4	2	Ø10	1.206	0.000	0.000

M_{uA}: Momento mayorado sin decalar.
M_{uB}: Momento mayorado decalado.
M_n : Momento nominal.
M_r : Momento resistente mayorado (Mn · FR)
Sd : Longitud de decalaje
FR : Factor de resistencia

5.1 Estado límite de Resistencia. Combinación de Resistencia I

Viga 2:

Viga 2. Tras la transferencia del pretesado

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	
0.750	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
1.389	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
1.750	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
2.779	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
3.750	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
4.168	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
4.662	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
5.557	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
6.946	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
8.336	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
9.725	388.2	2.004	388.2	3286.9	1.000	3286.9	8.467	
11.114	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
12.504	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
13.893	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
14.788	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
15.282	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
15.700	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
16.671	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
17.700	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
18.061	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
18.700	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
19.450	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	
19.700	-0.2	0.000	125.4	0.0	0.000	0.0	10.000	

Viga 2. Tras el hormigonado de la losa

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
0.750	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
1.389	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
1.750	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
2.779	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
3.750	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
4.168	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
4.662	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
5.557	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
6.946	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
8.336	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
9.725	1123.1	1.977	1123.1	3286.9	1.000	3286.9	2.927	
11.114	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
12.504	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
13.893	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
14.788	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	

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Representante Legal

15.282	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078
15.700	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967
16.671	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969
17.700	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992
18.061	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110
18.700	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258
19.450	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898
19.700	-0.5	0.000	360.3	0.0	0.000	0.0	10.000

Viga 2. Tras la disposición de la superestructura

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
0.750	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
1.389	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
1.750	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
2.779	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
3.750	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
4.168	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
4.662	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
5.557	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
6.946	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
8.336	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
9.725	1352.9	2.324	1352.9	4207.8	1.000	4207.8	3.110	
11.114	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
12.504	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
13.893	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
14.788	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
15.282	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
15.700	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
16.671	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
17.700	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
18.061	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
18.700	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
19.450	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
19.700	1.4	2.315	496.5	0.0	0.000	0.0	10.000	

Viga 2. Tras la apertura al tráfico

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	3.2	2.315	1504.9	1937.1	1.000	1937.1	1.287	
0.750	517.1	2.327	1879.7	2801.6	1.000	2801.6	1.490	
1.389	955.1	2.331	2183.1	3232.3	1.000	3232.3	1.481	
1.750	1202.2	2.336	2326.7	3427.1	1.000	3427.1	1.473	
2.779	1737.5	2.328	2686.7	4102.3	1.000	4102.3	1.527	
3.750	2205.5	2.313	2961.9	3415.6	1.000	3415.6	1.153	
4.168	2368.9	2.309	3056.7	3694.9	1.000	3694.9	1.209	
4.662	2539.6	2.313	3168.5	4008.3	1.000	4008.3	1.265	
5.557	2848.8	2.305	3295.7	4114.6	1.000	4114.6	1.249	
6.946	3167.9	2.289	3412.9	4207.1	1.000	4207.1	1.233	
8.336	3367.7	2.271	3448.8	4207.7	1.000	4207.7	1.220	
9.725	3448.8	2.278	3448.8	4207.8	1.000	4207.8	1.220	
11.114	3367.7	2.271	3448.8	4207.7	1.000	4207.7	1.220	
12.504	3167.9	2.289	3412.9	4207.1	1.000	4207.1	1.233	
13.893	2848.8	2.305	3295.7	4114.6	1.000	4114.6	1.248	
14.788	2539.6	2.313	3168.5	4008.3	1.000	4008.3	1.265	
15.282	2368.9	2.309	3056.7	3694.9	1.000	3694.9	1.209	
15.700	2205.5	2.313	2961.9	3415.6	1.000	3415.6	1.153	
16.671	1737.5	2.328	2686.7	4102.3	1.000	4102.3	1.527	
17.700	1202.2	2.336	2326.7	3427.1	1.000	3427.1	1.473	
18.061	955.1	2.331	2183.1	3232.3	1.000	3232.3	1.481	
18.700	517.1	2.327	1879.7	2801.6	1.000	2801.6	1.490	
19.450	3.2	2.315	1504.9	1937.1	1.000	1937.1	1.287	

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Representante Legal

19.700	3.2	2.315	1375.8	0.0	0.000	0.0	10.000

Viga 2. A tiempo infinito

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	3.2	2.315	1504.9	1937.1	1.000	1937.1	1.287	
0.750	517.1	2.327	1879.7	2801.6	1.000	2801.6	1.490	
1.389	955.1	2.331	2183.1	3232.3	1.000	3232.3	1.481	
1.750	1202.2	2.336	2326.7	3427.1	1.000	3427.1	1.473	
2.779	1737.5	2.328	2686.7	4102.3	1.000	4102.3	1.527	
3.750	2205.5	2.313	2961.9	3415.6	1.000	3415.6	1.153	
4.168	2368.9	2.309	3056.7	3694.9	1.000	3694.9	1.209	
4.662	2539.6	2.313	3168.5	4008.3	1.000	4008.3	1.265	
5.557	2848.8	2.305	3295.7	4114.6	1.000	4114.6	1.249	
6.946	3167.9	2.289	3412.9	4207.1	1.000	4207.1	1.233	
8.336	3367.7	2.271	3448.8	4207.7	1.000	4207.7	1.220	
9.725	3448.8	2.078	3448.8	4207.8	1.000	4207.8	1.220	
11.114	3367.7	2.271	3448.8	4207.7	1.000	4207.7	1.220	
12.504	3167.9	2.289	3412.9	4207.1	1.000	4207.1	1.233	
13.893	2848.8	2.305	3295.7	4114.6	1.000	4114.6	1.248	
14.788	2539.6	2.313	3168.5	4008.3	1.000	4008.3	1.265	
15.282	2368.9	2.309	3056.7	3694.9	1.000	3694.9	1.209	
15.700	2205.5	2.313	2961.9	3415.6	1.000	3415.6	1.153	
16.671	1737.5	2.328	2686.7	4102.3	1.000	4102.3	1.527	
17.700	1202.2	2.336	2326.7	3427.1	1.000	3427.1	1.473	
18.061	955.1	2.331	2183.1	3232.3	1.000	3232.3	1.481	
18.700	517.1	2.327	1879.7	2801.6	1.000	2801.6	1.490	
19.450	3.2	2.315	1504.9	1937.1	1.000	1937.1	1.287	
19.700	3.2	2.315	1375.8	0.0	0.000	0.0	10.000	

5.2 Estado límite de Resistencia. Combinación de Resistencia II

Viga 2:

Viga 2. Tras la transferencia del pretesado

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	
0.750	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
1.389	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
1.750	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
2.779	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
3.750	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
4.168	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
4.662	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
5.557	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
6.946	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
8.336	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
9.725	388.2	2.004	388.2	3286.9	1.000	3286.9	8.467	
11.114	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
12.504	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
13.893	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
14.788	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
15.282	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
15.700	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
16.671	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
17.700	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
18.061	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
18.700	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
19.450	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	

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Representante Legal
Empresa de Construcciones edivisa

Ing. Antonio N. Pangrazio
Representante Le

19.700	-0.2	0.000	125.4	0.0	0.000	0.0	10.000

Viga 2. Tras el hormigonado de la losa

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
0.750	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
1.389	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
1.750	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
2.779	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
3.750	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
4.168	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
4.662	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
5.557	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
6.946	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
8.336	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
9.725	1123.1	1.977	1123.1	3286.9	1.000	3286.9	2.927	
11.114	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
12.504	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
13.893	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
14.788	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
15.282	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
15.700	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
16.671	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
17.700	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
18.061	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
18.700	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
19.450	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
19.700	-0.5	0.000	360.3	0.0	0.000	0.0	10.000	

Viga 2. Tras la disposición de la superestructura

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
0.750	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
1.389	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
1.750	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
2.779	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
3.750	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
4.168	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
4.662	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
5.557	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
6.946	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
8.336	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
9.725	1352.9	2.324	1352.9	4207.8	1.000	4207.8	3.110	
11.114	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
12.504	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
13.893	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
14.788	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
15.282	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
15.700	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
16.671	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
17.700	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
18.061	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
18.700	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
19.450	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
19.700	1.4	2.315	496.5	0.0	0.000	0.0	10.000	

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Viga 2. Tras la apertura al tráfico

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	

Ing. Antonio N. Pangrazio
Representante Legal

0.750	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740
1.389	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726
1.750	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717
2.779	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777
3.750	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341
4.168	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405
4.662	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471
5.557	2446.9	2.311	2836.7	4114.6	1.000	4114.6	1.450
6.946	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429
8.336	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417
9.725	2969.8	2.268	2969.8	4207.8	1.000	4207.8	1.417
11.114	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417
12.504	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429
13.893	2447.0	2.311	2836.7	4114.6	1.000	4114.6	1.450
14.788	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471
15.282	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405
15.700	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341
16.671	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777
17.700	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717
18.061	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726
18.700	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740
19.450	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506
19.700	2.8	2.315	1175.1	0.0	0.000	0.0	10.000

Viga 2. A tiempo infinito

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	
0.750	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	
1.389	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
1.750	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
2.779	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
3.750	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
4.168	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
4.662	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
5.557	2446.9	2.311	2836.7	4114.6	1.000	4114.6	1.450	
6.946	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
8.336	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
9.725	2969.8	2.268	2969.8	4207.8	1.000	4207.8	1.417	
11.114	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
12.504	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
13.893	2447.0	2.311	2836.7	4114.6	1.000	4114.6	1.450	
14.788	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
15.282	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
15.700	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
16.671	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
17.700	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
18.061	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
18.700	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	
19.450	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	
19.700	2.8	2.315	1175.1	0.0	0.000	0.0	10.000	

5.3 Estado límite de Resistencia. Combinación de Resistencia III

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Viga 2:

Viga 2. Tras la transferencia del pretesado

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	

Ing. Antonio N. Pangrazio
Representante Legal

Civil eStudio

0.750	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255
1.389	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834
1.750	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496
2.779	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447
3.750	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566
4.168	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886
4.662	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191
5.557	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921
6.946	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604
8.336	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467
9.725	388.2	2.004	388.2	3286.9	1.000	3286.9	8.467
11.114	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467
12.504	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604
13.893	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921
14.788	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191
15.282	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886
15.700	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566
16.671	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447
17.700	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496
18.061	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834
18.700	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255
19.450	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214
19.700	-0.2	0.000	125.4	0.0	0.000	0.0	10.000

Viga 2. Tras el hormigonado de la losa

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
0.750	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
1.389	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
1.750	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
2.779	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
3.750	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
4.168	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
4.662	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
5.557	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
6.946	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
8.336	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
9.725	1123.1	1.977	1123.1	3286.9	1.000	3286.9	2.927	
11.114	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
12.504	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
13.893	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
14.788	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
15.282	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
15.700	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
16.671	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
17.700	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
18.061	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
18.700	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
19.450	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
19.700	-0.5	0.000	360.3	0.0	0.000	0.0	10.000	

Viga 2. Tras la disposición de la superestructura

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
0.750	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
1.389	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
1.750	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
2.779	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
3.750	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
4.168	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
4.662	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Ing. Antonio N. Pangrazio
Representante Legal

Civil eStudio

5.557	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203
6.946	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140
8.336	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110
9.725	1352.9	2.324	1352.9	4207.8	1.000	4207.8	3.110
11.114	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110
12.504	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140
13.893	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203
14.788	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264
15.282	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127
15.700	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993
16.671	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993
17.700	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898
18.061	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938
18.700	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019
19.450	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539
19.700	1.4	2.315	496.5	0.0	0.000	0.0	10.000

Viga 2. Tras la apertura al tráfico

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.7	2.315	630.8	1937.1	1.000	1937.1	3.071	
0.750	211.6	2.330	803.2	2801.6	1.000	2801.6	3.488	
1.389	390.5	2.338	945.8	3232.3	1.000	3232.3	3.417	
1.750	491.4	2.343	1012.9	3427.1	1.000	3427.1	3.384	
2.779	733.4	2.342	1183.5	4102.3	1.000	4102.3	3.466	
3.750	951.8	2.334	1314.5	3415.6	1.000	3415.6	2.598	
4.168	1028.6	2.332	1361.1	3694.9	1.000	3694.9	2.715	
4.662	1109.2	2.339	1414.2	4008.3	1.000	4008.3	2.834	
5.557	1255.3	2.337	1478.9	4114.6	1.000	4114.6	2.782	
6.946	1410.5	2.336	1542.3	4207.1	1.000	4207.1	2.728	
8.336	1511.3	2.332	1557.2	4207.7	1.000	4207.7	2.702	
9.725	1557.2	2.323	1557.2	4207.8	1.000	4207.8	2.702	
11.114	1511.3	2.332	1557.2	4207.7	1.000	4207.7	2.702	
12.504	1410.5	2.336	1542.3	4207.1	1.000	4207.1	2.728	
13.893	1255.3	2.337	1478.9	4114.6	1.000	4114.6	2.782	
14.788	1109.2	2.339	1414.2	4008.3	1.000	4008.3	2.834	
15.282	1028.6	2.332	1361.1	3694.9	1.000	3694.9	2.715	
15.700	951.7	2.334	1314.5	3415.6	1.000	3415.6	2.598	
16.671	733.4	2.342	1183.5	4102.3	1.000	4102.3	3.466	
17.700	491.4	2.343	1012.9	3427.1	1.000	3427.1	3.384	
18.061	390.5	2.338	945.8	3232.3	1.000	3232.3	3.417	
18.700	211.6	2.330	803.2	2801.6	1.000	2801.6	3.488	
19.450	1.7	2.315	630.8	1937.1	1.000	1937.1	3.071	
19.700	1.7	2.315	572.1	0.0	0.000	0.0	10.000	

Viga 2. A tiempo infinito

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.7	2.315	630.8	1937.1	1.000	1937.1	3.071	
0.750	211.6	2.330	803.2	2801.6	1.000	2801.6	3.488	
1.389	390.5	2.338	945.8	3232.3	1.000	3232.3	3.417	
1.750	491.4	2.343	1012.9	3427.1	1.000	3427.1	3.384	
2.779	733.4	2.342	1183.5	4102.3	1.000	4102.3	3.466	
3.750	951.8	2.334	1314.5	3415.6	1.000	3415.6	2.598	
4.168	1028.6	2.332	1361.1	3694.9	1.000	3694.9	2.715	
4.662	1109.2	2.339	1414.2	4008.3	1.000	4008.3	2.834	
5.557	1255.3	2.337	1478.9	4114.6	1.000	4114.6	2.782	
6.946	1410.5	2.336	1542.3	4207.1	1.000	4207.1	2.728	
8.336	1511.3	2.332	1557.2	4207.7	1.000	4207.7	2.702	
9.725	1557.2	2.323	1557.2	4207.8	1.000	4207.8	2.702	
11.114	1511.3	2.332	1557.2	4207.7	1.000	4207.7	2.702	
12.504	1410.5	2.336	1542.3	4207.1	1.000	4207.1	2.728	
13.893	1255.3	2.337	1478.9	4114.6	1.000	4114.6	2.782	

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Ing. Antonio N. Pangrazio
Representante Legal

14.788	1109.2	2.339	1414.2	4008.3	1.000	4008.3	2.834
15.282	1028.6	2.332	1361.1	3694.9	1.000	3694.9	2.715
15.700	951.7	2.334	1314.5	3415.6	1.000	3415.6	2.598
16.671	733.4	2.342	1183.5	4102.3	1.000	4102.3	3.466
17.700	491.4	2.343	1012.9	3427.1	1.000	3427.1	3.384
18.061	390.5	2.338	945.8	3232.3	1.000	3232.3	3.417
18.700	211.6	2.330	803.2	2801.6	1.000	2801.6	3.488
19.450	1.7	2.315	630.8	1937.1	1.000	1937.1	3.071
19.700	1.7	2.315	572.1	0.0	0.000	0.0	10.000

5.4 Estado límite de Resistencia. Combinación de Resistencia V

Viga 2:

Viga 2. Tras la transferencia del pretesado

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	
0.750	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
1.389	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
1.750	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
2.779	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
3.750	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
4.168	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
4.662	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
5.557	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
6.946	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
8.336	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
9.725	388.2	2.004	388.2	3286.9	1.000	3286.9	8.467	
11.114	377.1	2.003	388.2	3286.9	1.000	3286.9	8.467	
12.504	352.7	2.004	382.0	3286.9	1.000	3286.9	8.604	
13.893	314.9	2.005	363.5	3242.5	1.000	3242.5	8.921	
14.788	279.2	2.006	345.1	3171.4	1.000	3171.4	9.191	
15.282	259.5	1.996	331.7	2947.0	1.000	2947.0	8.886	
15.700	240.5	1.997	320.3	2743.8	1.000	2743.8	8.566	
16.671	186.2	2.000	284.1	3251.7	1.000	3251.7	11.447	
17.700	125.6	1.998	240.4	2763.1	1.000	2763.1	11.496	
18.061	99.7	1.991	220.2	2606.4	1.000	2606.4	11.834	
18.700	53.7	1.983	184.5	2261.1	1.000	2261.1	12.255	
19.450	-0.2	0.000	140.2	1572.5	1.000	1572.5	11.214	
19.700	-0.2	0.000	125.4	0.0	0.000	0.0	10.000	

Viga 2. Tras el hormigonado de la losa

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898	
0.750	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258	
1.389	288.3	1.980	634.2	2606.4	1.000	2606.4	4.110	
1.750	363.3	1.986	692.2	2763.1	1.000	2763.1	3.992	
2.779	538.7	1.984	819.3	3251.7	1.000	3251.7	3.969	
3.750	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967	
4.168	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078	
4.662	807.7	1.984	996.3	3171.4	1.000	3171.4	3.183	
5.557	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	
6.946	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
8.336	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
9.725	1123.1	1.977	1123.1	3286.9	1.000	3286.9	2.927	
11.114	1091.0	1.977	1123.1	3286.9	1.000	3286.9	2.927	
12.504	1020.4	1.978	1104.6	3286.9	1.000	3286.9	2.976	
13.893	911.2	1.981	1050.3	3242.5	1.000	3242.5	3.087	

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14.788	807.7	1.934	996.3	3171.4	1.000	3171.4	3.183
15.282	750.6	1.975	957.6	2947.0	1.000	2947.0	3.078
15.700	695.9	1.977	924.8	2743.8	1.000	2743.8	2.967
16.671	538.7	1.934	819.3	3251.7	1.000	3251.7	3.969
17.700	363.3	1.936	692.2	2763.1	1.000	2763.1	3.992
18.061	288.3	1.930	634.2	2606.4	1.000	2606.4	4.110
18.700	155.4	1.973	531.1	2261.1	1.000	2261.1	4.258
19.450	-0.5	0.000	403.4	1572.5	1.000	1572.5	3.898
19.700	-0.5	0.000	360.3	0.0	0.000	0.0	10.000

Viga 2. Tras la disposición de la superestructura

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
0.750	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
1.389	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
1.750	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
2.779	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
3.750	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
4.168	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
4.662	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
5.557	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
6.946	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
8.336	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
9.725	1352.9	2.324	1352.9	4207.8	1.000	4207.8	3.110	
11.114	1313.0	2.325	1352.9	4207.7	1.000	4207.7	3.110	
12.504	1225.5	2.327	1339.9	4207.1	1.000	4207.1	3.140	
13.893	1090.8	2.329	1284.5	4114.6	1.000	4114.6	3.203	
14.788	964.0	2.332	1228.2	4008.3	1.000	4008.3	3.264	
15.282	894.0	2.325	1181.8	3694.9	1.000	3694.9	3.127	
15.700	827.3	2.327	1141.3	3415.6	1.000	3415.6	2.993	
16.671	637.6	2.336	1027.3	4102.3	1.000	4102.3	3.993	
17.700	427.4	2.339	879.2	3427.1	1.000	3427.1	3.898	
18.061	339.6	2.334	820.8	3232.3	1.000	3232.3	3.938	
18.700	184.0	2.326	697.1	2801.6	1.000	2801.6	4.019	
19.450	1.4	2.315	547.4	1937.1	1.000	1937.1	3.539	
19.700	1.4	2.315	496.5	0.0	0.000	0.0	10.000	

Viga 2. Tras la apertura al tráfico

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	
0.750	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	
1.389	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
1.750	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
2.779	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
3.750	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
4.168	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
4.662	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
5.557	2446.9	2.311	2836.7	4114.6	1.000	4114.6	1.450	
6.946	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
8.336	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
9.725	2969.8	2.268	2969.8	4207.8	1.000	4207.8	1.417	
11.114	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
12.504	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
13.893	2447.0	2.311	2836.7	4114.6	1.000	4114.6	1.450	
14.788	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
15.282	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
15.700	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
16.671	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
17.700	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
18.061	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
18.700	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	

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19.450	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506
19.700	2.8	2.315	1175.1	0.0	0.000	0.0	10.000

Viga 2. A tiempo infinito

Distancia al eje 1	M_{uA}	S_d	M_{uB}	M_n	FR	M_r	M_r/M_u	Observaciones
(m)	(kNm)	(m)	(kNm)	(kNm)		(kNm)		
0.000	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	
0.750	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	
1.389	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
1.750	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
2.779	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
3.750	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
4.168	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
4.662	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
5.557	2446.9	2.311	2836.7	4114.6	1.000	4114.6	1.450	
6.946	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
8.336	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
9.725	2969.8	2.268	2969.8	4207.8	1.000	4207.8	1.417	
11.114	2898.1	2.284	2969.8	4207.7	1.000	4207.7	1.417	
12.504	2723.9	2.299	2943.7	4207.1	1.000	4207.1	1.429	
13.893	2447.0	2.311	2836.7	4114.6	1.000	4114.6	1.450	
14.788	2179.5	2.317	2725.7	4008.3	1.000	4008.3	1.471	
15.282	2031.8	2.312	2629.1	3694.9	1.000	3694.9	1.405	
15.700	1890.5	2.317	2546.5	3415.6	1.000	3415.6	1.341	
16.671	1486.1	2.330	2308.2	4102.3	1.000	4102.3	1.777	
17.700	1025.1	2.337	1996.4	3427.1	1.000	3427.1	1.717	
18.061	814.4	2.332	1872.4	3232.3	1.000	3232.3	1.726	
18.700	440.9	2.326	1609.9	2801.6	1.000	2801.6	1.740	
19.450	2.8	2.315	1286.4	1937.1	1.000	1937.1	1.506	
19.700	2.8	2.315	1175.1	0.0	0.000	0.0	10.000	

5.5 Resumen de verificaciones

Viga 2. Estado límite de Resistencia. Combinación de Resistencia I. Verifica la comprobación.

Viga 2. Estado límite de Resistencia. Combinación de Resistencia II. Verifica la comprobación.

Viga 2. Estado límite de Resistencia. Combinación de Resistencia III. Verifica la comprobación.

Viga 2. Estado límite de Resistencia. Combinación de Resistencia V. Verifica la comprobación.

6 ROTURA POR CORTANTE EN LAS VIGAS

V_u-, V_u+	:	Cortante mínimo y máximo mayorado (sin el pretensado)
V_p-, V_p+	:	Cortante mínimo y máximo de pretensado
N_p-, N_p+	:	Axil mínimo y máximo de pretensado
M_u-, M_u+	:	Flector mínimo y máximo mayorado
V_u	:	Cortante mayorado (sin el pretensado)
V_p	:	Cortante de pretensado (positivo si se opone a V_u)
$V_{n\ max}$	:	Resistencia nominal máxima de las bielas de compresión
V_n	:	Resistencia nominal a cortante (= $V_c + V_s + V_p$)
V_r	:	Resistencia mayorada a cortante
V_c	:	Contribución del hormigón a la resistencia a cortante
V_s	:	Contribución de las armaduras a la resistencia a cortante
A_{st}	:	Armadura de cálculo necesaria a cortante
$A_{st\ min}$	:	Armadura mínima de cortante
$S_{max\ long}$	:	Separación longitudinal máxima entre cercos de cortante
θ	:	Inclinación de las bielas de cortante y torsión
b_0	:	Ancho del alma
d_v	:	Brazo mecánico de la sección

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13.893	34.2	1584.3	1425.9	0.024	Cumple
14.788	41.6	1584.3	1425.9	0.029	Cumple
15.282	45.6	1587.4	1428.7	0.032	Cumple
15.700	49.1	1590.5	1431.5	0.034	Cumple
16.671	57.1	1608.4	1447.6	0.039	Cumple
17.700	65.5	1619.2	1457.2	0.045	Cumple
18.061	68.5	1619.3	1457.4	0.047	Cumple
18.700	73.7	1619.7	1457.7	0.051	Cumple
19.449	79.9	1574.2	1416.8	0.056	Cumple
19.451	2.0	1574.2	1416.8	0.001	Cumple
19.690	0.1	1574.2	1416.8	0.000	Cumple

Viga 2. Tras la transferencia del pretesado

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm²/m)	(cm²/m)	(m)
-0.240	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
-0.001	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
0.001	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
0.750	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
1.389	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
1.750	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
2.779	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
3.750	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
4.168	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
4.662	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610
5.557	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
6.946	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
8.336	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
9.725	0.0	341.7	0.0	-0.0	341.7	307.5	0.0	0.0	0.610
11.114	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
12.504	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
13.893	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
14.788	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610
15.282	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
15.700	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
16.671	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
17.700	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
18.061	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
18.700	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
19.449	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
19.451	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
19.690	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610

Viga 2. Tras la transferencia del pretesado

Armadura de cortante

Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	ν	ε
(m)	(°)	(m)	(m)	(MPa)		(kN/m²)	
-0.240	29.3	0.150	1.052	0.0	2.926	1	0.00008
-0.001	29.3	0.150	1.052	0.0	2.926	14	0.00008
0.001	39.8	0.150	1.052	500.0	1.448	563	0.00309
0.750	28.6	0.150	1.082	0.0	3.307	505	-0.00010
1.389	28.5	0.150	1.082	0.0	3.385	469	-0.00013
1.750	28.5	0.150	1.082	0.0	3.458	449	-0.00015
2.779	28.3	0.150	1.074	0.0	3.618	393	-0.00020
3.750	28.1	0.150	1.063	0.0	3.857	342	-0.00027
4.168	28.0	0.150	1.060	0.0	3.895	319	-0.00028
4.662	27.9	0.150	1.058	0.0	4.075	291	-0.00032
5.557	27.9	0.150	1.058	0.0	4.056	240	-0.00032
6.946	27.9	0.150	1.058	0.0	4.038	160	-0.00031
8.336	27.9	0.150	1.058	0.0	4.051	80	-0.00032
9.725	27.8	0.150	1.058	0.0	4.105	0	-0.00033

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11.114	27.9	0.150	1.058	0.0	4.051	80	-0.00032
12.504	27.9	0.150	1.058	0.0	4.038	160	-0.00031
13.893	27.9	0.150	1.058	0.0	4.056	240	-0.00032
14.788	27.9	0.150	1.058	0.0	4.075	291	-0.00032
15.282	28.0	0.150	1.060	0.0	3.895	319	-0.00028
15.700	28.1	0.150	1.063	0.0	3.857	342	-0.00027
16.671	28.3	0.150	1.074	0.0	3.618	393	-0.00020
17.700	28.5	0.150	1.082	0.0	3.458	449	-0.00015
18.061	28.5	0.150	1.082	0.0	3.385	469	-0.00013
18.700	28.6	0.150	1.082	0.0	3.307	505	-0.00010
19.449	39.8	0.150	1.052	500.0	1.448	563	0.00309
19.451	29.3	0.150	1.052	0.0	2.926	14	0.00008
19.690	29.3	0.150	1.052	0.0	2.926	1	0.00008

Viga 2. Tras el hormigonado de la losa
Envolvente de esfuerzos.

	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	166.4	231.1	0.0	0.0	188.7	188.7	-0.5	-0.4
0.750	153.6	213.3	0.0	0.0	678.4	678.4	111.8	155.3
1.389	142.6	198.1	0.0	0.0	919.1	919.1	207.5	288.2
1.750	136.5	189.5	0.0	0.0	1001.0	1001.0	261.6	363.3
2.779	118.9	165.1	0.0	0.0	1312.4	1312.4	387.9	538.7
3.750	102.2	142.0	0.0	0.0	1616.3	1616.3	501.0	695.9
4.168	95.1	132.1	0.0	0.0	1758.4	1758.4	540.5	750.6
4.662	86.6	120.3	0.0	0.0	1931.2	1931.2	581.6	807.7
5.557	71.3	99.1	0.0	0.0	1932.8	1932.8	656.1	911.2
6.946	47.5	66.0	0.0	0.0	1934.5	1934.5	734.7	1020.4
8.336	23.8	33.0	0.0	0.0	1935.5	1935.5	785.5	1001.2
9.725	-0.0	-0.0	0.0	0.0	1936.0	1936.0	808.6	808.6
11.114	-33.0	-23.8	0.0	0.0	1935.5	1935.5	785.5	1001.2
12.504	-66.0	-47.5	0.0	0.0	1934.5	1934.5	734.7	1020.4
13.893	-99.1	-71.3	0.0	0.0	1932.8	1932.8	656.1	911.2
14.788	-120.3	-86.6	0.0	0.0	1931.2	1931.2	581.6	807.7
15.282	-132.1	-95.1	0.0	0.0	1758.4	1758.4	540.5	750.6
15.700	-142.0	-102.2	0.0	0.0	1616.3	1616.3	501.0	695.9
16.671	-165.1	-118.9	0.0	0.0	1312.4	1312.4	387.9	538.7
17.700	-189.5	-136.5	0.0	0.0	1001.0	1001.0	261.6	363.3
18.061	-198.1	-142.6	0.0	0.0	919.1	919.1	207.5	288.2
18.700	-213.3	-153.6	0.0	0.0	678.4	678.4	111.8	155.3
19.449	-231.1	-166.4	0.0	0.0	188.7	188.7	-0.5	-0.4
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras el hormigonado de la losa
Verificación por agotamiento de las bielas de compresión

Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1971.8	1774.7	0.000	Cumple
-0.001	5.9	1971.8	1774.7	0.003	Cumple
0.001	231.1	1971.8	1774.7	0.130	Cumple
0.750	213.3	2028.8	1825.9	0.117	Cumple
1.389	198.1	2028.3	1825.5	0.109	Cumple
1.750	189.5	2028.1	1825.3	0.104	Cumple
2.779	165.1	2014.7	1813.2	0.091	Cumple
3.750	142.0	1992.3	1793.0	0.079	Cumple
4.168	132.1	1988.4	1789.5	0.074	Cumple
4.662	120.3	1984.5	1786.0	0.067	Cumple
5.557	99.1	1984.5	1786.0	0.055	Cumple

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6.946	66.0	1984.5	1786.0	0.037	Cumple
8.336	33.0	1984.5	1786.0	0.018	Cumple
9.725	0.0	1984.5	1786.0	0.000	Cumple
11.114	33.0	1984.5	1786.0	0.018	Cumple
12.504	66.0	1984.5	1786.0	0.037	Cumple
13.893	99.1	1984.5	1786.0	0.055	Cumple
14.788	120.3	1984.5	1786.0	0.067	Cumple
15.282	132.1	1988.4	1789.5	0.074	Cumple
15.700	142.0	1992.3	1793.0	0.079	Cumple
16.671	165.1	2014.7	1813.2	0.091	Cumple
17.700	189.5	2028.1	1825.3	0.104	Cumple
18.061	198.1	2028.3	1825.5	0.109	Cumple
18.700	213.3	2028.8	1825.9	0.117	Cumple
19.449	231.1	1971.8	1774.7	0.130	Cumple
19.451	5.9	1971.8	1774.7	0.003	Cumple
19.690	0.2	1971.8	1774.7	0.000	Cumple

Viga 2. Tras el hormigonado de la losa

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm²/m)	(cm²/m)	(m)
-0.240	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
-0.001	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
0.001	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
0.750	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
1.389	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
1.750	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
2.779	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
3.750	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
4.168	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
4.662	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
5.557	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
6.946	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
8.336	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610
9.725	0.0	350.5	0.0	-0.0	350.5	315.5	0.0	0.0	0.610
11.114	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610
12.504	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
13.893	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
14.788	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
15.282	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
15.700	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
16.671	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
17.700	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
18.061	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
18.700	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
19.449	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
19.451	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
19.690	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610

Viga 2. Tras el hormigonado de la losa

Armadura de cortante

Distancia al eje 1	θ	b_0	d_v	$f_y\ \alpha d$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m²)	
-0.240	29.8	0.150	1.052	0.0	2.643	2	0.00023
-0.001	29.8	0.150	1.052	0.0	2.643	42	0.00023
0.001	50.0	0.150	1.052	500.0	0.873	1628	0.00600
0.750	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
1.389	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
1.750	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
2.779	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
3.750	28.4	0.150	1.063	0.0	3.538	990	-0.00017
4.168	28.4	0.150	1.060	0.0	3.556	923	-0.00018

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4.662	28.2	0.150	1.058	0.0	3.690	842	-0.00022
5.557	28.3	0.150	1.058	0.0	3.644	693	-0.00020
6.946	28.3	0.150	1.058	0.0	3.604	462	-0.00019
8.336	28.3	0.150	1.058	0.0	3.633	231	-0.00020
9.725	28.2	0.150	1.058	0.0	3.763	0	-0.00024
11.114	28.3	0.150	1.058	0.0	3.633	231	-0.00020
12.504	28.3	0.150	1.058	0.0	3.604	462	-0.00019
13.893	28.3	0.150	1.058	0.0	3.644	693	-0.00020
14.788	28.2	0.150	1.058	0.0	3.690	842	-0.00022
15.282	28.4	0.150	1.060	0.0	3.556	923	-0.00018
15.700	28.4	0.150	1.063	0.0	3.538	990	-0.00017
16.671	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
17.700	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
18.061	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
18.700	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
19.449	50.0	0.150	1.052	500.0	0.873	1628	0.00600
19.451	29.8	0.150	1.052	0.0	2.643	42	0.00023
19.690	29.8	0.150	1.052	0.0	2.643	2	0.00023

Viga 2. Tras la disposición de la superestructura								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	180.7	266.0	0.0	0.0	188.7	188.7	0.8	1.6
0.750	168.0	247.6	0.0	0.0	678.4	678.4	125.1	183.4
1.389	157.2	231.9	0.0	0.0	919.1	919.1	230.4	339.3
1.750	151.1	223.0	0.0	0.0	1001.0	1001.0	289.9	427.3
2.779	133.1	196.2	0.0	0.0	1312.4	1312.4	432.8	637.6
3.750	116.0	170.6	0.0	0.0	1616.3	1616.3	561.8	827.3
4.168	108.3	159.2	0.0	0.0	1758.4	1758.4	607.3	894.0
4.662	98.9	145.4	0.0	0.0	1931.2	1931.2	655.0	964.0
5.557	82.0	120.4	0.0	0.0	1932.8	1932.8	741.4	1090.8
6.946	55.0	80.7	0.0	0.0	1934.5	1934.5	833.3	1225.5
8.336	27.2	40.9	0.0	0.0	1935.5	1935.5	909.9	1206.3
9.725	-1.3	1.3	0.0	0.0	1936.0	1936.0	979.4	979.4
11.114	-40.9	-27.2	0.0	0.0	1935.5	1935.5	909.9	1206.3
12.504	-80.7	-55.0	0.0	0.0	1934.5	1934.5	833.3	1225.5
13.893	-120.4	-82.0	0.0	0.0	1932.8	1932.8	741.4	1090.8
14.788	-145.4	-98.9	0.0	0.0	1931.2	1931.2	655.0	964.0
15.282	-159.2	-103.3	0.0	0.0	1758.4	1758.4	607.3	894.0
15.700	-170.6	-115.0	0.0	0.0	1616.3	1616.3	561.8	827.3
16.671	-196.2	-133.1	0.0	0.0	1312.4	1312.4	432.8	637.6
17.700	-223.0	-151.1	0.0	0.0	1001.0	1001.0	289.9	427.3
18.061	-231.9	-157.2	0.0	0.0	919.1	919.1	230.4	339.3
18.700	-247.6	-168.0	0.0	0.0	678.4	678.4	125.1	183.4
19.449	-266.0	-180.7	0.0	0.0	188.7	188.7	0.8	1.6
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la disposición de la superestructura					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	266.0	2402.9	2162.6	0.123	Cumple
0.750	247.6	2400.0	2160.0	0.115	Cumple
1.389	231.9	2399.6	2159.6	0.107	Cumple
1.750	223.0	2399.4	2159.4	0.103	Cumple

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2.779	196.2	2385.9	2147.3	0.091	Cumple
3.750	170.6	2363.5	2127.2	0.080	Cumple
4.168	159.2	2359.6	2123.7	0.075	Cumple
4.662	145.4	2355.7	2120.2	0.069	Cumple
5.557	120.4	2355.7	2120.2	0.057	Cumple
6.946	80.7	2355.7	2120.2	0.038	Cumple
8.336	40.9	2355.7	2120.2	0.019	Cumple
9.725	1.3	2355.7	2120.2	0.001	Cumple
11.114	40.9	2355.7	2120.2	0.019	Cumple
12.504	80.7	2355.7	2120.2	0.038	Cumple
13.893	120.4	2355.7	2120.2	0.057	Cumple
14.788	145.4	2355.7	2120.2	0.069	Cumple
15.282	159.2	2359.6	2123.7	0.075	Cumple
15.700	170.6	2363.5	2127.2	0.080	Cumple
16.671	196.2	2385.9	2147.3	0.091	Cumple
17.700	223.0	2399.4	2159.4	0.103	Cumple
18.061	231.9	2399.6	2159.6	0.107	Cumple
18.700	247.6	2400.0	2160.0	0.115	Cumple
19.449	266.0	2402.9	2162.6	0.123	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

Viga 2. Tras la disposición de la superestructura

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
0.750	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
1.389	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
1.750	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
2.779	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
3.750	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610
4.168	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
4.662	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
5.557	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
6.946	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
8.336	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
9.725	1.3	358.0	0.0	-0.0	358.0	322.2	0.0	0.0	0.610
11.114	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
12.504	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
13.893	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
14.788	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
15.282	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
15.700	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610
16.671	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
17.700	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
18.061	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
18.700	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
19.449	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. Tras la disposición de la superestructura

Armadura de cortante

Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	32.4	0.150	1.282	500.0	2.782	1538	0.00097
0.750	28.9	0.150	1.280	500.0	4.887	1433	-0.00002

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1.389	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
1.750	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
2.779	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
3.750	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
4.168	28.6	0.150	1.258	500.0	5.260	937	-0.00012
4.662	28.5	0.150	1.256	0.0	3.172	857	-0.00015
5.557	28.5	0.150	1.256	0.0	3.141	710	-0.00014
6.946	28.6	0.150	1.256	0.0	3.114	476	-0.00013
8.336	28.5	0.150	1.256	0.0	3.139	241	-0.00013
9.725	28.4	0.150	1.256	0.0	3.238	8	-0.00017
11.114	28.5	0.150	1.256	0.0	3.139	241	-0.00013
12.504	28.6	0.150	1.256	0.0	3.114	476	-0.00013
13.893	28.5	0.150	1.256	0.0	3.141	710	-0.00014
14.788	28.5	0.150	1.256	0.0	3.172	857	-0.00015
15.282	28.6	0.150	1.258	500.0	5.260	937	-0.00012
15.700	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
16.671	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
17.700	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
18.061	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
18.700	28.9	0.150	1.280	500.0	4.887	1433	-0.00002
19.449	32.4	0.150	1.282	500.0	2.782	1538	0.00097
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

Viga 2. Tras la apertura al tráfico								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	175.8	712.6	0.0	0.0	188.7	188.7	-2.7	2.4
0.750	159.7	677.8	0.0	0.0	678.4	678.4	162.1	482.9
1.389	145.9	648.1	0.0	0.0	919.1	919.1	298.4	897.3
1.750	138.1	631.4	0.0	0.0	1001.0	1001.0	375.3	1131.2
2.779	104.5	567.6	0.0	0.0	1312.4	1312.4	653.0	1622.0
3.750	70.3	503.7	0.0	0.0	1616.3	1616.3	928.1	2046.7
4.168	54.2	478.5	0.0	0.0	1758.4	1758.4	1036.2	2189.8
4.662	34.4	449.9	0.0	0.0	1931.2	1931.2	1158.1	2335.3
5.557	-1.4	398.3	0.0	0.0	1932.8	1932.8	1378.9	2598.9
6.946	-52.5	325.1	0.0	0.0	1934.5	1934.5	1704.8	2834.1
8.336	-108.3	250.9	0.0	0.0	1935.5	1935.5	2047.7	2798.7
9.725	-172.6	172.6	0.0	0.0	1936.0	1936.0	2422.6	2422.6
11.114	-250.9	108.3	0.0	0.0	1935.5	1935.5	2047.7	2798.7
12.504	-325.1	52.5	0.0	0.0	1934.5	1934.5	1704.8	2834.1
13.893	-398.3	1.4	0.0	0.0	1932.8	1932.8	1379.0	2598.9
14.788	-449.9	-34.4	0.0	0.0	1931.2	1931.2	1158.2	2335.3
15.282	-478.5	-54.2	0.0	0.0	1758.4	1758.4	1036.3	2189.8
15.700	-503.7	-70.3	0.0	0.0	1616.3	1616.3	928.1	2046.7
16.671	-567.6	-104.5	0.0	0.0	1312.4	1312.4	653.0	1622.1
17.700	-631.4	-138.1	0.0	0.0	1001.0	1001.0	375.3	1131.2
18.061	-648.1	-145.9	0.0	0.0	919.1	919.1	298.4	897.4
18.700	-677.8	-159.7	0.0	0.0	678.4	678.4	162.1	482.9
19.449	-712.6	-175.8	0.0	0.0	188.7	188.7	-2.7	2.4
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la apertura al tráfico					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple

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Representante Legal

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-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	712.6	1984.5	1786.1	0.399	Cumple
0.750	677.8	2400.0	2160.0	0.314	Cumple
1.389	648.1	2399.6	2159.6	0.300	Cumple
1.750	631.4	2399.4	2159.4	0.292	Cumple
2.779	567.6	2385.9	2147.3	0.264	Cumple
3.750	503.7	2363.5	2127.2	0.237	Cumple
4.168	478.5	2359.6	2123.7	0.225	Cumple
4.662	449.9	2355.7	2120.2	0.212	Cumple
5.557	398.3	2355.7	2120.2	0.188	Cumple
6.946	325.1	2355.7	2120.2	0.153	Cumple
8.336	250.9	2355.7	2120.2	0.118	Cumple
9.725	172.6	2355.7	2120.2	0.081	Cumple
11.114	250.9	2355.7	2120.2	0.118	Cumple
12.504	325.1	2355.7	2120.2	0.153	Cumple
13.893	398.3	2355.7	2120.2	0.188	Cumple
14.788	449.9	2355.7	2120.2	0.212	Cumple
15.282	478.5	2359.6	2123.7	0.225	Cumple
15.700	503.7	2363.5	2127.2	0.237	Cumple
16.671	567.6	2385.9	2147.3	0.264	Cumple
17.700	631.4	2399.4	2159.4	0.292	Cumple
18.061	648.1	2399.6	2159.6	0.300	Cumple
18.700	677.8	2400.0	2160.0	0.314	Cumple
19.449	712.6	1984.5	1786.1	0.399	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

Viga 2. Tras la apertura al tráfico									
Armadura de cortante									
Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	712.6	81.3	710.5	-0.0	791.7	712.6	16.0	1.8	0.610
0.750	677.8	288.2	464.9	-0.0	753.1	677.8	4.7	1.8	0.610
1.389	648.1	331.5	388.6	-0.0	720.2	648.1	3.8	1.8	0.610
1.750	631.4	329.4	372.2	-0.0	701.6	631.4	3.6	1.8	0.610
2.779	567.6	330.2	300.4	-0.0	630.6	567.6	2.9	1.8	0.610
3.750	503.7	248.2	311.4	-0.0	559.7	503.7	3.4	1.8	0.610
4.168	478.5	248.3	283.4	-0.0	531.6	478.5	3.1	1.8	0.610
4.662	449.9	289.7	210.2	-0.0	499.9	449.9	2.2	1.8	0.610
5.557	398.3	254.4	188.2	-0.0	442.5	398.3	2.0	1.8	0.610
6.946	325.1	234.0	127.2	-0.0	361.2	325.1	1.4	1.8	0.610
8.336	250.9	253.6	25.2	-0.0	278.8	250.9	0.3	1.8	0.610
9.725	172.6	362.6	0.0	-0.0	362.6	326.4	1.8	1.8	0.610
11.114	250.9	253.6	25.2	-0.0	278.8	250.9	0.3	1.8	0.610
12.504	325.1	234.0	127.2	-0.0	361.2	325.1	1.4	1.8	0.610
13.893	398.3	254.4	188.2	-0.0	442.5	398.3	2.0	1.8	0.610
14.788	449.9	289.7	210.2	-0.0	499.9	449.9	2.2	1.8	0.610
15.282	478.5	248.3	283.4	-0.0	531.6	478.5	3.1	1.8	0.610
15.700	503.7	248.2	311.4	-0.0	559.7	503.7	3.4	1.8	0.610
16.671	567.6	330.2	300.4	-0.0	630.6	567.6	2.9	1.8	0.610
17.700	631.4	329.4	372.2	-0.0	701.6	631.4	3.6	1.8	0.610
18.061	648.1	331.5	388.6	-0.0	720.2	648.1	3.8	1.8	0.610
18.700	677.8	288.2	464.9	-0.0	753.1	677.8	4.7	1.8	0.610
19.449	712.6	81.3	710.5	-0.0	791.7	712.6	16.0	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. Tras la apertura al tráfico							
Armadura de cortante							
Distancia al eje 1	θ	b_v	d_v	$f_{y\,\alpha d}$	β	ν	ε

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

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Representante Legal

(m)	(º)	(m)	(m)	(MPa)		(kN/m2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	50.0	0.150	1.058	500.0	0.873	4987	0.00600
0.750	33.1	0.150	1.280	500.0	2.558	3922	0.00117
1.389	31.9	0.150	1.280	500.0	2.944	3752	0.00084
1.750	32.0	0.150	1.280	500.0	2.924	3655	0.00086
2.779	31.9	0.150	1.272	500.0	2.949	3304	0.00084
3.750	34.3	0.150	1.261	500.0	2.238	2960	0.00153
4.168	34.3	0.150	1.258	500.0	2.242	2816	0.00152
4.662	32.9	0.150	1.256	500.0	2.620	2653	0.00111
5.557	34.1	0.150	1.256	500.0	2.300	2348	0.00145
6.946	34.9	0.150	1.256	500.0	2.117	1917	0.00169
8.336	34.1	0.150	1.256	500.0	2.294	1479	0.00146
9.725	31.2	0.150	1.256	500.0	3.279	1018	0.00062
11.114	34.1	0.150	1.256	500.0	2.294	1479	0.00146
12.504	34.9	0.150	1.256	500.0	2.117	1917	0.00169
13.893	34.1	0.150	1.256	500.0	2.300	2348	0.00145
14.788	32.9	0.150	1.256	500.0	2.620	2653	0.00111
15.282	34.3	0.150	1.258	500.0	2.242	2816	0.00152
15.700	34.3	0.150	1.261	500.0	2.238	2960	0.00153
16.671	31.9	0.150	1.272	500.0	2.949	3304	0.00084
17.700	32.0	0.150	1.280	500.0	2.924	3655	0.00086
18.061	31.9	0.150	1.280	500.0	2.944	3752	0.00084
18.700	33.1	0.150	1.280	500.0	2.558	3922	0.00117
19.449	50.0	0.150	1.058	500.0	0.873	4987	0.00600
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

Viga 2. A tiempo infinito								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.3	7.3	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	180.8	180.8	-0.7	-0.5
0.001	175.8	712.6	0.0	0.0	182.1	182.1	-2.7	2.4
0.750	159.7	677.8	0.0	0.0	644.1	644.1	162.1	482.9
1.389	145.9	648.1	0.0	0.0	875.2	875.2	298.4	897.3
1.750	138.1	631.4	0.0	0.0	947.6	947.6	375.3	1131.2
2.779	104.5	567.6	0.0	0.0	1238.9	1238.9	653.0	1622.0
3.750	70.3	503.7	0.0	0.0	1521.3	1521.3	928.1	2046.7
4.168	54.2	478.5	0.0	0.0	1649.1	1649.1	1036.2	2189.8
4.662	34.4	449.9	0.0	0.0	1807.3	1807.3	1158.1	2335.3
5.557	-1.4	398.3	0.0	0.0	1811.9	1811.9	1378.9	2598.9
6.946	-52.5	325.1	0.0	0.0	1816.8	1816.8	1704.8	2834.1
8.336	-108.3	250.9	0.0	0.0	1820.0	1820.0	2047.7	2798.7
9.725	-172.6	172.6	0.0	0.0	1821.4	1821.4	2422.6	2422.6
11.114	-250.9	108.3	0.0	0.0	1820.0	1820.0	2047.7	2798.7
12.504	-325.1	52.5	0.0	0.0	1816.8	1816.8	1704.8	2834.1
13.893	-398.3	1.4	0.0	0.0	1811.9	1811.9	1379.0	2598.9
14.788	-449.9	-34.4	0.0	0.0	1807.3	1807.3	1158.2	2335.3
15.282	-478.5	-54.2	0.0	0.0	1649.1	1649.1	1036.3	2189.8
15.700	-503.7	-70.3	0.0	0.0	1521.3	1521.3	928.1	2046.7
16.671	-567.6	-104.5	0.0	0.0	1238.9	1238.9	653.0	1622.1
17.700	-631.4	-138.1	0.0	0.0	947.6	947.6	375.3	1131.2
18.061	-648.1	-145.9	0.0	0.0	875.2	875.2	298.4	897.4
18.700	-677.8	-159.7	0.0	0.0	644.1	644.1	162.1	482.9
19.449	-712.6	-175.8	0.0	0.0	182.1	182.1	-2.7	2.4
19.451	4.3	5.9	0.0	0.0	180.8	180.8	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.3	7.3	-0.0	-0.0

Viga 2. A tiempo infinito

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Ing. Antonio N. Pangrazio
Representante Legal

Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	712.6	1984.5	1786.1	0.399	Cumple
0.750	677.8	2400.0	2160.0	0.314	Cumple
1.389	648.1	2399.6	2159.6	0.300	Cumple
1.750	631.4	2399.4	2159.4	0.292	Cumple
2.779	567.6	2385.9	2147.3	0.264	Cumple
3.750	503.7	2363.5	2127.2	0.237	Cumple
4.168	478.5	2359.6	2123.7	0.225	Cumple
4.662	449.9	2355.7	2120.2	0.212	Cumple
5.557	398.3	2355.7	2120.2	0.188	Cumple
6.946	325.1	2355.7	2120.2	0.153	Cumple
8.336	250.9	2355.7	2120.2	0.118	Cumple
9.725	172.6	2355.7	2120.2	0.081	Cumple
11.114	250.9	2355.7	2120.2	0.118	Cumple
12.504	325.1	2355.7	2120.2	0.153	Cumple
13.893	398.3	2355.7	2120.2	0.188	Cumple
14.788	449.9	2355.7	2120.2	0.212	Cumple
15.282	478.5	2359.6	2123.7	0.225	Cumple
15.700	503.7	2363.5	2127.2	0.237	Cumple
16.671	567.6	2385.9	2147.3	0.264	Cumple
17.700	631.4	2399.4	2159.4	0.292	Cumple
18.061	648.1	2399.6	2159.6	0.300	Cumple
18.700	677.8	2400.0	2160.0	0.314	Cumple
19.449	712.6	1984.5	1786.1	0.399	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

Viga 2. A tiempo infinito									
Armadura de cortante									
Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	712.6	81.3	710.5	-0.0	791.7	712.6	16.0	1.8	0.610
0.750	677.8	288.2	464.9	-0.0	753.1	677.8	4.7	1.8	0.610
1.389	648.1	331.5	388.6	-0.0	720.2	648.1	3.8	1.8	0.610
1.750	631.4	329.4	372.2	-0.0	701.6	631.4	3.6	1.8	0.610
2.779	567.6	330.2	300.4	-0.0	630.6	567.6	2.9	1.8	0.610
3.750	503.7	248.2	311.4	-0.0	559.7	503.7	3.4	1.8	0.610
4.168	478.5	248.3	283.4	-0.0	531.6	478.5	3.1	1.8	0.610
4.662	449.9	289.7	210.2	-0.0	499.9	449.9	2.2	1.8	0.610
5.557	398.3	254.4	188.2	-0.0	442.5	398.3	2.0	1.8	0.610
6.946	325.1	234.0	127.2	-0.0	361.2	325.1	1.4	1.8	0.610
8.336	250.9	253.6	25.2	-0.0	278.8	250.9	0.3	1.8	0.610
9.725	172.6	362.6	0.0	-0.0	362.6	326.4	1.8	1.8	0.610
11.114	250.9	253.6	25.2	-0.0	278.8	250.9	0.3	1.8	0.610
12.504	325.1	234.0	127.2	-0.0	361.2	325.1	1.4	1.8	0.610
13.893	398.3	254.4	188.2	-0.0	442.5	398.3	2.0	1.8	0.610
14.788	449.9	289.7	210.2	-0.0	499.9	449.9	2.2	1.8	0.610
15.282	478.5	248.3	283.4	-0.0	531.6	478.5	3.1	1.8	0.610
15.700	503.7	248.2	311.4	-0.0	559.7	503.7	3.4	1.8	0.610
16.671	567.6	330.2	300.4	-0.0	630.6	567.6	2.9	1.8	0.610
17.700	631.4	329.4	372.2	-0.0	701.6	631.4	3.6	1.8	0.610
18.061	648.1	331.5	388.6	-0.0	720.2	648.1	3.8	1.8	0.610
18.700	677.8	288.2	464.9	-0.0	753.1	677.8	4.7	1.8	0.610
19.449	712.6	81.3	710.5	-0.0	791.7	712.6	16.0	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Ing. Antonio N. Pangrazio
Representante Leg.

Ing. Emilio Diaz de Vivar
Representante Legal
Empresa de Construcciones edivisa

Viga 2. A tiempo infinito							
Armadura de cortante							
Distancia al eje 1	θ	b_v	d_v	$f_{y\alpha d}$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	50.0	0.150	1.058	500.0	0.873	4987	0.00600
0.750	33.1	0.150	1.280	500.0	2.558	3922	0.00117
1.389	31.9	0.150	1.280	500.0	2.944	3752	0.00084
1.750	32.0	0.150	1.280	500.0	2.924	3655	0.00086
2.779	31.9	0.150	1.272	500.0	2.949	3304	0.00084
3.750	34.3	0.150	1.261	500.0	2.238	2960	0.00153
4.168	34.3	0.150	1.258	500.0	2.242	2816	0.00152
4.662	32.9	0.150	1.256	500.0	2.620	2653	0.00111
5.557	34.1	0.150	1.256	500.0	2.300	2348	0.00145
6.946	34.9	0.150	1.256	500.0	2.117	1917	0.00169
8.336	34.1	0.150	1.256	500.0	2.294	1479	0.00146
9.725	31.2	0.150	1.256	500.0	3.279	1018	0.00062
11.114	34.1	0.150	1.256	500.0	2.294	1479	0.00146
12.504	34.9	0.150	1.256	500.0	2.117	1917	0.00169
13.893	34.1	0.150	1.256	500.0	2.300	2348	0.00145
14.788	32.9	0.150	1.256	500.0	2.620	2653	0.00111
15.282	34.3	0.150	1.258	500.0	2.242	2816	0.00152
15.700	34.3	0.150	1.261	500.0	2.238	2960	0.00153
16.671	31.9	0.150	1.272	500.0	2.949	3304	0.00084
17.700	32.0	0.150	1.280	500.0	2.924	3655	0.00086
18.061	31.9	0.150	1.280	500.0	2.944	3752	0.00084
18.700	33.1	0.150	1.280	500.0	2.558	3922	0.00117
19.449	50.0	0.150	1.058	500.0	0.873	4987	0.00600
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

6.2 Estado límite de Resistencia. Combinación de Resistencia II

Viga 2:

Viga 2. Tras la transferencia del pretesado								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.1	-0.1	0.0	0.0	8.0	8.0	-0.0	-0.0
-0.001	-2.0	-1.5	0.0	0.0	199.3	199.3	-0.3	-0.2
0.001	57.5	79.9	0.0	0.0	200.7	200.7	-0.2	-0.1
0.750	53.1	73.7	0.0	0.0	718.1	718.1	38.6	53.7
1.389	49.3	68.5	0.0	0.0	971.2	971.2	71.7	99.6
1.750	47.2	65.5	0.0	0.0	1062.6	1062.6	90.4	125.6
2.779	41.1	57.1	0.0	0.0	1407.8	1407.8	134.1	186.2
3.750	35.3	49.1	0.0	0.0	1724.4	1724.4	173.2	240.5
4.168	32.9	45.6	0.0	0.0	1882.9	1882.9	186.8	259.5
4.662	29.9	41.6	0.0	0.0	2070.3	2070.3	201.0	279.2
5.557	24.7	34.2	0.0	0.0	2070.3	2070.3	226.8	314.9
6.946	16.4	22.8	0.0	0.0	2070.3	2070.3	253.9	352.7
8.336	8.2	11.4	0.0	0.0	2070.3	2070.3	271.5	346.0
9.725	0.0	0.0	0.0	0.0	2070.3	2070.3	279.5	279.5
11.114	-11.4	-8.2	0.0	0.0	2070.3	2070.3	271.5	346.0
12.504	-22.8	-16.4	0.0	0.0	2070.3	2070.3	253.9	352.7
13.893	-34.2	-24.7	0.0	0.0	2070.3	2070.3	226.8	314.9
14.788	-41.6	-29.9	0.0	0.0	2070.3	2070.3	201.0	279.2
15.282	-45.6	-32.9	0.0	0.0	1882.9	1882.9	186.8	259.5

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15.700	-49.1	-35.3	0.0	0.0	1724.4	1724.4	173.2	240.5
16.671	-57.1	-41.1	0.0	0.0	1407.8	1407.8	134.1	186.2
17.700	-65.5	-47.2	0.0	0.0	1062.6	1062.6	90.4	125.6
18.061	-68.5	-49.3	0.0	0.0	971.2	971.2	71.7	99.6
18.700	-73.7	-53.1	0.0	0.0	718.1	718.1	38.6	53.7
19.449	-79.9	-57.5	0.0	0.0	200.7	200.7	-0.2	-0.1
19.451	1.5	2.0	0.0	0.0	199.3	199.3	-0.3	-0.2
19.690	0.1	0.1	0.0	0.0	8.0	8.0	-0.0	-0.0

Viga 2. Tras la transferencia del pretesado					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.1	1574.2	1416.8	0.000	Cumple
-0.001	2.0	1574.2	1416.8	0.001	Cumple
0.001	79.9	1574.2	1416.8	0.056	Cumple
0.750	73.7	1619.7	1457.7	0.051	Cumple
1.389	68.5	1619.3	1457.4	0.047	Cumple
1.750	65.5	1619.2	1457.2	0.045	Cumple
2.779	57.1	1608.4	1447.6	0.039	Cumple
3.750	49.1	1590.5	1431.5	0.034	Cumple
4.168	45.6	1587.4	1428.7	0.032	Cumple
4.662	41.6	1584.3	1425.9	0.029	Cumple
5.557	34.2	1584.3	1425.9	0.024	Cumple
6.946	22.8	1584.3	1425.9	0.016	Cumple
8.336	11.4	1584.3	1425.9	0.008	Cumple
9.725	0.0	1584.3	1425.9	0.000	Cumple
11.114	11.4	1584.3	1425.9	0.008	Cumple
12.504	22.8	1584.3	1425.9	0.016	Cumple
13.893	34.2	1584.3	1425.9	0.024	Cumple
14.788	41.6	1584.3	1425.9	0.029	Cumple
15.282	45.6	1587.4	1428.7	0.032	Cumple
15.700	49.1	1590.5	1431.5	0.034	Cumple
16.671	57.1	1608.4	1447.6	0.039	Cumple
17.700	65.5	1619.2	1457.2	0.045	Cumple
18.061	68.5	1619.3	1457.4	0.047	Cumple
18.700	73.7	1619.7	1457.7	0.051	Cumple
19.449	79.9	1574.2	1416.8	0.056	Cumple
19.451	2.0	1574.2	1416.8	0.001	Cumple
19.690	0.1	1574.2	1416.8	0.000	Cumple

Viga 2. Tras la transferencia del pretesado									
Armadura de cortante									
Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
-0.001	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
0.001	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
0.750	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
1.389	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
1.750	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
2.779	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
3.750	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
4.168	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
4.662	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610
5.557	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
6.946	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
8.336	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
9.725	0.0	341.7	0.0	-0.0	341.7	307.5	0.0	0.0	0.610
11.114	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
12.504	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
13.893	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
14.788	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610

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15.282	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
15.700	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
16.671	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
17.700	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
18.061	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
18.700	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
19.449	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
19.451	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
19.690	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610

Viga 2. Tras la transferencia del pretesado							
Armadura de cortante							
Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.3	0.150	1.052	0.0	2.926	1	0.00008
-0.001	29.3	0.150	1.052	0.0	2.926	14	0.00008
0.001	39.8	0.150	1.052	500.0	1.448	563	0.00309
0.750	28.6	0.150	1.082	0.0	3.307	505	-0.00010
1.389	28.5	0.150	1.082	0.0	3.385	469	-0.00013
1.750	28.5	0.150	1.082	0.0	3.458	449	-0.00015
2.779	28.3	0.150	1.074	0.0	3.618	393	-0.00020
3.750	28.1	0.150	1.063	0.0	3.857	342	-0.00027
4.168	28.0	0.150	1.060	0.0	3.895	319	-0.00028
4.662	27.9	0.150	1.058	0.0	4.075	291	-0.00032
5.557	27.9	0.150	1.058	0.0	4.056	240	-0.00032
6.946	27.9	0.150	1.058	0.0	4.038	160	-0.00031
8.336	27.9	0.150	1.058	0.0	4.051	80	-0.00032
9.725	27.8	0.150	1.058	0.0	4.105	0	-0.00033
11.114	27.9	0.150	1.058	0.0	4.051	80	-0.00032
12.504	27.9	0.150	1.058	0.0	4.038	160	-0.00031
13.893	27.9	0.150	1.058	0.0	4.056	240	-0.00032
14.788	27.9	0.150	1.058	0.0	4.075	291	-0.00032
15.282	28.0	0.150	1.060	0.0	3.895	319	-0.00028
15.700	28.1	0.150	1.063	0.0	3.857	342	-0.00027
16.671	28.3	0.150	1.074	0.0	3.618	393	-0.00020
17.700	28.5	0.150	1.082	0.0	3.458	449	-0.00015
18.061	28.5	0.150	1.082	0.0	3.385	469	-0.00013
18.700	28.6	0.150	1.082	0.0	3.307	505	-0.00010
19.449	39.8	0.150	1.052	500.0	1.448	563	0.00309
19.451	29.3	0.150	1.052	0.0	2.926	14	0.00008
19.690	29.3	0.150	1.052	0.0	2.926	1	0.00008

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Viga 2. Tras el hormigonado de la losa								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	166.4	231.1	0.0	0.0	188.7	188.7	-0.5	-0.4
0.750	153.6	213.3	0.0	0.0	678.4	678.4	111.8	155.3
1.389	142.6	198.1	0.0	0.0	919.1	919.1	207.5	288.2
1.750	136.5	189.5	0.0	0.0	1001.0	1001.0	261.6	363.3
2.779	118.9	165.1	0.0	0.0	1312.4	1312.4	387.9	538.7
3.750	102.2	142.0	0.0	0.0	1616.3	1616.3	501.0	695.9
4.168	95.1	132.1	0.0	0.0	1758.4	1758.4	540.5	750.6
4.662	86.6	120.3	0.0	0.0	1931.2	1931.2	581.6	807.7
5.557	71.3	99.1	0.0	0.0	1932.8	1932.8	656.1	911.2
6.946	47.5	66.0	0.0	0.0	1934.5	1934.5	734.7	1020.4
8.336	23.8	33.0	0.0	0.0	1935.5	1935.5	785.5	1001.2
9.725	-0.0	-0.0	0.0	0.0	1936.0	1936.0	808.6	808.6

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11.114	-33.0	-23.8	0.0	0.0	1935.5	1935.5	785.5	1001.2
12.504	-66.0	-47.5	0.0	0.0	1934.5	1934.5	734.7	1020.4
13.893	-99.1	-71.3	0.0	0.0	1932.8	1932.8	656.1	911.2
14.788	-120.3	-86.6	0.0	0.0	1931.2	1931.2	581.6	807.7
15.282	-132.1	-95.1	0.0	0.0	1758.4	1758.4	540.5	750.6
15.700	-142.0	-102.2	0.0	0.0	1616.3	1616.3	501.0	695.9
16.671	-165.1	-118.9	0.0	0.0	1312.4	1312.4	387.9	538.7
17.700	-189.5	-136.5	0.0	0.0	1001.0	1001.0	261.6	363.3
18.061	-198.1	-142.6	0.0	0.0	919.1	919.1	207.5	288.2
18.700	-213.3	-153.6	0.0	0.0	678.4	678.4	111.8	155.3
19.449	-231.1	-166.4	0.0	0.0	188.7	188.7	-0.5	-0.4
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras el hormigonado de la losa

Verificación por agotamiento de las bielas de compresión

Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1971.8	1774.7	0.000	Cumple
-0.001	5.9	1971.8	1774.7	0.003	Cumple
0.001	231.1	1971.8	1774.7	0.130	Cumple
0.750	213.3	2028.8	1825.9	0.117	Cumple
1.389	198.1	2028.3	1825.5	0.109	Cumple
1.750	189.5	2028.1	1825.3	0.104	Cumple
2.779	165.1	2014.7	1813.2	0.091	Cumple
3.750	142.0	1992.3	1793.0	0.079	Cumple
4.168	132.1	1988.4	1789.5	0.074	Cumple
4.662	120.3	1984.5	1786.0	0.067	Cumple
5.557	99.1	1984.5	1786.0	0.055	Cumple
6.946	66.0	1984.5	1786.0	0.037	Cumple
8.336	33.0	1984.5	1786.0	0.018	Cumple
9.725	0.0	1984.5	1786.0	0.000	Cumple
11.114	33.0	1984.5	1786.0	0.018	Cumple
12.504	66.0	1984.5	1786.0	0.037	Cumple
13.893	99.1	1984.5	1786.0	0.055	Cumple
14.788	120.3	1984.5	1786.0	0.067	Cumple
15.282	132.1	1988.4	1789.5	0.074	Cumple
15.700	142.0	1992.3	1793.0	0.079	Cumple
16.671	165.1	2014.7	1813.2	0.091	Cumple
17.700	189.5	2028.1	1825.3	0.104	Cumple
18.061	198.1	2028.3	1825.5	0.109	Cumple
18.700	213.3	2028.8	1825.9	0.117	Cumple
19.449	231.1	1971.8	1774.7	0.130	Cumple
19.451	5.9	1971.8	1774.7	0.003	Cumple
19.690	0.2	1971.8	1774.7	0.000	Cumple

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Viga 2. Tras el hormigonado de la losa

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
-0.001	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
0.001	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
0.750	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
1.389	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
1.750	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
2.779	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
3.750	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
4.168	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
4.662	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
5.557	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
6.946	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
8.336	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610

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9.725	0.0	350.5	0.0	-0.0	350.5	315.5	0.0	0.0	0.610
11.114	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610
12.504	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
13.893	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
14.788	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
15.282	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
15.700	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
16.671	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
17.700	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
18.061	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
18.700	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
19.449	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
19.451	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
19.690	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610

Viga 2. Tras el hormigonado de la losa							
Armadura de cortante							
Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.052	0.0	2.643	2	0.00023
-0.001	29.8	0.150	1.052	0.0	2.643	42	0.00023
0.001	50.0	0.150	1.052	500.0	0.873	1628	0.00600
0.750	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
1.389	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
1.750	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
2.779	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
3.750	28.4	0.150	1.063	0.0	3.538	990	-0.00017
4.168	28.4	0.150	1.060	0.0	3.556	923	-0.00018
4.662	28.2	0.150	1.058	0.0	3.690	842	-0.00022
5.557	28.3	0.150	1.058	0.0	3.644	693	-0.00020
6.946	28.3	0.150	1.058	0.0	3.604	462	-0.00019
8.336	28.3	0.150	1.058	0.0	3.633	231	-0.00020
9.725	28.2	0.150	1.058	0.0	3.763	0	-0.00024
11.114	28.3	0.150	1.058	0.0	3.633	231	-0.00020
12.504	28.3	0.150	1.058	0.0	3.604	462	-0.00019
13.893	28.3	0.150	1.058	0.0	3.644	693	-0.00020
14.788	28.2	0.150	1.058	0.0	3.690	842	-0.00022
15.282	28.4	0.150	1.060	0.0	3.556	923	-0.00018
15.700	28.4	0.150	1.063	0.0	3.538	990	-0.00017
16.671	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
17.700	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
18.061	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
18.700	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
19.449	50.0	0.150	1.052	500.0	0.873	1628	0.00600
19.451	29.8	0.150	1.052	0.0	2.643	42	0.00023
19.690	29.8	0.150	1.052	0.0	2.643	2	0.00023

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Viga 2. Tras la disposición de la superestructura								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	180.7	266.0	0.0	0.0	188.7	188.7	0.8	1.6
0.750	168.0	247.6	0.0	0.0	678.4	678.4	125.1	183.4
1.389	157.2	231.9	0.0	0.0	919.1	919.1	230.4	339.3
1.750	151.1	223.0	0.0	0.0	1001.0	1001.0	289.9	427.3
2.779	133.1	196.2	0.0	0.0	1312.4	1312.4	432.8	637.6
3.750	116.0	170.6	0.0	0.0	1616.3	1616.3	561.8	827.3
4.168	108.3	159.2	0.0	0.0	1758.4	1758.4	607.3	894.0

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4.662	98.9	145.4	0.0	0.0	1931.2	1931.2	655.0	964.0
5.557	82.0	120.4	0.0	0.0	1932.8	1932.8	741.4	1090.8
6.946	55.0	80.7	0.0	0.0	1934.5	1934.5	833.3	1225.5
8.336	27.2	40.9	0.0	0.0	1935.5	1935.5	909.9	1206.3
9.725	-1.3	1.3	0.0	0.0	1936.0	1936.0	979.4	979.4
11.114	-40.9	-27.2	0.0	0.0	1935.5	1935.5	909.9	1206.3
12.504	-80.7	-55.0	0.0	0.0	1934.5	1934.5	833.3	1225.5
13.893	-120.4	-82.0	0.0	0.0	1932.8	1932.8	741.4	1090.8
14.788	-145.4	-98.9	0.0	0.0	1931.2	1931.2	655.0	964.0
15.282	-159.2	-108.3	0.0	0.0	1758.4	1758.4	607.3	894.0
15.700	-170.6	-116.0	0.0	0.0	1616.3	1616.3	561.8	827.3
16.671	-196.2	-133.1	0.0	0.0	1312.4	1312.4	432.8	637.6
17.700	-223.0	-151.1	0.0	0.0	1001.0	1001.0	289.9	427.3
18.061	-231.9	-157.2	0.0	0.0	919.1	919.1	230.4	339.3
18.700	-247.6	-168.0	0.0	0.0	678.4	678.4	125.1	183.4
19.449	-266.0	-180.7	0.0	0.0	188.7	188.7	0.8	1.6
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la disposición de la superestructura

Verificación por agotamiento de las bielas de compresión

Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	266.0	2402.9	2162.6	0.123	Cumple
0.750	247.6	2400.0	2160.0	0.115	Cumple
1.389	231.9	2399.6	2159.6	0.107	Cumple
1.750	223.0	2399.4	2159.4	0.103	Cumple
2.779	196.2	2385.9	2147.3	0.091	Cumple
3.750	170.6	2363.5	2127.2	0.080	Cumple
4.168	159.2	2359.6	2123.7	0.075	Cumple
4.662	145.4	2355.7	2120.2	0.069	Cumple
5.557	120.4	2355.7	2120.2	0.057	Cumple
6.946	80.7	2355.7	2120.2	0.038	Cumple
8.336	40.9	2355.7	2120.2	0.019	Cumple
9.725	1.3	2355.7	2120.2	0.001	Cumple
11.114	40.9	2355.7	2120.2	0.019	Cumple
12.504	80.7	2355.7	2120.2	0.038	Cumple
13.893	120.4	2355.7	2120.2	0.057	Cumple
14.788	145.4	2355.7	2120.2	0.069	Cumple
15.282	159.2	2359.6	2123.7	0.075	Cumple
15.700	170.6	2363.5	2127.2	0.080	Cumple
16.671	196.2	2385.9	2147.3	0.091	Cumple
17.700	223.0	2399.4	2159.4	0.103	Cumple
18.061	231.9	2399.6	2159.6	0.107	Cumple
18.700	247.6	2400.0	2160.0	0.115	Cumple
19.449	266.0	2402.9	2162.6	0.123	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

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Viga 2. Tras la disposición de la superestructura

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
0.750	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
1.389	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
1.750	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
2.779	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
3.750	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610

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4.168	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
4.662	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
5.557	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
6.946	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
8.336	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
9.725	1.3	358.0	0.0	-0.0	358.0	322.2	0.0	0.0	0.610
11.114	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
12.504	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
13.893	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
14.788	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
15.282	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
15.700	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610
16.671	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
17.700	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
18.061	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
18.700	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
19.449	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. Tras la disposición de la superestructura							
Armadura de cortante							
Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	ν	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	32.4	0.150	1.282	500.0	2.782	1538	0.00097
0.750	28.9	0.150	1.280	500.0	4.887	1433	-0.00002
1.389	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
1.750	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
2.779	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
3.750	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
4.168	28.6	0.150	1.258	500.0	5.260	937	-0.00012
4.662	28.5	0.150	1.256	0.0	3.172	857	-0.00015
5.557	28.5	0.150	1.256	0.0	3.141	710	-0.00014
6.946	28.6	0.150	1.256	0.0	3.114	476	-0.00013
8.336	28.5	0.150	1.256	0.0	3.139	241	-0.00013
9.725	28.4	0.150	1.256	0.0	3.238	8	-0.00017
11.114	28.5	0.150	1.256	0.0	3.139	241	-0.00013
12.504	28.6	0.150	1.256	0.0	3.114	476	-0.00013
13.893	28.5	0.150	1.256	0.0	3.141	710	-0.00014
14.788	28.5	0.150	1.256	0.0	3.172	857	-0.00015
15.282	28.6	0.150	1.258	500.0	5.260	937	-0.00012
15.700	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
16.671	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
17.700	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
18.061	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
18.700	28.9	0.150	1.280	500.0	4.887	1433	-0.00002
19.449	32.4	0.150	1.282	500.0	2.782	1538	0.00097
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

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Viga 2. Tras la apertura al tráfico								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	177.0	610.5	0.0	0.0	188.7	188.7	-1.9	2.2
0.750	161.6	579.5	0.0	0.0	678.4	678.4	153.7	414.4

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Civil eStudio

1.389	148.5	553.0	0.0	0.0	919.1	919.1	282.9	769.8
1.750	141.1	538.1	0.0	0.0	1001.0	1001.0	355.8	970.3
2.779	111.0	482.7	0.0	0.0	1312.4	1312.4	602.6	1397.0
3.750	80.7	427.6	0.0	0.0	1616.3	1616.3	844.3	1768.0
4.168	66.6	405.5	0.0	0.0	1758.4	1758.4	938.2	1893.6
4.662	49.2	380.3	0.0	0.0	1931.2	1931.2	1043.1	2021.8
5.557	17.6	334.8	0.0	0.0	1932.8	1932.8	1233.2	2254.2
6.946	-28.0	269.2	0.0	0.0	1934.5	1934.5	1505.6	2466.4
8.336	-77.3	202.9	0.0	0.0	1935.5	1935.5	1787.6	2434.8
9.725	-133.5	133.5	0.0	0.0	1936.0	1936.0	2092.7	2092.8
11.114	-202.9	77.3	0.0	0.0	1935.5	1935.5	1787.6	2434.7
12.504	-269.2	28.0	0.0	0.0	1934.5	1934.5	1505.6	2466.4
13.893	-334.8	-17.6	0.0	0.0	1932.8	1932.8	1233.2	2254.2
14.788	-380.3	-49.2	0.0	0.0	1931.2	1931.2	1043.1	2021.8
15.282	-405.5	-66.6	0.0	0.0	1758.4	1758.4	938.2	1893.6
15.700	-427.6	-80.7	0.0	0.0	1616.3	1616.3	844.4	1768.0
16.671	-482.7	-111.0	0.0	0.0	1312.4	1312.4	602.6	1397.0
17.700	-538.1	-141.1	0.0	0.0	1001.0	1001.0	355.8	970.3
18.061	-553.0	-148.5	0.0	0.0	919.1	919.1	282.9	769.8
18.700	-579.5	-161.6	0.0	0.0	678.4	678.4	153.7	414.4
19.449	-610.5	-176.9	0.0	0.0	188.7	188.7	-1.9	2.2
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la apertura al tráfico

Verificación por agotamiento de las bielas de compresión

Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	610.5	1984.5	1786.1	0.342	Cumple
0.750	579.5	2400.0	2160.0	0.268	Cumple
1.389	553.0	2399.6	2159.6	0.256	Cumple
1.750	538.1	2399.4	2159.4	0.249	Cumple
2.779	482.7	2385.9	2147.3	0.225	Cumple
3.750	427.6	2363.5	2127.2	0.201	Cumple
4.168	405.5	2359.6	2123.7	0.191	Cumple
4.662	380.3	2355.7	2120.2	0.179	Cumple
5.557	334.8	2355.7	2120.2	0.158	Cumple
6.946	269.2	2355.7	2120.2	0.127	Cumple
8.336	202.9	2355.7	2120.2	0.096	Cumple
9.725	133.5	2355.7	2120.2	0.063	Cumple
11.114	202.9	2355.7	2120.2	0.096	Cumple
12.504	269.2	2355.7	2120.2	0.127	Cumple
13.893	334.8	2355.7	2120.2	0.158	Cumple
14.788	380.3	2355.7	2120.2	0.179	Cumple
15.282	405.5	2359.6	2123.7	0.191	Cumple
15.700	427.6	2363.5	2127.2	0.201	Cumple
16.671	482.7	2385.9	2147.3	0.225	Cumple
17.700	538.1	2399.4	2159.4	0.249	Cumple
18.061	553.0	2399.6	2159.6	0.256	Cumple
18.700	579.5	2400.0	2160.0	0.268	Cumple
19.449	610.5	1984.5	1786.1	0.342	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

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Viga 2. Tras la apertura al tráfico

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	610.5	81.3	597.0	-0.0	678.3	610.5	13.4	1.8	0.610

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0.750	579.5	330.9	313.0	-0.0	643.9	579.5	3.1	1.8	0.610
1.389	553.0	384.8	229.7	-0.0	614.4	553.0	2.1	1.8	0.610
1.750	538.1	387.8	210.0	-0.0	597.8	538.1	2.0	1.8	0.610
2.779	482.7	396.6	139.8	-0.0	536.3	482.7	1.3	1.8	0.610
3.750	427.6	336.3	138.8	-0.0	475.1	427.6	1.4	1.8	0.610
4.168	405.5	333.6	117.0	-0.0	450.5	405.5	1.2	1.8	0.610
4.662	380.3	407.5	15.1	-0.0	422.6	380.3	0.1	1.8	0.610
5.557	334.8	347.8	24.1	-0.0	372.0	334.8	0.2	1.8	0.610
6.946	269.2	314.1	0.0	-0.0	314.1	282.7	1.8	1.8	0.610
8.336	202.9	346.4	0.0	-0.0	346.4	311.7	1.8	1.8	0.610
9.725	133.5	312.9	0.0	-0.0	312.9	281.6	0.0	0.0	0.610
11.114	202.9	346.4	0.0	-0.0	346.4	311.7	1.8	1.8	0.610
12.504	269.2	314.2	0.0	-0.0	314.2	282.7	1.8	1.8	0.610
13.893	334.8	347.8	24.1	-0.0	372.0	334.8	0.2	1.8	0.610
14.788	380.3	407.5	15.1	-0.0	422.6	380.3	0.1	1.8	0.610
15.282	405.5	333.6	117.0	-0.0	450.5	405.5	1.2	1.8	0.610
15.700	427.6	336.3	138.8	-0.0	475.1	427.6	1.4	1.8	0.610
16.671	482.7	396.6	139.8	-0.0	536.3	482.7	1.3	1.8	0.610
17.700	538.1	387.8	210.0	-0.0	597.8	538.1	2.0	1.8	0.610
18.061	553.0	384.8	229.7	-0.0	614.4	553.0	2.1	1.8	0.610
18.700	579.5	330.9	313.0	-0.0	643.9	579.5	3.1	1.8	0.610
19.449	610.5	81.3	597.0	-0.0	678.3	610.5	13.4	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. Tras la apertura al tráfico							
Armadura de cortante							
Distancia al eje 1	θ	b_α	d_v	$f_{y\,\alpha d}$	β	ν	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	50.0	0.150	1.058	500.0	0.873	4273	0.00600
0.750	32.0	0.150	1.280	500.0	2.937	3353	0.00085
1.389	30.9	0.150	1.280	500.0	3.416	3201	0.00054
1.750	30.8	0.150	1.280	500.0	3.444	3115	0.00053
2.779	30.7	0.150	1.272	500.0	3.541	2810	0.00047
3.750	31.7	0.150	1.261	500.0	3.031	2513	0.00078
4.168	31.8	0.150	1.258	500.0	3.012	2387	0.00079
4.662	30.4	0.150	1.256	500.0	3.686	2242	0.00040
5.557	31.5	0.150	1.256	500.0	3.146	1974	0.00070
6.946	32.2	0.150	1.256	500.0	2.841	1587	0.00092
8.336	31.5	0.150	1.256	500.0	3.132	1196	0.00071
9.725	29.0	0.150	1.256	0.0	2.830	787	-0.00000
11.114	31.5	0.150	1.256	500.0	3.132	1196	0.00071
12.504	32.2	0.150	1.256	500.0	2.841	1587	0.00092
13.893	31.5	0.150	1.256	500.0	3.146	1974	0.00070
14.788	30.4	0.150	1.256	500.0	3.686	2242	0.00040
15.282	31.8	0.150	1.258	500.0	3.012	2387	0.00079
15.700	31.7	0.150	1.261	500.0	3.031	2513	0.00078
16.671	30.7	0.150	1.272	500.0	3.541	2810	0.00047
17.700	30.8	0.150	1.280	500.0	3.444	3115	0.00053
18.061	30.9	0.150	1.280	500.0	3.416	3201	0.00054
18.700	32.0	0.150	1.280	500.0	2.937	3353	0.00085
19.449	50.0	0.150	1.058	500.0	0.873	4273	0.00600
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

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Viga 2. A tiempo infinito								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}

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(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.3	7.3	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	180.8	180.8	-0.7	-0.5
0.001	177.0	610.5	0.0	0.0	182.1	182.1	-1.9	2.2
0.750	161.6	579.5	0.0	0.0	644.1	644.1	153.7	414.4
1.389	148.5	553.0	0.0	0.0	875.2	875.2	282.9	769.8
1.750	141.1	538.1	0.0	0.0	947.6	947.6	355.8	970.3
2.779	111.0	482.7	0.0	0.0	1238.9	1238.9	602.6	1397.0
3.750	80.7	427.6	0.0	0.0	1521.3	1521.3	844.3	1768.0
4.168	66.6	405.5	0.0	0.0	1649.1	1649.1	938.2	1893.6
4.662	49.2	380.3	0.0	0.0	1807.3	1807.3	1043.1	2021.8
5.557	17.6	334.8	0.0	0.0	1811.9	1811.9	1233.2	2254.2
6.946	-28.0	269.2	0.0	0.0	1816.8	1816.8	1505.6	2466.4
8.336	-77.3	202.9	0.0	0.0	1820.0	1820.0	1787.6	2434.8
9.725	-133.5	133.5	0.0	0.0	1821.4	1821.4	2092.7	2092.8
11.114	-202.9	77.3	0.0	0.0	1820.0	1820.0	1787.6	2434.7
12.504	-269.2	28.0	0.0	0.0	1816.8	1816.8	1505.6	2466.4
13.893	-334.8	-17.6	0.0	0.0	1811.9	1811.9	1233.2	2254.2
14.788	-380.3	-49.2	0.0	0.0	1807.3	1807.3	1043.1	2021.8
15.282	-405.5	-66.6	0.0	0.0	1649.1	1649.1	938.2	1893.6
15.700	-427.6	-80.7	0.0	0.0	1521.3	1521.3	844.4	1768.0
16.671	-482.7	-111.0	0.0	0.0	1238.9	1238.9	602.6	1397.0
17.700	-538.1	-141.1	0.0	0.0	947.6	947.6	355.8	970.3
18.061	-553.0	-148.5	0.0	0.0	875.2	875.2	282.9	769.8
18.700	-579.5	-161.6	0.0	0.0	644.1	644.1	153.7	414.4
19.449	-610.5	-176.9	0.0	0.0	182.1	182.1	-1.9	2.2
19.451	4.3	5.9	0.0	0.0	180.8	180.8	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.3	7.3	-0.0	-0.0

Viga 2. A tiempo infinito					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	610.5	1984.5	1786.1	0.342	Cumple
0.750	579.5	2400.0	2160.0	0.268	Cumple
1.389	553.0	2399.6	2159.6	0.256	Cumple
1.750	538.1	2399.4	2159.4	0.249	Cumple
2.779	482.7	2385.9	2147.3	0.225	Cumple
3.750	427.6	2363.5	2127.2	0.201	Cumple
4.168	405.5	2359.6	2123.7	0.191	Cumple
4.662	380.3	2355.7	2120.2	0.179	Cumple
5.557	334.8	2355.7	2120.2	0.158	Cumple
6.946	269.2	2355.7	2120.2	0.127	Cumple
8.336	202.9	2355.7	2120.2	0.096	Cumple
9.725	133.5	2355.7	2120.2	0.063	Cumple
11.114	202.9	2355.7	2120.2	0.096	Cumple
12.504	269.2	2355.7	2120.2	0.127	Cumple
13.893	334.8	2355.7	2120.2	0.158	Cumple
14.788	380.3	2355.7	2120.2	0.179	Cumple
15.282	405.5	2359.6	2123.7	0.191	Cumple
15.700	427.6	2363.5	2127.2	0.201	Cumple
16.671	482.7	2385.9	2147.3	0.225	Cumple
17.700	538.1	2399.4	2159.4	0.249	Cumple
18.061	553.0	2399.6	2159.6	0.256	Cumple
18.700	579.5	2400.0	2160.0	0.268	Cumple
19.449	610.5	1984.5	1786.1	0.342	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

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Viga 2. A tiempo infinito									
Armadura de cortante									
Distancia al	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$

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eje 1									
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm2/m)	(cm2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	610.5	81.3	597.0	-0.0	678.3	610.5	13.4	1.8	0.610
0.750	579.5	330.9	313.0	-0.0	643.9	579.5	3.1	1.8	0.610
1.389	553.0	384.8	229.7	-0.0	614.4	553.0	2.1	1.8	0.610
1.750	538.1	387.8	210.0	-0.0	597.8	538.1	2.0	1.8	0.610
2.779	482.7	396.6	139.8	-0.0	536.3	482.7	1.3	1.8	0.610
3.750	427.6	336.3	138.8	-0.0	475.1	427.6	1.4	1.8	0.610
4.168	405.5	333.6	117.0	-0.0	450.5	405.5	1.2	1.8	0.610
4.662	380.3	407.5	15.1	-0.0	422.6	380.3	0.1	1.8	0.610
5.557	334.8	347.8	24.1	-0.0	372.0	334.8	0.2	1.8	0.610
6.946	269.2	314.1	0.0	-0.0	314.1	282.7	1.8	1.8	0.610
8.336	202.9	346.4	0.0	-0.0	346.4	311.7	1.8	1.8	0.610
9.725	133.5	312.9	0.0	-0.0	312.9	281.6	0.0	0.0	0.610
11.114	202.9	346.4	0.0	-0.0	346.4	311.7	1.8	1.8	0.610
12.504	269.2	314.2	0.0	-0.0	314.2	282.7	1.8	1.8	0.610
13.893	334.8	347.8	24.1	-0.0	372.0	334.8	0.2	1.8	0.610
14.788	380.3	407.5	15.1	-0.0	422.6	380.3	0.1	1.8	0.610
15.282	405.5	333.6	117.0	-0.0	450.5	405.5	1.2	1.8	0.610
15.700	427.6	336.3	138.8	-0.0	475.1	427.6	1.4	1.8	0.610
16.671	482.7	396.6	139.8	-0.0	536.3	482.7	1.3	1.8	0.610
17.700	538.1	387.8	210.0	-0.0	597.8	538.1	2.0	1.8	0.610
18.061	553.0	384.8	229.7	-0.0	614.4	553.0	2.1	1.8	0.610
18.700	579.5	330.9	313.0	-0.0	643.9	579.5	3.1	1.8	0.610
19.449	610.5	81.3	597.0	-0.0	678.3	610.5	13.4	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. A tiempo infinito							
Armadura de cortante							
Distancia al eje 1	θ	b_0	d_v	$f_{y\,\alpha d}$	β	v	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	50.0	0.150	1.058	500.0	0.873	4273	0.00600
0.750	32.0	0.150	1.280	500.0	2.937	3353	0.00085
1.389	30.9	0.150	1.280	500.0	3.416	3201	0.00054
1.750	30.8	0.150	1.280	500.0	3.444	3115	0.00053
2.779	30.7	0.150	1.272	500.0	3.541	2810	0.00047
3.750	31.7	0.150	1.261	500.0	3.031	2513	0.00078
4.168	31.8	0.150	1.258	500.0	3.012	2387	0.00079
4.662	30.4	0.150	1.256	500.0	3.686	2242	0.00040
5.557	31.5	0.150	1.256	500.0	3.146	1974	0.00070
6.946	32.2	0.150	1.256	500.0	2.841	1587	0.00092
8.336	31.5	0.150	1.256	500.0	3.132	1196	0.00071
9.725	29.0	0.150	1.256	0.0	2.830	787	-0.00000
11.114	31.5	0.150	1.256	500.0	3.132	1196	0.00071
12.504	32.2	0.150	1.256	500.0	2.841	1587	0.00092
13.893	31.5	0.150	1.256	500.0	3.146	1974	0.00070
14.788	30.4	0.150	1.256	500.0	3.686	2242	0.00040
15.282	31.8	0.150	1.258	500.0	3.012	2387	0.00079
15.700	31.7	0.150	1.261	500.0	3.031	2513	0.00078
16.671	30.7	0.150	1.272	500.0	3.541	2810	0.00047
17.700	30.8	0.150	1.280	500.0	3.444	3115	0.00053
18.061	30.9	0.150	1.280	500.0	3.416	3201	0.00054
18.700	32.0	0.150	1.280	500.0	2.937	3353	0.00085
19.449	50.0	0.150	1.058	500.0	0.873	4273	0.00600
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

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6.3 Estado límite de Resistencia. Combinación de Resistencia III

Viga 2:

Viga 2. Tras la transferencia del pretesado								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.1	-0.1	0.0	0.0	8.0	8.0	-0.0	-0.0
-0.001	-2.0	-1.5	0.0	0.0	199.3	199.3	-0.3	-0.2
0.001	57.5	79.9	0.0	0.0	200.7	200.7	-0.2	-0.1
0.750	53.1	73.7	0.0	0.0	718.1	718.1	38.6	53.7
1.389	49.3	68.5	0.0	0.0	971.2	971.2	71.7	99.6
1.750	47.2	65.5	0.0	0.0	1062.6	1062.6	90.4	125.6
2.779	41.1	57.1	0.0	0.0	1407.8	1407.8	134.1	186.2
3.750	35.3	49.1	0.0	0.0	1724.4	1724.4	173.2	240.5
4.168	32.9	45.6	0.0	0.0	1882.9	1882.9	186.8	259.5
4.662	29.9	41.6	0.0	0.0	2070.3	2070.3	201.0	279.2
5.557	24.7	34.2	0.0	0.0	2070.3	2070.3	226.8	314.9
6.946	16.4	22.8	0.0	0.0	2070.3	2070.3	253.9	352.7
8.336	8.2	11.4	0.0	0.0	2070.3	2070.3	271.5	346.0
9.725	0.0	0.0	0.0	0.0	2070.3	2070.3	279.5	279.5
11.114	-11.4	-8.2	0.0	0.0	2070.3	2070.3	271.5	346.0
12.504	-22.8	-16.4	0.0	0.0	2070.3	2070.3	253.9	352.7
13.893	-34.2	-24.7	0.0	0.0	2070.3	2070.3	226.8	314.9
14.788	-41.6	-29.9	0.0	0.0	2070.3	2070.3	201.0	279.2
15.282	-45.6	-32.9	0.0	0.0	1882.9	1882.9	186.8	259.5
15.700	-49.1	-35.3	0.0	0.0	1724.4	1724.4	173.2	240.5
16.671	-57.1	-41.1	0.0	0.0	1407.8	1407.8	134.1	186.2
17.700	-65.5	-47.2	0.0	0.0	1062.6	1062.6	90.4	125.6
18.061	-68.5	-49.3	0.0	0.0	971.2	971.2	71.7	99.6
18.700	-73.7	-53.1	0.0	0.0	718.1	718.1	38.6	53.7
19.449	-79.9	-57.5	0.0	0.0	200.7	200.7	-0.2	-0.1
19.451	1.5	2.0	0.0	0.0	199.3	199.3	-0.3	-0.2
19.690	0.1	0.1	0.0	0.0	8.0	8.0	-0.0	-0.0

Viga 2. Tras la transferencia del pretesado					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.1	1574.2	1416.8	0.000	Cumple
-0.001	2.0	1574.2	1416.8	0.001	Cumple
0.001	79.9	1574.2	1416.8	0.056	Cumple
0.750	73.7	1619.7	1457.7	0.051	Cumple
1.389	68.5	1619.3	1457.4	0.047	Cumple
1.750	65.5	1619.2	1457.2	0.045	Cumple
2.779	57.1	1608.4	1447.6	0.039	Cumple
3.750	49.1	1590.5	1431.5	0.034	Cumple
4.168	45.6	1587.4	1428.7	0.032	Cumple
4.662	41.6	1584.3	1425.9	0.029	Cumple
5.557	34.2	1584.3	1425.9	0.024	Cumple
6.946	22.8	1584.3	1425.9	0.016	Cumple
8.336	11.4	1584.3	1425.9	0.008	Cumple
9.725	0.0	1584.3	1425.9	0.000	Cumple
11.114	11.4	1584.3	1425.9	0.008	Cumple
12.504	22.8	1584.3	1425.9	0.016	Cumple
13.893	34.2	1584.3	1425.9	0.024	Cumple
14.788	41.6	1584.3	1425.9	0.029	Cumple
15.282	45.6	1587.4	1428.7	0.032	Cumple
15.700	49.1	1590.5	1431.5	0.034	Cumple
16.671	57.1	1608.4	1447.6	0.039	Cumple

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17.700	65.5	1619.2	1457.2	0.045	Cumple
18.061	68.5	1619.3	1457.4	0.047	Cumple
18.700	73.7	1619.7	1457.7	0.051	Cumple
19.449	79.9	1574.2	1416.8	0.056	Cumple
19.451	2.0	1574.2	1416.8	0.001	Cumple
19.690	0.1	1574.2	1416.8	0.000	Cumple

Viga 2. Tras la transferencia del pretesado									
Armadura de cortante									
Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
-0.001	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
0.001	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
0.750	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
1.389	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
1.750	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
2.779	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
3.750	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
4.168	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
4.662	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610
5.557	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
6.946	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
8.336	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
9.725	0.0	341.7	0.0	-0.0	341.7	307.5	0.0	0.0	0.610
11.114	11.4	337.1	0.0	-0.0	337.1	303.4	0.0	0.0	0.610
12.504	22.8	336.1	0.0	-0.0	336.1	302.5	0.0	0.0	0.610
13.893	34.2	337.5	0.0	-0.0	337.5	303.8	0.0	0.0	0.610
14.788	41.6	339.1	0.0	-0.0	339.1	305.2	0.0	0.0	0.610
15.282	45.6	324.8	0.0	-0.0	324.8	292.3	0.0	0.0	0.610
15.700	49.1	322.3	0.0	-0.0	322.3	290.0	0.0	0.0	0.610
16.671	57.1	305.7	0.0	-0.0	305.7	275.1	0.0	0.0	0.610
17.700	65.5	294.1	0.0	-0.0	294.1	264.7	0.0	0.0	0.610
18.061	68.5	288.0	0.0	-0.0	288.0	259.2	0.0	0.0	0.610
18.700	73.7	281.4	0.0	-0.0	281.4	253.2	0.0	0.0	0.610
19.449	79.9	119.7	0.0	-0.0	119.7	107.7	1.6	1.6	0.610
19.451	2.0	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610
19.690	0.1	241.9	0.0	-0.0	241.9	217.7	0.0	0.0	0.610

Viga 2. Tras la transferencia del pretesado							
Armadura de cortante							
Distancia al eje 1	θ	b_v	d_v	$f_{y\alpha d}$	β	ν	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.3	0.150	1.052	0.0	2.926	1	0.00008
-0.001	29.3	0.150	1.052	0.0	2.926	14	0.00008
0.001	39.8	0.150	1.052	500.0	1.448	563	0.00309
0.750	28.6	0.150	1.082	0.0	3.307	505	-0.00010
1.389	28.5	0.150	1.082	0.0	3.385	469	-0.00013
1.750	28.5	0.150	1.082	0.0	3.458	449	-0.00015
2.779	28.3	0.150	1.074	0.0	3.618	393	-0.00020
3.750	28.1	0.150	1.063	0.0	3.857	342	-0.00027
4.168	28.0	0.150	1.060	0.0	3.895	319	-0.00028
4.662	27.9	0.150	1.058	0.0	4.075	291	-0.00032
5.557	27.9	0.150	1.058	0.0	4.056	240	-0.00032
6.946	27.9	0.150	1.058	0.0	4.038	160	-0.00031
8.336	27.9	0.150	1.058	0.0	4.051	80	-0.00032
9.725	27.8	0.150	1.058	0.0	4.105	0	-0.00033
11.114	27.9	0.150	1.058	0.0	4.051	80	-0.00032
12.504	27.9	0.150	1.058	0.0	4.038	160	-0.00031
13.893	27.9	0.150	1.058	0.0	4.056	240	-0.00032
14.788	27.9	0.150	1.058	0.0	4.075	291	-0.00032
15.282	28.0	0.150	1.060	0.0	3.895	319	-0.00028

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15.700	28.1	0.150	1.063	0.0	3.857	342	-0.00027
16.671	28.3	0.150	1.074	0.0	3.618	393	-0.00020
17.700	28.5	0.150	1.082	0.0	3.458	449	-0.00015
18.061	28.5	0.150	1.082	0.0	3.385	469	-0.00013
18.700	28.6	0.150	1.082	0.0	3.307	505	-0.00010
19.449	39.8	0.150	1.052	500.0	1.448	563	0.00309
19.451	29.3	0.150	1.052	0.0	2.926	14	0.00008
19.690	29.3	0.150	1.052	0.0	2.926	1	0.00008

Viga 2. Tras el hormigonado de la losa								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	166.4	231.1	0.0	0.0	188.7	188.7	-0.5	-0.4
0.750	153.6	213.3	0.0	0.0	678.4	678.4	111.8	155.3
1.389	142.6	198.1	0.0	0.0	919.1	919.1	207.5	288.2
1.750	136.5	189.5	0.0	0.0	1001.0	1001.0	261.6	363.3
2.779	118.9	165.1	0.0	0.0	1312.4	1312.4	387.9	538.7
3.750	102.2	142.0	0.0	0.0	1616.3	1616.3	501.0	695.9
4.168	95.1	132.1	0.0	0.0	1758.4	1758.4	540.5	750.6
4.662	86.6	120.3	0.0	0.0	1931.2	1931.2	581.6	807.7
5.557	71.3	99.1	0.0	0.0	1932.8	1932.8	656.1	911.2
6.946	47.5	66.0	0.0	0.0	1934.5	1934.5	734.7	1020.4
8.336	23.8	33.0	0.0	0.0	1935.5	1935.5	785.5	1001.2
9.725	-0.0	-0.0	0.0	0.0	1936.0	1936.0	808.6	808.6
11.114	-33.0	-23.8	0.0	0.0	1935.5	1935.5	785.5	1001.2
12.504	-66.0	-47.5	0.0	0.0	1934.5	1934.5	734.7	1020.4
13.893	-99.1	-71.3	0.0	0.0	1932.8	1932.8	656.1	911.2
14.788	-120.3	-86.6	0.0	0.0	1931.2	1931.2	581.6	807.7
15.282	-132.1	-95.1	0.0	0.0	1758.4	1758.4	540.5	750.6
15.700	-142.0	-102.2	0.0	0.0	1616.3	1616.3	501.0	695.9
16.671	-165.1	-118.9	0.0	0.0	1312.4	1312.4	387.9	538.7
17.700	-189.5	-136.5	0.0	0.0	1001.0	1001.0	261.6	363.3
18.061	-198.1	-142.6	0.0	0.0	919.1	919.1	207.5	288.2
18.700	-213.3	-153.6	0.0	0.0	678.4	678.4	111.8	155.3
19.449	-231.1	-166.4	0.0	0.0	188.7	188.7	-0.5	-0.4
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras el hormigonado de la losa					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1971.8	1774.7	0.000	Cumple
-0.001	5.9	1971.8	1774.7	0.003	Cumple
0.001	231.1	1971.8	1774.7	0.130	Cumple
0.750	213.3	2028.8	1825.9	0.117	Cumple
1.389	198.1	2028.3	1825.5	0.109	Cumple
1.750	189.5	2028.1	1825.3	0.104	Cumple
2.779	165.1	2014.7	1813.2	0.091	Cumple
3.750	142.0	1992.3	1793.0	0.079	Cumple
4.168	132.1	1988.4	1789.5	0.074	Cumple
4.662	120.3	1984.5	1786.0	0.067	Cumple
5.557	99.1	1984.5	1786.0	0.055	Cumple
6.946	66.0	1984.5	1786.0	0.037	Cumple
8.336	33.0	1984.5	1786.0	0.018	Cumple
9.725	0.0	1984.5	1786.0	0.000	Cumple
11.114	33.0	1984.5	1786.0	0.018	Cumple
12.504	66.0	1984.5	1786.0	0.037	Cumple

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13.893	99.1	1984.5	1786.0	0.055	Cumple
14.788	120.3	1984.5	1786.0	0.067	Cumple
15.282	132.1	1988.4	1789.5	0.074	Cumple
15.700	142.0	1992.3	1793.0	0.079	Cumple
16.671	165.1	2014.7	1813.2	0.091	Cumple
17.700	189.5	2028.1	1825.3	0.104	Cumple
18.061	198.1	2028.3	1825.5	0.109	Cumple
18.700	213.3	2028.8	1825.9	0.117	Cumple
19.449	231.1	1971.8	1774.7	0.130	Cumple
19.451	5.9	1971.8	1774.7	0.003	Cumple
19.690	0.2	1971.8	1774.7	0.000	Cumple

Viga 2. Tras el hormigonado de la losa									
Armadura de cortante									
Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
-0.001	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
0.001	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
0.750	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
1.389	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
1.750	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
2.779	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
3.750	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
4.168	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
4.662	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
5.557	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
6.946	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
8.336	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610
9.725	0.0	350.5	0.0	-0.0	350.5	315.5	0.0	0.0	0.610
11.114	33.0	338.4	0.0	-0.0	338.4	304.6	0.0	0.0	0.610
12.504	66.0	335.7	0.0	-0.0	335.7	302.1	0.0	0.0	0.610
13.893	99.1	339.5	0.0	-0.0	339.5	305.5	0.0	0.0	0.610
14.788	120.3	343.7	0.0	-0.0	343.7	309.3	0.0	0.0	0.610
15.282	132.1	331.9	0.0	-0.0	331.9	298.7	0.0	0.0	0.610
15.700	142.0	330.8	0.0	-0.0	330.8	297.8	0.0	0.0	0.610
16.671	165.1	501.7	0.0	-0.0	501.7	451.6	1.8	1.8	0.610
17.700	189.5	491.7	0.0	-0.0	491.7	442.6	1.8	1.8	0.610
18.061	198.1	484.6	0.0	-0.0	484.6	436.1	1.8	1.8	0.610
18.700	213.3	475.5	0.0	-0.0	475.5	428.0	1.8	1.8	0.610
19.449	231.1	80.8	176.0	-0.0	256.8	231.1	4.0	1.8	0.610
19.451	5.9	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610
19.690	0.2	244.6	0.0	-0.0	244.6	220.2	0.0	0.0	0.610

Viga 2. Tras el hormigonado de la losa							
Armadura de cortante							
Distancia al eje 1	θ	b_c	d_v	$f_{y\alpha d}$	β	ν	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.052	0.0	2.643	2	0.00023
-0.001	29.8	0.150	1.052	0.0	2.643	42	0.00023
0.001	50.0	0.150	1.052	500.0	0.873	1628	0.00600
0.750	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
1.389	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
1.750	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
2.779	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
3.750	28.4	0.150	1.063	0.0	3.538	990	-0.00017
4.168	28.4	0.150	1.060	0.0	3.556	923	-0.00018
4.662	28.2	0.150	1.058	0.0	3.690	842	-0.00022
5.557	28.3	0.150	1.058	0.0	3.644	693	-0.00020
6.946	28.3	0.150	1.058	0.0	3.604	462	-0.00019
8.336	28.3	0.150	1.058	0.0	3.633	231	-0.00020
9.725	28.2	0.150	1.058	0.0	3.763	0	-0.00024

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11.114	28.3	0.150	1.058	0.0	3.633	231	-0.00020
12.504	28.3	0.150	1.058	0.0	3.604	462	-0.00019
13.893	28.3	0.150	1.058	0.0	3.644	693	-0.00020
14.788	28.2	0.150	1.058	0.0	3.690	842	-0.00022
15.282	28.4	0.150	1.060	0.0	3.556	923	-0.00018
15.700	28.4	0.150	1.063	0.0	3.538	990	-0.00017
16.671	28.6	0.150	1.074	500.0	5.306	1138	-0.00013
17.700	28.7	0.150	1.082	500.0	5.166	1298	-0.00009
18.061	28.7	0.150	1.082	500.0	5.090	1357	-0.00008
18.700	28.8	0.150	1.082	500.0	4.994	1460	-0.00005
19.449	50.0	0.150	1.052	500.0	0.873	1628	0.00600
19.451	29.8	0.150	1.052	0.0	2.643	42	0.00023
19.690	29.8	0.150	1.052	0.0	2.643	2	0.00023

Viga 2. Tras la disposición de la superestructura								
Envolvente de esfuerzos.								
	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u-}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	180.7	266.0	0.0	0.0	188.7	188.7	0.8	1.6
0.750	168.0	247.6	0.0	0.0	678.4	678.4	125.1	183.4
1.389	157.2	231.9	0.0	0.0	919.1	919.1	230.4	339.3
1.750	151.1	223.0	0.0	0.0	1001.0	1001.0	289.9	427.3
2.779	133.1	196.2	0.0	0.0	1312.4	1312.4	432.8	637.6
3.750	116.0	170.6	0.0	0.0	1616.3	1616.3	561.8	827.3
4.168	108.3	159.2	0.0	0.0	1758.4	1758.4	607.3	894.0
4.662	98.9	145.4	0.0	0.0	1931.2	1931.2	655.0	964.0
5.557	82.0	120.4	0.0	0.0	1932.8	1932.8	741.4	1090.8
6.946	55.0	80.7	0.0	0.0	1934.5	1934.5	833.3	1225.5
8.336	27.2	40.9	0.0	0.0	1935.5	1935.5	909.9	1206.3
9.725	-1.3	1.3	0.0	0.0	1936.0	1936.0	979.4	979.4
11.114	-40.9	-27.2	0.0	0.0	1935.5	1935.5	909.9	1206.3
12.504	-80.7	-55.0	0.0	0.0	1934.5	1934.5	833.3	1225.5
13.893	-120.4	-82.0	0.0	0.0	1932.8	1932.8	741.4	1090.8
14.788	-145.4	-98.9	0.0	0.0	1931.2	1931.2	655.0	964.0
15.282	-159.2	-108.3	0.0	0.0	1758.4	1758.4	607.3	894.0
15.700	-170.6	-116.0	0.0	0.0	1616.3	1616.3	561.8	827.3
16.671	-196.2	-133.1	0.0	0.0	1312.4	1312.4	432.8	637.6
17.700	-223.0	-151.1	0.0	0.0	1001.0	1001.0	289.9	427.3
18.061	-231.9	-157.2	0.0	0.0	919.1	919.1	230.4	339.3
18.700	-247.6	-168.0	0.0	0.0	678.4	678.4	125.1	183.4
19.449	-266.0	-180.7	0.0	0.0	188.7	188.7	0.8	1.6
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la disposición de la superestructura					
Verificación por agotamiento de las bielas de compresión					
Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	266.0	2402.9	2162.6	0.123	Cumple
0.750	247.6	2400.0	2160.0	0.115	Cumple
1.389	231.9	2399.6	2159.6	0.107	Cumple
1.750	223.0	2399.4	2159.4	0.103	Cumple
2.779	196.2	2385.9	2147.3	0.091	Cumple
3.750	170.6	2363.5	2127.2	0.080	Cumple
4.168	159.2	2359.6	2123.7	0.075	Cumple
4.662	145.4	2355.7	2120.2	0.069	Cumple
5.557	120.4	2355.7	2120.2	0.057	Cumple

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6.946	80.7	2355.7	2120.2	0.038	Cumple
8.336	40.9	2355.7	2120.2	0.019	Cumple
9.725	1.3	2355.7	2120.2	0.001	Cumple
11.114	40.9	2355.7	2120.2	0.019	Cumple
12.504	80.7	2355.7	2120.2	0.038	Cumple
13.893	120.4	2355.7	2120.2	0.057	Cumple
14.788	145.4	2355.7	2120.2	0.069	Cumple
15.282	159.2	2359.6	2123.7	0.075	Cumple
15.700	170.6	2363.5	2127.2	0.080	Cumple
16.671	196.2	2385.9	2147.3	0.091	Cumple
17.700	223.0	2399.4	2159.4	0.103	Cumple
18.061	231.9	2399.6	2159.6	0.107	Cumple
18.700	247.6	2400.0	2160.0	0.115	Cumple
19.449	266.0	2402.9	2162.6	0.123	Cumple
19.451	5.9	1984.5	1786.1	0.003	Cumple
19.690	0.2	1984.5	1786.1	0.000	Cumple

Viga 2. Tras la disposición de la superestructura

Armadura de cortante

Distancia al eje 1	V_u	V_c	V_s	V_p	V_n	V_r	A_{st}	$A_{st\ min}$	$S_{max\ long}$
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(cm^2/m)	(cm^2/m)	(m)
-0.240	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
-0.001	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
0.001	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
0.750	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
1.389	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
1.750	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
2.779	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
3.750	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610
4.168	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
4.662	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
5.557	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
6.946	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
8.336	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
9.725	1.3	358.0	0.0	-0.0	358.0	322.2	0.0	0.0	0.610
11.114	40.9	347.1	0.0	-0.0	347.1	312.4	0.0	0.0	0.610
12.504	80.7	344.4	0.0	-0.0	344.4	309.9	0.0	0.0	0.610
13.893	120.4	347.3	0.0	-0.0	347.3	312.6	0.0	0.0	0.610
14.788	145.4	350.8	0.0	-0.0	350.8	315.7	0.0	0.0	0.610
15.282	159.2	582.6	0.0	-0.0	582.6	524.4	1.8	1.8	0.610
15.700	170.6	582.9	0.0	-0.0	582.9	524.6	1.8	1.8	0.610
16.671	196.2	574.3	0.0	-0.0	574.3	516.8	1.8	1.8	0.610
17.700	223.0	567.0	0.0	-0.0	567.0	510.3	1.8	1.8	0.610
18.061	231.9	561.3	0.0	-0.0	561.3	505.1	1.8	1.8	0.610
18.700	247.6	550.6	0.0	-0.0	550.6	495.5	1.8	1.8	0.610
19.449	266.0	313.8	0.0	-0.0	313.8	282.4	1.8	1.8	0.610
19.451	5.9	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610
19.690	0.2	245.4	0.0	-0.0	245.4	220.9	0.0	0.0	0.610

Viga 2. Tras la disposición de la superestructura

Armadura de cortante

Distancia al eje 1	θ	b_0	d_v	$f_{y\alpha d}$	β	ν	ε
(m)	(º)	(m)	(m)	(MPa)		(kN/m^2)	
-0.240	29.8	0.150	1.058	0.0	2.635	2	0.00023
-0.001	29.8	0.150	1.058	0.0	2.635	41	0.00023
0.001	32.4	0.150	1.282	500.0	2.782	1538	0.00097
0.750	28.9	0.150	1.280	500.0	4.887	1433	-0.00002
1.389	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
1.750	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
2.779	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
3.750	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
4.168	28.6	0.150	1.258	500.0	5.260	937	-0.00012

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4.662	28.5	0.150	1.256	0.0	3.172	857	-0.00015
5.557	28.5	0.150	1.256	0.0	3.141	710	-0.00014
6.946	28.6	0.150	1.256	0.0	3.114	476	-0.00013
8.336	28.5	0.150	1.256	0.0	3.139	241	-0.00013
9.725	28.4	0.150	1.256	0.0	3.238	8	-0.00017
11.114	28.5	0.150	1.256	0.0	3.139	241	-0.00013
12.504	28.6	0.150	1.256	0.0	3.114	476	-0.00013
13.893	28.5	0.150	1.256	0.0	3.141	710	-0.00014
14.788	28.5	0.150	1.256	0.0	3.172	857	-0.00015
15.282	28.6	0.150	1.258	500.0	5.260	937	-0.00012
15.700	28.6	0.150	1.261	500.0	5.254	1003	-0.00012
16.671	28.7	0.150	1.272	500.0	5.128	1142	-0.00009
17.700	28.8	0.150	1.280	500.0	5.034	1291	-0.00006
18.061	28.8	0.150	1.280	500.0	4.983	1342	-0.00005
18.700	28.9	0.150	1.280	500.0	4.887	1433	-0.00002
19.449	32.4	0.150	1.282	500.0	2.782	1538	0.00097
19.451	29.8	0.150	1.058	0.0	2.635	41	0.00023
19.690	29.8	0.150	1.058	0.0	2.635	2	0.00023

Viga 2. Tras la apertura al tráfico
Envolvente de esfuerzos.

	Cortantes		Cortantes de pretensado		Axiles y flectores			
Distancia al eje 1	V_{u-}	V_{u+}	V_{p-}	V_{p+}	N_{p-}	N_{p+}	M_{u-}	M_{u+}
(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kNm)	(kNm)
-0.240	-0.2	-0.2	0.0	0.0	7.5	7.5	-0.0	-0.0
-0.001	-5.9	-4.3	0.0	0.0	187.3	187.3	-0.7	-0.5
0.001	144.4	302.4	0.0	0.0	188.7	188.7	1.0	1.4
0.750	133.0	282.6	0.0	0.0	678.4	678.4	97.5	211.0
1.389	123.4	265.7	0.0	0.0	919.1	919.1	179.6	390.2
1.750	117.9	256.2	0.0	0.0	1001.0	1001.0	225.9	491.3
2.779	103.5	225.9	0.0	0.0	1312.4	1312.4	337.0	733.4
3.750	90.1	196.5	0.0	0.0	1616.3	1616.3	437.4	951.8
4.168	84.1	183.4	0.0	0.0	1758.4	1758.4	472.7	1028.6
4.662	76.8	167.5	0.0	0.0	1931.2	1931.2	509.7	1109.2
5.557	63.6	138.7	0.0	0.0	1932.8	1932.8	576.9	1255.3
6.946	42.7	93.0	0.0	0.0	1934.5	1934.5	648.3	1410.5
8.336	19.8	48.3	0.0	0.0	1935.5	1935.5	770.0	1346.2
9.725	-5.6	5.6	0.0	0.0	1936.0	1936.0	979.4	979.4
11.114	-48.3	-19.8	0.0	0.0	1935.5	1935.5	770.0	1346.2
12.504	-93.0	-42.7	0.0	0.0	1934.5	1934.5	648.3	1410.5
13.893	-138.7	-63.6	0.0	0.0	1932.8	1932.8	576.9	1255.3
14.788	-167.5	-76.8	0.0	0.0	1931.2	1931.2	509.7	1109.2
15.282	-183.4	-84.1	0.0	0.0	1758.4	1758.4	472.7	1028.6
15.700	-196.5	-90.1	0.0	0.0	1616.3	1616.3	437.4	951.7
16.671	-225.9	-103.5	0.0	0.0	1312.4	1312.4	337.0	733.4
17.700	-256.2	-117.9	0.0	0.0	1001.0	1001.0	225.9	491.3
18.061	-265.7	-123.4	0.0	0.0	919.1	919.1	179.6	390.2
18.700	-282.6	-133.0	0.0	0.0	678.4	678.4	97.5	211.0
19.449	-302.4	-144.4	0.0	0.0	188.7	188.7	1.0	1.4
19.451	4.3	5.9	0.0	0.0	187.3	187.3	-0.7	-0.5
19.690	0.2	0.2	0.0	0.0	7.5	7.5	-0.0	-0.0

Viga 2. Tras la apertura al tráfico
Verificación por agotamiento de las bielas de compresión

Distancia al eje 1	V_u	V_{nmax}	V_r	V_u/V_r	Observaciones
(m)	(kN)	(kN)	(kN)		
-0.240	0.2	1984.5	1786.1	0.000	Cumple
-0.001	5.9	1984.5	1786.1	0.003	Cumple
0.001	302.4	2402.9	2162.6	0.140	Cumple
0.750	282.6	2400.0	2160.0	0.131	Cumple
1.389	265.7	2399.6	2159.6	0.123	Cumple
1.750	256.2	2399.4	2159.4	0.119	Cumple

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