

DESCRIPCIÓN DE LA SITUACIÓN ACTUAL

ANEJO 2 **ANÁLISIS NORMATIVO**

ANEJO DEL ANÁLISIS NORMATIVO

Datos geométricos del trazado en planta obtenidos con el programa “Clip”

Alineación	P.K. final (m)	Longitud (m)	X inicial	Y inicial	Acimut (gonios)	X final	Y final	Radio (m)
1 RE	0.000	0.000	697089.838	4362625.990	13.3466	697089.838	4362625.990	0.000
2 RE	87.098	87.098	697107.965	4362711.181	13.3466	697107.965	4362711.181	0.000
3 CL	88.099	1.000	697108.151	4362712.164	9.1013	697107.965	4362711.181	2.739
4 CI	101.374	13.276	697100.305	4362720.720	296.4124	697100.727	4362713.232	-7.500
5 CL	102.375	1.000	697099.310	4362720.620	292.1671	697099.310	4362720.620	2.739
6 RE	153.312	50.937	697048.758	4362714.368	292.1671	697048.758	4362714.368	0.000
7 CL	154.312	1.000	697047.762	4362714.279	298.5329	697048.758	4362714.368	2.236
8 CI	162.186	7.874	697042.648	4362719.182	398.7877	697047.647	4362719.277	5.000
9 CL	163.186	1.000	697042.696	4362720.181	5.1535	697042.696	4362720.181	2.236
10 RE	179.554	16.368	697044.019	4362736.495	5.1535	697044.019	4362736.495	0.000
11 CL	182.054	2.500	697044.117	4362738.992	397.1958	697044.019	4362736.495	5.000
12 CI	188.114	6.060	697042.088	4362744.603	358.6186	697034.127	4362738.551	-10.000
13 CL	190.614	2.500	697040.416	4362746.459	350.6609	697040.416	4362746.459	5.000
14 RE	337.798	147.184	696937.426	4362851.609	350.6609	696937.426	4362851.609	0.000
15 CL	347.799	10.000	696930.128	4362858.435	342.2840	696937.426	4362851.609	19.494
16 CI	370.648	22.849	696909.093	4362866.438	304.0048	696906.704	4362828.513	-38.000
17 CL	380.648	10.000	696899.103	4362866.190	295.6278	696899.103	4362866.190	19.494
18 RE	388.774	8.126	696890.996	4362865.632	295.6278	696890.996	4362865.632	0.000
19 CL	398.774	10.000	696881.017	4362864.979	296.2644	696890.996	4362865.632	70.711
20 CI	422.094	23.319	696857.714	4362864.155	299.2336	696851.695	4363364.119	500.000
21 CL	432.094	10.000	696847.715	4362864.101	299.8702	696847.715	4362864.101	70.711
22 RE	533.924	101.830	696745.885	4362863.894	299.8702	696745.885	4362863.894	0.000
23 CL	550.924	17.000	696728.969	4362865.139	314.3005	696745.885	4362863.894	25.249
24 CI	566.772	15.848	696714.710	4362871.781	341.2042	696737.322	4362901.697	37.500
25 CL	583.772	17.000	696702.873	4362883.929	355.6345	696702.873	4362883.929	25.249
26 RE	603.770	19.998	696690.038	4362899.265	355.6345	696690.038	4362899.265	0.000
27 CL	613.770	10.000	696683.749	4362907.038	358.8177	696690.038	4362899.265	31.623
28 CI	634.907	21.137	696672.880	4362925.120	372.2737	696763.545	4362967.309	100.000
29 CL	644.907	10.000	696668.966	4362934.322	375.4568	696668.966	4362934.322	31.623
30 RE	653.064	8.156	696665.899	4362941.879	375.4568	696665.899	4362941.879	0.000
31 CL	663.064	10.000	696662.321	4362951.216	379.2017	696665.899	4362941.879	29.155
32 CI	680.090	17.026	696658.503	4362967.780	391.9539	696742.825	4362978.494	85.000
33 CL	690.090	10.000	696657.633	4362977.740	395.6988	696657.633	4362977.740	29.155
34 RE	702.497	12.407	696656.795	4362990.119	395.6988	696656.795	4362990.119	0.000
35 CL	710.497	8.000	696656.503	4362998.110	1.6207	696656.795	4362990.119	18.547
36 CI	734.582	24.085	696663.653	4363020.781	37.2795	696699.489	4362997.015	43.000
37 CL	742.582	8.000	696668.478	4363027.159	43.2014	696668.478	4363027.159	18.547
38 RE	744.995	2.413	696669.992	4363029.037	43.2014	696669.992	4363029.037	0.000
39 CL	756.995	12.000	696677.054	4363038.726	33.8851	696669.992	4363029.037	22.181
40 CI	788.705	31.710	696681.539	4363069.324	384.6481	696641.726	4363059.532	-41.000
41 CL	800.705	12.000	696677.556	4363080.631	375.3318	696677.556	4363080.631	22.181
42 RE	851.176	50.470	696658.485	4363127.360	375.3318	696658.485	4363127.360	0.000
43 CL	867.176	16.000	696653.630	4363142.565	390.3114	696658.485	4363127.360	23.324
44 CI	885.015	17.839	696655.568	4363160.093	23.7138	696687.237	4363147.719	34.000
45 CL	887.015	2.000	696656.333	4363161.941	25.5861	696656.333	4363161.941	8.246
46 RE	945.626	58.610	696679.260	4363215.881	25.5861	696679.260	4363215.881	0.000
47 CL	955.625	10.000	696682.826	4363225.218	18.5127	696679.260	4363215.881	21.213
48 CI	982.751	27.126	696682.543	4363251.933	380.1373	696639.715	4363238.120	-45.000
49 CL	1027.751	45.000	696655.763	4363287.476	348.3063	696655.763	4363287.476	45.000
50 RE	1107.154	79.403	696598.144	4363342.109	348.3063	696598.144	4363342.109	0.000
51 CL	1112.155	5.001	696594.694	4363345.722	357.8091	696598.144	4363342.109	9.152
52 CI	1138.712	26.558	696597.788	4363369.383	58.7471	696607.898	4363356.028	16.750
53 CL	1155.713	17.001	696613.798	4363374.499	91.0550	696613.798	4363374.499	16.875
54 RE	1170.174	14.461	696628.116	4363376.524	91.0550	696628.116	4363376.524	0.000
55 CL	1173.717	3.543	696631.619	4363377.053	89.2790	696628.116	4363376.524	14.999
56 CI	1212.230	38.513	696665.404	4363394.285	50.6674	696620.976	4363439.654	-63.500
57 CL	1212.987	0.756	696665.940	4363394.818	49.5379	696664.851	4363393.747	6.999
58 CI	1213.309	0.322	696666.165	4363395.048	48.8987	696643.100	4363417.329	-32.069
59 CL	1214.205	0.896	696666.779	4363395.701	47.3755	696668.257	4363397.360	10.000
60 CI	1231.304	17.100	696675.724	4363410.154	23.1842	696633.675	4363426.182	-45.000
61 CL	1232.370	1.066	696676.094	4363411.154	22.0379	696676.481	4363412.244	10.001
62 CI	1249.922	17.551	696680.338	4363428.153	9.1152	696594.758	4363440.491	-86.465
63 CL	1251.543	1.621	696680.547	4363429.760	7.0853	696680.168	4363427.009	9.999
64 CI	1266.491	14.948	696679.120	4363444.533	380.6506	696644.770	4363433.759	-36.000
65 CL	1268.728	2.237	696678.402	4363446.651	378.2880	696678.221	4363447.160	9.999
66 CI	1288.354	19.626	696670.870	4363464.764	371.5345	696504.058	4363384.773	-185.000

*Estudio para la mejora del trazado de la Carretera CV-421 en el tramo comprendido entre los PP.KK. 0+535 y 5+300, en los
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67	CL	1302.561	14.208	696663.983	4363477.177	362.6292	696674.487	4363456.909	39.999
68	CI	1309.388	6.827	696659.930	4363482.668	356.4204	696605.701	4363438.406	-70.000
69	CL	1359.117	49.729	696620.543	4363512.568	333.8074	696620.543	4363512.568	59.000
70	RE	1403.615	44.499	696582.173	4363535.104	333.8074	696582.173	4363535.104	0.000
71	CL	1421.616	18.000	696567.044	4363544.835	341.5502	696582.173	4363535.104	36.497
72	CI	1443.982	22.366	696551.581	4363560.877	360.7914	696611.985	4363603.625	74.000
73	CL	1461.982	18.000	696542.413	4363576.354	368.5343	696542.413	4363576.354	36.497
74	RE	1478.238	16.256	696534.702	4363590.664	368.5343	696534.702	4363590.664	0.000
75	CI	1521.145	42.907	696511.720	4363626.854	359.4290	696270.606	4363448.349	-300.000
76	RE	1787.412	266.267	696353.286	4363840.857	359.4290	696353.286	4363840.857	0.000
77	CI	1839.198	51.786	696323.841	4363883.445	363.5500	696996.257	4364312.870	800.000
78	RE	1925.678	86.480	696276.988	4363956.134	363.5500	696276.988	4363956.134	0.000
79	CL	1950.678	25.000	696264.569	4363977.799	373.4970	696276.988	4363956.134	44.721
80	CI	1965.949	15.271	696259.760	4363992.269	385.6494	696337.736	4364010.150	80.000
81	CL	1990.949	25.000	696256.740	4364017.058	395.5964	696256.740	4364017.058	44.721
82	RE	2029.077	38.128	696254.104	4364055.095	395.5964	696254.104	4364055.095	0.000
83	CI	2082.250	53.173	696247.618	4364107.846	388.8262	695755.300	4364020.537	-500.000
84	RE	2201.181	118.931	696226.851	4364224.950	388.8262	696226.851	4364224.950	0.000
85	CL	2211.182	10.000	696224.750	4364234.722	381.9061	696226.851	4364224.950	21.448
86	CI	2238.562	27.380	696209.925	4364257.261	344.0137	696180.595	4364221.823	-46.000
87	CL	2248.562	10.000	696201.783	4364263.059	337.0936	696201.783	4364263.059	21.448
88	RE	2266.390	17.828	696186.897	4364272.869	337.0936	696186.897	4364272.869	0.000
89	CL	2290.389	23.999	696166.023	4364284.614	323.6915	696186.897	4364272.869	36.986
90	CI	2295.580	5.191	696161.108	4364286.279	317.8943	696145.297	4364231.516	-57.000
91	CL	2319.579	23.999	696137.393	4364289.638	304.4921	696137.393	4364289.638	36.986
92	RE	2351.520	31.941	696105.531	4364291.890	304.4921	696105.531	4364291.890	0.000
93	CL	2359.520	8.000	696097.563	4364292.587	307.6751	696105.531	4364291.890	25.298
94	CI	2384.480	24.960	696073.648	4364299.375	327.5380	696107.184	4364372.006	80.000
95	CL	2392.480	8.000	696066.501	4364302.968	330.7210	696066.501	4364302.968	25.298
96	RE	2424.412	31.932	696038.216	4364317.787	330.7210	696038.216	4364317.787	0.000
97	CL	2444.413	20.001	696022.580	4364329.861	364.2287	696038.216	4364317.787	19.494
98	CI	2448.760	4.346	696020.703	4364333.771	378.7920	696038.659	4364339.984	19.000
99	CL	2468.760	20.001	696021.062	4364353.524	12.2997	696021.062	4364353.524	19.494
100	RE	2482.397	13.637	696023.680	4364366.907	12.2997	696023.680	4364366.907	0.000
101	CL	2502.397	20.000	696026.343	4364386.700	0.9318	696023.680	4364366.907	33.466
102	CI	2556.120	53.723	696003.164	4364432.898	339.8582	695970.349	4364387.519	-56.000
103	CL	2576.119	20.000	695985.705	4364442.595	328.4902	695985.705	4364442.595	33.466
104	RE	2594.322	18.203	695969.295	4364450.472	328.4902	695969.295	4364450.472	0.000
105	CI	2621.499	27.177	695945.360	4364463.326	334.2574	696099.115	4364720.929	300.000
106	RE	2665.455	43.956	695907.616	4364485.854	334.2574	695907.616	4364485.854	0.000
107	CL	2695.455	30.000	695883.376	4364503.371	351.0104	695907.616	4364485.854	41.352
108	CI	2720.559	25.104	695870.375	4364524.610	379.0485	695924.315	4364543.032	57.000
109	CL	2746.559	26.000	695865.806	4364550.144	393.5681	695865.806	4364550.144	38.497
110	RE	2994.100	247.541	695840.840	4364796.423	393.5681	695840.840	4364796.423	0.000
111	CL	3019.100	25.000	695837.287	4364821.152	385.6104	695840.840	4364796.423	50.000
112	CI	3036.436	17.336	695831.960	4364837.626	374.5741	695739.830	4364788.740	-100.000
113	CL	3061.436	25.000	695820.359	4364859.752	366.5802	695820.302	4364859.850	50.114
114	CI	3618.354	556.918	695535.191	4365338.103	364.9727	676735.365	4353806.445	-22054.764
115	CL	3647.445	29.091	695522.261	4365364.062	381.8089	695535.191	4365338.103	40.000
116	CI	3649.600	2.155	695521.695	4365366.141	384.3033	695575.031	4365379.565	55.000
117	CL	3674.611	25.011	695519.594	4365390.991	0.8084	695519.660	4365395.070	40.000
118	CI	3723.906	49.295	695523.312	4365440.113	8.8101	695911.757	4365386.011	392.194
119	CL	3725.906	2.000	695523.598	4365442.093	9.6090	695523.218	4365439.435	16.384
120	CI	3731.867	5.962	695524.670	4365447.956	13.4042	695622.461	4365427.056	100.000
121	CL	3733.867	2.000	695525.101	4365449.909	14.0408	695525.101	4365449.909	14.142
122	RE	3804.543	70.676	695540.562	4365518.873	14.0408	695540.562	4365518.873	0.000
123	CL	3819.543	15.000	695543.524	4365533.574	9.8890	695540.562	4365518.873	41.533
124	CI	3846.686	27.143	695544.535	4365560.636	394.8630	695429.909	4365551.366	-115.000
125	CL	3861.686	15.000	695542.659	4365575.515	390.4752	695542.524	4365576.408	42.766
126	CI	3889.826	28.140	695538.271	4365603.311	389.5902	693541.145	4365273.804	-2024.126
127	CL	3891.826	2.000	695537.941	4365605.283	389.2050	695538.303	4365603.118	19.878
128	CI	3905.854	14.028	695535.038	4365619.004	384.2436	695360.523	4365574.907	-180.000
129	CL	3907.854	2.000	695534.541	4365620.941	383.8900	695534.541	4365620.941	18.974
130	RE	3943.639	35.785	695525.581	4365655.586	383.8900	695525.581	4365655.586	0.000
131	CL	3953.639	10.000	695523.207	4365665.300	386.4364	695525.581	4365655.586	35.355
132	CI	3974.379	20.740	695520.520	4365685.841	396.9993	695645.381	4365691.731	125.000
133	CL	3984.379	10.000	695520.315	4365695.838	399.5457	695520.315	4365695.838	35.355
134	RE	3996.503	12.124	695520.229	4365707.961	399.5457	695520.229	4365707.961	0.000
135	CL	4026.503	30.000	695519.078	4365737.928	393.5774	695520.229	4365707.961	69.282
136	CI	4042.757	16.254	695516.623	4365753.988	387.1102	695359.891	4365721.813	-160.000
137	CL	4072.757	30.000	695508.769	4365782.930	381.1419	695508.769	4365782.930	69.282
138	RE	4090.317	17.560	695503.644	4365799.725	381.1419	695503.644	4365799.725	0.000
139	CL	4105.317	15.000	695498.329	4365813.723	368.4096	695503.644	4365799.725	23.717
140	CI	4121.570	16.253	695487.781	4365825.922	340.8169	695465.352	4365795.869	-37.500
141	CL	4136.571	15.000	695474.533	4365832.853	323.1597	695465.587	4365835.930	30.287
142	CI	4148.272	11.702	695463.373	4365836.347	315.4762	695440.035	4365742.244	-96.954
143	CL	4150.272	2.000	695461.426	4365836.807	313.9707	695469.964	4365834.547	25.738

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144	CI	4165.926	15.654	695445.904	4365838.601	300.6834	695445.099	4365763.606	-75.000
145	CL	4200.926	35.000	695411.354	4365833.561	285.8288	695411.354	4365833.561	51.235
146	RE	4247.214	46.288	695366.208	4365823.342	285.8288	695366.208	4365823.342	0.000
147	CL	4258.025	10.811	695355.571	4365821.473	295.1293	695366.208	4365823.342	20.000
148	CI	4280.707	22.682	695333.830	4365826.564	334.1553	695352.743	4365858.365	37.000
149	CL	4291.518	10.811	695325.128	4365832.961	343.4558	695325.128	4365832.961	20.000
150	RE	4324.777	33.259	695299.322	4365853.941	343.4558	695299.322	4365853.941	0.000
151	CL	4334.776	10.000	695291.805	4365860.528	350.5292	695299.322	4365853.941	21.213
152	CI	4359.714	24.938	695280.002	4365882.134	385.8088	695323.889	4365892.083	45.000
153	CL	4369.714	10.000	695278.670	4365892.035	395.7687	695278.356	4365898.920	27.571
154	CI	4386.152	16.438	695278.802	4365908.457	5.2567	695388.720	4365969.360	110.293
155	CL	4388.152	2.000	695278.994	4365910.448	7.2808	695278.698	4365907.134	12.100
156	CI	4395.849	7.697	695280.535	4365917.978	18.4167	695322.707	4365905.427	44.000
157	CL	4397.849	2.000	695281.135	4365919.887	19.8636	695281.135	4365919.887	9.381
158	RE	4403.005	5.156	695282.717	4365924.793	19.8636	695282.717	4365924.793	0.000
159	CL	4413.005	10.000	695285.491	4365934.397	13.9689	695282.717	4365924.793	23.238
160	CI	4428.163	15.159	695286.684	4365949.459	396.0981	695232.786	4365946.151	-54.000
161	CL	4438.163	10.000	695285.458	4365959.379	390.2035	695285.458	4365959.379	23.238
162	RE	4448.532	10.369	695283.869	4365969.626	390.2035	695283.869	4365969.626	0.000
163	CL	4449.032	0.500	695283.793	4365970.120	390.6013	695283.869	4365969.626	4.472
164	CI	4451.720	2.688	695283.487	4365972.790	394.8795	695323.358	4365976.004	40.000
165	CL	4452.220	0.500	695283.450	4365973.289	395.5097	695283.403	4365973.989	6.933
166	CI	4460.876	8.656	695283.386	4365981.938	3.5539	695351.779	4365978.116	68.500
167	CL	4470.876	10.000	695285.265	4365991.714	24.5252	695283.241	4365977.961	16.511
168	CI	4479.133	8.257	695289.872	4365998.492	51.4820	695303.336	4365984.386	19.500
169	CL	4489.133	10.000	695298.151	4366004.048	67.8050	695298.151	4366004.048	13.964
170	RE	4504.477	15.344	695311.574	4366011.481	67.8050	695311.574	4366011.481	0.000
171	CL	4508.477	4.000	695315.061	4366013.440	66.6476	695311.574	4366011.481	20.976
172	CI	4514.828	6.352	695320.466	4366016.775	62.9716	695260.033	4366108.687	-110.000
173	CL	4518.828	4.000	695323.774	4366019.023	61.1775	695327.758	4366021.856	31.269
174	CI	4528.171	9.343	695331.305	4366024.551	58.2036	695209.230	4366182.973	-200.000
175	CL	4546.171	18.000	695344.149	4366037.061	38.9685	695328.266	4366022.240	27.634
176	CI	4553.308	7.137	695347.629	4366043.279	25.9864	695315.504	4366057.172	-35.000
177	CL	4571.309	18.000	695351.837	4366060.726	9.6159	695351.837	4366060.726	25.100
178	RE	4611.398	40.089	695357.870	4366100.358	9.6159	695357.870	4366100.358	0.000
179	CL	4629.397	18.000	695359.983	4366118.225	3.2498	695357.870	4366100.358	40.249
180	CI	4644.461	15.063	695359.492	4366133.263	392.5947	695270.100	4366122.818	-90.000
181	CL	4662.461	18.000	695356.218	4366150.954	386.2286	695356.218	4366150.954	40.249
182	RE	4681.779	19.319	695352.071	4366169.823	386.2286	695352.071	4366169.823	0.000
183	CL	4685.779	4.000	695351.280	4366173.743	389.4933	695352.071	4366169.823	12.490
184	CI	4718.704	32.925	695359.404	4366204.649	43.2384	695389.750	4366180.151	39.000
185	CL	4722.704	4.000	695362.022	4366207.673	46.5031	695362.022	4366207.673	12.490
186	RE	4733.433	10.729	695369.180	4366215.664	46.5031	695369.180	4366215.664	0.000
187	CL	4738.433	5.000	695372.471	4366219.428	44.2295	695369.180	4366215.664	18.708
188	CI	4791.409	52.976	695388.562	4366268.582	396.0501	695318.697	4366264.242	-70.000
189	CL	4796.408	5.000	695388.133	4366273.563	393.7766	695388.133	4366273.563	18.708
190	RE	4832.145	35.736	695384.645	4366309.129	393.7766	695384.645	4366309.129	0.000
191	CL	4846.144	14.000	695382.651	4366322.974	385.1238	695384.645	4366309.129	26.851
192	CI	4872.624	26.479	695370.309	4366346.072	352.3912	695332.551	4366311.049	-51.500
193	CL	4886.623	14.000	695359.907	4366355.425	343.7384	695359.907	4366355.425	26.851
194	CI	4889.752	3.128	695357.594	4366357.529	350.2315	695379.361	4366379.139	30.673
195	CL	4890.752	1.000	695356.898	4366358.247	351.6836	695356.442	4366358.731	7.146
196	CI	4935.205	44.454	695337.064	4366397.339	388.5328	695412.621	4366411.098	76.800
197	CL	4940.205	5.000	695336.280	4366402.277	390.8165	695336.199	4366402.839	20.679
198	CI	4955.245	15.039	695334.267	4366417.181	392.0884	696081.207	4366510.487	752.745
199	CL	4983.244	28.000	695326.866	4366443.938	364.2368	695305.942	4366462.184	29.933
200	CI	5001.181	17.937	695313.660	4366455.727	328.5529	695299.784	4366426.892	-32.000
201	CL	5006.181	5.000	695309.049	4366457.657	323.5794	695309.049	4366457.657	12.649
202	RE	5023.019	16.839	695293.352	4366463.752	323.5794	695293.352	4366463.752	0.000
203	CL	5028.020	5.000	695288.724	4366465.644	326.9658	695293.352	4366463.752	15.330
204	CI	5049.425	21.405	695271.847	4366478.509	355.9597	695308.042	4366508.491	47.000
205	CL	5056.425	7.000	695267.656	4366484.113	360.7003	695267.656	4366484.113	18.138
206	RE	5149.874	93.449	695213.563	4366560.315	360.7003	695213.563	4366560.315	0.000
207	CL	5176.007	26.133	695201.772	4366583.391	388.4286	695213.563	4366560.315	28.000
208	CI	5179.633	3.626	695201.334	4366586.988	396.1232	695231.278	4366588.814	30.000
209	CL	5205.767	26.133	695207.234	4366612.221	23.8515	695207.234	4366612.221	28.000
210	RE	5282.792	77.025	695235.422	4366683.903	23.8515	695235.422	4366683.903	0.000
211	CL	5299.791	16.999	695240.814	4366700.005	14.0133	695235.422	4366683.903	30.577
212	CI	5312.687	12.896	695242.136	4366712.804	399.0859	695187.141	4366712.014	-55.000
213	CL	5336.187	23.500	695238.473	4366735.968	385.4857	695238.473	4366735.968	35.951
214	RE	5357.708	21.521	695233.609	4366756.932	385.4857	695233.609	4366756.932	0.000

RE = alineación recta	P.K. final: punto kilométrico final de la alineación
CL = curva de transición	X, Y inicial: coordenadas iniciales de la alineación
CI = curva circular	X, Y final: coordenadas finales de la alineación
*Nota sobre el radio: "Clip" asigna radio 0.000 a las alineaciones rectas (R = infinito)	

Tablas completas con cálculos y resultados del ANÁLISIS NORMATIVO

3.5.1 Rectas: longitudes mínima y máxima

Longitud mínima de rectas							
Alineación	P.K. final (m)	Longitud (m)	Radio curva anterior (m)	Radio curva posterior (m)	Tipo	Criterio	Cumple
22 RE	533,924	101,830	500,000	37,500	O	L≥111m	No
26 RE	603,770	19,998	37,500	100,000	O	L≥111m	No
30 RE	653,064	8,156	100,000	85,000	O	L≥111m	No
34 RE	702,497	12,407	85,000	43,000	O	L≥111m	No
38 RE	744,995	2,413	43,000	-41,000	S	L≥56m	No
42 RE	851,176	50,470	-41,000	34,000	S	L≥56m	No
46 RE	945,626	58,610	34,000	-45,000	S	L≥56m	Sí
50 RE	1107,154	79,403	-45,000	16,750	S	L≥56m	Sí
54 RE	1170,174	14,461	16,750	-63,500	S	L≥56m	No
70 RE	1403,615	44,499	-70,000	74,000	S	L≥56m	No
74 RE	1478,238	16,256	74,000	-300,000	S	L≥56m	No
76 RE	1787,412	266,267	-300,000	800,000	S	L≥56m	Sí
78 RE	1925,678	86,480	800,000	80,000	O	L≥111m	No
82 RE	2029,077	38,128	80,000	-500,000	S	L≥56m	No
84 RE	2201,181	118,931	-500,000	-46,000	O	L≥111m	Sí
88 RE	2266,390	17,828	-46,000	-57,000	O	L≥111m	No
92 RE	2351,520	31,941	-57,000	80,000	S	L≥56m	No
96 RE	2424,412	31,932	80,000	19,000	O	L≥111m	No
100 RE	2482,397	13,637	19,000	-56,000	S	L≥56m	No
104 RE	2594,322	18,203	-56,000	300,000	S	L≥56m	No
106 RE	2665,455	43,956	300,000	57,000	O	L≥111m	No
110 RE	2994,100	247,541	57,000	-100,000	S	L≥56m	Sí
122 RE	3804,543	70,676	100,000	-115,000	S	L≥56m	Sí
130 RE	3943,639	35,785	-180,000	125,000	S	L≥56m	No
134 RE	3996,503	12,124	125,000	-160,000	S	L≥56m	No
138 RE	4090,317	17,560	-160,000	-37,500	O	L≥111m	No
146 RE	4247,214	46,288	-75,000	37,000	S	L≥56m	No
150 RE	4324,777	33,259	37,000	45,000	O	L≥111m	No
158 RE	4403,005	5,156	44,000	-54,000	S	L≥56m	No
162 RE	4448,532	10,369	-54,000	40,000	S	L≥56m	No
170 RE	4504,477	15,344	19,500	-110,000	S	L≥56m	No
178 RE	4611,398	40,089	-35,000	-90,000	O	L≥111m	No
182 RE	4681,779	19,319	-90,000	39,000	S	L≥56m	No
186 RE	4733,433	10,729	39,000	-70,000	S	L≥56m	No
190 RE	4832,145	35,736	-70,000	-51,500	O	L≥111m	No
202 RE	5023,019	16,839	-32,000	47,000	S	L≥56m	No
206 RE	5149,874	93,449	47,000	30,000	O	L≥111m	No
210 RE	5282,792	77,025	30,000	-55,000	S	L≥56m	Sí

3.5.2 Rectas de longitud limitada

Rectas de longitud limitada

Alineación	P.K. final (m)	Longitud \leq 30 m
26 RE	603,770	19,998
30 RE	653,064	8,156
34 RE	702,497	12,407
38 RE	744,995	2,413
54 RE	1170,174	14,461
74 RE	1478,238	16,256
88 RE	2266,390	17,828
100 RE	2482,397	13,637
104 RE	2594,322	18,203
134 RE	3996,503	12,124
138 RE	4090,317	17,560
158 RE	4403,005	5,156
162 RE	4448,532	10,369
170 RE	4504,477	15,344
182 RE	4681,779	19,319
186 RE	4733,433	10,729
202 RE	5023,019	16,839

3.5.3 Curvas circulares

Curvas circulares

Alineación	P.K. final (m)	Radio \leq 50 m
24 CI	566,772	37,500
36 CI	734,582	43,000
40 CI	788,705	-41,000
44 CI	885,015	34,000
48 CI	982,751	-45,000
52 CI	1138,712	16,750
58 CI	1213,309	-32,069
60 CI	1231,304	-45,000
86 CI	2238,562	-46,000
98 CI	2448,760	19,000
140 CI	4121,570	-37,500
148 CI	4280,707	37,000
152 CI	4359,714	45,000
156 CI	4395,849	44,000
164 CI	4451,720	40,000
168 CI	4479,133	19,500
176 CI	4553,308	-35,000
184 CI	4718,704	39,000
194 CI	4889,752	30,673
204 CI	5049,425	47,000
208 CI	5179,633	30,000

3.5.4 Curvas de acuerdo

Curvas de acuerdo

Alineación	P.K. final (m)	Radio (m)
74 RE	1478,238	Infinito
75 CI	1521,145	-300
76 RE	1787,412	Infinito
77 CI	1839,198	800
78 RE	1925,678	Infinito
82 RE	2029,077	Infinito
83 CI	2082,250	-500
84 RE	2201,181	Infinito
104 RE	2594,322	Infinito
105 CI	2621,499	300
106 RE	2665,455	Infinito

3.5.5 Limitaciones por condiciones de percepción visual y longitudes máximas I

Alineación	Longitud	A (CL) ó R (CI)	4.4.3.3 Percepción visual			4.4 Longitudes máximas	
			Lmin	Amin	Cumple	Longitud/Lmin ϵ [1;1,5]	Cumple
23 CL	17,000	25,249	21,213	28,205	No	0,801	No
24 CI		37,500					
25 CL	17,000	25,249	21,213	28,205	No	0,801	No
27 CL	10,000	31,623	34,641	58,857	No	0,289	No
28 CI		100,000					
29 CL	10,000	31,623	34,641	58,857	No	0,289	No
31 CL	10,000	29,155	31,937	52,103	No	0,313	No
32 CI		85,000					
33 CL	10,000	29,155	31,937	52,103	No	0,313	No
35 CL	8,000	18,547	22,716	31,253	No	0,352	No
36 CI		43,000					
37 CL	8,000	18,547	22,716	31,253	No	0,352	No
39 CL	12,000	22,181	22,181	30,157	No	0,541	No
40 CI		41,000					
41 CL	12,000	22,181	22,181	30,157	No	0,541	No
43 CL	16,000	23,324	20,199	26,206	No	0,792	No
44 CI		34,000					
43 CL	2,000	8,246	20,199	26,206	No	0,099	No
47 CL	10,000	21,213	23,238	32,337	No	0,430	No
48 CI		45,000					
49 CL	45,000	45,000	23,238	32,337	Sí	1,936	No
51 CL	5,001	9,152	14,177	15,410	No	0,353	No
52 CI		16,750					
53 CL	17,001	16,875	14,177	15,410	Sí	1,199	Sí
55 CL	3,543	14,999	27,604	41,867	No	0,128	No
56 CI		63,500					
57 CL	0,756	6,999	27,604	41,867	No	0,027	No
57 CL	0,756	6,999	19,617	25,082	No	0,039	No
58 CI		32,069					

59 CL	0,896	10,000	19,617	25,082	No	0,046	No
59 CL	0,896	10,000	23,238	32,337	No	0,039	No
60 CI		45,000					
61 CL	1,066	10,000	23,238	32,337	No	0,046	No
61 CL	1,066	10,001	32,211	52,775	No	0,033	No
62 CI		86,465					
63 CL	1,621	9,999	32,211	52,775	No	0,050	No
63 CL	1,621	9,999	20,785	27,354	No	0,078	No
64 CI		36,000					
65 CL	2,237	9,999	20,785	27,354	No	0,108	No
65 CL	2,237	9,999	47,117	93,363	No	0,047	No
66 CI		185,000					
67 CL	14,208	39,999	47,117	93,363	No	0,302	No
67 CL	14,208	39,999	28,983	45,042	No	0,490	No
68 CI		70,000					
69 CL	49,729	59,000	28,983	45,042	Sí	1,716	No
71 CL	18,000	36,497	29,799	46,959	No	0,604	No
72 CI		74,000					
73 CL	18,000	36,947	29,799	46,959	No	0,604	No
79 CL	25,000	44,721	30,984	49,787	No	0,807	No
80 CI		80,000					
81 CL	25,000	44,721	30,984	49,787	No	0,807	No
85 CL	10,000	21,448	23,495	32,875	No	0,426	No
86 CI		46,000					
87 CL	10,000	21,448	23,495	32,875	No	0,426	No
89 CL	23,999	36,986	26,153	38,610	No	0,918	No
90 CI		57,000					
91 CL	23,999	36,986	26,153	38,610	No	0,918	No
93 CL	8,000	25,298	30,984	49,787	No	0,258	No
94 CI		80,000					
95 CL	8,000	25,298	30,984	49,787	No	0,258	No
97 CL	20,001	19,949	15,100	16,938	Sí	1,325	Sí
98 CI		19,000					
99 CL	20,001	19,494	15,100	16,938	Sí	1,325	Sí
101 CL	20,000	33,466	25,923	38,101	No	0,772	No
102 CI		56,000					
102 CL	20,000	33,466	25,923	38,101	No	0,772	No
107 CL	30,000	41,352	26,153	38,610	Sí	1,147	Sí
108 CI		57,000					
109 CL	26,000	38,497	26,153	38,610	No	0,994	No
111 CL	25,000	50,000	34,641	58,857	No	0,722	No
112 CI		100,000					
113 CL	25,000	50,000	34,641	58,857	No	0,722	No
113 CL	25,000	50,114	2450,529	7351,588	No	0,010	No
114 CI		22054,764					
115 CL	29,091	40,000	2450,529	7351,588	No	0,012	No
115 CL	29,091	40,000	25,690	37,590	Sí	1,132	Sí
116 CI		55,000					
117 CL	25,011	40,000	25,690	37,590	No	0,974	No
117 CL	25,011	40,000	68,603	164,029	No	0,365	No
118 CI		392,194					

119 CL	2,000	16,384	68,603	164,029	No	0,029	No
119 CL	2,000	16,384	34,641	58,857	No	0,058	No
120 CI		100,000					
121 CL	2,000	14,142	34,641	58,857	No	0,058	No
123 CL	15,000	41,533	37,148	65,361	No	0,404	No
124 CI		115,000					
125 CL	15,000	42,766	37,148	65,361	No	0,404	No
125 CL	15,000	42,766	224,903	674,709	No	0,067	No
126 CI		2024,126					
127 CL	2,000	19,878	224,903	674,709	No	0,009	No
127 CL	2,000	19,878	46,476	91,464	No	0,043	No
128 CI		180,000					
129 CL	2,000	18,974	46,476	91,464	No	0,043	No
131 CL	10,000	35,355	38,730	69,579	No	0,258	No
132 CI		125,000					
133 CL	10,000	35,355	38,730	69,579	No	0,258	No
131 CL	10,000	35,355	38,730	69,579	No	0,258	No
132 CI		125,000					
133 CL	10,000	35,355	38,730	69,579	No	0,258	No
135 CL	30,000	69,282	43,818	83,731	No	0,685	No
136 CI		160,000					
137 CL	30,000	69,282	43,818	83,731	No	0,685	No
139 CL	15,000	23,717	21,213	28,205	No	0,707	No
140 CI		37,500					
141 CL	15,000	30,287	21,213	28,205	No	0,707	No
141 CL	15,000	30,287	34,109	57,507	No	0,440	No
142 CI		96,954					
143 CL	2,000	25,738	34,109	57,507	No	0,059	No
143 CL	2,000	25,738	30,000	47,434	No	0,067	No
144 CI		75,000					
145 CL	35,000	51,235	30,000	47,434	Sí	1,167	Sí
147 CL	10,811	20,000	21,071	27,922	No	0,513	No
148 CI		37,000					
149 CL	10,811	20,000	21,071	27,922	No	0,513	No
151 CL	10,000	21,213	23,238	32,337	No	0,430	No
152 CI		45,000					
153 CL	10,000	27,571	23,238	32,337	No	0,430	No
153 CL	10,000	27,571	36,380	63,344	No	0,275	No
154 CI		110,293					
155 CL	2,000	12,100	36,380	63,344	No	0,055	No
155 CL	2,000	12,100	22,978	31,797	No	0,087	No
156 CI		44,000					
157 CL	2,000	9,381	22,978	31,797	No	0,087	No
159 CL	10,000	23,238	25,456	37,076	No	0,393	No
160 CI		54,000					
161 CL	10,000	23,238	25,456	37,076	No	0,393	No
163 CL	0,500	4,472	21,909	29,603	No	0,023	No
164 CI		40,000					
165 CL	0,500	6,933	21,909	29,603	No	0,023	No
165 CL	0,500	6,933	28,671	44,316	No	0,017	No
166 CI		68,500					

167 CL	10,000	16,511	28,671	44,316	No	0,349	No
167 CL	10,000	16,511	15,297	17,271	No	0,654	No
168 CI		19,500					
169 CL	10,000	13,964	15,297	17,271	No	0,654	No
171 CL	4,000	20,976	36,332	63,218	No	0,110	No
172 CI		110,000					
173 CL	4,000	31,269	36,332	63,218	No	0,110	No
173 CL	4,000	31,269	48,990	98,985	No	0,082	No
174 CI		200,000					
175 CL	18,000	27,643	48,990	98,985	No	0,367	No
175 CL	18,000	27,634	20,494	26,782	No	0,878	No
176 CI		35,000					
177 CL	18,000	25,100	20,494	26,782	No	0,878	No
179 CL	18,000	40,249	40,249	54,385	No	0,447	No
180 CI		90,000					
181 CL	18,000	40,249	40,249	54,385	No	0,447	No
183 CL	4,000	12,490	40,249	29,046	No	0,099	No
184 CI		39,000					
185 CL	4,000	12,490	40,249	29,046	No	0,099	No
187 CL	5,000	18,708	40,249	45,042	No	0,124	No
188 CI		70,000					
189 CL	5,000	18,708	40,249	45,042	No	0,124	No
191 CL	14,000	26,851	40,249	35,781	No	0,348	No
192 CI		51,500					
193 CL	14,000	26,851	40,249	35,781	No	0,348	No
193 CL	14,000	26,851	40,249	24,258	No	0,348	No
194 CI		30,673					
195 CL	1,000	7,146	40,249	24,258	No	0,025	No
195 CL	1,000	7,146	40,249	48,285	No	0,025	No
196 CI		76,800					
197 CL	5,000	20,679	40,249	48,285	No	0,124	No
197 CL	5,000	20,679	40,249	267,474	No	0,124	No
198 CI		752,745					
199 CL	28,000	29,933	40,249	267,474	No	0,696	No
199 CL	28,000	29,933	40,249	25,041	No	0,696	No
200 CI		32,000					
201 CL	5,000	12,649	40,249	25,041	No	0,124	No
203 CL	5,000	15,330	40,249	33,409	No	0,124	No
204 CI		47,000					
205 CL	7,000	18,138	40,249	33,409	No	0,174	No
207 CL	26,133	28,000	40,249	23,858	No	0,649	No
208 CI		30,000					
209 CL	26,133	28,000	40,249	23,858	No	0,649	No

3.5.5 Limitaciones por condiciones de percepción visual y longitudes máximas II

Alineación	Longitud	A (CL) ó R (CI)	Acimut	4.4.3.3 Percepción visual			4.4 Longitudes máximas	
				Lmin	Amin	Cumple	Longitud/Lmin ϵ [1;1,5]	Cumple
50 RE			348,3063					
51 CL	5,001	9,152	Ω	27,074	21,295	No	0,185	No
52 CI		16,750	257,2513					
53 CL	17,001	16,875		27,074	21,295	No	0,628	Sí
54 RE			91,0550					
96 RE			330,7210					
97 CL	20,001	19,949	Ω	38,013	26,875	No	0,526	Sí
98 CI		19,000	318,4213					
99 CL	20,001	19,494		38,013	26,875	No	0,526	Sí
100 RE			12,2997					
106 RE			334,2574					
107 CL	30,000	41,352	Ω	21,242	34,796	Sí	1,412	Sí
108 CI		57,000	59,3107					
109 CL	26,000	38,497		21,242	34,796	Sí	1,224	Sí
110 RE			393,5681					

3.5.6 Desarrollo mínimo

Desarrollo mínimo

Alineación	P.K. final (m)	Acimut	Ángulo Ω	Cumple
26 RE	603,770	355,6345	19,8223	Sí, $20 \geq \Omega \geq 6$, combinación Tipo I
27 CL	613,770	358,8177		
28 CI	634,907	372,2737		
29 CL	644,907	375,4568		
30 RE	653,064	375,4568		
74 RE	1478,238	368,5343	9,1053	No, $20 \geq \Omega \geq 6$, combinación Tipo III
75 CI	1521,145	359,4290		
76 RE	1787,412	359,4290		
76 RE	1787,412	359,4290	4,1210	Sí, $\Omega < 6$, combinación Tipo III
77 CI	1839,198	363,5500		
78 RE	1925,678	363,5500		
82 RE	2029,077	395,5964	6,7702	No, $20 \geq \Omega \geq 6$, combinación Tipo III
83 CI	2082,250	388,8262		
84 RE	2201,181	388,8262		
104 RE	2594,322	328,4902	5,7672	Sí, $\Omega < 6$, combinación Tipo III
105 CI	2621,499	334,2574		
106 RE	2665,455	334,2574		

3.5.7 Simetría y otras alineaciones

Desarrollo mínimo

Alineación	P.K. final (m)	Acimut	Ángulo Ω	Cumple
26 RE	603,770	355,6345	19,8223	Sí, $20 \geq \Omega \geq 6$, combinación Tipo I
27 CL	613,770	358,8177		
28 CI	634,907	372,2737		
29 CL	644,907	375,4568		
30 RE	653,064	375,4568		
74 RE	1478,238	368,5343	9,1053	No, $20 \geq \Omega \geq 6$, combinación Tipo III
75 CI	1521,145	359,4290		
76 RE	1787,412	359,4290		
76 RE	1787,412	359,4290	4,1210	Sí, $\Omega < 6$, combinación Tipo III
77 CI	1839,198	363,5500		
78 RE	1925,678	363,5500		
82 RE	2029,077	395,5964	6,7702	No, $20 \geq \Omega \geq 6$, combinación Tipo III
83 CI	2082,250	388,8262		
84 RE	2201,181	388,8262		
104 RE	2594,322	328,4902	5,7672	Sí, $\Omega < 6$, combinación Tipo III
105 CI	2621,499	334,2574		
106 RE	2665,455	334,2574		

3.5.8 Ángulo de giros pequeños

Ángulos de giro pequeños

Alineación	P.K. final (m)	Dc	Acimut	Ángulo Ω	$325 - 25 \cdot \Omega$	Cumple
76 RE	1787,412	51,786	359,4290	4,1210	221,9750	No $Dc \leq 325 - 25 \cdot \Omega$
77 CI	1839,198		363,5500			
78 RE	1925,678		363,5500			
104 RE	2594,322	27,177	328,4902	5,7672	180,8200	No $Dc \leq 325 - 25 \cdot \Omega$
105 CI	2621,499		334,2574			
106 RE	2665,455		334,2574			

3.5.9 Coordinación entre alineaciones curvas consecutivas

Norma 3.1-IC Trazado 2016

Coordinación entre alineaciones curvas consecutivas: sentido creciente de los PP.KK.

Alineación	P.K. final (m)	Longitud	Criterio	Radio (m)	Radio de salida mínimo (m)	Radio de salida máximo (m)	Cumple
20 CI	422,094			500,000			
22 RE	533,924	101,830	$R' \geq 2*50$				
24 CI	566,772			37,500	100,000		(2) No
26 RE	603,770	19,998	Tabla 4.7 I				
28 CI	634,907			100,000	32,151	45,131	(2) No
30 RE	653,064	8,156	Tabla 4.7 I				
32 CI	680,090			85,000	72,735	144,350	(1) Sí
34 RE	702,497	12,407	Tabla 4.7 I				
36 CI	734,582			43,000	62,995	120,538	(2) No
38 RE	744,995	2,413	Tabla 4.7 I				
40 CI	788,705			41,000	35,722	53,863	(3) No
42 RE	851,176	50,470	$R' \geq 2*50$				
44 CI	885,015			34,000	100,000		(2) No
46 RE	945,626	58,610	$R' \geq 2*50$				
48 CI	982,751			45,000	100,000		(2) No
50 RE	1107,154	79,403	$R' \geq 2*50$				
52 CI	1138,712			16,750	100,000		(2) No
54 RE	1170,174	14,461	Tabla 4.7 I				
56 CI	1212,230			63,500	18,677	12,191	(2) No
(sin recta)		0,000	Tabla 4.7 I				
58 CI	1213,309			32,069	49,034	86,406	(2) No
(sin recta)		0,000	Tabla 4.7 I				
60 CI	1231,304			45,000	28,624	36,510	(2) No
(sin recta)		0,000	Tabla 4.7 I				
62 CI	1249,922			86,465	37,021	57,038	(2) No
(sin recta)		0,000	Tabla 4.7 I				
64 CI	1266,491			36,000	63,946	122,863	(2) No
(sin recta)		0,000	Tabla 4.7 I				
66 CI	1288,354			185,000	31,177	42,750	(2) No
(sin recta)		0,000	Tabla 4.7 I				
68 CI	1309,388			70,000	127,930	279,288	(2) No
70 RE	1403,615	44,499	$R' \geq 2*50$				
72 CI	1443,982			74,000	100,000		(2) No
74 RE	1478,238	16,256	Tabla 4.7 I				
75 CI	1521,145			300,000	55,852	103,075	(6) No
76 RE	1787,412	266,267	$R' \geq 2*50$				
77 CI	1839,198			800,000	100,000		(6) No
78 RE	1925,678	86,480	$R' \geq 2*50$				
80 CI	1965,949			80,000	100,000		(6) No
82 RE	2029,077	38,128	$R' \geq 2*50$				
83 CI	2082,250			500,000	100,000		(6) No
84 RE	2201,181	118,931	$R' \geq 2*50$				
86 CI	2238,562			46,000	100,000		(6) No
88 RE	2266,390	17,828	Tabla 4.7 I				

90 CI	2295,580			57,000	37,670	58,625	(5) No
92 RE	2351,520	31,941	$R' \geq 2*50$				
94 CI	2384,480			80,000	100,000		(2) No
96 RE	2424,421	31,932	$R' \geq 2*50$				
98 CI	2448,760			19,000	100,000		(2) No
100 RE	2482,397	13,637	Tabla 4.7 I				
102 CI	2556,120			56,000	20,138	15,763	(2) No
104 RE	2594,322	18,203	Tabla 4.7 I				
105 CI	2621,499			300,000	44,164	74,500	(6) No
106 RE	2665,455	43,956	$R' \geq 2*50$				
108 CI	2720,559			57,000	100,000		(6) No
110 RE	2994,100	247,541	$R' \geq 2*50$				
112 CI	3036,436			100,000	100,000		(1) Sí
(sin recta)		0,000	Tabla 4.7 I				
114 CI	3618,354			22054,764	72,735	144,350	(2) No
(sin recta)		0,000	Tabla 4.7 IV				
116 CI	3649,600			55,000	700,000		(2) No
(sin recta)		0,000	Tabla 4.7 I				
118 CI	3723,906			392,194	43,514	72,913	(2) No
(sin recta)		0,000	Tabla 4.7 I				
120 CI	3731,867			100,000	262,471	608,208	(2) No
122 RE	3804,543	70,676	$R' \geq 2*50$				
124 CI	3846,686			115,000	100,000		(1) Sí
(sin recta)		0,000	Tabla 4.7 I				
126 CI	3889,862			2024,126	82,475	168,163	(2) No
(sin recta)		0,000	Tabla 4.7 IV				
128 CI	3905,854			180,000	700,000		(2) No
130 RE	3943,639	35,785	$R' \geq 2*50$				
132 CI	3974,379			125,000	100,000		(1) Sí
134 RE	3996,503	12,124	Tabla 4.7 I				
136 CI	4042,757			160,000	88,969	184,038	(1) Sí
138 RE	4090,317	17,560	Tabla 4.7 I				
140 CI	4121,570			37,500	111,696	239,600	(2) No
(sin recta)		0,000	Tabla 4.7 I				
142 CI	4148,272			96,954	32,151	45,131	(2) No
(sin recta)		0,000	Tabla 4.7 I				
144 CI	4165,926			75,000	70,757	139,514	(1) Sí
146 RE	4247,214	46,288	$R' \geq 2*50$				
148 CI	4280,707			37,000	100,000		(2) No
150 RE	4324,777	33,259	$R' \geq 2*50$				
152 CI	4359,714			45,000	100,000		(2) No
(sin recta)		0,000	Tabla 4.7 I				
154 CI	4386,152			110,293	37,021	57,038	(2) No
(sin recta)		0,000	Tabla 4.7 I				
156 CI	4395,849			44,000	79,419	160,690	(2) No
158 RE	4403,005	5,156	Tabla 4.7 I				
160 CI	4428,163			54,000	36,371	55,450	(5) No
162 RE	4448,532	10,369	Tabla 4.7 I				
164 CI	4451,720			40,000	42,865	71,325	(2) No
(sin recta)		0,000	Tabla 4.7 I				
166 CI	4460,876			68,500	33,774	49,100	(2) No
(sin recta)		0,000	Tabla 4.7 I				

168 CI	4479,133			19,500	52,281	94,344	(2) No
170 RE	4504,477	15,344	Tabla 4.7 I				
172 CI	4514,828			110,000	20,462	16,556	(2) No
(sin recta)		0,000	Tabla 4.7 I				
174 CI	4528,171			200,000	79,229	160,225	(2) No
(sin recta)		0,000	Tabla 4.7 I				
176 CI	4553,308			35,000	137,670	303,100	(2) No
178 RE	4611,398	40,089	$R' \geq 2^*50$				
180 CI	4644,461			90,000	100,000		(2) No
182 RE	4681,779	19,319	Tabla 4.7 I				
184 CI	4718,704			39,000	66,242	128,475	(2) No
186 RE	4733,433	10,729	Tabla 4.7 I				
188 CI	4791,409			70,000	33,125	47,513	(2) No
190 RE	4832,145	35,736	$R' \geq 2^*50$				
192 CI	4872,624			51,500	100,000		(2) No
(sin recta)		0,000	Tabla 4.7 I				
194 CI	4889,752			30,673	41,242	67,356	(2) No
(sin recta)		0,000	Tabla 4.7 I				
196 CI	4935,205			76,800	27,718	34,293	(2) No
(sin recta)		0,000	Tabla 4.7 I				
198 CI	4955,245			752,745	57,670	107,520	(2) No
(sin recta)		0,000	Tabla 4.7 III				
200 CI	5001,181			32,000	389,736		(2) No
202 RE	5023,019	16,839	Tabla 4.7 I				
204 CI	5049,425			47,000	28,579	36,400	(2) No
206 RE	5149,874	93,449	$R' \geq 2^*50$				
208 CI	5179,633			30,000	100,000		(2) No
210 RE	5282,792	77,025	$R' \geq 2^*50$				
212 CI	5312,687			55,000	100,000		(2) No

Norma 3.1-IC Trazado 2016

Coordinación entre alineaciones curvas consecutivas: sentido decreciente de los PP.KK.

Alineación	P.K. final (m)	Longitud	Criterio	Radio (m)	Radio de salida mín (m)	Radio de salida máx (m)	Cumple
212 CI	5312,687			55,000			
210 RE	5282,792	77,025	$R' \geq 2^*50$				
208 CI	5179,633			30,000	100,000		(2) No
206 RE	5149,874	93,449	$R' \geq 2^*50$				
204 CI	5049,425			47,000	100,000		(2) No
202 RE	5023,019	16,839	Tabla 4.7 I				
200 CI	5001,181			32,000	38,319	60,213	(2) No
(sin recta)		0,000	Tabla 4.7 I				
198 CI	4955,245			752,745	28,579	36,400	(2) No
(sin recta)		0,000	Tabla 4.7 III				
196 CI	4935,205			76,800	389,736		(2) No
(sin recta)		0,000	Tabla 4.7 I				
194 CI	4889,752			30,673	57,670	107,520	(2) No
(sin recta)		0,000	Tabla 4.7 I				
192 CI	4872,624			51,500	27,718	34,293	(2) No
190 RE	4832,145	35,736	$R' \geq 2^*50$				
188 CI	4791,409			70,000	100,000		(2) No

186 RE	4733,433	10,729	Tabla 4.7 I				
184 CI	4718,704			39,000	53,255	96,725	(2) No
182 RE	4681,779	19,319	Tabla 4.7 I				
180 CI	4644,461			90,000	33,125	47,513	(2) No
178 RE	4611,398	40,089	$R' \geq 2^*50$				
176 CI	4553,308			35,000	100,000		(2) No
(sin recta)		0,000	Tabla 4.7 I				
174 CI	4528,171			200,000	30,527	41,163	(2) No
(sin recta)		0,000	Tabla 4.7 I				
172 CI	4514,828			110,000	137,670	303,100	(2) No
170 RE	4504,477	15,344	Tabla 4.7 I				
168 CI	4479,133			19,500	79,229	160,225	(2) No
(sin recta)		0,000	Tabla 4.7 I				
166 CI	4460,876			68,500	20,462	16,556	(2) No
(sin recta)		0,000	Tabla 4.7 I				
164 CI	4451,720			40,000	52,281	94,344	(2) No
162 RE	4448,532	10,369	Tabla 4.7 I				
160 CI	4428,163			54,000	33,774	49,100	(2) No
158 RE	4403,005	5,156	Tabla 4.7 I				
156 CI	4395,849			44,000	42,865	71,325	(4) No
(sin recta)		0,000	Tabla 4.7 I				
154 CI	4386,152			110,293	36,371	55,450	(2) No
(sin recta)		0,000	Tabla 4.7 I				
152 CI	4359,714			45,000	79,419	160,690	(2) No
150 RE	4324,777	33,259	$R' \geq 2^*50$				
148 CI	4280,707			37,000	100,000		(2) No
146 RE	4247,214	46,288	$R' \geq 2^*50$				
144 CI	4165,926			75,000	100,000		(2) No
(sin recta)		0,000	Tabla 4.7 I				
142 CI	4148,272			96,954	56,501	104,663	(1) Sí
(sin recta)		0,000	Tabla 4.7 I				
140 CI	4121,570			37,500	70,757	139,514	(2) No
138 RE	4090,317	17,560	Tabla 4.7 I				
136 CI	4042,757			160,000	32,151	45,131	(2) No
134 RE	3996,503	12,124	Tabla 4.7 I				
132 CI	3974,379			125,000	111,696	239,600	(1) Sí
130 RE	3943,639	35,785	$R' \geq 2^*50$				
128 CI	3905,854			180,000	100,000		(1) Sí
(sin recta)		0,000	Tabla 4.7 I				
126 CI	3889,862			2024,126	124,683	271,350	(2) No
(sin recta)		0,000	Tabla 4.7 IV				
124 CI	3846,686			115,000	700,000		(2) No
122 RE	3804,543	70,676	$R' \geq 2^*50$				
120 CI	3731,867			100,000	100,000		(1) Sí
(sin recta)		0,000	Tabla 4.7 I				
118 CI	3723,906			392,194	72,735	144,350	(2) No
(sin recta)		0,000	Tabla 4.7 I				
116 CI	3649,600			55,000	262,471	608,208	(2) No
(sin recta)		0,000	Tabla 4.7 I				
114 CI	3618,354			22054,764	43,514	72,913	(2) No
(sin recta)		0,000	Tabla 4.7 IV				
112 CI	3036,436			100,000	700,000		(2) No

110 RE	2994,100	247,541	R' ≥ 2*50				
108 CI	2720,559			57,000	100,000	(2) No	
106 RE	2665,455	43,956	R' ≥ 2*50				
105 CI	2621,499			300,000	100,000	(6) No	
104 RE	2594,322	18,203	Tabla 4.7 I				
102 CI	2556,120			56,000	202,605	461,850	(6) No
100 RE	2482,397	13,637	Tabla 4.7 I				
98 CI	2448,760			19,000	44,164	74,500	(2) No
96 RE	2424,421	31,932	R' ≥ 2*50				
94 CI	2384,480			80,000	100,000	(2) No	
92 RE	2351,520	31,941	R' ≥ 2*50				
90 CI	2295,580			57,000	100,000	(2) No	
88 RE	2266,390	17,828	Tabla 4.7 I				
86 CI	2238,562			46,000	44,813	76,088	(4) No
84 RE	2201,181	118,931	R' ≥ 2*50				
83 CI	2082,250			500,000	100,000	(6) No	
82 RE	2029,077	38,128	R' ≥ 2*50				
80 CI	1965,949			80,000	100,000	(6) No	
78 RE	1925,678	86,480	R' ≥ 2*50				
77 CI	1839,198			800,000	100,000	(6) No	
76 RE	1787,412	266,267	R' ≥ 2*50				
75 CI	1521,145			300,000	100,000	(6) No	
74 RE	1478,238	16,256	Tabla 4.7 I				
72 CI	1443,982			74,000	202,605	461,850	(6) No
70 RE	1403,615	44,499	R' ≥ 2*50				
68 CI	1309,388			70,000	100,000	(2) No	
(sin recta)		0,000	Tabla 4.7 I				
66 CI	1288,354			185,000	53,255	96,725	(2) No
(sin recta)		0,000	Tabla 4.7 I				
64 CI	1266,491			36,000	127,930	279,288	(2) No
(sin recta)		0,000	Tabla 4.7 I				
62 CI	1249,922			86,465	31,177	42,750	(2) No
(sin recta)		0,000	Tabla 4.7 I				
60 CI	1231,304			45,000	63,946	122,863	(2) No
(sin recta)		0,000	Tabla 4.7 I				
58 CI	1213,309			32,069	37,021	57,038	(2) No
(sin recta)		0,000	Tabla 4.7 I				
56 CI	1212,230			63,500	28,624	36,510	(2) No
54 RE	1170,174	14,461	Tabla 4.7 I				
52 CI	1138,712			16,750	49,034	86,406	(2) No
50 RE	1107,154	79,403	R' ≥ 2*50				
48 CI	982,751			45,000	100,000	(2) No	
46 RE	945,626	58,610	R' ≥ 2*50				
44 CI	885,015			34,000	100,000	(2) No	
42 RE	851,176	50,470	R' ≥ 2*50				
40 CI	788,705			41,000	100,000	(2) No	
38 RE	744,995	2,413	Tabla 4.7 I				
36 CI	734,582			43,000	34,423	50,688	(4) No
34 RE	702,497	12,407	Tabla 4.7 I				
32 CI	680,090			85,000	35,722	53,863	(2) No
30 RE	653,064	8,156	Tabla 4.7 I				
28 CI	634,907			100,000	62,995	120,538	(1) Sí

26 RE	603,770	19,998	Tabla 4.7 I				
24 CI	566,772			37,500	72,735	144,350	(2) No
22 RE	533,924	101,830	$R' \geq 2*50$				
20 CI	422,094			500,000	100,000		(2) No

Norma 3.1-IC Trazado 2000

Coordinación entre alineaciones curvas consecutivas: sentido creciente de los PP.KK.

Alineación	P.K. final (m)	Longitud	Criterio	Radio (m)	Radio de salida máximo (m)	Radio de salida mínimo (m)	Cumple
20 CI	422,094			500,000			
22 RE	533,924	101,830	$L_r \leq 400$ m				
24 CI	566,772			37,500	> 670	259	(2) No
26 RE	603,770	19,998	$L_r \leq 400$ m				
28 CI	634,907			100,000	56	29	(2) No
30 RE	653,064	8,156	$L_r \leq 400$ m				
32 CI	680,090			85,000	151	67	(1) Sí
34 RE	702,497	12,407	$L_r \leq 400$ m				
36 CI	734,582			43,000	128	58	(2) No
38 RE	744,995	2,413	$L_r \leq 400$ m				
40 CI	788,705			41,000	64	32	(3) No
42 RE	851,176	50,470	$L_r \leq 400$ m				
44 CI	885,015			34,000	61	31	(3) No
46 RE	945,626	58,610	$L_r \leq 400$ m				
48 CI	982,751			45,000	51	27	(3) No
50 RE	1107,154	79,403	$L_r \leq 400$ m				
52 CI	1138,712			16,750	67	33	(2) No
54 RE	1170,174	14,461	$L_r \leq 400$ m				
56 CI	1212,230			63,500	25	18	(2) No
(sin recta)		0,000	$L_r \leq 400$ m				
58 CI	1213,309			32,069	95	50	(2) No
(sin recta)		0,000	$L_r \leq 400$ m				
60 CI	1231,304			45,000	48	26	(3) No
(sin recta)		0,000	$L_r \leq 400$ m				
62 CI	1249,922			86,465	67	33	(2) No
(sin recta)		0,000	$L_r \leq 400$ m				
64 CI	1266,491			36,000	130	59	(2) No
(sin recta)		0,000	$L_r \leq 400$ m				
66 CI	1288,354			185,000	54	28	(2) No
(sin recta)		0,000	$L_r \leq 400$ m				
68 CI	1309,388			70,000	299	123	(2) No
70 RE	1403,615	44,499	$L_r \leq 400$ m				
72 CI	1443,982			74,000	105	50	(1) Sí
74 RE	1478,238	16,256	$L_r \leq 400$ m				
75 CI	1521,145			300,000	111	51	(6) No
76 RE	1787,412	266,267	$L_r \leq 400$ m				
77 CI	1839,198			800,000	670	186	(6) No
78 RE	1925,678	86,480	$L_r \leq 400$ m				
80 CI	1965,949			80,000	> 670	373	(6) No
82 RE	2029,077	38,128	$L_r \leq 400$ m				
83 CI	2082,250			500,000	120	53	(6) No

84 RE	2201,181	118,931	Lr ≤ 400 m				
86 CI	2238,562			46,000	> 670	259	(6) No
88 RE	2266,390	17,828	Lr ≤ 400 m				
90 CI	2295,580			57,000	69	34	(5) No
92 RE	2351,520	31,941	Lr ≤ 400 m				
94 CI	2384,480			80,000	86	50	(1) Sí
96 RE	2424,421	31,932	Lr ≤ 400 m				
98 CI	2448,760			19,000	120	53	(2) No
100 RE	2482,397	13,637	Lr ≤ 400 m				
102 CI	2556,120			56,000	28	19	(2) No
104 RE	2594,322	18,203	Lr ≤ 400 m				
105 CI	2621,499			300,000	84	50	(6) No
106 RE	2665,455	43,956	Lr ≤ 400 m				
108 CI	2720,559			57,000	670	186	(6) No
110 RE	2994,100	247,541	Lr ≤ 400 m				
112 CI	3036,436			100,000	86	50	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
114 CI	3618,354			22054,764	151	67	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
116 CI	3649,600			55,000	> 670	389	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
118 CI	3723,906			392,194	83	50	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
120 CI	3731,867			100,000	> 670	230	(2) No
122 RE	3804,543	70,676	Lr ≤ 400 m				
124 CI	3846,686			115,000	151	67	(1) Sí
(sin recta)		0,000	Lr ≤ 400 m				
126 CI	3889,862			2024,126	174	77	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
128 CI	3905,854			180,000	> 670	389	(2) No
130 RE	3943,639	35,785	Lr ≤ 400 m				
132 CI	3974,379			125,000	289	119	(1) Sí
134 RE	3996,503	12,124	Lr ≤ 400 m				
136 CI	4042,757			160,000	190	84	(1) Sí
138 RE	4090,317	17,560	Lr ≤ 400 m				
140 CI	4121,570			37,500	250	106	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
142 CI	4148,272			96,954	56	29	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
144 CI	4165,926			75,000	146	65	(1) Sí
146 RE	4247,214	46,288	Lr ≤ 400 m				
148 CI	4280,707			37,000	113	51	(2) No
150 RE	4324,777	33,259	Lr ≤ 400 m				
152 CI	4359,714			45,000	55	29	(3) No
(sin recta)		0,000	Lr ≤ 400 m				
154 CI	4386,152			110,293	67	33	(2) No
(sin recta)		0,000	Lr ≤ 400 m				
156 CI	4395,849			44,000	167	74	(2) No
158 RE	4403,005	5,156	Lr ≤ 400 m				
160 CI	4428,163			54,000	66	33	(5) No
162 RE	4448,532	10,369	Lr ≤ 400 m				
164 CI	4451,720			40,000	81	50	(2) No

(sin recta)	0,000	Lr ≤ 400 m				
166 CI	4460,876		68,500	60	30	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
168 CI	4479,133		19,500	103	50	(2) No
170 RE	4504,477	15,344	Lr ≤ 400 m			
172 CI	4514,828		110,000	29	19	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
174 CI	4528,171		200,000	166	73	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
176 CI	4553,308		35,000	332	131	(2) No
178 RE	4611,398	40,089	Lr ≤ 400 m			
180 CI	4644,461		90,000	52	28	(2) No
182 RE	4681,779	19,319	Lr ≤ 400 m			
184 CI	4718,704		39,000	135	60	(2) No
186 RE	4733,433	10,729	Lr ≤ 400 m			
188 CI	4791,409		70,000	58	30	(2) No
190 RE	4832,145	35,736	Lr ≤ 400 m			
192 CI	4872,624		51,500	105	50	(1) Sí
(sin recta)	0,000	Lr ≤ 400 m				
194 CI	4889,752		30,673	77	50	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
196 CI	4935,205		76,800	46	25	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
198 CI	4955,245		752,745	115	52	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
200 CI	5001,181		32,000	13389	358	(2) No
202 RE	5023,019	16,839	Lr ≤ 400 m			
204 CI	5049,425		47,000	48	26	(3) No
206 RE	5149,874	93,449	Lr ≤ 400 m			
208 CI	5179,633		30,000	70	34	(2) No
210 RE	5282,792	77,025	Lr ≤ 400 m			
212 CI	5312,687		55,000	45	25	(2) No

Norma 3.1-IC Trazado 2000

Coordinación entre alineaciones curvas consecutivas: sentido decreciente de los PP.KK.

Alineación	P.K. final (m)	Longitud	Criterio	Radio (m)	Radio de salida máximo (m)	Radio de salida mínimo (m)	Cumple
212 CI	5312,687			55,000			
210 RE	5282,792	77,025	Lr ≤ 400 m				
208 CI	5179,633			30,000	83	50	(2) No
206 RE	5149,874	93,449	Lr ≤ 400 m				
204 CI	5049,425			47,000	45	25	(2) No
202 RE	5023,019	16,839	Lr ≤ 400 m				
200 CI	5001,181			32,000	70	34	(2) No
(sin recta)	0,000	Lr ≤ 400 m					
198 CI	4955,245			752,745	48	26	(2) No
(sin recta)	0,000	Lr ≤ 400 m					
196 CI	4935,205			76,800	> 670	358	(2) No
(sin recta)	0,000	Lr ≤ 400 m					
194 CI	4889,752			30,673	115	52	(2) No

(sin recta)	0,000	Lr ≤ 400 m				
192 CI	4872,624		51,500	46	25	(2) No
190 RE	4832,145	35,736	Lr ≤ 400 m			
188 CI	4791,409		70,000	77	50	(1) Sí
186 RE	4733,433	10,729	Lr ≤ 400 m			
184 CI	4718,704		39,000	105	50	(2) No
182 RE	4681,779	19,319	Lr ≤ 400 m			
180 CI	4644,461		90,000	58	30	(2) No
178 RE	4611,398	40,089	Lr ≤ 400 m			
176 CI	4553,308		35,000	135	60	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
174 CI	4528,171		200,000	52	28	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
172 CI	4514,828		110,000	332	131	(2) No
170 RE	4504,477	15,344	Lr ≤ 400 m			
168 CI	4479,133		19,500	166	73	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
166 CI	4460,876		68,500	29	19	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
164 CI	4451,720		40,000	103	50	(2) No
162 RE	4448,532	10,369	Lr ≤ 400 m			
160 CI	4428,163		54,000	60	30	(5) No
158 RE	4403,005	5,156	Lr ≤ 400 m			
156 CI	4395,849		44,000	81	50	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
154 CI	4386,152		110,293	66	33	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
152 CI	4359,714		45,000	167	74	(2) No
150 RE	4324,777	33,259	Lr ≤ 400 m			
148 CI	4280,707		37,000	67	33	(3) No
146 RE	4247,214	46,288	Lr ≤ 400 m			
144 CI	4165,926		75,000	55	29	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
142 CI	4148,272		96,954	113	51	(1) Sí
(sin recta)	0,000	Lr ≤ 400 m				
140 CI	4121,570		37,500	146	65	(2) No
138 RE	4090,317	17,560	Lr ≤ 400 m			
136 CI	4042,757		160,000	56	29	(2) No
134 RE	3996,503	12,124	Lr ≤ 400 m			
132 CI	3974,379		125,000	250	106	(1) Sí
130 RE	3943,639	35,785	Lr ≤ 400 m			
128 CI	3905,854		180,000	190	84	(1) Sí
(sin recta)	0,000	Lr ≤ 400 m				
126 CI	3889,862		2024,126	289	119	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
124 CI	3846,686		115,000	> 670	389	(2) No
122 RE	3804,543	70,676	Lr ≤ 400 m			
120 CI	3731,867		100,000	174	77	(1) Sí
(sin recta)	0,000	Lr ≤ 400 m				
118 CI	3723,906		392,194	151	67	(2) No
(sin recta)	0,000	Lr ≤ 400 m				
116 CI	3649,600		55,000	> 670	230	(2) No

(sin recta)	0,000	Lr ≤ 400 m			
114 CI	3618,354	22054,764	83	50	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
112 CI	3036,436	100,000	> 670	389	(2) No
110 RE	2994,100	247,541	Lr ≤ 400 m		
108 CI	2720,559	57,000	151	67	(2) No
106 RE	2665,455	43,956	Lr ≤ 400 m		
105 CI	2621,499	300,000	86	50	(6) No
104 RE	2594,322	18,203	Lr ≤ 400 m		
102 CI	2556,120	56,000	670	186	(6) No
100 RE	2482,397	13,637	Lr ≤ 400 m		
98 CI	2448,760	19,000	84	50	(2) No
96 RE	2424,421	31,932	Lr ≤ 400 m		
94 CI	2384,480	80,000	28	19	(2) No
92 RE	2351,520	31,941	Lr ≤ 400 m		
90 CI	2295,580	57,000	120	53	(1) Sí
88 RE	2266,390	17,828	Lr ≤ 400 m		
86 CI	2238,562	46,000	86	50	(2) No
84 RE	2201,181	118,931	Lr ≤ 400 m		
83 CI	2082,250	500,000	69	34	(6) No
82 RE	2029,077	38,128	Lr ≤ 400 m		
80 CI	1965,949	80,000	> 670	259	(6) No
78 RE	1925,678	86,480	Lr ≤ 400 m		
77 CI	1839,198	800,000	120	53	(6) No
76 RE	1787,412	266,267	Lr ≤ 400 m		
75 CI	1521,145	300,000	> 670	373	(6) No
74 RE	1478,238	16,256	Lr ≤ 400 m		
72 CI	1443,982	74,000	670	186	(6) No
70 RE	1403,615	44,499	Lr ≤ 400 m		
68 CI	1309,388	70,000	111	51	(1) Sí
(sin recta)	0,000	Lr ≤ 400 m			
66 CI	1288,354	185,000	105	50	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
64 CI	1266,491	36,000	299	123	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
62 CI	1249,922	86,465	54	28	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
60 CI	1231,304	45,000	130	59	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
58 CI	1213,309	32,069	67	33	(2) No
(sin recta)	0,000	Lr ≤ 400 m			
56 CI	1212,230	63,500	48	26	(2) No
54 RE	1170,174	14,461	Lr ≤ 400 m		
52 CI	1138,712	16,750	95	50	(2) No
50 RE	1107,154	79,403	Lr ≤ 400 m		
48 CI	982,751	45,000	25	18	(2) No
46 RE	945,626	58,610	Lr ≤ 400 m		
44 CI	885,015	34,000	67	33	(3) No
42 RE	851,176	50,470	Lr ≤ 400 m		
40 CI	788,705	41,000	51	27	(3) No
38 RE	744,995	2,413	Lr ≤ 400 m		
36 CI	734,582	43,000	61	31	(3) No

34 RE	702,497	12,407	$L_r \leq 400$ m				
32 CI	680,090			85,000	64	32	(2) No
30 RE	653,064	8,156	$L_r \leq 400$ m				
28 CI	634,907			100,000	128	58	(1) Sí
26 RE	603,770	19,998	$L_r \leq 400$ m				
24 CI	566,772			37,500	151	67	(2) No
22 RE	533,924	101,830	$L_r \leq 400$ m				
20 CI	422,094			500,000	56	29	(2) No

Criterio empleado para radios máximo y mínimo en la Norma 3.1-IC Trazado 2000:

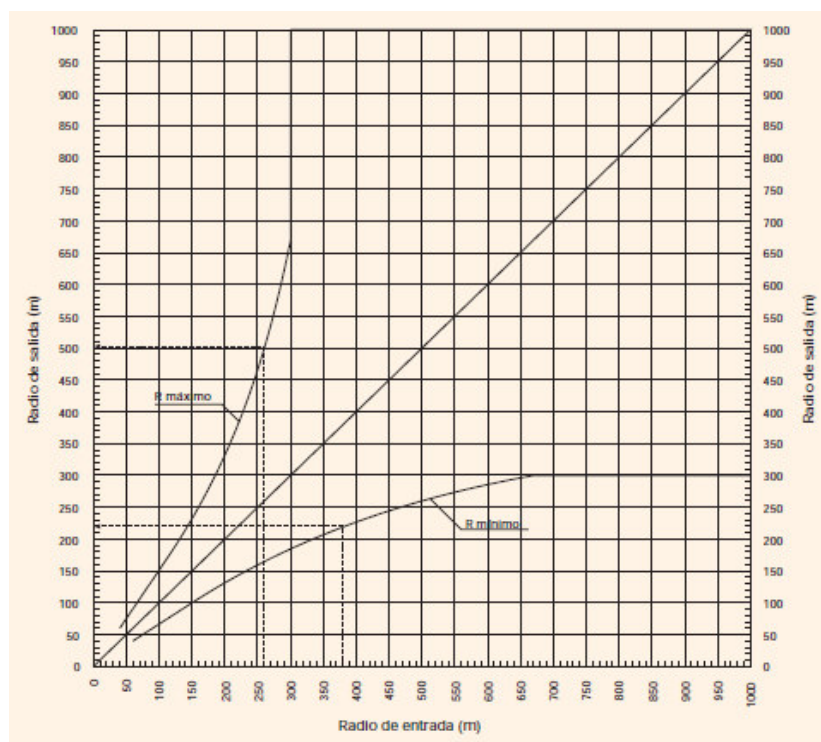


FIGURA 4.3. RELACIÓN ENTRE RADIOS DE CURVAS CIRCULARES CONSECUTIVAS SIN RECTA INTERMEDIA, O CON RECTA DE LONGITUD MENOR O IGUAL QUE CUATROCIENTOS METROS (400 M) PARA CARRETERAS DEL GRUPO 2

Función empleada para el cálculo de radios mínimo en Excel con valores no tabulados en la Norma 3.1-IC Trazado 2000 (radio mínimo límite $y=389$).

