



ESTUDIOS Y DISEÑOS DEFINITIVOS PARA LA REHABILITACION DE LA VIA CONEXIÓN E30 - PEDRO VÉLEZ - CARLOS JULIO AROSEMENA, UBICADA EN EL CANTÓN EL EMPALME DE LA PROVINCIA DEL GUAYAS



ELEMENTOS DEL TRAZADO HORIZONTAL

No.	Type	Length	Radius	Minimum Radius Table	Design Speed	Start Station	End Station	External Secant	PI Station	PI Point
1	Line	13.069m			20 km/h	0+000.00m	0+013.07m			
2	Curve	33.855m	200.000m	Pmax 2% MTOP-2003	20 km/h	0+013.07m	0+046.92m	0.718m	0+030.04m	(638567.750m,9884448.631m)
3	Line	1.390m			20 km/h	0+046.92m	0+048.31m			
4	Curve	28.459m	200.000m	Pmax 2% MTOP-2003	20 km/h	0+048.31m	0+076.77m	0.507m	0+062.57m	(638548.898m,9884475.242m)
5	Line	393.817m			80 km/h	0+076.77m	0+470.59m			
6	Line	229.208m			80 km/h	0+470.59m	0+699.80m			
7	Curve	67.910m	500.000m	Pmax 8% MTOP-2003	80 km/h	0+699.80m	0+767.71m	1.155m	0+733.81m	(638242.829m,9885072.691m)
8	Line	362.718m			80 km/h	0+767.71m	1+130.43m			
9	Line	52.149m			80 km/h	1+130.43m	1+182.57m			
10	Curve	128.775m	800.000m	Pmax 8% MTOP-2003	80 km/h	1+182.57m	1+311.35m	2.598m	1+247.10m	(638073.840m,9885557.482m)
11	Line	334.434m			80 km/h	1+311.35m	1+645.78m			
12	Curve	383.428m	500.000m	Pmax 8% MTOP-2003	80 km/h	1+645.78m	2+029.21m	39.149m	1+847.48m	(637789.975m,9886086.831m)
13	Line	138.794m			80 km/h	2+029.21m	2+168.01m			
14	Line	343.375m			80 km/h	2+168.01m	2+511.38m			
15	Curve	101.083m	1200.000m	Pmax 8% MTOP-2003	80 km/h	2+511.38m	2+612.46m	1.065m	2+561.95m	(637988.595m,9886793.901m)
16	Line	237.534m			80 km/h	2+612.46m	2+850.00m			
17	Curve	103.368m	800.000m	Pmax 8% MTOP-2003	80 km/h	2+850.00m	2+953.37m	1.672m	2+901.75m	(638107.495m,9887112.285m)
18	Line	497.213m			80 km/h	2+953.37m	3+450.58m			
19	Curve	200.577m	320.000m	Pmax 8% MTOP-2003	80 km/h	3+450.58m	3+651.16m	16.385m	3+554.29m	(638255.146m,9887748.040m)
20	Line	662.821m			80 km/h	3+651.16m	4+313.98m			
21	Line	171.902m			80 km/h	4+313.98m	4+485.88m			
22	Curve	50.892m	600.000m	Pmax 8% MTOP-2003	80 km/h	4+485.88m	4+536.77m	0.540m	4+511.34m	(637880.571m,9888636.172m)
23	Line	157.211m			80 km/h	4+536.77m	4+693.98m			
24	Curve	174.800m	470.000m	Pmax 8% MTOP-2003	80 km/h	4+693.98m	4+868.78m	8.245m	4+782.40m	(637796.249m,9888893.818m)
25	Line	385.583m			80 km/h	4+868.78m	5+254.36m			
26	Line	171.995m			80 km/h	5+254.36m	5+426.36m			
27	Line	169.003m			80 km/h	5+426.36m	5+595.36m			
28	Line	322.775m			80 km/h	5+595.36m	5+918.14m			
29	Curve	311.936m	520.000m	Pmax 8% MTOP-2003	80 km/h	5+918.14m	6+230.07m	24.300m	6+078.96m	(636974.682m,9889899.461m)
30	Line	407.650m			80 km/h	6+230.07m	6+637.72m			
31	Line	572.577m			80 km/h	6+637.72m	7+210.30m			
32	Curve	126.215m	1200.000m	Pmax 8% MTOP-2003	80 km/h	7+210.30m	7+336.52m	1.661m	7+273.47m	(636867.794m,9891098.919m)
33	Line	506.010m			80 km/h	7+336.52m	7+842.53m			

34	Curve	200.414m	1200.000m	Pmax 8% MTOP-2003	80 km/h	7+842.53m	8+042.94m	4.196m	7+942.97m	(636877.762m,9891768.461m)
35	Line	680.074m			80 km/h	8+042.94m	8+723.01m			
36	Line	370.266m			80 km/h	8+723.01m	9+093.28m			
37	Line	228.829m			80 km/h	9+093.28m	9+322.11m			
38	Curve	202.226m	850.000m	Pmax 8% MTOP-2003	80 km/h	9+322.11m	9+524.33m	6.050m	9+423.70m	(637145.029m,9893225.351m)
39	Line	308.993m			80 km/h	9+524.33m	9+833.33m			
40	Line	260.713m			80 km/h	9+833.33m	10+094.04m			
41	Curve	241.654m	640.000m	Pmax 8% MTOP-2003	80 km/h	10+094.04m	10+335.70m	11.577m	10+216.32m	(637470.339m,9893949.184m)
42	Line	674.517m			80 km/h	10+335.70m	11+010.21m			
43	Line	121.277m			80 km/h	11+010.21m	11+131.49m			
44	Curve	198.750m	290.000m	Pmax 8% MTOP-2003	80 km/h	11+131.49m	11+330.24m	17.901m	11+234.95m	(637521.217m,9894969.450m)
45	Line	242.003m			80 km/h	11+330.24m	11+572.24m			
46	Line	91.869m			80 km/h	11+572.24m	11+664.11m			
47	Curve	161.879m	300.000m	Pmax 8% MTOP-2003	80 km/h	11+664.11m	11+825.99m	11.260m	11+747.07m	(637870.860m,9895354.744m)
48	Line	153.367m			80 km/h	11+825.99m	11+979.36m			
49	Curve	199.440m	320.000m	Pmax 8% MTOP-2003	80 km/h	11+979.36m	12+178.80m	16.192m	12+082.44m	(637937.511m,9895687.543m)
50	Line	216.954m			80 km/h	12+178.80m	12+395.75m			
51	Curve	166.960m	300.000m	Pmax 8% MTOP-2003	80 km/h	12+395.75m	12+562.71m	12.002m	12+481.45m	(638234.415m,9895964.074m)
52	Line	132.013m			80 km/h	12+562.71m	12+694.72m			
53	Curve	140.090m	170.000m	Pmax 8% MTOP-2003	80 km/h	12+694.72m	12+834.81m	15.527m	12+769.02m	(638310.720m,9896245.943m)
54	Line	361.660m			80 km/h	12+834.81m	13+196.47m			
55	Curve	229.951m	300.000m	Pmax 8% MTOP-2003	80 km/h	13+196.47m	13+426.42m	23.466m	13+317.43m	(638804.091m,9896504.280m)
56	Line	156.729m			80 km/h	13+426.42m	13+583.15m			
57	Curve	217.685m	400.000m	Pmax 8% MTOP-2003	80 km/h	13+583.15m	13+800.84m	15.279m	13+694.76m	(638927.264m,9896873.576m)
58	Line	204.812m			80 km/h	13+800.84m	14+005.65m			
59	Curve	255.089m	290.000m	Pmax 8% MTOP-2003	80 km/h	14+005.65m	14+260.74m	30.501m	14+142.11m	(639272.286m,9897166.939m)
60	Line	47.702m			80 km/h	14+260.74m	14+308.44m			
61	Curve	30.890m	1000.000m	Pmax 8% MTOP-2003	80 km/h	14+308.44m	14+339.33m	0.119m	14+323.89m	(639468.845m,9897132.193m)
62	Line	90.561m			80 km/h	14+339.33m	14+429.89m			
63	Line	572.190m			80 km/h	14+429.89m	15+002.08m			
64	Curve	166.269m	320.000m	Pmax 8% MTOP-2003	80 km/h	15+002.08m	15+168.35m	11.111m	15+087.14m	(640222.609m,9897012.282m)
65	Line	55.717m			80 km/h	15+168.35m	15+224.07m			
66	Line	400.685m			80 km/h	15+224.10m	15+624.78m			
67	Curve	76.744m	60.000m	Pmax 6% MTOP-2003	80 km/h	15+624.78m	15+701.53m	14.778m	15+669.41m	(640769.975m,9897004.920m)
68	Line	74.334m			80 km/h	15+701.53m	15+775.86m			
69	Curve	105.953m	80.000m	Pmax 6% MTOP-2003	80 km/h	15+775.86m	15+881.82m	21.441m	15+838.23m	(640852.889m,9896843.652m)
70	Line	170.725m			80 km/h	15+881.82m	16+052.54m			
71	Curve	41.639m	200.000m	Pmax 6% MTOP-2003	80 km/h	16+052.54m	16+094.18m	1.089m	16+073.44m	(641100.278m,9896901.186m)
72	Line	15.211m			80 km/h	16+094.18m	16+109.39m			
73	Line	80.694m			80 km/h	16+109.40m	16+190.09m			
74	Line	258.380m			80 km/h	16+190.09m	16+448.47m			

75	Line	300.937m		80 km/h	16+448.47m	16+749.41m		
76	Line	45.976m		80 km/h	16+749.41m	16+795.39m		