMENTS D (Principal axis) for: Vv1+ [mm], Scaling factor: 5000,0



DISPLACEMENTS D (Principal axis) for: Vv1- [mm], Scaling factor: 5000,0



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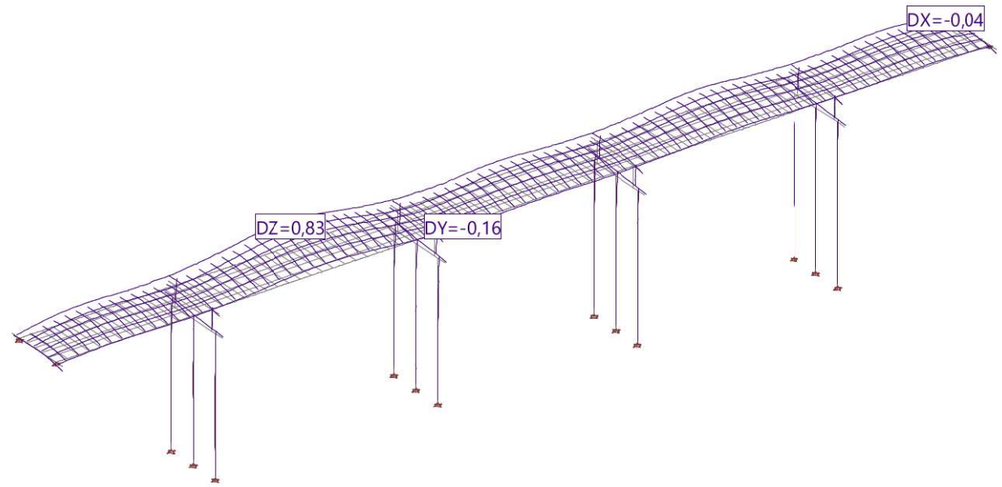
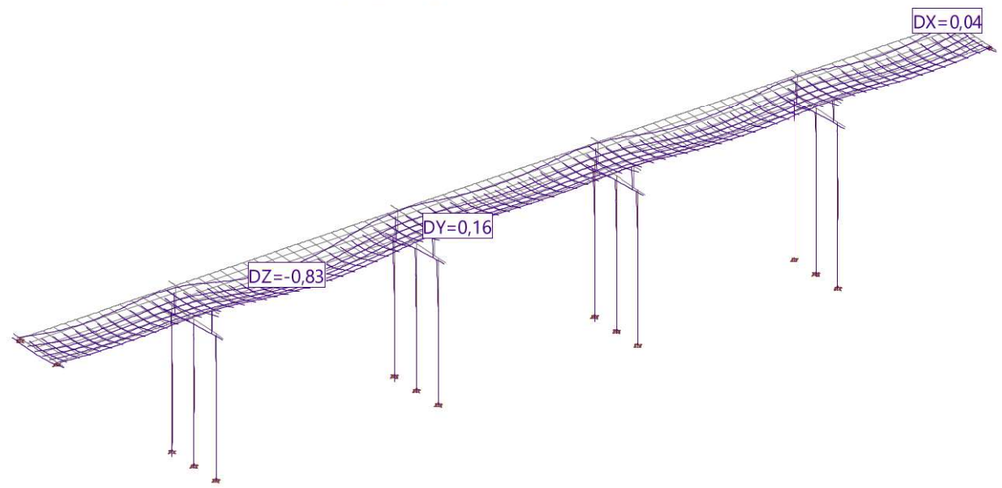
DISPLACEMENTS D (Principal axis) for: Vv2+ [mm], Scaling factor: 5000,0



DISPLACEMENTS D (Principal axis) for: Vv2- [mm], Scaling factor: 5000,0



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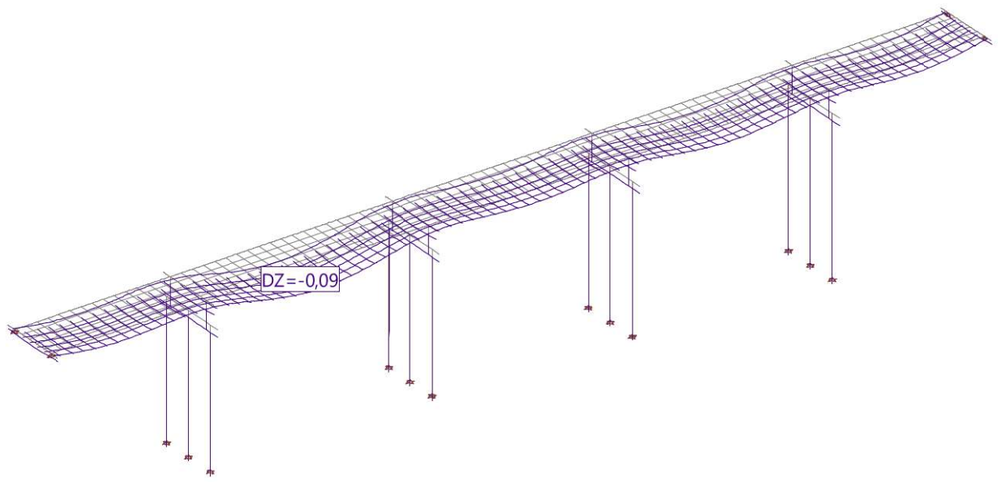
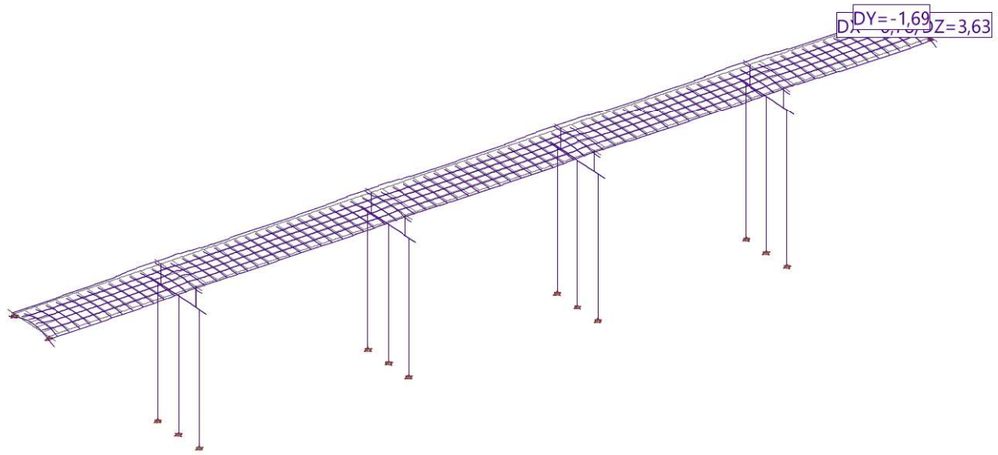
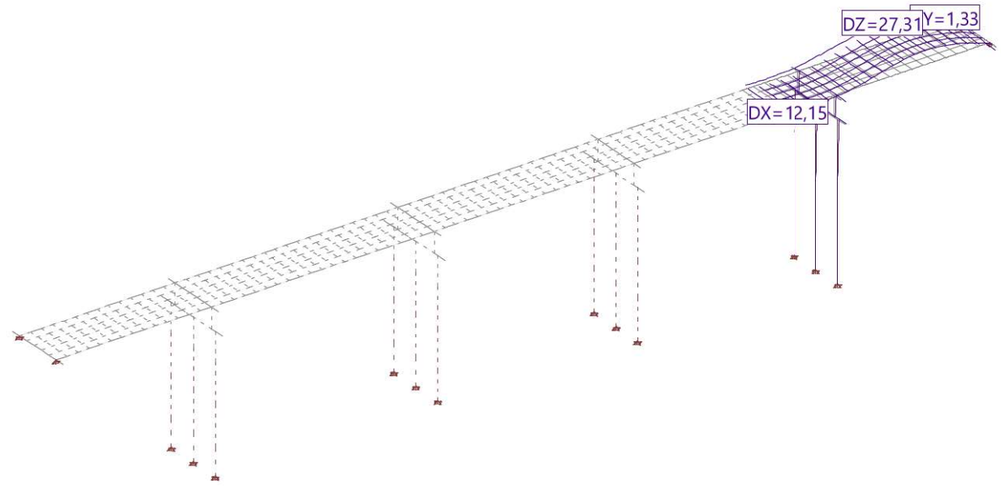
DISPLACEMENTS D (Principal axis) for: nk [mm], Scaling factor: 50000,0



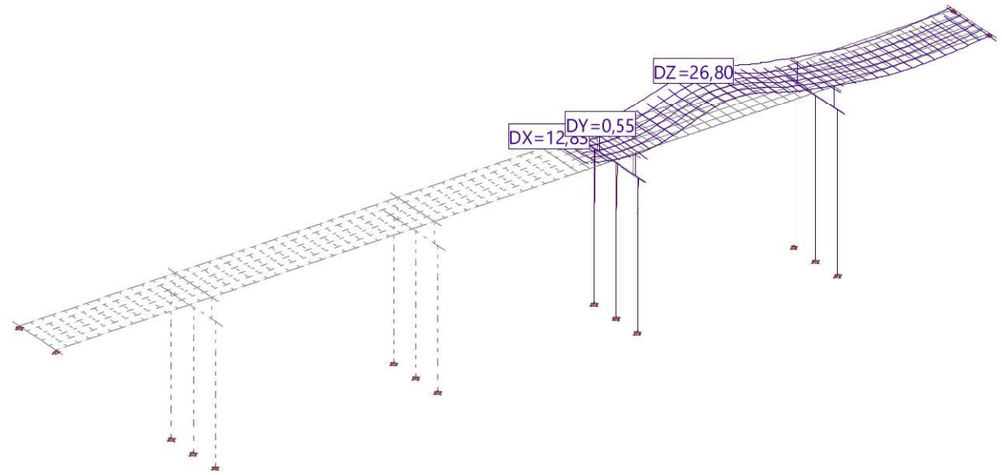
DISPLACEMENTS D (Principal axis) for: V2 (Bz 5) [mm], Scaling factor: 209,0



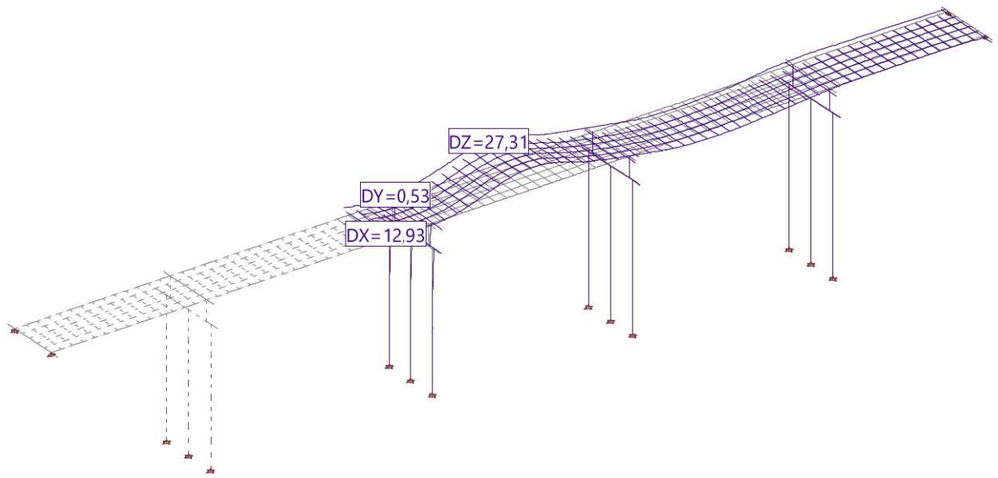
DISPLACEMENTS D (Principal axis) for: V1-1 (Bz 1) [mm], Scaling factor: 98,3



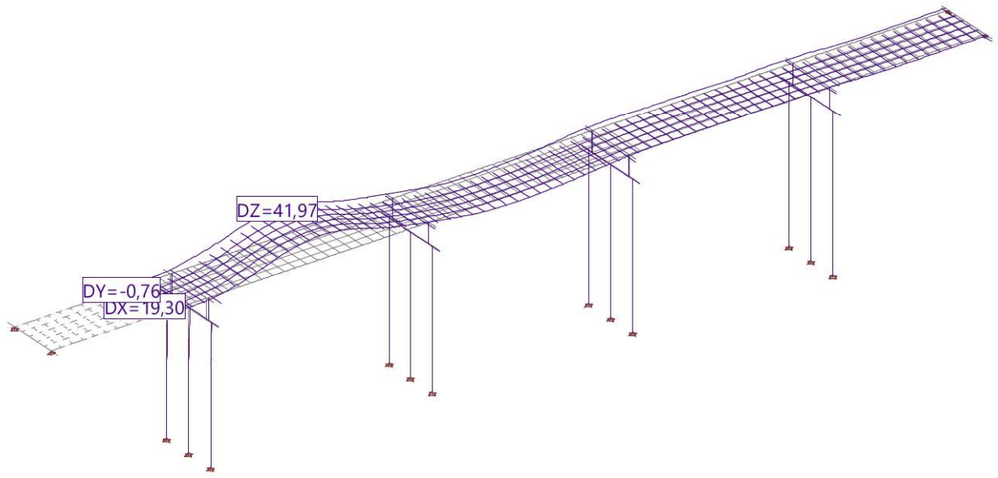
DISPLACEMENTS D (Principal axis) for: V1-2 (Bz 2) [mm], Scaling factor: 145,9



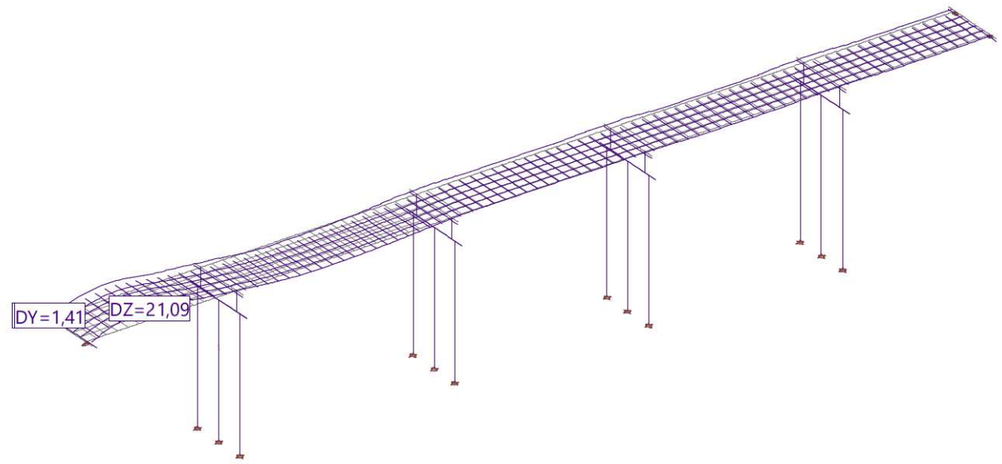
DISPLACEMENTS D (Principal axis) for: V1-3 (Bz 3) [mm], Scaling factor: 144,5



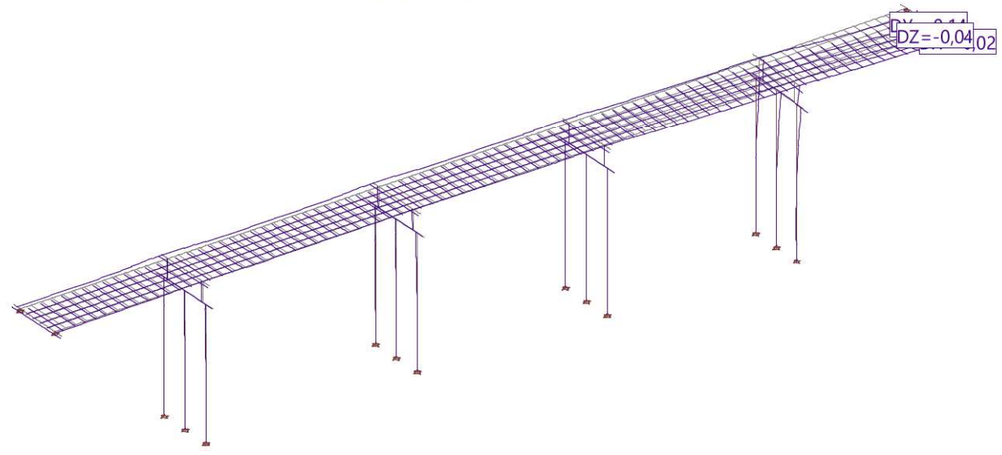
DISPLACEMENTS D (Principal axis) for: V1-4 (Bz 4) [mm], Scaling factor: 100,0



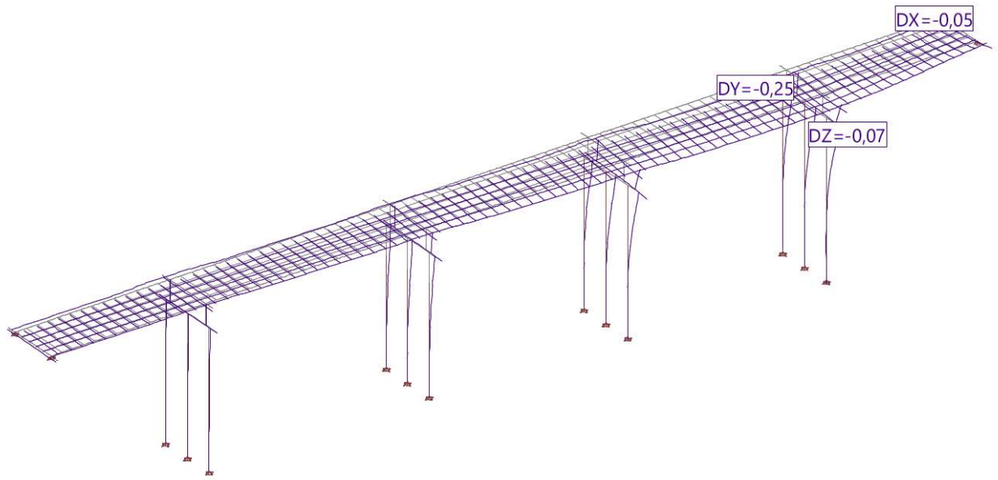
DISPLACEMENTS D (Principal axis) for: V1-5 (Bz 5) [mm], Scaling factor: 105,7



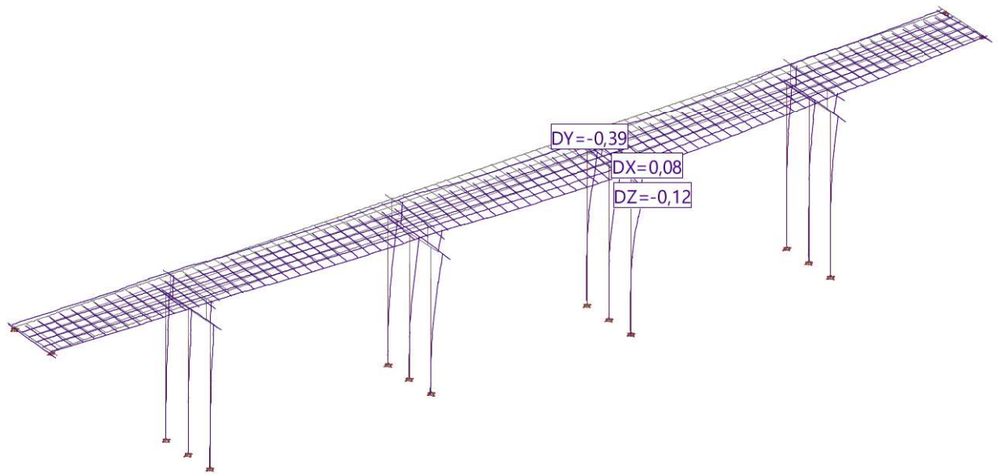
DISPLACEMENTS D (Principal axis) for: Qs%P12 [mm], Scaling factor: 25999,0



DISPLACEMENTS D (Principal axis) for: Qs%P10 [mm], Scaling factor: 15995,3

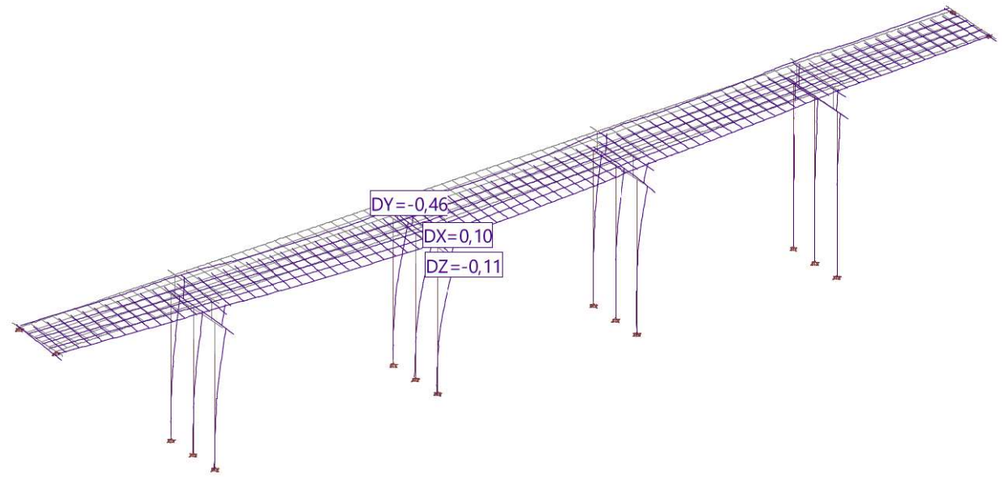


DISPLACEMENTS D (Principal axis) for: Qs%P8 [mm], Scaling factor: 9929,7

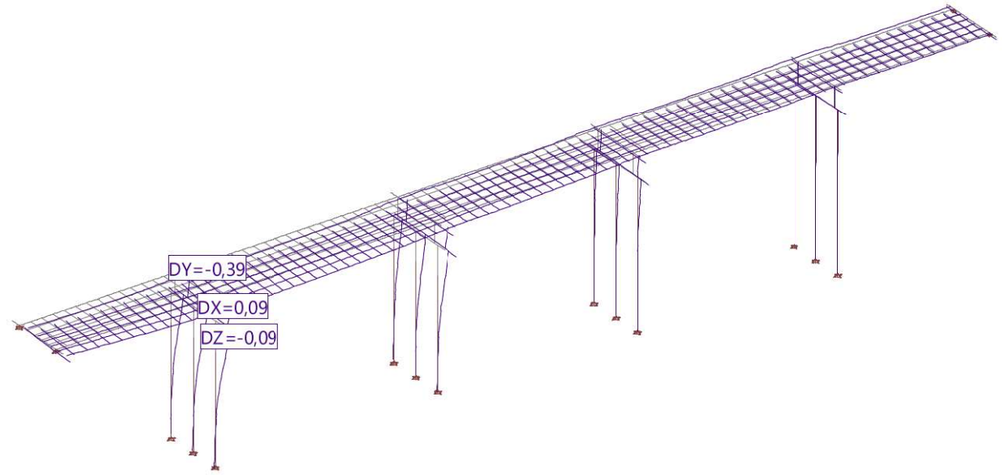


Nr.:

DISPLACEMENTS D (Principal axis) for: Qs%P6 [mm], Scaling factor: 10000,0

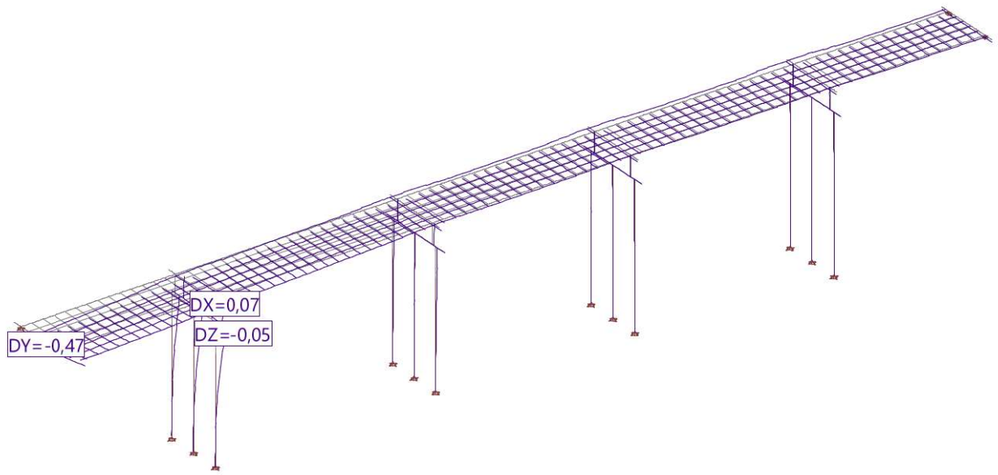


DISPLACEMENTS D (Principal axis) for: Qs%P4 [mm], Scaling factor: 10000,0

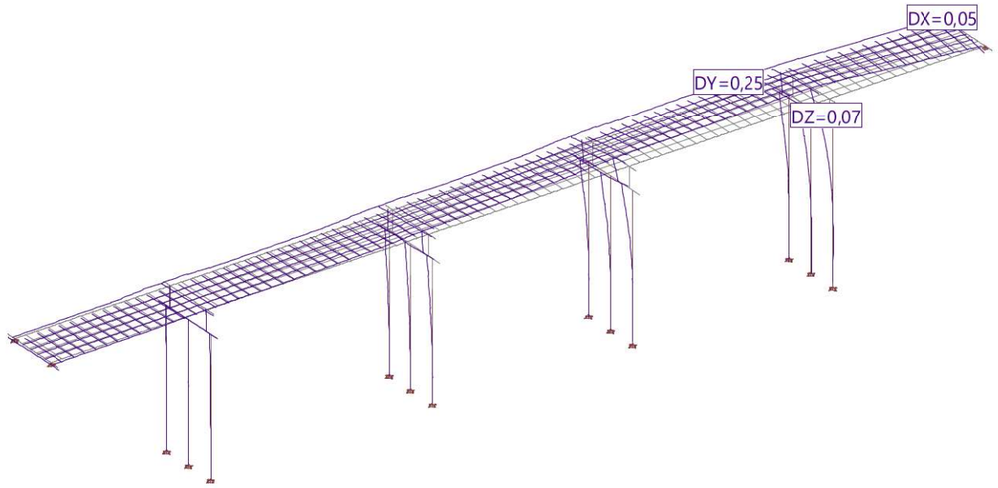


Nr.:

DISPLACEMENTS D (Principal axis) for: Qs%P2 [mm], Scaling factor: 10000,0



DISPLACEMENTS D (Principal axis) for: Qs%P9 [mm], Scaling factor: 15995,3



Nr.:

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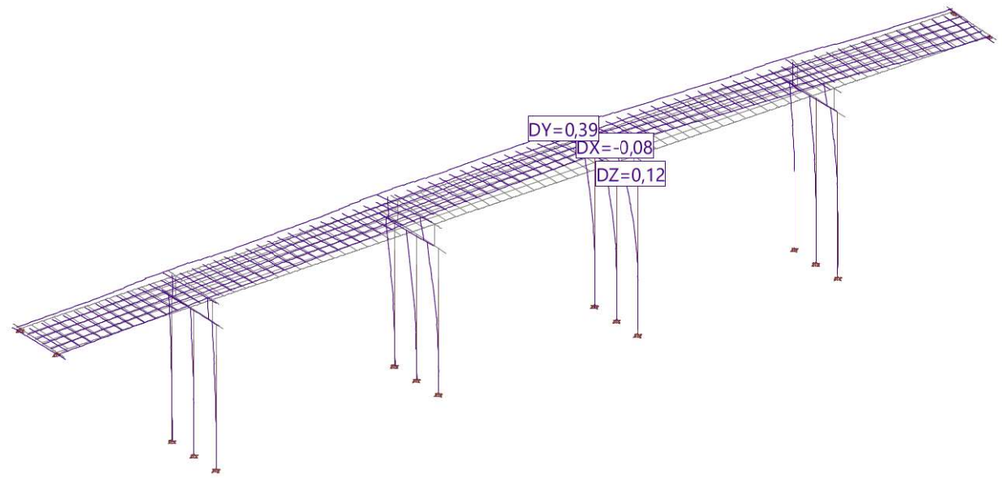
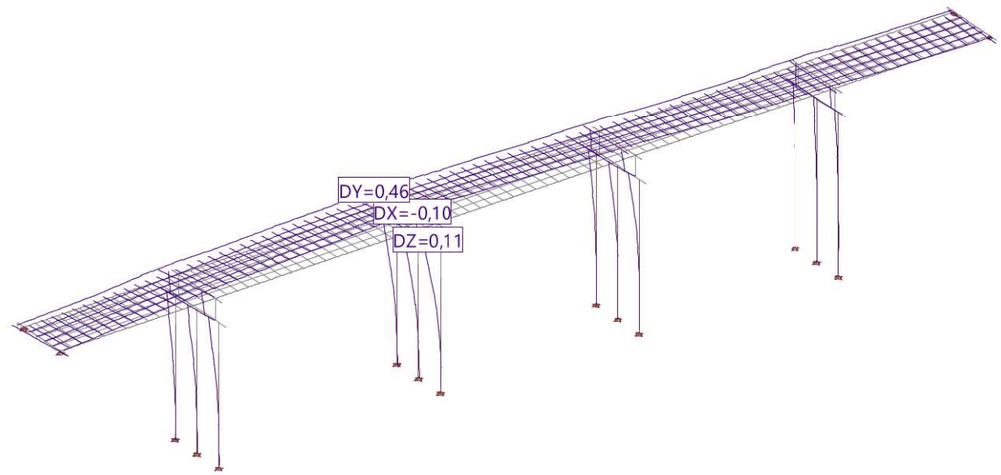
DISPLACEMENTS D (Principal axis) for: Qs%P7 [mm], Scaling factor: 9929,7



DISPLACEMENTS D (Principal axis) for: Qs%P5 [mm], Scaling factor: 10000,0



Nr.:

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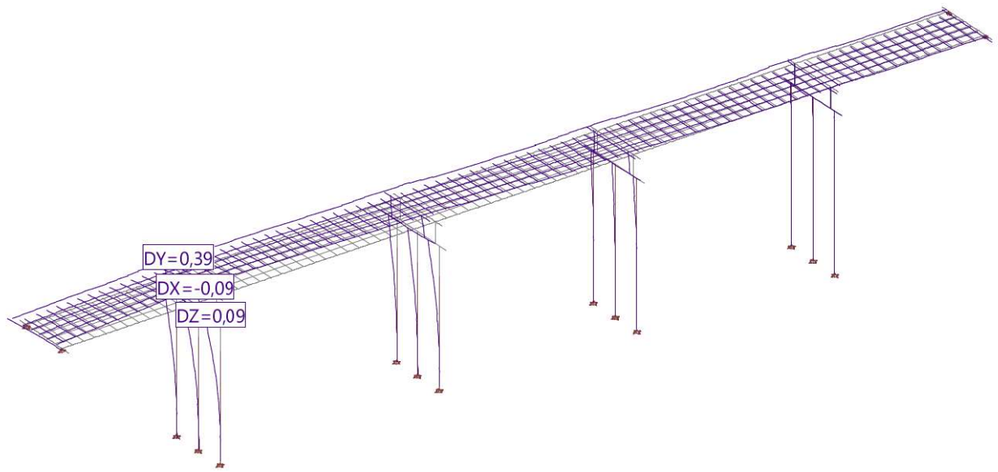
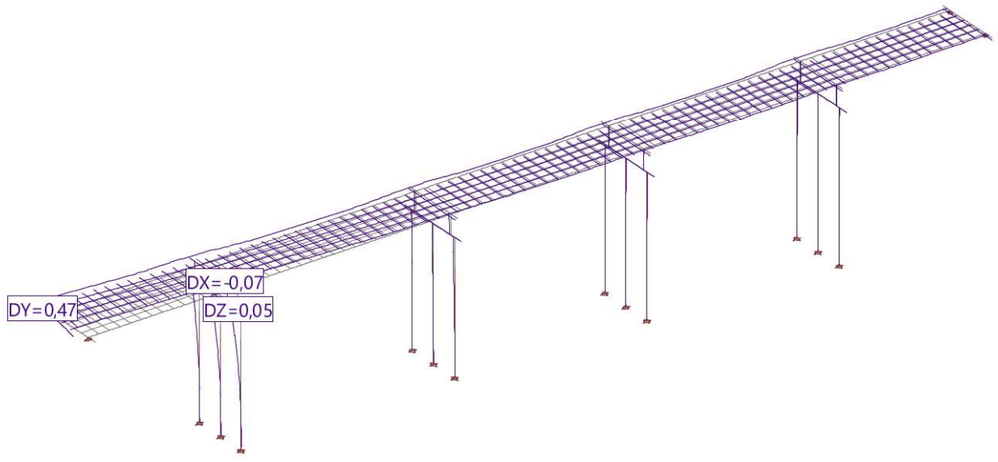
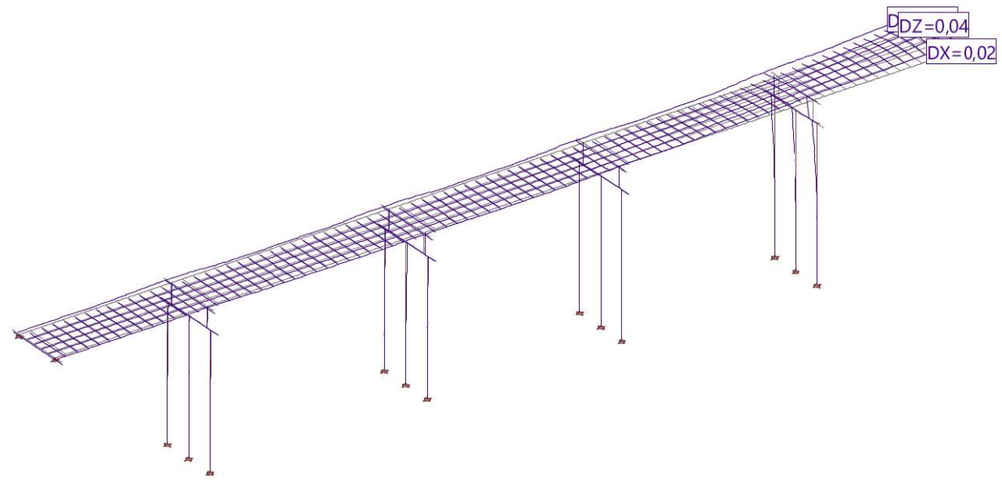
DISPLACEMENTS D (Principal axis) for: Qs%P3 [mm], Scaling factor: 10000,0



DISPLACEMENTS D (Principal axis) for: Qs%P1 [mm], Scaling factor: 10000,0



DISPLACEMENTS D (Principal axis) for: Qs%P11 [mm], Scaling factor: 25999,0



Limit state specification: ELU

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	1	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
12	Swinging/centrifugal force	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,037									1,2	1,2
14	SW/0 via 2	1,037									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions
for limit state specification ELU

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	

Nr.:

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	

Nr.:

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-INF

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	0,85	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,037	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
12	Swinging/centrifugal force	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,037									1,2	1,2
14	SW/0 via 2	1,037									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions
for limit state specification ELU-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	0,420	C1_2
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	0,420	C1_3
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	0,420	C1_4
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	0,420	C1_5
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	0,420	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-SISMO

Description
Standard design situation: Serviceability, SLS quasi permanent combination

Action combinations

Action No	Action Name	Fac	Action combinations 1	
1	Dead load	1	1	
2	Superimposed dead loads	1	1	
3	Wind loads general	1		
4	Temperature action	1	0,5	
5	Nieve	1		
6	PC	1		
7	Prestressing	1	1	
8	accidental	1	1	
	Set Railroad traffic-N			
9	Loading model 1	1,037		
10	Loading model 2	1,037		
11	Loading model 3	1,037		

Action No	Action Name	Fac	Action combinations 1	
12	Starting/braking forces	1		
13	Swinging/centrifugal force	1		
	Set Tráfico de trenes-N			
14	SW/0 via 1	1,037		
15	SW/0 via 2	1,037		

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification ELU-SISMO

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
accidental		if critical		ELU-SIS_K3 ?	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-SISMO-TINF

Description
Standard design situation: Serviceability, SLS quasi permanent combination

Action combinations

Action No	Action Name	Fac	Action combinations 1
1	Dead load	1	1
2	Superimposed dead loads	1	1
3	Wind loads general	1	
4	Temperature action	1	0,5
5	Nieve	1	
6	PC	1	
7	Prestressing	1	0,85
8	accidental	1	1
	Set Railroad traffic-N		
9	Loading model 1	1,037	
10	Loading model 2	1,037	
11	Loading model 3	1,037	
12	Starting/braking forces	1	
13	Swinging/centrifugal force	1	
	Set Tráfico de trenes-N		
14	SW/0 via 1	1,037	
15	SW/0 via 2	1,037	

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification ELU-SISMO-TINF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	0,420	C1_1
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	0,420	C1_2
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	0,420	C1_3
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	0,420	C1_4
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	0,420	C1_5
		plus where crit		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
accidental		if critical		ELU-SIS_K3 ?	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-RIOSTRA

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	1	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
12	Swinging/centrifugal force	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,2									1,2	1,2
14	SW/0 via 2	1,2									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions
for limit state specification ELU-RIOSTRA

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-RIOSTRA-INF

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	0,85	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,2	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
12	Swinging/centrifugal force	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,2									1,2	1,2
14	SW/0 via 2	1,2									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions

for limit state specification ELU-RIOSTRA-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	0,420	C1_1
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	0,420	C1_2
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	0,420	C1_3
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	0,420	C1_4
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	0,420	C1_5
		plus where crit		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-LOSA

Description

Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	1	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
12	Swinging/centrifugal force Set Tráfico de trenes-N	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
13	SW/0 via 1	1,89									1,2	1,2
14	SW/0 via 2	1,89									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions

for limit state specification ELU-LOSA

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Ql1 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Ql2 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-LOSA-INF

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
2	Superimposed dead loads	1	1,35	1,35	1,35	1,35	1	1	1	1	1	1
3	Wind loads general	1	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5	0,9
4	Temperature action	1	0,9	1,5	0,9	0,9	0,9	1,5	0,9	0,9	0,9	1,5
5	Nieve	1	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2	1,2
6	PC	1										
7	Prestressing	0,85	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
9	Loading model 2	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
10	Loading model 3	1,89	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5		
11	Starting/braking forces	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
12	Swinging/centrifugal force	1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	1,2
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,89									1,2	1,2
14	SW/0 via 2	1,89									1,2	1,2

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,9	0,9	1,5	0,9	0,9	0,9
4	0,9	0,9	0,9	1,5	0,9	0,9
5	1,5	1,2	1,2	1,2	1,5	1,2
6						
7	1	1	1	1	1	1
8						
9						
10						
11	1,2	1,5	1,2	1,2	1,2	1,5
12	1,2	1,5	1,2	1,2	1,2	1,5
13	1,2	1,5	1,2	1,2	1,2	1,5
14	1,2	1,5	1,2	1,2	1,2	1,5

Loading superpositions for the actions
for limit state specification ELU-LOSA-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	0,420	C1_1
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	0,420	C1_2
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	0,420	C1_3
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	0,420	C1_4
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	0,420	C1_5
		plus where crit		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-FATIGA

Description
Standard design situation: Serviceability, SLS occasional combination

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4
1	Dead load	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1
3	Wind loads general	1				
4	Temperature action	1				
5	Trens UIC71	1				
6	Nieve	1				
7	PC	1				
8	Prestressing	1	1	1	1	1
9	accidental	1				
	Set Railroad traffic-N					
10	Loading model 1	1,037	1	1		
11	Loading model 2	1,037	1			
12	Loading model 3	1,037		1		
13	Starting/braking forces	1				
14	Swinging/centrifugal force	1				
	Set Tráfico de trenes-N					
15	SW/0 via 1	1,037			1	
16	SW/0 via 2	1,037				1

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification ELU-FATIGA

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	

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Action	Alt	additive	exclusive	Loading	Factor	Comb.
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Trens UIC71		if critical		T1 Tren tipus (x2) sense coef. impa	1,000	
		plus where crit		UIC-1 Tren UIC71 tipus 1 (x2) sense	1,000	
		plus where crit		UIC-2 Tren UIC71 tipus 2 (x2) sense	1,000	
		plus where crit		UIC-3B Tren UIC71 tipus 3 REPARTIDO	1,000	
		plus where crit		UIC-3 Tren UIC71 tipus 3 (x2) sense	1,000	
		plus where crit		UIC-4 Tren UIC71 tipus 4 (x2) sense	1,000	
		plus where crit		UIC-5 Tren UIC71 tipus 5 (x2) sense	1,000	
		plus where crit		UIC-6 Tren UIC71 tipus 6 (x1) sense	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
accidental		if critical	either	Qa11 DESCARRILAMIENTO SITUACICN 1	1,000	
			or	Qa21 DESCARRILAMIENTO SITUACICN 2	1,000	
			or	Qa31 IMPACTO DE VEHICULO CARRETERA	1,000	
			or	Qa32 IMPACTO DE VEHICULO CARRETERA	1,000	
			or	Qa41 IMPACTO DE TREN 01	1,000	
			or	Qa42 IMPACTO DE TREN 02	1,000	
			or	Qa43 IMPACTO DE TREN 03	1,000	
			or	Qa44 IMPACTO DE TREN 04	1,000	
			or	Qa51 IMPACTO DE EMBARCACIÓN	1,000	
			or	Qa52 IMPACTO DE EMBARCACIÓN	1,000	
			or	Qa53 IMPACTO DE EMBARCACIÓN	1,000	
Loading model 1	1	if critical		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
	2	if critical		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L20 Load position: L20	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	

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Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELU-ACC-INF

Description
Accidental design situation: Ultimate, ULS type 2 (1B)

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5
1	Dead load	1	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1	1
3	Wind loads general	1	0,5	0,2	0,2	0,2	0,2
4	Temperature action	1	0,2	0,5	0,2	0,2	0,2
5	Nieve	1	0,2	0,2	0,6	0,2	0,2
6	PC	1					
7	Prestressing	0,85	1	1	1	1	1
8	accidental	1	1	1	1	1	1
	Set Railroad traffic-N						
9	Loading model 1	1,037				0,6	
10	Loading model 3	1,037				0,6	
11	Starting/braking forces	1				0,6	0,6
12	Swinging/centrifugal force	1				0,6	0,6
	Set Tráfico de trenes-N						
13	SW/0 via 2	1,037					0,6

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification ELU-ACC-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	0,420	C1_1
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	0,420	C1_2
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	0,420	C1_3
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	0,420	C1_4
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	0,420	C1_5
		plus where crit		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
accidental		if critical	either	Qa11 DESCARRILAMIENTO SITUACICN 1	1,000	
			or	Qa21 DESCARRILAMIENTO SITUACICN 2	1,000	
			or	Qa31 IMPACTO DE VEHICULO CARRETERA	1,000	
			or	Qa32 IMPACTO DE VEHICULO CARRETERA	1,000	
			or	Qa41 IMPACTO DE TREN 01	1,000	
			or	Qa42 IMPACTO DE TREN 02	1,000	
			or	Qa43 IMPACTO DE TREN 03	1,000	
			or	Qa44 IMPACTO DE TREN 04	1,000	
			or	Qa51 IMPACTO DE EMBARCACIÓN	1,000	
			or	Qa52 IMPACTO DE EMBARCACIÓN	1,000	
			or	Qa53 IMPACTO DE EMBARCACIÓN	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Ql1 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Ql2 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS

Description
Standard design situation: Serviceability, SLS occasional combination

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1	1	1	1	1	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1	1	1	1	1	1	1
3	Wind loads general	1	1	0,6	0,6	0,6	1	0,6	0,6	0,6	1	0,6
4	Temperature action	1	0,6	1	0,6	0,6	0,6	1	0,6	0,6	0,6	1
5	Nieve	1	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8	1
6	PC	1										
7	Prestressing	1	1	1	1	1	1	1	1	1	1	1
	Set Railroad traffic-N											
8	Loading model 1	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
9	Loading model 2	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
10	Loading model 3	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
11	Starting/braking forces	1	0,8	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8
12	Swinging/centrifugal force	1	0,8	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,037									0,8	0,8
14	SW/0 via 2	1,037									0,8	0,8

Fac : all combination factors are multiplied by this factor

Nr.:

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,6	0,6	1	0,6	0,6	0,6
4	0,6	0,6	0,6	1	0,6	0,6
5	0,8	0,8	0,8	0,8	1	0,8
6						
7	1	1	1	1	1	1
8						
9						
10						
11	0,8	1	0,8	0,8	0,8	1
12	0,8	1	0,8	0,8	0,8	1
13	0,8	1	0,8	0,8	0,8	1
14	0,8	1	0,8	0,8	0,8	1

Loading superpositions for the actions
for limit state specification ELS

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	

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Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS-INF

Description
Standard design situation: Serviceability, SLS occasional combination

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1	1	1	1	1	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1	1	1	1	1	1	1
3	Wind loads general	1	1	0,6	0,6	0,6	1	0,6	0,6	0,6	1	0,6
4	Temperature action	1	0,6	1	0,6	0,6	0,6	1	0,6	0,6	0,6	1
5	Nieve	1	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8	0,8
6	PC	1										
7	Prestressing	0,85	0,9	0,9	0,9	0,9	1,1	1,1	1,1	1,1	0,9	0,9
	Set Railroad traffic-N											
8	Loading model 1	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
9	Loading model 2	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
10	Loading model 3	1,037	0,8	0,8	0,8	1	0,8	0,8	0,8	1		
11	Starting/braking forces	1	0,8	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8
12	Swinging/centrifugal force	1	0,8	0,8	0,8	1	0,8	0,8	0,8	1	0,8	0,8
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,037									0,8	0,8
14	SW/0 via 2	1,037									0,8	0,8

Fac : all combination factors are multiplied by this factor

Action combinations - Continuation

No	Action combinations 11	12	13	14	15	16
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	0,6	0,6	1	0,6	0,6	0,6
4	0,6	0,6	0,6	1	0,6	0,6
5	1	0,8	0,8	0,8	1	0,8
6						
7	0,9	0,9	1,1	1,1	1,1	1,1
8						
9						
10						
11	0,8	1	0,8	0,8	0,8	1
12	0,8	1	0,8	0,8	0,8	1
13	0,8	1	0,8	0,8	0,8	1
14	0,8	1	0,8	0,8	0,8	1

Loading superpositions for the actions
for limit state specification ELS-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	0,420	C1_2
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	0,420	C1_3
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	0,420	C1_4
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	0,420	C1_5
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	0,420	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS-QPERM

Description
Standard design situation: Serviceability, SLS quasi permanent combination

Action combinations

No	Action Name	Fac	Action combinations 1	2
1	Dead load	1	1	1
2	Superimposed dead loads	1	1	1
3	Wind loads general	1	0,2	0,2
4	Temperature action	1	0,2	0,2
5	Nieve	1	0,2	0,2
6	PC	1		
7	Prestressing	1	0,9	1,1
	Set Railroad traffic-N			
8	Loading model 1	1,037		
9	Loading model 2	1,037		
10	Loading model 3	1,037		
11	Starting/braking forces	1		
12	Swinging/centrifugal force	1		
	Set Tráfico de trenes-N			
13	SW/0 via 1	1,037		
14	SW/0 via 2	1,037		

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification ELS-QPERM

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS-QPERM-INF

Description
Standard design situation: Serviceability, SLS quasi permanent combination

Action combinations

No	Action Name	Fac	1	2	Action combinations
1	Dead load	1	1	1	
2	Superimposed dead loads	1	1	1	
3	Wind loads general	1	0,2	0,2	
4	Temperature action	1	0,2	0,2	
5	Nieve	1	0,2	0,2	
6	PC	1			
7	Prestressing	0,85	0,9	1,1	
	Set Railroad traffic-N				
8	Loading model 1	1,037			
9	Loading model 2	1,037			
10	Loading model 3	1,037			
11	Starting/braking forces	1			
12	Swinging/centrifugal force	1			
	Set Tráfico de trenes-N				
13	SW/0 via 1	1,037			
14	SW/0 via 2	1,037			

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions

for limit state specification ELS-QPERM-INF

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP1 PP LLOSA DE FORMIGO. F1	0,420	C1_1
		permanent		G1-PP2 PP LLOSA DE FORMIGO. F2	0,420	C1_2
		permanent		G1-PP3 PP LLOSA DE FORMIGO. F3	0,420	C1_3
		permanent		G1-PP4 PP LLOSA DE FORMIGO. F4	0,420	C1_4
		permanent		G1-PP5 PP LLOSA DE FORMIGO. F5	0,420	C1_5
		plus where crit		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0,580	C1_6
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
		permanent		RET RETRACCIÓN 0,367 MM/M	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Ql1 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Ql2 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS-FREQ

Description
Standard design situation: Serviceability, SLS frequent combination

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1	1	1	1	1	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1	1	1	1	1	1	1
3	Wind loads general	1	0,5	0,2	0,2	0,2	0,5	0,2	0,2	0,2	0,2	0,2
4	Temperature action	1	0,2	0,5	0,2	0,2	0,2	0,5	0,2	0,2	0,2	0,2
5	Nieve	1	0,2	0,2	0,6	0,2	0,2	0,2	0,6	0,2	0,2	0,2
6	PC	1										
7	Prestressing	1	0,9	0,9	0,9	0,9	1,1	1,1	1,1	1,1	1,1	1,1
	Set Railroad traffic-N											
8	Loading model 1	1,037				0,6				0,6		
9	Loading model 2	1,037				0,6				0,6		
10	Loading model 3	1,037				0,6				0,6		
11	Starting/braking forces	1				0,6				0,6	0,6	0,6
12	Swinging/centrifugal force	1				0,6				0,6	0,6	0,6
	Set Tráfico de trenes-N											
13	SW/0 via 1	1,037									0,6	0,6
14	SW/0 via 2	1,037									0,6	0,6

Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions

for limit state specification ELS-FREQ

Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		G1-PP PP LLOSA DE FORMIGO. TOT DE C	0	C1_1
		permanent		G1-PP1 PP LLOSA DE FORMIGC. F1	1,000	
		permanent		G1-PP2 PP LLOSA DE FORMIGC. F2	1,000	
		permanent		G1-PP3 PP LLOSA DE FORMIGC. F3	1,000	
		permanent		G1-PP4 PP LLOSA DE FORMIGC. F4	1,000	
		permanent		G1-PP5 PP LLOSA DE FORMIGC. F5	1,000	
Superimposed dead loa		permanent	either	G2 BALAST 65 CM	0,700	C5_1
			or	G2 BALAST 65 CM	1,300	C5_2
		permanent		G3 CARRIL + TRAV	1,000	
		permanent		G4 SERVEIS	1,000	
		permanent		G5 IMPERMEABILITZACIÓ 5 CM	1,000	
Wind loads general		if critical		Vt1 Viento transversal dirección 1	1,000	
		plus where crit		Vt2 Viento transversal dirección 2	1,000	
		plus where crit		Vv1+ Viento vertical 1 positivo	1,000	
		plus where crit		Vv1- Viento vertical 1 negativo	1,000	
		plus where crit		Vv2+ Viento vertical 2 positivo	1,000	
		plus where crit		Vv2- Viento vertical 2 negativo	1,000	
Temperature action		if critical		Tg+ Gradiente térmico vertical posi	1,000	
		plus where crit		Tg- Gradiente térmico vertical nega	1,000	
		plus where crit		Tgt+ Gradiente térmico transversal	1,000	
		plus where crit		Tgt- Gradiente térmico transversal	1,000	
		plus where crit		Tu+ Variación térmica uniforme dila	1,000	
		plus where crit		Tu- Variación térmica uniforme cont	1,000	
Nieve		if critical		nk SOBRECARGA DE NIEVE	1,000	
PC		if critical		PC-01 PRUEBA DE CARGA 01	1,000	
Prestressing		permanent		V2@5 Tendon group 'V2' CS: 'LLOSA-F	1,000	
		permanent		V1-1@1 Tendon group 'V1-1' CS: 'LLO	1,000	
		permanent		V1-2@2 Tendon group 'V1-2' CS: 'LLO	1,000	
		permanent		V1-3@3 Tendon group 'V1-3' CS: 'LLO	1,000	
		permanent		V1-4@4 Tendon group 'V1-4' CS: 'LLO	1,000	
		permanent		V1-5@5 Tendon group 'V1-5' CS: 'LLO	1,000	
Loading model 1		if critical		qu%L20 Load position: L20	1,000	
		plus where crit		qu%L19 Load position: L19	1,000	
		plus where crit		qu%L18 Load position: L18	1,000	
		plus where crit		qu%L17 Load position: L17	1,000	
		plus where crit		qu%L16 Load position: L16	1,000	
		plus where crit		qu%L15 Load position: L15	1,000	
		plus where crit		qu%L14 Load position: L14	1,000	
		plus where crit		qu%L13 Load position: L13	1,000	
		plus where crit		qu%L12 Load position: L12	1,000	
		plus where crit		qu%L11 Load position: L11	1,000	
		plus where crit		qu%L10 Load position: L10	1,000	
		plus where crit		qu%L9 Load position: L9	1,000	
		plus where crit		qu%L8 Load position: L8	1,000	
		plus where crit		qu%L7 Load position: L7	1,000	
		plus where crit		qu%L6 Load position: L6	1,000	
		plus where crit		qu%L5 Load position: L5	1,000	
		plus where crit		qu%L4 Load position: L4	1,000	
		plus where crit		qu%L3 Load position: L3	1,000	
		plus where crit		qu%L2 Load position: L2	1,000	
		plus where crit		qu%L1 Load position: L1	1,000	
Loading model 2		if critical	either	Q1-10 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-11 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-12 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-13 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-14 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-15 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-1 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-2 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-3 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-4 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-5 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-6 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-7 TREN DE CARREGUES VIA 1	1,000	
			or	Q1-8 TREN DE CARREGUES VIA 1	1,000	

Action	Alt	additive	exclusive	Loading	Factor	Comb.
			or	Q1-9 TREN DE CARREGUES VIA 1	1,000	
Loading model 3		if critical	either	Q2-10 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-11 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-12 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-13 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-14 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-15 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-1 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-2 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-3 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-4 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-5 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-6 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-7 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-8 TREN DE CARREGUES VIA 2	1,000	
			or	Q2-9 TREN DE CARREGUES VIA 2	1,000	
Starting/braking forc		if critical		Q11 FRENADO + ARRANQUE 1	1,000	
		plus where crit		Q12 FRENADO + ARRANQUE 2	1,000	
Swinging/centrifugal		if critical	either	Qs1 EFECTO LAZO CONTRASTE	1,000	
			or	Qs%P12 Load position: P12	1,000	
			or	Qs%P10 Load position: P10	1,000	
			or	Qs%P8 Load position: P8	1,000	
			or	Qs%P6 Load position: P6	1,000	
			or	Qs%P4 Load position: P4	1,000	
			or	Qs%P2 Load position: P2	1,000	
			or	Qs%P9 Load position: P9	1,000	
			or	Qs%P7 Load position: P7	1,000	
			or	Qs%P5 Load position: P5	1,000	
			or	Qs%P3 Load position: P3	1,000	
			or	Qs%P1 Load position: P1	1,000	
			or	Qs%P11 Load position: P11	1,000	
SW/0 via 1		if critical	either	SW01-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW01-6 SC DE EC. TREN TRÁFICO NORMA	1,000	
SW/0 via 2		if critical	either	SW02-1 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-2 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-3 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-4 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-5 SC DE EC. TREN TRÁFICO NORMA	1,000	
			or	SW02-6 SC DE EC. TREN TRÁFICO NORMA	1,000	

Alt : Alternative superposition

Limit state specification: ELS-FREQ-TINF

Description

Standard design situation: Serviceability, SLS frequent combination

Action combinations

No	Action Name	Fac	Action combinations 1	2	3	4	5	6	7	8	9	10
1	Dead load	1	1	1	1	1	1	1	1	1	1	1
2	Superimposed dead loads	1	1	1	1	1	1	1	1	1	1	1
3	Wind loads general	1	0,5	0,2	0,2	0,2	0,5	0,2	0,2	0,2	0,2	0,2
4	Temperature action	1	0,2	0,5	0,2	0,2	0,2	0,5	0,2	0,2	0,2	0,2
5	Nieve	1	0,2	0,2	0,6	0,2	0,2	0,2	0,6	0,2	0,2	0,2
6	PC	1										
7	Prestressing	0,85	0,9	0,9	0,9	0,9	1,1	1,1	1,1	1,1	0,9	1,1
	Set Railroad traffic-N											
8	Loading model 1	1,037				0,6				0,6		
9	Loading model 2	1,037				0,6				0,6		
10	Loading model 3	1,037				0,6				0,6		
11	Starting/braking forces	1				0,6				0,6	0,6	0,6
12	Swinging/centrifugal force	1				0,6				0,6	0,6	0,6