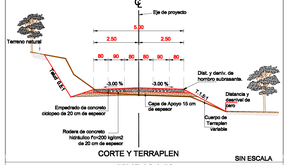
DATOS DE PROYECTO

CAMINO TIPO " ARTESANAL "

VELOCIDAD DE PROYECTO	ANCHO DE CORONA	ANCHO DE CALZADA
30 km/h	5.00 m.	5.00 m.
CURVATURA MAXIMA	**PENDIENTE MAXIMA**	**PENDIENTE CONSERVADORA**
87°20'57"	12.00 %	0.50 %

S E C C I O N T I P O



CORTE Y TERRAPLEN — SIN ESCALA

SIMBOLOGIA

BANCOS DE NIVEL — HOMBRO, EJE DEL CAMINO, HOMBRO

CERCO DE PUAS O MALLA — x x x

OBRA DE DRENAJE

DERECHO DE VIA — DV DV

NUMERO DE CURVA — 61

ORILLA DE CAMINO EXISTENTE

KILOMETRAJE — 0

CURVA DE NIVEL ORDINARIA

POSTE DE C.F.E.

CURVA DE NIVEL MAESTRA A CADA 5 MTS — 1800 m.

TIRANTE (ARREMETIDA DE POSTE)

Camino: CONSTRUCCIÓN DE LA CARRETERA SIN NOMBRE CON CONCRETO HIDRÁULICO DEL CAMINO PIEDRA GRANDE - LA SOLEDAD COFRADÍA, TRAMO DEL KM 0+000 AL KM 5+000, SUBTRAMO DEL KM 0+400 AL KM 1+140, EN EL MUNICIPIO DE SANTA CRUZ ZENZONTEPEC

PLANTA TOPOGRAFICA DEL KM. 0+400.00 AL KM. 1+140.00

PROYECTO:

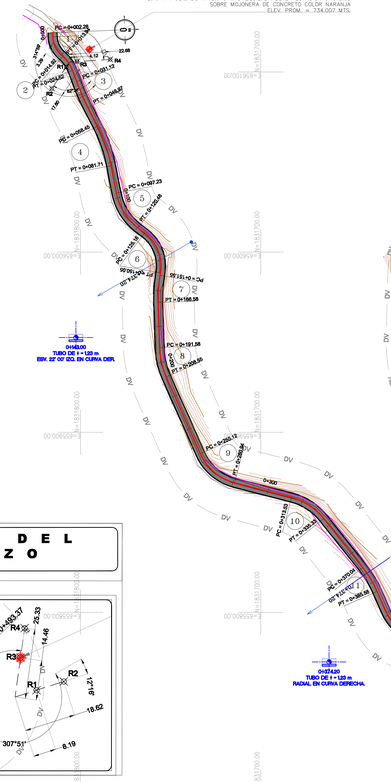
DIRECCION DE PROYECTOS Y CONTROL DE CALIDAD

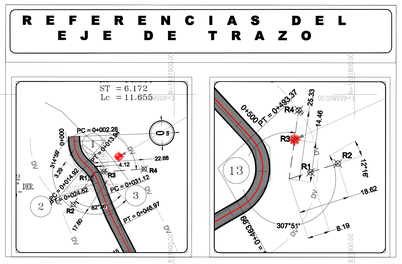
REVISÓ:

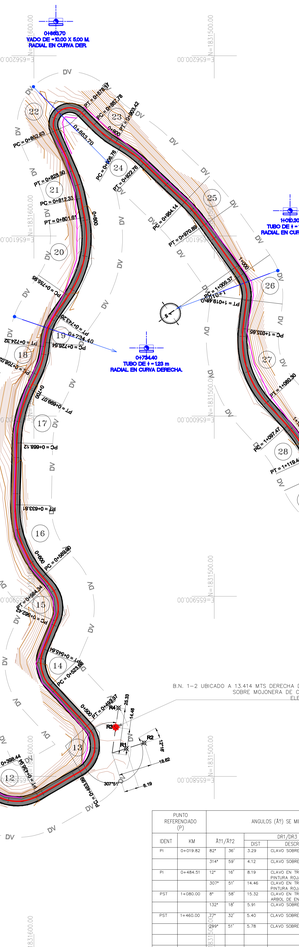
CAMINOS BIENESTAR

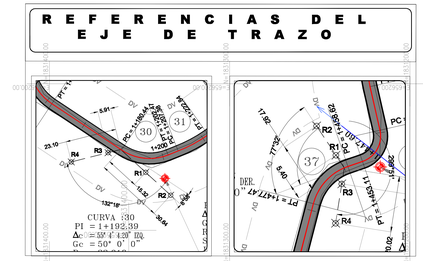
JEFE DE LA UNIDAD DE ESTUDIOS Y PROYECTOS	DIRECTOR DE PROYECTOS Y CONTROL DE CALIDAD	EL DIRECTOR GENERAL
Cédula Profesional 8602284 ING. JAIRO RAMÍREZ VERA	Cédula Profesional 12969000 ING. ALVARO PEREZ HERNANDEZ	ING. MOISÉS SALAZAR MARTÍNEZ

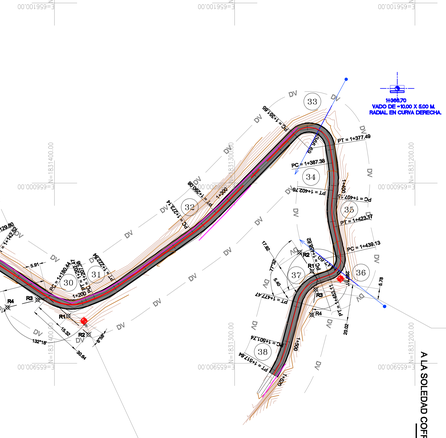
2025	Escala 1:1000	Plano 1 DE 1







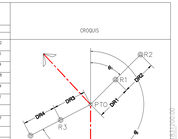




REFERENCIAS DEL TRAZO

PUNTO REFERENCIADO (PI)		ANGULOS (Δ1) SE MIDEN A LA DERECHA DESDE LA PROLONGACION DE LA TANGENTE DE ATRAS. LAS DISTANCIAS DR SON TOTALES								
			DR1./DR1		COORDENADAS			DR2./DR4	COORDENADAS	
IDENT	KM	Δ1°/Δ1'	DIST	DESCRIPCION	N	E	DIST	DESCRIPCION	N	E
PI	0+019.92	82° 36'	3.29	CLAVO SOBRE CONCRETO	1801807.918	656102.687	17.60	CLAVO SOBRE TROMPO	1801815.874	656090.792
		3°4'	59'	4.12	CLAVO SOBRE TROMPO	1801801.976	656105.701	22.68	CLAVO SOBRE TROMPO	1801780.462	656106.946
PI	0+484.51	12°	14'	8.19	CLAVO EN TRONCO CON PINTURA ROJA	1801548.815	656145.453	18.52	CLAVO EN TRONCO EN ARBOL DE PINO	1801536.875	656161.614
		307°	51'	14.46	CLAVO EN TRONCO CON PINTURA ROJA	1801554.631	655921.289	25.23	CLAVO EN TRONCO CON PINTURA ROJA	1801553.137	655838.058
PST	1+080.00	8°	58'	15.32	CLAVO EN TRONCO DE ARBOL DE ENCINO	1801392.331	655926.261	30.44	CLAVO EN TRONCO EN ARBOL DE PINO	1801361.046	655915.899
		132°	18'	5.91	CLAVO SOBRE TROMPO	1801459.347	655935.182	23.10	CLAVO EN TRONCO EN ARBOL DE PINO	1801426.018	655930.991
PST	1+462.00	27°	32'	5.43	CLAVO SOBRE TROMPO	1801207.093	655991.128	17.92	CLAVO SOBRE TROMPO	1801203.994	655962.287
		29°	51'	5.78	CLAVO SOBRE TROMPO	1801255.013	655943.915	20.02	CLAVO EN TRONCO EN ARBOL DE PINO	1801217.215	655936.847

CROQUIS



GEOMETRIA DEL ALINEAMIENTO HORIZONTAL

CURVA	TE O PC	EC	PI O PST		CE		ET O PT	
	N	E	N	E	N	E	N	E
			0+000.00					
			2002991.976	0.00108.808				
			0+019.93				0+019.94	
01	0+002.28		1801815.166	656113.364			1801815.320	656109.301
02	0+019.93		0+019.93				0+019.94	
	1801807.918		1801807.918	656102.687			1801800.918	656100.818
03	0+019.93		1801548.815	656145.453			1801548.815	656161.614
	1801802.145	656094.631		656081.184			1801795.804	656080.132
04	0+098.45		0+235.31				0+167.23	
	1801790.563	656063.891	1801785.216	656059.472			1801783.005	656047.972
05	0+187.23		0+256.08				0+281.08	
	1801780.070	656032.737	1801777.777	656032.785			1801780.069	656013.615
06	0+281.08		0+356.08				0+376.08	
	1801784.366	656002.580	1801783.705	656002.206			1801785.638	655988.564
07	0+376.08		0+436.08				0+456.08	
	1801787.351	655987.084	1801787.351	655974.645			1801787.351	655972.156
08	0+456.08		0+506.08				0+526.08	
	1801795.112	655941.121	1801795.844	655938.534			1801795.370	655930.876
09	0+526.08		0+576.08				0+596.08	
	1801773.545	655888.096	1801772.933	655875.405			1801771.934	655871.934
10	0+596.08		0+646.08				0+666.08	
	1801760.887	655863.777	1801757.724	655861.000			1801753.733	655852.133
11	0+666.08		0+716.08				0+736.08	
	1801744.512	655824.918	1801738.798	655819.768			1801731.065	655817.643
12	0+736.08		0+786.08				0+806.08	
	1801730.257	655799.869	1801723.894	655776.439			1801721.826	655789.238
13	0+806.08		0+856.08				0+876.08	
	1801674.366	655802.724	1801668.017	655812.364			1801670.543	655828.022
14	0+876.08		0+926.08				0+946.08	
	1801681.111	655850.263	1801685.132	655859.769			1801684.648	655870.747
15	0+946.08		0+996.08				1+016.08	
	1801698.542	655886.170	1801703.184	655893.519			1801707.537	655906.655
16	1+016.08		1+066.08				1+086.08	
	1801695.266	655930.765	1801692.347	655927.717			1801691.348	655915.807
17	1+086.08		1+136.08				1+156.08	
	1801678.587	655965.100	1801676.219	656000.817			1801672.302	656014.936
18	1+156.08		1+206.08				1+226.08	
	1801698.764	656033.974	1801703.777	656038.577			1801709.220	656038.974
19	1+226.08		1+276.08				1+296.08	
	1801693.837	656040.904	1801690.284	656056.306			1801690.127	656072.292
20	1+296.08		1+346.08				1+366.08	
	1801677.242	656066.787	1801676.612	656080.612			1801671.242	656110.292
21	1+366.08		1+416.08				1+436.08	
	1801673.307	656120.824	1801675.442	656128.784			1801679.727	656136.217
22	1+436.08		1+486.08				1+506.08	
	1801688.494	656158.282	1801693.964	656204.985			1801673.541	656168.387
23	1+506.08		1+556.08				1+576.08	
	1801685.442	656151.504	1801700.268	656155.868			1801700.268	656155.868
24	1+576.08		1+626.08				1+646.08	
	1801702.109	656140.109	1801704.824	656145.984			1801705.824	656140.435
25	1+646.08		1+696.08				1+716.08	
	1801716.365	656118.749	1801722.268	656112.345			1801725.423	656106.099
26	1+716.08		1+766.08				1+786.08	
	1801685.445	656077.994	1801687.161	656071.987			1801683.253	656064.837
27	1+786.08		1+836.08				1+856.08	
	1801684.372	656048.571	1801684.371	656024.568			1801679.662	656007.739
28	1+856.08		1+906.08				1+926.08	
	1801684.373	655994.587	1801684.384	655988.384			1801687.373	655976.708
29	1+926.08		1+976.08				1+996.08	
	1801693.444	655964.905	1801693.368	655960.368			1801693.368	655957.356
30	1+996.08		2+046.08				2+066.08	
	1801703.248	655938.378	1801703.769	655929.769			1801701.777	655924.144
31	2+066.08		2+116.08				2+136.08	
	1801697.227	655915.943	1801700.175	655938.186			1801694.248	655943.288
32	2+136.08		2+186.08				2+206.08	
	1801703.040	655974.306	1801708.120	655977.305			1801703.175	655983.408
33	2+206.08		2+256.08				2+276.08	
	1801705.751	656001.364	1801704.043	656014.577			1801704.043	656020.992
34	2+276.08		2+326.08				2+346.08	
	1801695.636	656011.318	1801694.436	656003.576			1801695.305	655995.890
35	2+346.08		2+396.08				2+416.08	
	1801695.799	655991.528	1801698.761	655983.494			1801694.932	655979.009
36	2+416.08		2+466.08				2+486.08	
	1801701.352	655960.046	1801704.276	655951.676			1801707.813	655948.997
37	2+486.08		2+536.08				2+556.08	
	1801703.812	655947.716	1801705.553	655943.790			1801705.553	655933.844
38	2+556.08		2+606.08				2+626.08	
	1801701.232	655910.358	1801703.242	655902.615			1801697.296	655895.702
			2+640.00					
			1801706.495	655883.680				

COORDENADAS DEL EJE DE TRAZO

ESTACION	PUNTO OBSERVADO	SUBTANGENTE ATRAS	TANGENTE	SUBTANGENTE ADELANTE	DISTANCIA	DEFLEXIONES			RUMBO		PROYECCIONES				COORDENADAS	
											COSENO	SENO	+N	+E	-N	-E
						Δ°	'	"	SENTIDO						NORTE	ESTE
0+000.00	0+008.45	0.000	0.280	8.452	16.670	8.452									1801815.166	656113.364
0+008.45	0+019.82	6.172	0.360	4.903	12.055	44.6*	37'	04.88"	TQO	S 41.6° 47' 0.00" E	0.73621	0.67628	0.000	8.076	0.000	7.936	1801808.090	656120.429
0+019.82	0+039.82	0.000	0.000	4.903	9.500	7.5*	38'	19.44"	DEF	S 41.6° 47' 0.00" E	0.73621	0.67628	0.000	6.663	0.000	6.295	1801799.431	656081.164
0+039.82	0+059.76	7.938	11.480	11.711	31.129	51.9*	08'	04.92"	TQO	S 43.8° 49' 53.34" E	0.72187	0.68967	0.000	14.214	0.000	13.787	1801785.217	656056.470
0+059.76	0+078.40	0.000	0.000	11.711	18.640	7.5*	38'	19.44"	DEF	S 43.8° 49' 53.34" E	0.72187	0.68967	0.000	8.509	0.000	8.258	1801776.959	656048.212
0+078.40	0+138.99	0.000	0.000	12.171	14.680	13.83*	00'	00.00"	TQO	S 36.75° 0' 0.00" E	0.79084	0.60251	0.000	24.418	0.000	19.578	1801753.760	656032.198
0+138.99	0+158.09	13.831	1.500	7.542	22.873	63.8*	13'	14.50"	TQDER	N 86.8° 30' 48.75" E	0.06481	0.99832	3.770	0.000	0.000	22.560	1801757.139	656079.638
0+158.09	0+159.09	0.000	0.000	7.542	25.000	8.562	41'	15.84"	DEF	N 86.8° 30' 48.75" E	0.06481	0.99832	0.000	1.285	0.000	0.084	1801757.054	656081.924
0+159.09	0+208.98	9.548	16.965	19.065	69.057	208.1*	09'	40.61"	TQO	S 69.8° 49' 53.25" E	0.34436	0.93902	0.000	17.913	0.000	6.170	1801757.032	656075.392
0+208.98	0+224.82	0.000	0.000	24.710	15.840	13.8*	00'	00.00"	TQO	S 83.8° 49' 53.25" E	0.10071	0.99492	0.000	15.840	0.000	1.596	1801757.032	656059.552
0+224.82	0+377.85	0.000	0.000	24.710	153.030	33.1*	01'	12.01"	TQO	S 50.7° 48' 41.24" E	0.63771	0.76018	0.000	33.464	0.000	25.541	1801731.491	656038.786
0+377.85	0+424.01	7.814	12.860	25.574	46.248	148*	04'	51.76"	TQDER	S 66.8° 19' 01.87" E	0.40167	0.91578	0.000	18.577	0.000	42.353	1801691.980	656016.453
0+424.01	0+444.12	0.000	0.000	25.574	20.110	6.2*	00'	00.00"	TQO	S 72.9° 19' 01.87" E	0.29781	0.95459	0.000	5.988	0.000	19.189	1801686.057	656010.977
0+444.12	0+536.09	0.000	0.000	25.510	92.390	12.388	41'	15.84"	DEF	S 72.9° 19' 01.87" E	0.29781	0.95459	0.000	27.517	0.000	88.192	1801657.977	655965.539
0+536.09	0+574.76	16.780	12.345	41.514	65.4*	56'	26.66"	TQDER	S 56.4° 48' 18.66" E	0.55159	0.83459	0.000	16.339	36.162	0.000	30.183	1801683.177	655987.502
0+574.76	0+613.00	0.000	0.000	12.345	38.240	13.8*	00'	00.00"	TQO	S 70.2° 48' 18.66" E	0.34169	0.93971	0.000	13.063	0.000	35.951	1801670.114	655951.551
0+613.00	0+653.84	0.000	0.000	24.310	15.722	73.1*	43'	58.61"	TQDER	S 89.8° 09' 40.71" E	0.00336	0.99973	0.000	0.053	0.000	15.719	1801670.060	655936.832
0+653.84	0+674.26	0.000	0.000	24.310	20.420	8.2*	00'	00.00"	TQO	S 81.8° 09' 40.71" E	0.14853	0.98890	0.000	3.033	0.000	20.196	1801667.027	655916.636
0+674.26	0+735.11	8.244	0.720	8.470	78.034	2.8*	01'	18.84"	TQO	S 84.2° 51' 58.55" E	0.09634	0.99535	0.000	7.799	0.000	77.712	1801659.228	655838.924
0+735.11	0+780.07	8.470	12.750	24.118	45.338	234*	48'	06.58"	TQDER	S 55.8° 17' 07.74" E	0.56949	0.82200	0.000	25.819	37.268	0.000	37.268	1801633.150	655801.656
0+780.07	0+820.45	24.118	0.000	24.118	40.378	23.1*	00'	00.00"	TQO	S 78.9° 17' 07.74" E	0.19777	0.98062	0.000	7.985	0.000	39.582	1801625.165	655761.774
0+820.45	0+902.70	8.117	24.130	10.573	83.320	124*	55'	57.47"	TQO	S 34.1° 48' 01.83" E	0.82772	0.56121	0.000	46.753	0.000	68.928	1801578.412	655726.964
0+902.70	0+914.79	10.573	0.000	10.573	12.090	7.1*	00'	00.00"	TQO	S 41.2° 48' 01.83" E	0.75242	0.65873	0.000	9.102	0.000	7.962	1801569.310	655718.999
0+914.79	0+955.84	0.000	0.000	10.573	41.050	24.1*	00'	00.00"	TQO	S 17.1° 48' 01.83" E	0.95494	0.29679	0.000	39.252	0.000	12.182	1801529.944	655706.817
0+955.84	0+974.79	7.864	0.340	8.030	18.940	7.8*	00'	00.00"	TQO	S 9.3° 48' 01.83" E	0.98722	0.15776	0.000	18.703	0.000	2.988	1801510.285	655703.829
0+974.79	0+982.54	8.030	11.360	8.399	47.809	137*	47'	46.78"	TQDER	S 43.8° 42' 33.71" E	0.72285	0.69100	0.000	34.559	0.000	33.036	1801510.285	655712.927
0+982.54	0+992.54	8.399	23.796	17.170	30.140	42.9*	00'	00.00"	TQO	S 86.7° 42' 33.71" E	0.05814	0.99831	0.000	1.752	0.000	30.089	1801508.533	655746.963
0+992.54	1+009.45	17.170	23.796	11.071	16.910	24.1*	00'	00.00"	TQO	S 62.6° 42' 33.71" E	0.46215	0.88675	0.000	7.814	0.000	14.992	1801500.719	655761.955
1+009.45	1+108.54	23.796	17.170	11.071	52.037	449*	06'	24.00"	TQO	S 47.6° 49' 01.04" E	0.67601	0.74100	0.000	34.943	0.000	38.560	1801465.776	655798.376
1+108.54	1+136.33	11.071	10.393	6.530	27.920	11.9*	00'	00.01"	TQO	S 35.7° 49' 01.04" E	0.81243	0.58317	0.000	22.683	0.000	16.282	1801442.282	655814.658
1+136.33	1+192.39	6.530	17.920	11.948	56.398	214*	48'	24.91"	TQO	S 83.8° 37' 03.22" E	0.11307	0.99359	0.000	46.984	0.000	31.197	1801393.298	655829.708
1+192.39	1+215.24	11.948	0.000	11.948	22.850	55.1*	00'	00.00"	TQO	S 28.9° 37' 03.22" E	0.87707	0.48033	0.000	20.044	0.000	10.977	1801373.254	655818.731
1+215.24	1+289.44	7.768	10.350	8.462	66.960	138*	47'	24.92"	TQO	S 41.2° 48' 01.83" E	0.75242	0.65873	0.000	50.356	0.000	44.236	1801322.897	655774.495
1+289.44