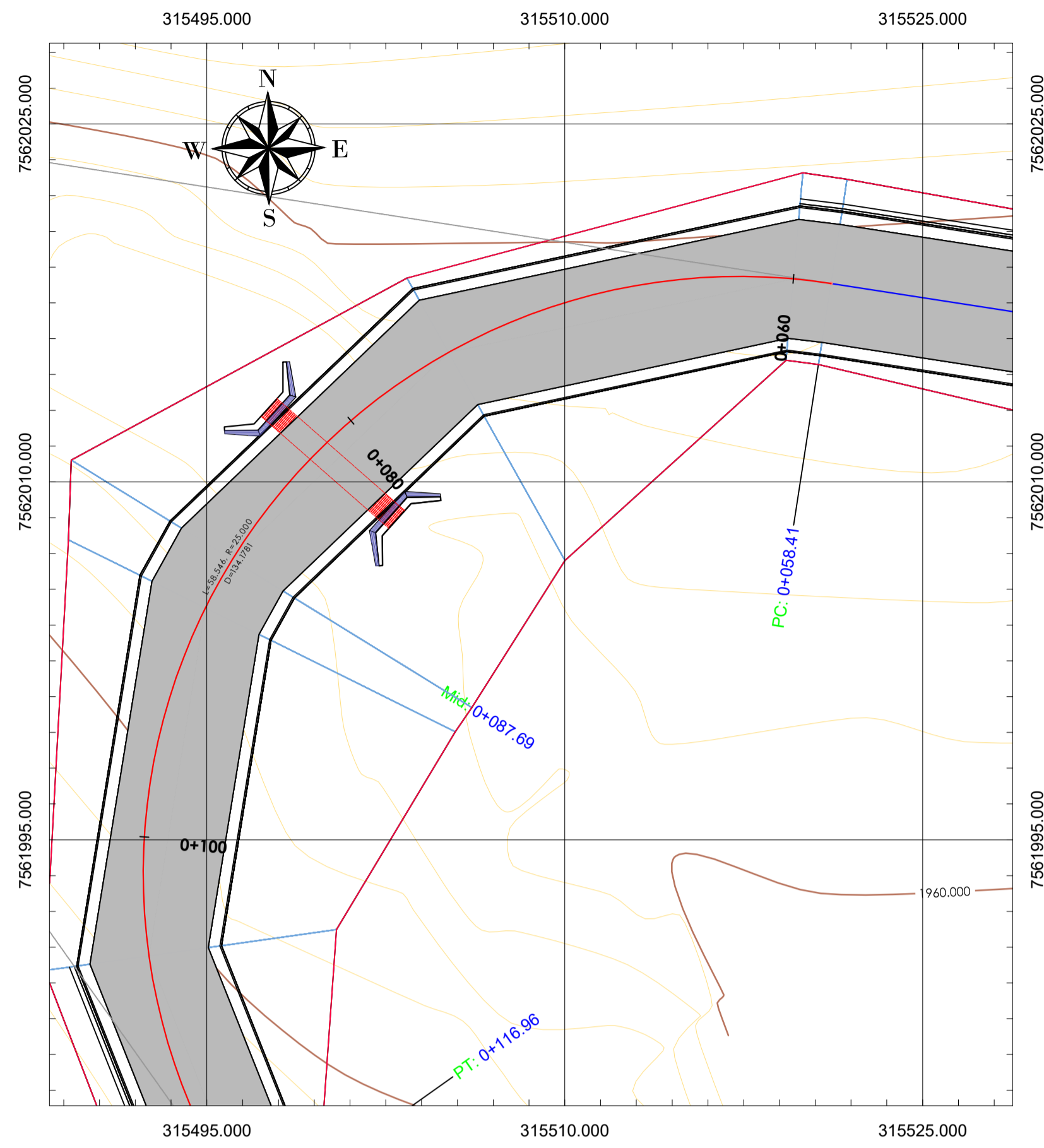


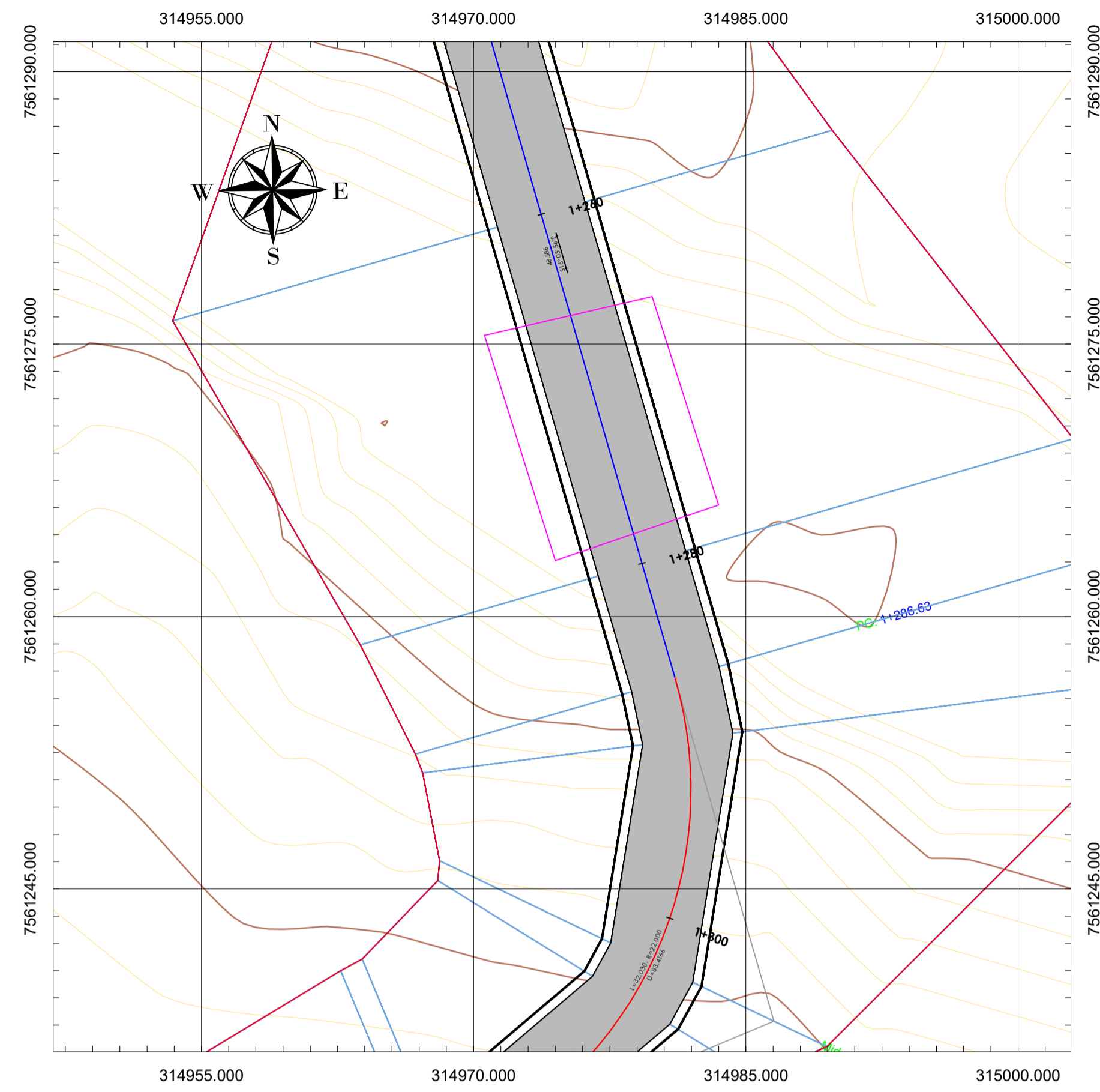
SECCIONES DE ALCANTARILLAS

ESC. 1:200



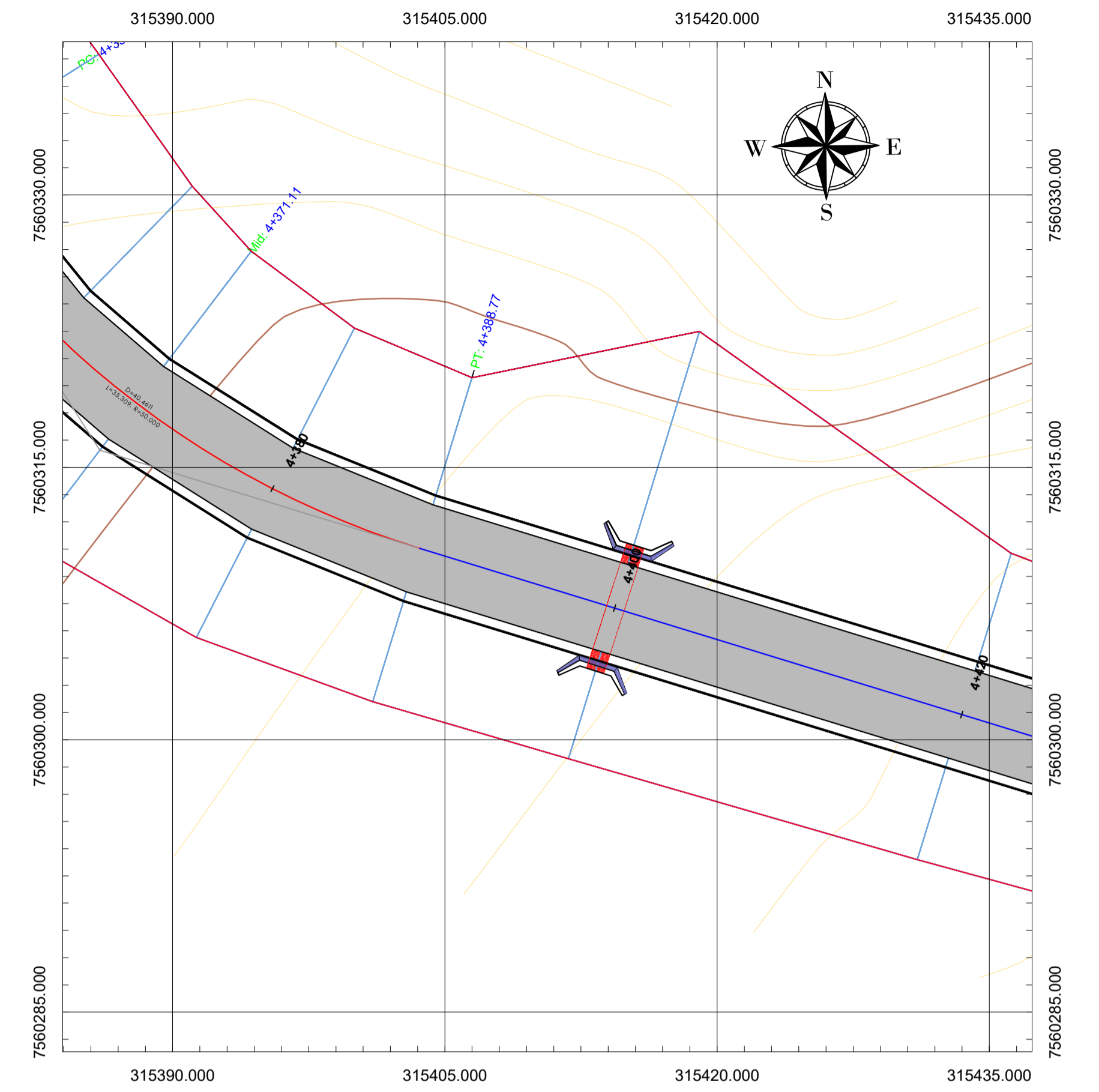
SECCIONES DEL PUENTE

ESC. 1:250

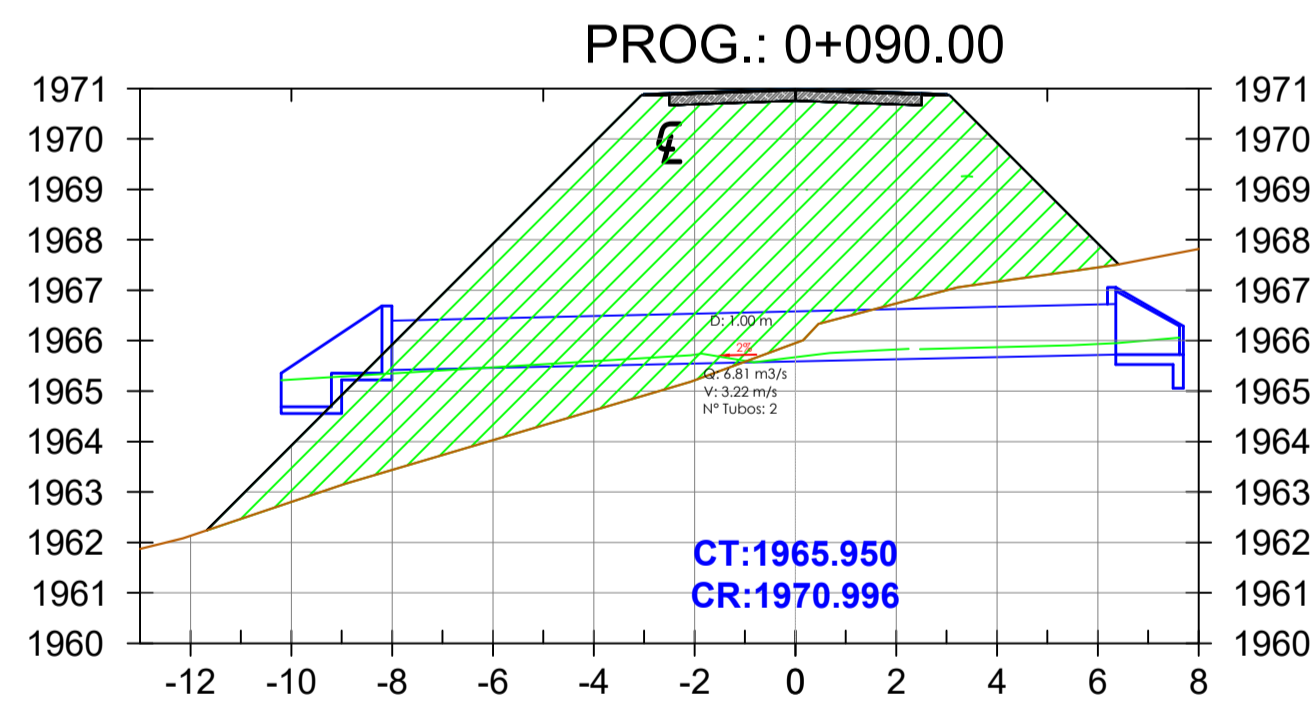


SECCIONES DE ALCANTARILLAS

ESC. 1:250

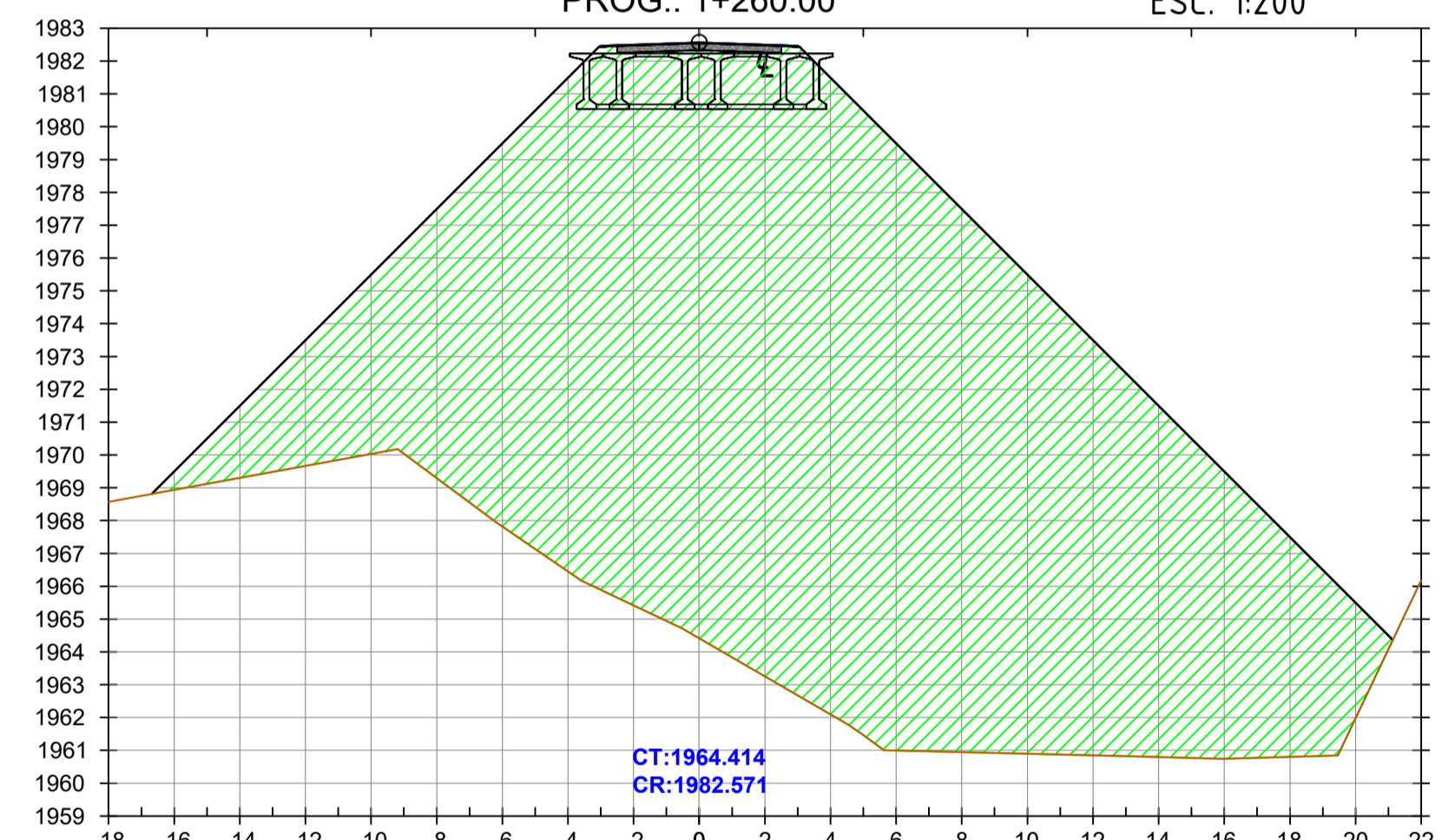


ESC. 1:150

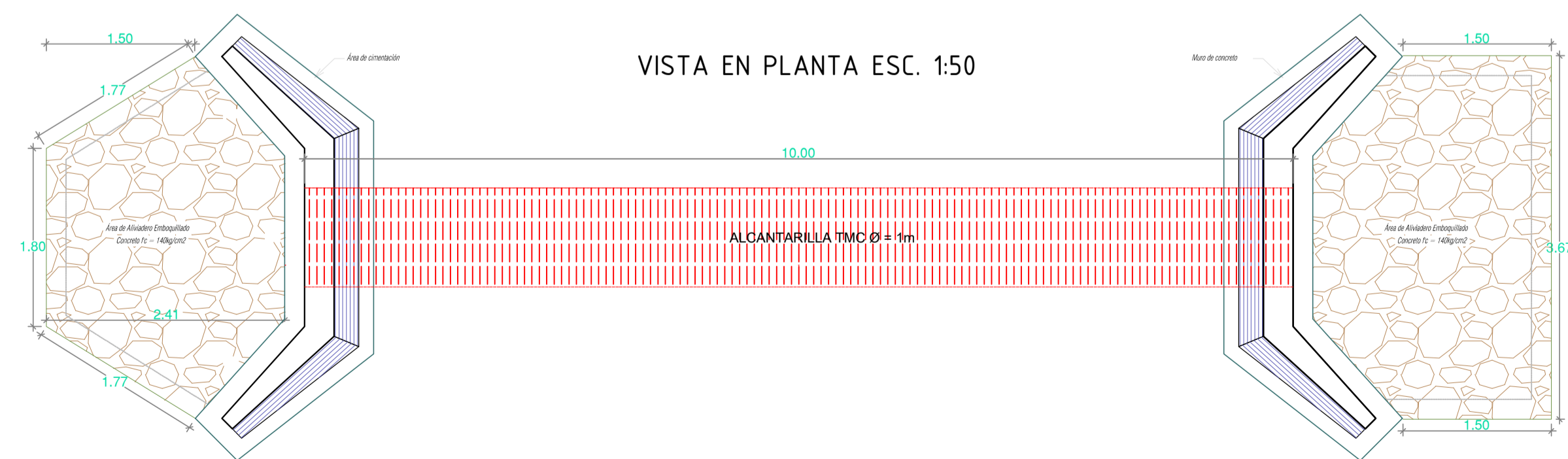
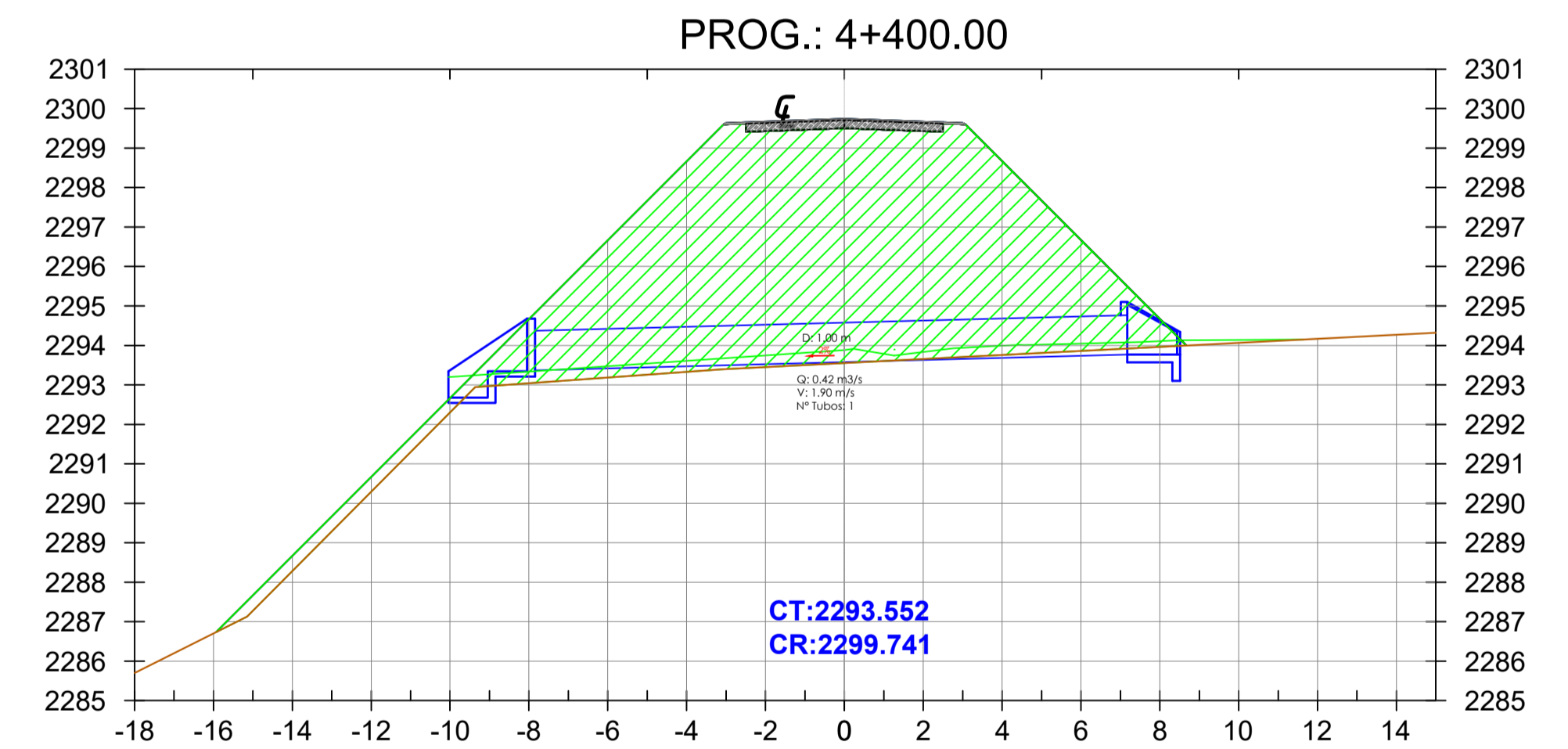


PROG.: 1+260.00

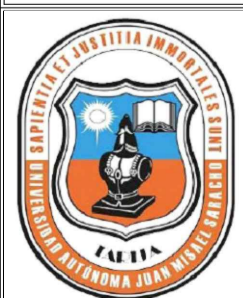
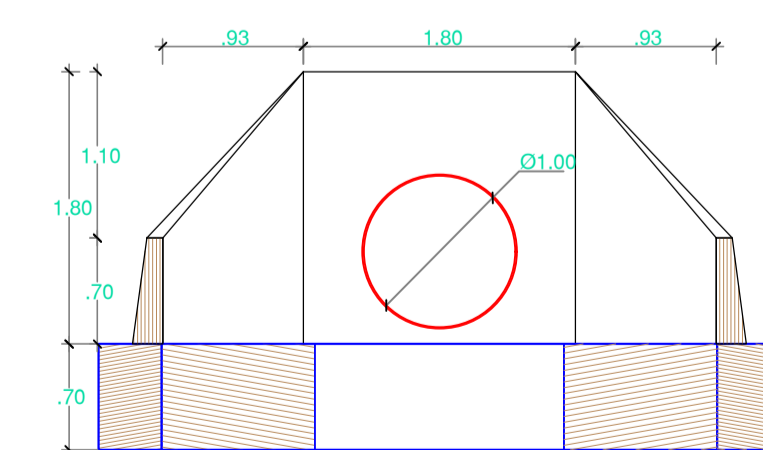
ESC. 1:200



ESC. 1:150



VISTA DE FRENTE ESC. 1:50



UNIVERSIDAD AUTÓNOMA  
JUAN MISAEL SARACHO

FACULTAD DE CIENCIAS Y TECNOLOGÍA  
CARRERA DE INGENIERÍA CIVIL

MATERIA:

PROYECTO DE GRADO II (MENCIÓN VÍAS)  
CIV - 502

TEMA:

"DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL  
RÍO GRANDE - YERBA BUENA"

UNIVERSITARIO:

JUAN CARLOS MENDOZA RUEDA

Plano: **DETALLES DE ALCANTARILLAS**

TRAMO  
RÍO GRANDE - YERBA BUENA

Progresivas:  
0+090  
1+260  
4+400

Nº de Lámina:

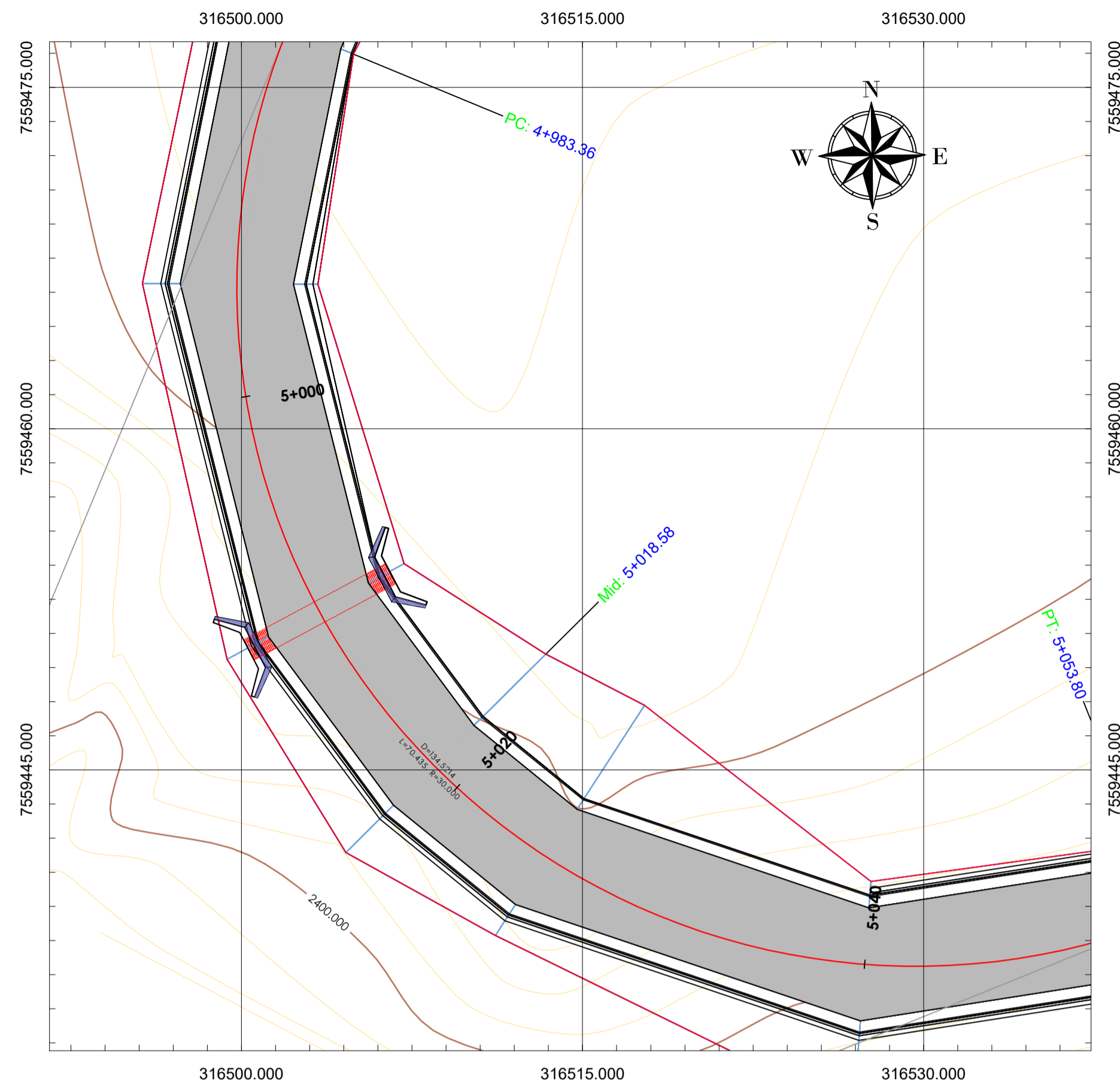
Escala:  
INDICADA

Fecha:  
JUNIO 2024

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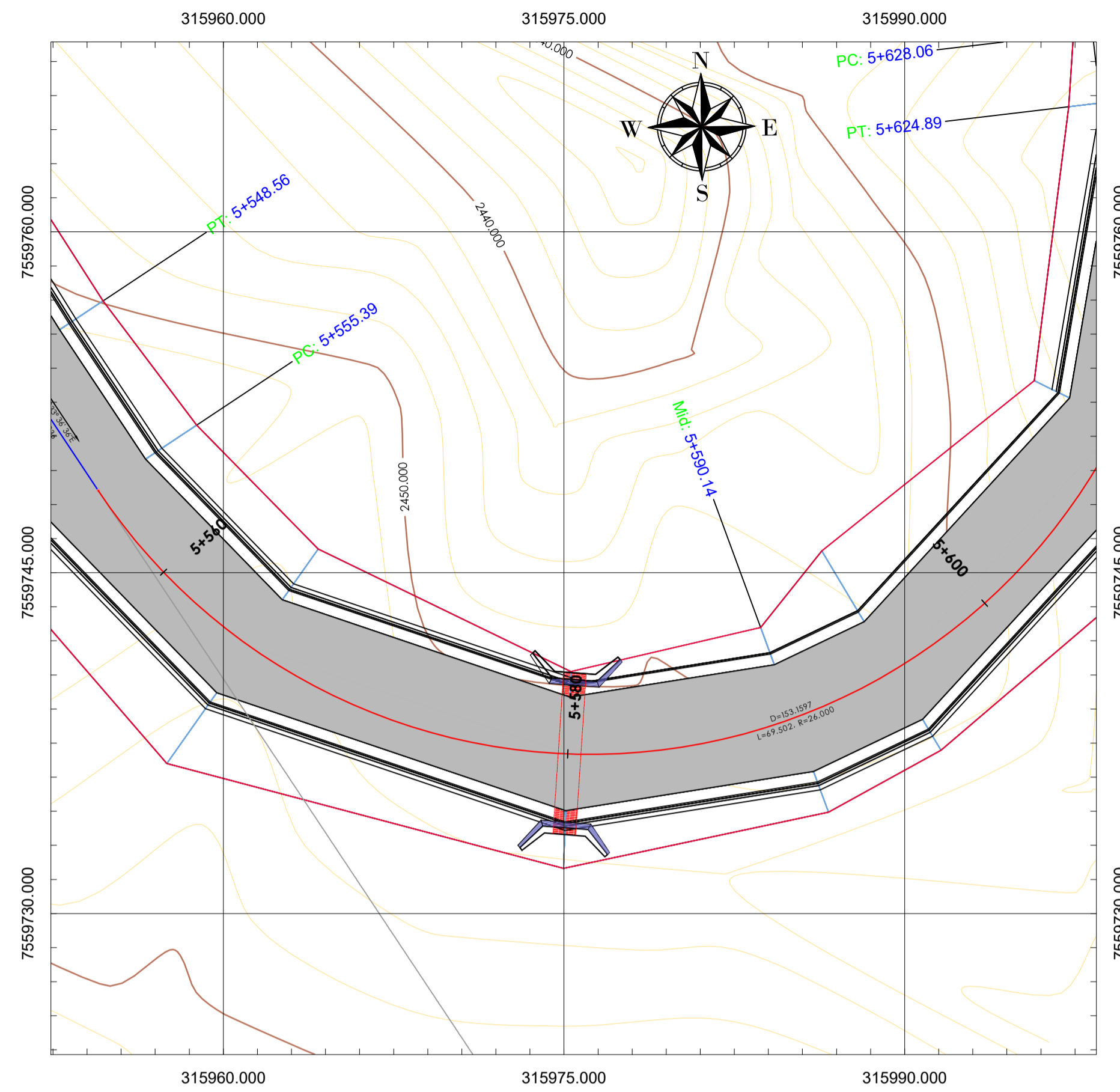
SECCIONES DE ALCANTARILLAS

ESC. 1:200



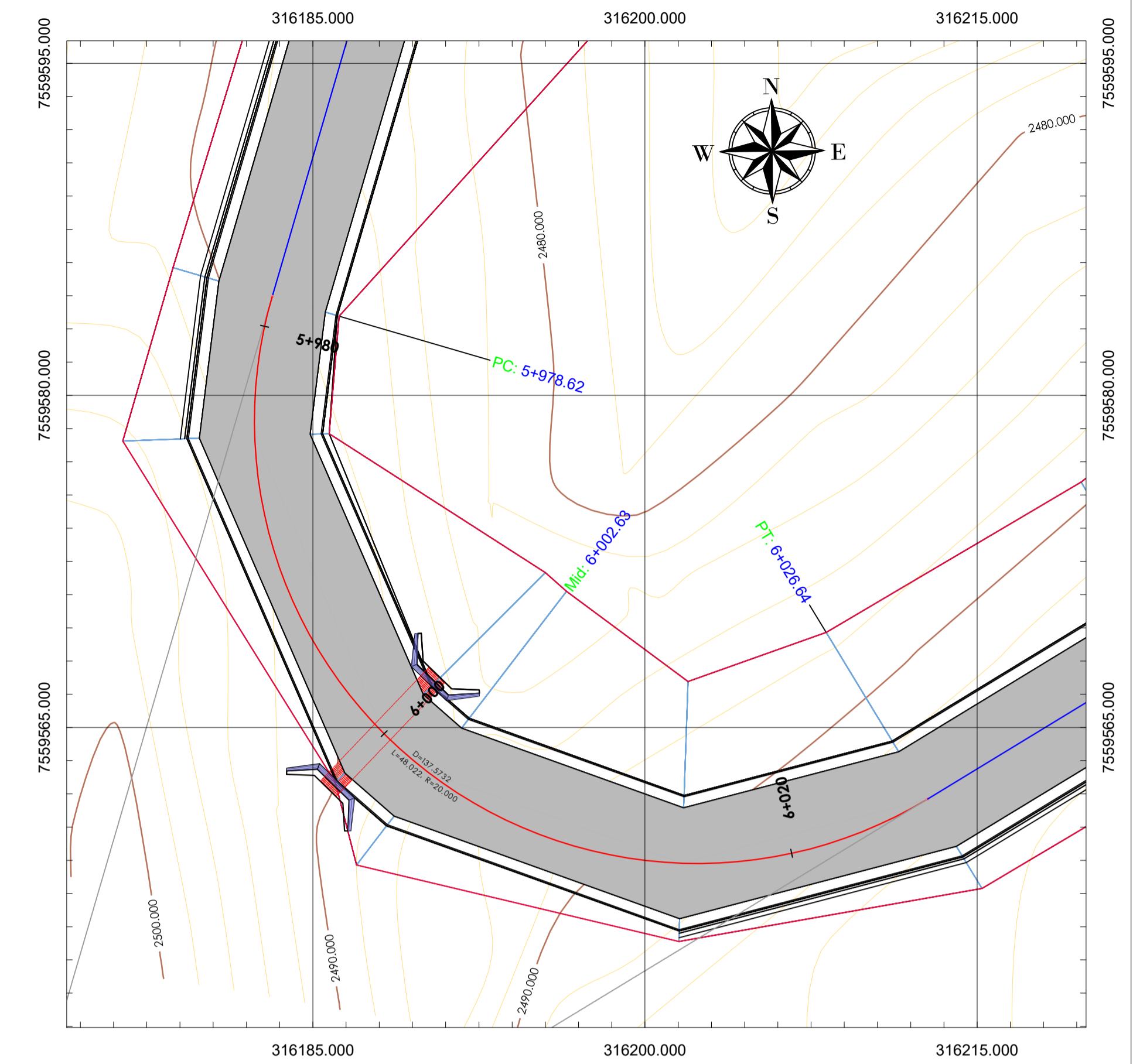
SECCIONES DE ALCANTARILLAS

ESC. 1:200



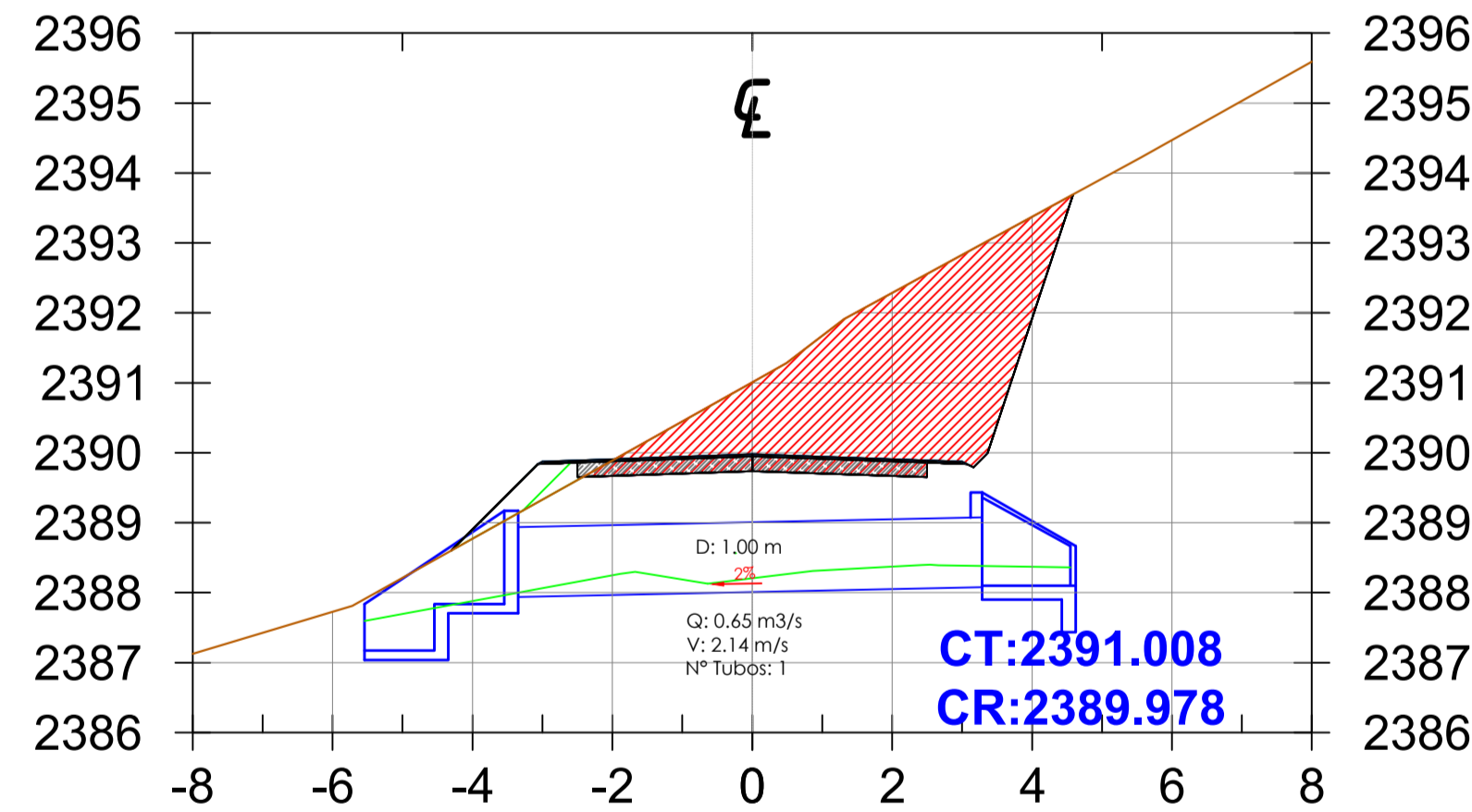
SECCIONES DE ALCANTARILLAS

ESC. 1:200



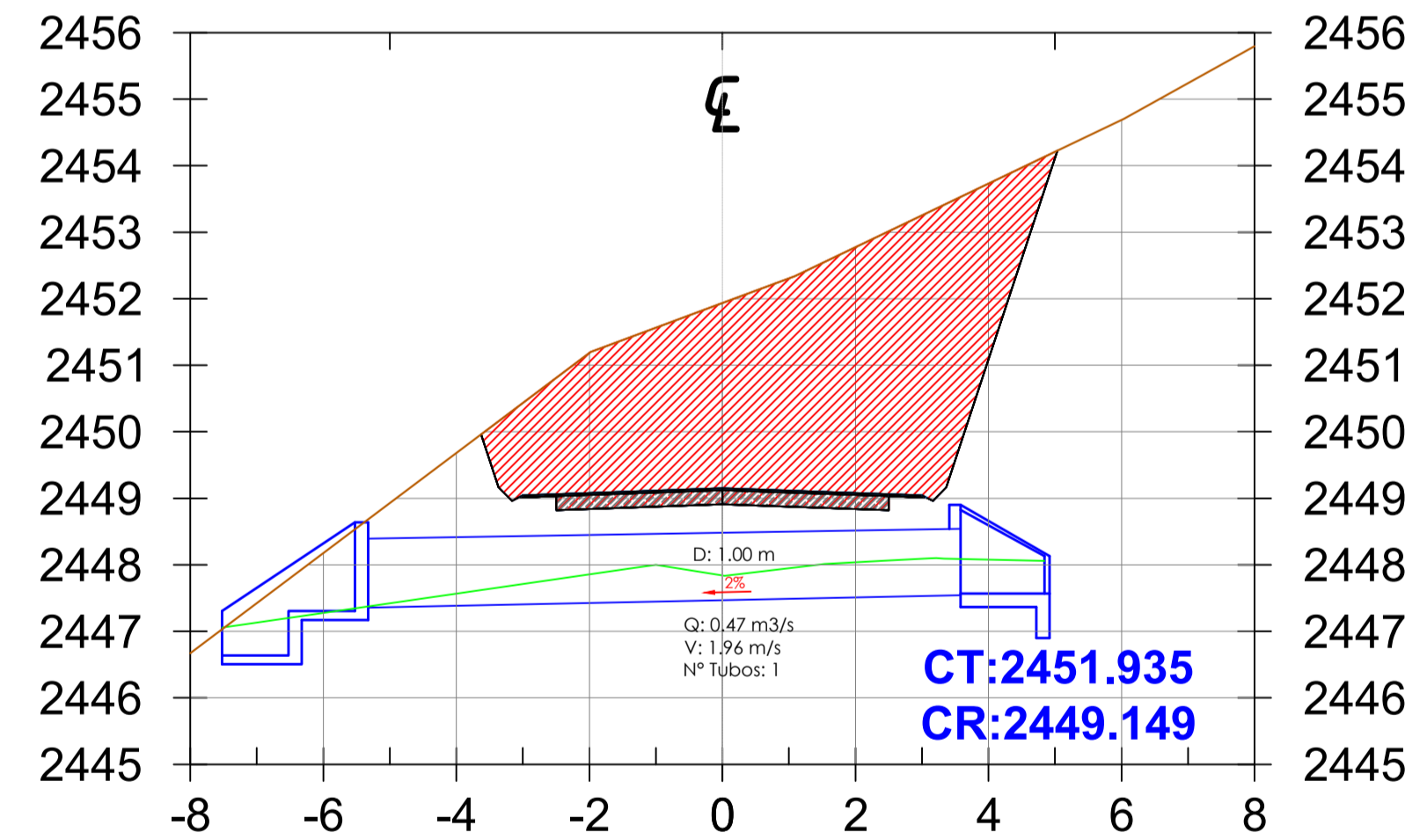
PROG.: 5+010.00

ESC. 1:100



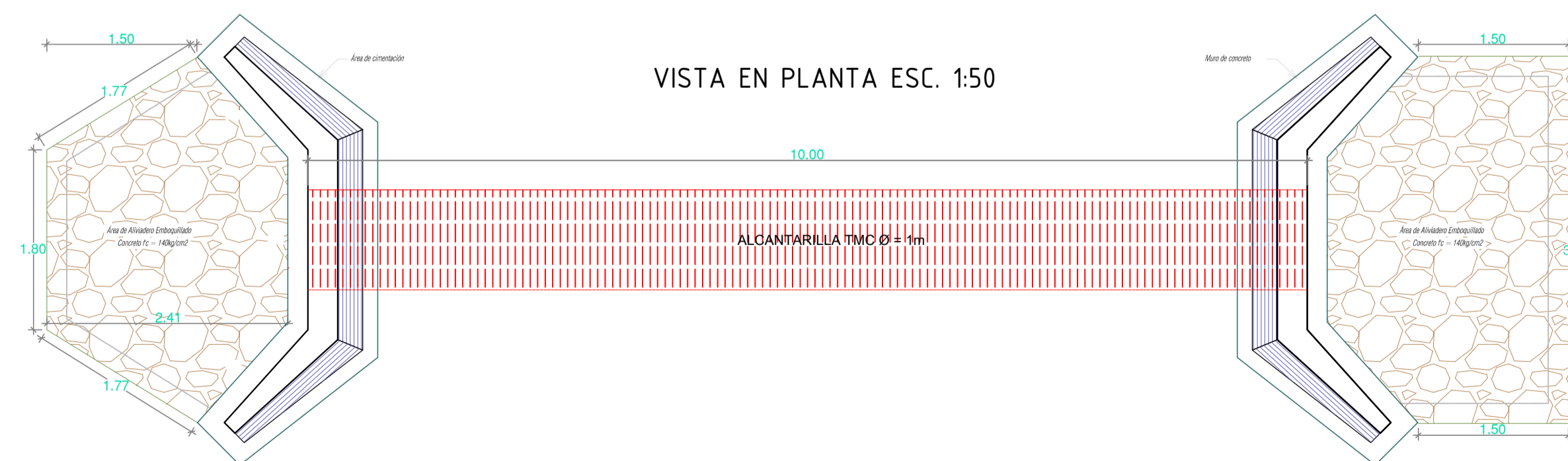
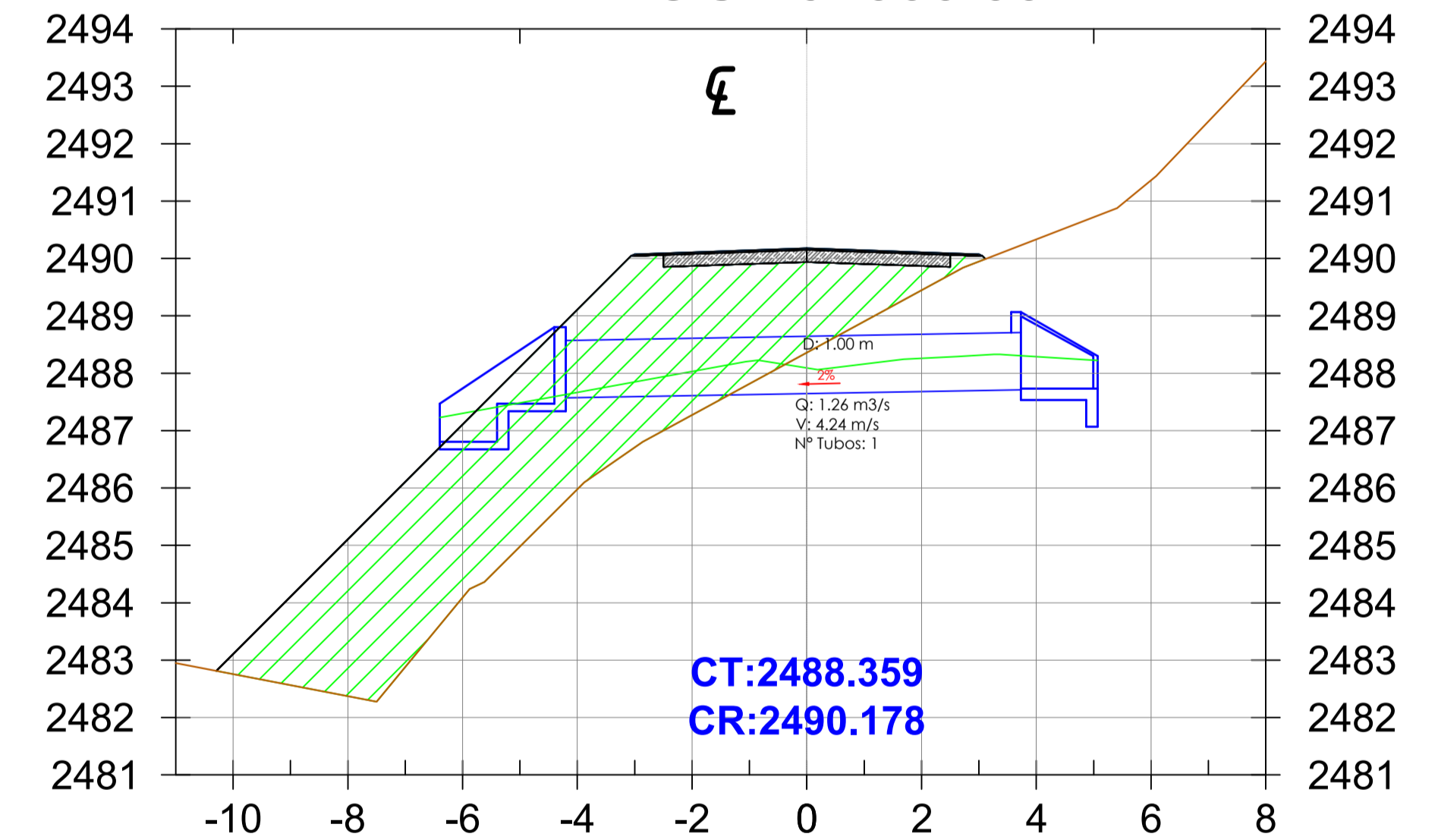
PROG.: 5+580.00

ESC. 1:100

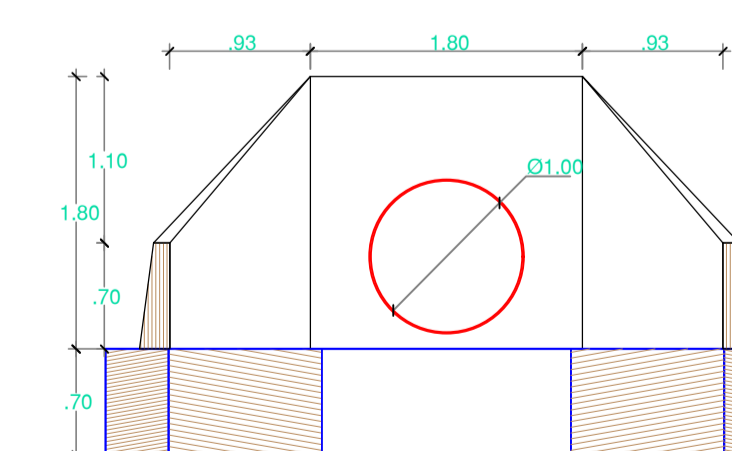


PROG.: 6+000.00

ESC. 1:100



VISTA DE FRENTE ESC. 1:50



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MATERIA:

PROYECTO DE GRADO II (MENCIÓN VÍAS)  
CIV - 502

TEMA:

"DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL  
RÍO GRANDE - YERBA BUENA"

UNIVERSITARIO:

JUAN CARLOS MENDOZA RUEDA

Plano: **DETALLES DE ALCANTARILLAS**

TRAMO  
RÍO GRANDE - YERBA BUENA

Progresivas:  
5+010  
5+380  
6+000

Nº de Lámina:

Escala:

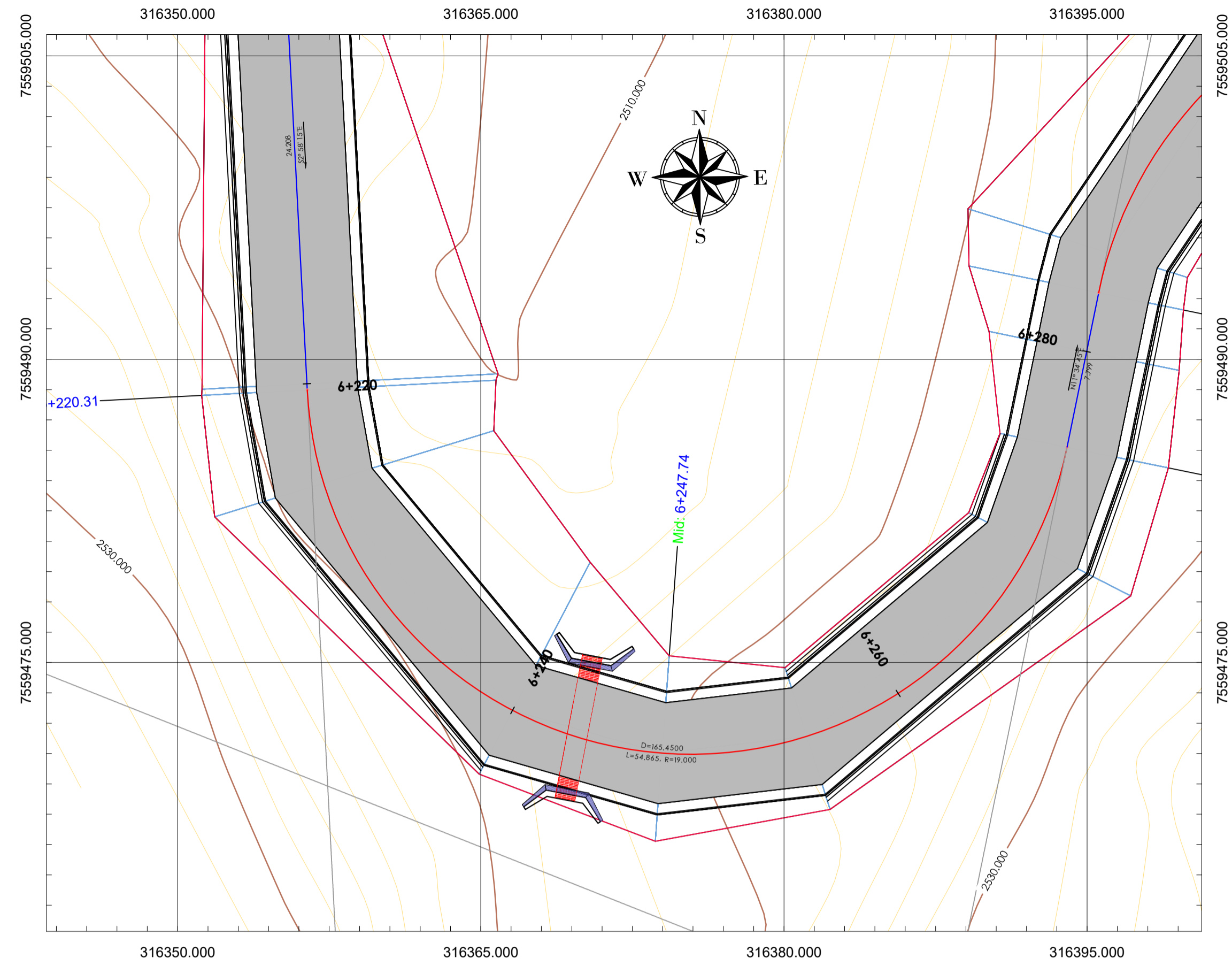
INDICADA

Fecha:

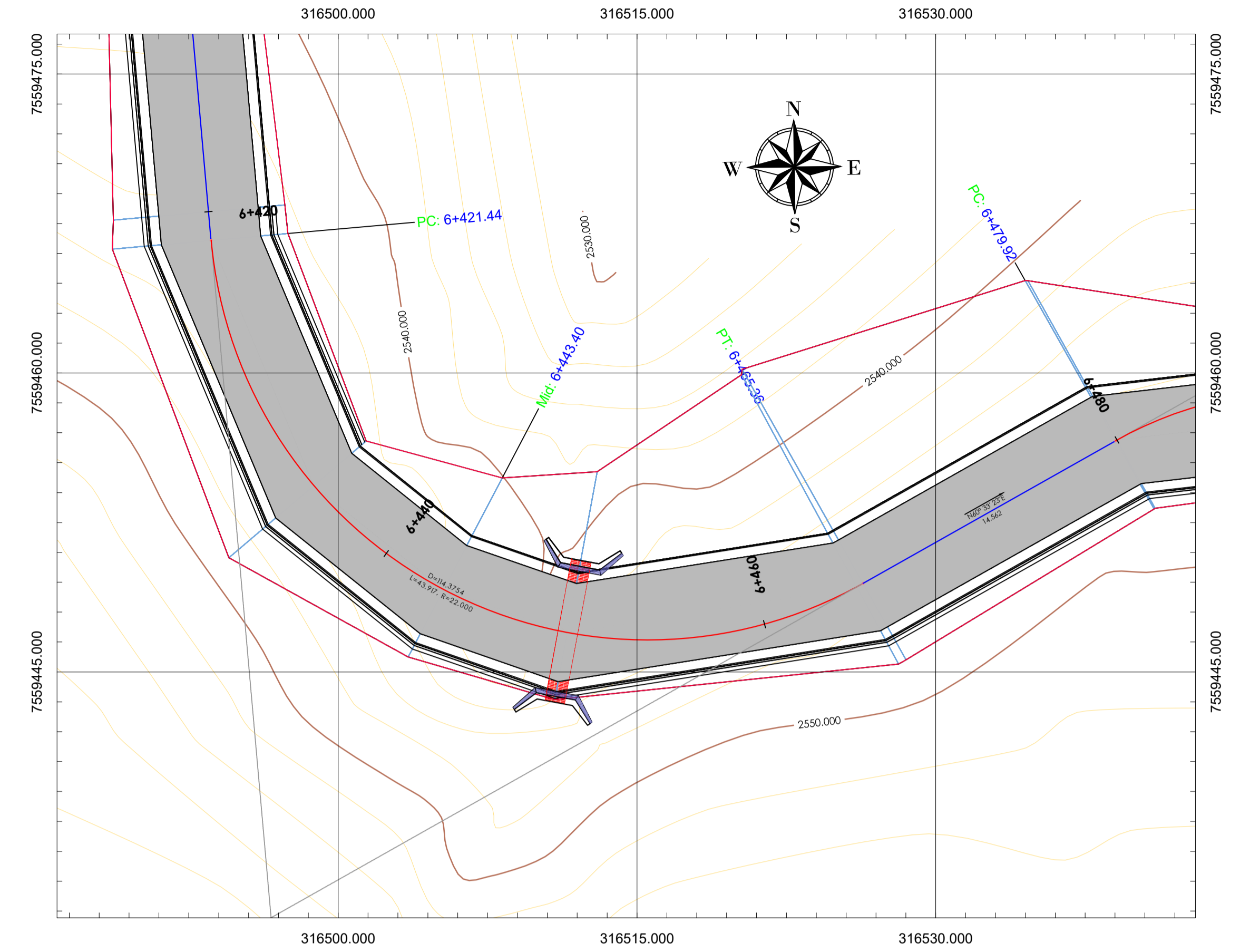
JUNIO 2024

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SECCIONES DE ALCANTARILLAS ESC. 1:200

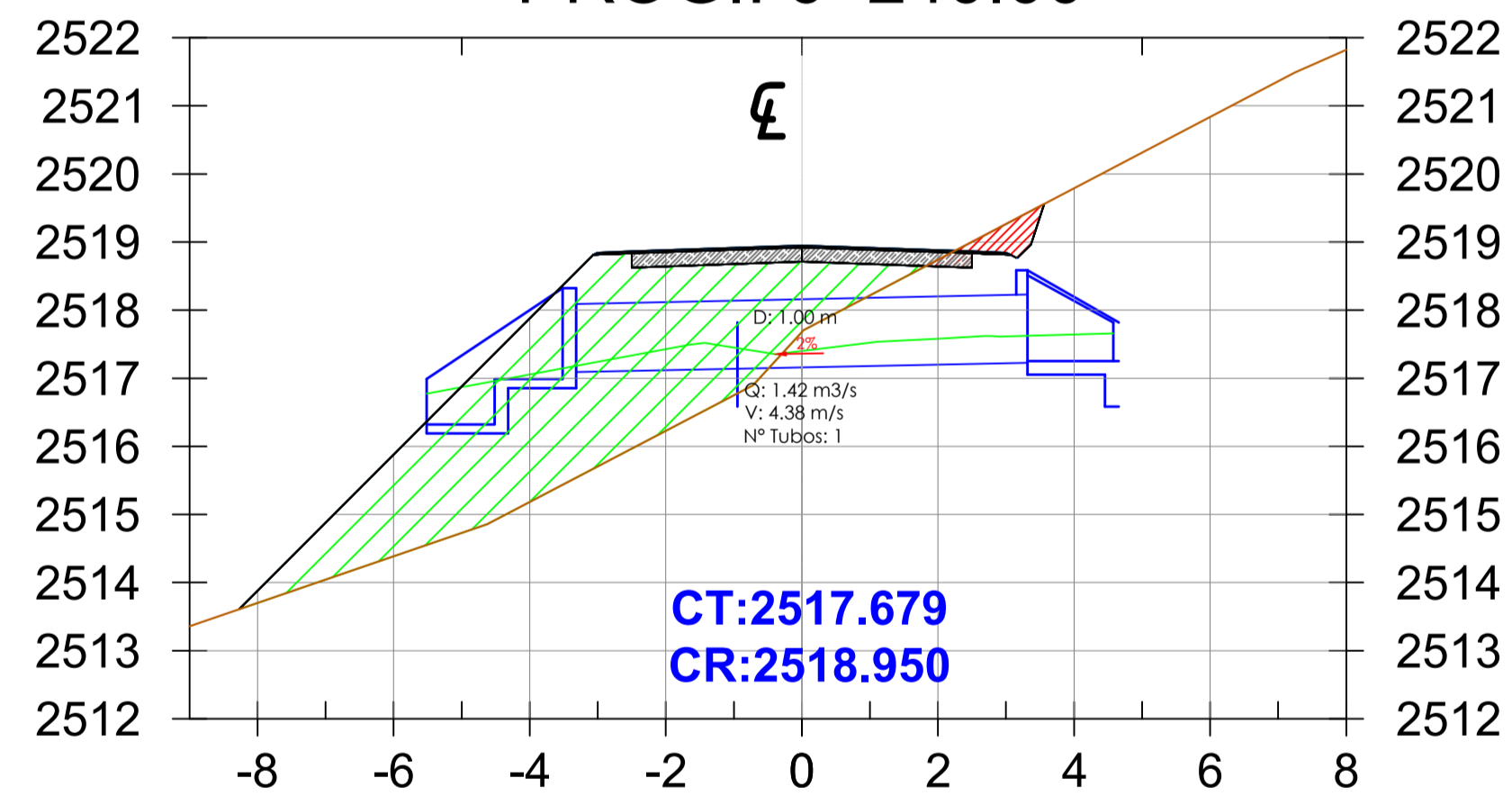


SECCIONES DE ALCANTARILLAS ESC. 1:200



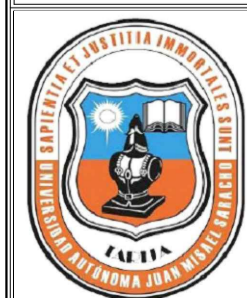
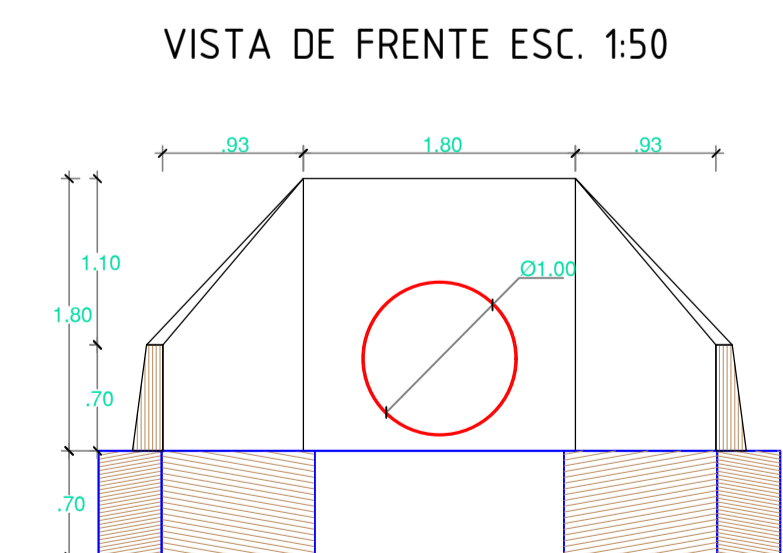
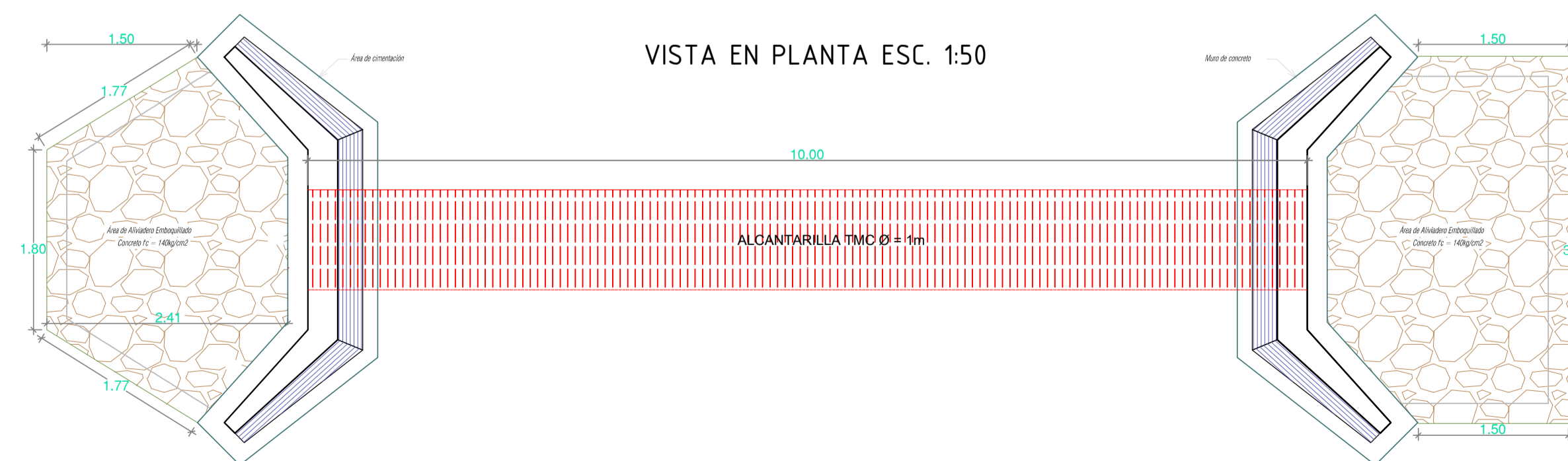
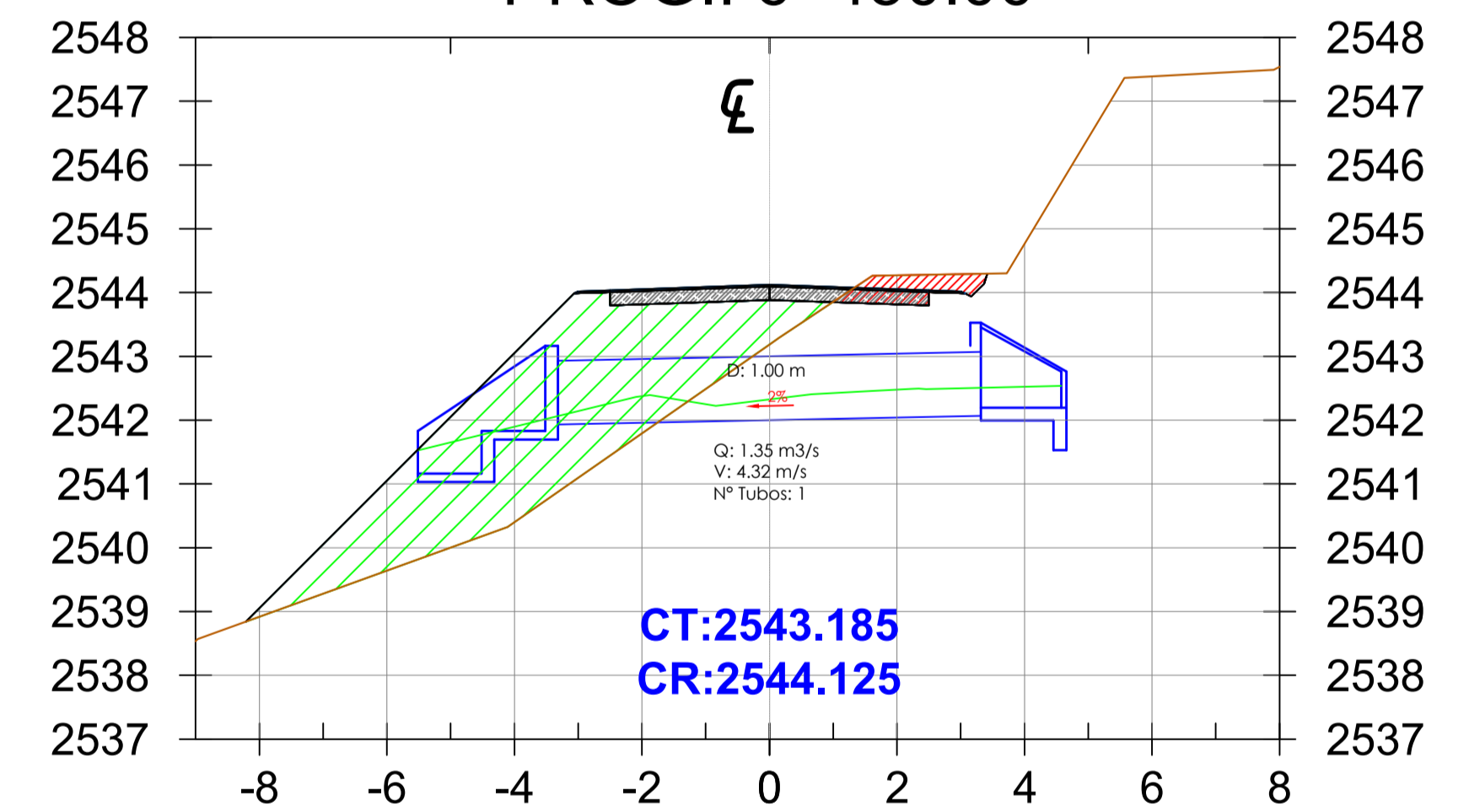
ESC. 1:100

PROG.: 6+240.00



ESC. 1:100

PROG.: 6+450.00



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PROYECTO DE GRADO II (MENCIÓN VÍAS)  
CIV - 502

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"DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL  
RÍO GRANDE - YERBA BUENA"

UNIVERSITARIO:

JUAN CARLOS MENDOZA RUEDA

Plano: **DETALLES DE ALCANTARILLAS**

TRAMO  
RÍO GRANDE - YERBA BUENA

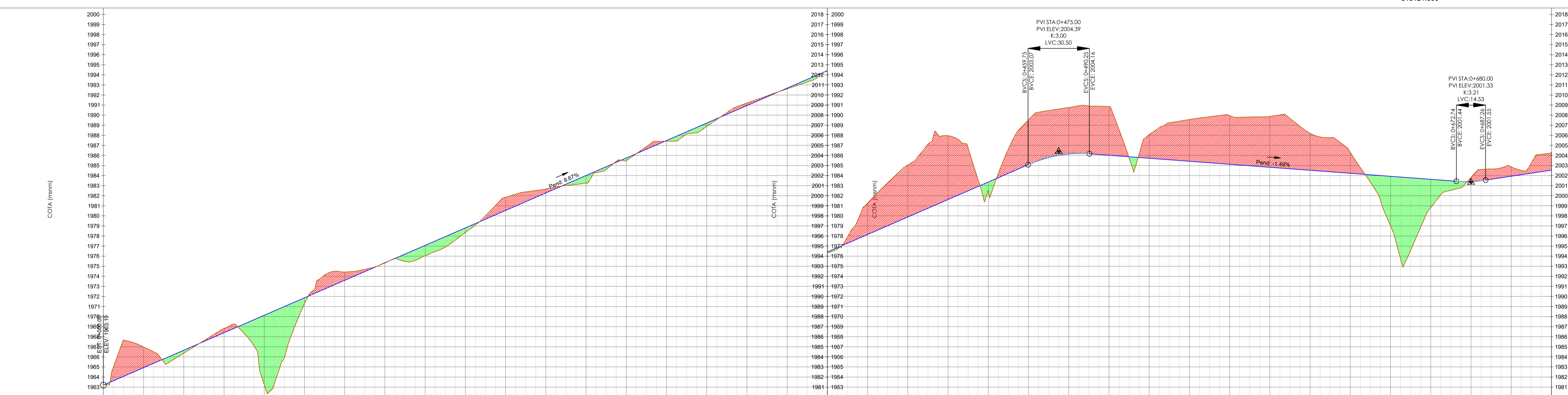
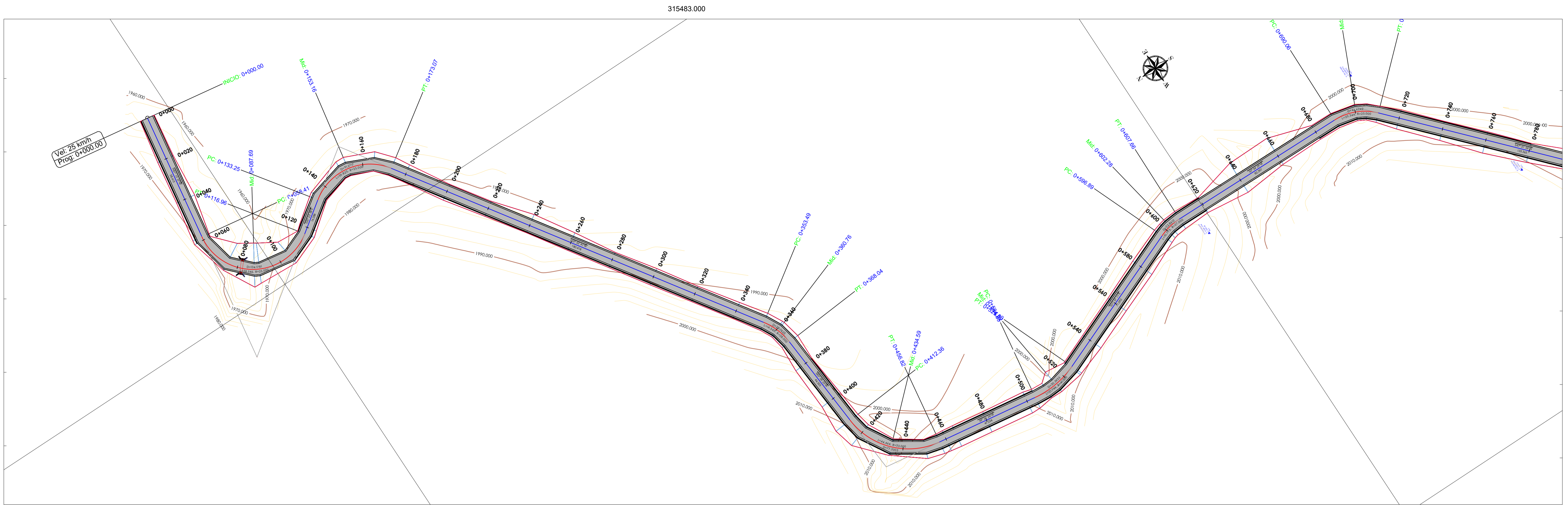
Progresivas:  
6+240  
6+450

N° de Lámina:

Escala:  
INDICADA

Fecha:  
JUNIO 2024


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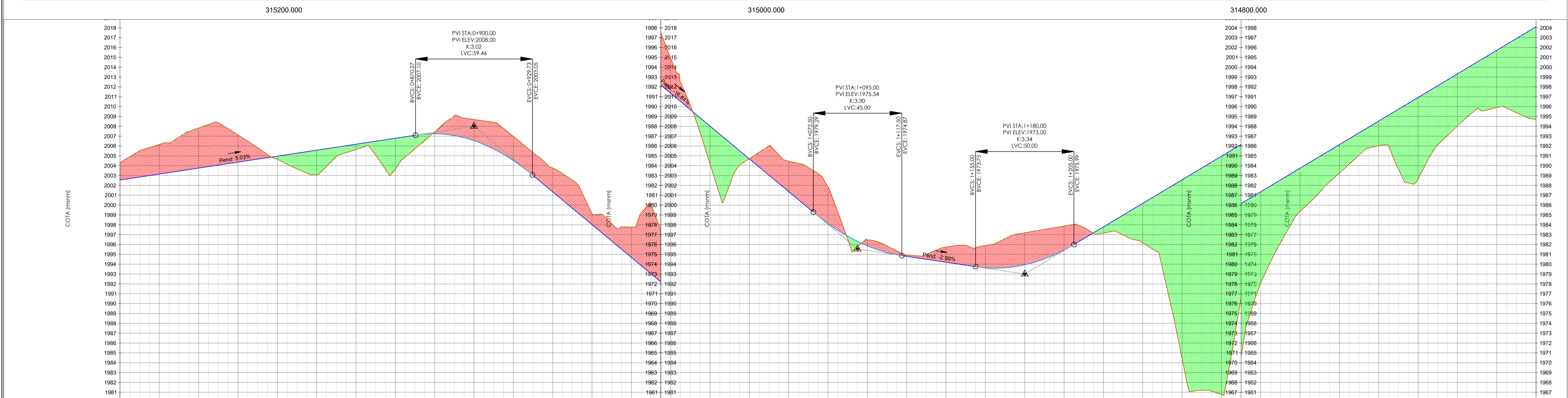
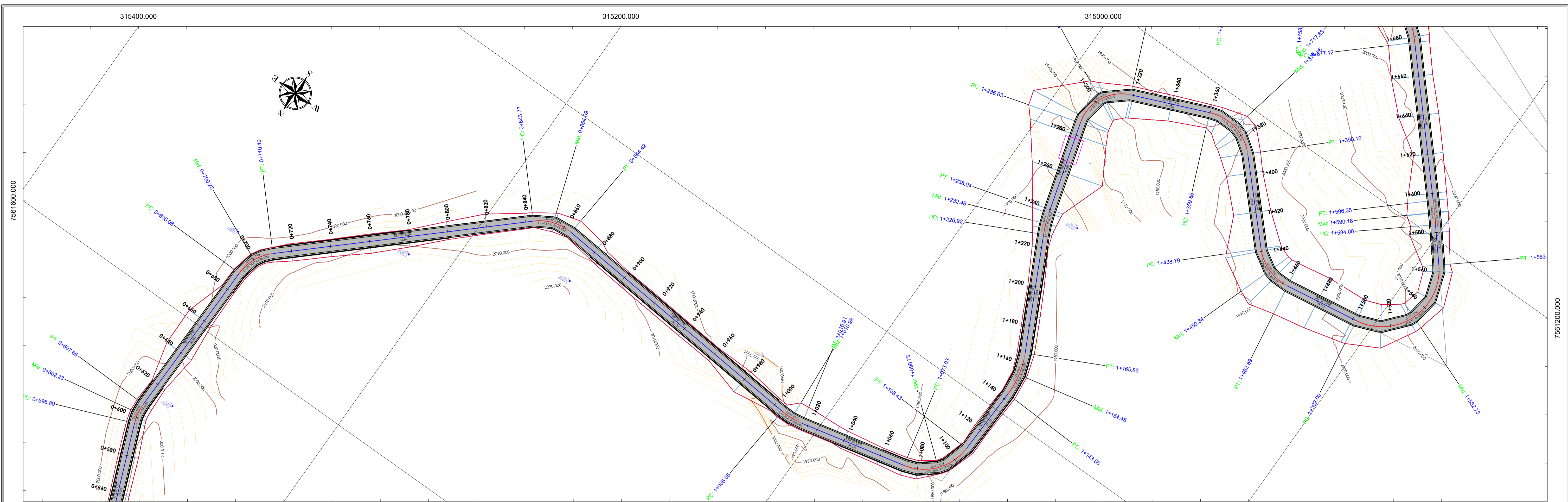


PROGRESIVA	COA TERRENO	COA BASCANTE
0+000.00	1963.19	1963.19
0+020.00	1966.98	1966.98
0+040.00	1966.37	1966.69
0+060.00	1968.83	1968.83
0+080.00	1970.129	1970.129
0+100.00	1971.97	1971.844
0+120.00	1974.42	1973.999
0+140.00	1975.98	1975.333
0+160.00	1976.04	1977.068
0+180.00	1978.35	1978.803
0+200.00	1981.55	1983.24
0+220.00	1982.67	1982.273
0+240.00	1984.028	1984.028
0+260.00	1985.47	1985.47
0+280.00	1987.41	1987.41
0+300.00	1988.87	1989.212
0+320.00	1991.20	1991.20
0+340.00	1992.482	1992.482
0+360.00	1994.33	1994.33
0+380.00	1996.151	1996.151
0+400.00	2000.05	2000.05
0+420.00	2005.96	2005.96
0+440.00	2007.49	2007.49
0+460.00	2007.54	2007.54
0+480.00	2008.142	2008.142
0+500.00	2008.85	2008.85
0+520.00	2009.607	2009.607
0+540.00	2007.27	2007.27
0+560.00	2003.122	2003.122
0+580.00	2007.88	2007.88
0+600.00	2006.20	2006.20
0+620.00	2002.525	2002.525
0+640.00	2001.41	2001.41
0+660.00	2001.628	2001.628
0+680.00	2001.412	2001.412
0+700.00	2002.87	2002.87
0+720.00	2004.52	2004.52

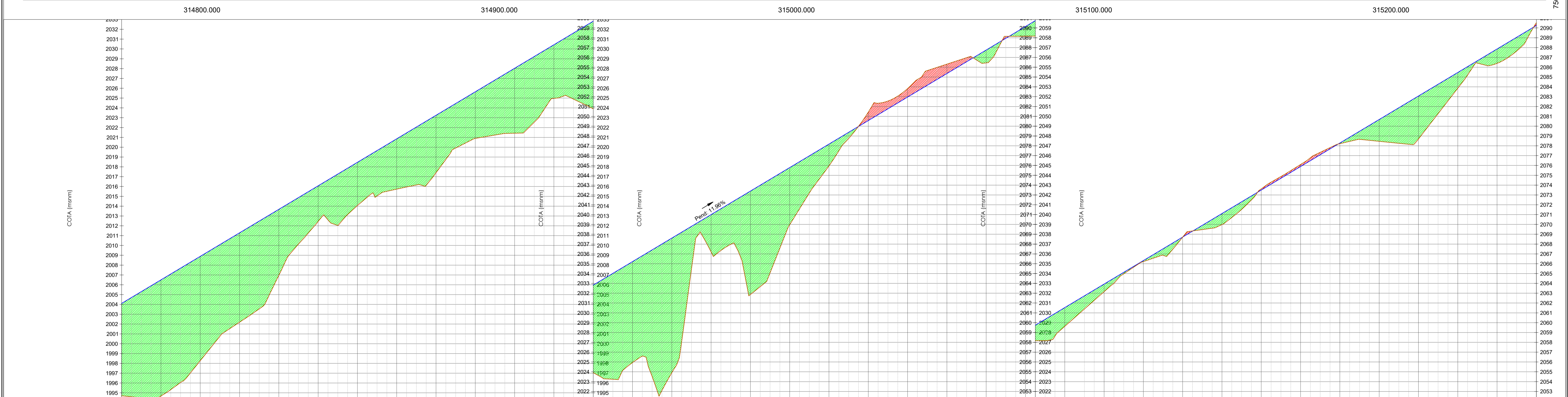
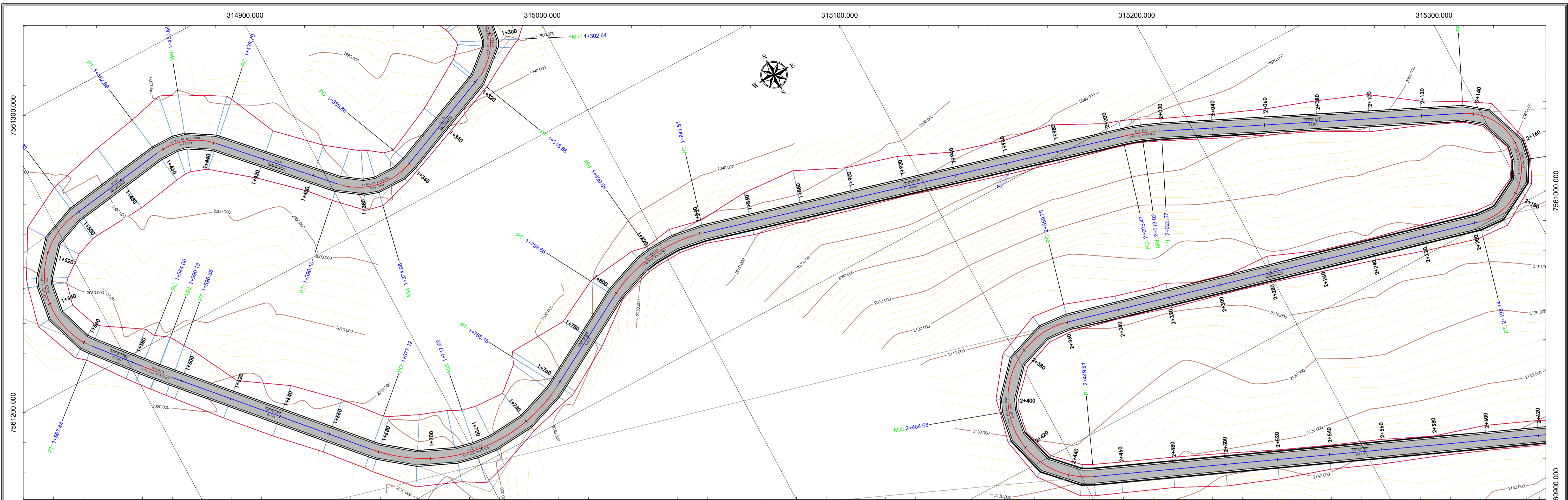
DIAGRAMA DE CURVATURAS	DIAGRAMA DE PENDIENTES %
RECTA L=58.41m.	L= 475.00 P%= 8.67%
CURVA1 R=33.00m. L=58.55m. Δ=134.1781	
RECTA L=16.29m.	L= 205.00 P%= -1.43%
CURVA2 R=23.00m. L=99.82m. Δ=91.2717	
RECTA L=180.42m.	L= 220.00 P%= 3.03%
CURVA3 R=28.00m. L=14.54m. Δ=29.7625	
RECTA L=44.32m.	
CURVA4 R=33.00m. L=44.66m. Δ=77.2003	
RECTA L=47.22m.	
CURVA5 R=41.00m. L=21.75m. Δ=30.9783	
RECTA L=71.09m.	
CURVA6 R=23.00m. L=10.77m. Δ=22.8612	
RECTA L=82.40m.	
CURVA7 R=23.00m. L=20.34m. Δ=46.6242	
RECTA L=133.37m.	

 <p>UNIVERSIDAD AUTÓNOMA JUAN MISAEL SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 0+000 A: 0+720</p>	<p>Nº de Lámina: 1/23</p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	



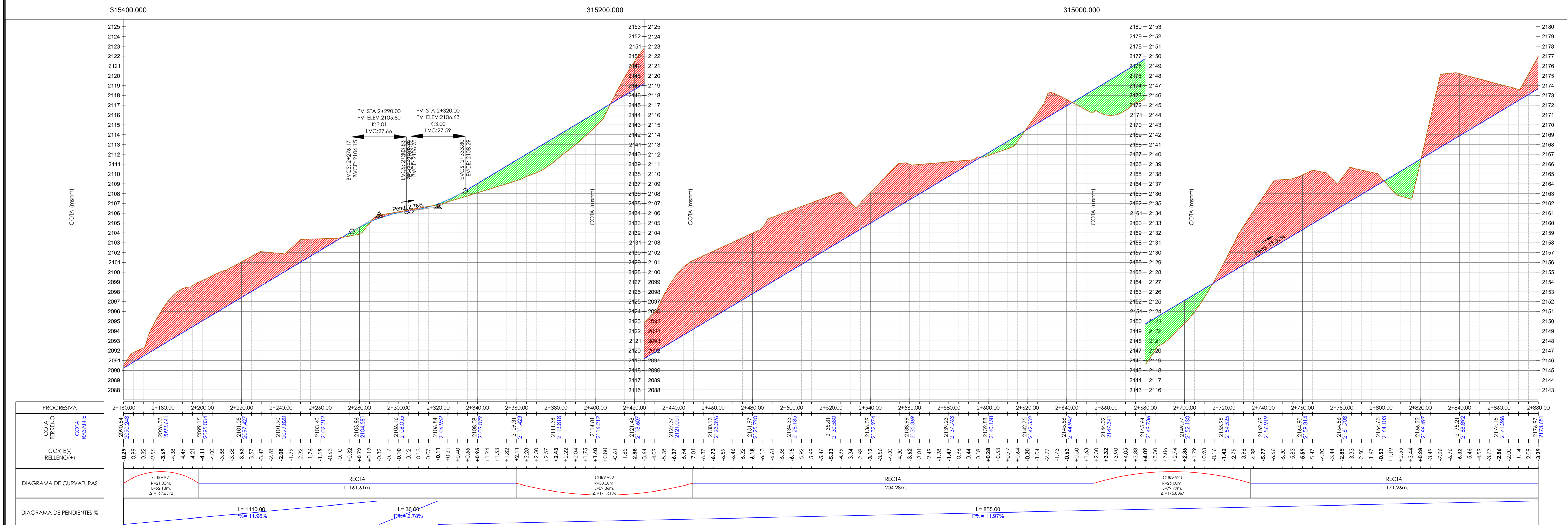
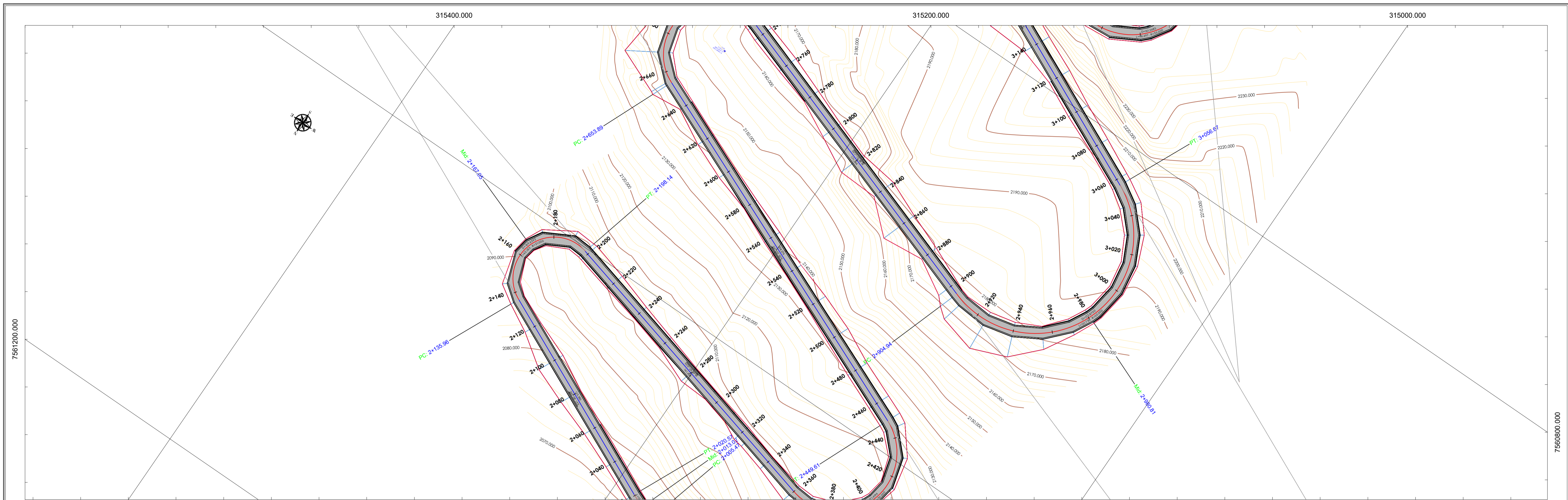
PROGRESIVA	COTA TERRENO	COTA PASANTE	CORTE(-) RELLENO(+)	DIAGRAMA DE CURVATURAS	DIAGRAMA DE PENDIENTES %
0+720.00	2004.32	2002.542	-1.77		
0+740.00	2006.16	2003.149	-2.22		
0+760.00	2007.83	2003.755	-3.01		
0+780.00	2009.50	2004.362	-3.44		
0+800.00	2011.17	2004.968	-3.88		
0+820.00	2012.84	2005.574	-4.08		
0+840.00	2014.51	2006.181	-4.28		
0+860.00	2016.18	2006.787	-3.54		
0+880.00	2017.85	2007.393	-2.76		
0+900.00	2019.52	2008.000	-1.97		
0+920.00	2021.19	2008.606	-1.16		
0+940.00	2022.86	2009.212	-0.32		
0+960.00	2024.53	2009.818	+0.32		
0+980.00	2026.20	2010.424	+1.01		
1+000.00	2027.87	2011.030	+1.69		
1+020.00	2029.54	2011.636	+2.38		
1+040.00	2031.21	2012.242	+3.07		
1+060.00	2032.88	2012.848	+3.76		
1+080.00	2034.55	2013.454	+4.45		
1+100.00	2036.22	2014.060	+5.14		
1+120.00	2037.89	2014.666	+5.83		
1+140.00	2039.56	2015.272	+6.52		
1+160.00	2041.23	2015.878	+7.21		
1+180.00	2042.90	2016.484	+7.90		
1+200.00	2044.57	2017.090	+8.59		
1+220.00	2046.24	2017.696	+9.28		
1+240.00	2047.91	2018.302	+9.97		
1+260.00	2049.58	2018.908	+10.66		
1+280.00	2051.25	2019.514	+11.35		
1+300.00	2052.92	2020.120	+12.04		
1+320.00	2054.59	2020.726	+12.73		
1+340.00	2056.26	2021.332	+13.42		
1+360.00	2057.93	2021.938	+14.11		
1+380.00	2059.60	2022.544	+14.80		
1+400.00	2061.27	2023.150	+15.49		
1+420.00	2062.94	2023.756	+16.18		
1+440.00	2064.61	2024.362	+16.87		

<p>UNIVERSIDAD AUTÓNOMA JUAN MISAEL SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 0+720 A: 1+440</p>	<p>Nº de Lámina: <b>2/23</b></p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	



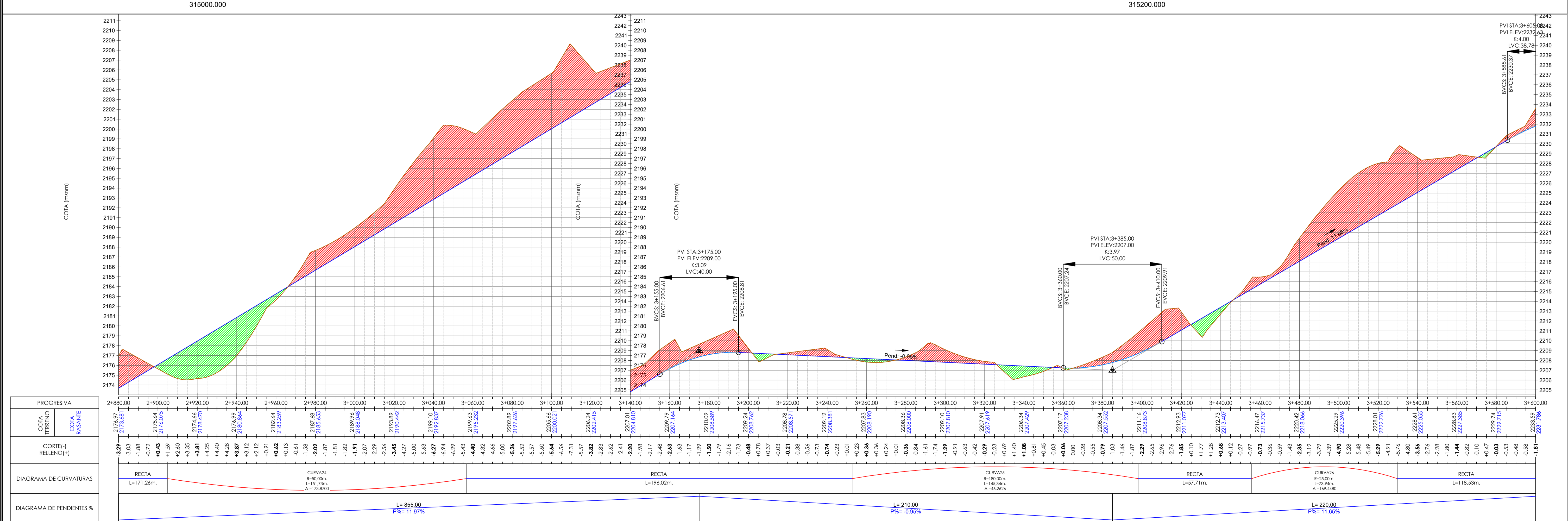
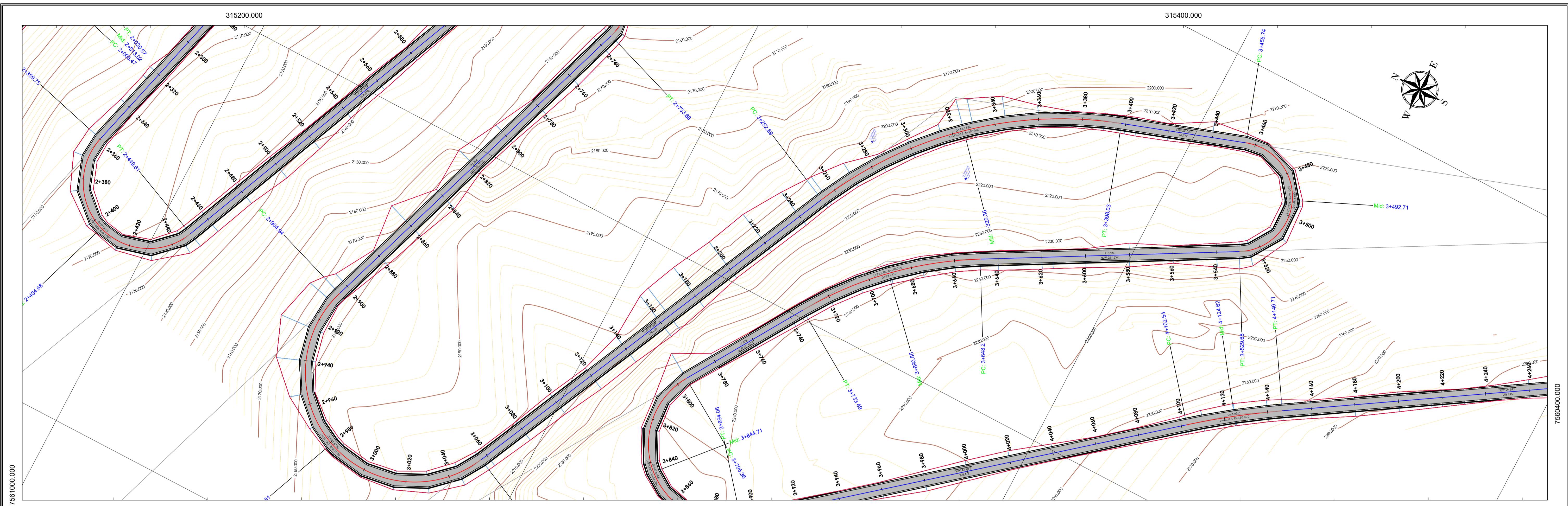
PROGRESIVA	COTA TERRENO	COTA RADIANTE	CORTE (-) RELLENO (+)	DIAGRAMA DE CURVATURAS	DIAGRAMA DE PENDIENTES %
1+300.00	2004.10	2004.10	+0.00	CURVA15 R=25.00m L=24.10m Δ=55.281	
1+310.00	2004.50	2004.50	+0.00	RECTA L=39.11m	
1+320.00	2005.00	2005.00	+0.00		
1+330.00	2005.50	2005.50	+0.00	CURVA16 R=29.00m L=41.44m Δ=71.387	
1+340.00	2006.00	2006.00	+0.00		
1+350.00	2006.50	2006.50	+0.00	RECTA L=20.57m	
1+360.00	2007.00	2007.00	+0.00		
1+370.00	2007.50	2007.50	+0.00	CURVA17 R=30.00m L=42.30m Δ=77.374	
1+380.00	2008.00	2008.00	+0.00		
1+390.00	2008.50	2008.50	+0.00	RECTA L=40.77m	
1+400.00	2009.00	2009.00	+0.00		
1+410.00	2009.50	2009.50	+0.00		
1+420.00	2010.00	2010.00	+0.00		
1+430.00	2010.50	2010.50	+0.00		
1+440.00	2011.00	2011.00	+0.00		
1+450.00	2011.50	2011.50	+0.00		
1+460.00	2012.00	2012.00	+0.00		
1+470.00	2012.50	2012.50	+0.00		
1+480.00	2013.00	2013.00	+0.00		
1+490.00	2013.50	2013.50	+0.00		
1+500.00	2014.00	2014.00	+0.00		
1+510.00	2014.50	2014.50	+0.00		
1+520.00	2015.00	2015.00	+0.00		
1+530.00	2015.50	2015.50	+0.00		
1+540.00	2016.00	2016.00	+0.00		
1+550.00	2016.50	2016.50	+0.00		
1+560.00	2017.00	2017.00	+0.00		
1+570.00	2017.50	2017.50	+0.00		
1+580.00	2018.00	2018.00	+0.00		
1+590.00	2018.50	2018.50	+0.00		
1+600.00	2019.00	2019.00	+0.00		
1+610.00	2019.50	2019.50	+0.00		
1+620.00	2020.00	2020.00	+0.00		
1+630.00	2020.50	2020.50	+0.00		
1+640.00	2021.00	2021.00	+0.00		
1+650.00	2021.50	2021.50	+0.00		
1+660.00	2022.00	2022.00	+0.00		
1+670.00	2022.50	2022.50	+0.00		
1+680.00	2023.00	2023.00	+0.00		
1+690.00	2023.50	2023.50	+0.00		
1+700.00	2024.00	2024.00	+0.00		
1+710.00	2024.50	2024.50	+0.00		
1+720.00	2025.00	2025.00	+0.00		
1+730.00	2025.50	2025.50	+0.00		
1+740.00	2026.00	2026.00	+0.00		
1+750.00	2026.50	2026.50	+0.00		
1+760.00	2027.00	2027.00	+0.00		
1+770.00	2027.50	2027.50	+0.00		
1+780.00	2028.00	2028.00	+0.00		
1+790.00	2028.50	2028.50	+0.00		
1+800.00	2029.00	2029.00	+0.00		
1+810.00	2029.50	2029.50	+0.00		
1+820.00	2030.00	2030.00	+0.00		
1+830.00	2030.50	2030.50	+0.00		
1+840.00	2031.00	2031.00	+0.00		
1+850.00	2031.50	2031.50	+0.00		
1+860.00	2032.00	2032.00	+0.00		
1+870.00	2032.50	2032.50	+0.00		
1+880.00	2033.00	2033.00	+0.00		
1+890.00	2033.50	2033.50	+0.00		
1+900.00	2034.00	2034.00	+0.00		
1+910.00	2034.50	2034.50	+0.00		
1+920.00	2035.00	2035.00	+0.00		
1+930.00	2035.50	2035.50	+0.00		
1+940.00	2036.00	2036.00	+0.00		
1+950.00	2036.50	2036.50	+0.00		
1+960.00	2037.00	2037.00	+0.00		
1+970.00	2037.50	2037.50	+0.00		
1+980.00	2038.00	2038.00	+0.00		
1+990.00	2038.50	2038.50	+0.00		
2+000.00	2039.00	2039.00	+0.00		
2+010.00	2039.50	2039.50	+0.00		
2+020.00	2040.00	2040.00	+0.00		
2+030.00	2040.50	2040.50	+0.00		
2+040.00	2041.00	2041.00	+0.00		
2+050.00	2041.50	2041.50	+0.00		
2+060.00	2042.00	2042.00	+0.00		
2+070.00	2042.50	2042.50	+0.00		
2+080.00	2043.00	2043.00	+0.00		
2+090.00	2043.50	2043.50	+0.00		
2+100.00	2044.00	2044.00	+0.00		
2+110.00	2044.50	2044.50	+0.00		
2+120.00	2045.00	2045.00	+0.00		
2+130.00	2045.50	2045.50	+0.00		
2+140.00	2046.00	2046.00	+0.00		
2+150.00	2046.50	2046.50	+0.00		
2+160.00	2047.00	2047.00	+0.00		

<p>UNIVERSIDAD AUTÓNOMA JUAN MISAEL SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 1+440 A: 2+160</p>	<p>Nº de Lámina: <b>3/23</b></p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	



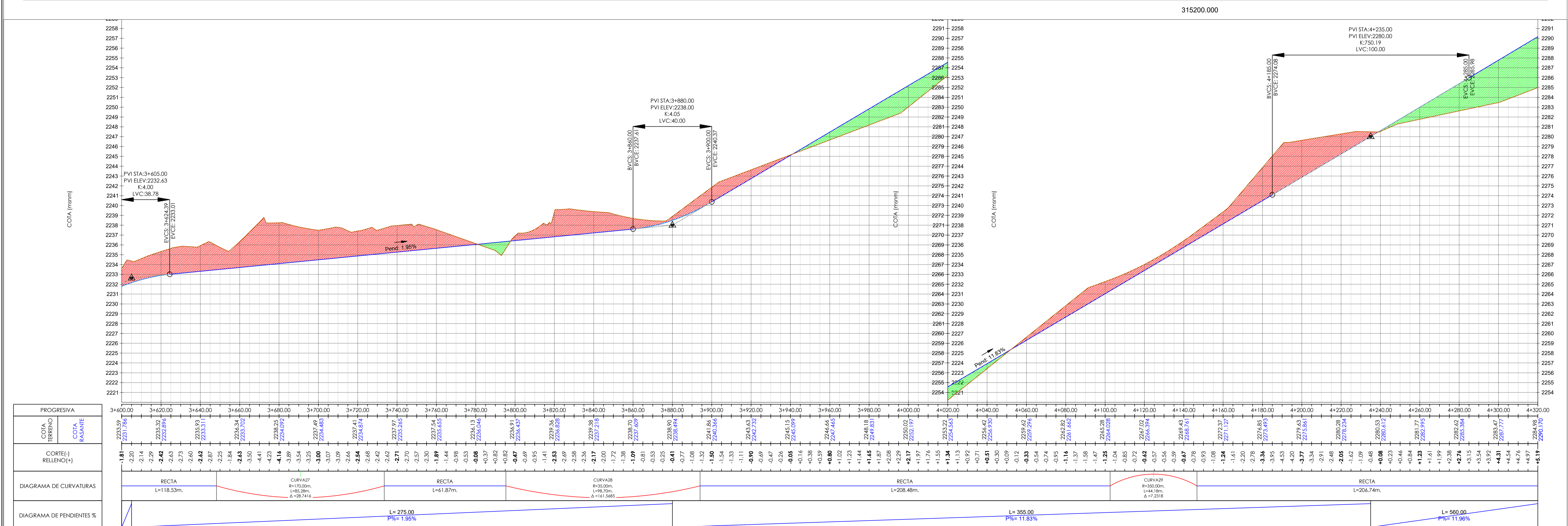
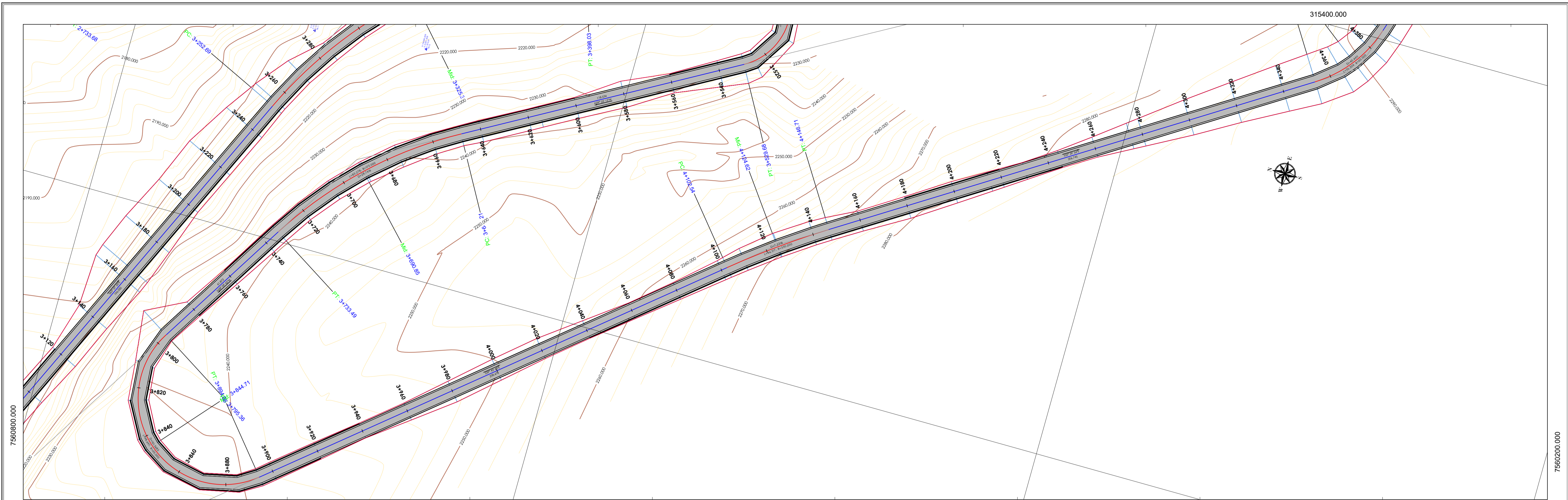
PROGRESIVA	COIA TERRENO	COIA PROYECTE	CORTE (-) RELLENO (+)
2+140.00	2090.248	2092.248	-0.27
2+160.00	2096.33	2097.641	-0.92
2+180.00	2099.15	2099.034	-0.49
2+200.00	2100.05	2097.407	-0.41
2+220.00	2101.90	2099.820	-0.08
2+240.00	2103.40	2102.214	0.32
2+260.00	2103.86	2104.581	-0.72
2+280.00	2104.14	2106.952	-0.81
2+300.00	2104.05	2109.321	-0.53
2+320.00	2103.84	2111.692	-0.21
2+340.00	2103.49	2114.063	0.11
2+360.00	2102.99	2116.434	0.24
2+380.00	2102.35	2118.805	0.45
2+400.00	2101.58	2121.176	0.72
2+420.00	2100.69	2123.547	1.05
2+440.00	2100.00	2125.918	1.42
2+460.00	2099.50	2128.289	1.81
2+480.00	2099.10	2130.660	2.22
2+500.00	2098.80	2133.031	2.65
2+520.00	2098.60	2135.402	3.10
2+540.00	2098.50	2137.773	3.57
2+560.00	2098.50	2140.144	4.05
2+580.00	2098.60	2142.515	4.55
2+600.00	2098.80	2144.886	5.08
2+620.00	2099.10	2147.257	5.63
2+640.00	2099.50	2149.628	6.20
2+660.00	2099.90	2151.999	6.79
2+680.00	2100.30	2154.370	7.40
2+700.00	2100.60	2156.741	8.03
2+720.00	2100.80	2159.112	8.68
2+740.00	2100.90	2161.483	9.35
2+760.00	2100.90	2163.854	10.05
2+780.00	2100.80	2166.225	10.78
2+800.00	2100.60	2168.596	11.55
2+820.00	2100.30	2170.967	12.37
2+840.00	2100.00	2173.338	13.25
2+860.00	2099.60	2175.709	14.19
2+880.00	2099.10	2178.080	15.19

<p>UNIVERSIDAD AUTÓNOMA JUAN MISAEI SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 2+160 A: 2+880</p>	<p>Nº de Lámina: 4 / 23</p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	




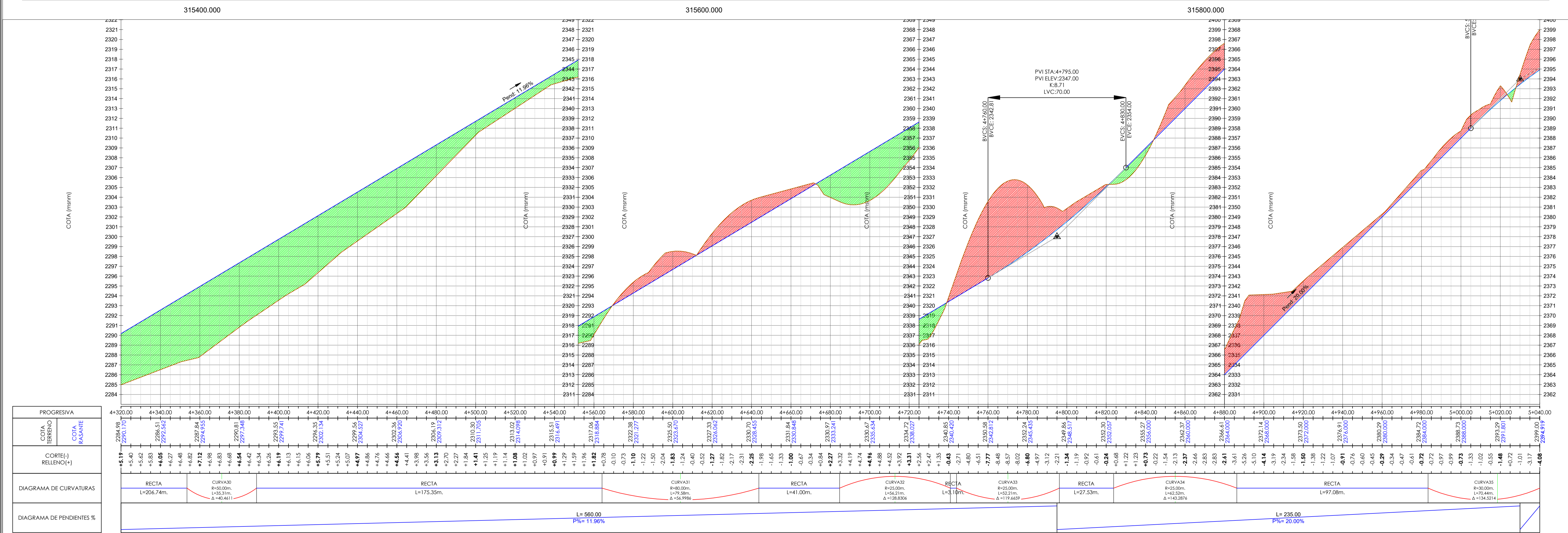
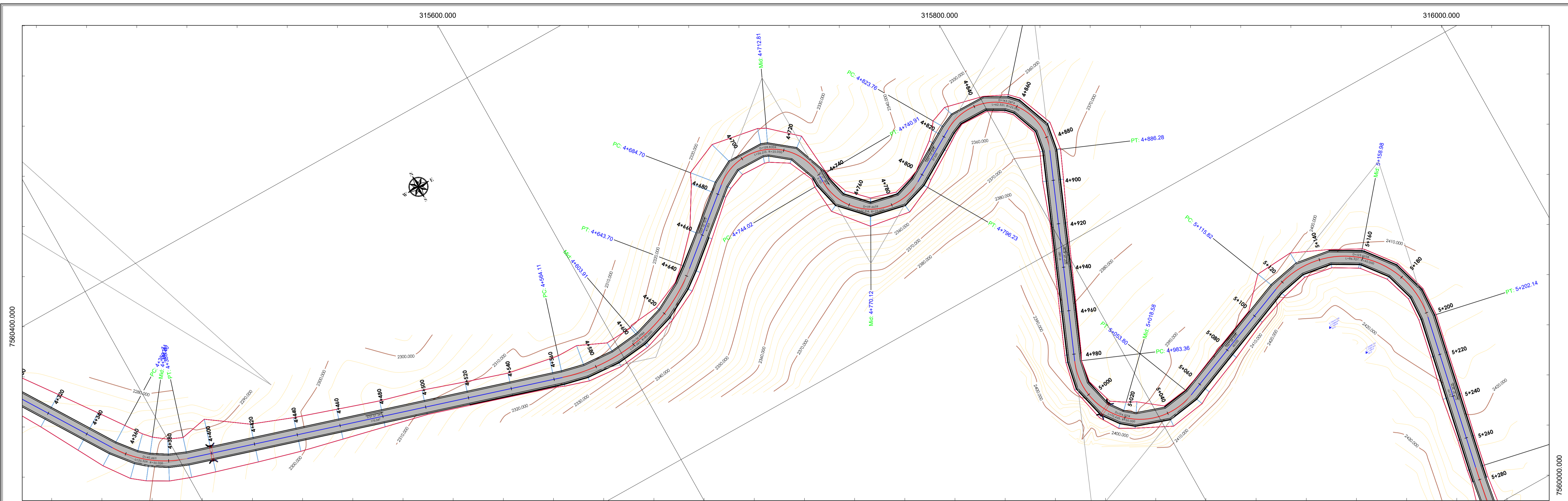
PROGRESIVA	2+880.00	2+900.00	2+920.00	2+940.00	2+960.00	2+980.00	3+000.00	3+020.00	3+040.00	3+060.00	3+080.00	3+100.00	3+120.00	3+140.00	3+160.00	3+180.00	3+200.00	3+220.00	3+240.00	3+260.00	3+280.00	3+300.00	3+320.00	3+340.00	3+360.00	3+380.00	3+400.00	3+420.00	3+440.00	3+460.00	3+480.00	3+500.00	3+520.00	3+540.00	3+560.00	3+580.00	3+600.00																																																																																	
CO/TA TERRENO	2176.97	2173.68	2175.64	2176.05	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66																																																																															
CO/TA PROYECTADA	2176.97	2173.68	2175.64	2176.05	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66	2174.66																																																																															
CORTE (-) / RELLENO (+)	-3.27	-3.03	-0.72	+0.43	+2.60	+3.35	+4.28	+4.42	+4.28	+3.12	+2.12	+0.91	+0.13	-0.61	-2.02	-1.58	-1.87	-1.82	-2.07	-2.29	-2.56	-3.45	-5.00	-5.63	-6.27	-6.94	-6.29	-5.43	-4.40	-3.32	-4.32	-4.66	-5.00	-5.28	-5.57	-5.60	-5.64	-5.56	-7.31	-5.57	-2.26	-2.83	-2.41	-2.07	-1.98	-2.17	-2.48	-2.63	-1.63	-1.17	-1.29	-1.09	-2.09	-1.79	-2.16	-1.73	-0.78	+0.37	-0.03	-0.38	-0.73	-0.23	+0.01	+0.34	+0.24	+0.01	-0.34	-0.84	-1.61	-1.74	-1.29	-0.91	-0.63	-0.42	-0.29	-0.23	+0.69	+1.08	+0.81	+0.45	-0.03	0.00	-0.28	-0.55	-0.79	-1.03	-1.46	-1.87	-2.65	-2.76	+0.10	+1.77	+0.68	-0.27	-0.97	-0.36	-0.59	-1.43	-3.12	-3.79	-4.39	-5.28	-5.49	-5.29	-4.91	-5.76	-4.80	-2.28	-2.76	-1.80	-1.44	-0.82	-0.10	+0.47	-0.03	-0.53	-0.48	-1.81
DIAGRAMA DE CURVATURAS	RECTA L=171.26m		CURVA24 R=60.00m L=151.73m Δ=173.8700										RECTA L=196.02m										CURVA25 R=180.00m L=73.94m Δ=169.4480										RECTA L=57.71m										CURVA26 R=25.00m L=73.94m Δ=169.4480										RECTA L=118.53m																																																																	
DIAGRAMA DE PENDIENTES %	L= 855.00 P%= 11.97%										L= 210.00 P%= -0.95%										L= 220.00 P%= 11.65%																																																																																																	





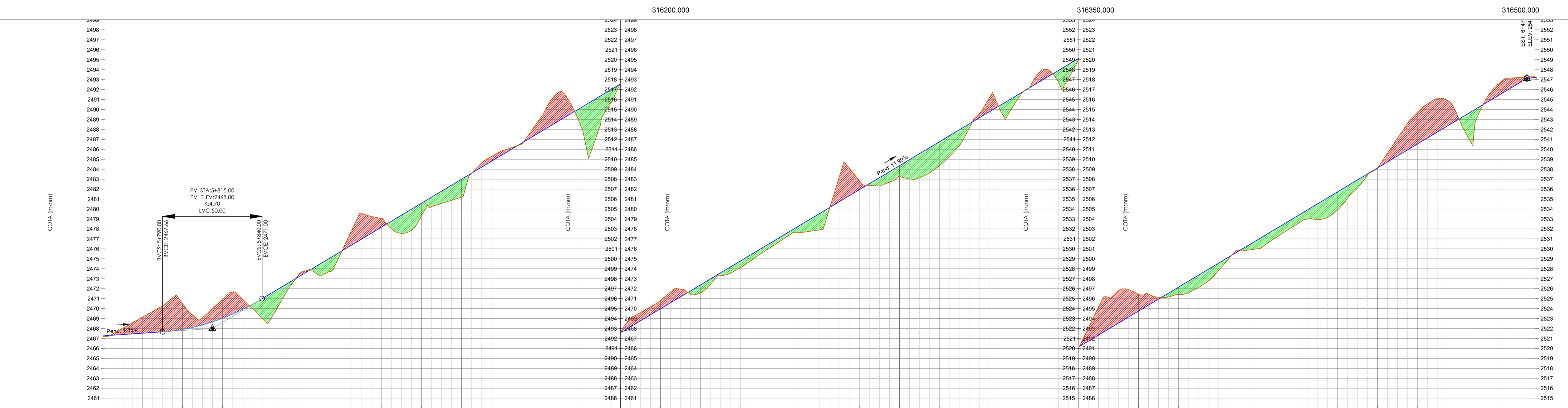
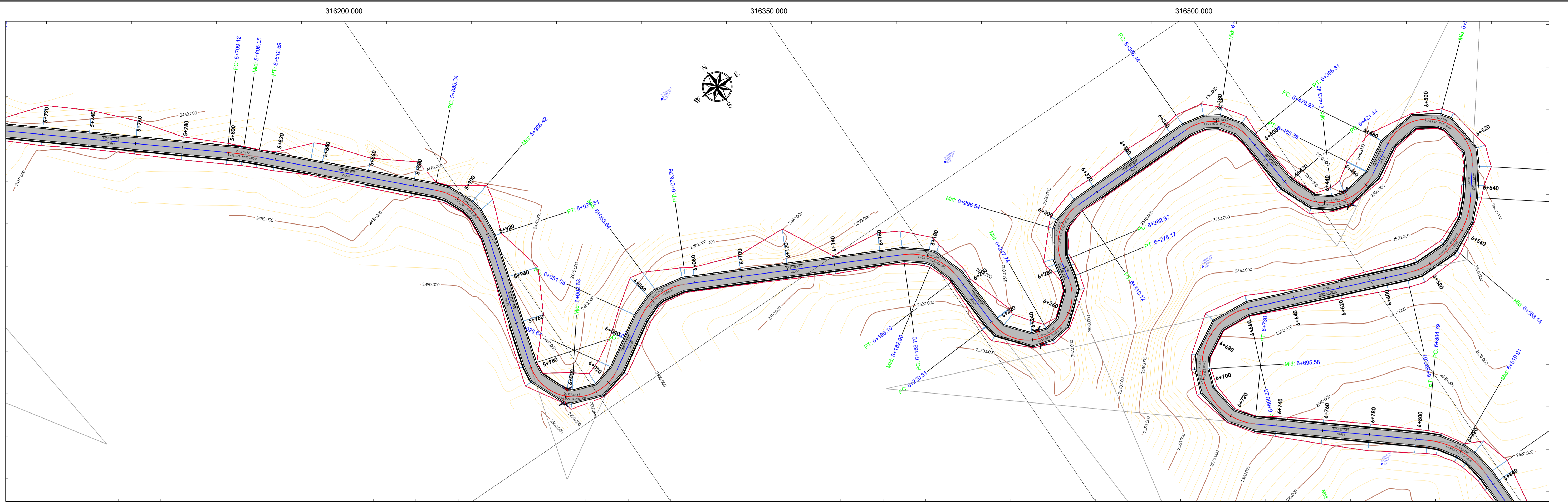
PROGRESIVA	COTA TERRENO	COTA RASANTE	CORTE (-) RELLENO (+)	DIAGRAMA DE CURVATURAS	DIAGRAMA DE PENDIENTES %
3+600.00	2232.79	2232.79	-1.81	RECTA	L=275.00 P%=1.95%
3+620.00	2233.32	2232.896	-2.20	CURVA27 R=170.00m L=85.00m Δ=28.7416	
3+640.00	2235.32	2232.896	-2.42		RECTA
3+660.00	2235.93	2233.311	-2.60		
3+680.00	2236.92	2233.311	-2.62	CURVA28 R=35.00m L=98.70m Δ=161.3685	L=208.48m
3+700.00	2237.49	2233.469	-3.00		
3+720.00	2237.49	2233.469	-3.07	RECTA	L=206.48m
3+740.00	2237.54	2233.54	-3.09		
3+760.00	2237.41	2234.874	-2.54	CURVA29 R=350.00m L=41.80m Δ=7.2318	L=206.74m
3+780.00	2237.41	2234.874	-2.64		
3+800.00	2237.41	2234.874	-2.66	RECTA	L=560.00 P%=11.96%
3+820.00	2237.41	2234.874	-2.68		
3+840.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
3+860.00	2237.41	2234.874	-2.71		
3+880.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
3+900.00	2237.41	2234.874	-2.71		
3+920.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
3+940.00	2237.41	2234.874	-2.71		
3+960.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
3+980.00	2237.41	2234.874	-2.71		
4+000.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+020.00	2237.41	2234.874	-2.71		
4+040.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+060.00	2237.41	2234.874	-2.71		
4+080.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+100.00	2237.41	2234.874	-2.71		
4+120.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+140.00	2237.41	2234.874	-2.71		
4+160.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+180.00	2237.41	2234.874	-2.71		
4+200.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+220.00	2237.41	2234.874	-2.71		
4+240.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+260.00	2237.41	2234.874	-2.71		
4+280.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%
4+300.00	2237.41	2234.874	-2.71		
4+320.00	2237.41	2234.874	-2.71	RECTA	L=560.00 P%=11.96%

 <p>UNIVERSIDAD AUTÓNOMA JUAN MISAEL SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 3+600 A: 4+320</p>	<p>Nº de Lámina: <b>6 / 23</b></p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	

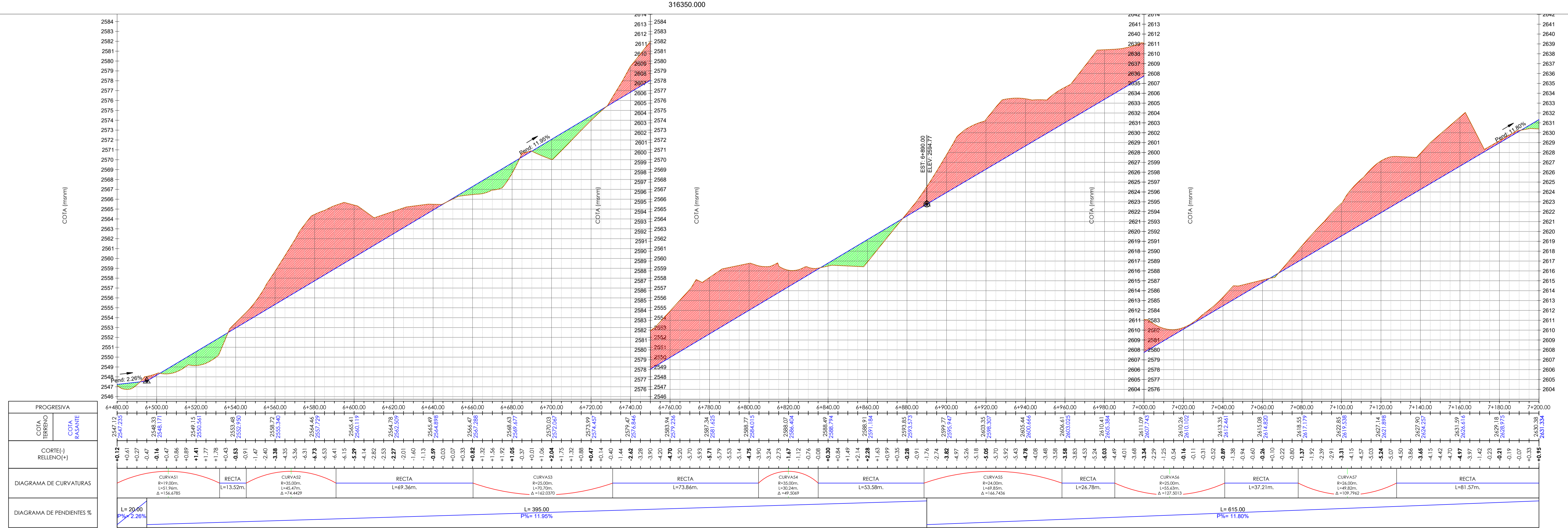
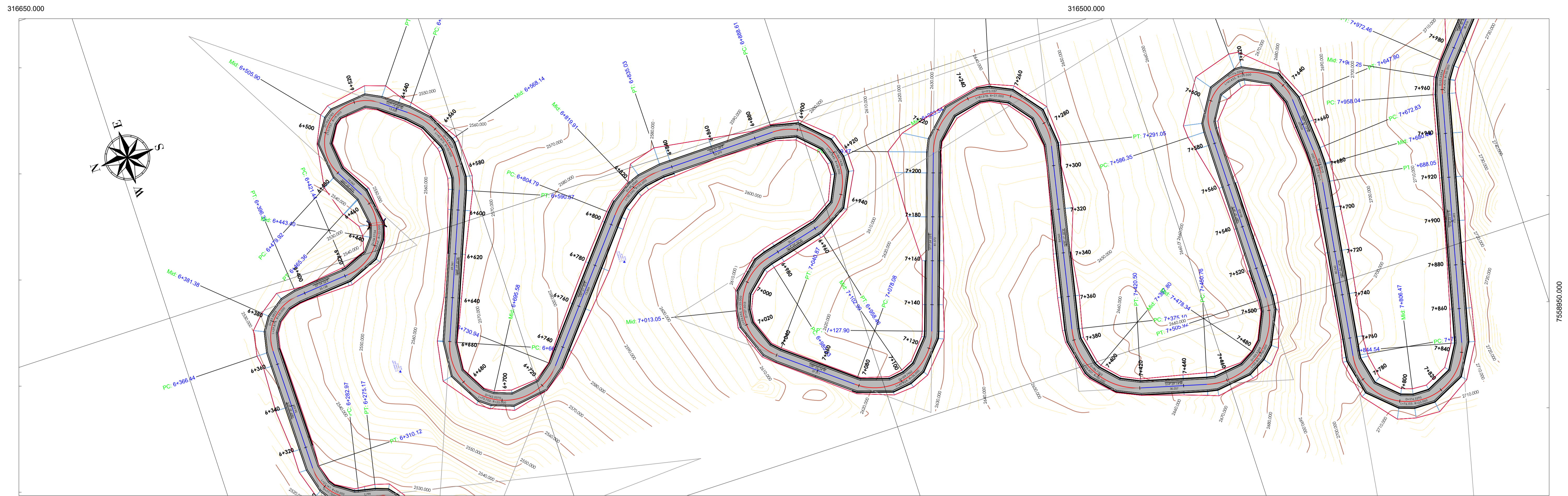


PROGRESIVA	COTA TERRENO	COTA RASANTE	CORTE (-) RELLENO (+)	DIAGRAMA DE CURVATURAS	DIAGRAMA DE PENDIENTES %
4+300.00	2291.17	2291.17	+5.19	RECTA L=206.74m	L=560.00 P%=11.96%
4+320.00	2291.17	2291.17	+5.40	CURVA30 R=50.00m L=206.74m Δ=40.4611	
4+340.00	2286.51	2275.56	+5.83	RECTA L=175.35m	L=235.00 P%=20.00%
4+360.00	2287.84	2294.95	+6.87	RECTA L=41.00m	
4+380.00	2290.81	2297.34	+6.53	CURVA32 R=25.00m L=42.21m Δ=119.659	L=97.08m
4+400.00	2293.55	2297.74	+6.19	RECTA L=97.08m	
4+420.00	2294.35	2298.15	+5.79	CURVA33 R=25.00m L=31.00m	L=408.00
4+440.00	2299.56	2304.57	+4.97	CURVA34 R=30.00m L=204.44m Δ=134.5214	
4+460.00	2304.50	2304.50	+4.41	RECTA L=97.08m	L=408.00
4+480.00	2306.19	2309.31	+3.12	RECTA L=97.08m	
4+500.00	2310.30	2311.70	+1.41	RECTA L=97.08m	L=408.00
4+520.00	2313.02	2316.09	+1.08	RECTA L=97.08m	
4+540.00	2315.51	2316.49	+0.99	RECTA L=97.08m	L=408.00
4+560.00	2317.61	2319.68	+1.82	RECTA L=97.08m	
4+580.00	2322.38	2322.38	-0.73	RECTA L=97.08m	L=408.00
4+600.00	2325.60	2323.67	-1.83	RECTA L=97.08m	
4+620.00	2327.33	2326.02	-1.27	RECTA L=97.08m	L=408.00
4+640.00	2330.70	2328.45	-2.25	RECTA L=97.08m	
4+660.00	2331.84	2331.84	-1.00	RECTA L=97.08m	L=408.00
4+680.00	2330.97	2331.24	+0.27	RECTA L=97.08m	
4+700.00	2331.61	2331.61	+0.76	RECTA L=97.08m	L=408.00
4+720.00	2334.72	2334.72	+3.31	RECTA L=97.08m	
4+740.00	2338.07	2338.07	+3.31	RECTA L=97.08m	L=408.00
4+760.00	2340.85	2340.40	-0.43	RECTA L=97.08m	
4+780.00	2350.59	2342.81	-7.77	RECTA L=97.08m	L=408.00
4+800.00	2352.24	2345.43	-6.80	RECTA L=97.08m	
4+820.00	2352.30	2352.05	-0.24	RECTA L=97.08m	L=408.00
4+840.00	2349.86	2349.51	-0.35	RECTA L=97.08m	
4+860.00	2352.37	2352.00	-0.37	RECTA L=97.08m	L=408.00
4+880.00	2354.00	2354.00	0.00	RECTA L=97.08m	
4+900.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
4+920.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
4+940.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
4+960.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
4+980.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+000.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+020.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+040.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+060.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+080.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+100.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+120.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+140.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+160.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+180.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+200.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+220.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+240.00	2354.61	2354.00	-0.61	RECTA L=97.08m	
5+260.00	2354.61	2354.00	-0.61	RECTA L=97.08m	L=408.00
5+280.00	2354.61	2354.00	-0.61	RECTA L=97.08m	

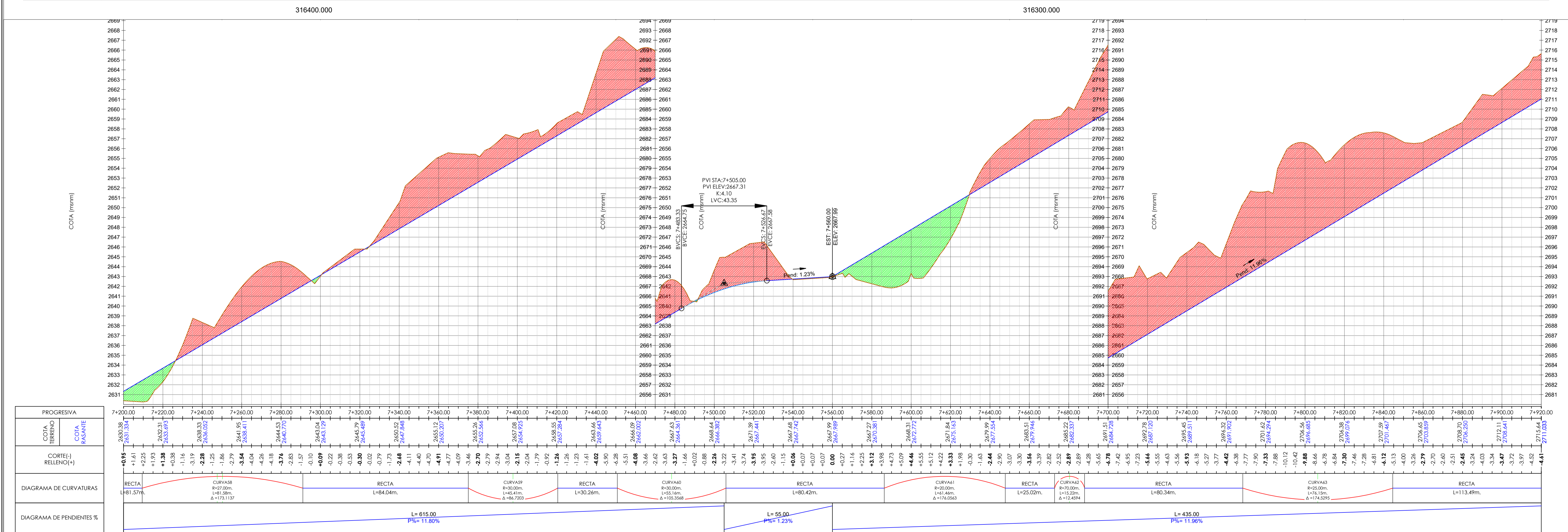
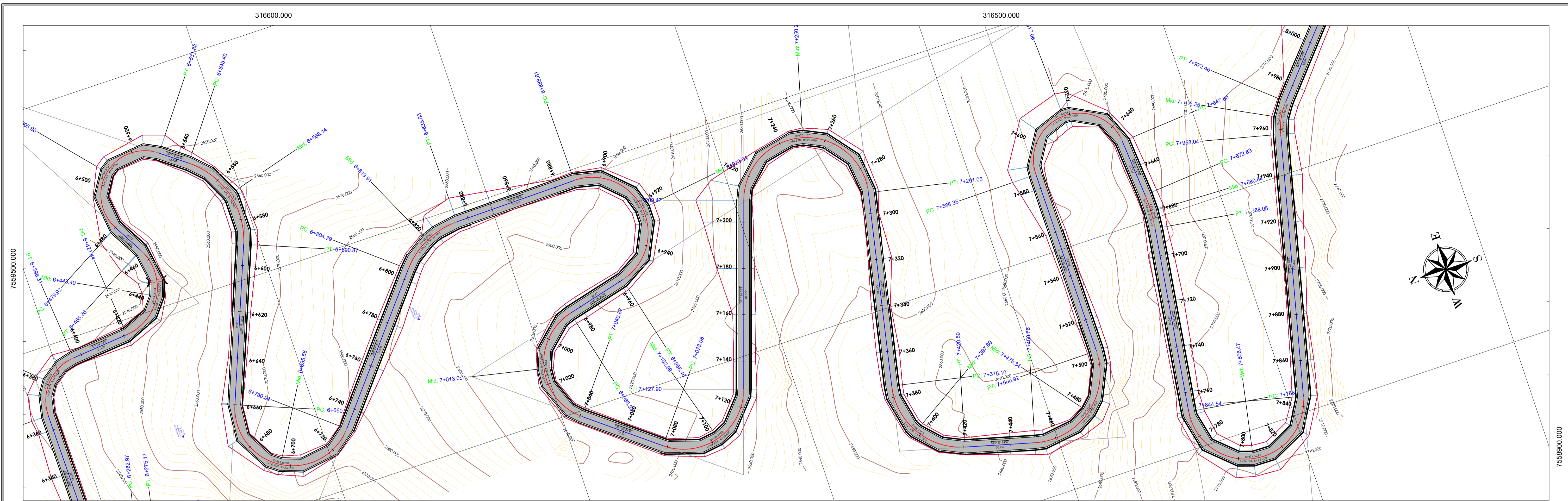




PROGRESIVA	COIA TERRENO	COIA RASANTE	CORTE(-)/RELLENO(+)
5+740.00	2467.18	2467.25	+0.08
5+750.00	2469.15	2469.20	-0.05
5+760.00	2467.50	2467.55	-0.05
5+770.00	2470.50	2470.50	0.00
5+780.00	2467.00	2467.04	-0.04
5+790.00	2470.91	2470.91	0.00
5+800.00	2469.02	2469.02	0.00
5+810.00	2469.00	2469.00	0.00
5+820.00	2470.97	2470.97	0.00
5+830.00	2472.70	2472.70	0.00
5+840.00	2473.30	2473.30	0.00
5+850.00	2473.30	2473.30	0.00
5+860.00	2473.30	2473.30	0.00
5+870.00	2473.30	2473.30	0.00
5+880.00	2473.30	2473.30	0.00
5+890.00	2473.30	2473.30	0.00
5+900.00	2473.30	2473.30	0.00
5+910.00	2473.30	2473.30	0.00
5+920.00	2473.30	2473.30	0.00
5+930.00	2473.30	2473.30	0.00
5+940.00	2473.30	2473.30	0.00
5+950.00	2473.30	2473.30	0.00
5+960.00	2473.30	2473.30	0.00
5+970.00	2473.30	2473.30	0.00
5+980.00	2473.30	2473.30	0.00
5+990.00	2473.30	2473.30	0.00
6+000.00	2473.30	2473.30	0.00
6+010.00	2473.30	2473.30	0.00
6+020.00	2473.30	2473.30	0.00
6+030.00	2473.30	2473.30	0.00
6+040.00	2473.30	2473.30	0.00
6+050.00	2473.30	2473.30	0.00
6+060.00	2473.30	2473.30	0.00
6+070.00	2473.30	2473.30	0.00
6+080.00	2473.30	2473.30	0.00
6+090.00	2473.30	2473.30	0.00
6+100.00	2473.30	2473.30	0.00
6+110.00	2473.30	2473.30	0.00
6+120.00	2473.30	2473.30	0.00
6+130.00	2473.30	2473.30	0.00
6+140.00	2473.30	2473.30	0.00
6+150.00	2473.30	2473.30	0.00
6+160.00	2473.30	2473.30	0.00
6+170.00	2473.30	2473.30	0.00
6+180.00	2473.30	2473.30	0.00
6+190.00	2473.30	2473.30	0.00
6+200.00	2473.30	2473.30	0.00
6+210.00	2473.30	2473.30	0.00
6+220.00	2473.30	2473.30	0.00
6+230.00	2473.30	2473.30	0.00
6+240.00	2473.30	2473.30	0.00
6+250.00	2473.30	2473.30	0.00
6+260.00	2473.30	2473.30	0.00
6+270.00	2473.30	2473.30	0.00
6+280.00	2473.30	2473.30	0.00
6+290.00	2473.30	2473.30	0.00
6+300.00	2473.30	2473.30	0.00
6+310.00	2473.30	2473.30	0.00
6+320.00	2473.30	2473.30	0.00
6+330.00	2473.30	2473.30	0.00
6+340.00	2473.30	2473.30	0.00
6+350.00	2473.30	2473.30	0.00
6+360.00	2473.30	2473.30	0.00
6+370.00	2473.30	2473.30	0.00
6+380.00	2473.30	2473.30	0.00
6+390.00	2473.30	2473.30	0.00
6+400.00	2473.30	2473.30	0.00
6+410.00	2473.30	2473.30	0.00
6+420.00	2473.30	2473.30	0.00
6+430.00	2473.30	2473.30	0.00
6+440.00	2473.30	2473.30	0.00
6+450.00	2473.30	2473.30	0.00
6+460.00	2473.30	2473.30	0.00
6+470.00	2473.30	2473.30	0.00
6+480.00	2473.30	2473.30	0.00

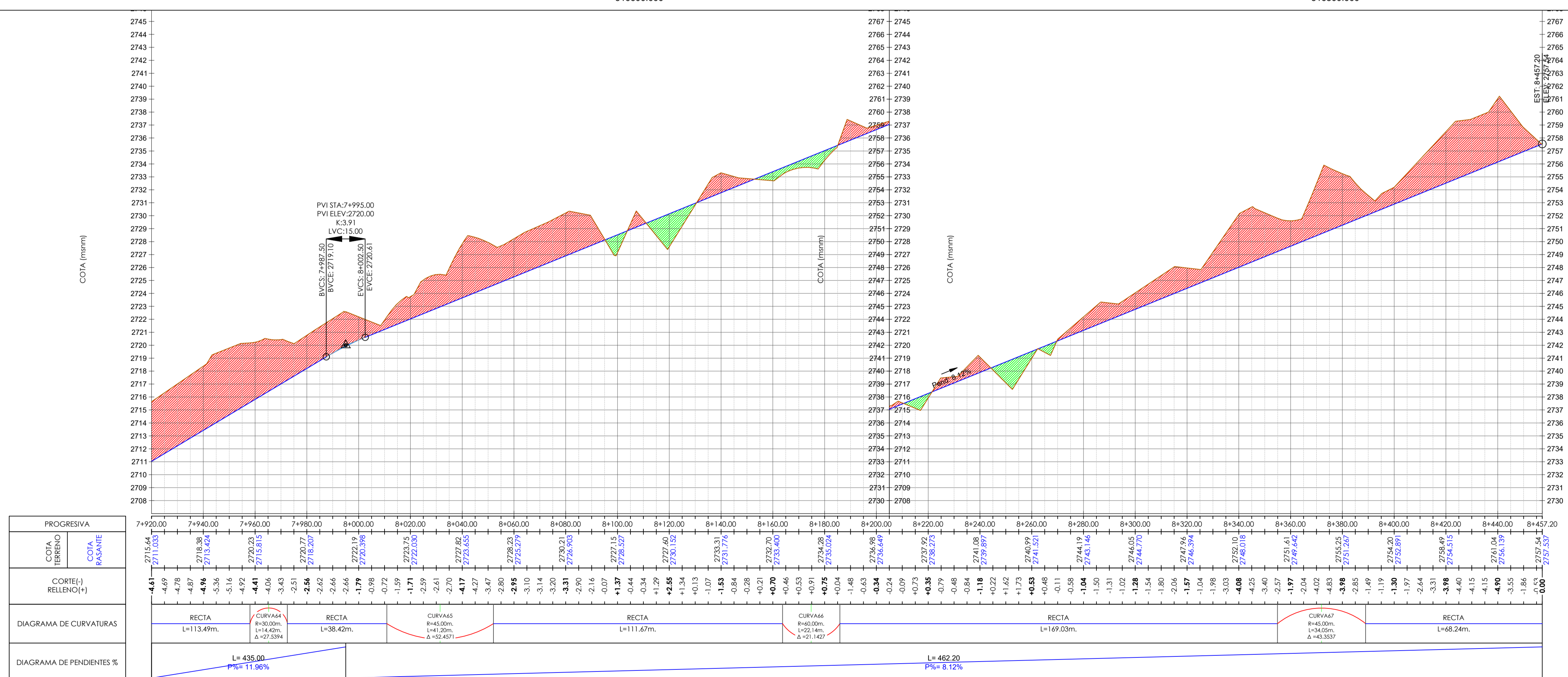
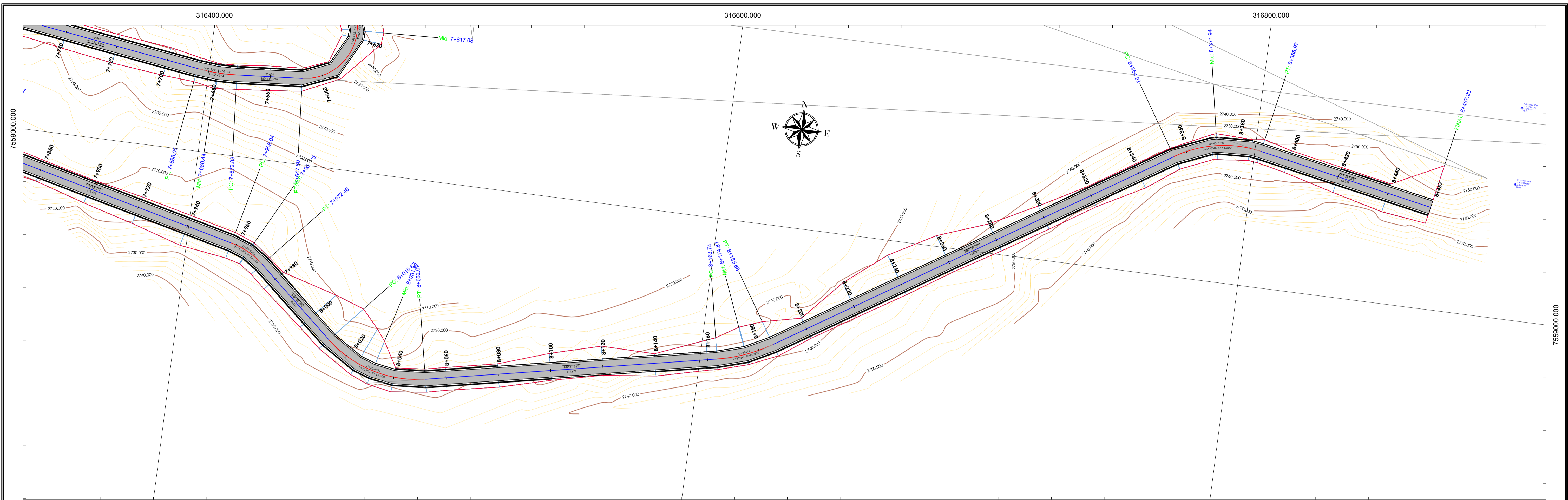


<b>UNIVERSIDAD AUTÓNOMA</b> <b>JUAN MISAEI SARACHO</b>	<b>FACULTAD DE CIENCIAS Y TECNOLOGÍA</b> <b>CARRERA DE INGENIERÍA CIVIL</b>	<b>MATERIA:</b> <b>PROYECTO DE GRADO II (MENCIÓN VÍAS)</b> <b>CIV - 502</b>	<b>TEMA:</b> <b>"DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL</b> <b>RÍO GRANDE - YERBA BUENA"</b>	<b>UNIVERSITARIO:</b> <b>JUAN CARLOS MENDOZA RUEDA</b>	<b>Plano:</b> <b>PLANTA Y PERFIL</b>	
					<b>TRAMO:</b> <b>RÍO GRANDE - YERBA BUENA</b>	<b>Progresivas:</b> De: 6+480 A: 7+200
					<b>Escala:</b> <b>1:1000</b>	<b>Fecha:</b> <b>JUNIO 2024</b>



PROGRESIVA	COTA (mtrm)	
	TERRENO	RAMBLIE
7+200.00	2630.38	2631.35
7+220.00	+1.61	2632.31
7+240.00	+1.93	2633.69
7+260.00	+1.38	2635.05
7+280.00	-1.16	2636.83
7+300.00	-3.19	2639.02
7+320.00	-2.28	2641.52
7+340.00	-1.86	2644.11
7+360.00	-3.54	2646.81
7+380.00	-4.04	2649.51
7+400.00	-4.18	2652.21
7+420.00	-3.76	2654.91
7+440.00	-2.83	2657.61
7+460.00	-1.57	2660.31
7+480.00	+0.09	2663.01
7+500.00	-0.22	2665.71
7+520.00	-0.38	2668.41
7+540.00	-0.53	2671.11
7+560.00	-0.30	2673.81
7+580.00	-0.02	2676.51
7+600.00	-1.73	2679.21
7+620.00	-2.68	2681.91
7+640.00	-4.40	2684.61
7+660.00	-4.91	2687.31
7+680.00	-4.77	2690.01
7+700.00	-4.09	2692.71
7+720.00	-3.46	2695.41
7+740.00	-2.79	2698.11
7+760.00	-2.04	2700.81
7+780.00	-1.26	2703.51
7+800.00	-0.42	2706.21
7+820.00	+0.88	2708.91
7+840.00	-2.26	2711.61
7+860.00	-3.41	2714.31
7+880.00	-4.35	2717.01
7+900.00	-5.20	2719.71
7+920.00	-6.07	2722.41
7+940.00	-6.97	2725.11
7+960.00	-7.89	2727.81
7+980.00	-8.83	2730.51
8+000.00	-9.79	2733.21
8+020.00	-10.77	2735.91
8+040.00	-11.77	2738.61
8+060.00	-12.79	2741.31
8+080.00	-13.83	2744.01
8+100.00	-14.89	2746.71
8+120.00	-15.97	2749.41
8+140.00	-17.07	2752.11
8+160.00	-18.19	2754.81
8+180.00	-19.33	2757.51
8+200.00	-20.49	2760.21
8+220.00	-21.67	2762.91
8+240.00	-22.87	2765.61
8+260.00	-24.09	2768.31
8+280.00	-25.33	2771.01
8+300.00	-26.59	2773.71
8+320.00	-27.87	2776.41
8+340.00	-29.17	2779.11
8+360.00	-30.49	2781.81
8+380.00	-31.83	2784.51
8+400.00	-33.19	2787.21
8+420.00	-34.57	2789.91
8+440.00	-35.97	2792.61
8+460.00	-37.39	2795.31
8+480.00	-38.83	2798.01
8+500.00	-40.29	2800.71
8+520.00	-41.77	2803.41
8+540.00	-43.27	2806.11
8+560.00	-44.79	2808.81
8+580.00	-46.33	2811.51
8+600.00	-47.89	2814.21
8+620.00	-49.47	2816.91
8+640.00	-51.07	2819.61
8+660.00	-52.69	2822.31
8+680.00	-54.33	2825.01
8+700.00	-55.99	2827.71
8+720.00	-57.67	2830.41
8+740.00	-59.37	2833.11
8+760.00	-61.09	2835.81
8+780.00	-62.83	2838.51
8+800.00	-64.59	2841.21
8+820.00	-66.37	2843.91
8+840.00	-68.17	2846.61
8+860.00	-69.99	2849.31
8+880.00	-71.83	2852.01
8+900.00	-73.69	2854.71
8+920.00	-75.57	2857.41
8+940.00	-77.47	2860.11
8+960.00	-79.39	2862.81
8+980.00	-81.33	2865.51
9+000.00	-83.29	2868.21
9+020.00	-85.27	2870.91
9+040.00	-87.27	2873.61
9+060.00	-89.29	2876.31
9+080.00	-91.33	2879.01
9+100.00	-93.39	2881.71
9+120.00	-95.47	2884.41
9+140.00	-97.57	2887.11
9+160.00	-99.69	2889.81
9+180.00	-101.83	2892.51
9+200.00	-103.99	2895.21
9+220.00	-106.17	2897.91
9+240.00	-108.37	2900.61
9+260.00	-110.59	2903.31
9+280.00	-112.83	2906.01
9+300.00	-115.09	2908.71
9+320.00	-117.37	2911.41
9+340.00	-119.67	2914.11
9+360.00	-121.99	2916.81
9+380.00	-124.33	2919.51
9+400.00	-126.69	2922.21
9+420.00	-129.07	2924.91
9+440.00	-131.47	2927.61
9+460.00	-133.89	2930.31
9+480.00	-136.33	2933.01
9+500.00	-138.79	2935.71
9+520.00	-141.27	2938.41
9+540.00	-143.77	2941.11
9+560.00	-146.29	2943.81
9+580.00	-148.83	2946.51
9+600.00	-151.39	2949.21
9+620.00	-153.97	2951.91
9+640.00	-156.57	2954.61
9+660.00	-159.19	2957.31
9+680.00	-161.83	2960.01
9+700.00	-164.49	2962.71
9+720.00	-167.17	2965.41
9+740.00	-169.87	2968.11
9+760.00	-172.59	2970.81
9+780.00	-175.33	2973.51
9+800.00	-178.09	2976.21
9+820.00	-180.87	2978.91
9+840.00	-183.67	2981.61
9+860.00	-186.49	2984.31
9+880.00	-189.33	2987.01
9+900.00	-192.19	2989.71
9+920.00	-195.07	2992.41
9+940.00	-197.97	2995.11
9+960.00	-200.89	2997.81
9+980.00	-203.83	3000.51
10+000.00	-206.79	3003.21

<p>UNIVERSIDAD AUTÓNOMA JUAN MISAEL SARACHO</p>	<p>FACULTAD DE CIENCIAS Y TECNOLOGÍA CARRERA DE INGENIERÍA CIVIL</p>	<p>MATERIA: PROYECTO DE GRADO II (MENCIÓN VÍAS) CIV - 502</p>	<p>TEMA: "DISEÑO DE INGENIERÍA APERTURA DEL TRAMO VIAL RÍO GRANDE - YERBA BUENA"</p>	<p>UNIVERSITARIO: JUAN CARLOS MENDOZA RUEDA</p>	<p>Plano: <b>PLANTA Y PERFIL</b></p>		
					<p>TRAMO RÍO GRANDE - YERBA BUENA</p>	<p>Progresivas: De: 7+200 A: 7+920</p>	<p>Nº de Lámina: 11/23</p>
					<p>Escala: 1:1000</p>	<p>Fecha: JUNIO 2024</p>	



PROGRESIVA	7+920.00	7+940.00	7+960.00	7+980.00	8+000.00	8+020.00	8+040.00	8+060.00	8+080.00	8+100.00	8+120.00	8+140.00	8+160.00	8+180.00	8+200.00	8+220.00	8+240.00	8+260.00	8+280.00	8+300.00	8+320.00	8+340.00	8+360.00	8+380.00	8+400.00	8+420.00	8+440.00	8+457.20		
COIA TERRENO	2715.64	2711.033	2713.38	2713.424	2713.815	2719.207	2720.77	2722.262	2723.75	2725.239	2726.72	2728.205	2729.688	2731.171	2732.654	2734.137	2735.62	2737.103	2738.586	2740.069	2741.552	2743.035	2744.518	2746.001	2747.484	2748.967	2750.45	2751.933	2753.416	2754.899
COIA RASANIE	2711.033	2713.424	2713.815	2719.207	2720.77	2722.262	2723.75	2725.239	2726.72	2728.205	2729.688	2731.171	2732.654	2734.137	2735.62	2737.103	2738.586	2740.069	2741.552	2743.035	2744.518	2746.001	2747.484	2748.967	2750.45	2751.933	2753.416	2754.899	2756.382	
CORTE(-) RELLENO(+)	-4.61	-4.78	-4.87	-4.96	-5.16	-5.36	-5.16	-4.41	-4.06	-3.43	-2.51	-2.56	-2.62	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	-2.66	
DIAGRAMA DE CURVATURAS	RECTA L=113.49m.		CURVA64 R=30.00m. L=14.02m. Δ=27.5394		RECTA L=38.42m.		CURVA65 R=45.00m. L=38.42m. Δ=52.4571		RECTA L=111.67m.		CURVA66 R=45.00m. L=111.67m. Δ=21.1427		RECTA L=169.03m.		CURVA67 R=45.00m. L=34.00m. Δ=43.3537		RECTA L=68.24m.													
DIAGRAMA DE PENDIENTES %	L=435.00 P%=11.96%												L=462.20 P%=8.12%																	