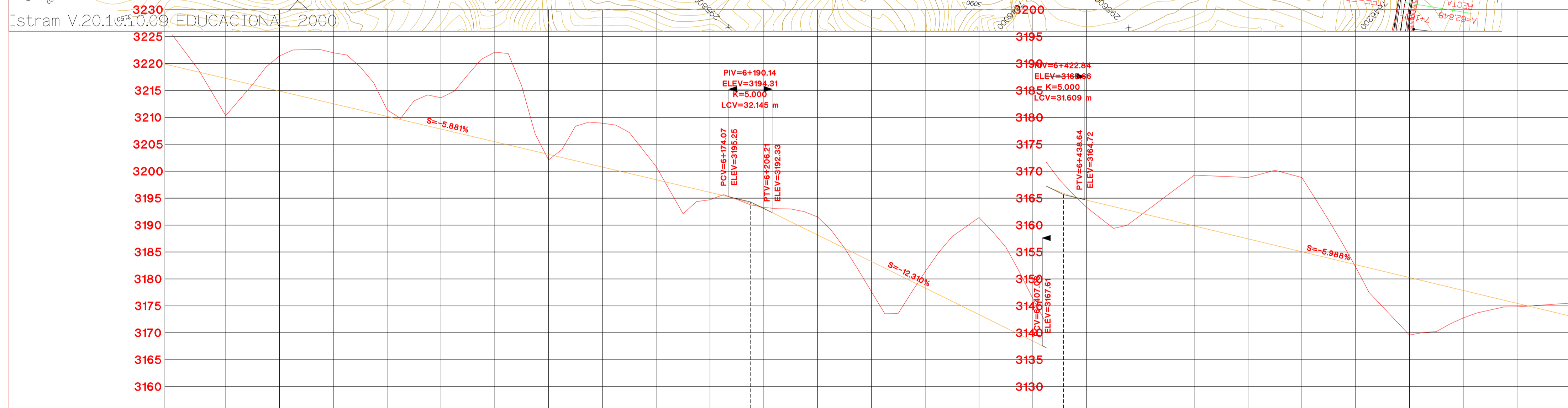
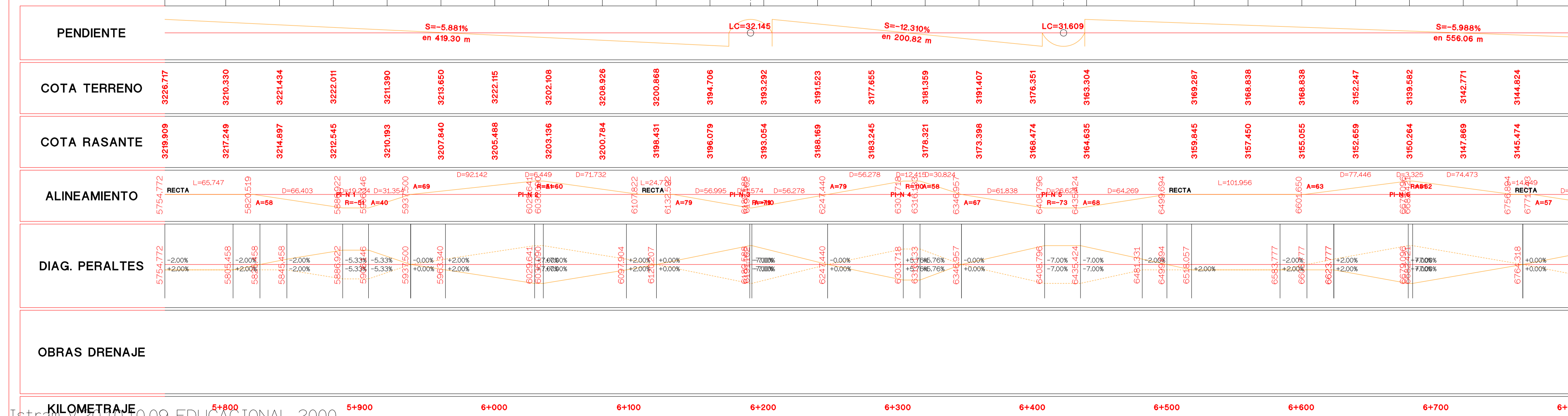


CUADRO DE ELEMENTOS DE CURVA

| Nº | SENTIDO | FNCL       | ABRDO | PI       | T       | PC       | Lc     | PT       | Evt    | COORDENADAS UTM | PC        | S/I |       |
|----|---------|------------|-------|----------|---------|----------|--------|----------|--------|-----------------|-----------|-----|-------|
| 1  | I       | -79°23'27" | 51    | 61046.00 | 72.921  | 61020.00 | 19.224 | 61027.00 | 16.751 | 764608.822      | 29985.455 | 5%  | 1.022 |
| 2  | D       | 89°07'48"  | 51    | 61047.74 | 110.161 | 61027.00 | 6.449  | 61027.00 | 36.176 | 764608.824      | 29982.192 | 7%  | 1.022 |
| 3  | I       | -30°07'07" | 110   | 61050.50 | 58.510  | 61022.00 | 1.574  | 61047.00 | 5.222  | 764608.824      | 29977.388 | 7%  | 0.403 |
| 4  | D       | -79°23'27" | 110   | 61051.83 | 55.273  | 61024.00 | 12.415 | 61047.00 | 4.474  | 764608.824      | 29977.388 | 6%  | 0.674 |
| 5  | I       | -79°23'27" | 73    | 61042.87 | 84.882  | 61019.00 | 3.325  | 61048.00 | 19.089 | 764608.829      | 29977.388 | 7%  | 1.022 |
| 6  | D       | -79°23'27" | 51    | 61046.00 | 71.442  | 61019.00 | 18.416 | 61048.00 | 16.984 | 764608.829      | 29982.192 | 7%  | 1.022 |
| 7  | I       | -79°23'27" | 51    | 61046.00 | 71.442  | 61019.00 | 18.416 | 61048.00 | 16.984 | 764608.829      | 29982.192 | 7%  | 1.022 |
| 8  | D       | -79°23'27" | 51    | 61046.00 | 71.442  | 61019.00 | 18.416 | 61048.00 | 16.984 | 764608.829      | 29982.192 | 7%  | 1.022 |



| #  | Tipo     | PK        | Longitud | Xt         | Yt          | Azimut   | Xo/1       | Yo/1        | Radio | Parametro |
|----|----------|-----------|----------|------------|-------------|----------|------------|-------------|-------|-----------|
| 1  | Recta    | 5+754.772 | 65.747   | 29605.3354 | 7645295.759 | 366.3999 |            |             |       |           |
| 2  | Cirolulo | 5+820.519 | 66.403   | 296020.212 | 7645352.542 | 366.3999 | 296020.212 | 7645352.542 |       | 58.194    |
| 3  | Cirolulo | 5+886.922 | 19.224   | 295976.058 | 7645400.463 | 366.3999 | 295976.058 | 7645353.321 |       | -51.000   |
| 4  | Cirolulo | 5+946.146 | 31.354   | 295957.341 | 7645404.313 | 366.3999 | 295957.341 | 7645398.405 |       | 39.988    |
| 5  | Cirolulo | 5+937.500 | 92.142   | 295958.685 | 7645398.405 | 366.3999 | 295958.685 | 7645398.405 |       | 68.551    |
| 6  | Cirolulo | 6+026.641 | 6.440    | 295837.842 | 7645398.951 | 338.8694 | 295837.842 | 7645440.738 |       | 51.000    |
| 7  | Cirolulo | 6+036.090 | 71.732   | 295832.805 | 7645402.972 | 346.9162 | 295832.805 | 7645468.543 |       | 60.484    |
| 8  | Recta    | 6+107.822 | 24.770   | 295807.598 | 7645468.543 | 366.3999 |            |             |       |           |
| 9  | Cirolulo | 6+132.592 | 56.995   | 295804.598 | 7645493.101 | 366.3999 | 295804.598 | 7645493.101 |       | 79.180    |
| 10 | Cirolulo | 6+189.588 | 1.574    | 295792.370 | 7645458.595 | 374.1937 | 295690.615 | 7645506.809 |       | -110.000  |
| 11 | Cirolulo | 6+191.162 | 56.278   | 295791.761 | 7645550.047 | 374.2884 | 295761.265 | 7645597.153 |       | 78.080    |
| 12 | Cirolulo | 6+247.440 | 56.278   | 295761.265 | 7645597.153 | 374.2884 | 295761.265 | 7645597.153 |       | 78.080    |
| 13 | Cirolulo | 6+302.718 | 12.415   | 295730.769 | 7645604.259 | 374.2884 | 295831.845 | 7645607.454 |       | 110.000   |
| 14 | Cirolulo | 6+316.133 | 30.824   | 295726.545 | 7645655.923 | 381.4575 | 295720.494 | 7645686.125 |       | 58.229    |
| 15 | Cirolulo | 6+346.957 | 61.838   | 295720.494 | 7645686.125 | 380.3876 | 295720.494 | 7645686.125 |       | 67.188    |
| 16 | Cirolulo | 6+408.798 | 20.620   | 295702.837 | 7645744.871 | 363.4238 | 295641.558 | 7645706.159 |       | -73.000   |
| 17 | Cirolulo | 6+435.424 | 64.269   | 295684.633 | 7645764.122 | 340.2013 | 295624.535 | 7645785.231 |       | 68.496    |
| 18 | Recta    | 6+499.694 | 101.956  | 295624.535 | 7645785.231 | 312.1772 |            |             |       |           |
| 19 | Cirolulo | 6+601.650 | 77.446   | 295524.439 | 7645804.620 | 312.1772 | 295524.439 | 7645804.620 |       | 62.847    |
| 20 | Cirolulo | 6+679.096 | 3.325    | 295456.240 | 7645836.982 | 360.8344 | 295497.750 | 7645866.625 |       | 51.000    |
| 21 | Cirolulo | 6+682.421 | 74.473   | 295454.406 | 7645839.749 | 360.8344 | 295449.524 | 7645912.309 |       | 61.629    |
| 22 | Recta    | 6+736.894 | 24.948   | 295449.524 | 7645912.309 | 111.461  |            |             |       |           |
| 23 | Cirolulo | 6+771.743 | 64.818   | 295442.111 | 7645926.931 | 111.461  | 295442.111 | 7645926.931 |       | 57.495    |
| 24 | Cirolulo | 6+836.561 | 0.416    | 295449.819 | 7645990.554 | 370.6994 | 295404.129 | 7645967.893 |       | -51.000   |
| 25 | Cirolulo | 6+836.977 | 62.909   | 295449.819 | 7645990.554 | 370.6994 | 295401.945 | 7646030.314 |       | 56.642    |
| 26 | Recta    | 6+899.886 | 10.784   | 295401.945 | 7646030.314 | 330.9072 |            |             |       |           |
| 27 | Cirolulo | 6+910.671 | 79.919   | 295392.407 | 7646035.341 | 330.9072 | 295392.407 | 7646035.341 |       | 63.842    |
| 28 | Cirolulo | 6+990.590 | 27.764   | 295335.262 | 7646088.088 | 360.7872 | 295383.957 | 7646103.240 |       | 51.000    |
| 29 | Cirolulo | 7+018.354 | 77.123   | 295334.450 | 7646115.492 | 18.4441  | 295385.582 | 7646170.608 |       | 62.716    |
| 30 | Recta    | 7+095.477 | 74.553   | 295385.582 | 7646170.608 | 63.5861  |            |             |       |           |

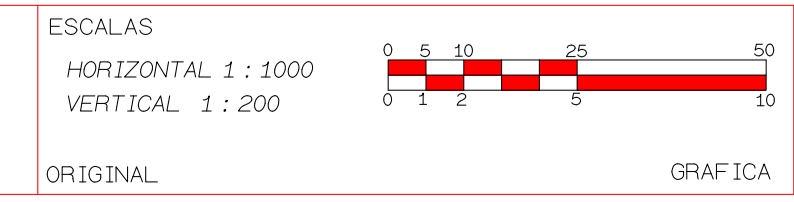


Istram V.20.10.09 EDUCACIONAL 2000



DIRECCION DE DESARROLLO

ISPOL



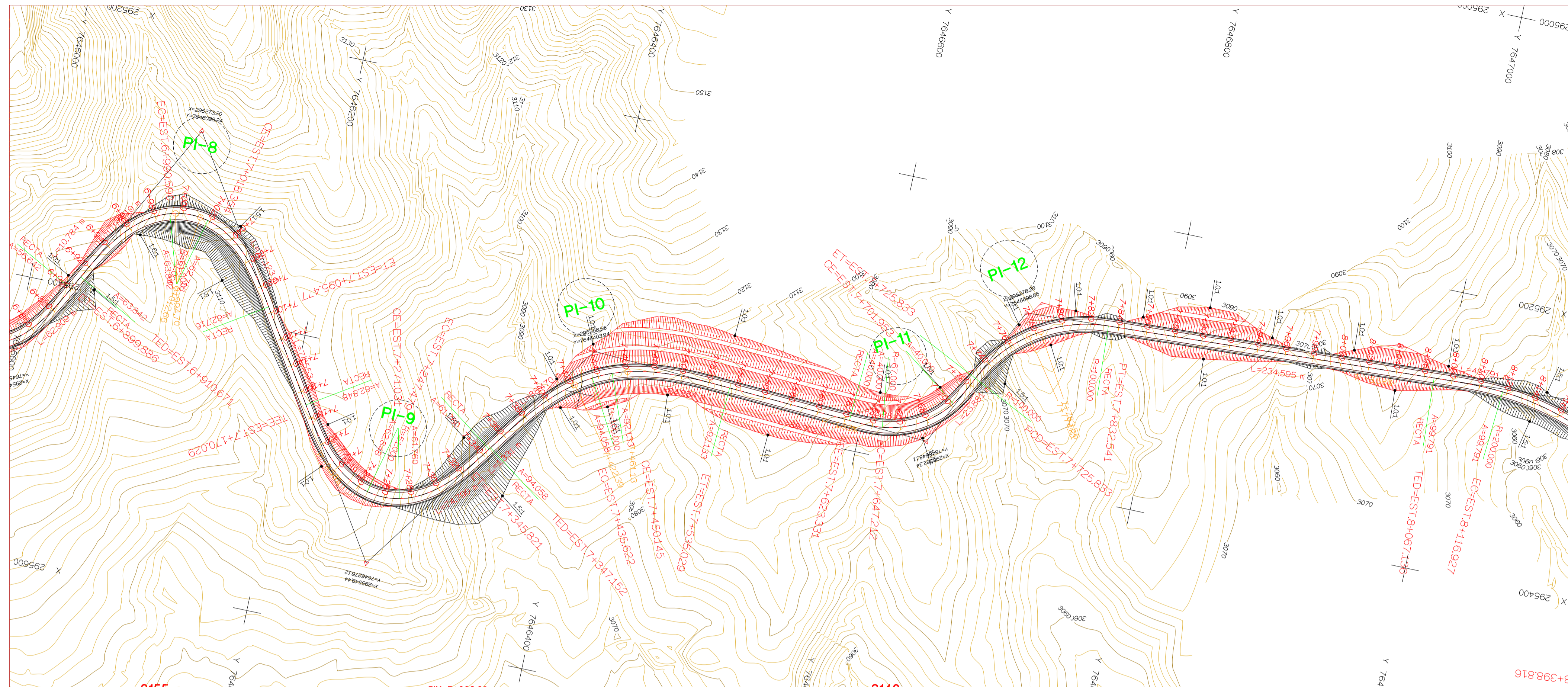
PROYECTO : AUTOPISTA DE AQUI A ALLI TRAMO : PRIMERO

NOMBRE PLANO : C. GRANDE - PAICHO SUD U.A.J.M.S. UNIV. CRUZ BENITEZ ROGER

DIRECCION GENERAL DEL PROYECTO : EL UNO DIRECCION TECNICA DEL PROYECTO : EL OTRO

FECHA : 20/10/2020 N.º : 7

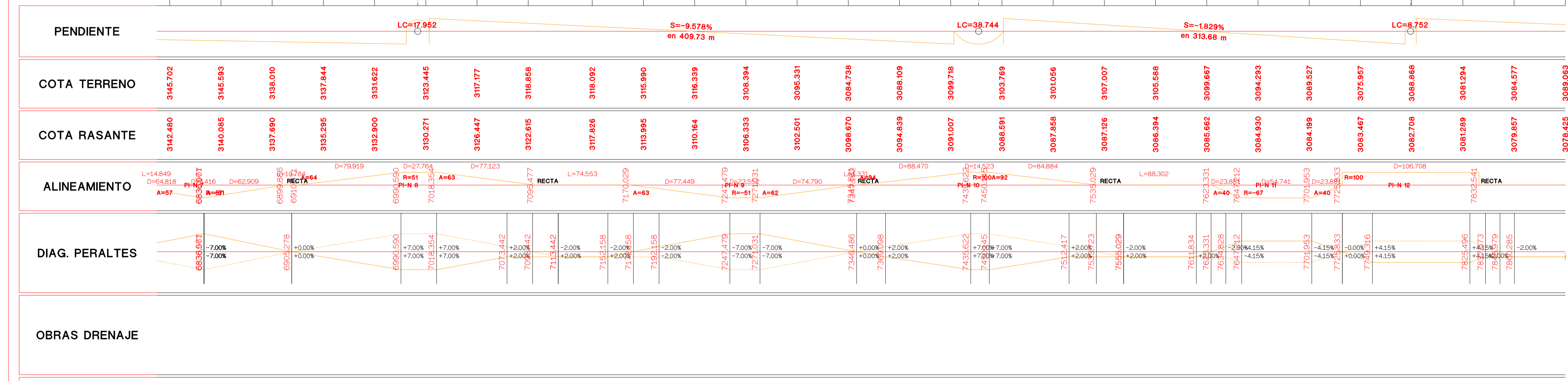
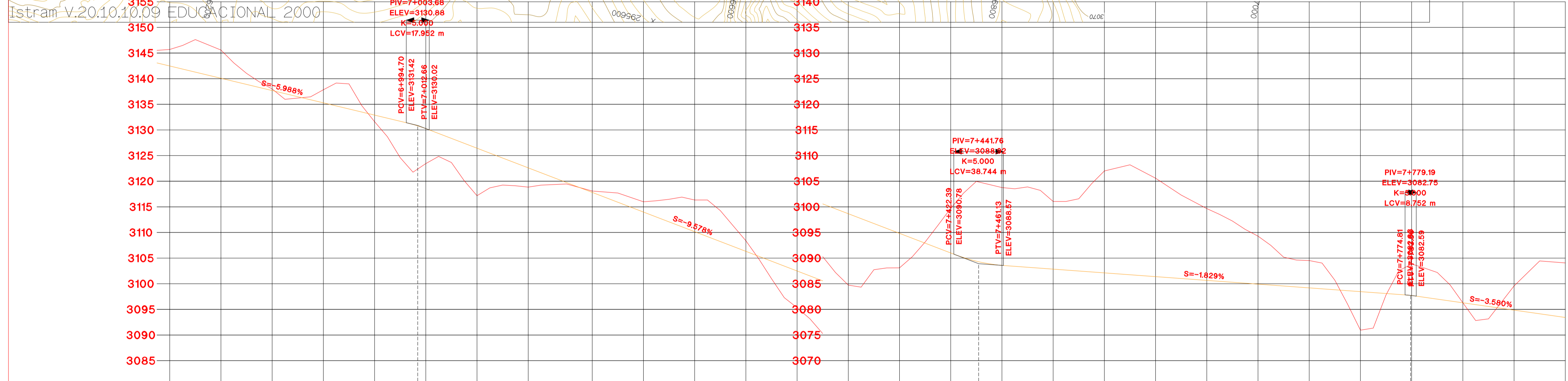




CUADRO DE ELEMENTOS DE CURVA

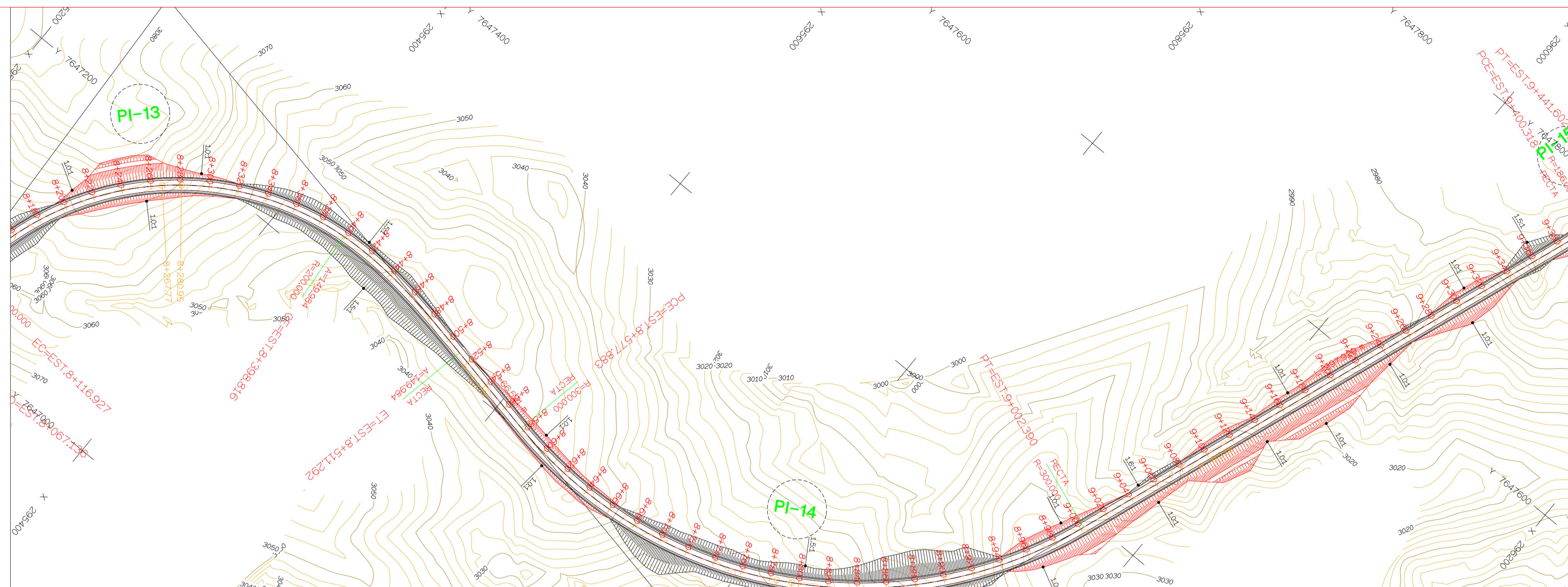
| Nº | SENTIDO | PKL        | ANGULO | PI       | T       | PC       | Lc      | PT       | E <sub>1</sub> | COORDENADAS LOCAL | PI        | S/100 |
|----|---------|------------|--------|----------|---------|----------|---------|----------|----------------|-------------------|-----------|-------|
|    |         |            |        |          |         |          |         |          |                | NORTE             | ESTE      |       |
| 1  | I       | 70°30'00"  | 51     | 6488.000 | 72.821  | 6488.000 | 19.224  | 6488.000 | 16.751         | 76458.000         | 30688.480 | 5%    |
| 2  | D       | 80°30'00"  | 51     | 6488.744 | 110.161 | 6488.744 | 6.440   | 6488.744 | 36.176         | 76458.000         | 30688.120 | 7%    |
| 3  | I       | 100°30'00" | 110    | 6490.160 | 58.510  | 6490.160 | 1.574   | 6490.160 | 5.222          | 76458.000         | 30678.876 | 7%    |
| 4  | D       | 20°30'00"  | 110    | 6492.880 | 55.273  | 6492.880 | 12.415  | 6492.880 | 4.474          | 76458.000         | 30677.386 | 6%    |
| 5  | I       | 70°30'00"  | 73     | 6492.880 | 84.882  | 6492.880 | 26.629  | 6492.880 | 19.089         | 76458.000         | 30677.888 | 7%    |
| 6  | D       | 80°30'00"  | 51     | 6493.800 | 92.540  | 6493.800 | 3.325   | 6493.800 | 27.034         | 76458.000         | 30682.120 | 7%    |
| 7  | I       | 70°30'00"  | 51     | 6493.800 | 71.442  | 6493.800 | 0.416   | 6493.800 | 16.194         | 76458.000         | 30682.280 | 7%    |
| 8  | D       | 80°30'00"  | 51     | 6493.800 | 134.784 | 6493.800 | 27.764  | 6493.800 | 58.872         | 76458.000         | 30682.280 | 7%    |
| 9  | I       | 100°30'00" | 51     | 6494.480 | 120.340 | 6494.480 | 23.552  | 6494.480 | 48.473         | 76458.000         | 30684.440 | 7%    |
| 10 | D       | 80°30'00"  | 100    | 6494.760 | 100.853 | 6494.760 | 14.523  | 6494.760 | 17.863         | 76458.000         | 30684.940 | 7%    |
| 11 | I       | 40°30'00"  | 67     | 6494.760 | 56.707  | 6494.760 | 54.741  | 6494.760 | 13.881         | 76458.000         | 30684.940 | 4%    |
| 12 | D       | 80°30'00"  | 100    | 6494.760 | 59.068  | 6494.760 | 106.708 | 6494.760 | 16.142         | 76458.000         | 30684.940 | 4%    |

| #  | Tipo     | PKL      | Longitud | Xt         | Yt          | Azmut   | Xc1        | Yc1         | Radio   | Parametro |
|----|----------|----------|----------|------------|-------------|---------|------------|-------------|---------|-----------|
| 23 | Cirolote | 6477.743 | 64.818   | 295452.111 | 7645926.931 | 114941  | 295452.111 | 7645926.931 |         | 57.495    |
| 24 | Cirolote | 6483.951 | 0.416    | 295449.819 | 7645990.551 | 3706009 | 295404.129 | 7645967.892 | -51.000 |           |
| 25 | Cirolote | 6483.957 | 62.909   | 295449.832 | 7645990.554 | 3701711 | 295401.945 | 7646030.314 |         | 56.642    |
| 26 | Recta    | 6489.886 | 10.784   | 295401.845 | 7646030.314 | 3309072 | 295392.407 | 7646035.347 |         | 63.842    |
| 27 | Cirolote | 6491.671 | 79.919   | 295392.407 | 7646035.314 | 3309072 | 295392.407 | 7646035.347 |         | 63.842    |
| 28 | Cirolote | 6499.590 | 27.764   | 295335.262 | 7646088.082 | 3807875 | 295383.957 | 7646103.241 | 51.000  |           |
| 29 | Cirolote | 7408.354 | 77.123   | 295334.450 | 7646115.492 | 134447  | 295385.583 | 7646170.608 |         | 62.716    |
| 30 | Recta    | 7409.477 | 74.553   | 295385.953 | 7646170.608 | 635982  | 295448.264 | 7646210.971 |         | 62.848    |
| 31 | Cirolote | 7417.025 | 77.440   | 295448.264 | 7646210.971 | 635982  | 295448.264 | 7646210.971 |         | 62.848    |
| 32 | Cirolote | 7424.749 | 23.552   | 295499.543 | 7646266.361 | 152412  | 295449.998 | 7646278.454 | -51.000 |           |
| 33 | Cirolote | 7427.031 | 74.790   | 295499.543 | 7646266.361 | 3898421 | 295452.016 | 7646344.966 |         | 61.760    |
| 34 | Recta    | 7434.821 | 1.331    | 295452.016 | 7646344.966 | 3394628 | 295450.029 | 7646345.734 |         | 94.058    |
| 35 | Cirolote | 7437.152 | 88.470   | 295450.029 | 7646345.734 | 3394628 | 295474.016 | 7646455.408 | 100.000 |           |
| 36 | Cirolote | 7435.622 | 14.523   | 295387.502 | 7646406.301 | 3673235 | 295374.174 | 7646503.332 |         | 92.133    |
| 37 | Cirolote | 7450.145 | 84.884   | 295381.313 | 7646419.425 | 3765991 | 295374.174 | 7646503.332 |         | 92.133    |
| 38 | Recta    | 7455.029 | 88.302   | 295374.174 | 7646503.332 | 32886   | 295378.149 | 7646591.492 |         | 40.000    |
| 39 | Cirolote | 7462.321 | 23.881   | 295378.149 | 7646591.492 | 33886   | 295312.573 | 7646697.197 | -67.000 |           |
| 40 | Cirolote | 7464.212 | 54.741   | 295378.149 | 7646615.344 | 3893432 | 295312.573 | 7646697.197 |         | 40.000    |
| 41 | Cirolote | 7470.953 | 23.881   | 295352.150 | 7646661.254 | 3402296 | 295312.573 | 7646697.197 |         | 40.000    |
| 42 | Cirolote | 7472.833 | 106.708  | 295312.573 | 7646672.965 | 328841  | 295312.573 | 7646697.197 | 100.000 |           |
| 43 | Recta    | 7482.541 | 234.595  | 295275.329 | 7646757.849 | 3064804 | 295263.160 | 7646992.151 |         | 99.791    |
| 44 | Cirolote | 6407.136 | 49.791   | 295263.160 | 7646992.151 | 3064804 | 295263.160 | 7646992.151 |         | 99.791    |
| 45 | Cirolote | 6411.627 | 281.888  | 295263.160 | 7647041.904 | 47409   | 295263.160 | 7647027.026 | 200.000 |           |



OBRAS DRENAJE



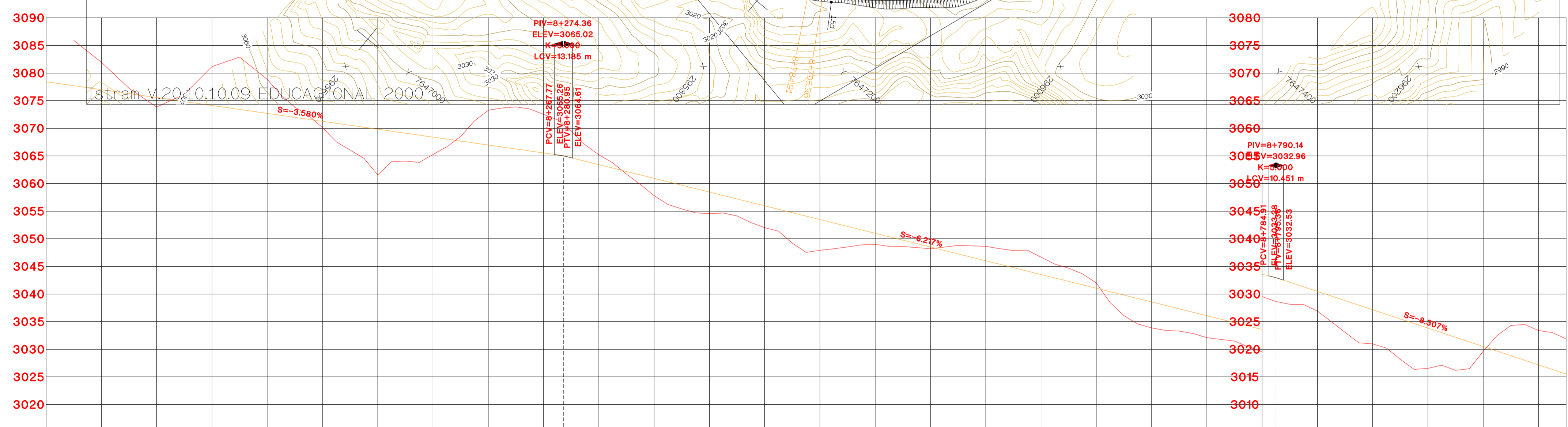


CUADRO DE ELEMENTOS DE CURVA

| Nº | SENTIDO | ÁNG.       | RÁDIO | PI        | T       | PC        | Lc      | PT        | Ext     | COORDENADAS UTM | PC        | SI (%) |
|----|---------|------------|-------|-----------|---------|-----------|---------|-----------|---------|-----------------|-----------|--------|
|    |         |            |       |           |         |           |         |           |         | X               | Y         |        |
| 6  | D       | 89°54'30"  | 51    | 6479.850  | 92.540  | 6460.650  | 3.325   | 6476.884  | 27.034  | 7646802.210     | 39453.587 | 7%     |
| 7  | I       | -72°02'30" | 51    | 6456.167  | 71.442  | 6477.743  | 0.416   | 6469.886  | 16.194  | 7646807.281     | 39454.555 | 7%     |
| 8  | D       | 10°20'30"  | 51    | 7403.661  | 134.764 | 7419.071  | 27.764  | 7405.677  | 59.872  | 7646808.243     | 39572.187 | 7%     |
| 9  | I       | -10°58'30" | 51    | 7428.482  | 120.340 | 7419.029  | 23.552  | 7435.631  | 48.473  | 7646878.120     | 39584.443 | 7%     |
| 10 | D       | 87°58'30"  | 100   | 7441.789  | 100.853 | 74347.182 | 14.523  | 7438.029  | 17.883  | 7646843.890     | 39598.985 | 7%     |
| 11 | I       | -87°58'30" | 67    | 7474.889  | 56.707  | 7469.391  | 54.741  | 7478.939  | 13.881  | 7646844.110     | 39600.349 | 4%     |
| 12 | D       | 87°58'30"  | 100   | 7478.787  | 59.938  | 7478.688  | 108.708 | 7482.241  | 16.542  | 7646846.885     | 39678.181 | 4%     |
| 13 | D       | 103°58'30" | 200   | 8474.381  | 313.257 | 84987.184 | 281.888 | 84912.881 | 127.403 | 7647375.486     | 39648.847 | 7%     |
| 14 | I       | -87°04'30" | 300   | 84780.188 | 256.563 | 84877.883 | 424.506 | 84802.380 | 94.746  | 7647878.816     | 39873.887 | 7%     |

EJE 3

| #  | Tipo     | PK        | Longitud | Xt         | Yt          | Azmut   | Xc1        | Yc1         | Radio    | Parametro |
|----|----------|-----------|----------|------------|-------------|---------|------------|-------------|----------|-----------|
| 43 | Recta    | 74632.541 | 234.595  | 295275.329 | 7646757.849 | 394.884 |            |             |          |           |
| 44 | Clotilde | 84671.136 | 49.791   | 295263.803 | 7646992.157 | 384.884 | 295263.803 | 7646992.157 | 200.000  | 99.791    |
| 45 | Clotilde | 84116.927 | 281.888  | 295263.179 | 7647041.904 | 47429   | 295482.624 | 7647027.024 | 200.000  |           |
| 46 | Clotilde | 84398.816 | 112.476  | 295445.289 | 7647226.274 | 94.697  | 295556.783 | 7647215.014 |          | 149.984   |
| 47 | Recta    | 84511.292 | 66.591   | 295656.783 | 7647215.014 | 112.399 |            |             |          |           |
| 48 | Clotilde | 84577.883 | 424.506  | 295622.122 | 7647202.151 | 112.399 | 295680.047 | 7647496.506 | -300.000 |           |
| 49 | Recta    | 84002.390 | 397.929  | 295061.851 | 7647393.616 | 22.288  |            |             |          |           |



| PENDIENTE      | S=-3.580%<br>en 484.21 m |          | LC=13.185 | S=-6.217%<br>en 503.96 m |          | LC=10.451 |           |                |           |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |  |  |  |  |
|----------------|--------------------------|----------|-----------|--------------------------|----------|-----------|-----------|----------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|--|--|
| COTA TERRENO   | 3089.063                 | 3081.965 | 3073.846  | 3061.168                 | 3078.860 | 3070.136  | 3061.562  | 3065.260       | 3073.260  | 3072.531 | 3065.220 | 3060.943 | 3058.456 | 3052.010 | 3047.911 | 3044.975 | 3048.206 | 3046.642 | 3046.681 | 3042.012 | 3033.883 | 3032.120 | 3029.559 | 3026.919 | 3020.971 | 3016.551 | 3018.635 | 3023.399 | 3021.889 |          |          |  |  |  |  |  |
| COTA RASANTE   | 3078.425                 | 3076.993 | 3075.561  | 3074.129                 | 3072.697 | 3071.266  | 3069.834  | 3068.402       | 3066.970  | 3065.538 | 3064.100 | 3062.668 | 3061.236 | 3059.804 | 3058.372 | 3056.940 | 3055.508 | 3054.076 | 3052.644 | 3051.212 | 3049.780 | 3048.348 | 3046.916 | 3045.484 | 3044.052 | 3042.620 | 3041.188 | 3039.756 | 3038.324 | 3036.892 | 3035.460 |  |  |  |  |  |
| ALINEAMIENTO   | RECTA L=234.595          |          | D=106.708 | D=49.791                 | A=100    | D=281.888 | D=112.476 | RECTA L=66.591 | D=124.506 | PI-N 13  | PI-N 14  | PI-N 15  | PI-N 16  | PI-N 17  | PI-N 18  | PI-N 19  | PI-N 20  | PI-N 21  | PI-N 22  | PI-N 23  | PI-N 24  | PI-N 25  | PI-N 26  | PI-N 27  | PI-N 28  | PI-N 29  | PI-N 30  | PI-N 31  | PI-N 32  | PI-N 33  |          |  |  |  |  |  |
| DIAG. PERALTES | +2.00%                   |          | +2.00%    | +7.00%                   | +7.00%   | +7.00%    | +7.00%    | +7.00%         | +7.00%    | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   | +7.00%   |          |          |  |  |  |  |  |
| OBRAS DRENAJE  |                          |          |           |                          |          |           |           |                |           |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |  |  |  |  |
| KILOMETRAJE    | 7+900                    | 8+000    | 8+100     | 8+200                    | 8+300    | 8+400     | 8+500     | 8+600          | 8+700     | 8+800    | 8+900    | 9+000    |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |  |  |  |  |

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DIRECCION DE DESARROLLO

ISPOL

ESCALAS  
HORIZONTAL 1 : 1000  
VERTICAL 1 : 200  
ORIGINAL

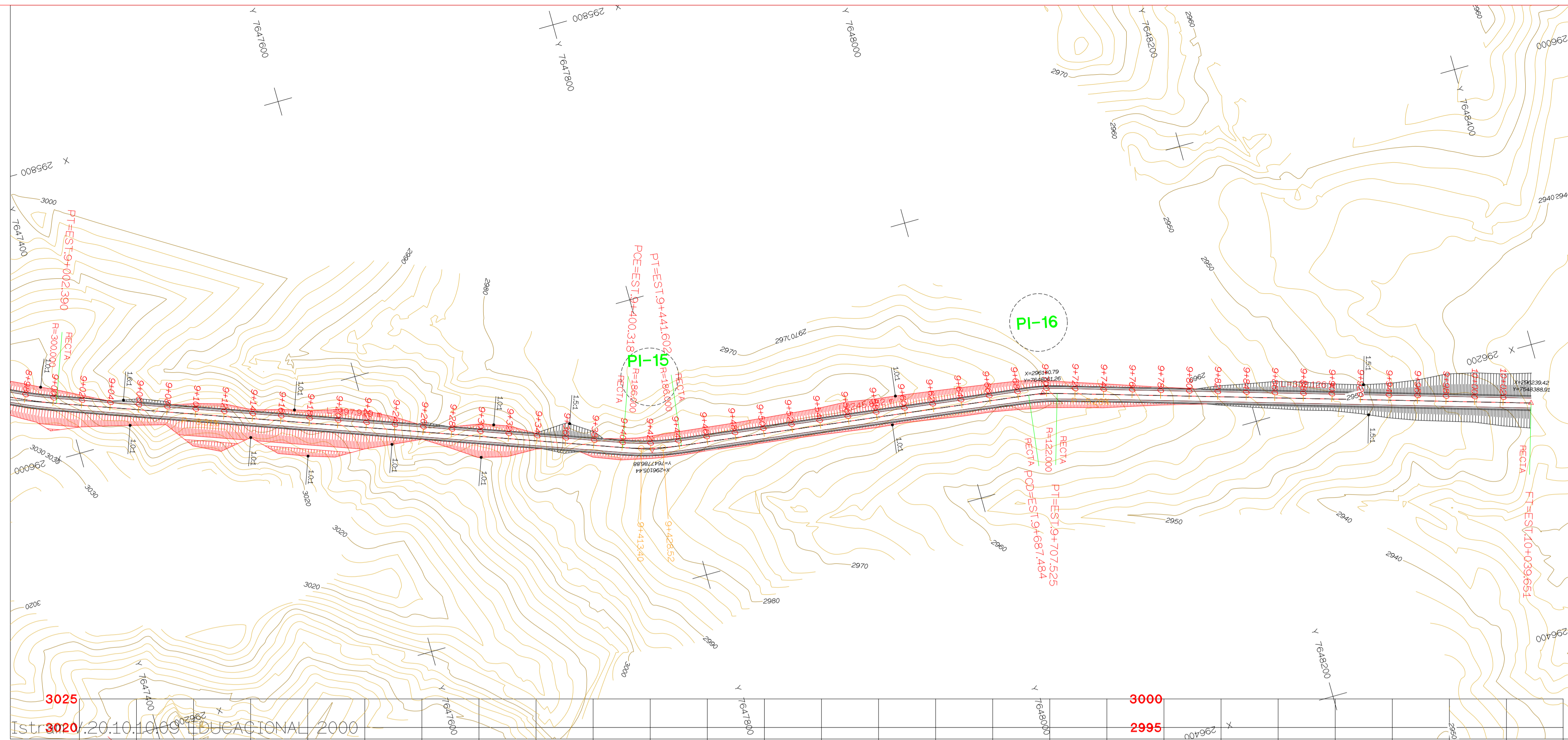
PROYECTO : AUTOPISTA DE AQUI A ALLI  
TRAMO : PRIMERO

NOMBRE PLANO : C. GRANDE - PAICHO SUD U.A.J.M.S.  
UNIV. CRUZ BENITEZ ROGER

DIRECCION GENERAL DEL PROYECTO : EL UNO  
DIRECCION TECNICA DEL PROYECTO : EL OTRO

FECHA : 20/10/2020  
Nº : 9  
Hoja : 06



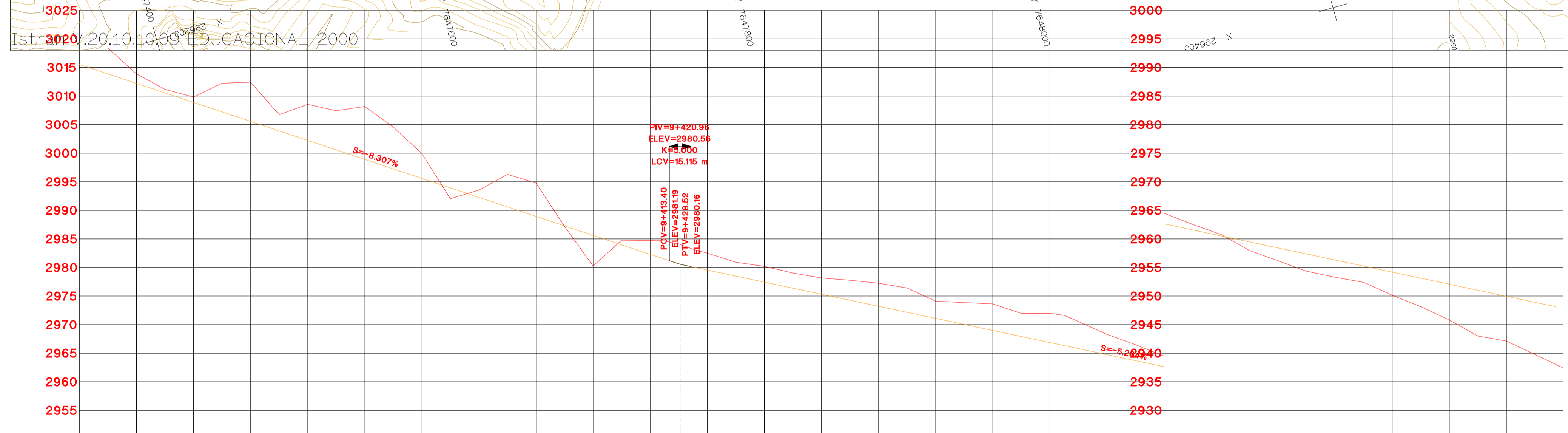


**CUADRO DE ELEMENTOS DE CURVA**

| Nº | SENTIDO | FUNC.      | ABR200 | PI        | T       | PC        | Lc      | PT        | Ext.    | COORDENADAS UTM |           | PC | S-R   |
|----|---------|------------|--------|-----------|---------|-----------|---------|-----------|---------|-----------------|-----------|----|-------|
|    |         |            |        |           |         |           |         |           |         | NORTE           | ESTE      |    |       |
| 11 | I       | 47°14'00"  | 67     | 7474.582  | 56.707  | 7483.331  | 54.741  | 7478.833  | 13.881  | 764664.10       | 29532.343 | 4% | 0.747 |
| 12 | D       | 81°09'30"  | 100    | 74778.927 | 59.068  | 74725.833 | 106.708 | 7482.541  | 16.142  | 764668.855      | 29579.282 | 4% | 0.457 |
| 13 | D       | 107°59'30" | 200    | 84174.291 | 313.257 | 84197.526 | 281.858 | 84192.292 | 127.403 | 7647275.499     | 29549.451 | 7% |       |
| 14 | I       | 47°14'00"  | 300    | 84179.298 | 256.563 | 84177.833 | 424.506 | 84162.393 | 94.746  | 764718.816      | 29613.887 | 7% |       |
| 15 | I       | 18°43'00"  | 196    | 84420.960 | 20.727  | 84405.238 | 41.283  | 84441.602 | 1.151   | 7647758.875     | 29625.438 | 7% |       |
| 16 | D       | 87°44'00"  | 122    | 84887.856 | 10.043  | 84887.484 | 20.042  | 84707.835 | 0.413   | 7648041.282     | 29645.738 | 7% | 0.387 |

**EJE 3 EJE 3**

| #  | Tipo    | PK        | Longitud | Xt         | Yt          | Azmut    | Xc/i       | Yc/i        | Radio    | Parametro |
|----|---------|-----------|----------|------------|-------------|----------|------------|-------------|----------|-----------|
| 48 | Circulo | 8+577.883 | 424.506  | 295622.122 | 7647202.153 | 112.3699 | 295680.047 | 7647496.508 | -300.000 |           |
| 49 | Recta   | 9+002.390 | 597.929  | 295961.851 | 7647393.618 | 22.2868  |            |             |          |           |
| 50 | Circulo | 9+400.318 | 41.283   | 296108.330 | 7647181.493 | 22.2868  | 295923.612 | 7647831.202 | -186.000 |           |
| 51 | Recta   | 9+441.602 | 245.862  | 296108.087 | 7647807.431 | 83.548   |            |             |          |           |
| 52 | Circulo | 9+687.484 | 20.042   | 296139.505 | 7648251.301 | 83.548   | 296090.505 | 7648035.713 | 122.000  |           |
| 53 | Recta   | 9+707.525 | 332.128  | 296143.683 | 7648070.874 | 48.0150  |            |             |          |           |



| PK  | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       | PK       |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>PENDIENTE</b>  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| S = -8.307% en 618.04 m   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| LC = 15.115   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| S = -5.284% en 605.85 m   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| LC = 0.000  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <b>COTA TERRENO</b>   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 3021.889  | 3013.887 | 3009.831 | 3012.429 | 3006.536 | 3008.174 | 2999.937 | 2993.544 | 2984.769 | 2980.269 | 2984.736 | 2982.523 | 2980.189 | 2978.163 | 2977.256 | 2974.111 | 2973.627 | 2971.988 | 2968.303 | 2964.491 | 2960.767 | 2956.165 | 2953.290 | 2950.143 | 2945.811 | 2942.132 | 2937.434 |
| <b>COTA RASANTE</b>   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 3016.528  | 3012.203 | 3008.881 | 3006.558 | 3002.235 | 2998.912 | 2995.590 | 2992.267 | 2988.944 | 2985.621 | 2982.299 | 2978.976 | 2977.438 | 2975.324 | 2973.211 | 2971.097 | 2966.984 | 2966.870 | 2964.757 | 2962.643 | 2960.530 | 2958.416 | 2956.303 | 2954.189 | 2952.075 | 2949.962 |          |
| <b>ALINEAMIENTO</b>   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| L=397.929   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| L=245.882   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| L=332.126   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <b>DIAG. PERALTES</b>   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| +2.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| -2.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| -7.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| -7.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| -7.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| +2.00%  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <b>OBRAS DRENAJE</b>  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Kilometraje: 9+000, 9+100, 9+200, 9+300, 9+400, 9+500, 9+600, 9+700, 9+800, 9+900, 10+000 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |



