



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



MUNICIPIO DE APARTADÓ



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



ARCHIVOS CRUDOS ESTACIÓN TOTAL HORIZON HTS 585



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION A
INGENIERO LUIS JORGE MONCADA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



APA03	APA10	0.0001	1.264	APA10	1.7	58.129	0.0001	89.2704	MOJON
APA03	APA10	0.0001	1.264	1064	1.7	43.668	2.3415	89.2049	DELTA
APA03	APA10	0.0001	1.264	AUX1	1.7	42.582	118.5118	89.3053	DELTA
AUX1	APA03	0	1.425	APA03	1.7	42.583	0	89.3144	MOJON
AUX1	APA03	0	1.425	AUX2	1.7	71.846	73.5502	89.4952	DELTA
AUX2	AUX1	0	1.505	AUX1	1.7	71.847	0	89.4757	DELTA
AUX2	AUX1	0	1.505	AUX3	1.7	170.976	252.5722	90.1004	DELTA
AUX3	AUX2	0.0001	1.508	AUX2	1.7	170.985	0.0001	89.4223	DELTA
AUX3	AUX2	0.0001	1.508	AUX4	1.7	182.422	180.2049	90.0709	DELTA
AUX4	AUX3	0	1.453	AUX3	1.7	182.423	0	89.4358	DELTA
AUX4	AUX3	0	1.453	AUX5	1.7	32.314	95.1114	89.1943	DELTA
AUX5	AUX4	359.5959	1.487	AUX4	1.7	32.318	359.5959	89.521	DELTA
AUX5	AUX4	359.5959	1.487	1060	1.7	42.598	200.2845	89.5818	DELTA
1060	AUX5	0	1.482	AUX5	1.7	42.602	0	89.2743	DELTA
1060	AUX5	0	1.482	1061	1.7	166.422	181.0106	90.0524	DELTA
1061	1060	0.0001	1.497	1060	1.7	166.42	0.0001	89.4607	DELTA
1061	1060	0.0001	1.497	AUX6	1.7	24.394	162.4552	94.4429	DELTA
AUX6	1061	0.0001	1.486	1061	1.7	24.432	0.0001	84.1749	DELTA
AUX6	1061	0.0001	1.486	AUX7	1.7	40.365	93.2938	90.1913	DELTA
AUX7	AUX6	0.0001	1.484	AUX6	1.7	40.366	0.0001	89.0448	DELTA
AUX7	AUX6	0.0001	1.484	AUX8	1.7	79.361	100.5321	87.4246	DELTA
AUX8	AUX7	0	1.469	AUX7	1.7	79.356	0	91.5823	DELTA
AUX8	AUX7	0	1.469	AUX9	1.7	191.371	182.2754	89.4934	DELTA
AUX9	AUX8	0	1.446	AUX8	1.7	191.374	0	90.0153	DELTA
AUX9	AUX8	0	1.446	AUX10	1.7	197.919	243.0356	89.4411	DELTA
AUX10	AUX9	0	1.439	AUX9	1.7	197.921	0	90.0659	DELTA
AUX10	AUX9	0	1.439	AUX3	1.7	71.797	5.2534	89.5956	DELTA
AUX10	AUX9	0	1.439	1064	1.7	151.228	177.04	89.3928	DELTA
1064	AUX10	0	1.448	AUX10	1.7	151.226	0	90.0939	DELTA
1064	AUX10	0	1.448	APA10	1.7	14.635	269.4851	88.4727	DELTA
1064	AUX10	0	1.448	APA03	1.7	43.668	100.0312	89.4555	DELTA
1064	AUX10	0	1.448	1	1.7	29.857	213.2508	89.0941	PARAMENTO
1064	AUX10	0	1.448	2	1.7	97.499	355.0557	90.0905	PARAMENTO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1001	1000	0	1.567	1000	1.5	100.948	0	89.1337	
SD	89.89.1337									
	1001	1000	0	1.567	1	1.5	12.012	350.0835	86.555	PARAMENTO
	1001	1000	0	1.567	2	1.5	12.754	336.0658	87.1515	PARAMENTO
	1001	1000	0	1.567	3	1.5	7.799	319.0531	86.0054	PARAMENTO
	1001	1000	0	1.567	1002	1.5	38.463	271.5913	91.4044	DELTA
	1001	1000	0	1.567	4	1.5	22.061	11.2543	88.1803	PARAMENTO
	1001	1000	0	1.567	5	1.5	13.469	16.284	88.2613	BORDE_VIA
	1001	1000	0	1.567	6	1.5	12.739	353.5348	88.3957	BORDE_VIA
	1001	1000	0	1.567	7	1.5	33.327	355.3904	88.5319	PARAMENTO
	1001	1000	0	1.567	8	1.5	46.769	5.521	89.1123	PARAMENTO
	1001	1000	0	1.567	9	1.5	42.413	3.4405	89.0109	BORDE_VIA
	1001	1000	0	1.567	10	1.5	34.184	358.0203	88.5119	BORDE_VIA
	1001	1000	0	1.567	11	1.5	6.31	203.4118	86.4805	PARAMENTO
	1001	1000	0	1.567	12	1.5	9.036	229.2802	85.1657	PARAMENTO
	1001	1000	0	1.567	13	1.5	7.246	259.1343	86.3616	PARAMENTO
	1001	1000	0	1.567	APA_13	1.5	2.424	304.3706	87.1009	DELTA
	1001	1000	0	1.567	14	1.5	2.244	299.0414	89.3109	POSTE
	1001	1000	0	1.567	15	1.5	3.277	28.2226	86.4401	MANHOL
	1001	1000	0	1.567	16	1.5	2.597	9.1552	86.3733	ESTRUCTURA
	1001	1000	0	1.567	17	1.5	4.156	16.3908	87.3512	ESTRUCTURA
	1001	1000	0	1.567	18	1.5	4.052	39.4609	87.4856	ESTRUCTURA
	1001	1000	0	1.567	19	1.5	2.47	44.581	86.1256	ESTRUCTURA
	1001	1000	0	1.567	20	1.5	5.332	97.5517	95.0005	EJE_TUBO
	1001	1000	0	1.567	21	1.5	48.552	52.2632	91.3205	CANCHA
	1001	1000	0	1.567	22	1.5	53.078	48.0749	91.2435	CANCHA
	1001	1000	0	1.567	23	1.5	115.449	72.2938	90.3854	CANCHA
	1001	1000	0	1.567	24	1.5	113.29	75.1317	90.3958	CANCHA
	1001	1000	0	1.567	25	1.5	39.803	74.1603	91.3451	CANCHA
	1001	1000	0	1.567	26	1.5	119.885	65.4205	90.4236	CANCHA
	1001	1000	0	1.567	27	1.5	12.792	190.2153	89.1003	PARAMENTO
	1001	1000	0	1.567	1003	1.5	37.374	130.333	92.3647	DELTA
	1003	1001	359.5959	1.457	1001	1.5	37.351	359.5959	87.2518	
SD	87.87.2518									
	1003	1001	359.5959	1.457	1001	1.5	37.356	0	87.2518	
SD	87.87.2518									
	1003	1001	359.5959	1.457	28	1.5	9.226	170.0359	96.3437	ESTRUCTURA
	1003	1001	359.5959	1.457	29	1.5	9.405	170.553	96.2717	ESTRUCTURA
	1003	1001	359.5959	1.457	30	1.5	15.416	148.5702	93.4814	ESTRUCTURA
	1003	1001	359.5959	1.457	31	1.5	15.447	149.5929	93.4814	ESTRUCTURA
	1003	1001	359.5959	1.457	32	2.6	12.742	157.3334	94.1956	DESCARGA
	1003	1001	359.5959	1.457	33	2.6	13.019	157.3926	99.1106	DESCARGA
	1003	1001	359.5959	1.457	34	2.6	13.488	156.2553	98.0931	DESCARGA
	1003	1001	359.5959	1.457	35	2.6	13.437	155.0942	98.0931	ESTRUCTURA
	1003	1001	359.5959	1.457	36	3.6	12.929	158.4227	100.0815	ESTRUCTURA
	1003	1001	359.5959	1.457	36	2.6	12.926	158.4228	100.0815	ESTRUCTURA
	1003	1001	359.5959	1.457	37	2.6	12.883	158.3842	100.113	ESTRUCTURA
	1003	1001	359.5959	1.457	38	2.6	12.953	158.3304	100.0846	ESTRUCTURA
	1003	1001	359.5959	1.457	39	2.6	11.882	159.5206	99.1121	ESTRUCTURA
	1003	1001	359.5959	1.457	40	2.6	12.098	161.1646	99.0435	ESTRUCTURA
	1003	1001	359.5959	1.457	41	2.6	13.771	156.2408	99.2113	ESTRUCTURA
	1003	1001	359.5959	1.457	42	2.6	14.005	157.5207	99.1355	ESTRUCTURA
	1003	1001	359.5959	1.457	43	4.015	13.077	160.0526	95.1156	ESTRUCTURA
	1003	1001	359.5959	1.457	44	4.015	12.003	161.3117	94.013	ESTRUCTURA
	1003	1001	359.5959	1.457	45	4.015	12.195	163.1157	100.3356	ESTRUCTURA
	1003	1001	359.5959	1.457	45	4.015	12.26	162.5647	93.5738	ESTRUCTURA
	1003	1001	359.5959	1.457	46	2	5.817	168.153	111.5151	CANO
	1003	1001	359.5959	1.457	47	2	4.375	133.5151	107.2212	CANO
	1003	1001	359.5959	1.457	48	2	5.007	82.1042	100.4112	CANO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1003	1001	359.5959	1.457	49	2	8.476	53.5728	94.5752	CANO
	1003	1001	359.5959	1.457	50	2	14.435	42.0628	92.2312	CANO
	1003	1001	359.5959	1.457	51	2	2.857	194.0121	100.4503	TERRENO
	1003	1001	359.5959	1.457	52	2	7.103	196.5526	104.5757	TERRENO
	1003	1001	359.5959	1.457	53	2	5.88	155.0515	98.3712	TERRENO
	1003	1001	359.5959	1.457	54	2	9.365	165.2846	96.3019	TERRENO
	1003	1001	359.5959	1.457	55	2	8.817	144.0752	86.3414	TERRENO
	1003	1001	359.5959	1.457	1004	1.5	11.032	154.5842	93.1226	DELTA
	1004	1003	0	1.572	1003	1.5	11.023	0	86.5912	
SD	86.86.5912									
	1004	1003	0	1.572	56	2	3.016	114.1647	83.0147	TERRENO
	1004	1003	0	1.572	57	2	10.342	147.2009	109.2445	TERRENO
	1004	1003	0	1.572	58	2	7.928	205.274	115.1848	RIO
	1004	1003	0	1.572	59	2	6.393	209.0013	122.0403	RIO
	1004	1003	0	1.572	60	2.6	5.095	207.303	126.5001	RIO
	1004	1003	0	1.572	61	2.6	3.949	255.3923	135.314	RIO
	1004	1003	0	1.572	62	2.6	4.961	257.3938	123.0145	RIO
	1004	1003	0	1.572	63	2.6	12.012	291.5448	103.28	RIO
	1004	1003	0	1.572	64	2.6	3.532	195.151	125.0045	ESTRUCTURA
	1004	1003	0	1.572	65	2.6	3.804	199.3901	122.1547	ESTRUCTURA
	1004	1003	0	1.572	66	2.6	3.552	214.2142	131.3237	ESTRUCTURA
	1004	1003	0	1.572	67	2.6	2.928	237.3503	134.0922	ESTRUCTURA
	1004	1003	0	1.572	68	2.6	3.255	237.3915	128.5831	ESTRUCTURA
	1004	1003	0	1.572	69	2.6	3.451	237.3426	132.0815	ESTRUCTURA
	1004	1003	0	1.572	70	2.6	3.442	240.2912	132.305	ESTRUCTURA
	1004	1003	0	1.572	71	2.6	4.129	239.3007	124.0808	ESTRUCTURA
	1004	1003	0	1.572	72	2.6	4.12	237.0745	124.0808	ESTRUCTURA
	1004	1003	0	1.572	73	2.6	4.305	230.4111	124.3844	ESTRUCTURA
	1004	1003	0	1.572	74	2.6	4.294	230.5619	129.4101	ESTRUCTURA
	1004	1003	0	1.572	75	2.6	3.987	199.2223	125.1553	ESTRUCTURA
	1004	1003	0	1.572	76	2.6	4.551	207.1731	120.0314	ESTRUCTURA
	1004	1003	0	1.572	77	2.6	5.895	189.1904	110.3122	TERRENO
	1004	1003	0	1.572	78	2.6	6.223	165.4618	106.3626	TERRENO
	1004	1003	0	1.572	79	2.6	5.851	138.483	96.5252	TERRENO
	1002	1001	0	1.513	1001	1.5	38.467	0	90.2409	
SD	90.90.2409									
	1002	1001	0	1.513	80	1.5	2.472	140.1442	89.3744	MANHOL
	1002	1001	0	1.513	81	1.5	3.513	46.2607	90.4617	POSTE
	1002	1001	0	1.513	82	1.5	3.931	65.4059	90.4808	PARAMENTO
	1002	1001	0	1.513	83	1.5	6.865	73.562	90.2511	PARAMENTO
	1002	1001	0	1.513	84	1.5	8.719	152.1108	90.0026	PARAMENTO
	1002	1001	0	1.513	85	1.5	16.353	111.4203	90.0026	PARAMENTO
	1002	1001	0	1.513	86	1.5	9.59	194.3041	88.2922	PARAMENTO
	1002	1001	0	1.513	87	1.5	13.501	223.3234	88.5126	PARAMENTO
	1002	1001	0	1.513	88	1.5	4.895	318.1015	89.4749	PARAMENTO
	1002	1001	0	1.513	89	1.5	16.63	277.0245	89.3939	PARAMENTO
	1002	1001	0	1.513	90	1.5	2.686	307.0045	91.271	SUMIDERO
	1002	1001	0	1.513	91	1.5	2.726	291.0507	91.5923	SUMIDERO
	1002	1001	0	1.513	92	1.5	7.468	200.2121	90.1615	SUMIDERO
	1002	1001	0	1.513	93	1.5	7.334	194.2158	90.0041	SUMIDERO
	1002	1001	0	1.513	94	1.5	6.856	202.4645	89.5058	BORDE_VIA
	1002	1001	0	1.513	95	1.5	2.912	283.0102	90.3229	BORDE_VIA
	1002	1001	0	1.513	1005	1.5	63.271	176.0824	90.2106	DELTA
	1005	1002	0	1.543	1002	1.5	63.274	0	89.4122	
SD	89.89.4122									
	1005	1002	0	1.543	1006	1.5	15.99	177.4035	91.1537	DELTA
	1005	1002	0	1.543	96	1.5	10.691	39.4237	88.2746	PARAMENTO
	1005	1002	0	1.543	97	1.5	18.805	352.1645	88.0359	PARAMENTO
	1005	1002	0	1.543	98	1.5	14.523	10.4957	88.4953	MANHOL



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1005	1002	0	1.543	99	1.5	21.578	13.3027	89.0757	PARAMENTO
	1005	1002	0	1.543	100	1.5	12.718	346.4429	87.3949	SUMIDERO
	1005	1002	0	1.543	101	1.5	12.311	349.4548	87.334	SUMIDERO
	1005	1002	0	1.543	102	1.5	17.639	354.4029	88.1033	SUMIDERO
	1005	1002	0	1.543	103	1.5	17.621	352.2157	88.0134	SUMIDERO
	1005	1002	0	1.543	104	1.5	11.625	325.4817	82.5506	PARAMENTO
	1005	1002	0	1.543	105	1.5	11.039	29.0539	89.3643	POSTE
	1005	1002	0	1.543	106	1.5	16.146	174.3158	91.0155	POSTE
	1005	1002	0	1.543	107	1.5	7.131	263.2736	84.5234	POSTE
	1005	1002	0	1.543	108	1.5	4.278	249.434	88.3243	POSTE
	1005	1002	0	1.543	109	1.5	9.028	216.1216	91.2839	POSTE
	1005	1002	0	1.543	110	1.5	14.486	214.5342	90.0133	POSTE
	1005	1002	0	1.543	111	1.5	9.798	224.181	90.3726	POSTE
	1005	1002	0	1.543	112	1.5	13.541	345.0428	86.3514	BORDE_VIA
	1005	1002	0	1.543	113	1.5	17.591	349.1126	87.1207	BORDE_VIA
	1006	1005	0	1.37	1005	1.5	15.996	0	88.322	
SD	88.88.3220									
	1006	1005	0	1.37	1007	2	34.059	144.5828	92.5622	DELTA
	1006	1005	0	1.37	114	1.5	12.38	110.4105	92.3935	PARAMENTO
	1006	1005	0	1.37	115	1.5	12.924	210.2418	91.4514	PARAMENTO
	1006	1005	0	1.37	116	1.5	15.049	246.2445	89.2828	PARAMENTO
	1006	1005	0	1.37	1008	1.5	54.296	219.4531	89.4129	DELTA
	1007	1006	0	1.573	1006	1.5	34.091	0	86.0653	
SD	86.86.0653									
	1007	1006	0	1.573	117	2.6	2.595	75.3214	97.043	DESCARGA
	1007	1006	0	1.573	118	2.6	1.911	48.0846	98.0045	DESCARGA
	1007	1006	0	1.573	119	2.6	2.92	36.1337	93.261	DESCARGA
	1007	1006	0	1.573	120	2.6	2.103	60.1935	78.2502	TERRENO
	1007	1006	0	1.573	121	2.6	2.837	54.4344	70.3714	TERRENO
	1007	1006	0	1.573	122	1.5	4.182	38.2504	81.5436	TERRENO
	1007	1006	0	1.573	123	1.5	5.043	70.3753	81.1406	TERRENO
	1007	1006	0	1.573	124	1.5	4.701	80.1552	85.1016	TERRENO
	1007	1006	0	1.573	125	1.5	3.509	1.1719	85.1909	TERRENO
	1007	1006	0	1.573	126	1.5	1.24	118.2849	101.4153	TERRENO
	1007	1006	0	1.573	127	1.5	1.443	116.1401	101.5806	ESTRUCTURA
	1007	1006	0	1.573	128	1.5	1.582	121.1655	101.1921	ESTRUCTURA
	1007	1006	0	1.573	129	1.5	3.723	94.0216	98.5801	ESTRUCTURA
	1007	1006	0	1.573	130	1.5	3.76	96.4721	99.1001	ESTRUCTURA
	1007	1006	0	1.573	131	2.6	6.109	108.5348	102.3325	TERRENO
	1007	1006	0	1.573	132	2.6	11.151	108.5649	104.3617	RIO
	1007	1006	0	1.573	133	2.6	8.009	217.4745	110.1932	RIO
	1007	1006	0	1.573	134	2.6	6.593	133.1221	115.2126	RIO
	1007	1006	0	1.573	135	2.6	4.502	188.3437	125.134	RIO
	1007	1006	0	1.573	136	1.5	2.854	291.3446	87.0319	TERRENO
	1007	1006	0	1.573	137	2.6	2.49	33.5232	127.3209	TERRENO
	1007	1006	0	1.573	138	1.5	3.678	29.1715	81.2442	TERRENO
	1007	1006	0	1.573	139	1.5	1.586	2.5805	96.5232	TERRENO
	1007	1006	0	1.573	140	1.5	2.777	322.5235	78.0033	ARBOL
	1008	1006	0.0002	1.46	1006	1.5	54.301	0.0002	90.072	
SD	90.90.0720									
	1008	1006	0.0002	1.46	1006	1.5	54.298	0	90.072	
SD	90.90.0720									
	1008	1006	0.0002	1.46	141	1.5	32.265	184.2203	89.3218	MANHOL
	1008	1006	0.0002	1.46	142	1.5	31.238	174.3242	89.2642	PARAMENTO
	1008	1006	0.0002	1.46	143	1.5	30.169	179.0712	89.2642	POSTE
	1008	1006	0.0002	1.46	144	1.5	39.973	188.2524	89.1451	PARAMENTO
	1008	1006	0.0002	1.46	145	1.5	42.702	198.5322	88.1817	PARAMENTO
	1008	1006	0.0002	1.46	146	1.5	11.723	6.1253	90.1451	POSTE
	1008	1006	0.0002	1.46	147	1.5	7.912	310.461	89.0509	POSTE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1008	1006	0.0002	1.46	148	1.5	25.557	342.2749	89.5423	PARAMENTO
	1008	1006	0.0002	1.46	149	1.5	25.965	1.2601	90.1852	PARAMENTO
	1008	1006	0.0002	1.46	150	1.5	15.456	202.5256	89.2037	PARAMENTO
	1008	1006	0.0002	1.46	151	1.5	3.659	68.1205	90.0803	PARAMENTO
	1008	1006	0.0002	1.46	152	1.5	5.289	75.4745	88.3632	PARAMENTO
	1008	1006	0.0002	1.46	153	1.5	12.092	7.1138	90.0023	PARAMENTO
	1008	1006	0.0002	1.46	154	1.5	12.507	15.4208	89.1615	PARAMENTO
	1008	1006	0.0002	1.46	1009	1.5	79.194	185.4444	88.4406	DELTA
	1008	1006	0.0002	1.46	155	1.5	65.441	188.2747	88.2846	PARAMENTO
	1009	1008	359.5959	1.6	1008	1.5	79.209	359.5959	91.1812	
SD	91.91.1812									
	1009	1008	359.5959	1.6	156	1.5	4.347	51.2807	93.1658	PARAMENTO
	1009	1008	359.5959	1.6	157	1.5	6.675	25.3939	92.3648	POSTE
	1009	1008	359.5959	1.6	158	1.5	5.929	66.2331	83.4316	POSTE
	1009	1008	359.5959	1.6	159	1.5	5.456	155.2347	87.3834	PARAMENTO
	1009	1008	359.5959	1.6	1010	1.5	25.585	203.4915	86.4557	DELTA
	1009	1008	359.5959	1.6	160	1.5	5.969	233.1917	80.5249	PARAMENTO
	1009	1008	359.5959	1.6	161	1.5	6.13	219.3045	84.265	PARAMENTO
	1009	1008	359.5959	1.6	162	1.5	9.99	211.2108	83.25	PARAMENTO
	1009	1008	359.5959	1.6	163	1.5	15.786	211.0435	85.1912	PARAMENTO
	1009	1008	359.5959	1.6	164	1.5	10.577	190.052	83.4117	PARAMENTO
	1009	1008	359.5959	1.6	165	1.5	10.959	191.5802	83.5907	MANHOL
	1009	1008	359.5959	1.6	166	1.5	10.156	188.0058	83.3501	MANHOL
	1009	1008	359.5959	1.6	167	1.5	20.321	194.1332	85.5839	MANHOL
	1010	1009	0.0001	1.466	1009	1.5	25.562	0.0001	93.2231	
SD	93.93.2231									
	1010	1009	0.0001	1.466	1009	1.5	25.578	0	93.2231	
SD	93.93.2231									
	1010	1009	0.0001	1.466	1011	1.5	60.392	197.5128	89.0627	DELTA
	1010	1009	0.0001	1.466	168	1.5	15.934	44.5914	89.4422	PARAMENTO
	1010	1009	0.0001	1.466	169	1.5	5.179	93.4453	86.5851	POSTE
	1010	1009	0.0001	1.466	170	1.5	5.486	298.5539	83.3317	POSTE
	1010	1009	0.0001	1.466	171	1.5	7.193	337.5556	86.3248	PARAMENTO
	1010	1009	0.0001	1.466	172	1.5	5.145	281.4212	86.2229	PARAMENTO
	1010	1009	0.0001	1.466	173	1.5	6.488	278.0955	86.1924	PARAMENTO
	1011	1010	0	1.539	1010	1.5	60.399	0	90.5326	
SD	90.90.5326									
	1011	1010	0	1.539	1012	1.5	52.932	83.1723	90.1849	DELTA
	1011	1010	0	1.539	174	1.5	4.02	49.3539	90.3942	PARAMENTO
	1011	1010	0	1.539	175	1.5	3.061	242.4845	92.1428	MANHOL
	1011	1010	0	1.539	176	1.5	7.585	250.2706	89.2828	MANHOL
	1011	1010	0	1.539	177	1.5	8.667	273.0128	89.2337	PARAMENTO
	1011	1010	0	1.539	178	1.5	14.11	234.1832	89.1254	PARAMENTO
	1011	1010	0	1.539	179	1.5	7.511	156.4502	88.4245	PARAMENTO
	1011	1010	0	1.539	180	1.5	6.387	166.1646	89.502	POSTE
	1011	1010	0	1.539	181	1.5	9.278	284.5308	89.0322	POSTE
	1012	1011	0	1.496	1011	1.5	52.927	0	89.4532	
SD	89.89.4532									
	1012	1011	0	1.496	182	1.5	3.178	272.1621	88.4129	SUMIDERO
	1012	1011	0	1.496	183	1.5	5.445	12.3033	88.2045	POSTE
	1012	1011	0	1.496	184	1.5	5.973	2.4624	89.044	PARAMENTO
	1012	1011	0	1.496	185	1.5	9.057	315.2657	90.5941	SUMIDERO
	1012	1011	0	1.496	186	1.5	10.361	312.54	90.381	SUMIDERO
	1012	1011	0	1.496	187	1.5	12.061	319.3156	87.2309	PARAMENTO
	1012	1011	0	1.496	188	1.5	8.522	197.0843	88.12	PARAMENTO
	1012	1011	0	1.496	189	1.5	12.751	133.1008	90.1155	PARAMENTO
	1012	1011	0	1.496	190	2.4	35.794	111.3613	89.2408	PARAMENTO
	1012	1011	0	1.496	191	1.7	42.651	94.0419	90.4458	PARAMENTO
	1012	1011	0	1.496	192	1.5	21.321	102.0221	90.0055	MANHOL



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1012	1011	0	1.496	1013	1.5	36.494	102.0024	90.5435 DELTA
	1012	1011	0	1.496	1014	1.5	48.211	182.4634	90.0406 DELTA
	1012	1011	0	1.496	193	1.5	10.69	146.0715	90.3059 POSTE
	1014	1012	0	1.532	1012	1.5	48.212	0	89.5857
SD	89.89.5857								
	1014	1012	0	1.532	1015	1.5	10.425	148.3716	90.475 DELTA
	1014	1012	0	1.532	194	1.5	7.666	204.3735	90.3336 MANHOL
	1014	1012	0	1.532	195	1.5	7.639	167.4351	90.4039 MANHOL
	1014	1012	0	1.532	196	1.5	8.911	169.2748	90.4039 MANHOL
	1014	1012	0	1.532	197	1.5	9.404	173.3047	90.3443 ESTRUCTURA
	1014	1012	0	1.532	198	1.5	8.467	165.0343	90.373 ESTRUCTURA
	1014	1012	0	1.532	199	1.5	8.178	173.0902	90.3333 ESTRUCTURA
	1014	1012	0	1.532	200	1.5	7.096	162.4749	90.3618 ESTRUCTURA
	1014	1012	0	1.532	201	1.5	5.843	230.3853	92.1134 SUMIDERO
	1014	1012	0	1.532	202	1.5	6.88	237.0303	92.0449 SUMIDERO
	1014	1012	0	1.532	203	1.5	4.454	137.1159	92.5026 SUMIDERO
	1014	1012	0	1.532	204	1.5	4.474	126.1006	92.3153 SUMIDERO
	1014	1012	0	1.532	205	1.5	4.846	127.0232	91.581 POSTE
	1014	1012	0	1.532	206	1.5	4.111	98.4803	90.5739 PARAMENTO
	1014	1012	0	1.532	207	1.5	6.925	98.2914	90.0126 PARAMENTO
	1014	1012	0	1.532	208	1.5	7.363	114.32	91.3225 PARAMENTO
	1014	1012	0	1.532	209	1.5	7.657	277.5323	89.2357 PARAMENTO
	1014	1012	0	1.532	210	1.5	18.553	149.0644	90.2523 PARAMENTO
	1014	1012	0	1.532	211	1.9	14.622	187.1316	88.4204 PARAMENTO
	1014	1012	0	1.532	212	1.9	17.164	154.163	90.5438 SUMIDERO
	1014	1012	0	1.532	213	1.9	15.864	152.433	91.0055 SUMIDERO
	1014	1012	0	1.532	214	1.9	13.331	201.1543	90.3101 POSTE
	1014	1012	0	1.532	215	1.9	16.601	148.264	90.5812 POSTE
	1014	1012	0	1.532	216	1.9	20.297	138.1351	90.2537 MANHOL
	1015	1014	0	1.485	1014	1.5	10.4	0	89.2124
SD	89.89.2124								
	1015	1014	0	1.485	1016	1.5	55.704	114.3221	95.4238 DELTA
	1015	1014	0	1.485	217	1.5	14.492	155.0615	90.3951 PARAMENTO
	1015	1014	0	1.485	218	1.5	14.544	105.4703	90.3526 PARAMENTO
	1016	1015	0.0001	1.46	1015	1.5	55.718	0.0001	84.1443
SD	84.84.1443								
	1016	1015	0.0001	1.46	219	0.075	34.858	349.2334	91.3959 DESCARGA
	1016	1015	0.0001	1.46	220	0.075	34.485	351.1705	91.4327 DESCARGA
	1016	1015	0.0001	1.46	221	1.5	34.746	349.1829	90.5552 DESCARGA
	1016	1015	0.0001	1.46	222	1.5	34.365	351.2021	90.5552 DESCARGA
	1016	1015	0.0001	1.46	223	1.5	31.685	349.222	91.2308 DESCARGA
	1016	1015	0.0001	1.46	224	1.5	32.278	347.2842	91.1938 DESCARGA
	1016	1015	0.0001	1.46	225	0.075	32.302	347.251	92.0638 DESCARGA
	1016	1015	0.0001	1.46	226	0.075	31.647	349.2455	92.1343 DESCARGA
	1016	1015	0.0001	1.46	227	1.5	34.732	350.1224	89.29 DESCARGA
	1016	1015	0.0001	1.46	228	0.075	34.867	349.2142	88.414 DESCARGA
	1016	1015	0.0001	1.46	229	2	27.231	351.2628	90.4445 CANO
	1016	1015	0.0001	1.46	230	2	27.539	349.0447	94.1117 CANO
	1016	1015	0.0001	1.46	231	2.6	27.999	345.1005	93.002 CANO
	1016	1015	0.0001	1.46	232	2.6	23.888	341.1252	94.0036 CANO
	1016	1015	0.0001	1.46	233	2.6	25.172	336.5144	93.5732 CANO
	1016	1015	0.0001	1.46	234	2.6	22.758	328.0949	95.0134 CANO
	1016	1015	0.0001	1.46	235	2.6	21.706	327.5704	95.2339 CANO
	1016	1015	0.0001	1.46	236	1.5	21.541	308.402	99.1251 CANO
	1016	1015	0.0001	1.46	237	1.5	22.3	309.175	98.581 CANO
	1016	1015	0.0001	1.46	238	1.5	23.003	309.3307	98.2126 CANO
	1016	1015	0.0001	1.46	239	2.6	22.305	294.2619	96.2811 CANO
	1016	1015	0.0001	1.46	240	2.6	23.319	294.4109	95.4137 CANO
	1016	1015	0.0001	1.46	241	2.6	24.258	294.5424	95.0523 CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1016	1015	0.0001	1.46	242	2.6	28.628	289.1319	95.0108	CANO
	1016	1015	0.0001	1.46	243	2.6	30.119	289.354	94.5831	CANO
	1016	1015	0.0001	1.46	244	1.5	32.372	338.2327	90.3844	CANO
	1016	1015	0.0001	1.46	245	2.6	28.828	339.2542	93.0001	CANO
	1016	1015	0.0001	1.46	246	1.5	23.809	345.1641	93.0931	CANO
	1016	1015	0.0001	1.46	247	2.6	25.699	329.3945	93.403	CANO
	1016	1015	0.0001	1.46	248	1.5	20.993	339.5613	92.301	CANO
	1016	1015	0.0001	1.46	249	1.5	27.685	327.5025	92.5854	CANO
	1016	1015	0.0001	1.46	250	1.5	20.144	329.1748	94.0005	CANO
	1016	1015	0.0001	1.46	251	1.6	26.859	317.2528	91.5841	CANO
	1016	1015	0.0001	1.46	252	1.5	18.336	319.3355	93.5628	CANO
	1016	1015	0.0001	1.46	253	1.5	20.209	305.5523	96.2708	CANO
	1016	1015	0.0001	1.46	254	0.075	26.059	305.4642	94.4127	CANO
	1016	1015	0.0001	1.46	255	1.5	20.072	294.4518	94.4932	CANO
	1016	1015	0.0001	1.46	256	1.8	27.844	295.3733	92.1649	CANO
	1016	1015	0.0001	1.46	257	1.5	23.509	287.055	94.5013	CANO
	1015	1014	359.5959	1.512	1014	1.5	10.418	359.5959	89.3158	
SD	89.89.3158									
	1015	1014	359.5959	1.512	1017	1.5	53.696	215.0604	90.1328	DELTA
	1017	1015	0.0001	1.512	1015	1.5	53.708	0.0001	89.4855	
SD	89.89.4855									
	1017	1015	0.0001	1.512	1015	1.5	53.706	359.5959	89.4855	
SD	89.89.4855									
	1017	1015	0.0001	1.512	1015	1.5	53.706	0	89.4855	
SD	89.89.4855									
	1017	1015	0.0001	1.512	1018	1.5	54.829	177.0458	90.1442	DELTA
	1017	1015	0.0001	1.512	259	1.5	6.273	21.1811	89.0348	PARAMENTO
	1017	1015	0.0001	1.512	260	1.5	9.073	304.4336	89.3204	POSTE
	1017	1015	0.0001	1.512	261	1.5	3.713	271.4115	90.0639	MANHOL
	1017	1015	0.0001	1.512	262	1.5	12.057	303.2456	88.5712	PARAMENTO
	1017	1015	0.0001	1.512	263	1.5	7.31	200.5348	89.441	PARAMENTO
	1017	1015	0.0001	1.512	264	1.5	8.389	190.1619	89.5239	PARAMENTO
	1017	1015	0.0001	1.512	265	1.5	10.044	124.2827	91.2711	SUMIDERO
	1017	1015	0.0001	1.512	266	1.5	8.869	126.3756	91.33	SUMIDERO
	1017	1015	0.0001	1.512	267	1.5	9.391	68.1526	90.0801	POSTE
	1017	1015	0.0001	1.512	268	1.5	11.624	129.4229	90.3211	POSTE
	1017	1015	0.0001	1.512	269	1.5	12.238	135.3504	89.2618	PARAMENTO
	1017	1015	0.0001	1.512	270	1.5	10.405	76.3937	90.0739	PARAMENTO
	1017	1015	0.0001	1.512	271	1.5	11.677	62.2417	89.2318	PARAMENTO
	1017	1015	0.0001	1.512	272	1.5	18.526	84.1836	89.5916	PARAMENTO
	1017	1015	0.0001	1.512	273	1.5	19.017	74.4149	89.351	PARAMENTO
	1018	1017	0	1.462	1017	1.5	54.83	0	89.4457	
SD	89.89.4457									
	1018	1017	0	1.462	1017	1.5	54.835	0	89.4432	
SD	89.89.4432									
	1018	1017	0	1.462	274	1.5	6.87	29.2503	88.0434	PARAMENTO
	1018	1017	0	1.462	1019	1.5	11.637	101.1959	90.0058	DELTA
	1016	1015	359.5959	1.45	1015	1.5	55.715	359.5959	84.1311	
SD	84.84.1311									
	1016	1015	359.5959	1.45	275	1.5	9.189	142.323	88.5513	DESCARGA
	1016	1015	359.5959	1.45	276	1.5	9.124	141.2001	88.4742	DESCARGA
	1016	1015	359.5959	1.45	277	1.5	7.377	141.29	88.1353	DESCARGA
	1016	1015	359.5959	1.45	278	1.5	7.491	140.2354	88.1629	DESCARGA
	1016	1015	359.5959	1.45	279	1.5	8.446	137.3909	89.2733	TERRENO
	1016	1015	359.5959	1.45	280	1.5	7.133	142.5812	88.0701	TERRENO
	1016	1015	359.5959	1.45	281	1.9	7.833	144.0932	90.2538	TERRENO
	1016	1015	359.5959	1.45	282	1.5	9.403	143.1513	91.002	TERRENO
	1016	1015	359.5959	1.45	283	1.5	8.74	143.5936	92.3444	TERRENO
	1016	1015	359.5959	1.45	284	1.5	6.778	152.5339	86.04	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1016	1015	359.5959	1.45	285	1.5	7.583	152.3615	90.0436	TERRENO
	1016	1015	359.5959	1.45	286	1.5	9.102	150.2751	93.21	TERRENO
	1016	1015	359.5959	1.45	287	1.5	8.643	150.4728	95.3013	TERRENO
	1016	1015	359.5959	1.45	288	1.5	6.983	163.4414	87.2029	TERRENO
	1016	1015	359.5959	1.45	289	1.9	7.552	163.1417	89.293	TERRENO
	1016	1015	359.5959	1.45	290	2.2	9.253	159.1943	94.3835	TERRENO
	1016	1015	359.5959	1.45	291	1.8	9.63	144.575	91.1654	TERRENO
	1016	1015	359.5959	1.45	292	1.8	9.805	147.2127	93.4702	TERRENO
	1016	1015	359.5959	1.45	293	1.8	10.076	152.0824	95.321	TERRENO
	1016	1015	359.5959	1.45	294	2.6	8.321	142.3451	92.4615	TERRENO
	1016	1015	359.5959	1.45	295	2.6	8.476	142.3607	90.5729	TERRENO
	1016	1015	359.5959	1.45	296	2.6	8.3	147.0223	92.5408	TERRENO
	1016	1015	359.5959	1.45	297	2.6	8.244	150.3701	94.2059	TERRENO
	1016	1015	359.5959	1.45	298	2.6	8.385	154.3624	95.5633	TERRENO
	1016	1015	359.5959	1.45	299	2.6	8.489	158.092	97.2842	TERRENO
	1016	1015	359.5959	1.45	300	3.058	8.465	159.1813	96.1053	DESCARGA
	1016	1015	359.5959	1.45	301	3.058	8.707	162.2353	97.5122	DESCARGA
	1016	1015	359.5959	1.45	302	3.544	8.855	167.0826	96.1309	DESCARGA
	1016	1015	359.5959	1.45	303	3.544	8.954	171.2059	97.5947	DESCARGA
	1016	1015	359.5959	1.45	304	1.5	38.407	69.5654	89.4618	MANHOL
	1016	1015	359.5959	1.45	305	0.075	39.519	69.3448	91.0815	MANHOL
	1016	1015	359.5959	1.45	306	0.075	42.677	69.2605	89.4839	TUBO
	1016	1015	359.5959	1.45	307	1.5	4.858	157.0247	87.0232	TERRENO
	1016	1015	359.5959	1.45	308	1.5	4.484	135.2224	87.5917	TERRENO
	1016	1015	359.5959	1.45	309	1.5	10.027	116.5007	89.3713	TERRENO
	1016	1015	359.5959	1.45	310	1.5	12.605	134.393	88.0944	TERRENO
	1016	1015	359.5959	1.45	311	1.5	5.959	172.2745	87.1325	TERRENO
	1016	1015	359.5959	1.45	312	1.5	5.231	190.184	86.5549	TERRENO
	1016	1015	359.5959	1.45	1020	1.5	34.992	273.0332	91.0017	DELTA
	1020	1016	359.5959	1.452	1016	1.5	34.998	359.5959	88.5022	
SD	88.88.5022									
	1020	1016	359.5959	1.452	1016	1.5	34.996	0.0001	88.5023	
SD	88.88.5023									
	1020	1016	359.5959	1.452	312	2.6	7.579	150.4806	112.3811	CANO
	1020	1016	359.5959	1.452	313	2.6	7.459	152.3146	117.5848	CANO
	1020	1016	359.5959	1.452	314	2.6	6.895	156.2733	121.5526	CANO
	1020	1016	359.5959	1.452	315	2.6	4.423	173.0145	114.244	TERRENO
	1020	1016	359.5959	1.452	316	2.6	7.957	169.4703	112.0855	CANO
	1020	1016	359.5959	1.452	317	2.6	8.711	167.4919	112.4246	CANO
	1020	1016	359.5959	1.452	318	2.6	8.921	167.4847	112.1527	CANO
	1020	1016	359.5959	1.452	319	2.6	7.79	190.425	110.5359	CANO
	1020	1016	359.5959	1.452	320	2.6	8.39	191.2751	110.1638	CANO
	1020	1016	359.5959	1.452	321	2.6	8.725	193.5811	108.4219	CANO
	1020	1016	359.5959	1.452	322	2.6	7.549	220.3906	106.5735	CANO
	1020	1016	359.5959	1.452	323	2.6	6.484	219.3021	112.1307	CANO
	1020	1016	359.5959	1.452	324	2.6	5.136	221.5242	115.1422	CANO
	1020	1016	359.5959	1.452	325	1.5	2.346	226.4219	107.5913	TERRENO
	1020	1016	359.5959	1.452	326	2.6	5.238	270.3947	119.0738	CANO
	1020	1016	359.5959	1.452	327	2.6	5.598	267.3156	118.32	CANO
	1020	1016	359.5959	1.452	328	2.6	5.66	265.1524	111.5711	CANO
	1020	1016	359.5959	1.452	329	1.5	8.291	261.1358	102.1302	TERRENO
	1020	1016	359.5959	1.452	330	1.5	2.728	283.4909	106.0416	TERRENO
	1020	1016	359.5959	1.452	331	1.5	9.242	227.2146	102.5934	TERRENO
	1020	1016	359.5959	1.452	332	1.5	2.468	325.532	90.1658	TERRENO
	1020	1016	359.5959	1.452	333	1.5	9.353	206.474	108.1652	TERRENO
	1020	1016	359.5959	1.452	334	1.5	2.356	41.0203	74.0408	TERRENO
	1020	1016	359.5959	1.452	335	1.5	2.262	137.0652	97.4355	TERRENO
	1020	1016	359.5959	1.452	336	1.5	1.862	93.2346	80.161	TERRENO
	1020	1016	359.5959	1.452	337	1.5	10.285	181.4936	109.42	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1020	1016	359.5959	1.452	338	0.075	9.558	164.3159	117.2034	TERRENO
1020	1016	359.5959	1.452	339	2.6	3.215	130.3204	108.0314	TERRENO
1020	1016	359.5959	1.452	340	1.5	9.443	158.3941	99.3938	TERRENO
1020	1016	359.5959	1.452	341	1.5	11.651	164.3536	89.5933	TERRENO
1020	1016	359.5959	1.452	342	1.5	12.285	178.4508	90.2125	TERRENO
1020	1016	359.5959	1.452	343	1.5	20.268	160.3201	88.5159	TERRENO
1020	1016	359.5959	1.452	344	1.5	14.572	188.541	83.3536	TERRENO
1020	1016	359.5959	1.452	345	1.5	10.87	177.4224	104.0432	TERRENO
1020	1016	359.5959	1.452	346	1.5	13.481	203.5236	89.5448	TERRENO
1020	1016	359.5959	1.452	347	1.5	11.784	178.5945	100.0529	TERRENO
1020	1016	359.5959	1.452	348	1.5	13.691	217.2811	87.2026	TERRENO
1020	1016	359.5959	1.452	349	1.5	12.274	229.3028	95.4653	TERRENO
1020	1016	359.5959	1.452	350	1.5	12.589	247.1139	91.2635	TERRENO
1020	1016	359.5959	1.452	351	1.5	13.384	264.3736	90.5322	TERRENO
1020	1016	359.5959	1.452	352	1.5	14.094	276.4026	90.2938	TERRENO
1020	1016	359.5959	1.452	353	1.5	18.762	300.365	89.1128	TERRENO
1020	1016	359.5959	1.452	354	1.5	24.583	314.4732	92.4108	TERRENO
1020	1016	359.5959	1.452	355	1.5	18.114	342.1102	90.1942	TERRENO
1020	1016	359.5959	1.452	356	1.5	18.586	337.3508	92.1956	TERRENO
1020	1016	359.5959	1.452	357	1.5	20.21	330.184	94.3943	TERRENO
1020	1016	359.5959	1.452	358	1.5	19.712	332.0657	96.0959	TERRENO
1020	1016	359.5959	1.452	359	1.5	23.934	338.2653	91.5522	TERRENO
1020	1016	359.5959	1.452	360	1.5	23.734	330.3755	92.0736	TERRENO
1020	1016	359.5959	1.452	361	2.6	24.731	337.2046	91.005	TERRENO
1020	1016	359.5959	1.452	362	2.6	25.867	341.5913	91.303	TERRENO
1020	1016	359.5959	1.452	363	2.6	25.461	333.2558	93.0913	TERRENO
1020	1016	359.5959	1.452	364	2.6	24.901	342.1911	93.1751	TERRENO
1020	1016	359.5959	1.452	365	1.5	27.701	332.1339	90.2844	TERRENO
1020	1016	359.5959	1.452	366	1.5	23.688	344.0012	89.5755	TERRENO
1020	1016	359.5959	1.452	367	1.5	25.077	353.0328	89.2101	TERRENO
1020	1016	359.5959	1.452	368	1.5	27.26	337.0647	92.265	TERRENO
1020	1016	359.5959	1.452	369	2	25.978	349.4628	92.0147	TERRENO
1020	1016	359.5959	1.452	370	1.5	29.937	337.2806	89.5837	TERRENO
1020	1016	359.5959	1.452	371	1.5	27.273	342.011	91.5144	TERRENO
1020	1016	359.5959	1.452	372	1.5	30.763	353.023	89.4724	TERRENO
1020	1016	359.5959	1.452	373	1.5	30.054	344.2426	90.07	TERRENO
1020	1016	359.5959	1.452	374	2	30.41	349.2708	92.1127	TERRENO
1020	1016	359.5959	1.452	375	1.5	27.907	344.1602	91.2641	TERRENO
1020	1016	359.5959	1.452	376	1.5	33.829	352.3635	89.4335	TERRENO
1020	1016	359.5959	1.452	377	1.5	34.079	344.0341	89.4748	TERRENO
1020	1016	359.5959	1.452	378	1.5	33.467	347.4036	91.4549	TERRENO
1020	1016	359.5959	1.452	379	1.5	36.512	343.5746	90.0521	TERRENO
1020	1016	359.5959	1.452	380	1.5	36.39	352.4736	89.184	TERRENO
1020	1016	359.5959	1.452	381	1.5	35.865	347.4513	91.0229	TERRENO
1020	1016	359.5959	1.452	382	1.5	37.061	349.1438	90.5043	TERRENO
1020	1016	359.5959	1.452	383	1.5	28.527	359.3045	88.3612	TERRENO
1020	1016	359.5959	1.452	384	1.5	28.377	7.1506	88.3209	TERRENO
1020	1016	359.5959	1.452	385	1.5	16.62	9.4225	87.4245	TERRENO
1020	1016	359.5959	1.452	386	1.5	15.838	358.4908	88.1008	TERRENO
1016	1020	0.0002	1.434	1020	1.5	35.01	0.0002	90.5805	
SD	90.90.5805								
	1016	1020	0.0002	1.434	387	1.5	26.907	83.4307	89.4001 TERRENO
	1016	1020	0.0002	1.434	388	1.5	26.314	94.2748	89.174 TERRENO
	1016	1020	0.0002	1.434	389	1.5	26.256	89.2201	89.174 TERRENO
	1016	1020	0.0002	1.434	390	1.5	30.226	86.3356	88.142 TERRENO
	1016	1020	0.0002	1.434	391	1.5	30.444	94.0019	88.142 TERRENO
	1016	1020	0.0002	1.434	392	1.5	30.057	90.0349	88.0924 TERRENO
	1016	1020	0.0002	1.434	393	1.5	34.999	86.3847	85.2055 TERRENO
	1016	1020	0.0002	1.434	394	1.5	35.256	91.3656	85.2054 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1016	1020	0.0002	1.434	395	1.5	35.226	89.2343	85.1352	TERRENO
	1016	1020	0.0002	1.434	396	0.075	38.508	91.2121	85.1618	TERRENO
	1016	1020	0.0002	1.434	397	0.075	39.23	86.333	85.1033	TERRENO
	1016	1020	0.0002	1.434	398	0.075	39.444	89.0435	85.0917	TERRENO
	1016	1020	0.0002	1.434	399	0.075	41.061	91.2045	84.1928	TERRENO
	1016	1020	0.0002	1.434	400	0.075	41.66	86.5547	84.2817	TERRENO
	1016	1020	0.0002	1.434	401	0.075	41.333	88.4647	84.2342	TERRENO
	1016	1020	0.0002	1.434	402	1.5	6.661	172.3617	90.4853	TERRENO
	1016	1020	0.0002	1.434	403	1.5	23.382	125.0109	90.571	TERRENO
	1016	1020	0.0002	1.434	404	1.5	12.463	196.1157	89.2359	TERRENO
	1016	1020	0.0002	1.434	405	1.5	17.132	129.3306	91.4629	TERRENO
	1016	1020	0.0002	1.434	406	1.5	7.299	155.0851	89.1702	TERRENO
	1016	1020	0.0002	1.434	407	1.5	11.692	95.4502	92.1653	TERRENO
	1016	1020	0.0002	1.434	408	1.5	8.766	122.183	99.042	CANO
	1016	1020	0.0002	1.434	409	1.5	13.79	144.1459	95.4301	CANO
	1016	1020	0.0002	1.434	410	1.5	7.448	96.0812	102.5401	CANO
	1016	1020	0.0002	1.434	411	1.5	17.413	87.3317	90.4526	TERRENO
	1016	1020	0.0002	1.434	412	1.5	30.359	0.0523	90.2055	ARBOL
	1017	1015	0	1.463	1015	1.5	53.698	0	89.4609	
SD	89.89.4609									
	1017	1015	0	1.463	1021	1.5	81	100.0039	90.4045	DELTA
	1021	1017	359.5959	1.35	1017	1.5	80.993	359.5959	89.1155	
SD	89.89.1155									
	1021	1017	359.5959	1.35	413	1.7	15.392	26.2841	89.4833	MANHOL
	1021	1017	359.5959	1.35	414	0.075	12.668	73.2313	121.0735	DESCARGA
	1021	1017	359.5959	1.35	415	1.5	11.673	67.052	109.2704	TERRENO
	1021	1017	359.5959	1.35	416	1.5	12.046	57.4223	107.1631	TERRENO
	1021	1017	359.5959	1.35	417	1.5	13.369	36.5955	98.1608	TERRENO
	1021	1017	359.5959	1.35	418	1.5	14.483	31.0816	95.4445	TERRENO
	1021	1017	359.5959	1.35	419	1.5	16.928	34.5315	93.1622	TERRENO
	1021	1017	359.5959	1.35	420	1.5	16.062	43.2019	96.0323	TERRENO
	1021	1017	359.5959	1.35	421	1.5	15.155	53.3654	101.4454	TERRENO
	1021	1017	359.5959	1.35	422	2.6	15.884	69.1524	101.5741	TERRENO
	1021	1017	359.5959	1.35	423	2.6	13.598	71.5126	107.0443	TERRENO
	1021	1017	359.5959	1.35	424	1.8	7.028	54.02	107.4456	TERRENO
	1021	1017	359.5959	1.35	425	1.8	8.601	31.1119	98.3621	TERRENO
	1021	1017	359.5959	1.35	426	1.8	12.04	26.0013	92.5442	TERRENO
	1021	1017	359.5959	1.35	427	2.6	15.648	17.4538	85.5447	TERRENO
	1021	1017	359.5959	1.35	428	1.5	14.775	9.4306	86.463	TERRENO
	1021	1017	359.5959	1.35	429	1.5	10.135	17.0811	88.4237	TERRENO
	1021	1017	359.5959	1.35	430	1.5	6.556	21.1902	90.514	TERRENO
	1021	1017	359.5959	1.35	431	1.5	3.177	26.5453	89.215	TERRENO
	1021	1017	359.5959	1.35	432	1.5	1.432	343.2012	83.5141	PARAMENTO
	1021	1017	359.5959	1.35	433	1.5	6.598	351.4024	85.2227	PARAMENTO
	1021	1017	359.5959	1.35	434	1.5	14.282	357.1543	88.2219	POSTE
	1021	1017	359.5959	1.35	435	1.5	25.336	6.5033	87.4756	TERRENO
	1021	1017	359.5959	1.35	436	2.2	29.182	20.074	86.4007	PARAMENTO
	1021	1017	359.5959	1.35	437	1.5	21.721	92.5002	114.583	RIO
	1021	1017	359.5959	1.35	438	1.5	22.001	91.4958	114.3039	RIO
	1021	1017	359.5959	1.35	439	1.5	22.225	90.3048	113.31	RIO
	1021	1017	359.5959	1.35	440	1.5	18.003	87.5426	115.5144	CANO
	1021	1017	359.5959	1.35	441	1.5	18.081	84.4935	115.4848	CANO
	1021	1017	359.5959	1.35	442	1.5	18.056	83.3753	116.3836	CANO
	1021	1017	359.5959	1.35	443	1.5	14.103	89.1232	119.5328	CANO
	1021	1017	359.5959	1.35	444	1.5	13.925	91.1513	117.3959	TERRENO
	1021	1017	359.5959	1.35	445	1.5	14.47	85.4118	122.3138	CANO
	1021	1017	359.5959	1.35	446	1.5	14.262	84.1833	121.0914	CANO
	1021	1017	359.5959	1.35	447	1.5	14.068	81.3003	118.1305	TERRENO
	1021	1017	359.5959	1.35	448	1.5	11.212	91.1323	120.1036	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1021	1017	359.5959	1.35	449	1.5	11.759	87.4801	123.2609	CANO
1021	1017	359.5959	1.35	450	1.5	10.701	76.2324	123.063	CANO
1021	1017	359.5959	1.35	451	0.75	10.17	76.4315	121.0217	TUBO
1021	1017	359.5959	1.35	452	0.75	12.899	73.0715	123.0811	DESCARGA
1021	1017	359.5959	1.35	453	1.5	10.956	69.0238	121.0122	TERRENO
1021	1017	359.5959	1.35	454	1.5	8.192	63.3613	121.3133	TERRENO
1021	1017	359.5959	1.35	455	1.5	8.785	89.0539	123.1847	TERRENO
1021	1017	359.5959	1.35	456	1.5	7.585	112.4146	127.5206	TERRENO
1021	1017	359.5959	1.35	457	1.5	4.533	50.2929	122.5435	TERRENO
1021	1017	359.5959	1.35	458	1.5	3.706	120.5752	133.0629	TERRENO
1021	1017	359.5959	1.35	459	1.5	11.22	120.3012	123.5045	TERRENO
1021	1017	359.5959	1.35	460	1.5	17.154	94.1001	116.1556	TERRENO
1021	1017	359.5959	1.35	461	1.5	16.797	91.4051	113.4533	TERRENO
1021	1017	359.5959	1.35	462	1.5	18.292	94.183	115.2604	TERRENO
1021	1017	359.5959	1.35	463	1.5	2.38	174.3319	89.2956	TERRENO
1021	1017	359.5959	1.35	464	1.5	2.217	32.2532	95.1601	TERRENO
1021	1017	359.5959	1.35	465	1.5	2.277	266.1855	86.0223	TERRENO
1021	1017	359.5959	1.35	466	1.5	3.521	208.0501	87.1708	TERRENO
1021	1017	359.5959	1.35	467	1.5	10.986	270.0813	89.2029	PARAMENTO
1021	1017	359.5959	1.35	468	1.5	2.748	8.5323	83.3808	MANHOL
1021	1017	359.5959	1.35	469	1.5	17.957	10.0508	87.2143	VALVULA
1019	1018	0	1.481	1018	1.5	11.639	0	89.45	
SD	89.89.4500								
1019	1018	0	1.481	1022	1.5	51.935	260.3518	90.2329	DELTA
1019	1018	0	1.481	470	1.5	21.945	13.212	89.36	PARAMENTO
1019	1018	0	1.481	471	1.5	20.507	6.521	90.1211	SUMIDERO
1019	1018	0	1.481	472	1.5	19.28	6.5806	90.0914	SUMIDERO
1019	1018	0	1.481	473	1.5	12.894	354.5559	90.2234	MANHOL
1019	1018	0	1.481	474	1.5	10.567	303.1604	89.3118	PARAMENTO
1019	1018	0	1.481	475	1.5	11.193	292.0701	89.3546	PARAMENTO
1019	1018	0	1.481	476	1.5	6.789	220.0301	90.5923	SUMIDERO
1019	1018	0	1.481	477	1.5	7.691	213.013	90.5517	SUMIDERO
1019	1018	0	1.481	478	1.5	8.898	225.0016	90.4317	POSTE
1019	1018	0	1.481	479	1.5	8.369	216.2802	89.2756	PARAMENTO
1019	1018	0	1.481	480	1.5	24.27	188.0309	90.2329	PARAMENTO
1019	1018	0	1.481	481	2.6	24.304	194.3543	88.1221	PARAMENTO
1019	1018	0	1.481	481	2.3	24.313	194.3617	88.1221	PARAMENTO
1019	1018	0	1.481	482	1.5	5.64	84.2253	90.1826	POSTE
1019	1018	0	1.481	1023	1.5	105.287	174.2215	90.1207	DELTA
1023	1019	0	1.533	1019	1.5	105.299	0	89.4805	
SD	89.89.4805								
1023	1019	0	1.533	483	1.5	3.706	103.1326	88.121	PARAMENTO
1023	1019	0	1.533	484	1.5	1.374	126.5658	85.171	PARAMENTO
1023	1019	0	1.533	485	1.5	6.361	13.381	88.3035	PARAMENTO
1023	1019	0	1.533	486	1.5	14.176	321.1024	91.4204	PARAMENTO
1023	1019	0	1.533	487	1.5	16.086	309.2959	91.451	PARAMENTO
1023	1019	0	1.533	488	1.5	26.139	284.5445	92.1235	PARAMENTO
1023	1019	0	1.533	489	1.5	30.816	281.4952	91.2325	PARAMENTO
1023	1019	0	1.533	490	1.5	29.298	298.2608	91.4814	PARAMENTO
1023	1019	0	1.533	1024	1.5	28.522	202.5118	99.1313	DELTA
1023	1019	0	1.533	491	1.5	4.804	347.0047	90.5117	TERRENO
1023	1019	0	1.533	492	1.5	10.966	261.0731	92.3527	TERRENO
1023	1019	0	1.533	493	1.5	1.694	191.4606	96.1618	TERRENO
1023	1019	0	1.533	494	1.5	10.652	229.3428	93.2834	TERRENO
1023	1019	0	1.533	495	1.5	4.454	228.3733	97.343	TERRENO
1023	1019	0	1.533	496	1.5	9.444	212.3427	97.4202	TERRENO
1023	1019	0	1.533	497	1.5	5.335	215.0729	103.1929	TERRENO
1023	1019	0	1.533	498	1.5	3.679	134.2329	101.0217	TERRENO
1023	1019	0	1.533	499	1.5	7.103	202.2346	104.5242	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1023	1019	0	1.533	500	1.5	4.345	169.3918	105.3003	TERRENO
1023	1019	0	1.533	501	1.5	5.332	133.5943	101.2516	TERRENO
1023	1019	0	1.533	502	1.5	6.97	175.044	113.375	TERRENO
1023	1019	0	1.533	503	1.5	7.567	137.0908	107.4949	TERRENO
1023	1019	0	1.533	504	1.5	9.305	198.0308	106.0037	TERRENO
1023	1019	0	1.533	505	1.5	9.103	170.1004	114.5401	TERRENO
1023	1019	0	1.533	506	1.5	10.667	130.1525	108.4311	TERRENO
1023	1019	0	1.533	507	1.5	12.481	196.0745	105.5518	TERRENO
1023	1019	0	1.533	508	1.5	12.057	170.0538	111.0902	TERRENO
1023	1019	0	1.533	509	1.5	12.846	142.431	109.2625	TERRENO
1023	1019	0	1.533	510	1.5	18.736	168.39	106.0509	TERRENO
1023	1019	0	1.533	511	1.5	16.223	144.5631	107.5653	TERRENO
1023	1019	0	1.533	512	1.5	13.656	220.275	99.4458	TERRENO
1023	1019	0	1.533	513	1.5	14.432	213.2817	102.2602	TERRENO
1023	1019	0	1.533	514	1.5	16.607	224.532	99.3757	TERRENO
1023	1019	0	1.533	515	2.6	20.543	142.1529	107.2701	TERRENO
1023	1019	0	1.533	516	2.6	25.058	166.4047	103.514	TERRENO
1023	1019	0	1.533	517	1.5	23.337	153.013	107.4433	TERRENO
1023	1019	0	1.533	518	1.5	20.989	171.5259	105.3113	TERRENO
1023	1019	0	1.533	519	1.5	28.075	146.122	110.2711	RIO
1023	1019	0	1.533	520	1.5	25.924	146.2804	110.2014	TERRENO
1023	1019	0	1.533	521	2.6	29.529	159.2344	107.1514	RIO
1023	1019	0	1.533	522	2.6	26.781	158.5307	106.3041	TERRENO
1024	1023	0	1.366	1023	1.5	28.52	0	80.354	
SD	80.80.3540								
1024	1023	0	1.366	523	1.5	7.208	5.0057	88.5246	TERRENO
1024	1023	0	1.366	524	1.5	6.133	329.0558	88.3518	TERRENO
1024	1023	0	1.366	525	1.5	7.764	273.4707	88.16	TERRENO
1024	1023	0	1.366	526	1.5	4.56	26.2301	91.0436	TERRENO
1024	1023	0	1.366	527	1.5	3.95	229.1238	89.3359	TERRENO
1024	1023	0	1.366	528	1.5	4.605	214.3729	97.3914	TERRENO
1024	1023	0	1.366	529	1.5	4.389	196.3322	101.2407	TERRENO
1024	1023	0	1.366	530	1.5	2.969	23.5213	95.0931	TERRENO
1024	1023	0	1.366	531	1.5	1.403	57.2221	105.1915	TERRENO
1024	1023	0	1.366	532	1.5	4.128	61.0456	90.5953	TERRENO
1024	1023	0	1.366	533	1.5	3.01	140.2138	110.45	TERRENO
1024	1023	0	1.366	534	1.5	4.254	99.52	94.0929	TERRENO
1024	1023	0	1.366	535	1.5	4.098	146.3458	110.0554	TERRENO
1024	1023	0	1.366	536	2.6	4.619	105.2548	95.4401	TERRENO
1024	1023	0	1.366	537	1.5	5.939	63.5605	90.5108	TERRENO
1024	1023	0	1.366	538	1.5	5.985	82.0552	94.3256	TERRENO
1024	1023	0	1.366	539	1.5	9.492	58.4309	93.5205	TERRENO
1024	1023	0	1.366	540	1.5	10.036	73.201	98.4306	TERRENO
1024	1023	0	1.366	541	1.5	9.204	72.0756	97.1254	TERRENO
1024	1023	0	1.366	542	1.5	12.78	58.145	96.2824	TERRENO
1024	1023	0	1.366	543	1.5	14.372	71.3408	99.0658	TERRENO
1024	1023	0	1.366	544	1.5	17.722	59.0212	98.5545	TERRENO
1024	1023	0	1.366	545	2.6	3.552	40.0203	100.4806	DESCARGA
1024	1023	0	1.366	546	2.6	3.577	38.5241	95.5835	DESCARGA
1024	1023	0	1.366	547	2.6	3.71	39.0004	107.2657	ESTRUCTURA
1024	1023	0	1.366	548	2.6	3.329	49.2948	110.5824	ESTRUCTURA
1024	1023	0	1.366	549	2.6	3.272	49.1115	113.2615	ESTRUCTURA
1024	1023	0	1.366	550	2.6	2.752	74.0942	122.2819	ESTRUCTURA
1024	1023	0	1.366	551	2.6	2.898	76.1415	124.22	ESTRUCTURA
1024	1023	0	1.366	552	2.6	3.503	110.5446	121.4801	ESTRUCTURA
1024	1023	0	1.366	553	2.6	3.705	114.4143	123.5214	ESTRUCTURA
1024	1023	0	1.366	554	2.6	4.445	133.3835	120.251	ESTRUCTURA
1024	1023	0	1.366	555	2.6	4.873	137.5126	120.2509	CANO
1024	1023	0	1.366	556	2.6	5.28	129.3806	121.4832	CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1024	1023	0	1.366	557	2.6	4.684	141.5403	120.5734	CANO
1024	1023	0	1.366	558	2.6	6.929	144.0623	118.4456	CANO
1024	1023	0	1.366	559	2.6	8.965	152.0242	110.465	BORDE_CANO
1024	1023	0	1.366	560	2.6	10.829	149.252	109.0523	BORDE_CANO
1024	1023	0	1.366	561	2.6	11.734	139.3812	109.332	BORDE_CANO
1024	1023	0	1.366	562	2.6	13.406	137.0943	106.5642	BORDE_CANO
1024	1023	0	1.366	563	2.6	15.589	141.2407	104.2354	BORDE_CANO
1024	1023	0	1.366	564	2.6	16.567	137.3341	103.3206	CANO
1024	1023	0	1.366	565	2.6	16.203	134.483	103.4426	BORDE_CANO
1024	1023	0	1.366	566	2.6	14.266	135.5318	105.5009	BORDE_CANO
1024	1023	0	1.366	567	2.6	13.075	132.1648	106.5756	BORDE_CANO
1024	1023	0	1.366	568	2.6	11.766	136.2929	108.1324	BORDE_CANO
1024	1023	0	1.366	569	2.6	10.059	143.4848	109.0448	BORDE_CANO
1024	1023	0	1.366	570	2.6	7.809	143.1259	113.3247	BORDE_CANO
1024	1023	0	1.366	571	2.6	10.619	146.1024	110.0823	CANO
1024	1023	0	1.366	572	2.6	13.112	135.0418	107.5453	CANO
1024	1023	0	1.366	573	1.5	13.208	146.5507	102.3639	TERRENO
1024	1023	0	1.366	574	1.5	11.6	152.1901	106.0716	TERRENO
1024	1023	0	1.366	575	1.5	8.779	156.1219	114.1029	TERRENO
1024	1023	0	1.366	576	1.5	10.023	175.1707	93.2713	TERRENO
1024	1023	0	1.366	577	1.5	12.162	128.3323	105.0018	TERRENO
1024	1023	0	1.366	578	1.5	12.589	154.5456	97.5053	TERRENO
1024	1023	0	1.366	579	1.5	13.581	131.2913	106.4015	TERRENO
1024	1023	0	1.366	580	1.5	9.017	125.2753	105.4139	TERRENO
1024	1023	0	1.366	581	1.5	7.154	122.1301	109.2003	TERRENO
1024	1023	0	1.366	582	1.5	4.553	135.1141	113.4151	ESTRUCTURA
1024	1023	0	1.366	583	1.5	4.671	133.0132	113.0123	ESTRUCTURA
1024	1023	0	1.366	584	1.5	7.265	173.5351	102.5041	TERRENO
1024	1023	0	1.366	585	1.5	7.079	132.3401	117.173	TERRENO
1024	1023	0	1.366	1023	1.5	28.542	0	80.3636	
SD	80.80.3636								
1024	1023	0	1.366	586	1.5	8.874	141.0121	114.1144	TERRENO
1024	1023	0	1.366	587	1.5	10.734	137.2102	110.3357	TERRENO
1024	1023	0	1.366	588	1.5	12.135	131.2402	107.2136	TERRENO
1024	1023	0	1.366	589	1.5	10.557	111.4528	101.3715	TERRENO
1024	1023	0	1.366	590	1.5	8.052	107.4935	95.5747	TERRENO
1024	1023	0	1.366	591	1.5	6.934	108.2626	96.5756	TERRENO
1024	1023	0	1.366	592	1.5	6.909	111.3028	102.1051	TERRENO
1024	1023	0	1.366	593	1.5	6.11	98.462	95.0035	TERRENO
1024	1023	0	1.366	594	1.5	6.939	87.4151	95.4758	TERRENO
1024	1023	0	1.366	595	1.5	8.948	182.0903	92.5001	TERRENO
1024	1023	0	1.366	596	1.5	6.626	203.4824	98.4348	TERRENO
1024	1023	0	1.366	597	1.5	8.786	204.3346	90.3252	TERRENO
1024	1023	0	1.366	598	1.5	8.017	216.5735	93.3332	TERRENO
1024	1023	0	1.366	599	1.5	9.227	212.4527	90.0752	TERRENO
1024	1023	0	1.366	600	1.5	7.49	221.0242	94.0735	CANO
1024	1023	0	1.366	601	1.5	6.848	226.3736	90.0127	TERRENO
1024	1023	0	1.366	602	1.5	5.888	210.0315	100.0335	TERRENO
1024	1023	0	1.366	603	1.5	4.994	213.0113	97.4809	TERRENO
1024	1023	0	1.366	604	1.5	5.343	180.0142	107.4345	TERRENO
1024	1023	0	1.366	605	1.5	3.385	192.5148	99.2507	TERRENO
1024	1023	0	1.366	606	2	6.503	186.5036	108.4056	TERRENO
1024	1023	0	1.366	607	2	6.092	203.5513	101.5943	CANO
1024	1023	0	1.366	608	1.5	6.484	211.2459	101.1158	CANO
1024	1023	0	1.366	609	1.5	12.386	204.412	90.4633	TERRENO
1024	1023	0	1.366	610	1.5	14.622	227.4004	89.04	TERRENO
1024	1023	0	1.366	611	1.5	18.273	223.0313	88.575	TERRENO
1024	1023	0	1.366	612	1.5	13.817	254.4816	89.0058	TERRENO
1024	1023	0	1.366	613	1.5	13.445	269.2602	88.0957	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1024	1023	0	1.366	614	1.5	11.15	18.0639	87.5603	TERRENO
	1024	1023	0	1.366	615	1.5	3.334	31.4621	103.441	ESTRUCTURA
	1024	1023	0	1.366	616	1.5	3.099	35.4543	104.4728	TUBO
	1022	1019	0	1.472	1019	1.5	51.938	0	89.3513	
SD	89.89.3513									
	1022	1019	0	1.472	617	1.5	4.463	36.3108	86.5836	PARAMENTO
	1022	1019	0	1.472	618	1.5	10.201	295.203	90.1958	PARAMENTO
	1022	1019	0	1.472	619	1.5	8.469	283.2618	91.3054	SUMIDERO
	1022	1019	0	1.472	620	1.5	7.409	279.293	91.3054	SUMIDERO
	1022	1019	0	1.472	621	1.5	5.101	217.1328	89.0508	MANHOL
	1022	1019	0	1.472	622	1.5	16.778	120.0956	90.0608	SUMIDERO
	1022	1019	0	1.472	623	1.5	15.613	118.1431	90.0608	SUMIDERO
	1022	1019	0	1.472	624	1.5	18.088	132.4739	89.331	PARAMENTO
	1022	1019	0	1.472	625	2.2	18.451	127.3707	87.4525	POSTE
	1022	1019	0	1.472	626	1.8	30.456	126.1845	88.5121	PARAMENTO
	1022	1019	0	1.472	627	1.5	34.029	122.3528	89.3619	PARAMENTO
	1022	1019	0	1.472	628	2.4	32.537	116.2118	87.5255	PARAMENTO
	1022	1019	0	1.472	629	2.4	29.203	114.4842	89.2357	POSTE
	1022	1019	0	1.472	630	1.5	11.141	172.0936	88.5806	PARAMENTO
	1022	1019	0	1.472	1025	1.5	126.417	96.434	90.4113	DELTA
	1025	1022	0	1.41	1022	1.5	126.426	0	89.153	
SD	89.89.1530									
	1025	1022	0	1.41	631	1.5	4.646	20.4624	82.3849	EJE_TUBO
	1025	1022	0	1.41	632	1.5	10.707	251.0223	89.1239	EJE_TUBO
	1025	1022	0	1.41	633	1.5	5.353	319.4724	82.4307	VALVULA
	1025	1022	0	1.41	634	1.5	6.514	349.1603	83.0148	MANHOL
	1025	1022	0	1.41	635	1.5	6.486	76.0433	80.4011	PARAMENTO
	1025	1022	0	1.41	636	1.5	5.03	42.4338	80.211	ARBOL
	1025	1022	0	1.41	637	1.5	1.289	244.272	61.245	PARAMENTO
	1025	1022	0	1.41	638	1.5	5.276	170.374	101.5732	PARAMENTO
	1025	1022	0	1.41	639	1.5	5.218	245.4232	82.3845	PARAMENTO
	1025	1022	0	1.41	640	1.5	9.412	281.2656	86.1957	PARAMENTO
	1025	1022	0	1.41	1027	1.5	60.117	256.25	90.5733	DELTA
	1025	1022	0	1.41	1026	1.5	21.34	166.0338	98.4856	DELTA
	1026	1025	0	1.392	1025	1.5	21.356	0	80.4021	
SD	80.80.4021									
	1026	1025	0	1.392	641	1.5	19.02	7.4829	79.1417	TERRENO
	1026	1025	0	1.392	642	1.5	17.349	18.5625	77.5717	TERRENO
	1026	1025	0	1.392	643	1.5	18.928	29.485	78.0859	TERRENO
	1026	1025	0	1.392	644	1.5	20.459	24.0507	78.1635	TERRENO
	1026	1025	0	1.392	645	1.5	18.302	1.5541	81.2627	TERRENO
	1026	1025	0	1.392	646	1.5	15.686	12.3831	80.4054	TERRENO
	1026	1025	0	1.392	647	1.5	15.633	22.3159	79.4049	TERRENO
	1026	1025	0	1.392	648	1.5	13.474	20.0312	83.3517	TERRENO
	1026	1025	0	1.392	649	1.5	14.178	2.2501	83.4623	TERRENO
	1026	1025	0	1.392	650	1.5	12.294	350.5431	82.0105	TERRENO
	1026	1025	0	1.392	651	1.5	12.521	334.4845	84.2717	TERRENO
	1026	1025	0	1.392	652	1.5	16.784	337.5313	80.5859	TERRENO
	1026	1025	0	1.392	653	1.5	8.603	350.3117	88.0928	TERRENO
	1026	1025	0	1.392	654	1.5	9.647	332.3047	88.1507	TERRENO
	1026	1025	0	1.392	655	1.5	3.837	349.4448	91.1545	TERRENO
	1026	1025	0	1.392	656	1.5	6.045	306.3824	94.302	TERRENO
	1026	1025	0	1.392	657	1.5	4.51	278.4338	103.2717	TERRENO
	1026	1025	0	1.392	658	1.5	2.466	282.3716	103.5626	TERRENO
	1026	1025	0	1.392	659	1.5	3.346	277.1947	108.2615	TERRENO
	1026	1025	0	1.392	660	1.5	5.972	277.1439	92.221	TERRENO
	1026	1025	0	1.392	661	1.5	9.049	276.3923	89.0456	TERRENO
	1026	1025	0	1.392	662	1.5	13.618	276.3408	88.5251	TERRENO
	1026	1025	0	1.392	663	1.5	14.062	259.2658	88.5533	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1026	1025	0	1.392	664	1.5	9.895	261.0302	88.1635	TERRENO
1026	1025	0	1.392	665	1.5	6.182	260.1419	93.0143	TERRENO
1026	1025	0	1.392	666	1.5	9.282	293.3207	88.55	TERRENO
1026	1025	0	1.392	667	1.5	14.402	294.261	88.2646	TERRENO
1026	1025	0	1.392	668	1.5	12.883	305.5755	87.3158	TERRENO
1026	1025	0	1.392	669	1.5	13.057	319.1409	85.1854	TERRENO
1026	1025	0	1.392	670	1.5	3.169	159.3239	86.3156	TERRENO
1026	1025	0	1.392	671	1.5	16.143	152.5538	96.4447	TERRENO
1026	1025	0	1.392	672	1.5	13.36	157.1542	96.2642	TERRENO
1026	1025	0	1.392	673	1.5	13.558	167.5911	94.2841	TERRENO
1026	1025	0	1.392	674	1.5	11.056	154.3022	95.3547	TERRENO
1026	1025	0	1.392	675	1.5	9.076	140.3244	91.2751	TERRENO
1026	1025	0	1.392	676	1.5	6.926	146.3937	92.1452	TERRENO
1026	1025	0	1.392	677	1.5	4.465	150.1408	86.3842	TERRENO
1026	1025	0	1.392	678	1.5	5.082	103.1248	87.1755	TERRENO
1026	1025	0	1.392	679	1.5	3.031	6.0422	87.0726	TERRENO
1026	1025	0	1.392	680	1.5	8.035	27.1049	86.4123	TERRENO
1026	1025	0	1.392	681	1.5	10.33	3.1658	85.3551	TERRENO
1026	1025	0	1.392	682	1.5	4.42	266.0223	107.3816	DESCARGA
1026	1025	0	1.392	683	1.5	4.558	265.4114	124.5635	DESCARGA
1026	1025	0	1.392	684	1.5	23.614	178.2933	102.143	RIO
1026	1025	0	1.392	685	2.6	22.797	174.0353	99.443	RIO
1026	1025	0	1.392	686	1.5	19.529	179.5329	101.4659	BORDE_CANO
1026	1025	0	1.392	687	1.5	19.894	175.3252	102.3208	BORDE_CANO
1026	1025	0	1.392	688	1.5	16.251	178.5448	103.2643	BORDE_CANO
1026	1025	0	1.392	689	2.6	17.441	173.1956	98.5509	BORDE_CANO
1026	1025	0	1.392	690	2	14.423	182.0636	104.4807	BORDE_CANO
1026	1025	0	1.392	691	2.6	13.061	178.5002	100.5911	BORDE_CANO
1026	1025	0	1.392	692	1.5	11.861	186.4156	109.3309	BORDE_CANO
1026	1025	0	1.392	693	2.6	11.377	181.2656	103.2915	BORDE_CANO
1026	1025	0	1.392	694	1.5	7.566	186.0727	111.3048	BORDE_CANO
1026	1025	0	1.392	695	2.6	6.912	173.2909	98.3906	BORDE_CANO
1026	1025	0	1.392	696	1.5	6.85	221.2101	111.0036	BORDE_CANO
1026	1025	0	1.392	697	2.6	4.73	197.0338	102.0416	BORDE_CANO
1026	1025	0	1.392	698	2.6	3.711	195.0839	94.5101	TERRENO
1026	1025	0	1.392	699	2.6	4.532	197.3817	101.3416	TERRENO
1026	1025	0	1.392	700	2.6	4.956	182.0758	93.4231	TERRENO
1026	1025	0	1.392	701	2.6	5.993	243.4141	100.2914	TERRENO
1026	1025	0	1.392	702	2.6	3.662	260.2011	98.3335	TERRENO
1026	1025	0	1.392	703	2.6	2.971	233.2029	77.5733	TERRENO
1026	1025	0	1.392	704	1.5	3.195	208.0804	104.5013	TERRENO
1026	1025	0	1.392	705	1.5	5.016	262.0105	101.5901	TERRENO
1026	1025	0	1.392	706	1.5	6.86	245.443	89.4922	TERRENO
1026	1025	0	1.392	707	2.6	7.05	237.4231	96.3558	TERRENO
1026	1025	0	1.392	708	2.6	7.488	222.5206	95.2931	TERRENO
1026	1025	0	1.392	709	1.5	7.646	223.1651	96.0038	TERRENO
1026	1025	0	1.392	710	1.5	7.01	244.1814	89.2738	TERRENO
1026	1025	0	1.392	711	1.5	10.161	213.0518	89.4757	TERRENO
1026	1025	0	1.392	712	1.5	12.164	196.0059	92.3733	TERRENO
1026	1025	0	1.392	713	1.5	10.254	196.3536	96.3013	TERRENO
1026	1025	0	1.392	714	1.5	9.316	195.3533	101.5556	TERRENO
1026	1025	0	1.392	715	1.5	13.35	206.5633	90.0833	TERRENO
1026	1025	0	1.392	716	1.5	14.203	224.0836	87.4151	TERRENO
1026	1025	0	1.392	717	1.5	14.158	252.4007	88.3904	TERRENO
1026	1025	0	1.392	718	1.5	16.398	197.2505	93.0228	TERRENO
1026	1025	0	1.392	719	1.5	18.457	173.3746	97.4724	TERRENO
1026	1025	0	1.392	720	1.5	15.917	169.2638	98.4137	TERRENO
1026	1025	0	1.392	721	1.5	15.136	186.3227	97.1954	TERRENO
1026	1025	0	1.392	722	1.5	19.182	185.4243	97.3211	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1026	1025	0	1.392	723	1.5	14.942	166.1135	94.1821	TERRENO
	1026	1025	0	1.392	724	1.5	21.011	197.2416	94.2511	TERRENO
	1026	1025	0	1.392	725	1.5	20.541	187.2454	98.2405	TERRENO
	1026	1025	0	1.392	726	1.5	12.453	175.0424	100.2002	TERRENO
	1026	1025	0	1.392	727	1.5	13.509	188.1852	100.3148	TERRENO
	1026	1025	0	1.392	728	1.5	14.325	185.0346	100.4006	TERRENO
	1026	1025	0	1.392	729	1.5	9.843	177.55	104.202	TERRENO
	1026	1025	0	1.392	730	1.5	19.809	172.0659	99.1314	TERRENO
	1026	1025	0	1.392	731	1.5	21.467	184.1445	100.442	TERRENO
	1026	1025	0	1.392	732	1.5	19.005	162.3128	98.5052	TERRENO
	1026	1025	0	1.392	733	1.5	19.22	181.0633	100.4222	TERRENO
	1026	1025	0	1.392	734	2.5	21.578	154.4634	98.5544	RIO
	1026	1025	0	1.392	735	2.5	25.584	186.2044	99.0155	RIO
	1026	1025	0	1.392	736	2.5	23.646	177.3531	102.2033	RIO
	1026	1025	0	1.392	737	1.5	11.398	16.1249	86.0402	LINDERO
	1026	1025	0	1.392	738	1.5	16.131	152.4646	96.5145	LINDERO
	1026	1025	0	1.392	739	1.5	15.092	300.4639	87.2716	LINDERO
	1026	1025	0	1.392	740	1.5	13.633	266.1629	89.0414	LINDERO
	1027	1025	0	1.429	1025	1.5	60.116	0	88.5922	
SD	88.88.5922									
	1027	1025	0	1.429	741	1.5	4.371	325.4123	84.1815	MANHOL
	1027	1025	0	1.429	742	1.5	2.905	213.2311	88.0112	PARAMENTO
	1027	1025	0	1.429	743	1.5	13.098	342.1908	87.1708	PARAMENTO
	1027	1025	0	1.429	744	1.5	18.818	316.095	86.4703	PARAMENTO
	1027	1025	0	1.429	745	1.5	8.085	17.1558	85.0846	PARAMENTO
	1027	1025	0	1.429	746	1.5	7.575	97.1517	84.5218	PARAMENTO
	1027	1025	0	1.429	747	1.5	11.656	127.0724	89.295	PARAMENTO
	1027	1025	0	1.429	748	1.5	27.982	4.2642	87.5216	PARAMENTO
	1027	1025	0	1.429	749	1.5	28.121	7.3051	87.5216	PARAMENTO
	1027	1025	0	1.429	1028	1.5	56.82	186.1254	90.3612	DELTA
	1027	1025	0	1.429	750	1.5	8.264	3.5757	86.3924	POSTE
	1027	1025	0	1.429	1029	1.5	29.695	116.1217	95.0803	DELTA
	1029	1027	0	1.415	1027	1.5	29.71	0	84.4654	
SD	84.84.4654									
	1029	1027	0	1.415	751	1.5	20.6	359.4551	83.1117	BORDE_VIA
	1029	1027	0	1.415	752	1.5	22.432	3.5435	82.3841	BORDE_VIA
	1029	1027	0	1.415	753	1.5	21.882	4.0343	83.3921	TERRENO
	1029	1027	0	1.415	754	1.5	20.97	0.3927	83.065	TERRENO
	1029	1027	0	1.415	755	1.5	18.553	8.1312	84.3101	TERRENO
	1029	1027	0	1.415	756	1.5	16.894	1.1603	83.3119	TERRENO
	1029	1027	0	1.415	757	1.5	14.825	11.5114	86.1637	TERRENO
	1029	1027	0	1.415	758	1.5	14.16	2.1754	84.3923	TERRENO
	1029	1027	0	1.415	759	1.5	10.829	358.1325	87.0901	PARAMENTO
	1029	1027	0	1.415	760	1.5	14.082	11.1204	86.5453	TERRENO
	1029	1027	0	1.415	761	1.5	10.561	325.2802	85.0042	PARAMENTO
	1029	1027	0	1.415	762	1.5	7.095	4.3034	88.563	TERRENO
	1029	1027	0	1.415	763	1.5	10.637	295.5901	86.2455	PARAMENTO
	1029	1027	0	1.415	764	1.5	8.51	258.5129	89.1311	PARAMENTO
	1029	1027	0	1.415	765	1.5	12.615	258.0413	89.0452	PARAMENTO
	1029	1027	0	1.415	766	1.5	4.019	21.4417	94.05	TERRENO
	1029	1027	0	1.415	767	1.5	6.462	298.542	87.1227	TERRENO
	1029	1027	0	1.415	768	1.5	16.894	231.0247	89.4917	TERRENO
	1029	1027	0	1.415	769	1.5	5.074	260.1806	87.4459	TERRENO
	1029	1027	0	1.415	770	1.5	3.189	178.4114	86.0756	TERRENO
	1029	1027	0	1.415	771	1.5	21.458	214.5346	89.2944	TERRENO
	1029	1027	0	1.415	772	1.5	10.837	207.453	88.1309	TERRENO
	1029	1027	0	1.415	773	1.5	10.039	181.1632	88.0319	TERRENO
	1029	1027	0	1.415	774	1.5	3.787	183.3155	89.2507	BORDE_CANO
	1029	1027	0	1.415	775	1.5	4.926	183.3645	89.3737	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1029	1027	0	1.415	776	1.5	5.134	229.2331	92.2941	BORDE_CANO
1029	1027	0	1.415	777	1.5	6.268	220.1255	90.2235	BORDE_CANO
1029	1027	0	1.415	778	1.5	8.4	246.2359	90.0624	BORDE_CANO
1029	1027	0	1.415	779	1.5	9.337	237.3724	89.5537	BORDE_CANO
1029	1027	0	1.415	780	1.5	13.475	247.3755	90.2346	BORDE_CANO
1029	1027	0	1.415	781	1.5	13.732	242.5613	90.2346	BORDE_CANO
1029	1027	0	1.415	782	1.5	13.707	244.3122	91.4353	CANO
1029	1027	0	1.415	783	1.5	13.487	246.5128	91.4353	CANO
1029	1027	0	1.415	784	1.5	8.612	244.2645	93.5334	CANO
1029	1027	0	1.415	785	1.5	9.122	239.3935	94.1017	CANO
1029	1027	0	1.415	786	1.5	5.708	228.4503	98.3635	CANO
1029	1027	0	1.415	787	1.5	6.157	224.5309	97.3122	CANO
1029	1027	0	1.415	788	1.5	4.252	181.4035	104.194	CANO
1029	1027	0	1.415	789	1.5	4.672	183.0521	103.465	CANO
1029	1027	0	1.415	790	1.5	6.087	144.4754	105.4849	CANO
1029	1027	0	1.415	791	1.5	6.395	153.4235	104.1537	CANO
1029	1027	0	1.415	792	1.5	4.817	143.0342	101.1646	TERRENO
1029	1027	0	1.415	793	1.5	3.612	145.225	95.1448	TERRENO
1029	1027	0	1.415	794	1.5	2.493	120.4835	108.2545	TERRENO
1029	1027	0	1.415	795	1.5	3.811	38.2019	101.3256	TERRENO
1029	1027	0	1.415	796	1.5	6.39	26.0804	96.072	TERRENO
1029	1027	0	1.415	797	1.5	4.793	352.0217	90.1919	TERRENO
1029	1027	0	1.415	798	1.5	10.232	117.2637	87.4637	TERRENO
1029	1027	0	1.415	799	1.5	16.295	133.4834	88.0354	TERRENO
1029	1027	0	1.415	800	1.5	11.082	141.1538	89.0132	TERRENO
1029	1027	0	1.415	801	1.5	8.017	118.0617	89.5425	TERRENO
1029	1027	0	1.415	802	1.5	14.32	118.3349	87.3244	LINDERO
1029	1027	0	1.415	803	1.5	10.928	103.3247	88.0119	LINDERO
1029	1027	0	1.415	804	1.5	6.249	72.5313	91.5032	LINDERO
1029	1027	0	1.415	805	1.5	8.891	73.0732	88.0457	TERRENO
1029	1027	0	1.415	806	1.5	8.592	43.315	93.0644	TERRENO
1029	1027	0	1.415	807	1.5	9.866	47.0913	90.203	TERRENO
1029	1027	0	1.415	808	1.5	13.891	72.2948	88.2535	TERRENO
1029	1027	0	1.415	809	1.5	14.745	60.235	88.305	TERRENO
1029	1027	0	1.415	810	1.5	15.319	103.3447	87.494	TERRENO
1029	1027	0	1.415	811	1.5	11.4	38.5911	91.5236	TERRENO
1029	1027	0	1.415	812	1.5	18.647	119.5653	87.5501	TERRENO
1029	1027	0	1.415	813	1.5	13.039	27.2048	90.1343	TERRENO
1029	1027	0	1.415	814	1.5	16.375	30.3156	87.2355	TERRENO
1029	1027	0	1.415	815	1.5	15.316	42.4924	88.3859	TERRENO
1029	1027	0	1.415	816	1.8	8.226	39.3402	98.0333	BORDE_CANO
1029	1027	0	1.415	817	1.8	8.492	32.1529	98.2645	BORDE_CANO
1029	1027	0	1.415	818	1.8	5.51	60.165	104.2441	BORDE_CANO
1029	1027	0	1.415	819	1.8	4.737	42.4852	105.1726	BORDE_CANO
1029	1027	0	1.415	820	1.8	5.993	125.1722	103.4425	BORDE_CANO
1029	1027	0	1.415	821	1.8	4.972	132.1724	107.5409	BORDE_CANO
1029	1027	0	1.415	822	1.8	8.971	152.1906	99.2854	BORDE_CANO
1029	1027	0	1.415	823	1.8	8.013	158.0954	101.0232	BORDE_CANO
1029	1027	0	1.415	824	1.8	14.856	157.002	91.1435	TERRENO
1029	1027	0	1.415	825	1.8	7.065	167.1109	90.093	TERRENO
1029	1027	0	1.415	826	1.8	9.293	145.352	93.17	TERRENO
1029	1027	0	1.415	827	1.8	4.553	132.4335	100.5253	TERRENO
1029	1027	0	1.415	828	1.8	5.893	113.3236	96.2441	TERRENO
1029	1027	0	1.415	829	1.8	4.285	126.5216	110.274	BORDE_CANO
1029	1027	0	1.415	830	1.8	5.15	119.3633	106.4313	BORDE_CANO
1029	1027	0	1.415	831	1.8	4.258	42.3009	99.5324	TERRENO
1029	1027	0	1.415	832	1.8	5.981	59.3814	96.0144	TERRENO
1029	1027	0	1.415	833	1.8	8.498	39.5107	93.3201	TERRENO
1029	1027	0	1.415	834	1.8	8.342	30.5053	95.2458	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1029	1027	0	1.415	1027	1.5	29.696	359.5958	84.4704	
SD	84.84.4704									
	1029	1027	0	1.415	1027	1.5	29.693	0	84.4704	
SD	84.84.4704									
	1029	1027	0	1.415	835	1.5	12.254	19.2648	96.0319	DESCARGA
	1029	1027	0	1.415	836	1.5	12.225	19.3957	93.5123	DESCARGA
	1029	1027	0	1.415	836	1.8	12.171	19.3442	93.4825	DESCARGA
	1029	1027	0	1.415	835	1.8	12.151	19.2802	95.5531	DESCARGA
	1029	1027	0	1.415	837	1.5	13.193	20.5045	94.4229	BORDE_CANO
	1029	1027	0	1.415	838	1.5	13.082	18.3659	94.2537	BORDE_CANO
	1029	1027	0	1.415	839	1.5	13.354	17.3053	91.5459	TERRENO
	1029	1027	0	1.415	840	1.5	13.626	21.2947	90.5304	TERRENO
	1029	1027	0	1.415	841	1.5	14.386	19.4404	87.2704	TERRENO
	1029	1027	0	1.415	842	1.5	14.09	11.4804	86.5933	TERRENO
	1029	1027	0	1.415	843	1.5	10.008	18.5922	90.3644	TERRENO
	1029	1027	0	1.415	844	1.8	12.147	30.0845	91.5944	TERRENO
	1029	1027	0	1.415	845	1.5	10.662	23.1635	93.5539	BORDE_CANO
	1029	1027	0	1.415	1030	1.5	39.283	169.2021	89.0651	DELTA
	1029	1027	0	1.415	846	1.5	22.727	185.5618	89.2734	TERRENO
	1029	1027	0	1.415	847	1.5	27.501	197.4708	88.5045	TERRENO
	1029	1027	0	1.415	848	1.5	26.479	181.3535	88.2242	TERRENO
	1029	1027	0	1.415	849	1.5	18.378	213.2122	89.4143	TERRENO
	1029	1027	0	1.415	850	1.5	18.777	214.4844	89.4143	TERRENO
	1029	1027	0	1.415	851	1.5	22.449	194.2407	89.3601	TERRENO
	1029	1027	0	1.415	852	1.5	23.035	194.2801	89.3244	TERRENO
	1029	1027	0	1.415	853	1.5	22.864	186.0139	89.3633	TERRENO
	1029	1027	0	1.415	854	1.5	23.574	186.0827	89.3516	TERRENO
	1029	1027	0	1.415	855	1.5	22.662	182.0728	89.3515	TERRENO
	1029	1027	0	1.415	856	1.5	23.249	182.0118	89.3906	TERRENO
	1029	1027	0	1.415	857	1.5	21.587	161.3145	90.1844	TERRENO
	1029	1027	0	1.415	858	1.5	22.213	161.3353	90.1412	TERRENO
	1029	1027	0	1.415	859	1.5	21.986	161.463	91.2711	CANO
	1029	1027	0	1.415	860	1.5	23.295	186.1805	90.3725	CANO
	1029	1027	0	1.415	861	1.5	21.863	200.1139	90.3118	CANO
	1029	1027	0	1.415	862	1.5	18.673	213.3634	90.3118	CANO
	1030	1029	0	1.43	1029	1.5	39.264	0	90.3822	
SD	90.90.3822									
	1030	1029	0	1.43	863	1.5	14.781	6.2135	88.4832	TERRENO
	1030	1029	0	1.43	864	1.5	14.474	329.4224	89.2536	TERRENO
	1030	1029	0	1.43	865	1.5	8.066	7.1331	87.0143	TERRENO
	1030	1029	0	1.43	866	1.5	10.106	310.5928	88.5359	TERRENO
	1030	1029	0	1.43	867	1.5	2.816	1.2219	86.273	TERRENO
	1030	1029	0	1.43	868	1.5	5.039	278.0452	88.3515	TERRENO
	1030	1029	0	1.43	869	1.5	11.381	277.1809	88.3626	TERRENO
	1030	1029	0	1.43	870	1.5	18.021	298.333	89.3258	LINDERO
	1030	1029	0	1.43	871	1.5	9.034	235.314	90.5145	TERRENO
	1030	1029	0	1.43	872	1.5	15.387	274.4636	89.2412	LINDERO
	1030	1029	0	1.43	873	1.5	17.467	239.2616	90.2047	LINDERO
	1030	1029	0	1.43	874	1.5	20.305	226.5955	91.1809	LINDERO
	1030	1029	0	1.43	875	1.5	6.664	136.5546	101.0856	LINDERO
	1030	1029	0	1.43	876	1.5	13.991	216.2102	91.24	TERRENO
	1030	1029	0	1.43	877	1.5	11.861	248.503	89.3729	TERRENO
	1030	1029	0	1.43	878	1.5	7.433	187.0506	97.2003	TERRENO
	1030	1029	0	1.43	879	1.5	3.089	57.5039	95.0328	TERRENO
	1030	1029	0	1.43	880	1.5	5.773	18.5552	87.3257	TERRENO
	1030	1029	0	1.43	881	1.5	10.408	89.5701	96.2954	TERRENO
	1030	1029	0	1.43	882	1.5	10.768	18.3558	89.1953	TERRENO
	1030	1029	0	1.43	883	1.5	12.13	61.0625	92.435	TERRENO
	1030	1029	0	1.43	884	1.5	16.634	17.3019	89.572	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1030	1029	0	1.43	885	1.5	14.987	44.143	91.4448	TERRENO
1030	1029	0	1.43	886	1.5	20.295	40.201	89.0402	TERRENO
1030	1029	0	1.43	887	1.5	22.495	31.262	91.2003	TERRENO
1030	1029	0	1.43	888	2.6	15.833	25.4437	92.5647	TERRENO
1030	1029	0	1.43	889	2.6	12.829	27.2318	93.3951	TERRENO
1030	1029	0	1.43	890	2.6	20.319	32.4334	92.2123	TERRENO
1030	1029	0	1.43	891	2.6	17.601	35.5802	92.4727	TERRENO
1030	1029	0	1.43	892	2.6	13.023	41.29	97.0331	TERRENO
1030	1029	0	1.43	893	2.6	10.305	56.3813	99.3735	TERRENO
1030	1029	0	1.43	894	2.6	6.832	76.2846	105.3532	TERRENO
1030	1029	0	1.43	895	2.6	8.121	98.0317	105.2414	TERRENO
1030	1029	0	1.43	896	2.6	9.571	116.0914	104.0155	TERRENO
1030	1029	0	1.43	897	2.6	12.491	107.4919	100.4333	TERRENO
1030	1029	0	1.43	898	2.6	14.352	101.2959	100.4953	TERRENO
1030	1029	0	1.43	899	1.5	12.338	81.045	92.36	TERRENO
1030	1029	0	1.43	900	1.5	15.231	68.5459	91.2736	TERRENO
1030	1029	0	1.43	901	1.5	21.008	57.0928	89.4218	TERRENO
1030	1029	0	1.43	902	1.5	21.562	51.035	89.2936	LINDERO
1030	1029	0	1.43	903	1.5	23.443	40.2034	88.5958	LINDERO
1030	1029	0	1.43	904	2.6	20.913	24.08	95.5141	BORDE_CANO
1030	1029	0	1.43	905	2.6	20.971	27.2143	96.0712	BORDE_CANO
1030	1029	0	1.43	906	2.6	18.853	31.0315	96.2124	BORDE_CANO
1030	1029	0	1.43	907	2.6	19.518	32.3737	96.4158	BORDE_CANO
1030	1029	0	1.43	908	2.6	13.602	34.0445	103.2642	CANO
1030	1029	0	1.43	909	2.6	11.294	34.1218	106.1655	BORDE_CANO
1030	1029	0	1.43	910	2.6	11.359	37.574	106.0555	BORDE_CANO
1030	1029	0	1.43	911	3.5	6.497	49.2055	112.1149	BORDE_CANO
1030	1029	0	1.43	912	3.5	5.337	41.2853	114.5137	BORDE_CANO
1030	1029	0	1.43	913	3.5	5.723	48.043	114.4505	CANO
1030	1029	0	1.43	914	3.5	6.415	85.4948	114.0828	CANO
1030	1029	0	1.43	915	3.5	6.065	86.2554	116.0308	CANO
1030	1029	0	1.43	916	3.5	6.284	85.4957	114.5547	CANO
1030	1029	0	1.43	917	3.5	7.958	116.3049	111.0003	BORDE_CANO
1030	1029	0	1.43	918	3.5	6.99	118.5731	113.1936	BORDE_CANO
1030	1029	0	1.43	919	3.5	7.413	117.3713	112.1826	CANO
1030	1029	0	1.43	920	3.5	12.986	133.2838	104.1617	BORDE_CANO
1030	1029	0	1.43	921	3.5	13.108	129.5143	104.1617	BORDE_CANO
1030	1029	0	1.43	922	3.5	14.275	115.3802	103.3729	RIO
1030	1029	0	1.43	923	3.5	15.149	108.1436	103.0447	RIO
1030	1029	0	1.43	924	3.5	12.922	146.0756	105.2657	RIO
1030	1029	0	1.43	925	3.5	14.18	167.0408	104.1159	RIO
1030	1029	0	1.43	926	2.6	10.256	165.313	102.2454	TERRENO
1030	1029	0	1.43	927	2.6	9.682	145.3359	101.5818	TERRENO
1030	1029	0	1.43	928	2.6	7.632	140.3158	102.2513	TERRENO
1030	1029	0	1.43	929	2.6	7.335	146.1146	95.1117	TERRENO
1028	1027	0	1.57	1027	1.5	56.836	0	89.3037	
SD	89.89.3037								
1028	1027	0	1.57	930	1.5	6.108	30.3907	88.0617	PARAMENTO
1028	1027	0	1.57	931	1.5	10.228	327.4455	90.1855	PARAMENTO
1028	1027	0	1.57	932	1.5	24.115	292.4532	89.4813	PARAMENTO
1028	1027	0	1.57	933	1.5	7.678	245.4217	90.2935	PARAMENTO
1028	1027	0	1.57	934	1.5	25.2	300.47	89.1149	PARAMENTO
1028	1027	0	1.57	935	0.075	15.242	259.3824	94.4133	PARAMENTO
1028	1027	0	1.57	936	1.5	4.419	133.3909	90.5907	PARAMENTO
1028	1027	0	1.57	937	1.5	5.366	21.3704	89.3859	POSTE
1028	1027	0	1.57	938	1.5	4.064	334.3545	88.2748	MANHOL
1028	1027	0	1.57	939	1.5	12.242	110.0904	91.1834	PARAMENTO
1028	1027	0	1.57	940	1.5	22.602	83.2141	90.3615	PARAMENTO
1028	1027	0	1.57	941	1.5	4.086	96.5412	92.045	POSTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1028	1027	0	1.57	942	1.5	3.017	340.5722	88.2614	ESTRUCTURA
	1028	1027	0	1.57	943	1.5	3.84	319.3135	88.5936	ESTRUCTURA
	1028	1027	0	1.57	944	1.5	5.063	330.3607	89.0951	ESTRUCTURA
	1028	1027	0	1.57	945	1.5	4.462	347.4256	88.5007	ESTRUCTURA
	1028	1027	0	1.57	1031	1.5	61.159	89.0356	91.4924	DELTA
	1028	1027	0	1.57	1032	1.5	65.152	187.0715	90.4242	DELTA
	1028	1027	0	1.57	946	1.5	12.515	187.0717	91.263	LINEAMIENT
	1028	1027	0	1.57	947	1.5	35.813	187.0717	90.3647	LINEAMIENT
	1028	1027	0	1.57	948	1.5	14.284	0	90.1437	LINEAMIENT
	1028	1027	0	1.57	949	1.5	39.748	0	89.2841	LINEAMIENT
	1028	1027	0	1.57	950	1.5	5.013	179.0204	91.5528	ARBOL
	1028	1027	0	1.57	951	1.5	13.222	173.3159	89.2117	PARAMENTO
	1028	1027	0	1.57	952	1.5	12.702	187.1923	90.5413	PARAMENTO
	1028	1027	0	1.57	953	1.5	32.442	188.1944	90.5853	PARAMENTO
	1031	1028	0	1.503	1028	1.5	61.159	0	88.1446	
SD	88.88.1446									
	1031	1028	0	1.503	1033	1.5	33.61	228.0536	90.2158	DELTA
	1031	1028	0	1.503	954	1.5	8.433	2.1307	91.2109	TERRENO
	1031	1028	0	1.503	955	1.5	8.662	343.1403	93.3752	TERRENO
	1031	1028	0	1.503	956	1.5	3.777	12.4816	91.5808	TERRENO
	1031	1028	0	1.503	957	1.5	4.656	333.2938	95.1452	TERRENO
	1031	1028	0	1.503	958	1.5	4.608	287.2255	95.0414	TERRENO
	1031	1028	0	1.503	959	1.5	2.918	121.0037	85.4051	TERRENO
	1031	1028	0	1.503	960	1.5	2.234	259.0411	91.2425	TERRENO
	1031	1028	0	1.503	961	1.5	7.83	264.0038	90.4908	TERRENO
	1031	1028	0	1.503	962	1.5	6.931	178.0125	89.2433	TERRENO
	1031	1028	0	1.503	963	1.5	7.329	209.1808	88.5427	TERRENO
	1031	1028	0	1.503	964	1.5	11.702	238.2418	89.3035	TERRENO
	1031	1028	0	1.503	965	1.5	14.391	187.1917	90.2518	TERRENO
	1031	1028	0	1.503	966	1.5	14.989	209.3502	89.3834	TERRENO
	1031	1028	0	1.503	967	1.5	17.727	234.0301	89.394	TERRENO
	1031	1028	0	1.503	968	1.5	13.578	263.381	90.3218	TERRENO
	1031	1028	0	1.503	969	1.5	10.853	320.1807	95.3852	TERRENO
	1031	1028	0	1.503	970	1.5	13.489	306.0544	92.281	TERRENO
	1031	1028	0	1.503	971	1.5	19.574	314.4852	91.3715	TERRENO
	1031	1028	0	1.503	972	1.5	22.261	300.0514	91.1653	TERRENO
	1031	1028	0	1.503	973	1.5	24.646	285.4337	91.372	TERRENO
	1031	1028	0	1.503	974	1.5	21.24	283.4747	90.5208	TERRENO
	1031	1028	0	1.503	975	1.5	25.498	270.0913	90.32	TERRENO
	1031	1028	0	1.503	976	1.5	7.482	145.5711	100.1735	BORDE_VIA
	1031	1028	0	1.503	977	1.5	8.954	141.594	98.2458	BORDE_VIA
	1031	1028	0	1.503	978	1.5	4.65	85.1251	102.0929	BORDE_VIA
	1031	1028	0	1.503	979	1.5	6.452	85.3055	99.5531	BORDE_VIA
	1031	1028	0	1.503	980	1.5	11.247	8.3146	92.0705	BORDE_VIA
	1031	1028	0	1.503	981	1.5	12.813	14.5429	92.5231	BORDE_VIA
	1031	1028	0	1.503	982	1.5	17.812	358.1659	91.0547	BORDE_VIA
	1031	1028	0	1.503	983	1.5	18.577	3.5258	91.0547	BORDE_VIA
	1031	1028	0	1.503	984	1.5	29.512	0.3643	89.3832	BORDE_VIA
	1031	1028	0	1.503	985	1.5	28.56	356.5204	89.5039	BORDE_VIA
	1031	1028	0	1.503	986	1.5	42.254	0.4501	88.1538	BORDE_VIA
	1031	1028	0	1.503	987	1.5	42.302	358.4549	88.2148	BORDE_VIA
	1031	1028	0	1.503	988	1.5	47.516	0.3755	88.1416	EJE_VIA
	1031	1028	0	1.503	989	1.5	30.243	8.1141	89.5705	DESCARGA
	1031	1028	0	1.503	990	1.5	30.207	8.1428	90.4813	DESCARGA
	1031	1028	0	1.503	991	1.5	28.954	9.0302	90.2145	TUBO
	1031	1028	0	1.503	992	1.5	29.946	5.4424	88.5704	TERRENO
	1031	1028	0	1.503	993	1.5	30.356	9.5114	89.1548	TERRENO
	1031	1028	0	1.503	994	1.5	26.887	7.0943	90.3808	TERRENO
	1031	1028	0	1.503	995	1.5	27.263	12.4052	90.5044	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1031	1028	0	1.503	996	1.5	21.161	14.4739	91.34	TERRENO
	1031	1028	0	1.503	997	1.5	21.733	21.2125	91.2627	TERRENO
	1031	1028	0	1.503	998	1.5	19.061	8.2247	91.4925	TERRENO
	1031	1028	0	1.503	999	1.5	17.931	10.1237	92.1838	TERRENO
	1031	1028	0	1.503	1100	1.5	18.046	4.2404	92.1018	BORDE_CANO
	1031	1028	0	1.503	1101	1.5	17.217	6.1422	91.5508	BORDE_CANO
	1031	1028	0	1.503	1102	1.5	30.755	8.2526	89.1317	TERRENO
	1031	1028	0	1.503	1103	1.5	30.342	5.0436	88.4736	TERRENO
	1031	1028	0	1.503	1104	1.5	30.384	8.2624	89.5928	ESTRUCTURA
	1031	1028	0	1.503	1105	1.5	30.215	7.2959	89.5928	ESTRUCTURA
	1031	1028	0	1.503	1106	1.5	30.158	8.0543	90.5907	CANO
	1031	1028	0	1.503	1107	1.5	33.397	11.1108	88.4355	TERRENO
	1031	1028	0	1.503	1108	1.5	34.601	16.5147	88.5329	TERRENO
	1031	1028	0	1.503	1109	1.5	30.655	18.195	90.0012	TERRENO
	1031	1028	0	1.503	1110	1.5	26.589	21.4353	90.5055	TERRENO
	1031	1028	0	1.503	1111	2.2	22.754	25.1708	89.2053	TERRENO
	1031	1028	0	1.503	1112	2.2	17.893	4.4118	92.3349	BORDE_CANO
	1031	1028	0	1.503	1113	2.2	17.457	6.2654	92.163	BORDE_CANO
	1031	1028	0	1.503	1114	2.2	20.511	4.3808	90.4331	TERRENO
	1031	1028	0	1.503	1115	2.2	25.387	4.565	90.1104	TERRENO
	1031	1028	0	1.503	1116	2.2	28.915	6.5402	90.0025	BORDE_CANO
	1031	1028	0	1.503	1117	2.2	29.666	9.572	90.5433	BORDE_CANO
	1031	1028	0	1.503	1118	1.5	26.747	7.5934	90.5622	BORDE_CANO
	1031	1028	0	1.503	1119	1.5	27.61	11.3737	91.1312	BORDE_CANO
	1031	1028	0	1.503	1120	1.5	17.545	4.0933	91.4119	PUENTE
	1031	1028	0	1.503	1121	1.5	16.963	358.3445	91.33	PUENTE
	1031	1028	0	1.503	1122	1.5	17.983	3.3331	91.1903	PUENTE
	1031	1028	0	1.503	1123	1.5	17.029	4.364	91.3154	PUENTE
	1031	1028	0	1.503	1124	1.5	16.439	358.53	91.2531	PUENTE
	1031	1028	0	1.503	1125	1.5	12.79	48.09	90.2038	LINDERO
	1031	1028	0	1.503	1126	1.5	8.765	71.1841	91.5153	LINDERO
	1031	1028	0	1.503	1127	1.5	7.339	91.5558	92.5444	LINDERO
	1031	1028	0	1.503	1128	1.5	9.068	130.5724	91.5407	LINDERO
	1031	1028	359.5959	1.507	1028	1.5	61.181	359.5959	88.1529	
SD	88.88.1529									
	1031	1028	359.5959	1.507	1129	1.5	15.019	357.2017	91.4209	TERRENO
	1031	1028	359.5959	1.507	1130	1.5	17.348	353.3712	92.191	TERRENO
	1031	1028	359.5959	1.507	1131	1.5	17.002	353.2823	94.3538	BORDE_CANO
	1031	1028	359.5959	1.507	1132	1.5	15.415	352.3323	95.3403	BORDE_CANO
	1031	1028	359.5959	1.507	1133	1.5	14.882	341.4847	94.5018	TERRENO
	1031	1028	359.5959	1.507	1134	1.5	13.81	346.0411	95.3619	TERRENO
	1031	1028	359.5959	1.507	1135	1.5	14.642	342.4959	97.2358	BORDE_CANO
	1031	1028	359.5959	1.507	1136	1.5	14.441	345.5036	97.2942	BORDE_CANO
	1031	1028	359.5959	1.507	1137	1.5	13.387	332.0423	95.0519	TERRENO
	1031	1028	359.5959	1.507	1138	1.5	12.039	336.2957	96.4454	TERRENO
	1031	1028	359.5959	1.507	1139	1.5	13.146	333.5138	98.3034	BORDE_CANO
	1031	1028	359.5959	1.507	1140	1.5	12.883	337.1109	98.3538	BORDE_CANO
	1031	1028	359.5959	1.507	1141	1.5	9.37	315.2052	98.4518	TERRENO
	1031	1028	359.5959	1.507	1142	1.5	8.099	321.1905	100.1021	TERRENO
	1031	1028	359.5959	1.507	1143	1.5	9.115	315.2313	102.4804	BORDE_CANO
	1031	1028	359.5959	1.507	1144	1.5	8.544	321.1322	103.425	BORDE_CANO
	1031	1028	359.5959	1.507	1145	1.5	8.312	286.09	97.3219	TERRENO
	1031	1028	359.5959	1.507	1146	1.5	9.437	296.3639	98.5102	TERRENO
	1031	1028	359.5959	1.507	1147	1.5	8.779	288.1152	103.4817	BORDE_CANO
	1031	1028	359.5959	1.507	1148	1.5	9.465	294.4632	102.16	BORDE_CANO
	1031	1028	359.5959	1.507	1149	1.5	13.35	280.4215	96.4721	TERRENO
	1031	1028	359.5959	1.507	1150	1.5	13.28	273.1224	95.5747	TERRENO
	1031	1028	359.5959	1.507	1151	1.5	13.352	280.0203	99.3022	BORDE_CANO
	1031	1028	359.5959	1.507	1152	1.5	12.699	276.5716	98.1644	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		1031	1028	359.5959	1.507	1153	1.5	16.074	277.3536	95.293	TERRENO
		1031	1028	359.5959	1.507	1154	1.5	17.057	283.5338	94.0924	TERRENO
		1031	1028	359.5959	1.507	1155	1.5	16.443	280.0517	97.4029	BORDE_CANO
		1031	1028	359.5959	1.507	1156	1.5	17.095	282.362	98.121	BORDE_CANO
		1033	1031	359.5959	1.434	1031	1.5	33.624	359.5959	89.3247	
SD	89.89.3247										
		1033	1031	359.5959	1.434	1031	1.5	33.634	0	89.3247	
SD	89.89.3247										
		1033	1031	359.5959	1.434	1157	1.5	22.967	324.4142	94.1256	TERRENO
		1033	1031	359.5959	1.434	1158	1.5	17.588	325.5528	93.2825	TERRENO
		1033	1031	359.5959	1.434	1159	1.5	18.016	317.5601	93.2251	TERRENO
		1033	1031	359.5959	1.434	1160	2	16.61	318.233	95.3557	BORDE_CANO
		1033	1031	359.5959	1.434	1161	2.3	15.401	320.0537	95.4411	BORDE_CANO
		1033	1031	359.5959	1.434	1162	1.5	10.841	312.0037	95.5107	TERRENO
		1033	1031	359.5959	1.434	1163	1.5	11.257	300.2352	93.0813	TERRENO
		1033	1031	359.5959	1.434	1164	2.6	11.408	309.2603	97.3812	BORDE_CANO
		1033	1031	359.5959	1.434	1165	2.6	11.174	303.3007	95.2958	BORDE_CANO
		1033	1031	359.5959	1.434	1166	1.5	3.969	299.331	101.4157	TERRENO
		1033	1031	359.5959	1.434	1167	1.5	6.576	284.5656	105.5516	TERRENO
		1033	1031	359.5959	1.434	1168	2.6	4.703	297.07	100.2418	BORDE_CANO
		1033	1031	359.5959	1.434	1169	2.6	6.192	285.0326	100.1715	BORDE_CANO
		1033	1031	359.5959	1.434	1170	1.5	2.057	194.0331	98.4342	TERRENO
		1033	1031	359.5959	1.434	1171	1.5	5.676	220.363	102.0038	TERRENO
		1033	1031	359.5959	1.434	1172	2.6	2.737	207.4818	113.3937	BORDE_CANO
		1033	1031	359.5959	1.434	1173	1.5	8.539	230.2417	90.3043	TERRENO
		1033	1031	359.5959	1.434	1174	1.5	17.968	225.1401	91.4629	TERRENO
		1033	1031	359.5959	1.434	1175	1.5	19.045	240.471	90.5102	TERRENO
		1033	1031	359.5959	1.434	1176	1.5	7.902	256.0612	89.0257	TERRENO
		1033	1031	359.5959	1.434	1177	1.5	11.483	290.3735	89.1039	TERRENO
		1033	1031	359.5959	1.434	1178	1.5	18.879	290.2636	89.5558	TERRENO
		1033	1031	359.5959	1.434	1179	1.5	19.156	300.251	89.4614	TERRENO
		1033	1031	359.5959	1.434	1180	1.5	4.489	340.4522	85.4934	TERRENO
		1033	1031	359.5959	1.434	1181	1.5	10.651	342.1054	89.1251	TERRENO
		1033	1031	359.5959	1.434	1182	1.5	16.921	348.4627	88.5042	TERRENO
		1033	1031	359.5959	1.434	1183	1.5	10.665	3.3627	87.4845	TERRENO
		1033	1031	359.5959	1.434	1184	1.5	11.588	40.3942	89.2803	TERRENO
		1033	1031	359.5959	1.434	1185	1.5	4.845	104.5559	92.3322	TERRENO
		1033	1031	359.5959	1.434	1186	1.5	8.069	120.5923	94.5447	TERRENO
		1033	1031	359.5959	1.434	1187	1.5	9.193	94.0223	92.5845	TERRENO
		1033	1031	359.5959	1.434	1188	2	16.543	202.2234	92.0632	TERRENO
		1033	1031	359.5959	1.434	1189	1.5	6.861	154.3907	95.5546	TERRENO
		1033	1031	359.5959	1.434	1190	2	13.426	200.4319	89.2934	TERRENO
		1033	1031	359.5959	1.434	1191	2	9.277	197.3755	91.0309	TERRENO
		1033	1031	359.5959	1.434	1192	2	10.489	185.2107	91.3204	TERRENO
		1033	1031	359.5959	1.434	1193	2	10.757	174.1623	96.2404	TERRENO
		1033	1031	359.5959	1.434	1194	2	12.778	169.5448	102.0047	TERRENO
		1033	1031	359.5959	1.434	1195	2	15.431	179.1429	101.0446	TERRENO
		1033	1031	359.5959	1.434	1196	1.5	17.604	172.1307	105.321	RIO
		1033	1031	359.5959	1.434	1197	1.5	20.486	178.2227	103.3548	RIO
		1033	1031	359.5959	1.434	1198	2.6	13.266	148.0134	103.5452	RIO
		1033	1031	359.5959	1.434	1199	2.6	10.361	154.0816	98.2521	TERRENO
		1033	1031	359.5959	1.434	1200	2.6	10.222	121.3234	99.4153	TERRENO
		1033	1031	359.5959	1.434	1201	1.5	20.356	163.4241	104.3629	BORDE_CANO
		1033	1031	359.5959	1.434	1202	1.5	20	165.1811	104.3628	BORDE_CANO
		1033	1031	359.5959	1.434	1203	2.6	15.427	152.1237	104.1001	BORDE_CANO
		1033	1031	359.5959	1.434	1204	2.6	15.565	156.0356	104.0639	BORDE_CANO
		1033	1031	359.5959	1.434	1205	2.6	12.845	159.5335	103.5332	TERRENO
		1033	1031	359.5959	1.434	1206	2.6	13.201	163.1004	103.3537	TERRENO
		1033	1031	359.5959	1.434	1207	2.6	13.243	160.2037	105.015	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1033	1031	359.5959	1.434	1208	2.6	13.359	162.0053	105.015	BORDE_CANO
	1033	1031	359.5959	1.434	1209	2.6	8.441	172.4627	105.13	BORDE_CANO
	1033	1031	359.5959	1.434	1210	2.6	6.719	172.2615	94.3611	TERRENO
	1033	1031	359.5959	1.434	1211	2.6	6.426	181.2657	107.1633	BORDE_CANO
	1033	1031	359.5959	1.434	1212	2.6	5.885	208.4904	113.3554	BORDE_CANO
	1033	1031	359.5959	1.434	1213	2.6	5.234	206.3832	118.473	BORDE_CANO
	1033	1031	359.5959	1.434	1214	2.6	9.597	172.0709	106.312	BORDE_CANO
	1033	1031	359.5959	1.434	1215	2.6	9.829	172.4736	101.1049	TERRENO
	1033	1031	359.5959	1.434	1216	1.5	1.495	181.1842	93.3453	TERRENO
	1033	1031	359.5959	1.434	1217	1.5	3.318	168.5346	93.5707	TERRENO
	1033	1031	359.5959	1.434	1034	1.5	38.84	256.0249	90.4648	DELTA
	1034	1033	0	1.443	1033	1.5	38.86	0	89.0351	
SD	89.89.0351									
	1034	1033	0	1.443	1218	1.5	23.913	241.1537	90.3348	DESCARGA
	1034	1033	0	1.443	1219	1.5	23.442	241.1625	91.2354	DESCARGA
	1034	1033	0	1.443	1220	1.5	23.355	241.0858	92.1653	CANO
	1034	1033	0	1.443	1221	0.085	25.217	239.2727	91.1903	TERRENO
	1034	1033	0	1.443	1222	0.085	25.215	241.3332	90.5602	TERRENO
	1034	1033	0	1.443	1223	0.085	24.609	241.3649	92.0426	TERRENO
	1034	1033	0	1.443	1224	0.085	24.693	239.5404	91.5522	TERRENO
	1034	1033	0	1.443	1225	1.5	21.339	246.495	91.0701	TERRENO
	1034	1033	0	1.443	1226	1.5	20.642	238.5006	91.3003	TERRENO
	1034	1033	0	1.443	1227	1.5	20.786	240.2855	93.1101	BORDE_CANO
	1034	1033	0	1.443	1228	1.5	21.939	246.4309	92.0922	BORDE_CANO
	1034	1033	0	1.443	1229	1.5	18.215	235.4859	92.3015	TERRENO
	1034	1033	0	1.443	1230	1.5	16.873	244.0623	91.2039	TERRENO
	1034	1033	0	1.443	1231	1.5	17.933	236.3729	93.5256	BORDE_CANO
	1034	1033	0	1.443	1232	1.8	16.224	239.5918	94.1437	BORDE_CANO
	1034	1033	0	1.443	1233	1.5	7.419	245.2518	99.3738	TERRENO
	1034	1033	0	1.443	1234	1.5	7.09	229.0857	99.1636	TERRENO
	1034	1033	0	1.443	1235	1.5	7.623	243.3626	103.3525	BORDE_CANO
	1034	1033	0	1.443	1236	1.5	7.104	231.034	105.1316	BORDE_CANO
	1034	1033	0	1.443	1237	1.5	4.763	162.4847	109.3339	TERRENO
	1034	1033	0	1.443	1238	1.5	6.367	161.2846	101.3906	TERRENO
	1034	1033	0	1.443	1239	1.5	5.2	162.4252	112.3416	BORDE_CANO
	1034	1033	0	1.443	1240	1.5	6.055	160.1117	108.3303	BORDE_CANO
	1034	1033	0	1.443	1241	1.5	7.226	111.3912	101.5914	TERRENO
	1034	1033	0	1.443	1242	1.5	6.223	104.4802	105.1745	TERRENO
	1034	1033	0	1.443	1243	1.5	6.63	109.3958	107.3422	BORDE_CANO
	1034	1033	0	1.443	1243	1.5	6.667	106.0319	109.5632	BORDE_CANO
	1034	1033	0	1.443	1244	1.5	7.152	109.3553	107.4004	BORDE_CANO
	1034	1033	0	1.443	1245	1.5	10.148	69.4846	99.3244	TERRENO
	1034	1033	0	1.443	1246	1.5	10.198	59.5707	99.1144	TERRENO
	1034	1033	0	1.443	1247	2	9.991	60.265	101.1017	BORDE_CANO
	1034	1033	0	1.443	1248	1.5	10.636	70.0023	103.2953	BORDE_CANO
	1034	1033	0	1.443	1249	1.5	13.332	86.0944	91.3018	TERRENO
	1034	1033	0	1.443	1250	2	12.152	71.1615	92.2753	TERRENO
	1034	1033	0	1.443	1251	2.6	13.061	81.3137	95.3406	BORDE_CANO
	1034	1033	0	1.443	1252	2.6	12.116	73.0916	97.2012	BORDE_CANO
	1034	1033	0	1.443	1253	1.5	17.599	77.4649	90.5954	TERRENO
	1034	1033	0	1.443	1254	1.5	16.861	75.3236	97.2922	BORDE_CANO
	1034	1033	0	1.443	1255	1.5	14.06	63.0114	89.2822	TERRENO
	1034	1033	0	1.443	1256	2.6	15.318	70.0208	95.3558	BORDE_CANO
	1034	1033	0	1.443	1257	2.6	23.258	60.5332	92.092	TERRENO
	1034	1033	0	1.443	1258	2.6	22.769	54.1806	92.1614	TERRENO
	1034	1033	0	1.443	1259	3.88	23.186	54.4502	91.3839	BORDE_CANO
	1034	1033	0	1.443	1260	4.76	22.628	57.4848	91.1843	BORDE_CANO
	1034	1033	0	1.443	1261	4.76	26.644	58.3039	91.2203	BORDE_CANO
	1034	1033	0	1.443	1262	4.76	26.154	56.4458	91.2154	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1034	1033	0	1.443	1263	3.945	26.1	56.5104	91.4343	TERRENO
1034	1033	0	1.443	1264	3.945	26.809	59.4231	91.2108	TERRENO
1034	1033	0	1.443	1265	4.76	29.042	55.5747	92.3513	BORDE_CANO
1034	1033	0	1.443	1266	4.77	28.286	54.1521	92.3432	BORDE_CANO
1034	1033	0	1.443	1267	2.6	23.352	61.045	92.032	TERRENO
1034	1033	0	1.443	1268	1.5	22.4	74.0508	90.314	TERRENO
1034	1033	0	1.443	1269	1.5	19.541	78.4659	89.1232	LINDERO
1034	1033	0	1.443	1270	1.5	21.683	88.1843	89.231	TERRENO
1034	1033	0	1.443	1271	1.5	21.402	49.534	89.5138	TERRENO
1034	1033	0	1.443	1272	1.5	23.813	101.56	88.2506	TERRENO
1034	1033	0	1.443	1273	1.5	17.162	53.3034	88.5902	TERRENO
1034	1033	0	1.443	1274	1.5	14.334	62.4152	89.0012	TERRENO
1034	1033	0	1.443	1275	2.6	22.811	50.1416	90.4346	TERRENO
1034	1033	0	1.443	1276	1.5	9.806	53.1055	94.4324	TERRENO
1034	1033	0	1.443	1277	2.6	24.657	51.3003	92.2614	TERRENO
1034	1033	0	1.443	1278	1.5	14.282	123.3154	88.1333	TERRENO
1034	1033	0	1.443	1279	2.6	23.74	53.5133	92.1121	TERRENO
1034	1033	0	1.443	1280	1.5	6.686	72.42	100.274	TERRENO
1034	1033	0	1.443	1281	1.5	3.948	111.4014	105.2246	TERRENO
1034	1033	0	1.443	1282	1.5	8.044	121.5021	94.3845	TERRENO
1034	1033	0	1.443	1283	1.5	2.675	190.1356	104.0336	TERRENO
1034	1033	0	1.443	1284	1.5	7.131	173.5229	95.1114	TERRENO
1034	1033	0	1.443	1285	1.5	2.591	246.131	102.1523	TERRENO
1034	1033	0	1.443	1286	1.5	2.088	249.0918	89.212	TERRENO
1034	1033	0	1.443	1287	1.5	7.313	214.0728	95.2758	TERRENO
1034	1033	0	1.443	1288	1.5	7.888	264.4616	90.2335	TERRENO
1034	1033	0	1.443	1289	1.5	8.106	267.3811	85.5704	TERRENO
1034	1033	0	1.443	1290	1.5	13.123	215.3153	87.1215	TERRENO
1034	1033	0	1.443	1291	1.5	17.722	206.2131	86.4234	TERRENO
1034	1033	0	1.443	1292	1.5	15.481	251.2611	89.57	TERRENO
1034	1033	0	1.443	1293	1.5	16.217	230.5636	90.4021	TERRENO
1034	1033	0	1.443	1294	1.5	16.686	252.5403	86.3902	TERRENO
1034	1033	0	1.443	1295	1.5	20.878	233.4744	88.5232	TERRENO
1034	1033	0	1.443	1296	1.5	21.084	246.3516	91.2555	TERRENO
1034	1033	0	1.443	1297	1.5	23.021	231.4814	86.47	TERRENO
1034	1033	0	1.443	1298	1.5	21.107	236.2202	90.03	TERRENO
1034	1033	0	1.443	1299	1.5	22.04	252.4505	88.4548	TERRENO
1034	1033	0	1.443	1300	1.5	25.361	242.0534	87.3348	TERRENO
1034	1033	0	1.443	1301	1.5	26.761	233.2854	87.4832	TERRENO
1034	1033	0	1.443	1302	1.5	31.592	233.4431	87.552	TERRENO
1034	1033	0	1.443	1303	1.5	29.675	241.1954	87.5748	TERRENO
1034	1033	0	1.443	1304	1.5	36.962	233.402	87.5054	TERRENO
1034	1033	0	1.443	1305	1.5	19.659	260.5446	86.1319	TERRENO
1034	1033	0	1.443	1306	1.5	15.883	275.2218	86.0043	TERRENO
1034	1033	0	1.443	1307	1.5	11.783	296.2259	89.181	TERRENO
1034	1033	0	1.443	1308	1.5	10.728	89.5049	92.06	TERRENO
1034	1033	0	1.443	1309	1.5	12.927	95.1542	87.5332	TERRENO
1034	1033	0	1.443	1310	1.5	14.802	86.3852	89.534	TERRENO
1034	1033	0	1.443	1311	1.5	9.885	24.0022	87.5005	TERRENO
1034	1033	0	1.443	1312	1.5	12.892	41.434	87.5524	TERRENO
1034	1033	0	1.443	1313	1.5	16.087	35.1857	88.3151	TERRENO
1034	1033	0	1.443	1314	1.5	8.974	156.5233	89.5852	TUBO
1034	1033	0	1.443	1315	1.5	9.446	158.5652	89.4752	TUBO
1034	1033	0	1.443	1316	1.5	15.03	348.2401	88.1713	TERRENO
1034	1033	0	1.443	1317	1.5	10.955	311.2935	92.5759	BORDE_CANO
1034	1033	0	1.443	1318	1.5	10.893	308.544	92.5759	BORDE_CANO
1034	1033	0	1.443	1319	1.5	7.26	309.464	95.3125	BORDE_CANO
1034	1033	0	1.443	1320	1.5	7.002	306.4608	95.5359	BORDE_CANO
1034	1033	0	1.443	1321	1.5	4.763	351.5723	99.2901	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1034	1033	0	1.443	1322	1.5	4.069	351.2216	101.1734	BORDE_CANO
	1034	1033	0	1.443	1323	1.5	8.202	60.3512	101.1612	BORDE_CANO
	1034	1033	0	1.443	1324	2.6	7.663	62.4507	96.2311	BORDE_CANO
	1034	1033	0	1.443	1325	1.5	11.174	306.2509	90.3844	TERRENO
	1034	1033	0	1.443	1326	1.5	7.036	301.5807	91.5138	TERRENO
	1034	1033	0	1.443	1327	1.5	3.237	2.2736	91.2808	TERRENO
	1034	1033	0	1.443	1328	1.5	6.189	61.2434	98.4834	TERRENO
	1034	1033	0	1.443	1329	1.5	7.316	51.5821	97.493	TERRENO
	1034	1033	0	1.443	1330	1.5	7.026	29.4648	90.2529	TERRENO
	1034	1033	0	1.443	1331	1.5	5.441	8.3005	91.28	TERRENO
	1034	1033	0	1.443	1332	1.5	6.391	328.2531	89.365	TERRENO
	1034	1033	0	1.443	1333	1.5	10.407	313.4728	90.3042	TERRENO
	1034	1033	0	1.443	1334	1.5	4.498	288.4639	89.1606	TERRENO
	1034	1033	0	1.443	1335	1.5	1.902	353.2627	83.1922	TERRENO
	1034	1033	0	1.443	1336	1.5	3.105	89.4941	99.3724	TERRENO
	1034	1033	0	1.443	1035	1.5	35.251	128.5555	88.4339	DELTA
	1035	1034	0	1.44	1034	1.5	35.259	0	91.0614	
SD	91.91.0614									
	1035	1034	0	1.44	1337	1.5	20.53	271.3903	89.1653	TERRENO
	1035	1034	0	1.44	1338	1.5	21.27	281.3358	89.2005	TERRENO
	1035	1034	0	1.44	1339	1.5	17.258	275.3504	89.1019	TERRENO
	1035	1034	0	1.44	1340	1.5	17.003	285.3114	89.1019	TERRENO
	1035	1034	0	1.44	1341	1.5	14.882	271.141	88.5232	TERRENO
	1035	1034	0	1.44	1342	1.5	13.632	269.3458	91.0903	TERRENO
	1035	1034	0	1.44	1343	1.5	13.586	269.2105	92.041	BORDE_CANO
	1035	1034	0	1.44	1344	1.5	13.168	269.0531	92.2643	BORDE_CANO
	1035	1034	0	1.44	1345	1.5	13.035	268.493	90.3505	TERRENO
	1035	1034	0	1.44	1346	1.5	11.49	267.1423	87.0353	TERRENO
	1035	1034	0	1.44	1347	1.5	16.328	283.005	90.4051	TERRENO
	1035	1034	0	1.44	1348	1.5	11.673	279.1552	92.5406	TERRENO
	1035	1034	0	1.44	1349	1.5	16.13	281.3846	91.4316	BORDE_CANO
	1035	1034	0	1.44	1350	1.5	16.095	280.525	91.2806	BORDE_CANO
	1035	1034	0	1.44	1351	1.5	12.17	280.0542	93.3627	BORDE_CANO
	1035	1034	0	1.44	1352	1.5	12.592	279.5028	93.3215	BORDE_CANO
	1035	1034	0	1.44	1353	1.5	13.167	279.5556	91.3831	TERRENO
	1035	1034	0	1.44	1354	1.5	16.051	279.2624	89.55	TERRENO
	1035	1034	0	1.44	1355	1.5	14.05	285.5328	91.0533	TERRENO
	1035	1034	0	1.44	1356	1.5	14.039	284.1334	92.1509	BORDE_CANO
	1035	1034	0	1.44	1357	1.5	13.903	282.4704	92.2926	BORDE_CANO
	1035	1034	0	1.44	1358	1.5	13.805	281.0541	90.3917	TERRENO
	1035	1034	0	1.44	1359	1.5	14.47	275.4236	88.3345	TERRENO
	1035	1034	0	1.44	1360	1.5	13.179	312.0225	91.5505	TERRENO
	1035	1034	0	1.44	1361	1.5	11.072	265.2953	86.4811	TERRENO
	1035	1034	0	1.44	1362	1.5	7.099	338.1816	95.5353	TERRENO
	1035	1034	0	1.44	1363	1.5	4.864	248.3614	88.2452	TERRENO
	1035	1034	0	1.44	1364	1.5	12.413	339.1634	89.1622	TERRENO
	1035	1034	0	1.44	1365	1.5	9.489	194.5626	88.2834	TERRENO
	1035	1034	0	1.44	1366	1.5	13.801	3.2843	90.5521	TERRENO
	1035	1034	0	1.44	1367	1.5	13.189	227.1444	87.4413	TERRENO
	1035	1034	0	1.44	1368	1.5	12.352	37.2848	89.3618	TERRENO
	1035	1034	0	1.44	1369	1.5	5.816	164.3814	94.3815	TERRENO
	1035	1034	0	1.44	1370	1.5	10.534	179.3137	91.3641	TERRENO
	1035	1034	0	1.44	1371	1.5	7.84	54.1339	93.2103	TERRENO
	1035	1034	0	1.44	1372	1.5	2.791	130.4043	104.1948	TERRENO
	1035	1034	0	1.44	1373	1.5	9.746	72.2549	98.593	TERRENO
	1035	1034	0	1.44	1374	1.5	7.296	142.4831	105.0511	TERRENO
	1035	1034	0	1.44	1375	1.5	9.365	88.5746	104.1343	TERRENO
	1035	1034	0	1.44	1376	1.5	9.291	155.2708	101.5933	TERRENO
	1035	1034	0	1.44	1377	1.5	13.435	76.5448	104.1338	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010





ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1032	1028	0	1.51	1434	1.5	17.302	0.3343	87.4443	PARAMENTO
	1032	1028	0	1.51	1435	1.5	12.039	4.4248	86.4411	PARAMENTO
	1032	1028	0	1.51	1436	1.5	4.978	340.2937	90.1755	MANHOL
	1032	1028	0	1.51	1437	1.5	23.118	341.2715	88.4327	PARAMENTO
	1032	1028	0	1.51	1438	1.5	23.709	344.5713	89.1419	POSTE
	1036	1032	0.0001	1.515	1032	1.5	95.272	0.0001	89.5923	
SD	89.89.5923									
	1036	1032	0.0001	1.515	1439	1.5	92.888	356.2412	90.0047	POSTE
	1036	1032	0.0001	1.515	1440	1.5	14.687	330.5923	89.2526	POSTE
	1036	1032	0.0001	1.515	1441	1.5	12.729	2.3913	89.5142	POSTE
	1036	1032	0.0001	1.515	1442	1.5	18.211	326.5242	89.391	PARAMENTO
	1036	1032	0.0001	1.515	1443	1.5	17.057	332.5306	89.5112	PARAMENTO
	1036	1032	0.0001	1.515	1444	1.5	9.934	348.0644	89.3237	MANHOL
	1036	1032	0.0001	1.515	1445	1.5	7.857	334.1901	89.3019	MANHOL
	1036	1032	0.0001	1.515	1446	1.5	5.001	339.5642	89.4426	MANHOL
	1036	1032	0.0001	1.515	1447	1.5	10.195	270.4041	89.1911	PARAMENTO
	1036	1032	0.0001	1.515	1448	1.5	6.982	263.003	90.151	BORDE_VIA
	1036	1032	0.0001	1.515	1449	1.5	10.358	287.1219	90.0549	BORDE_VIA
	1036	1032	0.0001	1.515	1450	1.5	15.265	288.1402	90.1338	BORDE_VIA
	1036	1032	0.0001	1.515	1451	1.5	14.238	332.2503	89.5133	BORDE_VIA
	1036	1032	0.0001	1.515	1452	1.5	13.71	327.3211	89.5257	BORDE_VIA
	1036	1032	0.0001	1.515	1453	1.5	14.601	317.1209	90.1844	BORDE_VIA
	1036	1032	0.0001	1.515	1454	1.5	25.864	281.1338	90.2339	BORDE_VIA
	1036	1032	0.0001	1.515	1455	1.5	25.908	295.0049	90.223	BORDE_VIA
	1036	1032	0.0001	1.515	1456	1.5	20.294	319.0126	89.435	PARAMENTO
	1036	1032	0.0001	1.515	1457	1.5	13.648	328.1225	89.5819	BORDE_VIA
	1036	1032	0.0001	1.515	1458	1.5	11.992	359.5956	90.0244	BORDE_VIA
	1036	1032	0.0001	1.515	1459	1.5	9.561	220.5324	90.3759	BORDE_VIA
	1036	1032	0.0001	1.515	1460	1.5	14.495	181.1204	89.593	BORDE_VIA
	1036	1032	0.0001	1.515	1461	1.5	21.956	200.0258	90.0825	POSTE
	1036	1032	0.0001	1.515	1462	1.5	9.605	169.4205	92.2537	ARBOL
	1036	1032	0.0001	1.515	1037	1.5	95.17	118.3511	90.4312	DELTA
	1036	1032	0.0001	1.515	1463	1.5	50.003	165.3214	91.2352	CANCHA
	1036	1032	0.0001	1.515	1464	1.5	35.732	15.2218	91.0617	CANCHA
	1036	1032	0.0001	1.515	1465	1.5	58.83	142.3124	91.0532	CANCHA
	1036	1032	0.0001	1.515	1466	1.5	46.808	43.341	91.1106	CANCHA
	1036	1032	0.0001	1.515	1467	1.5	63.292	136.5819	90.5926	CANCHA
	1036	1032	0.0001	1.515	1468	1.5	52.088	49.3646	91.0453	CANCHA
	1036	1032	0.0001	1.515	1469	1.5	83.418	122.054	90.5215	CANCHA
	1036	1032	0.0001	1.515	1470	1.5	74.436	63.072	90.3856	CANCHA
	1036	1032	0.0001	1.515	1471	1.5	52.747	41.431	90.4512	CANCHA
	1036	1032	0.0001	1.515	1472	1.5	66.467	32.0653	90.3629	CANCHA
	1036	1032	0.0001	1.515	1473	1.5	57.161	7.4101	90.4227	CANCHA
	1036	1032	0.0001	1.515	1038	1.5	88.726	183.4216	90.1022	DELTA
	1036	1032	0.0001	1.515	1474	1.5	37.435	183.4214	90.2532	LINEAMIENT
	1036	1032	0.0001	1.515	1475	1.5	61.759	183.4214	90.303	LINEAMIENT
	1036	1032	0.0001	1.515	1476	1.5	29.55	0.0002	90.201	LINEAMIENT
	1036	1032	0.0001	1.515	1477	1.5	61.886	0.0002	90.0145	LINEAMIENT
	1037	1036	0	1.466	1036	1.5	95.165	0	89.1653	
SD	89.89.1653									
	1037	1036	0	1.466	1039	1.5	40.146	229.5105	90.2019	DELTA
	1037	1036	0	1.466	1478	1.5	2.933	348.3355	89.3608	LINDERO
	1037	1036	0	1.466	1479	1.5	3.423	19.5546	90.2724	LINDERO
	1037	1036	0	1.466	1480	1.5	8.538	149.5333	89.2208	LINDERO
	1037	1036	0	1.466	1481	1.5	15.6	162.5805	89.415	LINDERO
	1037	1036	0	1.466	1482	1.5	40.209	182.0145	90.3228	LINDERO
	1037	1036	0	1.466	1483	1.5	23.568	227.1715	90.372	LINDERO
	1037	1036	0	1.466	1484	1.5	5.15	334.2219	90.1823	LINDERO
	1039	1037	0.0001	1.406	1037	1.5	40.154	0.0001	89.2922	



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	89.89.2922								
1039	1037	0.0001	1.406	1485	1.5	24.811	1.0627	89.074	TERRENO
1039	1037	0.0001	1.406	1486	1.5	21.692	30.3409	89.4615	TERRENO
1039	1037	0.0001	1.406	1487	1.5	23.173	13.2507	89.0617	TERRENO
1039	1037	0.0001	1.406	1488	1.5	19.662	45.2634	89.3641	TERRENO
1039	1037	0.0001	1.406	1489	1.5	17.908	66.1149	89.3641	TERRENO
1039	1037	0.0001	1.406	1490	1.5	29.56	16.1938	89.4656	TERRENO
1039	1037	0.0001	1.406	1491	1.5	18.741	80.3143	89.2541	TERRENO
1039	1037	0.0001	1.406	1492	1.5	12.323	68.0451	90.4038	TERRENO
1039	1037	0.0001	1.406	1493	1.5	31.444	29.1836	89.1656	TERRENO
1039	1037	0.0001	1.406	1494	1.5	9.005	49.5919	90.0652	TERRENO
1039	1037	0.0001	1.406	1495	1.5	13.097	30.345	88.5002	TERRENO
1039	1037	0.0001	1.406	1496	1.5	16.661	13.1915	89.5656	TERRENO
1039	1037	0.0001	1.406	1497	1.5	17.599	11.0328	89.401	TERRENO
1039	1037	0.0001	1.406	1498	1.5	17.449	5.4318	89.5237	TERRENO
1039	1037	0.0001	1.406	1499	1.5	16.276	3.2534	89.5441	TERRENO
1039	1037	0.0001	1.406	1500	1.5	13.833	269.1247	89.3211	TERRENO
1039	1037	0.0001	1.406	1501	1.5	14.464	2.5843	90.3931	TERRENO
1039	1037	0.0001	1.406	1502	1.5	14.82	291.4311	88.5615	TERRENO
1039	1037	0.0001	1.406	1503	1.5	12.659	2.57	90.1555	TERRENO
1039	1037	0.0001	1.406	1504	1.5	16.357	314.3446	89.1003	TERRENO
1039	1037	0.0001	1.406	1505	1.5	8.913	9.0531	93.5841	TERRENO
1039	1037	0.0001	1.406	1506	1.5	8.168	338.01	87.1456	TERRENO
1039	1037	0.0001	1.406	1507	1.5	7.429	344.1733	92.5817	TERRENO
1039	1037	0.0001	1.406	1508	1.5	6.4	318.3028	86.4455	TERRENO
1039	1037	0.0001	1.406	1509	1.5	3.994	299.1606	85.2307	TERRENO
1039	1037	0.0001	1.406	1510	1.5	5.531	326.435	95.0748	TERRENO
1039	1037	0.0001	1.406	1511	1.5	3.287	328.5554	103.5258	TERRENO
1039	1037	0.0001	1.406	1512	1.5	2.995	272.1908	82.4735	TERRENO
1039	1037	0.0001	1.406	1513	1.5	5.075	332.1259	99.5411	TERRENO
1039	1037	0.0001	1.406	1514	1.5	1.509	284.0056	92.543	TERRENO
1039	1037	0.0001	1.406	1515	0.085	2.987	253.1001	92.1359	TERRENO
1039	1037	0.0001	1.406	1516	0.085	3.014	230.5311	81.0326	TERRENO
1039	1037	0.0001	1.406	1517	0.085	2.215	216.3904	84.3911	TERRENO
1039	1037	0.0001	1.406	1518	0.085	1.685	193.2557	97.2234	TERRENO
1039	1037	0.0001	1.406	1519	0.085	1.566	238.0118	105.4456	TERRENO
1039	1037	0.0001	1.406	1520	1.5	2.104	153.0219	78.3	TERRENO
1039	1037	0.0001	1.406	1521	1.5	2.052	124.4405	87.3349	TERRENO
1039	1037	0.0001	1.406	1522	1.5	3.924	124.2227	96.2438	TERRENO
1039	1037	0.0001	1.406	1523	1.5	1.939	329.372	109.4753	TERRENO
1039	1037	0.0001	1.406	1524	1.5	0.774	32.0851	113.4653	TERRENO
1039	1037	0.0001	1.406	1525	1.5	1.66	284.5325	91.5933	TERRENO
1039	1037	0.0001	1.406	1526	1.5	8.114	13.3228	101.1301	TERRENO
1039	1037	0.0001	1.406	1527	1.5	7.744	17.4618	105.5946	TERRENO
1039	1037	0.0001	1.406	1528	1.5	7.856	23.1335	108.175	TERRENO
1039	1037	0.0001	1.406	1529	1.5	8.826	23.5815	105.1641	TERRENO
1039	1037	0.0001	1.406	1530	1.5	8.533	18.5805	102.3641	TERRENO
1039	1037	0.0001	1.406	1531	1.5	9.182	13.5819	97.1018	TERRENO
1039	1037	0.0001	1.406	1532	1.5	10.103	2.2147	91.3105	TERRENO
1039	1037	0.0001	1.406	1533	1.5	10.824	359.3413	89.3204	TERRENO
1039	1037	0.0001	1.406	1534	1.5	13.644	342.0533	88.3258	TERRENO
1039	1037	0.0001	1.406	1535	1.5	5.181	258.1242	84.1125	TERRENO
1039	1037	0.0001	1.406	1536	1.5	14.463	318.4032	89.242	TERRENO
1039	1037	0.0001	1.406	1537	1.5	7.989	39.4619	99.1114	TERRENO
1039	1037	0.0001	1.406	1538	1.5	6.204	33.1119	104.3118	TERRENO
1039	1037	0.0001	1.406	1539	1.5	5.681	17.1137	113.2619	TERRENO
1039	1037	0.0001	1.406	1540	1.5	5.262	17.2314	118.1438	TERRENO
1039	1037	0.0001	1.406	1541	1.5	5.495	9.172	120.2025	TERRENO
1039	1037	0.0001	1.406	1542	1.5	5.387	32.1257	111.2349	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1039	1037	0.0001	1.406	1543	1.5	6.607	52.0843	102.1104	TERRENO
1039	1037	0.0001	1.406	1544	1.5	5.777	57.141	108.3645	TERRENO
1039	1037	0.0001	1.406	1545	1.5	7.521	71.3603	104.2915	TERRENO
1039	1037	0.0001	1.406	1546	1.5	8.62	64.5947	97.5828	TERRENO
1039	1037	0.0001	1.406	1547	1.5	10.224	41.4117	93.5127	TERRENO
1039	1037	0.0001	1.406	1548	1.5	9.831	35.202	97.5122	TERRENO
1039	1037	0.0001	1.406	1549	1.5	11.787	34.0642	94.0716	TERRENO
1039	1037	0.0001	1.406	1550	1.5	10.905	27.2944	98.015	TERRENO
1039	1037	0.0001	1.406	1551	1.5	13.245	24.5417	95.4223	TERRENO
1039	1037	0.0001	1.406	1552	1.5	12.662	19.4102	100.2223	TERRENO
1039	1037	0.0001	1.406	1553	1.5	16.309	8.4512	95.3043	DESCARGA
1039	1037	0.0001	1.406	1554	1.5	16.446	8.5033	98.1036	DESCARGA
1039	1037	0.0001	1.406	1555	1.5	15.907	11.2232	98.3053	ESTRUCTURA
1039	1037	0.0001	1.406	1556	1.5	16.416	8.5537	98.1238	ESTRUCTURA
1039	1037	0.0001	1.406	1557	1.5	15.593	8.0728	98.3929	ESTRUCTURA
1039	1037	0.0001	1.406	1558	2.2	15.436	8.0728	97.3437	ESTRUCTURA
1039	1037	0.0001	1.406	1559	2.2	15.794	11.2756	97.2311	ESTRUCTURA
1039	1037	0.0001	1.406	1560	2.2	13.807	10.5354	98.3756	ESTRUCTURA
1039	1037	0.0001	1.406	1561	2.2	14.045	14.1433	98.2624	ESTRUCTURA
1039	1037	0.0001	1.406	1562	2.2	13.813	13.0243	100.105	ESTRUCTURA
1039	1037	0.0001	1.406	1563	2.2	11.414	20.5805	103.0436	ESTRUCTURA
1039	1037	0.0001	1.406	1564	2.22	10.958	17.5335	103.2852	BORDE_CANO
1039	1037	0.0001	1.406	1565	2.22	11.101	21.3724	103.3101	BORDE_CANO
1039	1037	0.0001	1.406	1566	2.22	9.42	24.2533	106.1543	BORDE_CANO
1039	1037	0.0001	1.406	1567	2.22	9.193	28.4049	106.3727	BORDE_CANO
1039	1037	0.0001	1.406	1568	2.22	7.826	26.4536	110.4431	BORDE_CANO
1039	1037	0.0001	1.406	1569	2.22	7.489	30.1332	110.253	BORDE_CANO
1039	1037	0.0001	1.406	1570	1.5	12.338	7.492	93.3819	TERRENO
1039	1037	0.0001	1.406	1571	1.5	10.67	11.4338	97.272	TERRENO
1039	1037	0.0001	1.406	1572	2.22	7.477	20.4846	113.1529	BORDE_CANO
1039	1037	0.0001	1.406	1573	2.22	6.923	16.5607	112.0853	BORDE_CANO
1039	1037	0.0001	1.406	1574	2.6	5.601	4.5355	119.4724	BORDE_CANO
1039	1037	0.0001	1.406	1575	2.6	5.23	358.1245	122.1213	BORDE_CANO
1039	1037	0.0001	1.406	1576	2.6	5.64	349.2025	119.383	BORDE_CANO
1039	1037	0.0001	1.406	1577	2.6	4.301	339.325	105.171	TERRENO
1039	1037	0.0001	1.406	1578	2.6	6.045	342.3526	101.0334	TERRENO
1039	1037	0.0001	1.406	1579	2.6	6.102	348.4114	112.2113	BORDE_CANO
1039	1037	0.0001	1.406	1580	2.6	3.818	10.2405	136.0845	BORDE_CANO
1039	1037	0.0001	1.406	1581	2.6	4.418	29.3856	126.4551	BORDE_CANO
1039	1037	0.0001	1.406	1582	2.6	2.43	5.1057	118.2802	TERRENO
1039	1037	0.0001	1.406	1583	2.6	3.485	79.0735	121.1523	TERRENO
1039	1037	0.0001	1.406	1584	2.6	5.754	69.5429	122.1041	BORDE_CANO
1039	1037	0.0001	1.406	1585	2.6	4.868	73.1801	129.1308	BORDE_CANO
1039	1037	0.0001	1.406	1586	2.6	5.361	104.033	102.4821	TERRENO
1039	1037	0.0001	1.406	1587	2.6	7.931	85.1159	112.093	BORDE_CANO
1039	1037	0.0001	1.406	1588	2.6	6.678	90.2825	120.1441	BORDE_CANO
1039	1037	0.0001	1.406	1589	2.6	7.939	98.1859	100.4611	TERRENO
1039	1037	0.0001	1.406	1590	2.6	11.533	85.5144	108.1158	BORDE_CANO
1039	1037	0.0001	1.406	1591	2.6	11.655	89.0321	106.5921	BORDE_CANO
1039	1037	0.0001	1.406	1592	2.6	10.923	82.3047	102.242	TERRENO
1039	1037	0.0001	1.406	1593	2.6	11.469	93.5245	99.2139	TERRENO
1039	1037	0.0001	1.406	1594	2.6	12.334	77.3817	98.5235	TERRENO
1039	1037	0.0001	1.406	1595	2.6	15.534	87.5531	105.2043	BORDE_CANO
1039	1037	0.0001	1.406	1596	2.6	15.157	92.3136	105.03	BORDE_CANO
1039	1037	0.0001	1.406	1597	2.6	14.441	94.4149	98.145	TERRENO
1039	1037	0.0001	1.406	1598	2.6	15.566	81.0901	98.394	TERRENO
1039	1037	0.0001	1.406	1599	2.6	15.204	84.1426	100.5334	TERRENO
1039	1037	0.0001	1.406	1600	2.6	18.131	97.2816	102.3047	BORDE_CANO
1039	1037	0.0001	1.406	1601	2.6	18.644	95.0739	102.0737	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1039	1037	0.0001	1.406	1602	2.6	19.236	93.483	99.1409	TERRENO
1039	1037	0.0001	1.406	1603	2.6	17.362	99.0851	99.4715	TERRENO
1039	1037	0.0001	1.406	1604	2.6	19.913	93.2343	98.143	TERRENO
1039	1037	0.0001	1.406	1605	2.6	20.168	108.0144	101.4845	BORDE_CANO
1039	1037	0.0001	1.406	1606	2.6	18.971	110.0649	102.1809	BORDE_CANO
1039	1037	0.0001	1.406	1607	2.6	23.246	101.0428	100.133	RIO
1039	1037	0.0001	1.406	1608	2.6	16.478	119.4843	104.4304	RIO
1039	1037	0.0001	1.406	1609	2.6	28.498	92.5924	98.2109	RIO
1039	1037	0.0001	1.406	1610	1.5	25.776	89.1242	97.5022	TERRENO
1039	1037	0.0001	1.406	1611	2.6	11.685	120.5458	103.265	TERRENO
1039	1037	0.0001	1.406	1612	1.5	21.585	89.5314	97.1417	TERRENO
1039	1037	0.0001	1.406	1613	2.6	9.217	115.1711	101.035	TERRENO
1039	1037	0.0001	1.406	1614	1.5	19.796	82.1925	92.0119	TERRENO
1039	1037	0.0001	1.406	1615	1.5	13.768	99.4616	99.5629	TERRENO
1039	1037	0.0001	1.406	1616	1.5	20.121	77.3045	88.5706	TERRENO
1039	1037	0.0001	1.406	1617	1.5	12.375	108.194	103.3758	TERRENO
1039	1037	0.0001	1.406	1618	1.5	13.738	110.5711	105.2049	TERRENO
1039	1037	0.0001	1.406	1619	1.5	14.393	104.5142	104.1826	TERRENO
1039	1037	0.0001	1.406	1620	1.5	9.054	105.4015	102.3037	TERRENO
1039	1037	0.0001	1.406	1621	1.5	6.734	112.4135	101.0948	TERRENO
1039	1037	0.0001	1.406	1622	1.5	4.788	127.2851	94.4318	TERRENO
1039	1037	0.0001	1.406	1623	1.5	3.182	172.1231	79.575	TERRENO
1039	1037	0.0001	1.406	1624	1.5	16.863	66.03	89.5949	TERRENO
1039	1037	0.0001	1.406	1625	1.5	15.74	50.004	89.595	TERRENO
1038	1036	359.5959	1.485	1036	1.5	88.714	359.5959	89.5001	
SD	89.89.5001								
1038	1036	359.5959	1.485	1040	1.5	85.959	182.0431	90.4451	DELTA
1038	1036	359.5959	1.485	1626	1.5	70.82	179.4404	90.4339	EJE_TUBO
1038	1036	359.5959	1.485	1627	1.5	51.559	179.4403	91.1019	LINEAMIENT
1038	1036	359.5959	1.485	1628	1.5	23.3	179.4403	91.1508	LINEAMIENT
1038	1036	359.5959	1.485	1629	1.5	9.432	179.4403	89.2531	LINEAMIENT
1038	1036	359.5959	1.485	1041	1.5	172.439	265.2845	89.362	DELTA
1038	1036	359.5959	1.485	1630	1.5	9.013	218.4533	90.2944	PARAMENTO
1038	1036	359.5959	1.485	1631	1.5	7.428	201.3707	89.5229	POSTE
1038	1036	359.5959	1.485	1632	1.5	25.155	167.2845	91.064	PARAMENTO
1038	1036	359.5959	1.485	1633	1.5	28.791	169.5124	91.1115	PARAMENTO
1038	1036	359.5959	1.485	1634	1.5	7.248	204.285	90.1703	BORDE_VIA
1038	1036	359.5959	1.485	1635	1.5	12.066	193.4924	90.5709	BORDE_VIA
1038	1036	359.5959	1.485	1636	1.5	31.214	146.2422	91.4749	PARAMENTO
1038	1036	359.5959	1.485	1637	1.5	11.262	132.5623	87.0715	BORDE_VIA
1038	1036	359.5959	1.485	1638	1.5	46.894	108.3607	86.1211	PUENTE
1038	1036	359.5959	1.485	1639	1.5	46.461	95.0745	86.0931	PUENTE
1038	1036	359.5959	1.485	1640	1.5	46.267	96.5354	86.2348	BORDE_VIA
1038	1036	359.5959	1.485	1641	1.5	46.653	106.48	86.213	BORDE_VIA
1038	1036	359.5959	1.485	1642	1.5	24.264	94.5137	87.0133	BORDE_VIA
1038	1036	359.5959	1.485	1643	1.5	22.281	93.4405	87.1057	BORDE_VIA
1038	1036	359.5959	1.485	1644	1.5	19.346	90.4102	87.2421	BORDE_VIA
1038	1036	359.5959	1.485	1645	1.5	13.185	100.4143	85.1834	BORDE_VIA
1038	1036	359.5959	1.485	1646	1.5	13.191	87.3456	87.3803	BORDE_VIA
1038	1036	359.5959	1.485	1647	1.5	12.57	96.541	85.2537	BORDE_VIA
1038	1036	359.5959	1.485	1648	1.5	12.567	104.0931	85.181	BORDE_VIA
1038	1036	359.5959	1.485	1649	1.5	13.129	66.3028	88.5051	BORDE_VIA
1038	1036	359.5959	1.485	1650	1.5	7.893	73.5038	85.1309	BORDE_VIA
1038	1036	359.5959	1.485	1651	1.5	13.31	30.2155	90.5021	BORDE_VIA
1038	1036	359.5959	1.485	1652	1.5	7.966	24.0531	88.1108	BORDE_VIA
1038	1036	359.5959	1.485	1653	1.5	7.843	22.1401	88.2118	BORDE_VIA
1038	1036	359.5959	1.485	1654	1.5	5.514	20.5846	88.1549	BORDE_VIA
1038	1036	359.5959	1.485	1655	1.5	14.335	23.0823	91.0034	BORDE_VIA
1038	1036	359.5959	1.485	1656	1.5	18.145	11.4234	90.5818	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1038	1036	359.5959	1.485	1657	1.5	20.07	9.3504	90.5539 BORDE_VIA
	1038	1036	359.5959	1.485	1658	1.5	1.693	49.5255	80.1832 BORDE_VIA
	1038	1036	359.5959	1.485	1659	1.5	1.462	107.4515	75.3237 BORDE_VIA
	1038	1036	359.5959	1.485	1660	1.5	2.474	119.4337	80.0448 BORDE_VIA
	1038	1036	359.5959	1.485	1661	1.5	2.289	75.0046	79.475 MANHOL
	1038	1036	359.5959	1.485	1662	1.5	23.317	8.1331	90.5657 SUMIDERO
	1038	1036	359.5959	1.485	1663	1.5	24.206	9.0917	90.4202 SUMIDERO
	1038	1036	359.5959	1.485	1664	1.5	16.404	30.1144	90.2046 PARAMENTO
	1038	1036	359.5959	1.485	1665	1.5	7.393	303.2836	88.292 PARAMENTO
	1038	1036	359.5959	1.485	1666	1.5	34.664	15.16	90.0359 PARAMENTO
	1038	1036	359.5959	1.485	1667	1.5	6.803	272.4322	91.4008 BORDE_VIA
	1038	1036	359.5959	1.485	1668	1.5	5.822	275.5614	91.2517 BORDE_VIA
	1038	1036	359.5959	1.485	1669	1.5	4.68	304.5325	91.5451 BORDE_VIA
	1038	1036	359.5959	1.485	1670	1.5	6.014	332.4939	91.4342 BORDE_VIA
	1038	1036	359.5959	1.485	1671	1.5	11.674	342.2949	90.2537 POSTE
	1038	1036	359.5959	1.485	1672	1.5	3.016	163.572	86.4612 MANHOL
	1038	1036	359.5959	1.485	1673	1.5	19.653	176.0045	90.3356 MANHOL
	1038	1036	359.5959	1.485	1674	1.5	37.905	274.1601	90.1139 PARAMENTO
	1038	1036	359.5959	1.485	1675	1.5	38.503	256.3649	90.2519 PARAMENTO
	1038	1036	359.5959	1.485	1676	1.5	38.471	259.0809	90.3607 BORDE_VIA
	1038	1036	359.5959	1.485	1677	1.5	37.447	268.1821	90.3028 BORDE_VIA
	1038	1036	359.5959	1.485	1678	1.5	40.147	179.333	90.4909 MANHOL
	1038	1036	359.5959	1.485	1679	1.5	42.479	175.3415	91.2044 ARBOL
	1038	1036	359.5959	1.485	1680	1.5	17.927	249.0058	91.4435 SUMIDERO
	1038	1036	359.5959	1.485	1681	1.5	18.606	250.5311	91.3646 SUMIDERO
	1038	1036	359.5959	1.485	1682	1.5	23.103	269.1515	91.0552 SUMIDERO
	1038	1036	359.5959	1.485	1683	1.5	23.927	270.0433	91.1001 SUMIDERO
	1038	1036	359.5959	1.485	1684	1.5	46.086	267.5536	90.2118 BORDE_VIA
	1038	1036	359.5959	1.485	1685	1.5	44.132	260.0214	90.2743 BORDE_VIA
	1038	1036	359.5959	1.485	1686	1.5	44.595	257.1832	90.2326 PARAMENTO
	1038	1036	359.5959	1.485	1687	1.5	46.335	271.1109	90.0653 PARAMENTO
	1038	1036	359.5959	1.485	1688	1.5	66.359	270.3721	89.5338 PARAMENTO
	1038	1036	359.5959	1.485	1689	1.5	83.269	261.5559	90.1418 PARAMENTO
	1038	1036	359.5959	1.485	1690	1.5	82.033	266.5843	90.1729 BORDE_VIA
	1038	1036	359.5959	1.485	1691	1.5	83.372	262.533	90.173 BORDE_VIA
	1038	1036	359.5959	1.485	1692	1.5	86.018	266.3214	90.1748 MANHOL
	1038	1036	359.5959	1.485	1693	1.5	83.603	267.1319	90.1916 SUMIDERO
	1038	1036	359.5959	1.485	1694	1.5	82.832	267.3548	90.1917 SUMIDERO
	1038	1036	359.5959	1.485	1695	1.5	88.039	267.0659	90.1955 SUMIDERO
	1038	1036	359.5959	1.485	1696	1.5	88.876	267.2541	90.1956 SUMIDERO
	1040	1038	44.3642	1.498	1038	1.5	85.97	44.3642	89.1423
SD	89.89.1423								
	1040	1038	44.3642	1.498	1038	1.5	85.975	0	89.1422
SD	89.89.1422								
	1040	1038	44.3642	1.498	1697	1.5	27.354	9.2255	89.4858 PARAMENTO
	1040	1038	44.3642	1.498	1698	1.5	23.51	10.2533	89.3824 PARAMENTO
	1040	1038	44.3642	1.498	1699	1.5	23.587	25.2735	88.4745 PARAMENTO
	1040	1038	44.3642	1.498	1700	1.5	19.975	358.5233	89.563 PARAMENTO
	1040	1038	44.3642	1.498	1701	1.5	19.94	354.2049	89.3649 PARAMENTO
	1040	1038	44.3642	1.498	1702	1.5	20.983	336.0817	88.3655 PARAMENTO
	1040	1038	44.3642	1.498	1703	1.5	21.784	337.0024	87.3731 PARAMENTO
	1040	1038	44.3642	1.498	1704	1.5	25.377	320.0926	89.4809 PARAMENTO
	1040	1038	44.3642	1.498	1705	1.5	19.98	288.011	89.221 PARAMENTO
	1040	1038	44.3642	1.498	1706	1.5	18.032	286.4403	89.1007 PARAMENTO
	1040	1038	44.3642	1.498	1707	0.085	24.692	249.0754	92.4315 PARAMENTO
	1040	1038	44.3642	1.498	1708	1.5	23.276	240.1914	89.3214 TERRENO
	1040	1038	44.3642	1.498	1709	1.5	11.466	233.3247	91.0618 TERRENO
	1040	1038	44.3642	1.498	1710	1.5	6.257	227.1042	92.4348 TERRENO
	1040	1038	44.3642	1.498	1711	1.5	4.796	297.5748	92.5342 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1040	1038	44.3642	1.498	1712	1.5	13.486	312.3517	89.0723	TERRENO
1040	1038	44.3642	1.498	1713	1.5	19.041	303.0437	89.2254	TERRENO
1040	1038	44.3642	1.498	1714	1.5	11.107	286.0114	90.5431	TERRENO
1040	1038	44.3642	1.498	1715	1.5	13.554	331.2353	89.3542	TERRENO
1040	1038	44.3642	1.498	1716	1.5	11.597	6.1721	89.1954	TERRENO
1040	1038	44.3642	1.498	1717	1.5	11.685	30.2706	85.3437	TERRENO
1040	1038	44.3642	1.498	1718	1.5	17.247	28.1858	86.4542	TERRENO
1040	1038	44.3642	1.498	1719	1.5	16.226	34.2956	88.2507	TERRENO
1040	1038	44.3642	1.498	1720	1.5	11.539	35.4038	88.0656	TERRENO
1040	1038	44.3642	1.498	1721	1.5	7.708	38.4828	88.1508	TERRENO
1040	1038	44.3642	1.498	1722	1.5	7.234	27.2455	87.1541	TERRENO
1040	1038	44.3642	1.498	1723	1.5	5.689	29.2925	92.0355	TERRENO
1040	1038	44.3642	1.498	1724	1.5	5.51	12.5945	85.4643	TERRENO
1040	1038	44.3642	1.498	1725	1.5	3.715	1.3431	87.2939	TERRENO
1040	1038	44.3642	1.498	1726	1.5	2.992	36.082	89.45	TERRENO
1040	1038	44.3642	1.498	1727	1.5	4.483	76.5338	99.5113	TERRENO
1040	1038	44.3642	1.498	1728	1.5	2.179	85.3714	108.302	TERRENO
1040	1038	44.3642	1.498	1729	1.5	2.559	148.2528	103.4656	TERRENO
1040	1038	44.3642	1.498	1730	1.5	4.813	177.4747	95.2512	TERRENO
1040	1038	44.3642	1.498	1731	1.5	8.297	175.3152	93.5312	TERRENO
1040	1038	44.3642	1.498	1732	1.5	11.298	177.14	94.4849	TERRENO
1040	1038	44.3642	1.498	1733	1.5	14.255	180.1119	93.0446	TERRENO
1040	1038	44.3642	1.498	1734	1.5	17.885	184.4616	92.3227	TERRENO
1040	1038	44.3642	1.498	1735	1.5	17.734	193.131	90.5907	TERRENO
1040	1038	44.3642	1.498	1736	1.5	14.49	194.0621	89.5309	TERRENO
1040	1038	44.3642	1.498	1737	1.5	10.415	195.3903	89.073	TERRENO
1040	1038	44.3642	1.498	1738	1.5	7.042	199.0521	92.1718	TERRENO
1040	1038	44.3642	1.498	1739	1.5	9.601	202.2507	91.4852	TERRENO
1040	1038	44.3642	1.498	1740	1.5	11.155	205.3137	91.4852	TERRENO
1040	1038	44.3642	1.498	1741	1.5	11.711	216.5309	91.481	TERRENO
1040	1038	44.3642	1.498	1742	1.5	5.82	237.015	93.0453	TERRENO
1040	1038	44.3642	1.498	1743	1.5	4.79	309.1922	93.2533	TERRENO
1040	1038	44.3642	1.498	1744	1.5	9.421	348.0734	90.5518	TERRENO
1040	1038	44.3642	1.498	1745	1.5	11.887	119.1748	114.5959	ESTRUCTURA
1040	1038	44.3642	1.498	1746	1.5	12.123	125.5804	114.3108	ESTRUCTURA
1040	1038	44.3642	1.498	1747	1.5	11.197	119.041	116.1608	ESTRUCTURA
1040	1038	44.3642	1.498	1748	1.5	10.735	127.3428	116.5618	ESTRUCTURA
1040	1038	44.3642	1.498	1749	1.5	10.882	116.4416	117.145	ESTRUCTURA
1040	1038	44.3642	1.498	1750	1.5	10.496	117.0822	117.5819	ESTRUCTURA
1040	1038	44.3642	1.498	1751	1.5	10.005	116.2614	119.0049	ESTRUCTURA
1040	1038	44.3642	1.498	1752	2	12.213	122.1549	115.3004	DESCARGA
1040	1038	44.3642	1.498	1753	2	11.898	122.1547	113.151	DESCARGA
1040	1038	44.3642	1.498	1754	2	12.431	122.3027	115.0858	RIO
1040	1038	44.3642	1.498	1755	2	13.102	139.5537	111.5228	RIO
1040	1038	44.3642	1.498	1756	2	15.411	161.1857	109.0715	RIO
1040	1038	44.3642	1.498	1757	2	10.869	101.3347	116.2545	RIO
1040	1038	44.3642	1.498	1758	2	10.851	112.051	116.4444	RIO
1040	1038	44.3642	1.498	1759	1.5	13.053	161.5205	110.5725	TERRENO
1040	1038	44.3642	1.498	1760	1.5	8.792	113.3536	118.5418	TERRENO
1040	1038	44.3642	1.498	1761	1.5	10.646	160.3807	112.2901	TERRENO
1040	1038	44.3642	1.498	1762	1.5	6.501	113.0346	119.0738	TERRENO
1040	1038	44.3642	1.498	1763	1.5	6.595	146.2915	118.0805	TERRENO
1040	1038	44.3642	1.498	1764	1.5	5.153	133.5913	118.5629	TERRENO
1040	1038	44.3642	1.498	1765	1.5	7.686	98.3741	116.413	TERRENO
1040	1038	44.3642	1.498	1766	1.5	7.317	134.3602	118.4248	TERRENO
1040	1038	44.3642	1.498	1767	1.5	4.995	92.1855	109.3025	TERRENO
1040	1038	44.3642	1.498	1768	1.5	9.954	127.3722	116.0157	TERRENO
1040	1038	44.3642	1.498	1769	1.5	3.913	71.4354	98.2723	TERRENO
1040	1038	44.3642	1.498	1770	1.5	10.829	139.405	114.1555	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1040	1038	44.3642	1.498	1771	1.5	6.355	50.1318	96.3821	TERRENO
	1040	1038	44.3642	1.498	1772	1.5	5.986	70.144	101.2342	TERRENO
	1040	1038	44.3642	1.498	1773	2.6	4.282	167.3542	101.4437	TERRENO
	1040	1038	44.3642	1.498	1774	2.6	6.714	172.0634	104.384	TERRENO
	1040	1038	44.3642	1.498	1775	2.6	10.135	173.3653	101.2231	TERRENO
	1040	1038	44.3642	1.498	1776	1.5	3.905	145.3308	120.0145	TERRENO
	1040	1038	44.3642	1.498	1777	1.5	1.928	196.234	93.0438	TERRENO
	1041	1038	359.5959	1.471	1038	1.5	172.428	359.5959	90.2501	
SD	90.90.2501									
	1041	1038	359.5959	1.471	1778	1.5	46.643	0.0001	91.523	EJE_TUBO
	1041	1038	359.5959	1.471	1779	1.5	104.814	0.0001	90.5022	EJE_TUBO
	1041	1038	359.5959	1.471	1780	1.5	132.166	359.5959	90.4123	EJE_TUBO
	1041	1038	359.5959	1.471	1781	1.5	82.51	357.1801	91.0359	PARAMENTO
	1041	1038	359.5959	1.471	1782	1.5	59.785	357.4537	91.3516	BORDE_VIA
	1041	1038	359.5959	1.471	1783	1.5	59.913	357.5013	91.3421	SUMIDERO
	1041	1038	359.5959	1.471	1784	1.5	60.756	357.2431	91.3421	SUMIDERO
	1041	1038	359.5959	1.471	1785	1.5	60.423	2.4851	91.3548	SUMIDERO
	1041	1038	359.5959	1.471	1786	1.5	59.594	3.2712	91.3753	SUMIDERO
	1041	1038	359.5959	1.471	1787	1.5	47.575	356.5628	91.515	BORDE_VIA
	1041	1038	359.5959	1.471	1788	0.085	47.964	355.0742	93.2102	BORDE_VIA
	1041	1038	359.5959	1.471	1789	1.5	49.372	5.1203	91.3603	PARAMENTO
	1041	1038	359.5959	1.471	1790	1.5	41.501	349.0517	91.4937	PARAMENTO
	1041	1038	359.5959	1.471	1791	1.5	48.149	4.0853	91.4955	BORDE_VIA
	1041	1038	359.5959	1.471	1792	1.5	48.044	4.1937	91.5152	POSTE
	1041	1038	359.5959	1.471	1793	1.5	45.522	357.3256	91.5417	MANHOL
	1041	1038	359.5959	1.471	1794	1.5	43.782	358.3739	91.5509	MANHOL
	1041	1038	359.5959	1.471	1795	1.5	41.93	4.4643	92.0304	BORDE_VIA
	1041	1038	359.5959	1.471	1796	1.5	40.663	356.3211	91.5835	BORDE_VIA
	1041	1038	359.5959	1.471	1797	1.5	22.712	353.2413	91.5542	BORDE_VIA
	1041	1038	359.5959	1.471	1798	1.5	18.509	355.4832	91.5058	MANHOL
	1041	1038	359.5959	1.471	1799	1.5	19.284	351.3526	91.4652	MANHOL
	1041	1038	359.5959	1.471	1800	1.5	14.214	348.5637	91.3814	BORDE_VIA
	1041	1038	359.5959	1.471	1801	1.5	14.844	338.0003	91.0215	PARAMENTO
	1041	1038	359.5959	1.471	1802	1.5	8.79	159.1723	88.4844	BORDE_VIA
	1041	1038	359.5959	1.471	1802	1.5	9.977	130.24	87.3649	PARAMENTO
	1041	1038	359.5959	1.471	1803	1.5	21.249	196.1617	88.2803	PARAMENTO
	1041	1038	359.5959	1.471	1804	1.5	16.762	154.0558	88.0046	PARAMENTO
	1041	1038	359.5959	1.471	1805	1.5	26.725	160.3656	88.051	PARAMENTO
	1041	1038	359.5959	1.471	1806	1.5	26.397	166.4747	88.1447	PARAMENTO
	1041	1038	359.5959	1.471	1807	1.5	23.344	187.2303	89.1141	BORDE_VIA
	1041	1038	359.5959	1.471	1808	1.5	14.898	165.082	88.4644	BORDE_VIA
	1041	1038	359.5959	1.471	1809	1.5	16.034	168.2009	88.4144	BORDE_VIA
	1041	1038	359.5959	1.471	1810	1.5	33.292	185.2418	89.1436	BORDE_VIA
	1041	1038	359.5959	1.471	1811	1.5	14.235	142.5605	88.3814	MANHOL
	1041	1038	359.5959	1.471	1812	1.5	5.996	90.1352	87.4503	PARAMENTO
	1041	1038	359.5959	1.471	1813	1.5	6.869	90.1508	87.5329	PARAMENTO
	1041	1038	359.5959	1.471	1814	0.085	33.818	190.5447	91.1041	PARAMENTO
	1041	1038	359.5959	1.471	1815	1.5	36.411	170.2051	88.3956	PARAMENTO
	1041	1038	359.5959	1.471	1816	1.5	39.482	184.5523	89.1912	MANHOL
	1041	1038	359.5959	1.471	1817	1.5	36.28	175.193	89.2228	BORDE_VIA
	1041	1038	359.5959	1.471	1818	1.5	48.604	185.4537	89.1459	PARAMENTO
	1041	1038	359.5959	1.471	1819	1.5	45.269	171.4013	89.2019	PARAMENTO
	1041	1038	359.5959	1.471	1820	1.5	62.65	184.3207	89.3244	PARAMENTO
	1041	1038	359.5959	1.471	1821	1.5	43.931	176.1239	89.2954	BORDE_VIA
	1041	1038	359.5959	1.471	1822	1.5	68.022	183.0254	89.4755	BORDE_VIA
	1041	1038	359.5959	1.471	1823	1.5	55.441	174.1016	89.2855	PARAMENTO
	1041	1038	359.5959	1.471	1824	1.5	67.687	177.5537	89.4751	BORDE_VIA
	1041	1038	359.5959	1.471	1825	1.5	55.448	173.033	89.1429	PARAMENTO
	1041	1038	359.5959	1.471	1826	1.5	66.136	175.0954	89.3441	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		1041	1038	359.5959	1.471	1827	1.5	66.476	182.3259	89.5019	SUMIDERO
		1041	1038	359.5959	1.471	1828	1.5	67.286	183.0005	89.502	SUMIDERO
		1041	1038	359.5959	1.471	1829	1.5	69.07	182.2046	89.4747	MANHOL
		1041	1038	359.5959	1.471	1830	1.5	70.115	180.5921	89.4924	MANHOL
		1041	1038	359.5959	1.471	1042	1.5	151.785	181.2254	89.3958	DELTA
		1042	1041	0	1.388	1041	1.5	151.779	0	90.1729	
SD	90.90.1729										
		1042	1041	0	1.388	1043	1.5	125.761	89.4121	90.0016	DELTA
		1042	1041	0	1.388	1831	1.5	117.164	0	90.133	ALINEAMENT
		1042	1041	0	1.388	1832	1.5	73.269	0	90.2731	ALINEAMEN
		1042	1041	0	1.388	1041	1.5	151.783	0	90.1806	
SD	90.90.1806										
		1042	1041	0	1.388	1833	1.5	74.35	356.5038	90.1936	PARAMENTO
		1042	1041	0	1.388	1834	1.5	75.07	358.2344	90.2627	BORDE_VIA
		1042	1041	0	1.388	1835	1.5	57.66	355.4236	90.2408	PARAMENTO
		1042	1041	0	1.388	1836	1.5	57.613	354.0533	90.215	PARAMENTO
		1042	1041	0	1.388	1837	1.5	77.749	4.5832	90.1655	PARAMENTO
		1042	1041	0	1.388	1838	1.5	76.769	2.5838	90.2606	BORDE_VIA
		1042	1041	0	1.388	1839	1.5	39.607	355.3127	90.5404	BORDE_VIA
		1042	1041	0	1.388	1840	1.5	40.398	350.5342	90.4005	PARAMENTO
		1042	1041	0	1.388	1841	1.5	36.538	9.5451	90.3251	PARAMENTO
		1042	1041	0	1.388	1842	1.5	26.088	15.5358	90.1642	PARAMENTO
		1042	1041	0	1.388	1843	1.5	47.028	357.34	90.5316	SUMIDERO
		1042	1041	0	1.388	1844	1.5	47.866	357.055	90.5317	SUMIDERO
		1042	1041	0	1.388	1845	1.5	48.283	4.5219	90.485	SUMIDERO
		1042	1041	0	1.388	1846	1.5	47.426	4.1433	90.4849	SUMIDERO
		1042	1041	0	1.388	1847	1.5	49.203	358.3413	90.5111	MANHOL
		1042	1041	0	1.388	1848	1.5	35.743	358.1423	90.535	MANHOL
		1042	1041	0	1.388	1849	1.5	33.155	354.2647	90.5801	BORDE_VIA
		1042	1041	0	1.388	1850	1.5	25.251	5.4605	90.5357	BORDE_VIA
		1042	1041	0	1.388	1851	1.5	17.028	7.3751	90.2238	BORDE_VIA
		1042	1041	0	1.388	1852	1.5	14.197	11.4147	90.0444	BORDE_VIA
		1042	1041	0	1.388	1853	1.5	12.933	25.0003	89.5957	BORDE_VIA
		1042	1041	0	1.388	1854	1.5	17.051	347.2027	90.343	BORDE_VIA
		1042	1041	0	1.388	1855	1.5	14.883	343.5941	90.2453	BORDE_VIA
		1042	1041	0	1.388	1856	1.5	13.736	337.0757	90.2452	BORDE_VIA
		1042	1041	0	1.388	1857	1.5	13.609	328.261	90.0942	BORDE_VIA
		1042	1041	0	1.388	1858	1.5	14.39	29.1207	89.2907	MANHOL
		1042	1041	0	1.388	1859	1.5	20.311	304.3235	89.4834	BORDE_VIA
		1042	1041	0	1.388	1860	1.5	36.431	287.5728	89.4919	BORDE_VIA
		1042	1041	0	1.388	1861	1.5	34.556	275.1622	89.46	BORDE_VIA
		1042	1041	0	1.388	1862	1.5	34.545	274.3426	89.3313	BORDE_VIA
		1042	1041	0	1.388	1863	1.5	35.138	262.4311	89.4413	BORDE_VIA
		1042	1041	0	1.388	1864	1.5	25.02	242.3646	88.445	PARAMENTO
		1042	1041	0	1.388	1865	1.5	12.379	286.294	89.264	BORDE_VIA
		1042	1041	0	1.388	1866	1.5	12.264	284.3304	89.0924	BORDE_VIA
		1042	1041	0	1.388	1867	1.5	12.476	250.2444	89.1434	BORDE_VIA
		1042	1041	0	1.388	1868	1.5	13.171	242.3026	88.5739	ANDEN
		1042	1041	0	1.388	1869	1.5	4.245	197.5731	86.5445	BORDE_VIA
		1042	1041	0	1.388	1870	1.5	2.278	162.1417	85.5857	BORDE_VIA
		1042	1041	0	1.388	1871	1.5	2.319	147.553	87.0525	BORDE_VIA
		1042	1041	0	1.388	1872	1.5	2.94	131.0849	89.2416	SUMIDERO
		1042	1041	0	1.388	1873	1.5	4.215	128.5245	90.3513	SUMIDERO
		1042	1041	0	1.388	1874	1.5	4.675	114.1521	88.3647	BORDE_VIA
		1042	1041	0	1.388	1875	1.5	5.777	115.5636	88.4036	BORDE_VIA
		1042	1041	0	1.388	1876	1.5	6.938	123.5903	88.5139	BORDE_VIA
		1042	1041	0	1.388	1877	1.5	8.313	134.5722	88.4249	ANDEN
		1042	1041	0	1.388	1878	1.5	13.524	149.5137	89.2428	PARAMENTO
		1042	1041	0	1.388	1879	1.5	7.068	150.3439	90.4157	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1042	1041	0	1.388	1880	1.5	7.905	147.2203	90.2859	SUMIDERO
	1042	1041	0	1.388	1881	1.5	20.805	123.3706	89.5837	PARAMENTO
	1042	1041	0	1.388	1882	1.5	30.52	148.1022	89.4535	PARAMENTO
	1042	1041	0	1.388	1883	1.5	14.83	104.3439	89.5417	ANDEN
	1042	1041	0	1.388	1884	1.5	15.458	111.4454	89.4352	ANDEN
	1042	1041	0	1.388	1885	1.5	15.855	96.2847	90.1017	BORDE_VIA
	1042	1041	0	1.388	1886	1.5	39.35	92.0445	89.5432	BORDE_VIA
	1042	1041	0	1.388	1887	1.5	14.909	75.0252	88.5622	SEPARADOR
	1042	1041	0	1.388	1888	1.5	14.853	76.0711	88.5043	SEPARADOR
	1042	1041	0	1.388	1889	1.5	21.615	80.2011	89.18	POSTE
	1042	1041	0	1.388	1890	1.5	77.751	86.1804	89.5752	SEPARADOR
	1042	1041	0.0005	1.388	1041	1.5	151.789	0.0005	90.172	
SD	90.90.1720									
	1042	1041	0.0005	1.388	1041	1.5	151.769	0	90.1716	
SD	90.90.1716									
	1042	1041	0.0005	1.388	1891	1.5	17.728	16.2539	89.4125	PUENTE
	1042	1041	0.0005	1.388	1892	1.5	18.328	21.3902	89.4851	PUENTE
	1042	1041	0.0005	1.388	1893	1.5	24.675	16.0025	90.1338	PUENTE
	1042	1041	0.0005	1.388	1894	1.5	24.252	12.0619	90.1842	PUENTE
	1042	1041	0.0005	1.388	1895	1.5	24.188	11.2902	90.2024	ANDEN
	1042	1041	0.0005	1.388	1896	1.5	22.507	6.2028	90.4618	BORDE_VIA
	1042	1041	0.0005	1.388	1896	1.5	22.454	6.2029	90.4617	ANDEN
	1042	1041	0.0005	1.388	1897	1.5	25.184	5.52	90.5319	ANDEN
	1042	1041	0.0005	1.388	1898	1.5	26.729	10.2342	90.2155	ANDEN
	1042	1041	0.0005	1.388	1899	1.5	28.175	9.5329	90.2412	ANDEN
	1042	1041	0.0005	1.388	1900	1.5	24.845	17.073	90.1349	ANDEN
	1042	1041	0.0005	1.388	1901	1.7	24.052	12.1307	90.1522	ESTRUCTURA
	1042	1041	0.0005	1.388	1902	1.7	24.224	12.0555	90.193	ESTRUCTURA
	1042	1041	0.0005	1.388	1903	1.7	24.139	11.2552	90.1559	ESTRUCTURA
	1042	1041	0.0005	1.388	1904	1.7	23.919	11.3627	90.1929	ESTRUCTURA
	1042	1041	0.0005	1.388	1905	1.7	22.339	6.4605	90.193	ESTRUCTURA
	1042	1041	0.0005	1.388	1906	1.7	21.49	7.075	90.0811	ESTRUCTURA
	1042	1041	0.0005	1.388	1907	1.7	21.417	6.4753	90.1	ESTRUCTURA
	1042	1041	0.0005	1.388	1908	1.7	22.381	6.2145	90.1742	ESTRUCTURA
	1042	1041	0.0005	1.388	1909	1.7	20.517	12.1055	91.1619	ESTRUCTURA
	1042	1041	0.0005	1.388	1910	1.7	20.414	12.0147	91.1619	ESTRUCTURA
	1042	1041	0.0005	1.388	1911	2.6	21.983	7.1028	93.4605	DESCARGA
	1042	1041	0.0005	1.388	1912	2.6	21.954	7.0914	91.5356	DESCARGA
	1042	1041	0.0005	1.388	1913	4.02	21.951	7.4335	90.1448	CANO
	1042	1041	0.0005	1.388	1914	4.02	22.322	6.5907	90.0037	CANO
	1042	1041	0.0005	1.388	1915	4.02	21.481	7.2042	90.0026	CANO
	1042	1041	0.0005	1.388	1916	4.02	22.319	9.5511	89.595	CANO
	1042	1041	0.0005	1.388	1917	4.02	22.966	9.0137	90.0238	CANO
	1042	1041	0.0005	1.388	1918	4.02	21.029	10.2005	89.1843	CANO
	1042	1041	0.0005	1.388	1919	4.02	21.296	13.0921	89.1846	CANO
	1042	1041	0.0005	1.388	1920	2.6	20.917	13.2608	91.5155	TERRENO
	1042	1041	0.0005	1.388	1921	2.6	20.42	13.5725	90.2312	TERRENO
	1042	1041	0.0005	1.388	1922	2.6	20.076	14.0949	88.4019	TERRENO
	1042	1041	0.0005	1.388	1923	2.6	19.459	14.1657	87.2858	TERRENO
	1042	1041	0.0005	1.388	1924	2.6	17.79	15.4011	86.183	TERRENO
	1042	1041	0.0005	1.388	1925	2.6	18.651	11.4855	86.4257	TERRENO
	1042	1041	0.0005	1.388	1926	2.6	19.93	11.0928	87.0639	TERRENO
	1042	1041	0.0005	1.388	1927	1.5	18.566	22.2728	89.5222	TERRENO
	1042	1041	0.0005	1.388	1928	1.5	19.915	20.5505	90.165	TERRENO
	1042	1041	0.0005	1.388	1929	2.6	20.575	20.1931	88.1957	TERRENO
	1042	1041	0.0005	1.388	1930	2.6	21.075	19.4357	89.2915	TERRENO
	1042	1041	0.0005	1.388	1931	2.6	21.755	19.1158	90.5921	TERRENO
	1042	1041	0.0005	1.388	1932	4.02	22.194	18.5022	89.0524	CANO
	1042	1041	0.0005	1.388	1933	4.02	23.142	17.281	89.2533	CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1042	1041	0.0005	1.388	1934	4.02	24.191	16.4949	89.0942	CANO
1042	1041	0.0005	1.388	1935	2.6	24.682	17.18	88.0822	ESTRUCTURA
1042	1041	0.0005	1.388	1936	4.02	24.331	17.1053	88.4317	ESTRUCTURA
1042	1041	0.0005	1.388	1937	4.02	24.981	21.5457	89.0734	CANO
1042	1041	0.0005	1.388	1938	2.6	24.278	21.523	92.5529	CANO
1042	1041	0.0005	1.388	1939	2.6	23.704	22.3012	92.4733	CANO
1042	1041	0.0005	1.388	1940	2.6	23.24	23.0832	92.0412	TERRENO
1042	1041	0.0005	1.388	1941	2.6	22.622	23.39	90.4209	TERRENO
1042	1041	0.0005	1.388	1942	2.6	20.896	25.5439	87.2637	TERRENO
1042	1041	0.0005	1.388	1943	1.5	19.3	27.3604	89.3907	TERRENO
1042	1041	0.0005	1.388	1944	1.5	21.651	37.0417	89.5843	TERRENO
1042	1041	0.0005	1.388	1945	1.5	22.993	34.4955	90.26	TERRENO
1042	1041	0.0005	1.388	1946	2.6	25.026	32.1926	90.4911	TERRENO
1042	1041	0.0005	1.388	1947	2.92	26.205	31.2638	92.0734	CANO
1042	1041	0.0005	1.388	1948	3.52	27.044	31.1427	90.5433	CANO
1042	1041	0.0005	1.388	1949	2.92	27.069	30.5321	91.0906	TERRENO
1042	1041	0.0005	1.388	1950	2.92	27.356	30.3252	90.4329	TERRENO
1042	1041	0.0005	1.388	1951	1.5	27.842	31.4057	90.3008	ESTRUCTURA
1042	1041	0.0005	1.388	1952	1.5	25.181	348.1225	90.1838	PUENTE
1042	1041	0.0005	1.388	1953	1.5	24.844	351.5856	90.2622	PUENTE
1042	1041	0.0005	1.388	1954	1.5	19.005	348.404	90.1205	PUENTE
1042	1041	0.0005	1.388	1955	1.5	19.557	344.12	89.5135	PUENTE
1042	1041	0.0005	1.388	1956	1.5	19.552	343.4355	90.2843	ESTRUCTURA
1042	1041	0.0005	1.388	1957	1.5	19.565	343.2431	90.2843	ESTRUCTURA
1042	1041	0.0005	1.388	1958	1.5	20.384	344.2156	90.3319	ESTRUCTURA
1042	1041	0.0005	1.388	1959	1.5	20.396	344.1202	90.3319	ESTRUCTURA
1042	1041	0.0005	1.388	1960	1.5	24.414	347.2017	90.4558	ESTRUCTURA
1042	1041	0.0005	1.388	1961	1.5	24.441	347.014	90.4558	ESTRUCTURA
1042	1041	0.0005	1.388	1962	1.5	25.307	347.532	90.4839	ESTRUCTURA
1042	1041	0.0005	1.388	1963	1.5	25.338	347.3859	90.484	ESTRUCTURA
1042	1041	359.5959	1.414	1041	1.5	151.775	359.5959	90.1753	
SD	90.90.1753								
1042	1041	359.5959	1.414	1964	1.5	33.242	351.344	90.5544	TERRENO
1042	1041	359.5959	1.414	1965	1.5	25.378	347.5547	90.1951	TERRENO
1042	1041	359.5959	1.414	1966	2.6	25.162	347.1548	90.0421	TERRENO
1042	1041	359.5959	1.414	1967	2.6	24.335	346.4002	91.561	TERRENO
1042	1041	359.5959	1.414	1968	4.015	23.311	346.272	89.4241	CANO
1042	1041	359.5959	1.414	1969	4.015	22.324	345.4148	90.05	CANO
1042	1041	359.5959	1.414	1970	4.015	21.738	345.1548	89.5348	CANO
1042	1041	359.5959	1.414	1971	2.6	20.184	343.281	90.2608	TERRENO
1042	1041	359.5959	1.414	1972	2.6	19.595	343.0127	90.195	TERRENO
1042	1041	359.5959	1.414	1973	2.6	17.623	341.083	89.2332	TERRENO
1042	1041	359.5959	1.414	1974	2.6	28.51	339.0959	89.5446	TERRENO
1042	1041	359.5959	1.414	1975	2	25.658	337.5117	90.2221	TERRENO
1042	1041	359.5959	1.414	1976	4.015	23.01	335.0458	89.294	CANO
1042	1041	359.5959	1.414	1977	2	24.353	336.0413	92.3329	BORDE_CANO
1042	1041	359.5959	1.414	1978	2	22.197	334.471	92.4121	BORDE_CANO
1042	1041	359.5959	1.414	1979	2	19.753	332.0652	90.0323	TERRENO
1042	1041	359.5959	1.414	1980	2	18.903	331.0836	87.5757	ANDEN
1042	1041	359.5959	1.414	1981	2	24.449	312.2128	88.2724	ANDEN
1042	1041	359.5959	1.414	1982	2	24.463	312.2215	90.3215	TERRENO
1042	1041	359.5959	1.414	1983	2	26.516	315.205	90.4325	TERRENO
1042	1041	359.5959	1.414	1984	2.6	27.569	316.5457	90.233	BORDE_CANO
1042	1041	359.5959	1.414	1985	4.015	27.847	318.0629	89.2047	CANO
1042	1041	359.5959	1.414	1986	2	28.932	320.4341	91.5133	BORDE_CANO
1042	1041	359.5959	1.414	1987	2	31.941	322.5048	90.1121	TERRENO
1042	1041	359.5959	1.414	1988	2	47.25	301.4713	90.0647	TERRENO
1042	1041	359.5959	1.414	1989	2	45.704	299.1408	90.3002	TERRENO
1042	1041	359.5959	1.414	1990	2	45.242	298.0614	91.2043	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1042	1041	359.5959	1.414	1991	3.415	45.027	297.3757	90.1225 CANO
1042	1041	359.5959	1.414	1992	2	44.345	296.2306	91.1725 BORDE_CANO
1042	1041	359.5959	1.414	1993	2	43.585	294.1109	90.0352 TERRENO
1042	1041	359.5959	1.414	1994	2	42.94	292.0317	89.1442 ANDEN
1042	1041	359.5959	1.414	1995	2	42.955	292.0458	89.0432 ANDEN
1042	1041	359.5959	1.414	1996	2	55.412	286.345	89.1824 ANDEN
1042	1041	359.5959	1.414	1997	2	55.384	286.3727	89.2137 TERRENO
1042	1041	359.5959	1.414	1998	2	56.526	289.0206	90.2608 TERRENO
1042	1041	359.5959	1.414	1999	2.6	57.197	289.5116	90.242 BORDE_CANO
1042	1041	359.5959	1.414	2000	4.015	57.235	290.3402	89.4112 CANO
1042	1041	359.5959	1.414	2001	2.6	57.312	291.5525	90.103 BORDE_CANO
1042	1041	359.5959	1.414	2002	2.6	58.544	295.2256	89.1722 TERRENO
1042	1041	359.5959	1.414	2003	2.6	60.556	298.1835	89.2119 TERRENO
1042	1041	359.5959	1.414	2004	2.6	68.163	293.3353	89.1921 TERRENO
1042	1041	359.5959	1.414	2005	2.6	65.299	291.0559	89.1612 TERRENO
1042	1041	359.5959	1.414	2006	2.6	64.022	290.0548	90.344 BORDE_CANO
1042	1041	359.5959	1.414	2007	3.415	63.502	289.3919	90.0956 CANO
1042	1041	359.5959	1.414	2008	3.415	62.386	289.2253	90.0108 BORDE_CANO
1042	1041	359.5959	1.414	2009	2	62.048	289.0246	90.2941 TERRENO
1042	1041	359.5959	1.414	2010	2	61.048	287.0317	90.0645 TERRENO
1042	1041	359.5959	1.414	2011	2	60.106	285.1329	89.38 TERRENO
1042	1041	359.5959	1.414	2012	2	60.065	285.0811	89.2209 ANDEN
1042	1041	359.5959	1.414	2013	2	61.869	284.1507	89.2437 ANDEN
1042	1041	359.5959	1.414	2014	2	61.876	284.1343	89.4719 ANDEN
1042	1041	359.5959	1.414	2015	2	63.435	285.1816	90.3154 TERRENO
1042	1041	359.5959	1.414	2016	2.6	64.261	285.5122	90.3044 BORDE_CANO
1042	1041	359.5959	1.414	2017	2.915	65.496	286.0856	90.2603 CANO
1042	1041	359.5959	1.414	2018	2.6	66.429	286.2528	90.2305 BORDE_CANO
1042	1041	359.5959	1.414	2019	1.5	67.904	287.5301	90.0714 TERRENO
1042	1041	359.5959	1.414	2020	1.5	70.636	289.5438	90.1045 TERRENO
1042	1041	359.5959	1.414	2021	1.5	73.648	290.3839	90.0713 TERRENO
1042	1041	359.5959	1.414	2022	1.5	64.694	284.2413	90.4516 ESTRUCTURA
1042	1041	359.5959	1.414	2023	1.5	64.507	284.1704	90.4517 ESTRUCTURA
1042	1041	359.5959	1.414	2024	1.5	64.962	283.3515	90.3713 ESTRUCTURA
1042	1041	359.5959	1.414	2025	1.5	65.216	283.4446	90.3714 ESTRUCTURA
1042	1041	359.5959	1.414	2026	1.5	60.762	284.564	89.5031 ANDEN
1042	1041	359.5959	1.414	2027	1.5	62.806	283.4553	89.5135 ESTRUCTURA
1042	1041	359.5959	1.414	2028	1.5	62.765	283.4023	89.5136 ESTRUCTURA
1042	1041	359.5959	1.414	2029	1.5	63.791	283.3312	89.5136 PUENTE
1042	1041	359.5959	1.414	2030	1.5	69.845	282.1604	89.5137 ESTRUCTURA
1042	1041	359.5959	1.414	2031	1.5	69.227	282.1852	89.5137 PUENTE
1042	1041	359.5959	1.414	2032	1.5	69.884	282.1219	89.5137 ESTRUCTURA
1042	1041	359.5959	1.414	2033	1.5	69.881	282.1341	89.5137 ESTRUCTURA
1042	1041	359.5959	1.414	2034	1.5	74.607	281.5736	89.5137 ANDEN
1042	1041	359.5959	1.414	2035	1.5	73.591	278.1729	89.5634 BORDE_VIA
1042	1041	359.5959	1.414	2036	1.5	69.782	283.4248	90.4022 ESTRUCTURA
1042	1041	359.5959	1.414	2037	1.5	72.306	274.0138	89.5707 MANHOL
1042	1041	359.5959	1.414	2038	1.5	99.102	272.3404	89.531 MANHOL
1042	1041	359.5959	1.414	2039	1.5	90.07	275.0159	89.5743 MANHOL
1042	1041	359.5959	1.414	2040	1.5	58.479	266.2519	90.0353 MANHOL
1042	1041	359.5959	1.414	2041	1.5	59.479	266.041	90.0754 VALVULA
1042	1041	359.5959	1.414	2042	1.5	61.009	265.4909	89.5333 ANDEN
1042	1041	359.5959	1.414	2043	1.5	68.408	267.2827	89.5332 ANDEN
1042	1041	359.5959	1.414	2044	1.5	66.412	266.0705	89.4933 ANDEN
1042	1041	359.5959	1.414	2045	1.5	67.557	265.3905	89.4933 ANDEN
1042	1041	359.5959	1.414	2046	1.5	66.51	265.5809	89.4932 ESTRUCTURA
1042	1041	359.5959	1.414	2047	1.5	60.982	265.4039	89.4932 ESTRUCTURA
1042	1041	359.5959	1.414	2048	1.5	68.183	263.0247	89.4413 TERRENO
1042	1041	359.5959	1.414	2049	1.5	59.47	263.5903	90.1933 ESTRUCTURA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1042	1041	359.5959	1.414	2050	1.5	59.599	263.5117	90.1932	ESTRUCTURA
	1042	1041	359.5959	1.414	2051	1.5	65.7	262.4414	89.4655	TERRENO
	1042	1041	359.5959	1.414	2052	1.5	60.881	265.4544	89.545	TERRENO
	1042	1041	359.5959	1.414	2052	1.5	60.877	265.4524	89.545	ESTRUCTURA
	1042	1041	359.5959	1.414	2053	1.5	61.07	265.4015	90.0747	ESTRUCTURA
	1042	1041	359.5959	1.414	2054	1.5	65.382	265.5505	89.5021	TERRENO
	1042	1041	359.5959	1.414	2055	1.5	60.976	265.4052	89.5021	PUENTE
	1042	1041	359.5959	1.414	2056	2.6	65.351	265.5301	89.2902	TERRENO
	1042	1041	359.5959	1.414	2057	2.6	61.191	265.4014	90.3015	BORDE_CANO
	1042	1041	359.5959	1.414	2058	2.6	64.245	265.49	89.2932	ESTRUCTURA
	1042	1041	359.5959	1.414	2059	2.6	64.538	265.471	89.2932	ESTRUCTURA
	1042	1041	359.5959	1.414	2060	2.6	64.801	265.1521	89.493	ESTRUCTURA
	1042	1041	359.5959	1.414	2061	2.6	64.222	265.4804	90.1852	BORDE_CANO
	1042	1041	359.5959	1.414	2062	2.6	62.051	265.3734	90.3458	CANO
	1042	1041	359.5959	1.414	2063	2.6	63.133	265.4353	90.3321	CANO
	1042	1041	359.5959	1.414	2064	2.6	59.316	263.4312	89.2741	TERRENO
	1042	1041	359.5959	1.414	2065	2.6	65.416	264.0335	89.3224	TERRENO
	1042	1041	359.5959	1.414	2066	2	57.379	263.3028	89.4814	TERRENO
	1042	1041	359.5959	1.414	2067	2	63.828	264.2145	90.5042	BORDE_CANO
	1042	1041	359.5959	1.414	2068	2	60.491	264.034	90.5936	BORDE_CANO
	1042	1041	359.5959	1.414	2069	2	62.837	264.1802	91.053	CANO
	1042	1041	359.5959	1.414	2070	2	61.042	262.0503	90.3525	TERRENO
	1042	1041	359.5959	1.414	2071	2	63.816	261.5722	90.3153	TERRENO
	1042	1041	359.5959	1.414	2072	2	61.673	262.0252	91.0003	BORDE_CANO
	1042	1041	359.5959	1.414	2073	2	62.991	262.0623	90.5533	BORDE_CANO
	1042	1041	359.5959	1.414	2074	2	62.516	262.181	91.0336	CANO
	1042	1041	359.5959	1.414	2075	2	57.197	262.1206	89.4736	TERRENO
	1042	1041	359.5959	1.414	2076	2	65.29	262.4805	89.5247	TERRENO
	1042	1041	359.5959	1.414	2077	2	65.316	261.14	89.4909	TERRENO
	1042	1041	359.5959	1.414	2078	2	58.436	261.0907	89.4908	TERRENO
	1042	1041	359.5959	1.414	2079	2	63.985	261.321	90.2645	TERRENO
	1042	1041	359.5959	1.414	2080	2	62.809	261.2742	90.4613	TERRENO
	1042	1041	359.5959	1.414	2081	2	62.246	261.2904	91.103	BORDE_CANO
	1042	1041	359.5959	1.414	2082	2	62	261.2911	91.0509	BORDE_CANO
	1042	1041	359.5959	1.414	2083	2	61.512	261.2618	90.4147	TERRENO
	1042	1041	359.5959	1.414	2084	2	60.543	261.1946	90.0449	TERRENO
	1042	1041	359.5959	1.414	2085	1.5	55.145	265.0519	90.0215	BORDE_VIA
	1042	1041	359.5959	1.414	2086	1.5	55.4	263.0116	89.5848	BORDE_VIA
	1042	1041	359.5959	1.414	2087	1.5	54.241	266.4421	90.0707	BORDE_VIA
	1042	1041	359.5959	1.414	2088	1.5	52.637	267.1003	90.0447	BORDE_VIA
	1042	1041	359.5959	1.414	2089	2.3	56.215	257.3652	89.3003	PARAMENTO
	1042	1041	359.5959	1.414	1044	1.5	143.684	269.2113	89.461	DELTA
	1042	1041	359.5959	1.414	2091	1.5	12.663	103.4704	89.4642	VALVULA
	1042	1041	359.5959	1.414	2092	1.5	31.095	56.0507	89.4642	PARAMENTO
	1042	1041	359.5959	1.414	2093	1.5	47.151	67.4658	89.5011	PARAMENTO
	1042	1041	359.5959	1.414	2094	1.5	49.153	75.2151	90.0024	BORDE_VIA
	1042	1041	359.5959	1.414	2095	1.5	77.794	86.1802	89.5845	SEPARADOR
	1042	1041	359.5959	1.414	2096	1.5	77.792	86.3752	90.0057	SEPARADOR
	1043	1042	0	1.431	1042	1.5	125.766	0	89.5421	
SD	89.89.5421									
	1043	1042	359.5959	1.431	1042	1.5	125.752	359.5959	89.5433	
SD	89.89.5433									
	1043	1042	359.5959	1.431	2097	1.5	46.296	359.5959	90.0239	LINEAMIENT
	1043	1042	359.5959	1.431	2098	1.5	18.053	0	89.5252	LINEAMIENT
	1043	1042	359.5959	1.431	2098	1.5	18.053	0.0001	89.4544	LINEAMIENT
	1043	1042	359.5959	1.431	1046	1.5	210.915	179.2024	90.0208	DELTA
	1043	1042	359.5959	1.431	1045	1.5	106.286	179.4234	90.0109	DELTA
	1043	1042	359.5959	1.431	2099	1.5	40.202	6.3942	89.491	SEPARADOR
	1043	1042	359.5959	1.431	2100	1.5	40.153	6.0534	89.5038	SEPARADOR



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1043	1042	359.5959	1.431	2100	1.5	34.95	7.133	89.5059	POSTE
1043	1042	359.5959	1.431	2101	1.5	14.479	20.0215	89.3825	SEPARADOR
1043	1042	359.5959	1.431	2102	1.5	14.376	18.1352	89.4153	SEPARADOR
1043	1042	359.5959	1.431	2103	2.6	40.242	356.361	88.4318	SUMIDERO
1043	1042	359.5959	1.431	2104	2.6	39.4	357.0828	88.4144	SUMIDERO
1043	1042	359.5959	1.431	2105	1.5	11.692	25.1703	89.383	SUMIDERO
1043	1042	359.5959	1.431	2106	1.5	11.505	23.2151	89.3612	SUMIDERO
1043	1042	359.5959	1.431	2107	1.5	40.012	356.0058	89.0608	HIDRANTE
1043	1042	359.5959	1.431	2108	1.5	8.766	352.0225	89.474	VALVULA
1043	1042	359.5959	1.431	2109	1.5	13.463	325.0833	90.1313	POSTE
1043	1042	359.5959	1.431	2110	1.5	5.606	344.4905	90.003	MANHOL
1043	1042	359.5959	1.431	2111	2.1	16.149	320.1537	87.43	PARAMENTO
1043	1042	359.5959	1.431	2112	1.5	35.875	172.0747	89.5912	SEPARADOR
1043	1042	359.5959	1.431	2113	1.5	35.841	171.1327	89.3754	SEPARADOR
1043	1042	359.5959	1.431	2114	1.5	35.88	171.4612	89.3754	POSTE
1043	1042	359.5959	1.431	2115	1.5	3.497	314.3009	90.1403	ANDEN
1043	1042	359.5959	1.431	2116	1.5	2.155	325.4209	87.484	BORDE_VIA
1043	1042	359.5959	1.431	2117	1.5	1.261	329.3034	84.5634	BORDE_VIA
1043	1042	359.5959	1.431	2118	1.5	0.824	307.5356	85.1028	BORDE_VIA
1043	1042	359.5959	1.431	2119	1.5	23.107	301.55	90.2131	PARAMENTO
1043	1042	359.5959	1.431	2120	1.5	36.382	200.3136	89.5019	PARAMENTO
1043	1042	359.5959	1.431	2121	1.5	35.493	196.3247	89.0145	PARAMENTO
1043	1042	359.5959	1.431	2122	2	49.049	191.2514	89.1214	PARAMENTO
1043	1042	359.5959	1.431	2123	1.5	5.216	299.5925	90.1842	ANDEN
1045	1043	0	1.331	1043	1.5	106.278	0	89.51	
SD	89.89.5100								
1045	1043	0	1.331	2125	1.5	105.864	2.2601	89.5018	POSTE
1045	1043	0	1.331	2126	1.5	111.109	7.1344	89.484	MANHOL
1045	1043	0	1.331	2127	1.5	110.362	7.3605	89.4915	POSTE
1045	1043	0	1.331	2128	1.5	108.941	6.5407	89.5357	BORDE_VIA
1045	1043	0	1.331	2129	1.5	96.705	7.4754	89.542	BORDE_VIA
1045	1043	0	1.331	2130	1.5	87.249	356.5658	89.4532	POSTE
1045	1043	0	1.331	2131	1.5	87.612	357.0846	89.482	ANDEN
1045	1043	0	1.331	2132	1.5	87.556	358.2659	89.482	ANDEN
1045	1043	0	1.331	2133	1.5	59.173	350.0838	89.3724	ANDEN
1045	1043	0	1.331	2134	1.5	58.615	357.4538	89.4923	BORDE_VIA
1045	1043	0	1.331	2135	1.5	44.9	350.0944	89.5322	POSTE
1045	1043	0	1.331	2136	1.5	44.003	350.1812	90.1035	BORDE_VIA
1045	1043	0	1.331	2137	1.5	39.444	349.1443	90.1829	BORDE_VIA
1045	1043	0	1.331	2138	1.5	37.726	348.4355	90.3534	BORDE_VIA
1045	1043	0	1.331	2139	1.5	37.408	353.4443	89.4816	ANDEN
1045	1043	0	1.331	2140	1.5	37.167	356.55	89.5102	ANDEN
1045	1043	0	1.331	2141	1.5	36.561	358.0607	90.0034	BORDE_VIA
1045	1043	0	1.331	2142	1.5	35.476	359.2913	89.5617	BORDE_VIA
1045	1043	0	1.331	2143	1.5	34.475	359.4556	89.5024	BORDE_VIA
1045	1043	0	1.331	2144	2.6	25.148	335.5739	88.0305	PARAMENTO
1045	1043	0	1.331	1046	1.5	104.646	179.1501	89.5757	DELTA
1045	1043	0	1.331	2145	0.085	42.054	192.03	91.4035	PARAMENTO
1045	1043	0	1.331	2146	0.085	40.07	192.4454	91.4701	ANDEN
1045	1043	0	1.331	2147	1.5	39.88	180.5206	89.5036	ANDEN
1045	1043	0	1.331	2148	1.5	41.845	179.3644	89.5036	ANDEN
1045	1043	0	1.331	2149	1.5	27.705	183.2351	90.0339	ANDEN
1045	1043	0	1.331	2150	1.5	28.115	187.2957	90.0108	ANDEN
1045	1043	0	1.331	2151	1.5	46.516	181.3313	91.0148	HIDRANTE
1045	1043	0	1.331	2152	1.5	27.057	181.3315	90.181	BORDE_VIA
1045	1043	0	1.331	2153	1.5	25.839	179.5727	90.0619	BORDE_VIA
1045	1043	0	1.331	2154	1.5	29.508	178.0409	90.035	MANHOL
1045	1043	0	1.331	2155	1.5	23.773	179.4711	90.2915	SUMIDERO
1045	1043	0	1.331	2156	1.5	24.569	180.513	90.3057	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1045	1043	0	1.331	2157	1.5	23.602	179.2227	90.1246 BORDE_VIA
	1045	1043	0	1.331	2158	1.5	24.56	167.3305	89.5459 POSTE
	1045	1043	0	1.331	2159	1.5	9.738	211.2002	89.5709 POSTE
	1045	1043	0	1.331	2160	1.5	6.557	216.4536	89.0441 POSTE
	1045	1043	0	1.331	2161	1.5	28.649	168.0146	89.4546 SEPARADOR
	1045	1043	0	1.331	2162	1.5	28.557	168.5645	89.5408 SEPARADOR
	1045	1043	0	1.331	2163	1.5	6.405	55.5352	88.3618 POSTE
	1045	1043	0	1.331	2164	1.5	40.828	172.0954	89.5458 SEPARADOR
	1045	1043	0	1.331	2165	1.5	40.886	171.3244	89.5056 SEPARADOR
	1045	1043	0	1.331	2166	1.8	25.185	204.4036	90.1104 PARAMENTO
	1045	1043	0	1.331	2167	1.5	59.419	174.2925	89.5523 POSTE
	1045	1043	0	1.331	2168	1.5	29.285	195.2625	90.5731 SUMIDERO
	1045	1043	0	1.331	2169	1.5	29.94	196.3138	90.5248 SUMIDERO
	1045	1043	0	1.331	2170	1.5	51.492	165.2258	90.0356 BORDE_VIA
	1045	1043	0	1.331	2171	1.5	16.709	61.5045	89.2514 MANHOL
	1045	1043	0	1.331	2172	1.5	40.599	359.4106	89.4812 MANHOL
	1045	1043	0	1.331	2173	1.5	41.933	359.0705	90.0603 VALVULA
	1045	1043	0	1.331	2174	1.5	45.862	359.3758	89.5629 SUMIDERO
	1045	1043	0	1.331	2175	1.5	46.673	358.5744	89.5849 SUMIDERO
	1045	1043	0	1.331	2176	1.5	38.014	352.3924	90.2031 SUMIDERO
	1045	1043	0	1.331	2177	1.5	38.62	351.3447	90.1949 SUMIDERO
	1045	1043	0	1.331	2178	1.5	59.731	13.5733	89.4125 MANHOL
	1045	1043	0	1.331	2179	0.085	42.865	196.4242	92.0352 PARAMENTO
	1045	1043	0	1.331	2180	1.5	43.75	174.3833	89.5247 CAMA_TELEF
	1045	1043	0	1.331	2181	1.5	23.957	193.011	90.1132 CAJA_TELEF
	1045	1043	0	1.331	2182	1.5	49.005	0.0001	89.5321 LINEAMIENT
	1045	1043	0	1.331	2183	1.5	1.472	89.5416	89.0132 EJE_TUBO
	1046	1045	0.0001	1.51	1045	1.7	104.643	0.0001	89.5117
SD	89.89.5117								
	1046	1045	0.0001	1.51	2184	1.7	11.711	23.5257	89.0834 POSTE
	1046	1045	0.0001	1.51	2185	1.7	8.17	352.4352	88.2153 MANHOL
	1046	1045	0	1.51	1045	1.7	104.632	0	89.5116
SD	89.89.5116								
	1046	1045	0	1.51	2186	1.7	5.808	279.4033	86.372 POSTE
	1046	1045	0	1.51	2187	1.7	3.696	341.5139	90.1604 SUMIDERO
	1046	1045	0	1.51	2188	1.7	2.764	347.3047	89.3554 SUMIDERO
	1046	1045	0	1.51	2189	1.7	17.145	54.1327	89.2824 MANHOL
	1046	1045	0	1.51	2190	1.7	18.464	45.4244	90.1529 SUMIDERO
	1046	1045	0	1.51	2191	1.7	19.357	45.0023	90.1217 SUMIDERO
	1046	1045	0	1.51	2192	1.7	18.586	59.4836	89.372 VALVULA
	1046	1045	0	1.51	2193	1.7	18.218	45.5233	90.2233 BORDE_VIA
	1046	1045	0	1.51	2194	1.7	17.622	48.292	89.5228 BORDE_VIA
	1046	1045	0	1.51	2195	1.7	18.441	58.3654	89.4347 BORDE_VIA
	1046	1045	0	1.51	2196	1.7	19.702	77.1027	89.4345 BORDE_VIA
	1046	1045	0	1.51	2197	1.7	14.604	72.0826	89.5238 BORDE_VIA
	1046	1045	0	1.51	2198	1.7	13.474	75.0005	89.5828 BORDE_VIA
	1046	1045	0	1.51	2199	1.7	18.204	79.4646	89.2447 HIDRANTE
	1046	1045	0	1.51	2200	1.7	4.805	95.555	85.3758 SEPARADOR
	1046	1045	0	1.51	2201	1.7	5.159	100.5244	85.5338 SEPARADOR
	1046	1045	0	1.51	2202	1.7	17.928	326.1027	88.5732 PARAMENTO
	1046	1045	0	1.51	2203	1.7	15.316	318.1631	88.4727 PARAMENTO
	1046	1045	0	1.51	2204	1.7	25.299	204.5957	89.1646 CERRAMIENT
	1046	1045	0	1.51	2205	1.7	4.843	354.1742	89.1 BORDE_VIA
	1046	1045	0	1.51	2206	1.7	24.002	196.2526	89.4204 ANDEN
	1046	1045	0	1.51	2207	1.7	25.819	169.3946	89.4624 POSTE
	1046	1045	0	1.51	2208	1.7	37.286	183.1519	89.5044 VALVULA
	1046	1045	0	1.51	2209	1.7	75.855	182.114	89.5934 MANHOL
	1046	1045	0	1.51	2210	1.7	60.277	175.4454	90.0056 POSTE
	1046	1045	0	1.51	1047	1.7	119.687	180.0039	90.0747 DELTA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1046	1045	0	1.51	2211	1.7	59.773	180.0038	90.0357 LINEAMIENT
	1046	1045	0	1.51	2212	1.7	52.679	180.5229	90.0024 BORDE_VIA
	1046	1045	0	1.51	2213	1.7	52.29	165.4703	90.0024 BORDE_VIA
	1046	1045	0	1.51	2214	1.7	58.119	186.5407	90.0734 ANDEN
	1047	1046	0	1.535	1046	1.7	119.684	0	89.4208
SD	89.89.4208								
	1047	1046	0	1.535	2215	1.7	13.681	347.3406	88.4307 MANHOL
	1047	1046	0	1.535	2216	1.7	26.831	345.0823	89.1051 POSTE
	1047	1046	0	1.535	2217	1.7	9.832	349.5656	88.0025 VALVULA
	1047	1046	0	1.535	2218	1.7	25.369	9.3505	89.201 POSTE
	1047	1046	0	1.535	2219	1.7	19.245	354.5014	89.4456 SUMIDERO
	1047	1046	0	1.535	2220	1.7	18.328	355.563	89.4001 SUMIDERO
	1047	1046	0	1.535	2221	1.7	19.014	13.4752	88.4259 SEPARADOR
	1047	1046	0	1.535	2222	1.7	18.935	12.2645	89.0159 SEPARADOR
	1047	1046	0	1.535	2223	1.7	8.44	32.3839	87.2144 SEPARADOR
	1047	1046	0	1.535	2224	1.7	8.218	29.3426	87.5306 SEPARADOR
	1047	1046	0	1.535	2225	1.7	11.332	320.0308	88.2122 CERRAMIENT
	1047	1046	0	1.535	2226	1.7	52.069	17.5024	89.3719 MANHOL
	1047	1046	0	1.535	2227	1.7	23.546	32.1739	89.2542 BORDE_VIA
	1047	1046	0	1.535	2228	1.7	22.847	36.2348	89.0856 BORDE_VIA
	1047	1046	0	1.535	2229	1.7	47.61	16.0631	89.3012 BORDE_VIA
	1047	1046	0	1.535	2230	1.7	23.43	39.5951	89.0359 BORDE_VIA
	1047	1046	0	1.535	2231	1.7	98.206	349.3613	90.0033 CERRAMIENT
	1047	1046	0	1.535	2232	1.7	47.597	16.0433	89.3 BORDE_VIA
	1047	1046	0	1.535	2233	1.7	46.804	15.4957	89.3 BORDE_VIA
	1047	1046	0	1.535	2234	1.7	17.673	48.1237	89.142 BORDE_VIA
	1047	1046	0	1.535	2235	1.7	16.645	50.3347	89.0609 BORDE_VIA
	1047	1046	0	1.535	2236	1.7	56.421	13.054	89.361 BORDE_VIA
	1047	1046	0	1.535	2237	1.7	55.155	14.0053	89.3419 BORDE_VIA
	1047	1046	0	1.535	2238	1.7	54.931	14.5755	89.3732 BORDE_VIA
	1047	1046	0	1.535	2239	1.7	20.754	55.4458	89.4328 BORDE_VIA
	1047	1046	0	1.535	2240	1.7	55.834	18.1946	89.452 BORDE_VIA
	1047	1046	0	1.535	2241	1.7	53.197	20.4002	89.5059 BORDE_VIA
	1047	1046	0	1.535	2242	1.7	25.619	45.3451	89.3508 BORDE_VIA
	1047	1046	0	1.535	2243	1.7	25.024	47.1409	88.5514 BORDE_VIA
	1047	1046	0	1.535	2244	1.7	27.558	51.4747	89.033 BORDE_VIA
	1047	1046	0	1.535	2245	1.7	20.218	189.0207	89.2857 MANHOL
	1047	1046	0	1.535	2246	1.7	20.019	190.4528	89.3313 SUMIDERO
	1047	1046	0	1.535	2247	1.7	20.868	191.5613	89.2709 SUMIDERO
	1047	1046	0	1.535	2248	1.7	19.32	184.0858	90.064 SUMIDERO
	1047	1046	0	1.535	2249	1.7	20.13	185.3155	90.0057 SUMIDERO
	1047	1046	0	1.535	2250	1.7	10.712	157.5255	88.5517 POSTE
	1047	1046	0	1.535	2251	1.7	21.317	169.2901	89.3158 SEPARADOR
	1047	1046	0	1.535	2252	1.7	21.413	168.1536	89.0518 SEPARADOR
	1047	1046	0	1.535	2253	1.7	18.643	184.0147	89.4345 BORDE_VIA
	1047	1046	0	1.535	2254	1.7	44.705	181.4938	89.5352 BORDE_VIA
	1047	1046	0	1.535	2255	1.7	47.511	189.2203	89.493 PARAMENTO
	1047	1046	0	1.535	2256	1.7	51.783	188.3935	89.5306 PARAMENTO
	1047	1046	0	1.535	2257	1.7	53.266	183.4106	89.5202 MANHOL
	1047	1046	0	1.535	2258	1.7	76.765	185.3341	89.5615 POSTE
	1047	1046	0	1.535	2259	1.7	76.769	185.4627	89.5614 POSTE
	1047	1046	0	1.535	2260	1.7	91.522	185.1619	90.0503 CERRAMIENT
	1047	1046	0	1.535	2261	1.7	83.442	181.2203	90.0748 SUMIDERO
	1047	1046	0	1.535	2262	1.7	84.242	181.3809	90.0934 SUMIDERO
	1047	1046	0	1.535	2263	1.7	96.337	181.4121	90.043 MANHOL
	1047	1046	0	1.535	1048	1.7	126.703	180.4636	90.0303 DELTA
	1047	1046	0	1.535	2264	1.7	24.812	146.2738	89.2902 MANHOL
	1047	1046	0	1.535	2265	1.7	22.134	144.5921	89.3906 BORDE_VIA
	1047	1046	0	1.535	2266	1.7	27.239	152.1821	89.421 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1047	1046	0	1.535	2267	1.7	26.236	134.4224	89.3251 BORDE_VIA
	1047	1046	0	1.535	2268	1.7	30.489	142.0405	90.0953 BORDE_VIA
	1048	1047	0.0003	1.435	1047	1.7	126.691	0.0003	89.4541
SD	89.89.4541								
	1048	1047	0.0003	1.435	1047	1.7	126.705	0	89.4539
SD	89.89.4539								
	1048	1047	0.0003	1.435	2269	1.7	72.262	0.0004	89.3853 LINEAMIENT
	1048	1047	0.0003	1.435	2270	1.7	36.939	358.5151	89.3405 BORDE_VIA
	1048	1047	0.0003	1.435	2271	1.7	35.241	355.5435	89.3655 BORDE_VIA
	1048	1047	0.0003	1.435	2272	1.7	34.973	346.5812	90.1808 SUMIDERO
	1048	1047	0.0003	1.435	2273	1.7	34.767	345.2744	90.1523 SUMIDERO
	1048	1047	0.0003	1.435	2274	1.7	47.063	5.4508	89.333 POSTE
	1048	1047	0.0003	1.435	2275	1.7	37.867	338.2937	90.13 BORDE_VIA
	1048	1047	0.0003	1.435	2276	1.7	28.494	354.5303	89.4655 BORDE_VIA
	1048	1047	0.0003	1.435	2277	1.7	27.717	357.3924	89.2733 BORDE_VIA
	1048	1047	0.0003	1.435	2278	1.7	25.457	358.5846	89.2432 BORDE_VIA
	1048	1047	0.0003	1.435	2279	1.7	30.745	339.3506	89.583 POSTE
	1048	1047	0.0003	1.435	2280	1.7	43.828	17.5439	89.3449 BORDE_VIA
	1048	1047	0.0003	1.435	2281	1.7	41.651	20.5121	89.2634 BORDE_VIA
	1048	1047	0.0003	1.435	2282	1.7	41.424	25.4952	89.2349 BORDE_VIA
	1048	1047	0.0003	1.435	2283	1.7	43.574	30.4857	89.2347 BORDE_VIA
	1048	1047	0.0003	1.435	2284	1.7	38.11	31.5739	89.295 BORDE_VIA
	1048	1047	0.0003	1.435	2285	1.7	36.721	28.2241	89.27 BORDE_VIA
	1048	1047	0.0003	1.435	2286	1.7	33.651	25.3825	89.1832 BORDE_VIA
	1048	1047	0.0003	1.435	2287	1.7	29.981	27.0013	89.1832 BORDE_VIA
	1048	1047	0.0003	1.435	2288	1.7	41.174	25.124	89.2134 VALVULA
	1048	1047	0.0003	1.435	2289	1.7	41.183	22.4702	89.2133 VALVULA
	1048	1047	0.0003	1.435	2290	1.7	42.37	23.4306	89.2133 VALVULA
	1048	1047	0.0003	1.435	2291	1.7	34.658	28.5848	89.1752 HIDRANTE
	1048	1047	0.0003	1.435	2292	1.7	24.259	11.3157	88.4018 SEPARADOR
	1048	1047	0.0003	1.435	2293	1.7	24.327	12.193	88.3908 SEPARADOR
	1048	1047	0.0003	1.435	2294	1.7	15.405	64.1514	88.394 BORDE_VIA
	1048	1047	0.0003	1.435	2295	1.7	16.379	77.0959	88.4831 BORDE_VIA
	1048	1047	0.0003	1.435	2296	1.7	19.658	81.37	89.0809 BORDE_VIA
	1048	1047	0.0003	1.435	2297	1.7	22.784	82.5059	89.4216 BORDE_VIA
	1048	1047	0.0003	1.435	2298	1.7	19.721	95.532	89.2042 BORDE_VIA
	1048	1047	0.0003	1.435	2299	1.7	16.314	100.4442	88.47 BORDE_VIA
	1048	1047	0.0003	1.435	2300	1.7	15.302	114.5039	88.4659 BORDE_VIA
	1048	1047	0.0003	1.435	2301	1.7	13.806	72.4625	89.1535 SUMIDERO
	1048	1047	0.0003	1.435	2302	1.7	14.47	69.3618	89.1933 SUMIDERO
	1048	1047	0.0003	1.435	2303	1.7	31.139	334.4457	89.4156 PARAMENTO
	1048	1047	0.0003	1.435	2304	1.7	15.572	340.1325	88.5416 MANHOL
	1048	1047	0.0003	1.435	2305	1.7	5.857	174.4936	87.3619 EJE_TUBO
	1048	1047	0.0003	1.435	2306	1.7	3.132	206.3442	83.5545 MANHOL
	1048	1047	0.0003	1.435	2307	1.7	1.682	234.34	84.5942 VALVULA
	1048	1047	0.0003	1.435	2308	1.7	7.115	196.4339	88.3035 BORDE_VIA
	1048	1047	0.0003	1.435	2309	1.7	7.825	184.2322	88.0045 BORDE_VIA
	1048	1047	0.0003	1.435	2310	1.7	8.802	181.1255	88.1427 BORDE_VIA
	1048	1047	0.0003	1.435	2311	1.7	3.199	354.0432	85.1019 BORDE_VIA
	1048	1047	0.0003	1.435	2312	1.7	2.239	289.1218	85.5708 BORDE_VIA
	1048	1047	0.0003	1.435	2313	1.7	11.175	271.5429	90.3525 BORDE_VIA
	1048	1047	0.0003	1.435	2314	1.7	11.227	266.5152	90.5008 ANDEN
	1048	1047	0.0003	1.435	2315	1.7	25.757	268.2912	90.3702 ANDEN
	1048	1047	0.0003	1.435	2316	1.7	27.068	255.0806	90.204 BORDE_VIA
	1048	1047	0	1.433	1047	1.7	126.668	0	89.4602
SD	89.89.4602								
	1048	1047	0	1.433	2317	1.7	12.51	238.0606	90.3605 POSTE
	1048	1047	0	1.433	2318	1.7	22.574	166.3639	88.5922 POSTE
	1048	1047	0	1.433	2319	1.7	29.751	169.5128	89.1432 SEPARADOR



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1048	1047	0	1.433	2320	1.7	29.782	169.0339	89.1541	SEPARADOR
	1048	1047	0	1.433	2321	1.7	48.87	173.0946	89.2926	SEPARADOR
	1048	1047	0	1.433	2322	1.7	48.848	173.3308	89.3413	SEPARADOR
	1048	1047	0	1.433	2323	1.7	56.39	174.1936	89.3834	POSTE
	1048	1047	0	1.433	2324	1.7	31.53	181.1338	89.2355	BORDE_VIA
	1048	1047	0	1.433	2325	1.7	45.995	179.4429	89.4334	BORDE_VIA
	1048	1047	0	1.433	2326	1.7	33.879	185.2019	89.4018	BORDE_VIA
	1048	1047	0	1.433	2327	1.7	44.15	180.423	89.3657	BORDE_VIA
	1048	1047	0	1.433	2328	1.7	42.223	183.5121	89.4245	BORDE_VIA
	1048	1047	0	1.433	2329	1.7	38.298	181.4556	89.3917	MANHOL
	1048	1047	0	1.433	2330	1.7	35.558	182.4916	89.384	VALVULA
	1048	1047	0	1.433	2331	1.7	42.116	194.4328	89.4645	BORDE_VIA
	1048	1047	0	1.433	2332	1.7	42.113	197.3541	89.3408	ANDEN
	1048	1047	0	1.433	2333	1.7	36.276	197.1323	89.1502	POSTE
	1048	1047	0	1.433	2334	1.7	56.325	187.5313	89.3254	MANHOL
	1048	1047	0	1.433	2335	1.7	55.741	185.2522	89.3254	POSTE
	1048	1047	0	1.433	2336	1.7	52.461	185.222	89.3005	ANDEN
	1048	1047	0	1.433	1049	1.7	116.096	179.4246	89.5309	DELTA
	1048	1047	0	1.433	2337	1.7	62.473	161.1021	89.3732	BORDE_VIA
	1048	1047	0	1.433	2338	1.7	68.753	163.1019	89.3751	BORDE_VIA
	1048	1047	0	1.433	2339	1.7	56.655	165.2446	89.3717	BORDE_VIA
	1048	1047	0	1.433	2340	1.7	65.351	164.0809	89.4008	MANHOL
	1048	1047	0	1.531	1047	1.7	126.709	0	89.4848	
SD	89.89.4848									
	1048	1047	0	1.531	1050	1.7	113.939	178.3641	89.5947	DELTA
	1050	1048	0	1.533	1048	1.7	113.943	0	89.521	
SD	89.89.5210									
	1050	1048	0	1.533	2341	1.7	23.124	8.4836	89.1544	POSTE
	1050	1048	0	1.533	1051	1.7	113.892	181.2611	90.0335	DELTA
	1050	1048	0	1.533	2342	1.7	12.949	350.5432	89.381	SUMIDERO
	1050	1048	0	1.533	2343	1.7	13.851	349.2517	89.5121	SUMIDERO
	1050	1048	0	1.533	2344	1.7	13.431	318.3	90.1606	SUMIDERO
	1050	1048	0	1.533	2345	1.7	12.45	317.5002	90.1655	SUMIDERO
	1050	1048	0	1.533	2346	1.7	12.076	350.3401	89.0625	BORDE_VIA
	1050	1048	0	1.533	2347	1.7	11.065	347.1536	89.0625	BORDE_VIA
	1050	1048	0	1.533	2348	1.7	10.561	338.1912	89.4808	BORDE_VIA
	1050	1048	0	1.533	2349	1.7	12.122	324.2632	88.2135	ANDEN
	1050	1048	0	1.533	2350	1.7	7.174	323.4707	88.5741	VALVULA
	1050	1048	0	1.533	2351	1.7	7.658	335.5559	87.4928	MANHOL
	1050	1048	0	1.533	2352	1.7	7.37	282.4442	88.1715	ANDEN
	1050	1048	0	1.533	2353	1.7	4.216	291.0442	87.3512	BORDE_VIA
	1050	1048	0	1.533	2354	1.7	2.6	282.2319	85.004	BORDE_VIA
	1050	1048	0	1.533	2355	1.7	2.648	233.0314	86.2614	BORDE_VIA
	1050	1048	0	1.533	2356	1.7	6.578	199.1215	88.235	BORDE_VIA
	1050	1048	0	1.533	2357	1.7	12.422	165.5515	89.0247	POSTE
	1050	1048	0	1.533	2358	1.7	17.848	303.5507	89.5429	PARAMENTO
	1050	1048	0	1.533	2359	1.7	24.108	294.4812	90.0309	PARAMENTO
	1050	1048	0	1.533	2360	1.7	15.249	274.5714	90.1535	PARAMENTO
	1050	1048	0	1.533	2361	1.7	14.446	283.1811	90.1306	POSTE
	1050	1048	0	1.533	2362	1.7	23.258	187.4224	89.593	SUMIDERO
	1050	1048	0	1.533	2363	1.7	22.343	186.403	89.5725	SUMIDERO
	1050	1048	0	1.533	2364	1.7	25.76	173.5124	89.0527	SEPARADOR
	1050	1048	0	1.533	2365	1.7	25.701	173.2213	89.1055	SEPARADOR
	1050	1048	0	1.533	2366	1.7	28.354	174.2647	89.1055	SEPARADOR
	1050	1048	0	1.533	2367	1.7	28.391	173.5112	89.1055	SEPARADOR
	1050	1048	0	1.533	2368	1.7	23.943	186.1239	89.3939	BORDE_VIA
	1050	1048	0	1.533	2369	1.7	25.278	187.22	89.4529	BORDE_VIA
	1050	1048	0	1.533	2370	1.7	26.284	189.4937	89.5806	BORDE_VIA
	1050	1048	0	1.533	2371	1.7	26.857	196.3722	89.3936	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1050	1048	0	1.533	2372	1.7	28.864	187.5331	89.5046	MANHOL
1050	1048	0	1.533	2373	1.7	29.894	188.3554	90.0356	VALVULA
1050	1048	0	1.533	2374	1.7	33.781	194.4437	90.0921	SUMIDERO
1050	1048	0	1.533	2375	1.7	34.281	193.2222	90.1158	SUMIDERO
1050	1048	0	1.533	2376	1.7	30.958	207.5414	90.0958	POSTE
1050	1048	0	1.533	2377	0.085	30.006	211.1224	92.2341	PARAMENTO
1050	1048	0	1.533	2378	1.7	34.589	204.4717	90.0903	POSTE
1050	1048	0	1.533	2379	1.7	36.349	205.5006	90.064	PARAMENTO
1050	1048	0	1.533	2380	1.7	31.131	207.0244	90.0755	BORDE_VIA
1050	1048	0	1.533	2381	1.7	34.062	204.3733	90.0653	BORDE_VIA
1050	1048	0	1.533	2382	1.7	36.51	206.2354	90.0857	PARAMENTO
1050	1048	0	1.533	2383	1.7	33.907	193.1504	89.4429	ANDEN
1050	1048	0	1.533	2384	1.7	33.388	187.5623	89.4803	BORDE_VIA
1050	1048	0	1.533	2385	1.7	34.453	185.1517	90.0156	BORDE_VIA
1050	1048	0	1.533	2386	1.7	35.88	184.2123	89.5754	BORDE_VIA
1050	1048	0	1.533	2387	1.7	39.54	183.5823	89.5445	BORDE_VIA
1050	1048	0	1.533	2388	1.7	47.045	176.5734	89.5003	POSTE
1050	1048	0	1.533	2389	1.7	40.828	191.325	90.0513	POSTE
1050	1048	0	1.533	2390	1.7	59.559	183.0617	90.091	SUMIDERO
1050	1048	0	1.533	2391	1.7	60.373	183.3321	90.0751	SUMIDERO
1050	1048	0	1.533	2392	1.7	60.658	182.5655	90.0503	BORDE_VIA
1050	1048	0	1.533	2393	1.7	60.987	182.5904	90.0503	BORDE_VIA
1050	1048	0	1.533	2394	1.7	61.333	183.2308	90.0715	BORDE_VIA
1050	1048	0	1.533	2395	1.7	61.505	184.4008	90.0602	BORDE_VIA
1050	1048	0	1.533	2396	1.7	64.236	183.4852	89.5727	MANHOL
1050	1048	0	1.533	2397	1.7	61.778	187.4319	90.0046	ANDEN
1050	1048	0	1.533	2398	1.7	68.524	184.1549	89.5641	BORDE_VIA
1050	1048	0	1.533	2399	1.7	69.545	183.0737	90.0446	BORDE_VIA
1050	1048	0	1.533	2400	1.7	70.998	182.3628	90.0239	BORDE_VIA
1050	1048	0	1.533	2401	1.7	68.719	187.3302	90.1637	SUMIDERO
1050	1048	0	1.533	2402	1.7	69.572	187.524	90.1716	SUMIDERO
1050	1048	0	1.533	2403	1.7	62.656	193.2238	89.5943	PARAMENTO
1050	1048	0	1.533	2404	0.085	68.924	186.5411	91.1658	ANDEN
1050	1048	0	1.533	2405	1.7	52.635	167.4349	89.5419	BORDE_VIA
1050	1048	0	1.533	2406	1.7	31.887	151.2319	89.3844	MANHOL
1050	1048	0	1.533	2407	1.7	28.726	147.1601	89.3357	VALVULA
1050	1048	0	1.533	2408	1.7	12.456	75.2147	88.4025	BORDE_VIA
1051	1050	0	1.567	1050	1.7	113.879	0	89.4539	
SD	89.89.4539								
1051	1050	0	1.567	2409	1.7	15.515	350.2841	89.1647	VALVULA
1051	1050	0	1.567	2410	1.7	21.866	355.0428	89.511	SUMIDERO
1051	1050	0	1.567	2411	1.7	21.045	356.0857	89.4736	SUMIDERO
1051	1050	0	1.567	2412	1.7	20.789	356.2753	89.3048	BORDE_VIA
1051	1050	0	1.567	2413	1.7	19.454	355.1207	89.2332	BORDE_VIA
1051	1050	0	1.567	2414	1.7	18.094	349.5958	89.064	BORDE_VIA
1051	1050	0	1.567	2415	1.7	18.871	340.2015	89.031	ANDEN
1051	1050	0	1.567	2416	1.7	20.19	340.5426	88.5404	POSTE
1051	1050	0	1.567	2417	1.7	11.064	345.2224	89.0622	BORDE_VIA
1051	1050	0	1.567	2418	1.7	12.712	329.5529	89.2303	BORDE_VIA
1051	1050	0	1.567	2419	1.7	12.706	329.5529	89.2303	BORDE_VIA
1051	1050	0	1.567	2420	1.7	9.975	349.3838	88.552	BORDE_VIA
1051	1050	0	1.567	2421	1.7	8.519	351.5257	88.4459	BORDE_VIA
1051	1050	0	1.567	2422	1.7	13.92	323.5651	89.4433	POSTE
1051	1050	0	1.567	2423	1.7	8.016	31.0616	87.0725	SEPARADOR
1051	1050	0	1.567	2423	1.7	8.229	33.1616	87.1039	SEPARADOR
1051	1050	0	1.567	2424	1.7	15.342	321.0054	89.4852	SUMIDERO
1051	1050	0	1.567	2425	1.7	14.433	321.5505	89.4852	SUMIDERO
1051	1050	0	1.567	2426	1.7	18.316	66.0532	89.1521	MANHOLE
1051	1050	0	1.567	2427	1.7	13.749	70.4154	89.3247	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1051	1050	0	1.567	2428	1.7	15.978	54.0422	89.3448 BORDE_VIA
1051	1050	0	1.567	2429	1.7	20.973	63.2019	89.2328 BORDE_VIA
1051	1050	0	1.567	2430	1.7	19.08	75.1402	89.1458 BORDE_VIA
1051	1050	0	1.567	2431	1.7	21.739	320.2436	89.3936 BORDE_VIA
1051	1050	0	1.567	2432	1.7	15.286	317.0332	89.4603 BORDE_VIA
1051	1050	0	1.567	2433	1.7	23.032	320.0914	88.535 PARAMENTO
1051	1050	0	1.567	2434	1.7	18.599	306.3826	88.1241 PARAMENTO
1051	1050	0	1.567	2435	1.7	5.303	124.4423	87.4539 POSTE
1051	1050	0	1.567	2436	1.7	15.434	183.3233	89.5038 SUMIDERO
1051	1050	0	1.567	2437	1.7	16.272	185.0957	89.5559 SUMIDERO
1051	1050	0	1.567	2438	1.7	18.91	183.1815	89.3924 BORDE_VIA
1051	1050	0	1.567	2439	1.7	20.598	187.4626	89.555 BORDE_VIA
1051	1050	0	1.567	2440	1.7	22.269	184.4402	89.5831 VALVULA
1051	1050	0	1.567	2441	1.7	23.814	179.4905	89.3848 VALVULA
1051	1050	0	1.567	2442	1.7	25.313	179.281	89.5043 MANHOLE
1051	1050	0	1.567	2443	1.7	21.221	196.2712	89.3701 ANDEN
1051	1050	0	1.567	2444	1.7	22.479	200.3038	90.4819 SUMIDERO
1051	1050	0	1.567	2445	1.7	23.032	202.0346	90.3802 SUMIDERO
1051	1050	0	1.567	2446	1.7	31.311	183.5509	90.0254 HIDRANTE
1051	1050	0	1.567	2447	1.7	31.736	184.5456	89.5608 POSTE
1051	1050	0	1.567	2448	1.7	32.027	185.4615	89.5608 ANDEN
1051	1050	0	1.567	2449	1.7	32.538	183.052	90.0344 BORDE_VIA
1051	1050	0	1.567	2450	1.7	33.812	181.2127	90.0004 BORDE_VIA
1051	1050	0	1.567	2451	1.7	37.057	181.0927	89.5616 BORDE_VIA
1051	1050	0	1.567	2452	1.7	32.935	172.0804	89.4632 POSTE
1051	1050	0	1.567	2453	1.7	37.115	185.1104	89.415 PARAMENTO
1051	1050	0	1.567	2454	1.7	39.098	198.2736	89.4149 PARAMENTO
1051	1050	0	1.567	2455	1.7	23.586	218.4335	90.0558 PARAMENTO
1051	1050	0	1.567	2456	1.7	25.77	214.5226	90.2321 BORDE_VIA
1051	1050	0	1.567	2457	1.7	33.756	207.0104	90.1445 BORDE_VIA
1051	1050	0	1.567	1052	1.7	75.924	179.1936	89.5729 DELTA
1051	1050	0	1.567	2458	1.7	64.845	175.492	89.5005 POSTE
1051	1050	0	1.567	2459	1.7	54.496	178.3955	89.5852 MANHOLE
1051	1050	0	1.567	2460	1.7	51.458	179.1936	89.5841 LINEAMIENT
1051	1050	0	1.567	2461	1.7	26.485	179.1936	89.5008 LINEAMIENT
1051	1050	0	1.567	2462	1.7	34.247	0	89.325 LINEAMIENT
1051	1050	0	1.567	2463	1.7	57.459	359.5959	89.4558 LINEAMIENT
1052	1051	0	1.606	1051	1.7	75.921	0	89.523
SD	89.89.5230							
1052	1051	0	1.606	2464	1.7	12.623	84.2117	90.0607 MANHOLE
1052	1051	0	1.606	2465	2.45	16.463	79.1458	86.3328 MANHOLE
1052	1051	0	1.606	2466	1.7	15.078	62.191	90.2702 SUMIDERO
1052	1051	0	1.606	2467	1.7	15.783	64.3257	90.2347 SUMIDERO
1052	1051	0	1.606	2468	1.7	13.637	105.5751	90.1249 SUMIDERO
1052	1051	0	1.606	2469	1.7	12.878	102.5639	90.1249 SUMIDERO
1052	1051	0	1.606	2470	1.7	16.518	50.3815	89.4923 BORDE_VIA
1052	1051	0	1.606	2471	1.7	12.597	102.2826	90.085 BORDE_VIA
1052	1051	0	1.606	2472	1.7	15.716	60.1533	89.132 BORDE_VIA
1052	1051	0	1.606	2473	1.7	12.776	97.1405	89.5738 BORDE_VIA
1052	1051	0	1.606	2474	1.7	16.59	68.5409	89.4602 BORDE_VIA
1052	1051	0	1.606	2475	1.7	14.234	95.2454	89.3856 BORDE_VIA
1052	1051	0	1.606	2476	1.7	18.822	73.3544	89.3102 BORDE_VIA
1052	1051	0	1.606	2477	1.7	18.178	94.1408	89.2938 BORDE_VIA
1052	1051	0	1.606	2478	1.7	19.669	68.0921	89.1854 PARAMENTO
1052	1051	0	1.606	2479	1.7	18.684	100.4639	88.5031 PARAMENTO
1052	1051	0	1.606	2480	1.7	14.316	120.5321	90.2013 BORDE_VIA
1052	1051	0	1.606	2481	1.7	22.319	168.5705	89.1337 SEPARADOR
1052	1051	0	1.606	2482	1.7	22.27	169.3758	89.1058 SEPARADOR
1052	1051	0	1.606	2483	1.7	17.96	167.1948	89.3335 POSTE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



1052	1051	0	1.606	2484	1.7	4.739	209.0932	90.4447	SUMIDERO
1052	1051	0	1.606	2485	1.7	5.719	206.1117	90.2304	SUMIDERO
1052	1051	0	1.606	2486	1.7	18.005	191.1848	88.5942	MANHOLE
1052	1051	0	1.606	2487	1.7	5.465	222.1925	86.5447	POSTE
1052	1051	0	1.606	2488	1.7	16.636	195.3238	90.461	SUMIDERO
1052	1051	0	1.606	2489	1.7	17.439	194.3513	90.4838	SUMIDERO
1052	1051	0	1.606	2490	1.7	3.807	254.0701	85.4153	PARAMENTO
1052	1051	0	1.606	2491	1.7	21.472	198.135	89.0458	PARAMENTO
1052	1051	0	1.606	2492	1.7	25.077	196.0838	89.1603	PARAMENTO
1052	1051	0	1.606	2493	1.7	7.485	244.1235	87.1141	PARAMENTO
1052	1051	0	1.606	2494	1.7	3.809	199.0014	87.3546	BORDE_VIA
1052	1051	0	1.606	2495	1.7	7.618	210.053	89.1041	BORDE_VIA
1052	1051	0	1.606	2496	1.7	41.033	175.0325	89.5258	MANHOLE
1052	1051	0	1.606	2497	1.7	16.26	194.3236	89.5815	BORDE_VIA
1052	1051	0	1.606	2498	1.7	18.97	183.5257	89.451	BORDE_VIA
1052	1051	0	1.606	2499	1.7	20.307	183.4524	89.4814	BORDE_VIA
1052	1051	0	1.606	2500	1.7	46.417	180.1833	89.5528	MANHOLE
1052	1051	0	1.606	2501	1.7	30.862	182.243	89.5221	BORDE_VIA
1052	1051	0	1.606	2502	1.7	38.023	182.0149	89.5221	BORDE_VIA
1052	1051	0	1.606	2503	1.7	38.978	183.2817	89.4828	BORDE_VIA
1052	1051	0	1.606	2504	1.7	44.612	183.5049	89.4827	BORDE_VIA
1052	1051	0	1.606	2505	1.7	45.695	181.464	89.5514	BORDE_VIA
1052	1051	0	1.606	2506	1.7	49.271	175.3338	89.5309	SEPARADOR
1052	1051	0	1.606	2507	1.7	49.302	175.1207	89.5357	SEPARADOR
1052	1051	0	1.606	2508	1.7	52.315	175.49	89.5502	POSTE
1052	1051	0	1.606	1053	1.7	113.859	180.062	90.0437	DELTA
1052	1051	0	1.606	2509	1.7	77.281	180.062	90.031	LINEAMIENT
1052	1051	0	1.606	2510	1.7	47.419	180.0621	89.565	LINEAMIENT
1052	1051	0	1.606	1054	1.7	1.309	267.4422	79.2755	DELTA
1053	1051	359.5959	1.52	1051	1.7	113.862	359.5959	89.4647	
SD	89.89.4647								
1053	1051	359.5959	1.52	1054	1.7	113.816	359.203	89.4214	DELTA
1053	1051	359.5959	1.52	2511	1.7	5.472	43.5101	87.2329	SEPARADOR
1053	1051	359.5959	1.52	2512	1.7	5.833	46.5153	87.3634	SEPARADOR
1053	1051	359.5959	1.52	2513	1.7	6.902	33.3908	88.1319	POSTE
1053	1051	359.5959	1.52	2514	1.7	34.512	6.2047	89.2849	POSTE
1053	1051	359.5959	1.52	2515	1.7	30.35	357.2306	89.2849	BORDE_VIA
1053	1051	359.5959	1.52	2516	1.7	5.069	344.4112	88.5705	BORDE_VIA
1053	1051	359.5959	1.52	2517	1.7	3.508	327.5436	87.2551	BORDE_VIA
1053	1051	359.5959	1.52	2518	1.7	3.453	314.5602	90.3803	SUMIDERO
1053	1051	359.5959	1.52	2519	1.7	4.019	303.5557	90.4527	SUMIDERO
1053	1051	359.5959	1.52	2520	1.7	3.342	294.3244	87.3856	BORDE_VIA
1053	1051	359.5959	1.52	2521	1.7	6.612	270.4919	88.3734	BORDE_VIA
1053	1051	359.5959	1.52	2522	1.7	6.93	288.5446	87.1358	PARAMENTO
1053	1051	359.5959	1.52	2523	1.7	11.958	213.2553	88.2522	PARAMENTO
1053	1051	359.5959	1.52	2524	1.7	10.097	218.4655	89.0037	BORDE_VIA
1053	1051	359.5959	1.52	2525	1.7	9.72	200.372	89.0428	BORDE_VIA
1053	1051	359.5959	1.52	2526	1.7	10.533	200.4239	90.0857	SUMIDERO
1053	1051	359.5959	1.52	2527	1.7	10.299	195.3828	90.2059	SUMIDERO
1053	1051	359.5959	1.52	2528	1.7	10.275	193.1153	89.4511	BORDE_VIA
1053	1051	359.5959	1.52	2529	1.7	11.364	188.3312	89.451	BORDE_VIA
1053	1051	359.5959	1.52	2530	1.7	12.835	186.0158	90.0626	BORDE_VIA
1053	1051	359.5959	1.52	2531	1.7	11.32	160.1823	89.0711	SEPARADOR
1053	1051	359.5959	1.52	2532	1.7	11.554	158.2144	89.1012	SEPARADOR
1053	1051	359.5959	1.52	2533	1.7	5.175	196.1822	89.1012	MANHOLE
1053	1051	359.5959	1.52	2534	1.7	12.291	82.3039	90.0333	BORDE_VIA
1053	1051	359.5959	1.52	2535	1.7	28.976	172.3342	89.52	POSTE
1053	1051	359.5959	1.52	2536	1.7	28.167	172.1522	89.3108	SEPARADOR
1053	1051	359.5959	1.52	2537	1.7	28.259	171.3316	89.3108	SEPARADOR



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



		1053	1051	359.5959	1.52	2538	1.7	18.749	73.1735	89.1059	CERRAMIENT
		1053	1051	359.5959	1.52	2539	1.7	22.489	135.2335	89.2645	CERRAMIENT
		1053	1051	359.5959	1.52	2540	1.7	25.309	195.1932	89.2514	PARAMENTO
		1053	1051	359.5959	1.52	2541	1.7	27.584	182.5248	90.0652	BORDE_VIA
		1053	1051	359.5959	1.52	12002	1.7	108.809	266.1457	90.0312	DELTA
		12002	1053	0	1.514	1053	1.7	108.812	0	89.4716	
SD	89.89.4716										
		12002	1053	0	1.514	12003	1.7	112.241	92.032	89.5417	DELTA
		1044	1042	0	1.47	1042	1.7	143.697	0	90.0636	
SD	90.90.0636										
		1044	1042	0	1.47	2542	1.7	9.363	43.5933	88.5507	ANDEN
		1044	1042	0	1.47	2543	1.7	8.174	33.3303	88.5056	ANDEN
		1044	1042	0	1.47	2544	1.7	6.567	92.4538	86.2511	ANDEN
		1044	1042	0	1.47	2545	1.7	4.618	94.3607	85.1729	ANDEN
		1044	1042	0	1.47	2546	1.7	3.359	81.4906	85.3208	VALVULA
		1044	1042	0	1.47	2547	1.7	7.566	335.1453	86.511	BORDE_VIA
		1044	1042	0	1.47	2548	1.7	12.54	193.2508	87.0904	BORDE_VIA
		1044	1042	0	1.47	1055	1.7	104.844	177.5349	89.1822	DELTA
		1044	1042	0	1.47	2549	1.7	3.638	104.3641	85.0307	BORDE_VIA
		1044	1042	0	1.47	2550	1.7	3.313	120.1115	85.5222	BORDE_VIA
		1044	1042	0	1.47	2551	1.7	4.239	141.1825	86.0145	BORDE_VIA
		1044	1042	0	1.47	2552	1.7	8.04	160.3315	87.5103	BORDE_VIA
		1044	1042	0	1.47	2553	1.7	10.624	141.2402	86.572	ANDEN
		1044	1042	0	1.47	2554	1.7	9.52	151.0033	86.4815	ANDEN
		1055	1044	0	1.474	1044	1.7	104.845	0	90.2833	
SD	90.90.2833										
		1055	1044	0	1.474	2555	1.7	113.579	355.0115	90.2414	BORDE_VIA
		1055	1044	0	1.474	2556	1.7	93.522	353.3541	90.2118	BORDE_VIA
		1055	1044	0	1.474	2557	1.7	33.758	4.1427	89.585	ANDEN
		1055	1044	0	1.474	2558	1.7	33.932	7.3129	89.5737	ANDEN
		1055	1044	0	1.474	2559	1.7	34.828	351.4217	90.0645	BORDE_VIA
		1055	1044	0	1.474	2560	1.7	4.541	21.0945	87.2512	ANDEN
		1055	1044	0	1.474	2561	1.7	5.532	40.4345	87.3318	ANDEN
		1055	1044	0	1.474	2562	1.7	37.052	340.5549	90.2203	BORDE_VIA
		1055	1044	0	1.474	2563	1.7	12.753	72.1444	89.3846	BORDE_VIA
		1055	1044	0	1.474	2564	1.7	16.701	303.3432	89.4753	BORDE_VIA
		1055	1044	0	1.474	2565	1.7	19.719	290.0923	89.4236	BORDE_VIA
		1055	1044	0	1.474	2566	1.7	18.631	255.1553	89.1822	BORDE_VIA
		1055	1044	0	1.474	2567	1.7	18.89	252.5734	89.0419	BORDE_VIA
		1055	1044	0	1.474	2568	1.7	23.131	256.2442	89.1858	BORDE_VIA
		1055	1044	0	1.474	2569	1.7	15.793	244.4617	89.3204	BORDE_VIA
		1055	1044	0	1.474	2570	1.7	20.327	225.0444	89.171	BORDE_VIA
		1055	1044	0	1.474	2571	1.7	1.79	122.5727	81.4502	ANDEN
		1055	1044	0	1.474	2572	1.7	3.792	107.3601	85.3555	ANDEN
		1055	1044	0	1.474	2573	1.7	8.437	98.0526	89.1912	BORDE_VIA
		1055	1044	0	1.474	2574	1.7	9.404	323.3406	87.5344	BORDE_VIA
		1055	1044	0	1.474	2575	1.7	9.098	220.4009	88.0521	BORDE_VIA
		1055	1044	0	1.474	1028	1.7	335.322	271.5554	90.2558	DELTA
		1055	1044	0	1.474	2576	1.7	3.239	188.4407	84.2931	BORDE_VIA
		1055	1044	0	1.474	2577	1.7	11.122	183.3252	88.1007	BORDE_VIA
		1055	1044	0	1.474	1056	1.7	117.65	182.5311	89.3619	DELTA
		1056	1055	0.0001	1.482	1055	1.7	117.644	0.0001	90.1226	
SD	90.90.1226										
		1056	1055	0.0001	1.482	2578	1.7	15.188	14.3621	89.3816	ANDEN
		1056	1055	0.0001	1.482	2579	1.7	15.779	21.0814	89.2117	ANDEN
		1056	1055	0.0001	1.482	2580	1.7	9.968	22.5635	89.0936	ANDEN
		1056	1055	0.0001	1.482	2581	1.7	10.96	32.1217	88.5704	ANDEN
		1056	1055	0.0001	1.482	2582	1.7	15.889	30.5154	90.0725	BORDE_VIA
		1056	1055	0.0001	1.482	2583	1.7	18.363	41.2611	90.1515	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1056	1055	0.0001	1.482	2584	1.7	14.23	345.1955	89.2655 BORDE_VIA
	1056	1055	0.0001	1.482	2585	1.7	13.658	38.2337	90.0928 BORDE_VIA
	1056	1055	0.0001	1.482	2586	1.7	15.655	46.1323	90.1738 BORDE_VIA
	1056	1055	0.0001	1.482	2587	1.7	16.916	190.1813	88.591 BORDE_VIA
	1056	1055	0.0001	1.482	2588	1.7	31.605	171.4138	89.2845 ANDEN
	1056	1055	0.0001	1.482	2589	1.7	32.207	188.2704	89.2725 ANDEN
	1056	1055	0.0001	1.482	2590	1.7	16.154	299.102	89.5746 BORDE_VIA
	1056	1055	0.0001	1.482	2591	1.7	24.501	288.3621	89.4346 BORDE_VIA
	1056	1055	0.0001	1.482	2592	1.7	16.398	314.3505	89.5213 BORDE_VIA
	1056	1055	0.0001	1.482	2593	1.7	23.59	329.5233	89.3806 BORDE_VIA
	1056	1055	0.0001	1.482	2594	1.7	14.929	263.4727	89.4916 BORDE_VIA
	1056	1055	0.0001	1.482	2595	1.7	12.303	247.443	89.2207 BORDE_VIA
	1056	1055	0.0001	1.482	2596	1.7	19.181	215.3958	88.5647 BORDE_VIA
	1056	1055	0.0001	1.482	1025	1.7	315.137	269.2742	90.1612 DELTA
	1056	1055	0.0001	1.482	1024	1.7	188.766	268.4113	89.5902 DELTA
	1056	1055	0.0001	1.482	1057	1.7	111.818	177.42	89.3955 DELTA
	1057	1056	0.0001	1.47	1056	1.7	111.808	0.0001	90.0938
SD	90.90.0938								
	1057	1056	0.0001	1.47	2597	1.7	36.458	3.5335	89.55 ANDEN
	1057	1056	0.0001	1.47	2598	1.7	36.578	7.0235	89.4957 ANDEN
	1057	1056	0.0001	1.47	2599	1.7	29.13	8.3818	90.0111 ANDEN
	1057	1056	0.0001	1.47	2600	1.7	28.906	4.4319	90.0313 ANDEN
	1057	1056	0.0001	1.47	2601	1.7	23.204	347.055	89.4218 BORDE_VIA
	1057	1056	0.0001	1.47	2602	1.7	17.221	308.1723	89.3414 BORDE_VIA
	1057	1056	0.0001	1.47	2603	1.7	23.751	325.5451	89.493 BORDE_VIA
	1057	1056	0.0001	1.47	2604	1.7	14.515	204.0344	89.3116 BORDE_VIA
	1057	1056	0.0001	1.47	2605	1.7	17.672	303.1022	89.3116 BORDE_VIA
	1057	1056	0.0001	1.47	2606	1.7	20.736	298.1651	89.3632 BORDE_VIA
	1057	1056	0.0001	1.47	2607	1.7	19.885	291.5241	89.3949 BORDE_VIA
	1057	1056	0.0001	1.47	2608	1.7	27.496	286.1708	89.3457 BORDE_VIA
	1057	1056	0.0001	1.47	2609	1.7	25.506	271.1751	90.0121 BORDE_VIA
	1057	1056	0.0001	1.47	2610	1.7	17.642	270.2225	89.5209 BORDE_VIA
	1057	1056	0.0001	1.47	2611	1.7	15.48	256.1401	89.3757 BORDE_VIA
	1057	1056	0.0001	1.47	2612	1.7	17.98	230.5111	89.2325 BORDE_VIA
	1057	1056	0.0001	1.47	2613	1.7	7.215	165.5809	89.0748 ANDEN
	1057	1056	0.0001	1.47	2614	1.7	7.927	152.1729	89.0002 ANDEN
	1057	1056	0.0001	1.47	2615	1.7	15.019	166.3558	89.2603 ANDEN
	1057	1056	0.0001	1.47	2616	1.7	14.643	174.085	89.4156 ANDEN
	1057	1056	0.0001	1.47	2617	1.7	5.464	113.5302	87.1013 ESTRUCTURA
	1057	1056	0.0001	1.47	2618	1.7	16.944	144.3814	90.0252 PARAMENTO
	1057	1056	0.0001	1.47	2619	2.25	12.492	100.1545	85.4015 ESTRUCTURA
	1057	1056	0.0001	1.47	2620	1.7	6.864	48.4356	88.1216 ESTRUCTURA
	1057	1056	0.0001	1.47	2621	1.7	19.688	130.0309	89.5047 PARAMENTO
	1057	1056	0.0001	1.47	2622	1.7	31.401	155.0717	89.3641 PARAMENTO
	1057	1056	0.0001	1.47	2623	1.7	29.828	173.5345	89.1249 ANDEN
	1057	1056	0.0001	1.47	2624	1.7	29.708	177.4408	89.254 ANDEN
	1057	1056	0.0001	1.47	1015	1.7	168.383	272.3349	89.5616 DELTA
	1057	1056	0.0001	1.47	1058	1.7	104.671	180.5809	89.4943 DELTA
	1058	1057	0	1.506	1057	1.7	104.657	0	90.0005
SD	90.90.0005								
	1058	1057	0	1.506	2625	1.7	55.719	354.015	89.4852 BORDE_VIA
	1058	1057	0	1.506	2626	1.7	48.146	343.193	89.5326 BORDE_VIA
	1058	1057	0	1.506	2627	1.7	29.375	331.4016	89.2653 BORDE_VIA
	1058	1057	0	1.506	2628	1.7	60.673	1.4542	89.5839 ANDEN
	1058	1057	0	1.506	2629	1.7	46.753	6.1329	89.5625 PARAMENTO
	1058	1057	0	1.506	2630	1.7	15.132	290.0425	88.3427 BORDE_VIA
	1058	1057	0	1.506	2631	1.7	35.307	262.0346	89.2658 BORDE_VIA
	1058	1057	0	1.506	2632	1.7	16.126	247.4426	88.2718 BORDE_VIA
	1058	1057	0	1.506	2633	1.7	22.793	218.1333	88.4441 BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	1058	1057	0	1.506	2634	1.7	35.887	257.2152	88.5623	PARAMENTO
	1058	1057	0	1.506	2635	1.7	20.879	245.4612	88.085	PARAMENTO
	1058	1057	0	1.506	2636	1.7	33.926	214.1142	88.5009	PARAMENTO
	1058	1057	0	1.506	2637	1.7	20.318	196.5421	88.2051	BORDE_VIA
	1058	1057	0	1.506	2638	1.7	19.925	118.2252	89.5158	PARAMENTO
	1058	1057	0	1.506	2639	1.7	23.882	109.5638	90.0412	PARAMENTO
	1058	1057	0	1.506	2640	1.7	23.953	129.0152	89.4905	PARAMENTO
	1058	1057	0	1.506	2641	1.7	18.637	103.5738	89.1629	PARAMENTO
	1058	1057	0	1.506	2642	1.7	4.113	24.2119	86.3518	POSTE
	1058	1057	0	1.506	2643	1.7	8.187	315.3823	86.582	POSTE
	1058	1057	0	1.506	2644	1.7	1.442	280.25	79.1029	MANHOLE
	1058	1057	0	1.506	1012	1.7	151.963	269.5724	89.5117	DELTA
	1058	1057	0	1.506	1059	1.7	112.791	179.5943	89.3828	DELTA
	1059	1058	0.0001	1.485	1058	1.7	112.791	0.0001	90.1006	
SD	90.90.1006									
	1059	1058	0.0001	1.485	2645	1.7	15.739	336.1807	88.4956	BORDE_VIA
	1059	1058	0.0001	1.485	2646	1.7	4.263	326.022	85.5054	MANHOLE
	1059	1058	0.0001	1.485	2647	1.7	8.617	220.5511	87.3321	POSTE
	1059	1058	0.0001	1.485	2648	1.7	14.816	201.5527	88.5452	BORDE_VIA
	1059	1058	0.0001	1.485	2649	1.7	22.924	191.4339	89.2353	BORDE_VIA
	1059	1058	0.0001	1.485	2650	1.7	33.257	185.4311	89.2559	BORDE_VIA
	1059	1058	0.0001	1.485	2651	1.7	42.931	191.4014	89.0928	BORDE_VIA
	1059	1058	0.0001	1.485	2652	1.7	41.987	194.2108	89.1208	POSTE
	1059	1058	0.0001	1.485	2653	1.7	29.212	202.5501	88.3857	BORDE_VIA
	1059	1058	0.0001	1.485	2654	1.7	13.977	250.4812	87.5952	BORDE_VIA
	1059	1058	0.0001	1.485	2655	1.7	19.633	271.3621	89.0119	VALVULA
	1059	1058	0.0001	1.485	2656	1.7	26.675	267.294	89.1122	BORDE_VIA
	1059	1058	0.0001	1.485	2657	1.7	30.345	267.4354	89.2152	BORDE_VIA
	1059	1058	0.0001	1.485	2658	1.7	16.545	305.5648	88.3416	BORDE_VIA
	1059	1058	0.0001	1.485	2659	1.7	23.259	324.1013	89.0101	BORDE_VIA
	1059	1058	0.0001	1.485	2660	1.7	12.647	130.5137	87.5	PARAMENTO
	1059	1058	0.0001	1.485	2661	1.7	11.695	120.0253	87.3628	PARAMENTO
	1059	1058	0.0001	1.485	2662	1.7	10.02	137.5651	88.1153	PARAMENTO
	1059	1058	0.0001	1.485	2663	1.7	10.309	82.5957	89.0713	PARAMENTO
	1059	1058	0.0001	1.485	2664	1.7	17.773	66.2936	90.0218	PARAMENTO
	1059	1058	0.0001	1.485	2665	1.7	24.329	73.3	88.545	PARAMENTO
	1059	1058	0.0001	1.485	2666	1.7	27.037	69.113	89.1109	PARAMENTO
	1059	1058	0.0001	1.485	2667	1.7	26.957	71.5941	89.0426	PARAMENTO
	1059	1058	0.0001	1.485	2668	1.7	16.469	68.1159	88.4425	PARAMENTO
	1059	1058	0.0001	1.485	2669	1.7	12.69	61.4606	88.3852	PARAMENTO
	1059	1058	0.0001	1.485	2670	1.7	11.413	78.4855	88.1542	PARAMENTO
	1059	1058	0.0001	1.485	1060	1.5	181.748	186.2612	89.485	DELTA
	1060	1059	359.5959	1.525	1059	1.5	181.745	359.5959	90.0756	
SD	90.90.0756									
	1060	1059	359.5959	1.525	1061	1.7	166.423	265.4729	90.0545	DELTA
	1060	1059	0.0001	1.462	1059	1.7	181.753	0.0001	90.0638	
SD	90.90.0638									
	1060	1059	0.0001	1.462	2671	1.7	4.599	21.03	89.1243	BORDE_VIA
	1060	1059	0.0001	1.462	2672	1.7	6.461	13.1603	89.0743	BORDE_VIA
	1060	1059	0.0001	1.462	2673	1.7	4.957	349.2434	87.5316	PARAMENTO
	1060	1059	0.0001	1.462	2674	1.7	7.954	348.0847	88.3524	PARAMENTO
	1060	1059	0.0001	1.462	2675	1.7	11.599	55.5342	88.2644	PARAMENTO
	1060	1059	0.0001	1.462	2676	1.7	10.152	57.5303	88.2832	PARAMENTO
	1060	1059	0.0001	1.462	2677	1.7	8.279	55.2138	89.4152	BORDE_VIA
	1060	1059	0.0001	1.462	2678	1.7	2.83	357.3358	88.0649	BORDE_VIA
	1060	1059	0.0001	1.462	2679	1.7	10.091	40.4536	89.361	BORDE_VIA
	1060	1059	0.0001	1.462	2680	1.7	8.687	284.4644	89.1122	BORDE_VIA
	1060	1059	0.0001	1.462	2681	1.7	9.402	298.3354	88.5039	PARAMENTO
	1060	1059	0.0001	1.462	2682	1.7	9.149	67.5235	89.2624	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1060	1059	0.0001	1.462	2683	1.7	12.083	72.3807	89.3145	BORDE_VIA
	1060	1059	0.0001	1.462	2684	1.7	13.906	60.5632	88.4339	PARAMENTO
	1060	1059	0.0001	1.462	2685	1.7	17.676	69.3049	89.0249	PARAMENTO
	1060	1059	0.0001	1.462	2686	1.7	9.175	100.3235	89.5601	BORDE_VIA
	1060	1059	0.0001	1.462	2687	1.7	13.452	95.2824	89.4927	BORDE_VIA
	1060	1059	0.0001	1.462	2688	1.7	11.299	112.3403	88.5631	PARAMENTO
	1060	1059	0.0001	1.462	2689	1.7	13.956	106.5637	88.5631	PARAMENTO
	1060	1059	0.0001	1.462	2690	1.7	8.231	113.5519	90.0003	BORDE_VIA
	1060	1059	0.0001	1.462	2691	1.7	10.977	134.1	89.4219	BORDE_VIA
	1060	1059	0.0001	1.462	2692	1.7	13.976	129.171	89.0406	PARAMENTO
	1060	1059	0.0001	1.462	2693	1.7	7.574	247.284	89.0949	BORDE_VIA
	1060	1059	0.0001	1.462	2694	1.7	2.468	159.0906	88.5055	BORDE_VIA
	1060	1059	0.0001	1.462	2695	1.7	4.125	146.2839	90.1414	BORDE_VIA
	1060	1059	0.0001	1.462	2696	1.7	5.252	185.0944	88.4157	PARAMENTO
	1060	1059	0.0001	1.462	2697	1.7	12.478	165.5314	89.3508	BORDE_VIA
	1060	1059	0.0001	1.462	2698	1.7	10.536	180.342	89.0632	PARAMENTO
	1060	1059	0.0001	1.462	2699	1.7	9.442	232.1928	89.0331	PARAMENTO
	1060	1059	0.0001	1.462	2700	1.7	4.764	82.0939	87.3855	MANHOLE
	1060	1059	0.0001	1.462	1061	1.7	166.427	265.4733	90.0439	DELTA
	1061	1059	0	1.517	1059	1.7	166.426	0	89.4636	
SD	89.89.4636									
	1061	1059	0	1.517	1000	1.7	34.346	177.111	94.0057	DELTA
	1061	1059	0	1.517	2701	1.7	14.833	165.1302	94.2117	BORDE_VIA
	1061	1059	0	1.517	2702	1.7	17.015	189.4703	94.1143	BORDE_VIA
	1061	1059	0	1.517	2703	1.7	17.619	196.55	93.3752	BORDE_VIA
	1061	1059	0	1.517	2704	1.7	15.902	165.0559	94.3556	BORDE_VIA
	1061	1059	0	1.517	2705	1.7	11.717	186.0404	94.2835	BORDE_VIA
	1061	1059	0	1.517	2706	1.7	16.917	163.3702	94.5027	BORDE_VIA
	1061	1059	0	1.517	2707	1.7	14.444	197.005	88.5446	PARAMENTO
	1061	1059	0	1.517	2708	0.085	15.317	154.4243	97.593	PARAMENTO
	1061	1059	0	1.517	2709	1.7	8.655	326.2124	87.562	PARAMENTO
	1061	1059	0	1.517	2710	1.7	8.631	349.2114	89.0632	BORDE_VIA
	1061	1059	0	1.517	2711	1.7	8.986	19.315	87.5945	BORDE_VIA
	1061	1059	0	1.517	2712	1.7	9.851	41.1946	87.3415	PARAMENTO
	1061	1059	0	1.517	2713	1.7	20.197	176.1804	94.2247	MANHOLE
	1061	1059	0	1.517	2714	1.7	21.727	175.0335	94.3105	MANHOLE
	1061	1059	0	1.517	2715	1.7	23.818	170.2305	94.494	BORDE_VIA
	1061	1059	0	1.517	2716	1.7	25.596	164.1911	94.3042	PARAMENTO
	1061	1059	0	1.517	2717	1.7	26.355	158.4238	94.3631	PARAMENTO
	1061	1059	0	1.517	2718	1.7	22.563	165.3911	94.4916	BORDE_VIA
	1061	1059	0	1.517	2719	1.7	27.081	171.3434	94.4448	BORDE_VIA
	1061	1059	0	1.517	2720	1.7	27.97	165.4008	94.2106	PARAMENTO
	1061	1059	0	1.517	2721	1.7	27.694	182.1553	94.3958	BORDE_VIA
	1061	1059	0	1.517	2722	1.7	27.617	188.4155	92.1927	PARAMENTO
	1061	1059	0	1.517	2723	1.7	25.191	189.3806	91.4921	PARAMENTO
	1061	1059	0	1.517	2724	1.7	22.152	187.4746	93.5924	BORDE_VIA
	1061	1059	0	1.517	2725	1.7	23.802	182.4427	94.4141	BORDE_VIA
	1061	1059	0	1.517	2726	1.7	25.712	195.1249	90.2235	PARAMENTO
	1000	1061	0	1.507	1061	1.7	34.384	0	85.2249	
SD	85.85.2249									
	1000	1061	0	1.507	1001	1.7	100.958	184.025	90.4226	DELTA
	1000	1061	0	1.507	2727	1.7	22.172	27.2935	84.4724	PARAMENTO
	1000	1061	0	1.507	2728	1.7	22.79	336.5444	82.2241	PARAMENTO
	1000	1061	0	1.507	2729	1.7	19.04	28.0513	87.3455	BORDE_VIA
	1000	1061	0	1.507	2730	1.7	13.929	335.0434	84.402	BORDE_VIA
	1008	1005	0	1.518	1005	1.7	67.377	0	89.485	
SD	89.89.4850									
	1008	1005	0	1.518	2731	1.7	36.749	0	90.1154	LINEAMIENT
	1008	1005	0	1.518	2732	1.7	18.525	0	90.2445	LINEAMIENT



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	1008	1005	0	1.518	2733	1.7	67.911	194.2859	88.4139	LINEAMIENT
	1008	1005	0	1.518	2734	1.7	54.605	194.2859	89.1245	LINEAMIENT
	1008	1005	0	1.518	2735	1.7	24.494	194.2859	89.0502	LINEAMIENT
	1009	1008	0	1.543	1008	1.7	79.204	0	91.073	
SD	91.91.0730									
	1009	1008	0	1.543	2736	1.7	17.484	203.4841	85.1018	LINEAMIENT
	1009	1008	0	1.543	2737	1.7	10.19	203.4841	84.3806	LINEAMIENT
	1009	1008	0	1.543	2738	1.7	4.08	203.4842	81.5929	LINEAMIENT
	1059	1058	0	1.494	1058	1.5	112.787	0	90.1618	
SD	90.90.1618									
	1059	1058	0	1.494	1062	1.5	146.903	167.1541	89.474	DELTA
	1062	1059	359.5959	1.53	1059	1.5	146.912	359.5959	90.1357	
SD	90.90.1357									
	1062	1059	359.5959	1.53	1063	1.5	245.808	165.3854	89.4903	DELTA
	1063	1062	0	1.497	1062	1.5	245.811	0	90.113	
SD	90.90.1130									
	1063	1062	0	1.497	APA10	1.5	194.429	187.1008	89.4532	DELTA
	1063	1062	0	1.473	1062	1.5	245.812	0	90.1118	
SD	90.90.1118									
	1063	1062	0	1.473	1064	1.5	192.858	182.5143	89.4536	DELTA
	1064	1063	0	1.426	1063	1.5	192.866	0	90.1211	
SD	90.90.1211									
	1064	1063	0	1.426	APA03	1.5	43.668	96.1519	89.5941	MOJON
	1064	1063	0	1.426	APA10	1.5	14.635	266.0059	89.2844	MOJON
	APA03	1064	0	1.219	1064	1.5	43.664	0	89.3223	
SD	89.89.3223									
	APA03	1064	0	1.219	APA10	1.5	58.121	357.2558	89.3533	MOJON
	APA03	1064	0	1.219	1134	1.5	15.994	314.5622	89.4729	ESTRUCTURA
	APA03	1064	0	1.219	1135	1.5	12.833	277.0536	89.4251	ESTRUCTURA
	APA03	1064	0	1.219	1136	1.5	10.785	289.5214	89.4013	ESTRUCTURA
	APA03	1064	0	1.219	1137	1.5	6.631	62.4017	89.0931	ESTRUCTURA
	APA03	1064	0	1.219	1138	1.5	3.174	10.1436	88.0441	ESTRUCTURA
	APA03	1064	0	1.219	1139	1.5	12.389	3.0725	87.5916	ESTRUCTURA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



1041	1039	0	1.489	1039	1.7	172.433	0	90.2143 DELTA
1041	1039	0	1.489	1065	1.7	73.073	179.3154	89.411 DELTA
1065	1041	0	1.458	1041	1.7	73.086	0	89.5726 DELTA
1065	1041	0	1.458	1066	1.7	113.34	83.4301	89.5949 DELTA
1065	1041	0	1.458	1	1.7	4.583	108.0728	83.3743 PARAMENTO
1065	1041	0	1.458	2	1.7	7.763	101.0747	84.4458 PARAMENTO
1065	1041	0	1.458	3	1.7	8.768	35.0712	86.4454 PARAMENTO
1065	1041	0	1.458	4	1.7	12.276	53.5026	87.075 PARAMENTO
1065	1041	0	1.458	5	1.7	7.963	71.1231	87.2921 MANHOLE
1065	1041	0	1.458	6	1.7	6.802	35.4112	86.3018 POSTE
1065	1041	0	1.458	7	1.7	6.961	45.141	87.1822 BORDE_VIA
1065	1041	0	1.458	8	1.7	5.58	21.3848	87.1934 BORDE_VIA
1065	1041	0	1.458	9	1.7	5.8	19.003	87.2348 BORDE_VIA
1065	1041	0	1.458	10	1.7	11.79	10.2943	88.4242 BORDE_VIA
1065	1041	0	1.458	11	1.7	6.632	321.1159	87.5023 BORDE_VIA
1065	1041	0	1.458	12	1.7	12.069	341.2558	88.394 BORDE_VIA
1065	1041	0	1.458	13	1.7	12.022	332.4028	87.3305 PARAMENTO
1065	1041	0	1.458	14	1.7	15.674	339.3437	88.063 PARAMENTO
1065	1041	0	1.458	15	1.7	8.192	309.4108	87.291 BORDE_VIA
1065	1041	0	1.458	16	1.7	14.131	319.132	87.1055 PARAMENTO
1065	1041	0	1.458	17	1.7	14.273	314.2935	87.1234 PARAMENTO
1065	1041	0	1.458	18	1.7	16.651	306.4903	87.3052 PARAMENTO
1065	1041	0	1.458	19	1.7	14.518	290.23	87.5852 PARAMENTO
1065	1041	0	1.458	20	1.7	17.815	286.2808	88.0625 PARAMENTO
1065	1041	0	1.458	21	1.7	7.334	244.2231	87.193 BORDE_VIA
1065	1041	0	1.458	22	1.7	12.622	256.55	87.4819 BORDE_VIA
1065	1041	0	1.458	23	1.7	5.801	232.1731	87.3155 BORDE_VIA
1065	1041	0	1.458	24	1.7	12.244	203.4232	88.5058 BORDE_VIA
1065	1041	0	1.458	25	1.7	11.692	174.3909	89.0148 BORDE_VIA
1065	1041	0	1.458	26	1.7	8.458	151.1036	87.0235 PARAMENTO
1065	1041	0	1.458	27	1.7	3.488	329.1817	85.5353 MANHOLE
1065	1041	0	1.458	28	1.7	5.333	320.2438	87.0028 MANHOLE
1065	1041	0	1.458	29	1.7	6.905	328.5558	88.083 SUMIDERO
1065	1041	0	1.458	30	1.7	7.87	329.0924	88.1913 SUMIDERO
1066	1065	0	1.497	1065	1.7	113.344	0	89.4652 DELTA
1066	1065	0	1.497	31	1.7	61.662	0	89.1923 LINEAMIENT
1066	1065	0	1.497	1067	1.7	43.071	275.111	88.4812 DELTA
1066	1065	0	1.497	32	1.7	8.516	268.0536	89.4213 LINEAMIENT
1066	1065	0	1.497	33	1.7	15.561	270.3811	89.1432 LINEAMIENT
1066	1065	0	1.497	34	1.7	5.799	148.0048	86.0037 PARAMENTO
1066	1065	0	1.497	35	1.7	11.395	246.4726	89.3045 PARAMENTO
1066	1065	0	1.497	36	1.7	6.35	329.2932	87.5443 PARAMENTO
1066	1065	0	1.497	37	1.7	13.82	346.5543	88.2746 PARAMENTO
1066	1065	0	1.497	38	1.7	7.034	47.2338	83.2415 PARAMENTO
1066	1065	0	1.497	39	1.7	9.293	123.1431	85.3023 PARAMENTO
1066	1065	0	1.497	40	1.7	12.356	24.5624	86.1804 PARAMENTO
1066	1065	0	1.497	41	1.7	20.197	106.0104	88.1211 PARAMENTO
1066	1065	0	1.497	42	1.7	17.122	74.3523	87.3152 PARAMENTO
1066	1065	0	1.497	43	1.7	9.531	125.2603	85.3616 PARAMENTO
1066	1065	0	1.497	44	1.7	5.096	134.4241	87.0804 POSTE
1066	1065	0	1.497	45	1.7	5.831	49.0046	87.4917 POSTE
1066	1065	0	1.497	46	3	9.895	294.4535	85.212 BOXCOULVER
1066	1065	0	1.497	47	3	10.1	295.254	85.281 BOXCOULVER
1066	1065	0	1.497	48	1.7	11.344	282.2009	91.0318 BOXCOULVER
1066	1065	0	1.497	49	1.7	11.492	283.3241	91.1825 BOXCOULVER
1066	1065	0	1.497	50	1.7	11.876	282.292	88.5754 BOXCOULVER
1066	1065	0	1.497	51	1.7	11.885	283.1216	89.0115 BOXCOULVER
1066	1065	0	1.497	52	1.8	13.312	281.2657	88.3822 BOXCOULVER
1066	1065	0	1.497	53	1.8	13.292	282.1436	88.3336 BOXCOULVER



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



1066	1065	0	1.497	54	4	11.957	283.3732	90.0211 CANO
1066	1065	0	1.497	55	4	12.892	282.5946	90.221 CANO
1066	1065	0	1.497	56	1.7	13.1	249.0213	90.0708 BOXCOULVER
1066	1065	0	1.497	57	1.7	15.047	252.3148	90.1433 BOXCOULVER
1066	1065	0	1.497	58	1.7	15.391	253.0821	91.5033 BOXCOULVER
1066	1065	0	1.497	59	1.7	16.607	252.5647	91.3606 BOXCOULVER
1066	1065	0	1.497	60	2.9	15.001	251.2422	92.3636 DESC_CLAVE
1066	1065	0	1.497	61	2.9	14.173	249.4511	92.3821 DESC_CLAVE
1067	1066	0.0001	1.479	1066	1.7	43.068	0.0001	90.3754 DELTA
1067	1066	0.0001	1.479	62	1.7	50.149	359.4253	90.3012 MANHOLE
1067	1066	0.0001	1.479	63	1.7	45.156	2.2053	90.3906 MANHOLE
1067	1066	0.0001	1.479	64	1.7	7.532	135.0019	86.0218 PARAMENTO
1067	1066	0.0001	1.479	65	1.7	14.064	159.0044	87.4559 PARAMENTO
1067	1066	0.0001	1.479	66	1.7	13.394	114.3432	88.0542 PARAMENTO
1067	1066	0.0001	1.479	67	1.7	6.282	67.0552	88.4319 PARAMENTO
1067	1066	0.0001	1.479	68	1.7	11.067	31.4051	90.1055 PARAMENTO
1067	1066	0.0001	1.479	69	1.7	13.081	79.3506	89.3943 PARAMENTO
1067	1066	0.0001	1.479	70	1.7	2.278	52.113	84.5243 MANHOLE
1067	1066	0.0001	1.479	71	1.7	4.249	115.3308	86.351 MANHOLE
1067	1066	0.0001	1.479	72	1.7	2.141	315.0609	84.3137 POSTE
1067	1066	0.0001	1.479	73	1.7	8.435	347.5416	88.3318 CERRAMIENT
1067	1066	0.0001	1.479	74	1.7	8.324	193.28	87.1753 CERRAMIENT
1067	1066	0.0001	1.479	1068	1.7	120.066	92.0808	90.0122 DELTA
1067	1066	0.0001	1.479	75	1.7	107.242	92.3103	90.0628 MANHOLE
1067	1066	0.0001	1.479	77	1.7	53.196	93.1424	89.5344 MANHOLE
1067	1066	0.0001	1.479	76	1.7	46.621	91.383	89.5531 LINEAMIENT
1067	1066	0.0001	1.479	78	2.6	105.746	91.3831	89.3657 LINEAMIENT
1068	1067	0	1.49	1067	1.7	120.066	0	89.4648 DELTA
1068	1067	0	1.49	1069	1.7	90.378	179.0421	90.1357 DELTA
1068	1067	0	1.49	79	1.7	10.212	337.1006	88.4126 PARAMENTO
1068	1067	0	1.49	80	1.7	4.854	304.4405	88.2822 PARAMENTO
1068	1067	0	1.49	81	1.7	4.083	47.0942	86.1429 PARAMENTO
1068	1067	0	1.49	82	1.7	9.961	16.5337	87.2807 PARAMENTO
1068	1067	0	1.49	83	1.7	10.297	13.0537	87.4343 POSTE
1068	1067	0	1.49	84	1.7	9.82	343.414	89.0335 POSTE
1068	1067	0	1.49	85	1.7	17.638	346.1058	89.092 PARAMENTO
1068	1067	0	1.49	86	1.7	18.13	339.4644	89.092 PARAMENTO
1068	1067	0	1.49	87	1.7	16.871	11.0251	89.3158 PARAMENTO
1068	1067	0	1.49	88	1.7	17.123	16.0347	89.0908 PARAMENTO
1068	1067	0	1.49	89	1.7	14.939	4.4723	89.2902 ESTACA
1068	1067	0	1.49	90	1.7	37.434	180.3325	89.462 MANHOLE
1069	1068	0.0001	1.527	1068	1.7	90.384	0.0001	89.3128 DELTA
1069	1068	0.0001	1.527	91	1.7	52.951	0.0001	89.183 LINEAMIENT
1069	1068	0.0001	1.527	1070	1.7	76.528	179.4736	89.5924 DELTA
1069	1068	0.0001	1.527	92	1.7	78.207	181.0839	89.5209 MANHOLE
1069	1068	0.0001	1.527	93	1.7	2.402	231.2026	78.3208 MANHOLE
1069	1068	0.0001	1.527	94	1.7	5.083	291.003	87.3136 PARAMENTO
1069	1068	0.0001	1.527	95	1.7	3.126	50.1938	86.5128 PARAMENTO
1069	1068	0.0001	1.527	96	1.7	6.164	155.2518	86.4149 PARAMENTO
1069	1068	0.0001	1.527	97	1.7	7.148	223.3827	88.1536 PARAMENTO
1069	1068	0.0001	1.527	98	1.7	9.422	236.2646	87.4733 PARAMENTO
1069	1068	0.0001	1.527	99	1.7	10.522	281.0518	87.5344 PARAMENTO
1069	1068	0.0001	1.527	100	1.7	1.945	37.5141	74.0817 CAMA_TELEF
1069	1068	0.0001	1.527	101	1.7	2.315	49.5351	76.5209 CAMA_TELEF
1069	1068	0.0001	1.527	102	1.7	2.587	27.4823	78.2407 CAMA_TELEF
1069	1068	0.0001	1.527	103	1.7	2.874	38.2902	79.3023 CAMA_TELEF
1069	1068	0.0001	1.527	104	1.7	4.621	66.0403	87.5827 PARAMENTO
1069	1068	0.0001	1.527	105	1.7	8.167	133.2934	89.2256 PARAMENTO
1069	1068	0.0001	1.527	106	1.7	30.72	95.1818	89.4649 MANHOLE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



1069	1068	0.0001	1.527	107	1.7	2.446	53.0923	86.5628	POSTE
1069	1068	0.0001	1.527	108	1.7	6.048	224.1016	88.0239	POSTE
1070	1069	0.0001	1.494	1069	1.7	76.53	0.0001	89.4353	DELTA
1070	1069	0.0001	1.494	109	1.7	49.908	2.5955	89.392	PARAMENTO
1070	1069	0.0001	1.494	1071	1.7	12.428	95.1512	90.1923	DELTA
1070	1069	0.0001	1.494	110	1.7	10.638	101.5142	89.2659	MANHOLE
1070	1069	0.0001	1.494	111	1.7	9.245	89.343	89.5629	LINEAMIENT
1070	1069	0.0001	1.494	112	1.7	9.511	126.1713	88.3824	PARAMENTO
1070	1069	0.0001	1.494	113	1.7	6.233	283.0116	88.1444	PARAMENTO
1070	1069	0.0001	1.494	114	1.7	11.564	277.3452	88.392	PARAMENTO
1070	1069	0.0001	1.494	115	1.7	5.701	173.363	89.132	PARAMENTO
1070	1069	0.0001	1.494	116	1.7	5.548	280.5328	88.1143	POSTE
1071	1070	0	1.565	1070	1.7	12.424	0	88.0708	DELTA
1071	1070	0	1.565	117	1.7	12.254	287.0417	88.2114	PARAMENTO
1071	1070	0	1.565	118	1.7	36.457	265.0606	89.2047	MANHOLE
1071	1070	0	1.565	119	1.7	33.758	269.424	89.2942	POSTE
1071	1070	0	1.565	120	1.7	7.474	294.4441	86.3638	POSTE
1071	1070	0	1.565	1072	1.7	140.162	266.1418	89.4755	DELTA
1071	1070	0	1.565	121	1.7	93.343	266.1419	89.4513	LINEAMIENT
1071	1070	0	1.565	122	1.7	70.481	265.4756	89.3737	MANHOLE
1071	1070	0	1.565	123	1.7	74.618	264.4646	89.4712	SUMIDERO
1071	1070	0	1.565	124	1.7	73.798	265.1826	89.454	SUMIDERO
1072	1071	0	1.574	1071	1.7	140.165	0	90.0611	DELTA
1072	1071	0	1.574	1073	1.7	15.763	268.4243	89.2109	DELTA
1072	1071	0	1.574	125	1.7	33.687	1.2809	90.1223	MANHOLE
1072	1071	0	1.574	126	1.7	35.892	356.3723	90.1825	SUMIDERO
1072	1071	0	1.574	127	1.7	36.839	356.5701	90.1348	SUMIDERO
1072	1071	0	1.574	128	1.7	1.532	336.4737	85.4516	VALVULA
1072	1071	0	1.574	129	1.7	1.921	126.431	84.1905	MANHOLE
1072	1071	0	1.574	130	1.7	9.269	23.1219	89.0807	PARAMENTO
1072	1071	0	1.574	131	1.7	16.868	12.2227	89.2236	PARAMENTO
1072	1071	0	1.574	132	1.7	9.826	341.0944	88.4347	PARAMENTO
1072	1071	0	1.574	133	1.7	4.158	306.5611	83.5715	PARAMENTO
1072	1071	0	1.574	134	1.7	4.133	339.0558	88.1415	POSTE
1072	1071	0	1.574	135	1.7	13.589	51.32	88.1054	PARAMENTO
1072	1071	0	1.574	136	1.7	11.535	72.514	88.0459	PARAMENTO
1072	1071	0	1.574	137	1.7	11.137	80.0522	88.0734	PARAMENTO
1072	1071	0	1.574	138	1.7	3.419	59.4338	87.5037	POSTE
1072	1071	0	1.574	139	1.7	21.067	84.5831	89.463	PARAMENTO
1072	1071	0	1.574	140	1.7	10.716	240.5157	89.2748	CANCHA
1072	1071	0	1.574	141	1.7	37.072	98.4838	90.0216	CANCHA
1072	1071	0	1.574	142	1.7	35.427	193.2806	90.0113	CANCHA
1072	1071	0	1.574	143	1.7	52.395	132.0009	89.5927	CANCHA
1072	1071	0	1.574	144	1.7	10.816	282.5814	87.5446	PARAMENTO
1072	1071	0	1.574	145	1.7	17.449	273.4634	89.0336	POSTE
1072	1071	0	1.574	146	1.7	23.244	251.4715	89.2716	PARAMENTO
1072	1071	0	1.574	147	1.7	28.834	255.2912	89.3629	PARAMENTO
1072	1071	0	1.574	148	1.7	27.373	233.0804	90.112	PARAMENTO
1072	1071	0	1.574	149	1.7	47.051	206.2017	89.5236	PARAMENTO
1072	1071	0	1.574	150	1.7	49.903	212.541	89.5611	PARAMENTO
1072	1071	0	1.574	151	1.7	52.772	203.2922	89.5203	PARAMENTO
1072	1071	0	1.574	152	1.7	44.408	196.2948	89.1352	PARAMENTO
1072	1071	0	1.574	153	1.7	47.42	196.4003	89.3603	PARAMENTO
1072	1071	0	1.574	154	1.7	43.125	190.0848	89.4615	PARAMENTO
1073	1072	0	1.536	1072	1.7	15.761	0	89.3531	DELTA
1073	1072	0	1.536	1074	1.7	97.78	91.21	90.091	DELTA
1073	1072	0	1.536	155	1.7	61.984	91.21	90.0529	LINEAMIENT
1074	1073	0.0001	1.549	1073	1.7	97.784	0.0001	89.3931	DELTA
1074	1073	0.0001	1.549	1075	1.7	78.311	179.4903	90.1031	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1074	1073	0.0001	1.549	156	1.7	62.716	356.5418	89.3749 MANHOLE
1074	1073	0.0001	1.549	157	1.7	3.671	216.3614	84.3749 MANHOLE
1074	1073	0.0001	1.549	158	1.7	4.668	289.4613	82.4614 PARAMENTO
1074	1073	0.0001	1.549	159	1.7	6.313	284.4118	84.184 PARAMENTO
1074	1073	0.0001	1.549	160	1.7	5.968	60.5338	87.4637 PARAMENTO
1074	1073	0.0001	1.549	161	1.7	3.212	60.5257	86.4753 PARAMENTO
1074	1073	0.0001	1.549	162	1.7	11.642	81.2759	89.0548 PARAMENTO
1074	1073	0.0001	1.549	163	1.7	9.455	123.0127	88.5049 PARAMENTO
1074	1073	0.0001	1.549	164	1.7	8.213	211.3912	85.0941 PARAMENTO
1074	1073	0.0001	1.549	165	1.7	6.15	151.3732	87.142 PARAMENTO
1074	1073	0.0001	1.549	166	1.7	9.487	234.1547	86.1416 PARAMENTO
1074	1073	0.0001	1.549	167	1.7	7.022	218.0838	83.5804 PARAMENTO
1074	1073	0.0001	1.549	168	1.7	6.049	220.5941	87.5913 POSTE
1074	1073	0.0001	1.549	169	1.7	3.761	277.5627	85.1214 POSTE
1074	1073	0.0001	1.549	170	1.7	2.584	67.2211	86.5225 POSTE
1075	1074	0	1.547	1074	1.7	78.31	0	89.3615 DELTA
1075	1074	0	1.547	1076	1.7	81.072	178.3911	89.3827 DELTA
1075	1074	0	1.547	171	1.7	3.426	73.2845	86.5925 PARAMENTO
1075	1074	0	1.547	172	1.7	9.438	83.4108	87.3857 PARAMENTO
1075	1074	0	1.547	173	1.7	6.372	213.5104	87.5532 PARAMENTO
1075	1074	0	1.547	174	1.7	6.995	150.5902	89.1124 PARAMENTO
1075	1074	0	1.547	175	1.7	10.938	198.0127	88.2754 PARAMENTO
1075	1074	0	1.547	176	1.7	13.012	117.3231	89.2609 PARAMENTO
1075	1074	0	1.547	177	1.7	11.852	242.2647	88.4501 PARAMENTO
1075	1074	0	1.547	178	1.7	3.713	266.0421	85.1604 PARAMENTO
1075	1074	0	1.547	179	1.7	9.75	268.1728	88.2946 PARAMENTO
1075	1074	0	1.547	180	1.7	2.547	190.4227	84.3637 MANHOLE
1075	1074	0	1.547	181	1.7	2.812	279.084	86.0353 POSTE
1075	1074	0	1.547	182	1.7	5.936	206.5656	88.4921 POSTE
1075	1074	0	1.547	183	1.7	5.905	156.1922	88.5705 POSTE
1075	1074	0	1.547	184	1.7	6.529	145.4707	89.0832 SUMIDERO
1075	1074	0	1.547	185	1.7	5.668	150.553	89.0238 SUMIDERO
1075	1074	0	1.547	186	1.7	1.102	96.3502	79.375 LINEAMIENT
1076	1075	0	1.516	1075	1.7	81.072	0	90.0702 DELTA
1076	1075	0	1.516	187	1.7	49.116	0.0001	90.0448 LINEAMIENT
1076	1075	0	1.516	1077	1.7	82.141	180.2929	90.0419 DELTA
1076	1075	0	1.516	188	1.7	46.749	180.2926	89.5249 LINEAMIENT
1076	1075	0	1.516	189	1.7	6.583	231.4806	88.2944 PARAMENTO
1076	1075	0	1.516	190	1.7	3.547	34.3301	86.1134 PARAMENTO
1076	1075	0	1.516	191	1.7	11.779	250.2702	87.3559 PARAMENTO
1076	1075	0	1.516	192	1.7	8.476	70.4548	88.3437 PARAMENTO
1076	1075	0	1.516	193	1.7	5.932	300.1525	87.462 PARAMENTO
1076	1075	0	1.516	194	1.7	4.718	153.0256	85.483 PARAMENTO
1076	1075	0	1.516	195	1.7	10.85	114.2131	88.1009 PARAMENTO
1076	1075	0	1.516	196	1.7	11.252	285.5844	88.1948 PARAMENTO
1076	1075	0	1.516	197	1.7	2.5	227.4036	85.1836 MANHOLE
1076	1075	0	1.516	198	1.7	3.246	302.4232	87.0412 POSTE
1076	1075	0	1.516	199	1.7	29.009	179.0938	90.0052 POSTE
1076	1075	0	1.516	200	1.7	40.067	1.3824	89.5314 ARBOL
1077	1076	0	1.537	1076	1.7	82.146	0	89.4119 DELTA
1077	1076	0	1.537	201	2.9	36.173	1.0256	87.2446 POSTE
1077	1076	0	1.537	202	1.7	17.912	2.1657	88.4752 POSTE
1077	1076	0	1.537	203	1.7	6.212	17.3727	87.3616 PARAMENTO
1077	1076	0	1.537	204	1.7	8.129	322.3416	85.4309 PARAMENTO
1077	1076	0	1.537	205	1.7	16.224	339.5059	88.0244 PARAMENTO
1077	1076	0	1.537	206	1.7	20.851	3.1523	88.0618 PARAMENTO
1077	1076	0	1.537	207	1.5	10.265	52.1149	89.3101 PARAMENTO
1077	1076	0	1.537	208	1.7	2.491	328.0718	83.1949 MANHOLE
1077	1076	0	1.537	209	1.7	8.091	106.3506	88.5854 PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1077	1076	0	1.537	210	1.7	2.432	170.3132	84.5825 PARAMENTO
1077	1076	0	1.537	211	1.7	9.11	254.121	88.101 PARAMENTO
1077	1076	0	1.537	212	1.7	12.973	279.195	88.4234 BORDE_VIA
1077	1076	0	1.537	213	1.7	13.578	267.1536	88.4444 BORDE_VIA
1077	1076	0	1.537	214	1.7	10.662	92.2038	89.3449 BORDE_VIA
1077	1076	0	1.537	215	1.7	10.824	77.4256	89.3557 BORDE_VIA
1077	1076	0	1.537	1078	1.7	134.132	88.4419	90.1952 DELTA
1077	1076	0	1.537	1079	1.7	36.053	266.1204	89.3157 DELTA
1079	1077	0	1.541	1077	1.5	36.057	0	90.1618 DELTA
1079	1077	0	1.541	1080	1.5	164.551	271.3534	89.5008 DELTA
1080	1079	0	1.562	1079	1.5	164.554	0	90.1258 DELTA
1080	1079	0	1.562	1081	1.5	166.139	179.223	89.5649 DELTA
1081	1080	0	1.578	1080	1.5	166.145	0	90.0557 DELTA
1081	1080	0	1.578	1082	1.5	212.012	184.011	89.5028 DELTA
1082	1081	0	1.545	1081	1.5	212.015	0	90.1207 DELTA
1082	1081	0	1.545	1083	1.5	161.374	178.3543	89.5823 DELTA
1083	1082	0	1.549	1082	1.5	161.379	0	90.0433 DELTA
1083	1082	0	1.549	1084	1.5	183.141	180.4306	89.554 DELTA
1084	1083	0.0001	1.532	1083	1.5	183.144	0.0001	90.064 DELTA
1084	1083	0.0001	1.532	1065	1.5	83.091	271.4236	90.3553 DELTA
1065	1084	0	1.527	1084	1.5	83.09	0	89.3142 DELTA
1065	1084	0	1.527	1066	1.5	113.34	261.0436	90.0748 DELTA
1065	1084	0	1.527	1041	1.5	73.085	177.2127	90.1538 DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10000	10001	0.0001	1.489	10001	1.7	18.285	0.0001	89.1339	
SD	89.89.1339									
	10000	10001	0.0001	1.489	10002	1.7	37.9	198.5601	89.3335	DELTA
	10000	10001	0.0001	1.489	1	1.7	20.137	198.5601	88.5447	LINEAMIENT
	10000	10001	0.0001	1.489	2	1.7	4.642	67.5246	85.1313	POSTE
	10000	10001	0.0001	1.489	3	1.7	15.168	358.1806	90.0023	BORDE_VIA
	10000	10001	0.0001	1.489	4	1.7	9.679	351.3655	89.3349	BORDE_VIA
	10000	10001	0.0001	1.489	5	1.7	4.966	350.2411	88.3548	BORDE_VIA
	10000	10001	0.0001	1.489	6	1.7	6.167	13.2539	88.3548	BORDE_VIA
	10000	10001	0.0001	1.489	7	1.7	10.983	187.5419	87.565	BORDE_VIA
	10000	10001	0.0001	1.489	8	1.7	10.684	200.4656	88.0452	BORDE_VIA
	10000	10001	0.0001	1.489	9	1.7	26.437	195.2149	89.1724	BORDE_VIA
	10000	10001	0.0001	1.489	10	1.7	26.638	200.5329	89.2906	BORDE_VIA
	10000	10001	0.0001	1.489	11	1.7	17.791	171.4721	88.4531	PARAMENTO
	10000	10001	0.0001	1.489	12	1.7	14.502	97.0029	88.3605	PARAMENTO
	10000	10001	0.0001	1.489	13	1.7	6.741	41.5754	84.0649	PARAMENTO
	10000	10001	0.0001	1.489	14	1.7	9.688	33.5255	85.4342	PARAMENTO
	10000	10001	0.0001	1.489	15	1.7	9.499	66.54	85.4341	PARAMENTO
	10000	10001	0.0001	1.489	16	1.7	9.352	28.441	85.3023	ESTRUCTURA
	10000	10001	0.0001	1.489	17	1.7	6.422	32.321	83.4509	ESTRUCTURA
	10002	10000	0.0001	1.499	10000	1.7	37.896	0.0001	89.4923	
SD	89.89.4923									
	10002	10000	0.0001	1.499	10003	1.7	41.057	155.3555	89.2748	DELTA
	10002	10000	0.0001	1.499	18	1.7	4.374	183.0349	86.5318	BORDE_VIA
	10002	10000	0.0001	1.499	19	1.7	5.956	123.2054	87.3128	BORDE_VIA
	10002	10000	0.0001	1.499	20	1.7	27.638	158.3039	89.1146	BORDE_VIA
	10002	10000	0.0001	1.499	21	1.7	27.799	150.3453	89.1528	BORDE_VIA
	10002	10000	0.0001	1.499	22	1.7	6.082	209.3137	84.5432	PARAMENTO
	10002	10000	0.0001	1.499	23	1.7	10.468	178.1224	87.1745	PARAMENTO
	10002	10000	0.0001	1.499	24	1.7	8.506	105.3526	86.1332	PARAMENTO
	10002	10000	0.0001	1.499	25	1.7	8.612	223.4419	85.5118	PARAMENTO
	10002	10000	0.0001	1.499	26	1.7	9.781	237.2025	87.0429	PARAMENTO
	10002	10000	0.0001	1.499	27	1.7	10.904	265.5515	86.5203	PARAMENTO
	10002	10000	0.0001	1.499	28	1.7	10.089	269.0812	87.0555	PARAMENTO
	10002	10000	0.0001	1.499	29	1.7	12.628	33.5723	89.124	PARAMENTO
	10002	10000	0.0001	1.499	30	0.085	14.071	289.3212	94.224	PARAMENTO
	10002	10000	0.0001	1.499	31	1.7	8.701	325.1101	89.203	BORDE_VIA
	10002	10000	0.0001	1.499	32	1.7	8.351	295.342	89.0413	BORDE_VIA
	10002	10000	0.0001	1.499	33	1.7	18.741	308.2016	89.5304	BORDE_VIA
	10002	10000	0.0001	1.499	34	1.7	17.855	297.432	90.0638	BORDE_VIA
	10002	10000	0.0001	1.499	35	1.7	21.734	167.2014	89.1136	PARAMENTO
	10002	10000	0.0001	1.499	36	1.7	16.608	165.0249	88.5031	POSTE
	10002	10000	0.0001	1.499	37	1.7	13.706	137.4959	88.4331	POSTE
	10002	10000	0.0001	1.499	38	1.7	10.049	338.0306	89.1814	POSTE
	10003	10002	0	1.514	10002	1.7	41.056	0	90.0035	
SD	90.90.0035									
	10003	10002	0	1.514	10004	1.7	23.072	236.3509	89.1547	DELTA
	10003	10002	0	1.514	39	1.7	14.227	20.4439	90.0256	PARAMENTO
	10003	10002	0	1.514	40	1.7	13.573	338.4046	87.364	PARAMENTO
	10003	10002	0	1.514	41	1.7	15.905	33.533	89.2451	PARAMENTO
	10003	10002	0	1.514	42	1.7	10.133	354.0242	88.455	BORDE_VIA
	10003	10002	0	1.514	43	1.7	4.221	310.4826	86.4009	BORDE_VIA
	10003	10002	0	1.514	44	1.7	22.9	47.582	88.3428	PARAMENTO
	10003	10002	0	1.514	45	1.7	8.721	288.0403	84.5134	PARAMENTO
	10003	10002	0	1.514	46	1.7	29.236	53.1905	88.5312	PARAMENTO
	10003	10002	0	1.514	47	1.7	29.295	56.3519	89.2928	BORDE_VIA
	10003	10002	0	1.514	48	1.7	9.648	247.5518	88.5159	BORDE_VIA
	10003	10002	0	1.514	49	1.7	28.881	67.1637	89.3036	BORDE_VIA
	10003	10002	0	1.514	50	1.7	30.736	69.3546	89.0711	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10003	10002	0	1.514	51	1.7	9.365	221.3224	88.5057	BORDE_VIA
	10003	10002	0	1.514	52	1.7	5.764	185.0347	88.0026	PARAMENTO
	10003	10002	0	1.514	53	1.7	10.315	160.2402	89.2123	PARAMENTO
	10003	10002	0	1.514	54	1.7	26.229	70.09	89.3313	PARAMENTO
	10003	10002	0	1.514	55	1.7	21.143	73.3543	89.1532	PARAMENTO
	10003	10002	0	1.514	56	1.7	19.252	70.5458	89.3042	BORDE_VIA
	10003	10002	0	1.514	57	1.7	2.118	196.4741	84.5923	BORDE_VIA
	10003	10002	0	1.514	58	1.7	12.054	24.171	89.2155	BORDE_VIA
	10003	10002	0	1.514	59	1.7	6.474	71.0544	88.3456	BORDE_VIA
	10003	10002	0	1.514	60	1.7	10.224	110.3649	88.3106	PARAMENTO
	10003	10002	0	1.514	61	1.7	13.407	117.1621	89.3817	PARAMENTO
	10003	10002	0	1.514	62	1.7	3.788	217.0801	87.1018	POSTE
	10003	10002	0	1.514	63	1.7	12.746	208.4505	88.4836	PARAMENTO
	10004	10003	0	1.51	10003	1.7	23.053	0	89.4959	
SD	89.89.4959									
	10004	10003	0	1.51	10005	1.7	99.24	197.3322	89.4259	DELTA
	10004	10003	0	1.51	65	1.7	4.792	221.5524	86.4627	MANHOLE
	10004	10003	0	1.51	66	1.7	4.976	148.4935	84.3553	POSTE
	10004	10003	0	1.51	67	1.7	8.89	223.0636	88.232	POSTE
	10004	10003	0	1.51	68	1.7	3.113	22.2805	88.2446	SUMIDERO
	10004	10003	0	1.51	69	1.7	3.469	39.0523	87.2332	SUMIDERO
	10004	10003	0	1.51	70	1.7	6.773	27.4854	88.1741	ESTRUCTURA
	10004	10003	0	1.51	71	1.7	7.547	337.4726	88.5759	ESTRUCTURA
	10004	10003	0	1.51	72	1.7	4.831	35.3057	87.3739	ESTRUCTURA
	10004	10003	0	1.51	73	1.7	5.927	326.5035	88.0325	ESTRUCTURA
	10004	10003	0	1.51	74	1.7	7.673	26.493	86.4609	ESTRUCTURA
	10004	10003	0	1.51	75	1.7	7.674	28.07	86.4126	ESTRUCTURA
	10004	10003	0	1.51	76	1.7	7.849	338.3053	87.0358	ESTRUCTURA
	10004	10003	0	1.51	77	1.7	8.295	332.4725	87.2304	ESTRUCTURA
	10004	10003	0	1.51	78	1.7	7.727	336.1937	87.0031	ESTRUCTURA
	10004	10003	0	1.51	79	1.7	8.54	35.154	90.333	ESTRUCTURA
	10004	10003	0	1.51	80	1.7	8.506	35.5647	90.4033	ESTRUCTURA
	10004	10003	0	1.51	81	1.7	6.192	326.253	85.585	ESTRUCTURA
	10004	10003	0	1.51	82	1.7	5.945	326.0419	85.4634	ESTRUCTURA
	10004	10003	0	1.51	83	1.7	6.794	28.3311	86.3203	ESTRUCTURA
	10004	10003	0	1.51	84	1.7	6.779	30.0002	86.3203	ESTRUCTURA
	10004	10003	0	1.51	85	1.7	4.896	36.1046	85.0137	ESTRUCTURA
	10004	10003	0	1.51	86	1.7	5.002	37.4021	85.1801	ESTRUCTURA
	10004	10003	0	1.51	87	1.7	6.586	320.0311	88.044	ESTRUCTURA
	10004	10003	0	1.51	88	1.7	6.557	318.5037	88.0044	ESTRUCTURA
	10004	10003	0	1.51	89	1.7	4.805	60.0444	90.3226	ESTRUCTURA
	10004	10003	0	1.51	90	1.7	4.646	60.3107	89.372	ESTRUCTURA
	10004	10003	0	1.51	91	1.7	6.401	65.1712	90.5944	ESTRUCTURA
	10004	10003	0	1.51	92	1.7	6.349	66.4107	90.3213	ESTRUCTURA
	10004	10003	0	1.51	93	1.7	3.102	84.5305	84.4003	TERRENO
	10004	10003	0	1.51	94	1.7	3.568	53.2231	85.2901	TERRENO
	10004	10003	0	1.51	95	1.7	5.246	85.2751	87.3849	TERRENO
	10004	10003	0	1.51	96	1.7	5.772	66.3947	89.5249	TERRENO
	10004	10003	0	1.51	97	2.6	5.058	37.1634	93.5446	BORDE_CANO
	10004	10003	0	1.51	98	2.6	5.759	61.1808	91.4435	BORDE_CANO
	10004	10003	0	1.51	99	2.6	5.881	33.4037	94.0233	CANO
	10004	10003	0	1.51	100	2.6	6.756	30.4047	92.2144	BORDE_CANO
	10004	10003	0	1.51	101	1.7	8.781	83.4021	89.2325	TERRENO
	10004	10003	0	1.51	102	1.7	8.869	69.3127	91.3015	TERRENO
	10004	10003	0	1.51	103	2.6	7.236	57.5133	91.5755	BORDE_CANO
	10004	10003	0	1.51	104	2.6	7.502	53.0909	93.1915	CANO
	10004	10003	0	1.51	105	2.6	7.848	49.2913	92.1109	BORDE_CANO
	10004	10003	0	1.51	106	2.6	8.266	42.0736	90.0054	TERRENO
	10004	10003	0	1.51	107	1.7	11.565	82.3619	89.1218	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



10004	10003	0	1.51	108	1.7	11.161	70.244	90.5915	TERRENO
10004	10003	0	1.51	109	1.7	9.611	61.2508	96.0101	TERRENO
10004	10003	0	1.51	110	1.7	9.816	58.4626	96.5526	BORDE_CANO
10004	10003	0	1.51	111	1.7	10.008	55.4802	97.1743	CANO
10004	10003	0	1.51	112	1.7	10.233	52.2107	97.0719	BORDE_CANO
10004	10003	0	1.51	113	1.7	10.579	46.5615	95.0355	TERRENO
10004	10003	0	1.51	114	1.7	14.109	82.4503	88.4408	TERRENO
10004	10003	0	1.51	115	1.7	14.09	71.1151	90.3819	TERRENO
10004	10003	0	1.51	116	1.7	14.314	63.4604	93.0141	TERRENO
10004	10003	0	1.51	117	1.7	14.714	60.4528	94.5812	BORDE_CANO
10004	10003	0	1.51	118	1.7	14.972	57.4621	95.2053	CANO
10004	10003	0	1.51	119	1.7	15.346	55.0141	94.3457	BORDE_CANO
10004	10003	0	1.51	120	1.7	15.418	53.5029	94.045	TERRENO
10004	10003	0	1.51	121	1.7	20.894	79.1503	89.083	TERRENO
10004	10003	0	1.51	122	1.7	20.644	73.2327	89.5018	TERRENO
10004	10003	0	1.51	123	1.7	20.533	70.1538	91.0236	TERRENO
10004	10003	0	1.51	124	1.7	20.501	69.0804	92.131	BORDE_CANO
10004	10003	0	1.51	125	2.6	20.402	66.3917	90.5833	CANO
10004	10003	0	1.51	126	2.6	20.682	65.3004	91.1341	BORDE_CANO
10004	10003	0	1.51	127	1.7	21.351	60.4625	92.1421	TERRENO
10004	10003	0	1.51	128	1.7	2.924	88.5219	84.0906	PARAMENTO
10004	10003	0	1.51	129	1.7	4.626	135.561	84.4058	PARAMENTO
10004	10003	0	1.51	130	1.7	8.038	110.2913	82.0619	PARAMENTO
10004	10003	0	1.51	131	1.7	7.712	87.4948	81.3713	PARAMENTO
10004	10003	0	1.51	132	1.7	4.362	176.3251	86.5831	BORDE_VIA
10004	10003	0	1.51	133	1.7	17.996	195.0242	88.5701	BORDE_VIA
10004	10003	0	1.51	134	1.7	13.234	187.013	86.4733	PARAMENTO
10004	10003	0	1.51	135	1.7	15.9	179.1651	87.4327	PARAMENTO
10004	10003	0	1.51	136	1.7	14.383	208.1738	88.5224	BORDE_VIA
10004	10003	0	1.51	137	1.7	4.101	283.4229	86.2535	BORDE_VIA
10004	10003	0	1.51	138	1.7	8.949	283.5105	88.3217	PARAMENTO
10004	10003	0	1.51	139	1.7	13.994	285.0807	90.1656	PARAMENTO
10004	10003	0	1.51	140	1.7	13.732	214.3308	88.3913	PARAMENTO
10004	10003	0	1.51	141	1.7	12.576	245.1502	87.4001	PARAMENTO
10004	10003	0	1.51	142	1.7	9.508	220.3817	88.3321	PARAMENTO
10004	10003	0	1.51	143	1.7	9.231	336.2435	88.2438	TERRENO
10004	10003	0	1.51	144	1.7	7.297	312.3716	86.5841	ESTRUCTURA
10004	10003	0	1.51	145	1.7	7.176	314.4117	86.5654	ESTRUCTURA
10004	10003	0	1.51	146	1.7	8.41	331.1124	99.4856	BORDE_CANO
10004	10003	0	1.51	147	2.2	7.198	315.3719	97.2919	BORDE_CANO
10004	10003	0	1.51	148	2	7.079	331.3519	99.4849	CANO
10004	10003	0	1.51	149	1.7	14.023	303.4459	88.3644	ESTRUCTURA
10004	10003	0	1.51	150	1.7	14.007	302.5121	88.3644	ESTRUCTURA
10004	10003	0	1.51	151	3.9	13.893	304.0302	89.1211	BORDE_CANO
10004	10003	0	1.51	152	3.9	15.048	312.5754	87.0735	BORDE_CANO
10004	10003	0	1.51	153	1.7	12.455	327.5144	87.3725	TERRENO
10004	10003	0	1.51	154	1.7	14.949	313.5029	88.2746	ESTRUCTURA
10005	10004	0	1.525	10004	1.7	99.217	0	90.0502	
SD	90.90.0502								
10005	10004	0	1.525	155	2.6	103.459	1.1403	89.5315	DESCARGA
10005	10004	0	1.525	156	1.7	30.481	0.0002	89.2918	LINEAMIENT
10005	10004	0	1.525	157	1.7	68.416	0	89.5326	LINEAMIENT
10005	10004	0	1.525	158	1.7	52.793	355.0739	89.4748	BORDE_VIA
10005	10004	0	1.525	159	1.7	52.533	1.2853	89.4317	BORDE_VIA
10005	10004	0	1.525	160	1.7	31.373	353.5416	89.2535	BORDE_VIA
10005	10004	0	1.525	161	1.7	31.055	1.3849	89.3224	BORDE_VIA
10005	10004	0	1.525	162	1.7	10.255	338.3851	89.2954	PARAMENTO
10005	10004	0	1.525	163	1.7	10.981	16.1334	89.0906	PARAMENTO
10005	10004	0	1.525	164	1.7	4.853	323.1446	86.3852	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10005	10004	0	1.525	165	1.7	4.013	57.3232	87.3752	PARAMENTO
	10005	10004	0	1.525	166	1.7	4.005	180.2539	87.0005	BORDE_VIA
	10005	10004	0	1.525	167	1.7	3.867	130.4026	87.0806	BORDE_VIA
	10005	10004	0	1.525	168	1.7	11.223	173.1455	89.2255	PARAMENTO
	10005	10004	0	1.525	169	1.7	12.884	146.3847	89.0729	BORDE_VIA
	10005	10004	0	1.525	170	1.7	18.298	161.102	89.2752	PARAMENTO
	10005	10004	0	1.525	171	1.7	23.078	157.0622	89.3545	PARAMENTO
	10005	10004	0	1.525	172	1.7	14.729	148.0405	89.1058	BORDE_VIA
	10005	10004	0	1.525	173	1.7	31.941	147.4242	89.5019	PARAMENTO
	10005	10004	0	1.525	174	1.7	18.926	149.1138	89.2234	LINEAMIENT
	10005	10004	0	1.525	175	1.7	9.156	149.1139	88.3149	LINEAMIENT
	10005	10004	0	1.525	10006	1.7	25.058	149.102	89.3959	DELTA
	10006	10005	0	1.465	10005	1.7	25.056	0	89.2532	
SD	89.89.2532									
	10006	10005	0	1.465	10007	1.7	44.334	137.4137	89.4719	DELTA
	10006	10005	0	1.465	176	1.7	7.477	15.3157	87.493	BORDE_VIA
	10006	10005	0	1.465	177	1.7	6.514	42.4702	87.3906	PARAMENTO
	10006	10005	0	1.465	178	1.7	8.901	110.3402	89.0409	BORDE_VIA
	10006	10005	0	1.465	179	1.7	14.128	116.343	88.3546	PARAMENTO
	10006	10005	0	1.465	180	1.7	9.626	107.3931	88.5237	PARAMENTO
	10006	10005	0	1.465	181	1.7	13.826	119.2705	89.3419	BORDE_VIA
	10006	10005	0	1.465	182	1.7	26.034	131.3318	89.36	BORDE_VIA
	10006	10005	0	1.465	183	1.7	26.202	129.4035	89.3	PARAMENTO
	10006	10005	0	1.465	184	1.7	24.437	146.233	89.4657	BORDE_VIA
	10006	10005	0	1.465	185	1.7	37.258	134.3016	89.5602	BORDE_VIA
	10006	10005	0	1.465	186	1.7	20.545	141.1928	89.3734	MANHOLE
	10006	10005	0	1.465	187	1.7	12.858	151.0804	89.1345	BORDE_VIA
	10006	10005	0	1.465	188	1.7	6.553	166.0226	88.2916	BORDE_VIA
	10006	10005	0	1.465	189	1.7	3.353	320.5303	87.0958	BORDE_VIA
	10007	10006	0	1.471	10006	1.7	44.327	0	89.3726	
SD	89.89.3726									
	10007	10006	0	1.471	190	1.7	24.849	4.3718	89.3535	LINEAMIENT
	10007	10006	0	1.471	10008	1.7	64.708	275.1929	90.0419	DELTA
	10007	10006	0	1.471	191	1.7	33.803	275.193	89.5601	LINEAMIENT
	10007	10006	0	1.471	192	1.7	6.405	259.4339	85.053	PARAMENTO
	10007	10006	0	1.471	193	1.7	10.315	318.3927	89.1303	PARAMENTO
	10007	10006	0	1.471	194	1.7	9.85	221.3852	86.4531	PARAMENTO
	10007	10006	0	1.471	195	1.7	4.039	50.0511	89.52	PARAMENTO
	10007	10006	0	1.471	196	1.7	2.586	132.5344	82.1735	POSTE
	10007	10006	0	1.471	197	1.7	26	199.5	89.0703	PARAMENTO
	10008	10007	0	1.49	10007	1.7	64.699	0	89.3303	
SD	89.89.3303									
	10008	10007	0	1.49	10009	1.7	32.651	273.2939	89.5917	DELTA
	10008	10007	0	1.49	199	1.7	2.804	220.4348	86.4937	MANHOLE
	10008	10007	0	1.49	200	1.7	6.434	301.2205	86.432	PARAMENTO
	10008	10007	0	1.49	201	1.7	3.468	39.2807	80.4733	PARAMENTO
	10008	10007	0	1.49	202	1.7	8.056	83.4148	87.4008	PARAMENTO
	10008	10007	0	1.49	203	1.7	8.17	78.125	86.1043	PARAMENTO
	10008	10007	0	1.49	204	1.7	12.985	123.0809	88.4951	PARAMENTO
	10008	10007	0	1.49	205	1.7	27.616	95.0522	89.103	PARAMENTO
	10008	10007	0	1.49	206	1.7	29.022	113.15	89.1534	PARAMENTO
	10008	10007	0	1.49	207	1.7	4.427	188.4317	86.1552	POSTE
	10008	10007	0	1.49	208	1.7	14.914	279.3903	89.4502	POSTE
	10009	10008	359.5959	1.496	10008	1.7	32.65	359.5959	89.1816	
SD	89.89.1816									
	10009	10008	359.5959	1.496	10010	1.7	63.761	77.4551	90.0338	DELTA
	10009	10008	359.5959	1.496	209	1.7	6.422	53.3447	87.1351	PARAMENTO
	10009	10008	359.5959	1.496	210	1.7	21.528	71.4036	89.185	PARAMENTO
	10009	10008	359.5959	1.496	211	1.7	2.916	183.3742	76.435	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10009	10008	359.5959	1.496	212	1.7	1.884	201.1718	84.3625	POSTE
	10009	10008	359.5959	1.496	213	1.7	21.623	73.2757	89.3909	POSTE
	10009	10008	359.5959	1.496	214	1.7	3.409	307.2003	85.4809	PARAMENTO
	10009	10008	359.5959	1.496	215	1.7	13.757	93.0405	88.3944	PARAMENTO
	10009	10008	359.5959	1.496	216	1.7	14.211	250.5148	87.2434	PARAMENTO
	10009	10008	359.5959	1.496	217	1.7	4.924	227.2714	86.3317	PARAMENTO
	10009	10008	359.5959	1.496	218	1.7	4.918	220.1314	86.3317	PARAMENTO
	10009	10008	359.5959	1.496	219	1.7	32.573	261.4034	89.3851	PARAMENTO
	10009	10008	359.5959	1.496	220	1.7	30.148	269.371	89.3616	PARAMENTO
	10009	10008	359.5959	1.496	221	1.7	30.086	269.4836	89.3815	PARAMENTO
	10009	10008	359.5959	1.496	222	1.7	30.172	273.1618	89.0754	PARAMENTO
	10009	10008	359.5959	1.496	223	1.7	22.35	266.2053	89.3716	MANHOLE
	10009	10008	359.5959	1.496	224	1.7	2.043	245.453	85.0005	SUMIDERO
	10009	10008	359.5959	1.496	225	1.7	2.437	277.2551	85.5655	SUMIDERO
	10009	10008	359.5959	1.496	226	1.7	31.154	77.4553	89.5106	LINEAMIENT
	10010	10009	0	1.514	10009	1.7	63.765	0	89.3611	
SD	89.89.3611									
	10010	10009	0	1.514	10011	1.7	62.993	168.5307	90.0812	DELTA
	10010	10009	0	1.514	227	1.7	22.952	179.4136	88.1625	PARAMENTO
	10010	10009	0	1.514	228	1.7	4.127	220.0708	87.3826	PARAMENTO
	10010	10009	0	1.514	229	1.7	24.733	192.1857	87.1936	PARAMENTO
	10010	10009	0	1.514	230	1.7	4.309	305.2903	86.3044	PARAMENTO
	10010	10009	0	1.514	231	1.7	3.282	314.4005	87.2937	POSTE
	10010	10009	0	1.514	232	1.7	20.294	162.3101	90.2202	MANHOLE
	10010	10009	0	1.514	233	1.7	9.147	26.5208	88.3643	POSTE
	10010	10009	0	1.514	234	1.7	12.722	345	88.4348	POSTE
	10010	10009	0	1.514	235	1.7	31.643	176.1546	88.4536	PARAMENTO
	10010	10009	0	1.514	236	1.7	22.695	349.4512	89.0755	PARAMENTO
	10010	10009	0	1.514	237	1.7	31.504	171.1538	89.1837	PARAMENTO
	10010	10009	0	1.514	238	1.7	25.724	154.3409	89.3052	PARAMENTO
	10010	10009	0	1.514	239	1.7	12.058	23.3714	88.2914	PARAMENTO
	10010	10009	0	1.514	240	1.7	25.137	5.3017	88.493	PARAMENTO
	10010	10009	0	1.514	241	1.7	31.076	349.2222	88.5314	PARAMENTO
	10010	10009	0	1.514	242	1.7	27.397	349.1116	88.5002	CANCHA
	10010	10009	0	1.514	243	1.7	7.873	332.433	86.0525	CANCHA
	10010	10009	0	1.514	244	1.7	31.548	331.1017	88.5905	CANCHA
	10010	10009	0	1.514	245	1.7	19.252	330.5251	88.2434	CANCHA
	10010	10009	0	1.514	246	1.7	35.954	169.3939	90.0254	POSTE
	10010	10009	0	1.514	247	1.7	35.65	168.5308	89.5912	LINEAMIENT
	10011	10010	0	1.485	10010	1.7	62.988	0	89.3022	
SD	89.89.3022									
	10011	10010	0	1.485	10012	1.7	60.923	109.1731	87.4304	DELTA
	10011	10010	0	1.485	10013	1.7	56.854	280.2154	90.0049	DELTA
	10011	10010	0	1.485	248	1.7	28.096	294.1349	89.2127	PARAMENTO
	10011	10010	0	1.485	249	1.7	26.128	272.2713	89.5515	PARAMENTO
	10011	10010	0	1.485	250	1.7	2.576	160.2104	80.1722	MANHOLE
	10011	10010	0	1.485	251	1.7	4.641	151.4202	83.523	MANHOLE
	10011	10010	0	1.485	252	1.7	4.685	194.4437	83.5838	POSTE
	10011	10010	0	1.485	253	1.7	5.672	72.3431	83.3444	PARAMENTO
	10011	10010	0	1.485	254	1.7	4.551	335.021	82.5224	PARAMENTO
	10011	10010	0	1.485	255	1.7	6.373	137.2437	84.5415	BORDE_VIA
	10011	10010	0	1.485	256	1.7	5.992	98.4141	86.1042	BORDE_VIA
	10011	10010	0	1.485	257	1.7	16.677	120.0211	86.1433	BORDE_VIA
	10011	10010	0	1.485	258	1.7	16.478	109.2739	86.32	BORDE_VIA
	10011	10010	0	1.485	259	1.7	33.942	113.4954	86.5441	BORDE_VIA
	10011	10010	0	1.485	260	1.7	33.672	108.2344	86.5143	BORDE_VIA
	10012	10011	0	1.504	10011	1.7	60.923	0	91.5428	
SD	91.91.5428									
	10012	10011	0	1.504	10014	1.7	97.192	275.4331	89.5225	DELTA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



10012	10011	0	1.504	261	1.7	11.605	325.4053	87.4239	PARAMENTO
10012	10011	0	1.504	262	1.7	7.655	42.2607	90.1207	PARAMENTO
10012	10011	0	1.504	263	1.7	11.473	313.2431	87.4413	PARAMENTO
10012	10011	0	1.504	264	1.7	8.477	319.3321	88.2401	POSTE
10012	10011	0	1.504	265	1.7	10.631	60.5419	88.5602	PARAMENTO
10012	10011	0	1.504	266	1.7	7.919	314.3221	88.375	ANDEN
10012	10011	0	1.504	267	1.7	7.061	305.161	88.3108	ANDEN
10012	10011	0	1.504	268	1.7	6.822	291.4027	88.2157	BORDE_VIA
10012	10011	0	1.504	269	1.7	7.397	282.0711	88.2801	BORDE_VIA
10012	10011	0	1.504	270	1.7	8.945	277.3227	88.4656	SUMIDERO
10012	10011	0	1.504	271	1.7	9.752	279.4906	89.3314	SUMIDERO
10012	10011	0	1.504	272	1.7	14.017	278.3849	89.2339	BORDE_VIA
10012	10011	0	1.504	273	1.7	6.305	88.3936	89.2339	SUMIDERO
10012	10011	0	1.504	274	1.7	5.425	92.3131	88.0052	SUMIDERO
10012	10011	0	1.504	275	1.7	4.97	86.5133	88.3833	BORDE_VIA
10012	10011	0	1.504	276	1.7	2.63	246.0812	85.095	MANHOLE
10012	10011	0	1.504	277	1.7	10.776	141.1116	88.5617	MANHOLE
10012	10011	0	1.504	278	1.7	16.256	93.1117	89.2459	BORDE_VIA
10012	10011	0	1.504	279	1.7	14.079	126.3548	89.3026	BORDE_VIA
10012	10011	0	1.504	280	1.7	9.873	143.2058	89.0258	BORDE_VIA
10012	10011	0	1.504	281	1.7	10.062	150.0908	89.0724	BORDE_VIA
10012	10011	0	1.504	282	1.7	12.295	158.3601	90.0045	BORDE_VIA
10012	10011	0	1.504	283	1.7	9.691	226.4512	89.2129	BORDE_VIA
10012	10011	0	1.504	284	1.7	9.379	217.4421	89.0237	BORDE_VIA
10012	10011	0	1.504	285	1.7	10.016	212.3132	89.1912	BORDE_VIA
10012	10011	0	1.504	286	1.7	18.22	164.5305	90.1757	BORDE_VIA
10012	10011	0	1.504	287	1.7	20.317	163.4826	88.583	PARAMENTO
10012	10011	0	1.504	288	1.7	14.542	157.3752	88.3143	PARAMENTO
10012	10011	0	1.504	289	1.7	16.494	146.2942	88.4755	PARAMENTO
10012	10011	0	1.504	290	1.7	13.957	207.0419	89.3456	PARAMENTO
10012	10011	0	1.504	291	1.7	14.915	217.4528	88.5949	PARAMENTO
10012	10011	0	1.504	292	1.7	12.794	204.4428	90.2845	SUMIDERO
10012	10011	0	1.504	293	1.7	11.984	207.1851	90.2641	SUMIDERO
10012	10011	0	1.504	294	1.7	14.542	201.3008	89.5709	BORDE_VIA
10012	10011	0	1.504	295	1.7	17.486	200.5545	89.4037	PARAMENTO
10012	10011	0	1.504	296	1.7	14.017	162.1255	90.5102	SUMIDERO
10012	10011	0	1.504	297	1.7	14.905	163.3116	90.4627	SUMIDERO
10012	10011	0	1.504	298	1.7	10.379	231.35	89.2452	SUMIDERO
10012	10011	0	1.504	299	1.7	9.486	229.525	88.435	SUMIDERO
10012	10011	0	1.504	300	1.7	11.762	237.2856	89.2737	BORDE_VIA
10012	10011	0	1.504	301	1.7	5.434	37.4628	88.063	SUMIDERO
10012	10011	0	1.504	302	1.7	6.296	43.365	88.4054	SUMIDERO
10012	10011	0	1.504	303	1.7	32.007	359.5959	91.0323	LINEAMIENT
10012	10011	0	1.504	304	1.7	45.299	359.5959	91.3152	LINEAMIENT
10012	10011	0	1.504	305	1.7	7.423	359.5959	89.1826	LINEAMIENT
10014	10012	0	1.522	10012	1.7	97.199	0	89.5453	
SD	89.89.5453								
10014	10012	0	1.522	306	1.7	64.896	0.0002	89.4347	LINEAMIENT
10014	10012	0	1.522	10015	0.085	145.212	180.2214	90.4109	DELTA
10014	10012	0	1.522	307	1.7	90.081	180.2214	90.0744	LINEAMIENT
10014	10012	0	1.522	308	1.7	47.499	180.2214	90.0011	LINEAMIENT
10014	10012	0	1.522	309	1.7	4.224	189.0334	89.0226	BORDE_VIA
10014	10012	0	1.522	310	1.7	26.71	358.2508	89.353	BORDE_VIA
10014	10012	0	1.522	311	1.7	26.129	357.0129	89.5904	SUMIDERO
10014	10012	0	1.522	312	1.7	25.257	357.5555	89.5335	SUMIDERO
10014	10012	0	1.522	313	1.7	21.285	358.012	89.4136	BORDE_VIA
10014	10012	0	1.522	314	1.7	28.505	352.2413	89.3533	BORDE_VIA
10014	10012	0	1.522	315	1.7	30.888	13.3616	89.4304	BORDE_VIA
10014	10012	0	1.522	316	1.7	30.46	15.0405	89.5605	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10014	10012	0	1.522	317	1.7	29.536	14.3149	89.5314	SUMIDERO
	10014	10012	0	1.522	318	1.7	24.208	17.3045	89.4421	BORDE_VIA
	10014	10012	0	1.522	319	1.7	33.175	22.5552	89.2247	PARAMENTO
	10014	10012	0	1.522	320	1.7	42.52	13.4237	89.3854	BORDE_VIA
	10014	10012	0	1.522	321	1.7	42.16	10.4759	89.3854	BORDE_VIA
	10014	10012	0	1.522	322	1.7	42.693	9.4943	89.4317	BORDE_VIA
	10014	10012	0	1.522	323	1.7	46.665	16.5739	89.3329	PARAMENTO
	10014	10012	0	1.522	324	1.7	45.569	20.0011	89.3103	PARAMENTO
	10014	10012	0	1.522	325	1.7	45.978	9.0416	89.4624	SUMIDERO
	10014	10012	0	1.522	326	1.7	45.1	8.3731	89.3756	SUMIDERO
	10014	10012	0	1.522	327	1.7	42.063	359.3532	89.3742	SUMIDERO
	10014	10012	0	1.522	328	1.7	41.234	358.5853	89.5046	SUMIDERO
	10014	10012	0	1.522	329	1.7	39.763	358.564	89.4512	BORDE_VIA
	10014	10012	0	1.522	330	1.7	39.017	357.4742	89.4738	BORDE_VIA
	10014	10012	0	1.522	331	1.7	38.713	355.3204	89.5135	BORDE_VIA
	10014	10012	0	1.522	332	1.7	38.874	353.0824	89.5701	BORDE_VIA
	10014	10012	0	1.522	333	1.7	37.706	355.2057	89.5855	SUMIDERO
	10014	10012	0	1.522	334	1.7	36.726	354.5933	89.5814	SUMIDERO
	10014	10012	0	1.522	335	1.7	41.14	350.4527	89.3314	PARAMENTO
	10014	10012	0	1.522	336	1.7	27.562	357.5241	89.3316	MANHOLE
	10014	10012	0	1.522	337	1.7	33.392	3.1119	89.3204	MANHOLE
	10014	10012	0	1.522	338	1.7	20.561	182.1503	89.3708	MANHOLE
	10014	10012	0	1.522	339	1.7	19.552	176.0256	89.3635	MANHOLE
	10014	10012	0	1.522	340	1.7	19.209	146.1424	89.5141	MANHOLE
	10014	10012	0	1.522	341	1.7	16.879	182.5422	90.1255	SUMIDERO
	10014	10012	0	1.522	342	1.7	17.726	184.152	90.1112	SUMIDERO
	10014	10012	0	1.522	343	1.7	18.695	154.5436	90.2009	SUMIDERO
	10014	10012	0	1.522	344	1.7	17.755	155.1125	90.1617	SUMIDERO
	10014	10012	0	1.522	345	1.7	24.369	191.2655	90.375	SUMIDERO
	10014	10012	0	1.522	346	1.7	25.274	191.5734	90.332	SUMIDERO
	10014	10012	0	1.522	347	1.7	20.526	139.2318	89.1715	PARAMENTO
	10014	10012	0	1.522	348	1.7	10.999	215.2434	90.0536	PARAMENTO
	10015	10014	359.5959	1.548	10014	1.7	145.228	359.5959	89.493	
SD	89.89.4930									
	10015	10014	359.5959	1.548	10016	1.7	16.472	154.0408	89.3303	DELTA
	10015	10014	359.5959	1.548	349	1.7	62.505	9.1855	89.5436	SUMIDERO
	10015	10014	359.5959	1.548	350	1.7	62.266	8.235	89.5603	SUMIDERO
	10015	10014	359.5959	1.548	351	1.7	46.878	11.254	90.0653	SUMIDERO
	10015	10014	359.5959	1.548	352	1.7	47.477	12.1715	90.074	SUMIDERO
	10015	10014	359.5959	1.548	353	1.7	51.961	359.1141	90.0013	SUMIDERO
	10015	10014	359.5959	1.548	354	1.7	51.143	359.4718	89.5722	SUMIDERO
	10015	10014	359.5959	1.548	355	1.7	50.209	9.0333	89.4635	MANHOLE
	10015	10014	359.5959	1.548	356	1.7	49.759	2.2159	89.4634	MANHOLE
	10015	10014	359.5959	1.548	357	1.7	50.696	4.5433	89.4244	MANHOLE
	10015	10014	359.5959	1.548	358	1.7	44.799	12.3309	89.4243	PARAMENTO
	10015	10014	359.5959	1.548	359	1.7	70.584	12.2303	89.4638	PARAMENTO
	10015	10014	359.5959	1.548	360	1.7	43.563	10.2639	90.0403	BORDE_VIA
	10015	10014	359.5959	1.548	361	1.7	69.846	6.2936	89.5325	BORDE_VIA
	10015	10014	359.5959	1.548	362	1.7	63.433	7.1002	89.5614	BORDE_VIA
	10015	10014	359.5959	1.548	363	1.7	63.014	8.024	89.5547	BORDE_VIA
	10015	10014	359.5959	1.548	364	1.7	62.643	9.3457	89.5619	BORDE_VIA
	10015	10014	359.5959	1.548	365	1.7	58.789	11.5243	89.5122	BORDE_VIA
	10015	10014	359.5959	1.548	366	1.7	50.377	12.2255	89.5654	BORDE_VIA
	10015	10014	359.5959	1.548	367	1.7	28.37	352.5736	89.2321	PARAMENTO
	10015	10014	359.5959	1.548	368	1.7	38.113	359.2212	89.5051	BORDE_VIA
	10015	10014	359.5959	1.548	369	1.7	25.144	346.1845	89.1852	PARAMENTO
	10015	10014	359.5959	1.548	370	1.7	19.898	355.1428	89.5627	BORDE_VIA
	10015	10014	359.5959	1.548	371	1.7	13.279	352.3515	90.0301	BORDE_VIA
	10015	10014	359.5959	1.548	372	1.7	12.034	353.1351	89.4055	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10015	10014	359.5959	1.548	373	1.7	12.905	351.533	90.1627	SUMIDERO
	10015	10014	359.5959	1.548	374	1.7	13.966	322.2443	89.5706	SUMIDERO
	10015	10014	359.5959	1.548	375	1.7	13.063	324.4539	89.5958	SUMIDERO
	10015	10014	359.5959	1.548	376	1.7	7.175	334.3002	88.2926	MANHOLE
	10015	10014	359.5959	1.548	377	1.7	4.551	34.2225	87.5728	MANHOLE
	10015	10014	359.5959	1.548	378	1.7	6.957	48.4124	88.4558	MANHOLE
	10015	10014	359.5959	1.548	379	1.7	5.374	122.1434	88.3203	MANHOLE
	10015	10014	359.5959	1.548	380	1.7	18.621	141.1926	89.3412	MANHOLE
	10015	10014	359.5959	1.548	381	1.7	7.4	59.5112	89.2928	BORDE_VIA
	10015	10014	359.5959	1.548	382	1.7	8.297	63.1952	87.4458	PARAMENTO
	10015	10014	359.5959	1.548	383	1.7	16.094	125.2516	90.273	SUMIDERO
	10015	10014	359.5959	1.548	384	1.7	15.085	126.0736	90.3519	SUMIDERO
	10015	10014	359.5959	1.548	385	1.7	8.718	104.3943	89.4653	BORDE_VIA
	10015	10014	359.5959	1.548	386	1.7	9.51	102.0355	89.0845	PARAMENTO
	10015	10014	359.5959	1.548	387	1.7	14.822	125.3138	90.2421	BORDE_VIA
	10015	10014	359.5959	1.548	388	1.7	11.653	119.0616	90.0116	BORDE_VIA
	10015	10014	359.5959	1.548	389	1.7	24.949	134.3303	89.4812	SUMIDERO
	10015	10014	359.5959	1.548	390	1.7	25.021	132.2046	90.073	SUMIDERO
	10015	10014	359.5959	1.548	391	1.7	26.386	133.0642	89.3322	PARAMENTO
	10015	10014	359.5959	1.548	392	1.7	25.312	128.0028	89.3107	PARAMENTO
	10015	10014	359.5959	1.548	393	1.7	26.232	123.0454	89.3244	PARAMENTO
	10015	10014	359.5959	1.548	394	1.7	25.182	123.4403	89.563	BORDE_VIA
	10015	10014	359.5959	1.548	395	1.7	26.008	135.0008	89.5918	BORDE_VIA
	10015	10014	359.5959	1.548	396	1.7	29.282	134.343	89.3635	PARAMENTO
	10015	10014	359.5959	1.548	397	1.7	28.967	136.244	90.0005	BORDE_VIA
	10015	10014	359.5959	1.548	398	1.7	24.374	153.0512	90.1922	SUMIDERO
	10015	10014	359.5959	1.548	399	1.7	23.472	153.5236	90.0122	SUMIDERO
	10015	10014	359.5959	1.548	400	1.7	24.694	152.4908	90.1319	BORDE_VIA
	10015	10014	359.5959	1.548	401	1.7	27.223	152.2236	90.053	BORDE_VIA
	10015	10014	359.5959	1.548	402	1.7	27.522	155.1142	89.2454	PARAMENTO
	10015	10014	359.5959	1.548	403	1.7	25.649	155.4623	89.2154	PARAMENTO
	10015	10014	359.5959	1.548	404	1.7	13.568	155.2124	89.3605	BORDE_VIA
	10015	10014	359.5959	1.548	405	1.7	9.691	158.0759	89.2632	BORDE_VIA
	10015	10014	359.5959	1.548	406	1.7	12.857	159.4759	88.3749	PARAMENTO
	10015	10014	359.5959	1.548	407	1.7	14.802	120.5919	89.593	PARAMENTO
	10015	10014	359.5959	1.548	408	1.7	0.977	251.4659	92.0021	SUMIDERO
	10015	10014	359.5959	1.548	409	1.7	1.726	276.1653	91.0314	SUMIDERO
	10015	10014	359.5959	1.548	410	1.7	8.467	317.2218	89.171	BORDE_VIA
	10015	10014	359.5959	1.548	411	1.7	8.575	310.0511	88.1114	PARAMENTO
	10015	10014	359.5959	1.548	412	1.7	4.915	345.2545	88.4203	BORDE_VIA
	10015	10014	359.5959	1.548	413	1.7	3.107	166.2553	87.522	BORDE_VIA
	10015	10014	359.5959	1.548	414	1.7	0.993	329.5416	87.102	BORDE_VIA
	10015	10014	359.5959	1.548	415	1.7	15.939	352.293	89.2751	POSTE
	10016	10015	0	1.556	10015	1.7	16.47	0	89.335	
SD	89.89.3350									
	10016	10015	0	1.556	10017	1.7	64.729	264.1643	90.1321	DELTA
	10016	10015	0	1.556	416	1.7	3.095	297.0001	93.1223	SUMIDERO
	10016	10015	0	1.556	417	1.7	2.13	294.3912	94.3937	SUMIDERO
	10016	10015	0	1.556	418	1.7	6.052	297.052	89.5346	PARAMENTO
	10016	10015	0	1.556	419	1.7	11.274	223.4301	88.2537	PARAMENTO
	10016	10015	0	1.556	420	1.7	5.493	287.4951	91.1731	BORDE_VIA
	10016	10015	0	1.556	421	1.7	13.217	235.2726	89.004	BORDE_VIA
	10016	10015	0	1.556	422	1.7	5.863	284.0734	90.4714	POSTE
	10016	10015	0	1.556	423	1.7	10.572	228.361	88.4826	POSTE
	10016	10015	0	1.556	424	1.7	16.272	72.5146	90.0448	PARAMENTO
	10016	10015	0	1.556	425	1.7	15.907	77.0435	90.1433	BORDE_VIA
	10017	10016	0	1.537	10016	1.7	64.731	0	89.3001	
SD	89.89.3001									
	10017	10016	0	1.537	10018	1.7	91.842	184.3246	91.0505	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



									</



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	10019	10017	0.0001	1.599	481	1.7	3.293	318.5925	89.5933	SUMIDERO
	10019	10017	0.0001	1.599	482	1.7	3.293	335.174	88.4454	SUMIDERO
	10019	10017	0.0001	1.599	483	1.7	4.825	49.5334	88.505	HIDRANTE
	10019	10017	0.0001	1.599	484	1.7	5.429	190.5945	89.1952	SUMIDERO
	10019	10017	0.0001	1.599	485	1.7	6.281	192.4831	89.4052	SUMIDERO
	10019	10017	0.0001	1.599	486	1.7	5.792	151.3335	88.4736	MANHOLE
	10019	10017	0.0001	1.599	487	1.7	18.298	177.4244	89.4632	MANHOLE
	10019	10017	0.0001	1.599	488	1.7	10.542	136.3724	90.0834	SUMIDERO
	10019	10017	0.0001	1.599	489	1.7	10.286	141.5002	89.3045	SUMIDERO
	10019	10017	0.0001	1.599	490	1.7	12.338	148.3232	89.5511	BORDE_VIA
	10019	10017	0.0001	1.599	491	1.7	10.812	139.4832	90.273	BORDE_VIA
	10019	10017	0.0001	1.599	492	1.7	10.848	128.3723	90.1913	BORDE_VIA
	10019	10017	0.0001	1.599	493	1.7	12.201	121.1437	90.1426	BORDE_VIA
	10019	10017	0.0001	1.599	494	1.7	18.284	110.3238	90.0356	BORDE_VIA
	10019	10017	0.0001	1.599	495	1.7	20.459	112.1215	90.0356	BORDE_VIA
	10019	10017	0.0001	1.599	496	1.7	16.901	157.5524	89.5639	BORDE_VIA
	10019	10017	0.0001	1.599	497	1.7	30.009	168.1106	90.0312	BORDE_VIA
	10019	10017	0.0001	1.599	498	1.7	2.302	323.3614	87.1915	POSTE
	10019	10017	0.0001	1.599	499	1.7	4.225	291.4441	87.1014	POSTE
	10019	10017	0.0001	1.599	500	1.7	3.158	84.0818	87.5639	MANHOLE
	10019	10017	0.0001	1.599	501	1.7	38.126	0	89.273	LINEAMIENT
	10019	10017	0.0001	1.599	10017	1.7	88.437	0.0001	90.0607	
SD	90.90.0607									
	10019	10017	0.0001	1.599	502	1.7	66.276	0	89.4826	LINEAMIENT
	10020	10019	0	1.484	10019	1.7	43.666	0	87.0614	
SD	87.87.0614									
	10020	10019	0	1.484	10021	1.7	81.929	95.5426	88.4201	DELTA
	10020	10019	0	1.484	10022	1.7	72.554	180.2759	90.1149	DELTA
	10020	10019	0	1.484	503	1.7	25.101	182.0911	89.5548	PARAMENTO
	10020	10019	0	1.484	504	1.7	19.912	162.3103	89.0134	BORDE_VIA
	10020	10019	0	1.484	505	1.7	8.619	111.2607	85.1747	PARAMENTO
	10020	10019	0	1.484	506	1.7	15.031	148.4855	87.1253	PARAMENTO
	10020	10019	0	1.484	507	1.7	6.864	109.274	88.5001	BORDE_VIA
	10020	10019	0	1.484	508	1.7	6.783	106.1453	89.0813	POSTE
	10020	10019	0	1.484	509	1.7	3.103	203.394	87.5912	PARAMENTO
	10020	10019	0	1.484	510	1.7	8.769	343.1924	87.2306	PARAMENTO
	10020	10019	0	1.484	511	1.7	11.673	251.5523	89.4038	PARAMENTO
	10020	10019	0	1.484	512	1.7	10.713	320.4441	87.0601	PARAMENTO
	10020	10019	0	1.484	513	1.7	7.937	353.4028	87.4536	BORDE_VIA
	10020	10019	0	1.484	514	0.085	14.773	27.5707	88.2016	PARAMENTO
	10020	10019	0	1.484	515	0.085	12.975	64.0248	94.0548	PARAMENTO
	10020	10019	0	1.484	516	1.7	2.138	219.5632	86.0532	POSTE
	10020	10019	0	1.484	517	1.7	14.54	158.4644	90.3717	SUMIDERO
	10020	10019	0	1.484	518	1.7	15.462	158.0431	90.3124	SUMIDERO
	10020	10019	0.0001	1.491	10019	1.5	43.633	0.0001	87.2138	
SD	87.87.2138									
	10020	10019	0.0001	1.491	519	1.5	34.783	0	86.28	LINEAMIENT
	10020	10019	0.0001	1.491	520	1.5	22.952	0.0002	87.0347	LINEAMIENT
	10020	10019	0.0001	1.491	521	1.5	8.299	0.0002	88.2252	LINEAMIENT
	10020	10019	0.0001	1.491	522	1.5	49.201	95.5428	88.2744	LINEAMIENT
	10020	10019	0.0001	1.491	523	1.5	31.241	95.5428	88.3657	LINEAMIENT
	10020	10019	0.0001	1.491	524	1.5	12.804	95.5428	89.2811	LINEAMIENT
	10021	10020	0	1.541	10020	1.5	81.924	0	91.1133	
SD	91.91.1133									
	10021	10020	0	1.541	10023	1.5	57.176	271.5316	91.2131	DELTA
	10021	10020	0	1.541	10024	1.5	83.89	177.4117	90.043	DELTA
	10021	10020	0	1.541	525	1.5	39.507	177.4118	90.0055	LINEAMIENT
	10021	10020	0	1.541	526	1.5	2.334	222.4319	91.292	BORDE_VIA
	10021	10020	0	1.541	527	1.5	5.905	342.1252	90.2535	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10021	10020	0	1.541	528	1.5	12.182	297.1132	90.3046 BORDE_VIA
	10021	10020	0	1.541	529	1.5	8.54	188.5529	90.2418 BORDE_VIA
	10021	10020	0	1.541	530	1.5	10.588	261.2244	89.5351 BORDE_VIA
	10021	10020	0	1.541	531	1.5	6.787	124.5812	90.4407 BORDE_VIA
	10021	10020	0	1.541	532	1.5	10.248	145.2806	90.0036 BORDE_VIA
	10021	10020	0	1.541	533	1.5	17.958	265.2115	89.5316 BORDE_VIA
	10021	10020	0	1.541	534	1.5	17.992	267.0814	90.0325 BORDE_VIA
	10021	10020	0	1.541	535	1.5	25.36	268.5836	90.4323 BORDE_VIA
	10021	10020	0	1.541	536	1.5	28.461	268.4519	90.4955 BORDE_VIA
	10021	10020	0	1.541	537	1.5	7.195	105.5555	90.4321 BORDE_VIA
	10021	10020	0	1.541	538	1.5	12.812	98.1224	90.2302 BORDE_VIA
	10021	10020	0	1.541	539	1.5	9.615	350.5928	91.0856 BORDE_VIA
	10021	10020	0	1.541	540	1.5	9.994	55.5226	90.2942 BORDE_VIA
	10021	10020	0	1.541	541	1.5	14.695	32.1931	90.2942 BORDE_VIA
	10021	10020	0	1.541	542	1.5	14.069	66.32	90.2238 BORDE_VIA
	10021	10020	0	1.541	543	1.5	5.581	31.3506	90.4253 MANHOLE
	10021	10020	0	1.541	544	1.5	3.694	48.5017	90.2715 MANHOLE
	10021	10020	0	1.541	545	1.5	9.562	153.0843	90.1929 MANHOLE
	10021	10020	0	1.541	546	1.5	6.57	117.1342	90.5609 SUMIDERO
	10021	10020	0	1.541	547	1.5	7.282	112.035	90.3423 SUMIDERO
	10021	10020	0	1.541	548	1.5	5.775	345.2653	90.3255 POSTE
	10021	10020	0	1.541	549	1.5	31.487	279.3047	91.14 TERRENO
	10021	10020	0	1.541	550	1.5	32.606	278.5527	91.14 POSTE
	10021	10020	0	1.541	551	1.5	8.868	263.4303	90.0635 POSTE
	10021	10020	0	1.541	552	1.5	8.193	263.1044	90.1925 POSTE
	10021	10020	0	1.541	553	1.5	19.722	284.543	90.3951 TERRENO
	10021	10020	0	1.541	554	1.5	11.02	299.1129	90.365 TERRENO
	10021	10020	0	1.541	555	1.5	4.881	197.0413	90.3646 POSTE
	10024	10021	0	1.517	10021	1.5	83.89	0	89.5831
SD	89.89.5831								
	10024	10021	0	1.517	10025	1.5	69.402	270.1619	91.2319 DELTA
	10024	10021	0	1.517	10026	1.5	106.484	179.4008	90.1214 DELTA
	10024	10021	0	1.517	556	1.5	3.623	339.4943	89.5131 BORDE_VIA
	10024	10021	0	1.517	557	1.5	9.418	352.2612	90.4823 BORDE_VIA
	10024	10021	0	1.517	558	1.5	5.234	193.0954	90.5423 BORDE_VIA
	10024	10021	0	1.517	559	1.5	9.98	186.3528	90.4551 BORDE_VIA
	10024	10021	0	1.517	560	1.5	5.004	227.3633	90.455 BORDE_VIA
	10024	10021	0	1.517	561	1.5	7.971	295.0317	89.3827 BORDE_VIA
	10024	10021	0	1.517	562	1.5	9.781	250.1555	91.1639 BORDE_VIA
	10024	10021	0	1.517	563	1.5	10.008	251.4152	91.1303 POSTE
	10024	10021	0	1.517	564	1.5	38.061	267.3451	91.2411 MANHOLE
	10024	10021	0	1.517	565	1.5	38.394	275.4802	91.1604 POSTE
	10024	10021	0	1.517	566	1.5	3.669	204.5755	91.3341 POSTE
	10024	10021	0	1.517	567	1.5	7.21	126.1901	90.3859 BORDE_VIA
	10024	10021	0	1.517	568	1.5	6.681	60.0319	91.0601 BORDE_VIA
	10024	10021	0	1.517	569	1.5	11.126	148.2017	90.3412 BORDE_VIA
	10024	10021	0	1.517	570	1.5	12.358	27.4954	90.3125 BORDE_VIA
	10024	10021	0	1.517	571	1.5	7.375	120.3133	90.3124 BORDE_VIA
	10024	10021	0	1.517	572	1.5	12.998	75.0325	90.392 BORDE_VIA
	10024	10021	0	1.517	573	1.5	13.398	106.0042	90.3204 BORDE_VIA
	10024	10021	0	1.517	574	1.5	9.621	29.5353	90.3204 MANHOLE
	10024	10021	0	1.517	575	1.5	2.877	45.0147	91.1159 MANHOLE
	10024	10021	0	1.517	576	1.5	3.539	349.0357	92.2343 SUMIDERO
	10024	10021	0	1.517	577	1.5	4.439	344.543	92.0318 SUMIDERO
	10024	10021	0	1.517	578	1.5	8.023	55.4419	91.1731 SUMIDERO
	10024	10021	0	1.517	579	1.5	7.304	61.1014	91.3104 SUMIDERO
	10024	10021	0	1.517	580	1.5	59.927	89.5351	90.1758 MANHOLE
	10024	10021	0	1.517	581	1.5	31.816	4.0933	89.5708 MANHOLE
	10024	10021	0	1.517	582	1.5	48.98	267.5122	91.4231 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		10024	10021	0	1.517	583	1.5	62.098	267.5856	91.2823	TERRENO
		10026	10024	0	1.531	10024	1.5	106.472	0	89.4953	
SD	89.89.4953										
		10026	10024	0	1.531	10027	1.5	60.226	269.1214	91.3926	DELTA
		10026	10024	0	1.531	584	1.5	46.338	268.1219	92.2653	MANHOLE
		10026	10024	0	1.531	585	1.5	56.09	268.2944	91.5831	TERRENO
		10026	10024	0	1.531	586	1.5	33.168	269.0435	92.3047	TERRENO
		10026	10024	0	1.531	587	1.5	26.111	269.421	91.5659	TERRENO
		10026	10024	0	1.531	588	1.5	19.845	270.3142	90.3812	TERRENO
		10026	10024	0	1.531	589	1.5	7.124	280.4044	89.5139	TERRENO
		10026	10024	0	1.531	590	1.5	6.117	346.1908	91.2311	BORDE_VIA
		10026	10024	0	1.531	591	1.5	5.793	322.5734	89.2137	BORDE_VIA
		10026	10024	0	1.531	592	1.5	12.459	354.0219	90.1404	BORDE_VIA
		10026	10024	0	1.531	593	1.5	12.13	289.1814	89.3342	BORDE_VIA
		10026	10024	0	1.531	594	1.5	10.307	34.2342	90.1107	BORDE_VIA
		10026	10024	0	1.531	595	1.5	16.234	20.5944	90.1107	BORDE_VIA
		10026	10024	0	1.531	596	1.5	3.314	202.4108	89.5534	BORDE_VIA
		10026	10024	0	1.531	597	1.5	9.759	249.4206	89.1946	BORDE_VIA
		10026	10024	0	1.531	598	1.5	10.559	186.3152	90.1852	BORDE_VIA
		10026	10024	0	1.531	599	1.5	10.571	56.3011	90.1852	BORDE_VIA
		10026	10024	0	1.531	600	1.5	7.055	123.1949	90.0807	BORDE_VIA
		10026	10024	0	1.531	601	1.5	17.19	67.4902	90.1701	BORDE_VIA
		10026	10024	0	1.531	602	1.5	14.302	155.4838	90.1701	BORDE_VIA
		10026	10024	0	1.531	603	1.5	16.451	91.3006	90.1219	BORDE_VIA
		10026	10024	0	1.531	604	1.5	8.317	98.3314	90.0628	BORDE_VIA
		10026	10024	0	1.531	605	1.5	4.653	67.0948	89.3626	MANHOLE
		10026	10024	0	1.531	606	1.5	2.985	55.3802	89.413	MANHOLE
		10026	10024	0	1.531	607	1.5	10.434	44.2433	90.2152	SUMIDERO
		10026	10024	0	1.531	608	1.5	10.012	49.2523	90.175	SUMIDERO
		10026	10024	0	1.531	609	1.5	5.083	345.1449	90.5134	SUMIDERO
		10026	10024	0	1.531	610	1.5	5.995	342.5443	90.3856	SUMIDERO
		10026	10024	0	1.531	611	1.5	7.582	112.4749	90.1445	SUMIDERO
		10026	10024	0	1.531	612	1.5	6.795	115.5803	90.1445	SUMIDERO
		10026	10024	0	1.531	613	1.5	2.245	197.3948	91.1755	SUMIDERO
		10026	10024	0	1.531	614	1.5	3.186	201.5521	91.1755	SUMIDERO
		10026	10024	0	1.531	615	1.5	4.066	230.0631	88.2016	POSTE
		10026	10024	0	1.531	10028	1.5	97.535	180.2041	89.5902	DELTA
		10028	10026	0	1.558	10026	1.5	97.53	0	90.0414	
SD	90.90.0414										
		10028	10026	0	1.558	616	1.5	57.758	0	90.1425	LINEAMIENT
		10028	10026	0	1.558	10029	1.5	45.785	261.2017	89.3448	DELTA
		10028	10026	0	1.558	617	1.5	43.599	359.0332	90.2533	SUMIDERO
		10028	10026	0	1.558	618	1.5	42.713	359.4113	90.2627	SUMIDERO
		10028	10026	0	1.558	619	1.5	41.015	4.0802	90.2035	MANHOLE
		10028	10026	0	1.558	620	1.5	43.612	5.4203	90.2319	MANHOLE
		10028	10026	0	1.558	621	1.5	5.521	73.4158	91.2648	MANHOLE
		10028	10026	0	1.558	622	1.5	4.19	124.0517	90.4744	MANHOLE
		10028	10026	0	1.558	623	1.5	11.178	89.5855	91.1207	MANHOLE
		10028	10026	0	1.558	624	1.5	44.312	8.0821	90.2609	SUMIDERO
		10028	10026	0	1.558	625	1.5	43.39	7.3811	90.2543	SUMIDERO
		10028	10026	0	1.558	626	1.5	12.008	81.4754	91.4542	MANHOLE
		10028	10026	0	1.558	627	1.5	8.674	71.4737	92.2735	HIDRANTE
		10028	10026	0	1.558	628	1.5	11.574	74.0401	92.2159	SUMIDERO
		10028	10026	0	1.558	629	1.5	10.713	75.5203	92.2736	SUMIDERO
		10028	10026	0	1.558	630	1.5	12.559	99.2936	90.0043	SUMIDERO
		10028	10026	0	1.558	631	1.5	11.589	98.3201	90.0838	SUMIDERO
		10028	10026	0	1.558	632	1.5	7.715	210.5818	88.1904	SUMIDERO
		10028	10026	0	1.558	633	1.5	8.685	212.3519	88.3326	SUMIDERO
		10028	10026	0	1.558	634	1.5	21.66	170.5324	89.452	MANHOLE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10028	10026	0	1.558	635	1.5	37.467	171.3308	90.1501 MANHOLE
	10028	10026	0	1.558	636	1.5	21.051	182.412	89.4337 CAMA_TELEF
	10028	10026	0	1.558	637	1.5	22.148	151.2017	89.4337 VALVULA
	10028	10026	0	1.558	638	1.5	10.841	101.1815	89.3956 BORDE_VIA
	10028	10026	0	1.558	639	1.5	8.187	96.1832	90.1353 BORDE_VIA
	10028	10026	0	1.558	640	1.5	6.713	80.163	91.0115 BORDE_VIA
	10028	10026	0	1.558	641	1.5	12.448	31.3721	90.465 BORDE_VIA
	10028	10026	0	1.558	642	1.5	9.722	4.4734	91.0214 VALVULA
	10028	10026	0	1.558	643	1.5	9.476	357.1352	90.5353 BORDE_VIA
	10028	10026	0	1.558	644	1.5	4.927	355.4348	91.2159 POSTE
	10028	10026	0	1.558	645	1.5	1.97	311.173	94.0134 BORDE_VIA
	10028	10026	0	1.558	646	1.5	2.441	343.0125	92.53 BORDE_VIA
	10028	10026	0	1.558	647	1.5	8.865	272.5903	90.3553 BORDE_VIA
	10028	10026	0	1.558	648	1.5	1.446	232.2746	92.5908 BORDE_VIA
	10028	10026	0	1.558	649	1.5	26.85	267.215	90.1316 BORDE_VIA
	10028	10026	0	1.558	650	1.5	3.859	210.3113	89.5505 BORDE_VIA
	10028	10026	0	1.558	651	1.5	3.84	206.3835	89.3013 BORDE_VIA
	10028	10026	0	1.558	652	1.5	6.022	205.3443	88.3126 BORDE_VIA
	10028	10026	0	1.558	653	1.5	7.151	209.0417	88.1609 BORDE_VIA
	10028	10026	0	1.558	654	1.5	10.211	223.5035	88.1416 BORDE_VIA
	10028	10026	0	1.558	655	1.5	20.512	238.4916	88.0359 BORDE_VIA
	10028	10026	0	1.558	656	1.5	45.52	272.4341	90.192 PARAMENTO
	10028	10026	0	1.558	657	1.5	16.124	272.2135	89.5618 POSTE
	10028	10026	0	1.558	658	1.5	16.842	278.4255	90.1022 POSTE
	10028	10026	0	1.558	659	1.5	11.952	145.3539	88.5202 SEPARADOR
	10028	10026	0	1.558	660	1.5	14.544	149.5944	89.221 SEPARADOR
	10028	10026	0	1.558	661	1.5	17.996	118.2811	89.204 SEPARADOR
	10028	10026	0	1.558	662	1.5	19.86	125.3941	89.25 SEPARADOR
	10028	10026	0	1.558	663	1.5	20.641	158.3329	89.3413 BORDE_VIA
	10028	10026	0	1.558	664	1.5	21.018	160.1849	89.4526 BORDE_VIA
	10028	10026	0	1.558	665	1.5	24.356	180.0452	89.5858 BORDE_VIA
	10028	10026	0	1.558	666	1.5	28.032	165.1508	90.0912 BORDE_VIA
	10028	10026	0	1.558	667	1.5	22.699	183.0322	89.4504 BORDE_VIA
	10028	10026	0	1.558	668	1.5	24.918	138.2034	89.3817 BORDE_VIA
	10028	10026	0	1.558	669	1.5	22.54	187.3845	89.4028 BORDE_VIA
	10028	10026	0	1.558	670	1.5	24.337	199.2649	89.26 BORDE_VIA
	10028	10026	0	1.558	10030	1.5	97.849	178.3251	90.1906 DELTA
	10030	10028	0.0001	1.557	10028	1.5	97.848	0.0001	89.4555
SD	89.89.4555								
	10030	10028	0.0001	1.557	10031	1.5	14.641	178.0916	90.3123 DELTA
	10030	10028	0.0001	1.557	10032	1.5	56.154	174.2843	90.0029 DELTA
	10030	10028	0.0001	1.557	671	1.5	92.843	0.0001	89.3904 LINEAMIENT
	10030	10028	0.0001	1.557	672	1.5	78.165	0	89.3258 LINEAMIENT
	10030	10028	0.0001	1.557	673	1.5	27.491	0	89.4017 LINEAMIENT
	10030	10028	0.0001	1.557	674	1.5	19.094	149.5402	90.1951 BORDE_VIA
	10030	10028	0.0001	1.557	675	1.5	20.792	163.0757	90.2226 BORDE_VIA
	10030	10028	0.0001	1.557	676	1.5	10.099	185.0051	90.4923 BORDE_VIA
	10030	10028	0.0001	1.557	677	1.5	28.715	168.2258	90.1539 BORDE_VIA
	10030	10028	0.0001	1.557	678	1.5	5.232	189.0139	91.1702 BORDE_VIA
	10030	10028	0.0001	1.557	679	1.5	23.595	135.011	90.1947 BORDE_VIA
	10030	10028	0.0001	1.557	680	1.5	10.253	185.2608	90.4518 SUMIDERO
	10030	10028	0.0001	1.557	681	1.5	10.265	189.0707	90.442 SUMIDERO
	10030	10028	0.0001	1.557	682	1.5	13.719	133.5901	90.29 BORDE_VIA
	10030	10028	0.0001	1.557	683	1.5	11.352	188.3503	90.4252 BORDE_VIA
	10030	10028	0.0001	1.557	684	1.5	8.679	133.3601	90.4252 BORDE_VIA
	10030	10028	0.0001	1.557	685	1.5	13.246	193.4939	90.4121 BORDE_VIA
	10030	10028	0.0001	1.557	686	1.5	13.532	194.5914	90.3959 BORDE_VIA
	10030	10028	0.0001	1.557	687	1.5	15.325	210.0456	90.3616 BORDE_VIA
	10030	10028	0.0001	1.557	688	1.5	7.577	56.3316	90.2543 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10030	10028	0.0001	1.557	689	1.5	6.278	353.2244	90.0847 BORDE_VIA
	10030	10028	0.0001	1.557	690	1.5	18.578	183.2625	90.2755 BORDE_VIA
	10030	10028	0.0001	1.557	691	1.5	17.81	186.335	90.3139 BORDE_VIA
	10030	10028	0.0001	1.557	692	1.5	17.79	190.5005	90.4318 SUMIDERO
	10030	10028	0.0001	1.557	693	1.5	17.175	195.461	90.3811 BORDE_VIA
	10030	10028	0.0001	1.557	694	1.5	17.808	201.07	90.3357 BORDE_VIA
	10030	10028	0.0001	1.557	695	1.5	14.912	129.5332	90.2823 BORDE_VIA
	10030	10028	0.0001	1.557	696	1.5	23.465	182.4022	90.2457 BORDE_VIA
	10030	10028	0.0001	1.557	697	1.5	12.824	136.5027	90.4034 SUMIDERO
	10030	10028	0.0001	1.557	698	1.5	13.601	134.2954	90.3517 SUMIDERO
	10030	10028	0.0001	1.557	699	1.5	19.311	157.2605	90.321 SUMIDERO
	10030	10028	0.0001	1.557	700	1.5	20.076	159.1235	90.2214 SUMIDERO
	10030	10028	0.0001	1.557	701	1.5	18.81	183.4738	90.3711 POSTE
	10030	10028	0.0001	1.557	702	1.5	10.442	184.5519	90.5502 SUMIDERO
	10030	10028	0.0001	1.557	703	1.5	11.283	187.2701	90.4821 SUMIDERO
	10030	10028	0.0001	1.557	704	1.5	10.841	160.4118	90.4032 MANHOLE
	10030	10028	0.0001	1.557	705	1.5	13.313	169.3356	90.2928 MANHOLE
	10030	10028	0.0001	1.557	706	1.5	13.91	161.451	90.2711 MANHOLE
	10030	10028	0.0001	1.557	707	1.5	13.557	187.3927	90.4035 CAMA_TELEF
	10030	10028	0.0001	1.557	708	1.5	11.078	191.5132	89.4247 HIDRANTE
	10032	10030	0	1.518	10030	1.5	56.151	0	90.0444
SD	90.90.0444								
	10032	10030	0	1.518	709	1.5	7.07	303.4558	90.1136 LINEAMIENT
	10032	10030	0	1.518	10033	1.5	55.052	279.4646	90.0939 DELTA
	10032	10030	0	1.518	711	1.5	5.469	6.1454	90.3043 BORDE_VIA
	10032	10030	0	1.518	712	1.5	7.781	264.0539	90.0754 BORDE_VIA
	10032	10030	0	1.518	713	1.5	11.476	304.1144	90.0754 BORDE_VIA
	10032	10030	0	1.518	714	1.5	13.636	218.5132	90.4004 BORDE_VIA
	10032	10030	0	1.518	715	1.5	19.505	291.5238	90.1125 BORDE_VIA
	10032	10030	0	1.518	716	1.5	18.78	270.4439	90.1125 BORDE_VIA
	10032	10030	0	1.518	717	1.5	3.871	312.1702	89.3903 MANHOLE
	10032	10030	0	1.518	718	1.5	9.084	305.5157	90.1805 CAMA_TELEF
	10032	10030	0	1.518	719	1.5	16.605	178.0851	89.3322 HIDRANTE
	10032	10030	0	1.518	720	1.5	4.233	143.5638	90.1848 BORDE_VIA
	10032	10030	0	1.518	721	1.5	2.266	156.1817	89.5746 BORDE_VIA
	10032	10030	0	1.518	722	1.5	2.771	186.5504	90.3614 BORDE_VIA
	10032	10030	0	1.518	723	1.5	8.239	185.324	89.5718 BORDE_VIA
	10032	10030	0	1.518	724	1.5	9.269	178.1603	90.0838 BORDE_VIA
	10032	10030	0	1.518	725	1.5	14.112	179.0025	90.1145 BORDE_VIA
	10032	10030	0	1.518	726	1.5	6.39	170.0554	88.3556 POSTE
	10032	10030	0	1.518	727	1.5	15.044	185.0516	90.2054 BORDE_VIA
	10032	10030	0	1.518	728	1.5	16.198	185.1755	90.2054 BORDE_VIA
	10032	10030	0	1.518	729	1.5	16.919	183.1857	90.2734 BORDE_VIA
	10032	10030	0	1.518	730	1.5	17.079	177.0242	90.0006 BORDE_VIA
	10032	10030	0	1.518	731	0.085	14.432	175.0635	95.0316 BORDE_VIA
	10032	10030	0	1.518	732	1.5	23.104	183.535	90.2854 BORDE_VIA
	10032	10030	0	1.518	733	1.5	17.72	273.0814	90.124 MANHOLE
	10032	10030	0	1.518	734	1.5	18.023	9.4814	90.0616 MANHOLE
	10032	10030	0	1.518	735	1.5	11.173	327.1752	90.1336 BORDE_VIA
	10032	10030	0	1.518	736	1.5	18.189	343.3543	90.1558 BORDE_VIA
	10032	10030	0	1.518	737	1.5	6.089	143.0343	90.1557 SUMIDERO
	10032	10030	0	1.518	738	1.5	4.999	52.5101	90.4155 SUMIDERO
	10032	10030	0	1.518	739	1.5	6.639	152.1555	90.2059 SUMIDERO
	10032	10030	0	1.518	740	1.5	10.382	162.1758	90.2058 SUMIDERO
	10033	10032	0	1.519	10032	1.5	55.037	0	89.5318
SD	89.89.5318								
	10033	10032	0	1.519	10034	1.5	172.913	85.0139	90.1326 DELTA
	10033	10032	0	1.519	741	1.5	3.728	152.2711	90.1441 LINEAMIENT
	10033	10032	0	1.519	742	1.5	3.176	173.1958	90.3825 SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10033	10032	0	1.519	743	1.5	3.703	186.4626	91.0306	SUMIDERO
	10033	10032	0	1.519	744	1.5	4.367	205.3108	88.2904	SUMIDERO
	10033	10032	0	1.519	745	1.5	2.535	223.3625	86.5156	SUMIDERO
	10033	10032	0	1.519	746	1.5	4.078	192.5212	90.4452	BORDE_VIA
	10033	10032	0	1.519	747	1.5	3.989	182.3208	90.5812	BORDE_VIA
	10033	10032	0	1.519	748	1.5	4.753	181.145	90.4729	BORDE_VIA
	10033	10032	0	1.519	749	1.5	8.175	50.5631	90.2614	SUMIDERO
	10033	10032	0	1.519	750	1.5	7.729	57.1317	90.3434	SUMIDERO
	10033	10032	0	1.519	751	1.5	8.076	59.3803	90.4	BORDE_VIA
	10033	10032	0	1.519	752	1.5	7.918	43.0514	90.3243	BORDE_VIA
	10033	10032	0	1.519	753	1.5	9.348	114.3739	90.2457	BORDE_VIA
	10033	10032	0	1.519	754	1.5	8.261	43.5017	89.3234	POSTE
	10033	10032	0	1.519	755	1.5	13.302	70.4756	90.2745	BORDE_VIA
	10033	10032	0	1.519	756	1.5	5.397	54.4625	90.5503	MANHOLE
	10033	10032	0	1.519	757	1.5	3.106	68.0606	90.1712	MANHOLE
	10033	10032	0	1.519	758	1.5	2.1	356.22	90.0554	CAMA_TELEF
	10033	10032	0	1.519	759	1.5	68.581	85.1526	90.172	MANHOLE
	10033	10032	0	1.519	760	2	68.6	83.3213	89.5408	MANHOLE
	10033	10032	0	1.519	761	2	72.23	89.1558	89.5547	SUMIDERO
	10033	10032	0	1.519	762	2	73.045	89.3012	90.0317	SUMIDERO
	10033	10032	0	1.519	763	2	71.822	82.5016	89.5617	SUMIDERO
	10033	10032	0	1.519	764	2	72.441	82.094	90.0007	SUMIDERO
	10033	10032	0	1.519	765	2	64.622	82.2252	89.541	SUMIDERO
	10033	10032	0	1.519	766	2	63.796	82.5603	89.525	SUMIDERO
	10033	10032	0	1.519	767	2	71.346	84.3624	89.5342	CAMA_TELEF
	10033	10032	0	1.519	10035	1.5	67.017	87.4327	90.1732	DELTA
	10034	10033	0	1.485	10033	1.5	172.913	0	89.4701	
SD	89.89.4701									
	10034	10033	0	1.485	768	1.5	81.435	356.3632	89.4917	LINEAMIENT
	10034	10033	0	1.485	769	1.5	58.155	359.2245	89.5038	MANHOLE
	10034	10033	0	1.485	770	1.5	59.673	1.0655	89.5308	MANHOLE
	10034	10033	0	1.485	771	1.5	55.631	0.2723	89.4938	CAMA_TELEF
	10034	10033	0	1.485	772	1.5	62.398	1.261	89.5246	SUMIDERO
	10034	10033	0	1.485	773	1.5	61.594	1.5439	89.5937	SUMIDERO
	10034	10033	0	1.485	774	1.5	54.756	3.4042	89.5511	SUMIDERO
	10034	10033	0	1.485	775	1.5	54.267	2.5135	90.0056	SUMIDERO
	10034	10033	0	1.485	776	1.5	57.96	353.5958	89.5944	SUMIDERO
	10034	10033	0	1.485	777	1.5	57.06	354.2502	89.5315	SUMIDERO
	10034	10033	0	1.485	778	1.5	5.996	206.2317	89.3741	MANHOLE
	10034	10033	0	1.485	779	1.5	4.208	189.0302	89.1948	MANHOLE
	10034	10033	0	1.485	780	1.5	2.073	269.004	89.1854	CAMA_TELEF
	10034	10033	0	1.485	781	1.5	3.049	357.0237	89.4243	CAMA_TELEF
	10034	10033	0	1.485	782	1.5	4.446	98.2741	89.1509	CAMA_TELEF
	10034	10033	0	1.485	783	1.5	2.986	73.5	90.4424	SUMIDERO
	10034	10033	0	1.485	784	1.5	3.675	73.0658	92.4032	SUMIDERO
	10034	10033	0	1.485	785	1.5	8.84	172.5431	89.3755	SUMIDERO
	10034	10033	0	1.485	786	1.5	8.075	171.2023	89.4101	SUMIDERO
	10034	10033	0	1.485	787	1.5	15.368	229.0152	90.1016	SUMIDERO
	10034	10033	0	1.485	788	1.5	14.761	230.535	90.1314	SUMIDERO
	10034	10033	0	1.485	789	1.5	9.613	217.3553	89.555	LINEAMIENT
	10034	10033	0	1.485	790	1.5	6.866	291.0604	91.2705	SUMIDERO
	10034	10033	0	1.485	791	1.5	6.167	285.1252	90.1252	SUMIDERO
	10034	10033	0	1.485	792	1.5	17.188	196.1742	90.0232	MANHOLE
	10034	10033	0	1.485	10036	1.5	135.708	217.3232	89.5916	DELTA
	10034	10033	0	1.485	793	1.5	7.077	269.2704	89.5656	BORDE_VIA
	10034	10033	0	1.485	794	1.5	10.778	269.4037	89.5453	BORDE_VIA
	10034	10033	0	1.485	795	1.5	6.619	283.5435	91.1345	BORDE_VIA
	10034	10033	0	1.485	796	1.5	10.364	322.51	90.3539	BORDE_VIA
	10034	10033	0	1.485	797	1.5	8.249	11.5808	90.5013	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10034	10033	0	1.485	798	1.5	2.752	37.3712	92.5444 BORDE_VIA
	10034	10033	0	1.485	799	1.5	3.742	73.3311	92.0939 BORDE_VIA
	10034	10033	0	1.485	800	1.5	3.447	92.531	89.1005 BORDE_VIA
	10034	10033	0	1.485	801	1.5	8.489	147.495	89.3652 BORDE_VIA
	10034	10033	0	1.485	802	1.5	8.675	91.3958	89.5855 BORDE_VIA
	10034	10033	0	1.485	803	1.5	13.571	122.2043	90.1305 BORDE_VIA
	10034	10033	0	1.485	804	1.5	12.022	183.59	89.4622 BORDE_VIA
	10034	10033	0	1.485	805	1.5	17.188	221.3856	89.5838 BORDE_VIA
	10034	10033	0	1.485	806	1.5	22.753	182.3227	90.2424 BORDE_VIA
	10034	10033	0	1.485	807	1.5	23.88	221.1332	90.0052 BORDE_VIA
	10034	10033	0	1.485	808	1.5	24.511	201.3305	90.0559 BORDE_VIA
	10034	10033	0	1.485	809	1.5	15.915	240.0018	90.0738 BORDE_VIA
	10034	10033	0	1.485	810	1.5	26.053	195.4538	90.2803 BORDE_VIA
	10034	10033	0	1.485	811	1.5	21.954	248.5343	89.5757 BORDE_VIA
	10034	10033	0	1.485	812	1.5	33.396	192.2333	90.2941 BORDE_VIA
	10034	10033	0	1.485	813	1.5	18.429	233.532	89.1838 POSTE
	10034	10033	0	1.485	814	1.5	26.519	205.46	90.0059 BORDE_VIA
	10034	10033	0	1.485	815	1.5	6.693	274.1123	90.1203 POSTE
	10034	10033	0	1.485	816	1.5	35.218	209.2655	90.0232 BORDE_VIA
	10034	10033	0	1.485	817	1.5	10.918	263.25	89.5435 BORDE_VIA
	10034	10033	0	1.485	818	1.5	17.253	265.5105	89.5434 BORDE_VIA
	10034	10033	0	1.485	819	1.5	80.381	215.3939	90.0726 BORDE_VIA
	10034	10033	0	1.485	820	1.5	82.209	214.1521	90.0702 BORDE_VIA
	10034	10033	0	1.485	821	1.5	82.718	212.5747	90.0957 BORDE_VIA
	10034	10033	0	1.485	822	1.5	83.148	210.5406	90.1059 BORDE_VIA
	10034	10033	0	1.485	823	1.5	51.801	222.0702	89.5058 HIDRANTE
	10034	10033	0	1.485	824	1.5	53.499	216.0739	90.0323 VALVULA
	10034	10033	0	1.485	825	1.5	17.241	237.3643	89.324 VALVULA
	10034	10033	0	1.485	826	1.5	68.554	265.4214	89.4536 MANHOLE
	10034	10033	0	1.485	827	1.5	110.619	219.4903	90.0254 LINEAMIENT
	10034	10033	0	1.485	828	1.5	86.288	218.0127	90.0439 MANHOLE
	10034	10033	0	1.485	829	1.5	86.988	220.5114	90.064 SUMIDERO
	10034	10033	0	1.485	830	1.5	87.546	221.0329	90.0532 SUMIDERO
	10034	10033	0	1.485	831	1.5	81.473	215.261	90.0834 SUMIDERO
	10034	10033	0	1.485	832	1.5	80.571	215.4443	90.0755 SUMIDERO
	10034	10033	0	1.485	833	1.5	93.765	216.1957	90.0525 SUMIDERO
	10034	10033	0	1.485	834	1.5	94.391	216.071	90.0538 SUMIDERO
	10034	10033	0	1.485	835	1.5	84.349	220.2024	90.0145 CAMA_TELEF
	10036	10034	0	1.521	10034	1.5	135.709	0	90.0132
SD	90.90.0132								
	10036	10034	0	1.521	10037	1.5	144.92	185.4336	90.2531 DELTA
	10036	10034	0	1.521	836	1.5	38.708	184.363	90.2125 MANHOLE
	10036	10034	0	1.521	837	1.5	62.805	186.2705	90.3016 LINEAMIENT
	10036	10034	0	1.521	838	1.5	95.096	185.2357	90.2859 LINEAMIENT
	10036	10034	0	1.521	839	1.5	69.844	183.1606	90.2755 MANHOLE
	10036	10034	0	1.521	840	1.5	65.727	186.5745	90.2546 CAMA_TELEF
	10036	10034	0	1.521	841	1.5	60.527	187.5204	90.3211 SUMIDERO
	10036	10034	0	1.521	842	1.5	61.146	188.0944	90.3226 SUMIDERO
	10036	10034	0	1.521	843	1.5	62.958	180.2159	90.304 SUMIDERO
	10036	10034	0	1.521	844	1.5	62.347	180.46	90.3019 SUMIDERO
	10036	10034	0	1.521	845	1.5	33.07	192.2127	90.2219 BORDE_VIA
	10036	10034	0	1.521	846	1.5	31.835	180.1147	90.2432 BORDE_VIA
	10036	10034	0	1.521	847	1.5	45.18	2.2947	90.1515 BORDE_VIA
	10036	10034	0	1.521	848	1.5	47.649	6.4256	90.1834 BORDE_VIA
	10036	10034	0	1.521	849	1.5	45.573	353.5204	90.1333 BORDE_VIA
	10037 NO	359.5956	1.547 NO		1.5	144.91	359.5956	89.3548	
SD	89.89.3548								
	10037	10036	359.5956	1.547	10036	1.5	144.916	0	89.3613
SD	89.89.3613								



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10037	10036	359.5956	1.547	10038	1.5	42.856	265.3744	89.1342	DELTA
	10037	10036	359.5956	1.547	850	1.5	33.269	9.2809	89.5322	SUMIDERO
	10037	10036	359.5956	1.547	851	1.5	32.478	9.3303	89.5452	SUMIDERO
	10037	10036	359.5956	1.547	852	1.5	5.617	74.0319	90.342	SUMIDERO
	10037	10036	359.5956	1.547	853	1.5	6.294	67.2709	90.2252	SUMIDERO
	10037	10036	359.5956	1.547	854	1.5	22.363	0.3756	89.4817	LINEAMIENT
	10037	10036	359.5956	1.547	855	1.5	15.299	143.2452	90.4557	SUMIDERO
	10037	10036	359.5956	1.547	856	1.5	15.979	142.4708	90.4643	SUMIDERO
	10037	10036	359.5956	1.547	857	1.5	15.018	171.1505	90.3223	SUMIDERO
	10037	10036	359.5956	1.547	858	1.5	15.695	172.1751	90.2721	SUMIDERO
	10037	10036	359.5956	1.547	859	1.5	25.597	167.1135	90.071	BORDE_VIA
	10037	10036	359.5956	1.547	860	1.5	24.119	150.4119	90.1207	BORDE_VIA
	10037	10036	359.5956	1.547	861	1.5	51.563	359.4829	89.4517	BORDE_VIA
	10037	10036	359.5956	1.547	862	1.5	52.118	7.2724	89.4757	BORDE_VIA
	10037	10036	359.5956	1.547	863	1.5	8.179	123.533	90.2545	BORDE_VIA
	10037	10036	359.5956	1.547	864	1.5	7.295	43.3714	89.5752	BORDE_VIA
	10037	10036	359.5956	1.547	865	1.5	7.252	343.5838	89.5752	BORDE_VIA
	10037	10036	359.5956	1.547	866	1.5	4.93	181.5456	90.3455	BORDE_VIA
	10037	10036	359.5956	1.547	867	1.5	6.422	210.5438	88.5905	PARAMENTO
	10037	10036	359.5956	1.547	868	1.5	4.756	310.0555	88.2726	PARAMENTO
	10037	10036	359.5956	1.547	869	1.5	3.316	62.1324	90.0207	MANHOLE
	10038	10037	359.5959	1.545	10037	1.5	42.843	359.5959	90.5329	
SD	90.90.5329									
	10038	10037	359.5959	1.545	12014	1.5	102.365	75.3431	90.0805	DELTA
	10038	10037	359.5959	1.545	870	1.5	38.689	271.2654	90.2057	SUMIDERO
	10038	10037	359.5959	1.545	871	1.5	39.192	279.1653	90.2322	SUMIDERO
	10038	10037	359.5959	1.545	872	1.5	39.526	270.5123	90.2419	SUMIDERO
	10038	10037	359.5959	1.545	873	1.5	38.447	280.0347	90.2259	SUMIDERO
	10038	10037	359.5959	1.545	874	1.5	40.057	271.5344	90.1842	BORDE_VIA
	10038	10037	359.5959	1.545	875	1.5	39.955	279.1113	90.2311	BORDE_VIA
	10038	10037	359.5959	1.545	876	1.5	14.334	263.0616	90.2311	BORDE_VIA
	10038	10037	359.5959	1.545	877	1.5	14.534	282.3919	90.2523	BORDE_VIA
	10038	10037	359.5959	1.545	878	1.5	4.355	248.3915	91.2818	BORDE_VIA
	10038	10037	359.5959	1.545	879	1.5	5.65	306.5903	90.2721	BORDE_VIA
	10038	10037	359.5959	1.545	880	1.5	8.89	70.4129	90.2721	MANHOLE
	10038	10037	359.5959	1.545	881	1.5	9.279	85.2613	90.4653	BORDE_VIA
	10038	10037	359.5959	1.545	882	1.5	10.005	54.1201	90.5432	BORDE_VIA
	10038	10037	359.5959	1.545	883	1.5	7.512	302.4458	89.1801	PARAMENTO
	10038	10037	359.5959	1.545	884	1.5	16.466	59.4023	90.092	PARAMENTO
	10038	10037	359.5959	1.545	885	1.5	40.91	359.5959	90.5439	LINEAMIENT
	10038	10037	359.5959	1.545	886	1.5	21.43	359.5959	91.0752	LINEAMIENT
	10038	10037	359.5959	1.545	887	1.5	8.647	359.5959	90.521	LINEAMIENT
	12014	10038	0	1.545	10038	1.5	102.353	0	89.5532	
SD	89.89.5532									
	12014	10038	0	1.545	888	1.5	60.813	0.0001	89.582	LINEAMIENT
	12014	10038	0	1.545	12015	1.5	105.377	179.5155	90.1753	DELTA
	12014	10038	0	1.545	889	1.5	59.385	179.5154	90.1451	LINEAMIENT
	12014	10038	0	1.545	890	1.5	49.368	181.302	90.1348	MANHOLE
	12014	10038	0	1.545	891	1.5	18.261	2.4918	90.1628	MANHOLE
	12014	10038	0	1.545	892	1.5	26.525	8.533	90.2502	SUMIDERO
	12014	10038	0	1.545	893	1.5	25.54	8.023	90.2555	SUMIDERO
	12014	10038	0	1.545	894	1.5	8.253	30.5622	91.4248	SUMIDERO
	12014	10038	0	1.545	895	1.5	9.119	30.4611	91.3145	SUMIDERO
	12014	10038	0	1.545	896	1.5	26.711	354.4823	90.2457	SUMIDERO
	12014	10038	0	1.545	897	1.5	25.754	355.3922	90.2642	SUMIDERO
	12014	10038	0	1.545	898	1.5	15.295	348.465	90.4308	SUMIDERO
	12014	10038	0	1.545	899	1.5	16.155	347.0355	90.3734	SUMIDERO
	12014	10038	0	1.545	900	1.5	24.673	353.4246	90.2532	BORDE_VIA
	12014	10038	0	1.545	901	1.5	16.336	346.0223	90.2623	BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12014	10038	0	1.545	902	1.5	31.181	357.0543	90.1844 BORDE_VIA
	12014	10038	0	1.545	903	1.5	17.369	339.3541	90.1934 BORDE_VIA
	12014	10038	0	1.545	904	1.5	30.887	6.1353	90.2234 BORDE_VIA
	12014	10038	0	1.545	905	1.5	14.594	351.1716	90.2749 BORDE_VIA
	12014	10038	0	1.545	906	1.5	24.307	9.2352	90.1749 BORDE_VIA
	12014	10038	0	1.545	907	1.5	4.866	333.4126	91.1058 BORDE_VIA
	12014	10038	0	1.545	908	1.5	22.84	12.5841	90.2658 BORDE_VIA
	12014	10038	0	1.545	909	1.5	17.458	24.3135	90.341 BORDE_VIA
	12014	10038	0	1.545	910	1.5	24.94	26.172	90.2609 BORDE_VIA
	12014	10038	0	1.545	911	1.5	19.775	34.2544	90.3003 BORDE_VIA
	12014	10038	0	1.545	912	1.5	23.099	349.1947	90.1251 BORDE_VIA
	12014	10038	0	1.545	913	1.5	14.971	21.1341	90.3621 BORDE_VIA
	12014	10038	0	1.545	914	1.5	24.09	340.5424	90.1154 BORDE_VIA
	12014	10038	0	1.545	915	1.5	11.985	19.2739	90.4716 BORDE_VIA
	12014	10038	0	1.545	916	1.5	5.618	44.1655	91.0948 BORDE_VIA
	12015	12014	0	1.535	12014	1.5	105.366	0	89.4438
SD	89.89.4438								
	12015	12014	0	1.535	917	1.5	7.603	318.2128	90.3457 BORDE_VIA
	12015	12014	0	1.535	918	1.5	8.439	343.4101	90.4 BORDE_VIA
	12015	12014	0	1.535	919	1.5	11.919	299.5354	90.2101 BORDE_VIA
	12015	12014	0	1.535	920	1.5	10.355	269.5034	90.0731 BORDE_VIA
	12015	12014	0	1.535	921	1.5	7.572	29.5306	91.0224 BORDE_VIA
	12015	12014	0	1.535	922	1.5	7.797	62.412	90.1031 BORDE_VIA
	12015	12014	0	1.535	923	1.5	13.769	81.364	89.5129 BORDE_VIA
	12015	12014	0	1.535	924	1.5	12.697	105.0847	90.154 BORDE_VIA
	12015	12014	0	1.535	12016	1.5	51.66	105.1805	89.4022 DELTA
	12015	12014	0	1.535	10039	1.5	48.599	99.3633	89.373 DELTA
	10039	12015	0.0001	1.525	12015	1.5	48.583	0.0001	90.2759
SD	90.90.2759								
	10039	12015	0.0001	1.525	10040	1.5	135.421	76.2643	90.0338 DELTA
	10039	12015	0.0001	1.525	925	1.5	9.031	249.2904	90.5525 BORDE_VIA
	10039	12015	0.0001	1.525	926	1.5	18.399	247.2426	90.2113 BORDE_VIA
	10039	12015	0.0001	1.525	927	1.5	10.67	65.5233	90.4648 BORDE_VIA
	10039	12015	0.0001	1.525	928	2	30.253	67.2727	89.0908 BORDE_VIA
	10039	12015	0.0001	1.525	929	2	30.428	82.372	89.1151 BORDE_VIA
	10039	12015	0.0001	1.525	930	1.5	8.815	12.4434	91.3608 BORDE_VIA
	10039	12015	0.0001	1.525	931	1.5	7.052	32.3929	91.5504 BORDE_VIA
	10039	12015	0.0001	1.525	932	1.5	8.563	64.2015	91.1552 BORDE_VIA
	10039	12015	0.0001	1.525	933	1.5	7.644	171.1841	91.0816 BORDE_VIA
	10040	10039	0	1.542	10039	1.5	135.405	0	89.584
SD	89.89.5840								
	10040	10039	0	1.542	10041	1.5	222.559	275.1559	90.1527 DELTA
	10040	10039	0	1.542	934	1.5	7.882	5.4901	90.3601 BORDE_VIA
	10040	10039	0	1.542	935	1.5	19.968	5.5659	90.1703 BORDE_VIA
	10040	10039	0	1.542	936	1.5	21.308	346.4435	90.1309 BORDE_VIA
	10040	10039	0	1.542	937	1.5	10.772	325.1832	90.1846 BORDE_VIA
	10040	10039	0	1.542	938	1.5	10.386	313.0133	90.3753 BORDE_VIA
	10040	10039	0	1.542	939	1.5	55.306	280.3612	90.4716 BORDE_VIA
	10040	10039	0	1.542	940	1.5	11.577	271.1835	90.5221 BORDE_VIA
	10040	10039	0	1.542	941	1.5	9.133	236.1645	90.5056 BORDE_VIA
	10040	10039	0	1.542	942	1.5	23.043	272.3725	90.5056 BORDE_VIA
	10040	10039	0	1.542	943	1.5	5.232	184.582	91.1341 BORDE_VIA
	10040	10039	0	1.542	944	1.5	4.156	304.1334	90.51 MANHOLE
	10040	10039	0	1.542	945	1.5	9.09	262.4745	91.03 VALVULA
	10041	10040	0	1.534	10040	1.5	222.549	0	89.4655
SD	89.89.4655								
	10041	10040	0	1.534	10042	1.5	364.912	66.1426	89.4341 DELTA
	10041	10040	0	1.534	946	1.5	6.09	349.3145	91.0947 BORDE_VIA
	10041	10040	0	1.534	947	1.5	1.019	278.2121	91.5436 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		10041	10040	0	1.534	948	1.5	7.26	350.574	91.0345	BORDE_VIA
		10041	10040	0	1.534	949	1.5	9.288	319.2655	91.3107	BORDE_VIA
		10041	10040	0	1.534	950	1.5	11.736	335.2207	90.2718	MANHOLE
		10041	10040	0	1.534	951	1.5	14.289	336.1431	91.0325	BORDE_VIA
		10041	10040	0	1.534	952	1.5	13.441	354.2807	90.3544	BORDE_VIA
		10041	10040	0	1.534	953	1.5	13.913	24.0735	90.2718	BORDE_VIA
		10041	10040	0	1.534	954	1.5	13.44	48.1128	90.3142	BORDE_VIA
		10041	10040	0	1.534	955	1.5	26.986	67.4919	90.0437	BORDE_VIA
		10041	10040	0	1.534	956	1.5	10.851	11.4805	90.2201	MANHOLE
		10041	10040	0	1.534	957	1.5	44.59	66.5057	89.5715	BORDE_VIA
		10041	10040	0	1.534	958	1.5	6.748	87.1635	90.5843	BORDE_VIA
		10041	10040	0	1.534	959	1.7	45.05	74.3712	89.4255	BORDE_VIA
		10041	10040	0	1.534	960	2.6	10.791	91.4409	84.3841	BORDE_VIA
		10041	10040	0	1.534	961	2.6	17.978	88.3312	86.4545	BORDE_VIA
		10042	10041	0	1.528	10041	1.5	364.882	0	90.1755	
SD	90.90.1755										
		10042	10041	0	1.528	10036	1.5	129.384	37.152	90.0052	DELTA
		10042	10041	0	1.528	10034	1.5	7.34	185.5558	90.2008	DELTA
		10042	10041	0	1.528	10043	1.5	53.077	254.4352	90.1922	DELTA
		10043	10042	0	1.53	10042	1.5	53.059	0	89.4452	
SD	89.89.4452										
		10043	10042	0	1.53	10044	1.5	109.599	102.0647	89.3716	DELTA
		10043	10042	0	1.53	962	1.5	3.879	265.2938	92.0919	BORDE_VIA
		10043	10042	0	1.53	963	1.5	7.155	355.0106	90.384	BORDE_VIA
		10043	10042	0	1.53	964	1.5	11.97	70.0245	89.5908	BORDE_VIA
		10043	10042	0	1.53	965	1.5	9.81	111.1543	90.0625	BORDE_VIA
		10043	10042	0	1.53	966	1.5	11.312	299.3422	90.2043	MANHOLE
		10043	10042	0	1.53	967	1.5	14.951	314.1231	90.1907	BORDE_VIA
		10043	10042	0	1.53	968	1.5	10.72	341.2831	90.2408	BORDE_VIA
		10044	10043	0	1.535	10043	1.5	109.6	0	90.251	
SD	90.90.2510										
		10044	10043	0	1.535	10045	1.5	82.701	273.0607	90.181	DELTA
		10044	10043	0	1.535	969	1.5	5.708	11.3212	91.4458	BORDE_VIA
		10044	10043	0	1.535	970	1.5	7.088	14.291	91.0847	BORDE_VIA
		10044	10043	0	1.535	971	1.5	22.084	279.1531	90.2658	BORDE_VIA
		10044	10043	0	1.535	972	1.5	14.132	11.4221	90.3524	BORDE_VIA
		10044	10043	0	1.535	973	1.5	7.706	294.2437	90.4241	BORDE_VIA
		10044	10043	0	1.535	974	1.5	15.539	6.1153	90.4009	BORDE_VIA
		10044	10043	0	1.535	975	1.5	11.346	343.1335	90.2737	MANHOLE
		10044	10043	0	1.535	976	1.5	8.229	241.4024	90.3641	BORDE_VIA
		10044	10043	0	1.535	977	1.5	3.398	266.5303	89.3628	MANHOLE
		10044	10043	0	1.535	978	1.5	16.877	257.4058	90.3357	BORDE_VIA
		10044	10043	0	1.535	979	1.5	41.956	271.5632	90.1909	MANHOLE
		10044	10043	0	1.535	980	1.5	10.142	243.3831	89.31	HIDRANTE
		10044	10043	0	1.535	10032	1.5	53.971	188.1824	89.4445	DELTA
		10045	10044	0	1.505	10044	1.5	82.706	0	89.4338	
SD	89.89.4338										
		10045	10044	0	1.505	10046	1.5	120.292	89.1251	89.5641	DELTA
		10045	10044	0	1.505	981	1.5	20.595	85.3712	90.0516	BORDE_VIA
		10045	10044	0	1.505	982	1.5	7.873	85.2139	90.1006	BORDE_VIA
		10045	10044	0	1.505	983	1.5	6.521	67.2743	89.575	BORDE_VIA
		10045	10044	0	1.505	984	1.5	16.211	113.004	90.0829	BORDE_VIA
		10045	10044	0	1.505	985	1.5	22.721	108.2532	90.0959	BORDE_VIA
		10045	10044	0	1.505	986	1.5	23.678	103.5121	90.044	BORDE_VIA
		10045	10044	0	1.505	987	1.5	1.653	324.4547	90.5254	BORDE_VIA
		10045	10044	0	1.505	988	1.5	2.775	265.1929	91.2328	BORDE_VIA
		10045	10044	0	1.505	989	1.5	9.273	265.2611	91.0048	BORDE_VIA
		10045	10044	0	1.505	990	1.5	12.768	229.2832	90.5447	BORDE_VIA
		10045	10044	0	1.505	991	1.5	3.333	152.5358	89.4405	MANHOLE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		10045	10044	0	1.505	992	1.5	25.041	92.2909	89.5327	MANHOLE
		10046	10045	0.0001	1.545	10045	1.5	120.291	0.0001	90.052	
SD	90.90.0520										
		10046	10045	0.0001	1.545	10047	1.5	73.807	169.5246	89.3037	DELTA
		10046	10045	0.0001	1.545	993	1.5	1.517	166.2428	92.5122	BORDE_VIA
		10046	10045	0.0001	1.545	994	1.5	2.906	281.593	90.0422	BORDE_VIA
		10046	10045	0.0001	1.545	995	1.5	10.233	271.2925	90.0424	BORDE_VIA
		10046	10045	0.0001	1.545	996	1.5	12.267	306.0644	90.0424	BORDE_VIA
		10046	10045	0.0001	1.545	997	1.5	8.145	340.1845	90.0638	BORDE_VIA
		10046	10045	0.0001	1.545	998	1.5	9.947	357.3708	90.0637	BORDE_VIA
		10046	10045	0.0001	1.545	999	1.5	24.418	8.0857	89.5231	MANHOLE
		10046	10045	0.0001	1.545	1000	1.5	16.739	23.4336	90.0445	BORDE_VIA
		10046	10045	0.0001	1.545	1001	1.5	22.996	29.0443	90.02	BORDE_VIA
		10046	10045	0.0001	1.545	1002	1.5	28.84	19.0939	90.0014	BORDE_VIA
		10046	10045	0.0001	1.545	1003	1.5	30.895	10.4424	89.5805	BORDE_VIA
		10046	10045	0.0001	1.545	1004	1.5	6.612	42.2402	90.0217	MANHOLE
		10047	10046	0	1.514	10046	1.5	73.794	0	90.3228	
SD	90.90.3228										
		10047	10046	0	1.514	1005	1.5	7.6	286.4626	90.3527	BORDE_VIA
		10047	10046	0	1.514	1006	1.5	12.425	262.2646	89.2203	BORDE_VIA
		10047	10046	0	1.514	1007	1.5	20.883	267.0455	89.2936	BORDE_VIA
		10047	10046	0	1.514	1008	1.5	4.24	271.142	90.2515	MANHOLE
		10047	10046	0	1.514	1009	1.5	6.086	118.0825	87.3453	BORDE_VIA
		10047	10046	0	1.514	1010	1.5	2.063	6.3927	91.4008	BORDE_VIA
		10047	10046	0	1.514	10048	1.5	122.566	190.2445	89.5757	DELTA
		10047	10046	0	1.514	1011	1.5	10.456	159.0757	88.0357	BORDE_VIA
		10047	10046	0	1.514	1012	1.5	11.395	170.1451	88.0826	BORDE_VIA
		10047	10046	0	1.514	1013	1.5	13.2	164.581	88.2446	BORDE_VIA
		10047	10046	0	1.514	1014	1.5	23.58	197.3631	89.5954	MANHOLE
		10047	10046	0	1.514	1015	1.5	22.051	195.2449	90.0037	MANHOLE
		10047	10046	0	1.514	1016	1.5	23.571	191.1746	90.0127	VALVULA
		10047	10046	0	1.514	1017	1.5	20.275	169.1048	89.1348	BORDE_VIA
		10047	10046	0	1.514	1018	1.5	23.424	187.1533	90.0433	BORDE_VIA
		10047	10046	0	1.514	1019	1.5	20.798	183.0409	89.3751	BORDE_VIA
		10047	10046	0	1.514	1020	1.5	24.984	203.3152	90.0222	BORDE_VIA
		10047	10046	0	1.514	1021	1.5	23.687	218.0316	89.4056	BORDE_VIA
		10047	10046	0	1.514	1022	1.5	26.809	227.0048	89.4057	BORDE_VIA
		10047	10046	0	1.514	1023	1.5	22.971	241.2937	89.0916	BORDE_VIA
		10047	10046	0	1.514	1024	1.5	21.484	247.4958	88.5825	BORDE_VIA
		10047	10046	0	1.514	1025	1.5	17.233	228.132	88.4705	BORDE_VIA
		10047	10046	0	1.514	1026	1.5	15.49	235.4746	88.5534	BORDE_VIA
		10047	10046	0	1.514	1027	1.5	15.688	229.3432	88.4115	BORDE_VIA
		10048	10047	0	1.521	10047	1.5	122.546	0	90.0309	
SD	90.90.0309										
		10048	10047	0	1.521	10049	1.5	94.537	172.3604	89.5517	DELTA
		10048	10047	0	1.521	10026	1.5	69.758	81.5606	89.5553	DELTA
		10048	10047	0	1.521	1028	1.5	7.643	109.3646	90.2903	BORDE_VIA
		10048	10047	0	1.521	1029	1.5	9.254	91.3806	90.2505	BORDE_VIA
		10048	10047	0	1.521	1030	1.5	10.953	52.0246	90.1059	BORDE_VIA
		10048	10047	0	1.521	1031	1.5	10.699	38.2242	90.1814	BORDE_VIA
		10048	10047	0	1.521	1032	1.5	7.96	357.3334	90.1859	BORDE_VIA
		10048	10047	0	1.521	1033	1.5	6.428	345.3623	90.2359	BORDE_VIA
		10048	10047	0	1.521	1034	1.5	9.293	307.4751	90.1121	BORDE_VIA
		10048	10047	0	1.521	1035	1.5	7.148	259.2447	90.0834	BORDE_VIA
		10048	10047	0	1.521	1036	1.5	2.739	250.5348	90.4027	BORDE_VIA
		10048	10047	0	1.521	1037	1.5	3.344	175.4525	90.293	BORDE_VIA
		10048	10047	0	1.521	1038	1.5	4.711	53.4352	90.1428	MANHOLE
		10048	10047	0	1.521	1039	1.5	54.512	0.3206	90.1117	MANHOLE
		10049	10048	0.0001	1.538	10048	1.5	94.522	0.0001	90.0807	



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	90.90.0807								
	10049	10048	0.0001	1.538	10050	1.5	170.665	187.3108	89.4439 DELTA
	10049	10048	0.0001	1.538	10024	1.5	56.08	100.2505	89.4405 DELTA
	10049	10048	0.0001	1.538	1040	1.5	5.862	171.3156	90.3817 BORDE_VIA
	10049	10048	0.0001	1.538	1041	1.5	7.336	188.5458	90.0251 BORDE_VIA
	10049	10048	0.0001	1.538	1042	1.5	16.856	186.3958	89.5907 BORDE_VIA
	10049	10048	0.0001	1.538	1043	1.5	22.906	203.475	90.0039 BORDE_VIA
	10049	10048	0.0001	1.538	1044	1.5	2.84	354.4305	90.4545 BORDE_VIA
	10049	10048	0.0001	1.538	1045	1.5	1.529	40.0222	92.3719 BORDE_VIA
	10049	10048	0.0001	1.538	1046	1.5	10.886	228.2834	90.0954 BORDE_VIA
	10049	10048	0.0001	1.538	1047	1.5	8.132	297.1602	90.1541 BORDE_VIA
	10049	10048	0.0001	1.538	1048	1.5	12.228	251.3432	90.0931 BORDE_VIA
	10049	10048	0.0001	1.538	1049	1.5	9.731	287.1902	90.1113 BORDE_VIA
	10049	10048	0.0001	1.538	1050	1.5	23.082	263.5056	89.5901 BORDE_VIA
	10049	10048	0.0001	1.538	1051	1.5	13.518	284.3333	90.0624 BORDE_VIA
	10049	10048	0.0001	1.538	1052	1.5	4.456	247.2627	90.1806 MANHOLE
	10049	10048	0.0001	1.538	1053	1.5	4.536	287.5853	90.5253 MANHOLE
	10050	10049	0	1.499	10049	1.5	170.663	0	90.1552
SD	90.90.1552								
	10050	10049	0	1.499	10019	1.5	7.15	90.3135	90.2601 DELTA
	10050	10049	0	1.499	10020	1.5	50.79	87.3437	92.2 DELTA
	10050	10049	0	1.499	10051	1.5	142.857	266.4556	90.0642 DELTA
	10051	10050	0	1.498	10050	1.5	149.996	0	89.543
SD	89.89.5430								
	10051	10050	0	1.498	10052	1.5	147.004	86.0922	89.5526 DELTA
	10051	10050	0	1.498	1054	1.5	3.709	345.2833	90.2924 BORDE_VIA
	10051	10050	0	1.498	1055	1.5	2.626	302.205	91.001 BORDE_VIA
	10051	10050	0	1.498	1056	1.5	7.733	276.1553	90.3228 BORDE_VIA
	10051	10050	0	1.498	1057	1.5	7.093	57.1612	90.1919 BORDE_VIA
	10051	10050	0	1.498	1058	1.5	9.541	229.5241	90.273 BORDE_VIA
	10051	10050	0	1.498	1059	1.5	5.891	197.5001	90.2552 BORDE_VIA
	10051	10050	0	1.498	1060	1.5	7.312	182.3231	90.165 BORDE_VIA
	10051	10050	0	1.498	1061	1.5	13.404	180.2354	90.1501 BORDE_VIA
	10051	10050	0	1.498	1062	1.5	9.126	72.56	90.265 BORDE_VIA
	10051	10050	0	1.498	1063	1.5	14.95	152.2904	90.1019 BORDE_VIA
	10051	10050	0	1.498	1064	1.5	13.507	77.3312	89.4218 BORDE_VIA
	10051	10050	0	1.498	1065	1.5	9.769	136.4745	90.1031 BORDE_VIA
	10051	10050	0	1.498	1066	1.5	16.736	104.1159	89.3537 BORDE_VIA
	10051	10050	0	1.498	1067	1.5	9.582	120.2736	90.0531 BORDE_VIA
	10051	10050	0	1.498	1068	1.5	2.277	160.2339	89.5745 MANHOLE
	10051	10050	0	1.498	1069	1.5	2.294	106.5434	90.0348 MANHOLE
	10051	10050	0	1.498	1070	1.5	7.67	351.3329	90.1222 BORDE_VIA
	10052	10051	0	1.535	10051	1.5	147.002	0	90.0639
SD	90.90.0639								
	10052	10051	0	1.535	1071	1.5	12.202	11.5553	90.2909 BORDE_VIA
	10052	10051	0	1.535	1072	1.5	3.542	45.3213	91.1137 BORDE_VIA
	10052	10051	0	1.535	1073	1.5	3.666	59.2625	90.4141 BORDE_VIA
	10052	10051	0	1.535	1074	1.5	7.383	292.3304	90.0809 BORDE_VIA
	10052	10051	0	1.535	1075	1.5	11.351	322.0534	89.5613 BORDE_VIA
	10052	10051	0	1.535	1076	1.5	8.078	283.4848	89.4824 BORDE_VIA
	10052	10051	0	1.535	1077	1.5	12.82	278.5418	89.5547 BORDE_VIA
	10052	10051	0	1.535	1078	1.5	15.058	240.1512	90.1347 BORDE_VIA
	10052	10051	0	1.535	10053	1.5	43.665	100.5754	89.4207 DELTA
	10052	10051	0	1.535	1079	1.5	4.84	226.262	90.2114 MANHOLE
	10052	10052	0	1.535	10052	1.5	43.658	0	90.2353
SD	90.90.2353								
	10052	10052	0	1.535	10015	1.5	55.673	119.4805	90.0611 DELTA
	10052	10052	0	1.535	10014	1.5	90.343	287.2247	89.5237 DELTA
	10052	10052	0	1.535	1080	1.5	12.595	352.2005	90.413 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10015	10053	0	1.485	10053	1.5	55.671	0	89.5517	
SD	89.89.5517									
	10015	10053	0	1.485	10016	1.5	16.473	146.2219	90.0039	DELTA
	10012	10011	0	1.428	10011	1.5	60.933	0	92.0207	
SD	92.92.0207									
	10012	10011	0	1.428	10054	1.5	103.221	96.3957	89.4025	DELTA
	10054	10012	0.0001	1.45	10012	1.5	103.241	0.0001	90.1612	
SD	90.90.1612									
	10054	10012	0.0001	1.45	10008	1.5	72.428	97.301	91.3017	DELTA
	10054	10012	0.0001	1.45	1081	1.5	3.992	25.5823	91.1718	BORDE_VIA
	10054	10012	0.0001	1.45	1082	1.5	11.843	12.2604	90.2858	BORDE_VIA
	10054	10012	0.0001	1.45	1083	1.5	21.872	6.0512	90.2222	BORDE_VIA
	10054	10012	0.0001	1.45	1084	1.5	29.757	5.4545	90.1939	MANHOLE
	10054	10012	0.0001	1.45	1085	1.5	24.798	358.5247	90.004	MANHOLE
	10054	10012	0.0001	1.45	1086	1.5	41.325	359.2531	90.0515	MANHOLE
	10054	10012	0.0001	1.45	1087	1.5	33.353	349.4813	90.2144	MANHOLE
	10054	10012	0.0001	1.45	1088	1.5	19.363	343.2258	90.2221	MANHOLE
	10054	10012	0.0001	1.45	1089	1.5	7.181	286.3112	90.3207	BORDE_VIA
	10054	10012	0.0001	1.45	1090	1.5	7.176	286.3031	90.3518	BORDE_VIA
	10054	10012	0.0001	1.45	1091	1.5	12.14	229.3245	90.0905	BORDE_VIA
	10054	10012	0.0001	1.45	1092	1.5	2.221	271.0201	88.4538	MANHOLE
	10054	10012	0.0001	1.45	1093	1.5	3.364	175.1159	89.5549	MANHOLE
	10054	10012	0.0001	1.45	1094	1.5	3.915	179.5848	90.3152	BORDE_VIA
	10054	10012	0.0001	1.45	1095	1.5	11.726	189.0939	90.1615	BORDE_VIA
	10054	10012	0.0001	1.45	1096	1.5	2.875	131.4127	96.4732	BORDE_VIA
	10054	10012	0.0001	1.45	1097	1.5	5.957	114.2833	96.2422	BORDE_VIA
	10054	10012	0.0001	1.45	1098	1.5	3.676	62.4051	99.4807	BORDE_VIA
	10054	10012	0.0001	1.45	1099	1.5	7.837	81.3157	95.1921	BORDE_VIA
	10054	10012	0.0001	1.45	1100	1.5	9.385	267.4805	89.4347	MANHOLE
	10054	10012	0.0001	1.45	10055	1.5	106.785	193.3253	89.4728	DELTA
	10055	10054	359.5959	1.441	10054	1.5	106.796	359.5959	90.0952	
SD	90.90.0952									
	10055	10054	359.5959	1.441	10056	1.5	40.074	145.2836	89.5025	DELTA
	10055	10054	359.5959	1.441	1101	1.5	35.324	162.2432	90.075	BORDE_VIA
	10055	10054	359.5959	1.441	1102	1.5	40.373	162.1359	90.0819	BORDE_VIA
	10055	10054	359.5959	1.441	1103	1.5	33.012	148.3717	90.0227	BORDE_VIA
	10055	10054	359.5959	1.441	1104	1.5	9.96	21.1614	90.3412	BORDE_VIA
	10055	10054	359.5959	1.441	1105	1.5	10.284	332.2356	90.5338	BORDE_VIA
	10055	10054	359.5959	1.441	1106	1.5	27.866	2.3522	90.1206	BORDE_VIA
	10055	10054	359.5959	1.441	1107	1.5	22.09	341.4126	90.1443	BORDE_VIA
	10055	10054	359.5959	1.441	1108	1.5	38.865	0.512	90.0826	MANHOLE
	10055	10054	359.5959	1.441	1109	1.5	29.96	345.3811	90.0342	MANHOLE
	10055	10054	359.5959	1.441	1110	1.5	19.329	356.1943	90.0249	MANHOLE
	10055	10054	359.5959	1.441	1111	1.5	18.579	352.4251	89.5737	MANHOLE
	10055	10054	359.5959	1.441	1112	1.5	16.623	352.5635	89.56	MANHOLE
	10056	10055	0.0002	1.425	10055	1.5	40.092	0.0002	89.5918	
SD	89.89.5918									
	10056	10055	0.0002	1.425	10055	1.5	40.079	0	89.5925	
SD	89.89.5925									
	10056	10055	0.0002	1.425	10057	1.5	80.958	107.1752	90.2615	DELTA
	10056	10055	0.0002	1.425	1113	1.5	6.18	103.2324	89.1126	BORDE_VIA
	10056	10055	0.0002	1.425	1114	1.5	7.065	155.1255	89.0651	BORDE_VIA
	10056	10055	0.0002	1.425	1115	1.5	7.654	221.2642	89.5727	BORDE_VIA
	10056	10055	0.0002	1.425	1116	1.5	22.957	227.0132	89.5617	BORDE_VIA
	10056	10055	0.0002	1.425	1117	1.5	19.931	247.4643	90.1356	BORDE_VIA
	10056	10055	0.0002	1.425	1118	1.5	17.034	271.1408	90.315	BORDE_VIA
	10056	10055	0.0002	1.425	1119	1.5	17.381	257.2603	89.5531	MANHOLE
	10056	10055	0.0002	1.425	1120	1.5	3.251	229.573	88.2705	MANHOLE
	10056	10055	0.0002	1.425	1121	1.5	12.309	244.3243	89.4617	MANHOLE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	10056	10055	0.0002	1.425	1122	1.5	12.673	300.1601	90.0159	MANHOLE
	10056	10055	0.0002	1.425	1123	1.5	18.72	212.0728	89.1908	MANHOLE
	10056	10055	0.0002	1.425	1124	1.5	31.108	110.5359	89.3511	MANHOLE
	10057	10055	0	1.396	10055	1.5	80.97	0	89.2612	
SD	89.89.2612									
	10057	10055	0	1.396	1125	1.5	102.436	181.3204	90.383	DELTA
	10057	10055	0	1.396	1125	1.5	53.025	181.4339	90.3903	MANHOLE
	10057	10055	0	1.396	1126	1.5	15.126	354.5659	88.372	MANHOLE
	10057	10055	0	1.396	1127	1.5	11.847	353.0751	88.1848	MANHOLE
	10057	10055	0	1.396	1128	1.5	12.289	10.2241	88.3038	MANHOLE
	10057	10055	0	1.396	1129	1.5	17.788	352.0136	88.3446	MANHOLE
	10057	10055	0	1.396	1130	1.5	17.836	7.5438	88.4527	BORDE_VIA
	10057	10055	0	1.396	1131	1.5	48.308	182.2838	90.3903	BORDE_VIA
	10057	10055	0	1.396	1132	1.5	57.93	182.2956	90.4048	BORDE_VIA
	10057	10055	0	1.396	1133	1.5	57.064	178.5415	90.4123	BORDE_VIA
	10058	10057	0	1.398	10057	1.5	102.45	0	89.1447	
SD	89.89.1447									
	10058	10057	0	1.398	10004	1.5	37.701	243.2353	90.1943	DELTA
	10004	10058	0.0004	1.392	10058	1.5	37.708	0.0004	89.2114	
SD	89.89.2114									
	10004	10058	0.0004	1.392	10058	1.5	37.711	0.0001	89.2114	
SD	89.89.2114									
	10004	10058	0.0004	1.392	10005	1.5	99.227	0.2825	89.4523	DELTA
	11005	11004	0	1.515	11004	1.5	129.734	0	89.4728	
SD	89.89.4728									
	11005	11004	0	1.515	10059	1.5	106.345	93.0547	88.4609	DELTA
	11059	11005	0	1.486	11005	1.5	106.34	0	91.1402	
SD	91.91.1402									
	11059	11005	0	1.486	M2	1.5	69.789	196.3522	90.0611	MOJON
M2		10059	359.5959	1.509	10059	1.5	69.773	359.5959	89.5331	
SD	89.89.5331									
M2		10059	359.5959	1.509	12016	1.5	75.955	116.4846	91.0519	DELTA
M2		10059	359.5959	1.509	1140	1.5	0.797	29.2255	86.2748	CAMA_TELEF
	12016	M2	359.5959	1.517	M2	1.5	75.951	359.5959	88.5629	
SD	88.88.5629									
	12016	M2	359.5959	1.517	12017	1.5	121.602	327.2614	90.0336	DELTA
AUX26		AUX25	359.5959	1.437	AUX25	1.5	27.135	359.5959	86.0537	
SD	86.86.0537									
AUX26		AUX25	359.5959	1.437	1141	1.5	26.411	244.0534	103.0606	RIO
AUX26		AUX25	359.5959	1.437	1142	1.5	23.658	238.4746	104.5358	RIO
AUX26		AUX25	359.5959	1.437	1143	1.5	21.532	221.072	106.3031	RIO
AUX26		AUX25	359.5959	1.437	1144	1.5	21.663	214.4642	106.3235	RIO
AUX26		AUX25	359.5959	1.437	1145	1.5	22.199	210.3011	106.005	RIO
AUX26		AUX25	359.5959	1.437	1146	1.5	31.258	254.4612	101.1433	RIO
AUX26		AUX25	359.5959	1.437	1147	1.5	32.995	258.0506	100.2937	RIO
AUX26		AUX25	359.5959	1.437	1148	1.5	41.897	267.3248	96.2605	DESCARGA
AUX26		AUX25	359.5959	1.437	1149	1.5	44.122	243.3718	87.4617	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



AUX	13003	0	1.59	13003	1.7	101.867	0	89.4903
SD	89.89.4903							
AUX	13003	0	1.59	1085	1.7	60.024	145.0041	89.4944 DELTA
AUX	13003	0	1.59	1	1.7	18.383	100.4201	88.4751 PARAMENTO
AUX	13003	0	1.59	2	1.7	16.884	77.525	88.4116 PARAMENTO
AUX	13003	0	1.59	3	1.7	39.051	12.3606	89.3755 PARAMENTO
AUX	13003	0	1.59	4	1.7	28.531	5.3508	89.3447 BORDE_VIA
AUX	13003	0	1.59	5	1.7	30.933	15.3017	89.382 BORDE_VIA
AUX	13003	0	1.59	6	1.7	17.848	126.0025	89.1502 BORDE_VIA
AUX	13003	0	1.59	7	1.7	11.74	99.2519	89.1819 BORDE_VIA
AUX	13003	0	1.59	8	1.7	14.079	355.3905	89.0305 BORDE_VIA
AUX	13003	0	1.59	9	1.7	4.788	19.4148	87.3134 BORDE_VIA
1085	AUX	359.5959	1.596	AUX	1.7	60.02	359.5959	89.5852
SD	89.89.5852							
1085	AUX	359.5959	1.596	10	1.7	8.85	8.1458	89.1511 PARAMENTO
1085	AUX	359.5959	1.596	11	1.7	6.123	283.5417	88.3543 BORDE_VIA
1085	AUX	359.5959	1.596	12	1.7	7.173	183.3534	87.3426 PARAMENTO
1085	AUX	359.5959	1.596	13	1.7	17.961	129.491	89.1802 PARAMENTO
1085	AUX	359.5959	1.596	14	1.7	17.434	125.2321	89.1956 PARAMENTO
1085	AUX	359.5959	1.596	1086	1.7	103.454	107.2237	89.534 DELTA
1085	AUX	359.5959	1.596	15	1.7	70.719	101.2807	89.5715 PARAMENTO
1085	AUX	359.5959	1.596	16	1.7	73.685	101.4845	89.5538 PARAMENTO
1085	AUX	359.5959	1.596	17	1.7	15.447	190.0754	89.1342 PARAMENTO
1086	1085	0	1.545	1085	1.7	103.454	0	89.5931
SD	89.89.5931							
1086	1085	0	1.545	18	1.7	6.36	105.1843	88.3541 PARAMENTO
1086	1085	0	1.545	19	1.7	5.913	102.3521	88.3127 POSTE
1086	1085	0	1.545	20	1.7	4.461	250.3957	88.5805 POSTE
1086	1085	0	1.545	21	1.7	10.855	326.0909	89.1021 POSTE
1086	1085	0	1.545	22	1.7	20.042	264.4859	89.3513 PARAMENTO
1086	1085	0	1.545	23	1.7	11.95	317.5735	89.3024 PARAMENTO
1086	1085	0	1.545	24	1.7	17.857	299.1046	89.3341 PARAMENTO
1086	1085	0	1.545	25	1.7	17.176	264.1019	89.3947 PARAMENTO
1086	1085	0	1.49	1085	1.7	103.456	0	89.553
SD	89.89.5530							
1086	1085	0	1.49	1087	1.7	30.609	7.2842	89.4928 DELTA
1087	1086	0	1.555	1086	1.7	30.607	0	89.2803
SD	89.89.2803							
1087	1086	0	1.555	1088	1.7	39.204	258.5149	89.4717 DELTA
1087	1086	0	1.555	26	1.7	5.588	234.3236	87.4621 BOXCOULVER
1087	1086	0	1.555	27	1.7	7.321	242.0204	88.2521 BOXCOULVER
1087	1086	0	1.555	28	1.7	6.854	264.0953	88.2151 BOXCOULVER
1087	1086	0	1.555	29	1.7	5	264.2328	87.4301 BOXCOULVER
1087	1086	0	1.555	30	1.7	5.709	207.2147	89.1732 CERRAMIENT
1087	1086	0	1.555	31	1.7	15.72	246.1609	88.5512 PARAMENTO
1087	1086	0	1.555	32	1.7	23.681	252.1724	89.2745 PARAMENTO
1087	1086	0	1.555	33	1.7	24.108	252.0519	89.2438 CERRAMIENT
1087	1086	0	1.555	34	1.7	39.054	254.0058	89.4444 CERRAMIENT
1087	1086	0	1.555	35	1.7	42.673	254.4506	89.4113 CERCA
1087	1086	0	1.555	36	1.7	39.293	274.182	89.5226 CERCA
1087	1086	0	1.555	37	1.7	8.496	334.0126	89.2606 CERCA
1087	1086	0	1.555	38	1.7	19.329	270.1404	89.1846 ESTRUCTURA
1087	1086	0	1.555	39	1.7	20.729	284.1833	89.2904 ESTRUCTURA
1087	1086	0	1.555	40	1.7	35.943	275.2937	89.5337 ESTRUCTURA
1087	1086	0	1.555	41	2.6	5.914	225.5357	80.3902 BORDE_CANO
1087	1086	0	1.555	42	2.6	6.265	229.364	87.0048 BORDE_CANO
1087	1086	0	1.555	43	2.6	6.69	233.3349	89.3439 CANO
1087	1086	0	1.555	44	2.6	7.137	236.2433	87.5216 BORDE_CANO
1087	1086	0	1.555	45	2.6	7.929	239.4647	82.5947 BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1087	1086	0	1.555	46	2.6	4.86	271.3419	80.4341 BORDE_CANO
1087	1086	0	1.555	47	2.6	5.225	271.3335	86.5415 BORDE_CANO
1087	1086	0	1.555	48	2.6	5.6	271.4325	89.3528 CANO
1087	1086	0	1.555	49	2.6	6.359	270.381	87.0855 BORDE_CANO
1087	1086	0	1.555	50	2.6	7.272	270.012	82.0821 BORDE_CANO
1088	1087	0	1.497	1087	1.7	39.202	0	89.4742
SD	89.89.4742							
1088	1087	0	1.497	1089	1.7	39.009	256.0922	88.4304 DELTA
1088	1087	0	1.497	51	1.7	14.104	99.0452	88.4435 CERRAMIENT
1088	1087	0	1.497	52	1.7	14.108	105.4533	88.3049 CERRAMIENT
1088	1087	0	1.497	53	1.7	14.043	106.1902	88.283 PARAMENTO
1088	1087	0	1.497	54	1.7	3.947	112.4305	86.1245 PARAMENTO
1088	1087	0	1.497	55	1.7	25.369	184.4232	89.552 PARAMENTO
1088	1087	0	1.497	56	1.7	25.33	185.1355	89.5648 CERCA
1088	1087	0	1.497	57	1.7	22.817	225.1553	89.4054 CERCA
1088	1087	0	1.497	58	1.7	21.503	296.1829	89.4232 PARAMENTO
1088	1087	0	1.497	59	1.7	25.698	293.3131	89.4538 PARAMENTO
1088	1087	0	1.497	60	1.7	23.657	308.4237	89.4539 PARAMENTO
1089	1088	0.0001	1.538	1088	1.7	39.007	0.0001	90.4522
SD	90.90.4522							
1089	1088	0.0001	1.538	61	1.7	7.205	338.3436	88.4247 ESTRUCTURA
1089	1088	0.0001	1.538	62	2.6	7.114	339.472	91.4809 ESTRUCTURA
1089	1088	0.0001	1.538	63	1.7	17.964	7.4131	89.2422 ESTRUCTURA
1089	1088	0.0001	1.538	64	4	17.782	8.0846	86.2043 ESTRUCTURA
1089	1088	0.0001	1.538	65	1.7	20.634	100.2848	89.303 ESTRUCTURA
1089	1088	0.0001	1.538	66	1.7	26.621	73.5347	89.5006 ESTRUCTURA
1089	1088	0.0001	1.538	67	4	26.3	73.5417	90.0558 ESTRUCTURA
1089	1088	0.0001	1.538	68	3.5	20.658	99.4802	91.2347 ESTRUCTURA
1089	1088	0.0001	1.538	69	1.7	23.129	44.1736	92.2502 CERCA
1089	1088	0.0001	1.538	70	0.085	21.944	129.522	92.0441 ESTRUCTURA
1089	1088	0.0001	1.538	71	0.085	21.826	130.3218	92.0803 ESTRUCTURA
1089	1088	0.0001	1.538	72	2.6	23.293	213.085	90.1726 POSTE
13006	13005	0	1.563	13005	1.7	30.131	0	86.3432
SD	86.86.3432							
13006	13005	0	1.563	1090	1.7	23.884	220.5315	90.1525 DELTA
1090	13006	0	1.475	13006	1.7	23.874	0	89.2404
SD	89.89.2404							
1090	13006	0	1.475	73	2.5	9.949	215.3718	87.5843 BORDE_RIO
1090	13006	0	1.475	74	2.5	13.495	225.4913	89.1151 BORDE_RIO
1090	13006	0	1.475	75	2.5	19.786	230.2152	89.3416 BORDE_RIO
1090	13006	0	1.475	1091	1.7	50.439	239.3037	90.0117 DELTA
1090	13006	0	1.475	76	1.7	27.812	233.101	91.3643 BORDE_RIO
1090	13006	0	1.475	77	1.7	34.497	231.5628	92.5842 BORDE_RIO
1090	13006	0	1.475	78	1.7	45.847	236.4456	92.2918 BORDE_RIO
1090	13006	0	1.475	79	1.7	42.785	233.4706	92.4315 BORDE_RIO
1090	13006	0	1.475	80	1.7	33.247	256.1309	89.0338 LINDERO
1090	13006	0	1.475	81	1.7	32.693	249.4122	89.105 CERCA
1091	1090	0	1.54	1090	1.7	50.445	0	89.343
SD	89.89.3430							
1091	1090	0	1.54	82	1.7	12.26	199.0233	84.3348 CERCA
1091	1090	0	1.54	83	1.7	12.901	186.1443	85.4758 BORDE_RIO
1091	1090	0	1.54	84	1.7	10.041	185.3619	85.1516 BORDE_RIO
1091	1090	0	1.54	85	1.7	6.927	178.0505	91.352 BORDE_RIO
1091	1090	0	1.54	86	1.7	3.394	151.4241	92.2203 BORDE_RIO
1091	1090	0	1.54	87	1.7	1.633	35.4714	91.5615 BORDE_RIO
1091	1090	0	1.54	88	1.7	17.222	7.0552	92.292 BORDE_RIO
1091	1090	0	1.54	89	1.7	4.235	17.5527	96.0404 BORDE_RIO
1091	1090	0	1.54	90	1.7	13.006	8.3925	92.4515 BORDE_RIO
1091	1090	0	1.54	91	1.7	9.052	26.3709	100.2056 BORDE_RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1091	1090	0	1.54	92	1.7	8.231	32.2312	103.5622 BORDE_RIO
1091	1090	0	1.54	93	1.7	7.562	46.4646	108.5823 BORDE_RIO
1091	1090	0	1.54	94	1.7	5.916	49.4237	116.1327 BORDE_RIO
1086	1087	0	1.551	1087	1.7	30.605	0	89.5833
SD	89.89.5833							
1086	1087	0	1.551	1092	1.7	4.233	273.2453	88.0414 DELTA
1092	1086	0	1.567	1086	1.7	4.232	0	88.3335
SD	88.88.3335							
1092	1086	0	1.567	95	2.9	39.082	61.4443	91.3643 CERCA
1092	1086	0	1.567	96	1.7	40.669	63.5936	94.0324 BORDE_RIO
1092	1086	0	1.567	97	2.9	42.382	61.0726	92.4553 BORDE_RIO
1092	1086	0	1.567	98	1.7	36.786	79.4245	91.5949 PARAMENTO
1092	1086	0	1.567	99	1.7	23.922	78.5216	92.1138 PARAMENTO
1092	1086	0	1.567	100	2.9	14.028	356.2841	89.4448 CANO
1092	1086	0	1.567	101	2.9	14.768	317.1615	88.4851 CANO
1092	1086	0	1.567	102	2.9	18.948	305.0113	89.3105 CANO
1092	1086	0	1.567	103	2.9	25.405	291.5417	89.3617 CANO
AUX	13003	0.0001	1.612	13003	1.7	101.863	0.0001	89.505
SD	89.89.5050							
AUX	13003	0.0001	1.612	1093	1.7	57.573	80.5536	89.4804 DELTA
AUX	13003	0.0001	1.612	104	1.7	24.463	104.1415	89.5519 PARAMENTO
AUX	13003	0.0001	1.612	105	1.7	29.193	116.1856	90.0426 PARAMENTO
AUX	13003	0.0001	1.612	106	1.7	31.549	96.2055	89.5801 PARAMENTO
1093	AUX	359.5959	1.513	AUX	1.7	57.57	359.5959	89.5658
SD	89.89.5658							
1093	AUX	359.5959	1.513	107	1.7	19.839	355.2329	89.4125 PARAMENTO
1093	AUX	359.5959	1.513	108	1.7	23.254	319.2137	90.0944 PARAMENTO
1093	AUX	359.5959	1.513	109	2.9	36.753	353.2227	88.2554 PARAMENTO
1093	AUX	359.5959	1.513	110	1.7	13.038	187.0317	88.3712 CERRAMIENT
1093	AUX	359.5959	1.513	111	2.3	10.164	209.5211	84.2132 PARAMENTO
1093	AUX	359.5959	1.513	112	1.7	13.885	200.3615	88.3 PARAMENTO
1093	AUX	359.5959	1.513	113	4.4	28.797	251.0728	84.2559 PARAMENTO
1093	AUX	359.5959	1.513	114	1.7	16.966	136.5537	88.4745 PARAMENTO
1093	AUX	359.5959	1.513	115	1.7	22.831	123.3325	89.0154 PARAMENTO
1093	AUX	359.5959	1.513	116	2.9	29.134	120.2058	88.1607 LINDERO
1093	AUX	359.5959	1.513	117	2.9	30.681	118.1529	88.1127 LINDERO
1093	AUX	359.5959	1.513	118	1.7	40.089	97.4617	89.3819 LINDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		10051	10050	0	1.472	10050	1.5	142.853	0	89.4721	
SD	89.89.4721										
		10051	10052	0	1.472	10052	1.5	147.857	87.571	89.4818	
SD	89.89.4818										
		10052	10051	0	1.562	10051	1.7	147.855	0	90.0412	
SD	90.90.0412										
		10052	10051	0	1.562	10053	1.7	47.634	97.2713	89.3644	DELTA
		10053	10052	0	1.567	10052	1.7	47.637	0	90.0604	
SD	90.90.0604										
		10053	10052	0	1.567	10015	1.7	55.669	121.4105	89.5605	DELTA
		10014	10012	0	1.533	10012	1.7	97.181	0	89.5518	
SD	89.89.5518										
		10014	10012	0	1.533	10060	1.7	75.088	179.3611	90.0125	DELTA
		10014	10012	0	1.533	1	1.7	10.02	183.5357	89.4046	BORDE_VIA
		10014	10012	0	1.533	2	1.7	12.507	356.3802	89.1643	BORDE_VIA
		10014	10012	0	1.533	3	1.7	10.701	136.4711	89.5633	BORDE_VIA
		10014	10012	0	1.533	4	1.7	14.301	30.4035	89.2228	BORDE_VIA
		10060	10014	359.5959	1.575	10014	1.7	75.091	359.5959	89.4502	
SD	89.89.4502										
		10060	10014	359.5959	1.575	5	1.7	5.667	191.4714	90.1019	BORDE_VIA
		10060	10014	359.5959	1.575	6	1.7	8.583	127.1633	90.093	BORDE_VIA
		10060	10014	359.5959	1.575	10015	1.7	70.133	181.3548	89.5925	DELTA
		10015	10060	0	1.578	10060	1.7	70.136	0	89.4843	
SD	89.89.4843										
		10015	10060	0	1.578	10016	1.7	16.465	153.135	89.4636	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



EAUX28CM	E12025CM	0	1.54	E12025CM	1.7	71.956	0	90.0251
SD 90.90.0251								
EAUX28CM	E12025CM	0	1.54	E10061JM	1.7	18.556	58.4634	89.541 DELTA
EAUX28CM	E12025CM	0	1.54	1	1.7	2.789	54.1538	85.301 MANHOLE
EAUX28CM	E12025CM	0	1.54	2	1.7	1.48	162.2632	83.1541 POSTE
EAUX28CM	E12025CM	0	1.54	3	1.7	9.21	145.3446	88.5855 POSTE
EAUX28CM	E12025CM	0	1.54	4	1.7	21.501	14.2416	89.3148 POSTE
EAUX28CM	E12025CM	0	1.54	5	1.7	18.453	352.3151	88.2525 PARAMENTO
EAUX28CM	E12025CM	0	1.54	6	1.7	14.927	351.3714	88.4423 PARAMENTO
EAUX28CM	E12025CM	0	1.54	7	1.7	70.514	3.5034	89.565 PARAMENTO
EAUX28CM	E12025CM	0	1.54	8	1.7	8.006	345.2128	87.3 PARAMENTO
EAUX28CM	E12025CM	0	1.54	9	1.7	11.575	308.3047	89.054 PARAMENTO
EAUX28CM	E12025CM	0	1.54	10	1.7	63.665	4.3242	89.5559 PARAMENTO
EAUX28CM	E12025CM	0	1.54	11	1.7	60.782	5.0749	89.5845 PARAMENTO
EAUX28CM	E12025CM	0	1.54	12	1.7	55.355	5.0752	89.4553 PARAMENTO
EAUX28CM	E12025CM	0	1.54	13	1.7	15.52	277.5612	89.4739 PARAMENTO
EAUX28CM	E12025CM	0	1.54	14	1.7	23.596	274.4634	89.5606 PARAMENTO
EAUX28CM	E12025CM	0	1.54	15	1.7	40.968	8.2508	89.3017 PARAMENTO
EAUX28CM	E12025CM	0	1.54	16	1.7	17.337	261.3126	89.5036 PARAMENTO
EAUX28CM	E12025CM	0	1.54	17	1.7	2.357	196.5446	82.4921 PARAMENTO
EAUX28CM	E12025CM	0	1.54	18	1.7	12.548	182.3358	88.2505 PARAMENTO
EAUX28CM	E12025CM	0	1.54	19	1.7	14.115	182.1832	88.5018 PARAMENTO
EAUX28CM	E12025CM	0	1.54	20	1.7	21.979	181.1618	89.3636 PARAMENTO
EAUX28CM	E12025CM	0	1.54	21	1.7	7.626	22.4255	89.06 TERRENO
EAUX28CM	E12025CM	0	1.54	22	1.7	9.004	38.5136	88.5923 TERRENO
EAUX28CM	E12025CM	0	1.54	23	1.7	22.738	5.4736	89.4251 TERRENO
EAUX28CM	E12025CM	0	1.54	24	1.7	23.43	11.0108	89.4139 TERRENO
EAUX28CM	E12025CM	0	1.54	25	1.7	41.92	1.1617	89.5341 TERRENO
EAUX28CM	E12025CM	0	1.54	26	1.7	42.06	5.2957	89.5555 TERRENO
EAUX28CM	E12025CM	0	1.54	27	1.7	57.395	0.2639	90.0124 TERRENO
EAUX28CM	E12025CM	0	1.54	28	1.7	57.285	4.0158	90.0013 TERRENO
EAUX28CM	E12025CM	0	1.54	29	1.7	75.743	0.0615	90.0328 LINDERO
EAUX28CM	E12025CM	0	1.54	30	1.7	76.157	1.3243	89.5754 LINDERO
EAUX28CM	E12025CM	0	1.54	31	1.7	39.646	8.513	89.5051 PARAMENTO
EAUX28CM	E12025CM	0	1.54	32	1.7	39.953	10.5052	90.0534 PARAMENTO
EAUX28CM	E12025CM	0	1.54	33	1.7	8.249	263.1208	89.2428 TERRENO
EAUX28CM	E12025CM	0	1.54	34	1.7	8.802	283.5753	89.3505 TERRENO
EAUX28CM	E12025CM	0	1.54	35	1.7	22.515	263.3213	90.003 TERRENO
EAUX28CM	E12025CM	0	1.54	36	1.7	22.838	271.0313	90.0355 TERRENO
EAUX28CM	E12025CM	0	1.54	37	1.7	38.782	266.4623	89.4618 PARAMENTO
EAUX28CM	E12025CM	0	1.54	38	1.7	37.863	271.4159	90.0012 PARAMENTO
EAUX28CM	E12025CM	0	1.54	39	1.7	32.166	269.1514	89.5814 NADA
EAUX28CM	E12025CM	0	1.54	40	1.7	32.14	270.0518	90.0131 MANHOLE
EAUX28CM	E12025CM	0	1.54	41	1.7	31.654	271.4415	90.0131 PARAMENTO
EAUX28CM	E12025CM	0	1.54	42	1.7	25.695	271.5734	89.5954 PARAMENTO
EAUX28CM	E12025CM	0	1.54	43	1.7	25.574	274.332	89.55 PARAMENTO
EAUX28CM	E12025CM	0	1.54	44	1.7	28.791	270.5806	90.0054 POSTE
EAUX28CM	E12025CM	0	1.54	45	1.5	16.778	293.3423	90.2842 PARAMENTO
EAUX28CM	E12025CM	0	1.54	46	1.7	6.79	139.3712	88.0636 TERRENO
EAUX28CM	E12025CM	0	1.54	47	1.7	5.576	168.3723	87.595 TERRENO
EAUX28CM	E12025CM	0	1.54	48	1.7	21.576	177.1921	89.3334 TERRENO
EAUX28CM	E12025CM	0	1.54	49	1.7	22.121	168.5414	89.2906 TERRENO
EAUX28CM	E12025CM	0	1.54	50	1.7	35.571	179.1452	89.3616 TERRENO
EAUX28CM	E12025CM	0	1.54	51	1.7	36.715	173.2317	89.3531 TERRENO
EAUX28CM	E12025CM	0	1.54	52	1.7	45.392	180.2534	89.423 TERRENO
EAUX28CM	E12025CM	0	1.54	53	1.7	45.887	176.5331	89.315 TERRENO
EAUX28CM	E12025CM	0	1.54	54	1.7	35.383	171.1331	89.3348 PARAMENTO
EAUX28CM	E12025CM	0	1.54	55	1.7	33.011	170.0507	89.3034 PARAMENTO
EAUX28CM	E12025CM	0	1.54	56	1.7	24.689	151.1348	89.3952 PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



EAUX28CM	E12025CM	0	1.54	57	1.7	15.2	122.131	92.1123	ARBOL
EAUX28CM	E12025CM	0	1.54	58	1.7	16.111	146.3701	89.2727	ARBOL
EAUX28CM	E12025CM	0	1.54	59	1.7	10.642	62.2816	88.2354	ARBOL
EAUX28CM	E12025CM	0	1.54	60	1.7	15.452	42.4355	89.3116	ARBOL
EAUX28CM	E12025CM	0	1.54	61	1.7	9.188	78.1102	88.0449	ARBOL
EAUX28CM	E12025CM	0	1.54	62	1.7	12.687	43.4711	89.1227	ARBOL
E10061JM	EAUX28CM	0	1.403	EAUX28CM	1.7	18.561	0	88.4124	
SD	88.88.4124								
E10061JM	EAUX28CM	0	1.403	63	1.7	6.563	337.055	85.0813	TERRENO
E10061JM	EAUX28CM	0	1.403	64	1.7	13.01	318.5742	87.1846	TERRENO
E10061JM	EAUX28CM	0	1.403	65	1.7	4.661	298.3937	88.2919	TERRENO
E10061JM	EAUX28CM	0	1.403	66	1.7	12.432	303.1341	92.4035	TERRENO
E10061JM	EAUX28CM	0	1.403	67	1.7	6.61	256.2848	99.2547	TERRENO
E10061JM	EAUX28CM	0	1.403	68	1.7	13.407	285.3739	96.4211	TERRENO
E10061JM	EAUX28CM	0	1.403	69	1.7	10.579	239.1433	104.3307	TERRENO
E10061JM	EAUX28CM	0	1.403	70	1.7	10.953	239.3111	105.4523	TERRENO
E10061JM	EAUX28CM	0	1.403	71	2.9	15.714	271.4214	96.3218	TERRENO
E10061JM	EAUX28CM	0	1.403	72	1.7	13.341	231.5935	106.0024	TERRENO
E10061JM	EAUX28CM	0	1.403	73	3.9	17.95	266.3711	95.3848	TERRENO
E10061JM	EAUX28CM	0	1.403	74	2.9	20.73	263.3515	100.3105	TERRENO
E10061JM	EAUX28CM	0	1.403	75	1.7	7.007	90.3005	87.1153	TERRENO
E10061JM	EAUX28CM	0	1.403	76	1.7	14.794	101.0608	88.3048	TERRENO
E10061JM	EAUX28CM	0	1.403	77	1.7	5.9	125.0918	91.2242	TERRENO
E10061JM	EAUX28CM	0	1.403	78	1.7	13.999	124.2013	89.2913	TERRENO
E10061JM	EAUX28CM	0	1.403	79	1.7	8.67	173.3007	94.2334	TERRENO
E10061JM	EAUX28CM	0	1.403	80	1.7	15.826	153.5823	91.5057	TERRENO
E10061JM	EAUX28CM	0	1.403	81	1.7	11.199	179.1526	99.3534	TERRENO
E10061JM	EAUX28CM	0	1.403	82	2	13.196	184.1558	102.5837	TERRENO
E10061JM	EAUX28CM	0	1.403	83	1.7	16.813	158.0203	93.3406	TERRENO
E10061JM	EAUX28CM	0	1.403	84	1.7	20.991	113.2827	89.5211	TERRENO
E10061JM	EAUX28CM	0	1.403	85	1.7	28.232	114.3203	89.5744	TERRENO
E10061JM	EAUX28CM	0	1.403	86	1.7	20.92	127.3131	91.0946	TERRENO
E10061JM	EAUX28CM	0	1.403	87	1.7	27.982	127.1711	90.2007	TERRENO
E10061JM	EAUX28CM	0	1.403	88	1.7	20.755	142.0531	91.3818	TERRENO
E10061JM	EAUX28CM	0	1.403	89	1.7	30.64	138.2948	90.5656	TERRENO
E10061JM	EAUX28CM	0	1.403	90	1.7	21.124	155.0354	93.3146	TERRENO
E10061JM	EAUX28CM	0	1.403	91	1.7	30.173	142.1037	91.581	TERRENO
E10061JM	EAUX28CM	0	1.403	92	2.9	31.096	133.1751	88.1309	PARAMENTO
E10061JM	EAUX28CM	0	1.403	E10062JM	1.7	30.288	135.2017	90.3348	DELTA
E10061JM	EAUX28CM	0	1.403	E10063JM	1.7	21.618	149.0943	91.3959	DELTA
E10063JM	E10061JM	0.0001	1.582	E10061JM	1.7	21.633	0.0001	87.1609	
SD	87.87.1609								
E10063JM	E10061JM	0.0001	1.582	E10064JM	1.7	31.076	248.1323	93.2733	DELTA
E10063JM	E10061JM	0.0001	1.582	93	1.7	27.647	249.5733	94.5338	TERRENO
E10063JM	E10061JM	0.0001	1.582	94	1.7	27.08	249.5733	97.3545	TERRENO
E10063JM	E10061JM	0.0001	1.582	95	1.7	25.296	249.5733	101.2548	TERRENO
E10063JM	E10061JM	0.0001	1.582	96	1.7	22.862	249.5732	105.4935	TERRENO
E10063JM	E10061JM	0.0001	1.582	97	1.7	22.785	249.5733	106.0629	AGUA_MIN
E10063JM	E10061JM	0.0001	1.582	98	1.7	22.736	249.4459	108.1701	FONDO_RIO
E10063JM	E10061JM	0.0001	1.582	99	0	23.016	249.4459	110.2612	RIO
E10063JM	E10061JM	0.0001	1.582	100	2.9	24.249	265.471	101.5153	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	101	4	27.916	282.0231	98.0315	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	102	1.7	29.386	285.0405	102.0533	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	103	1.7	31.315	283.3103	101.1223	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	104	1.7	33.072	283.2207	100.0005	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	105	0.085	35.552	289.0944	101.5356	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	106	0.085	38.245	293.5355	101.2053	BORDE_RIO
E10063JM	E10061JM	0.0001	1.582	107	1.7	38.536	290.272	98.0319	TERRENO
E10063JM	E10061JM	0.0001	1.582	108	1.7	35.459	285.5806	98.3022	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



E10063JM	E10061JM	0.0001	1.582	109	1.7	33.352	280.4506	99.1652	TERRENO
E10063JM	E10061JM	0.0001	1.582	110	1.7	32.255	275.2847	99.0815	TERRENO
E10063JM	E10061JM	0.0001	1.582	111	1.7	28.984	267.2802	98.0623	TERRENO
E10063JM	E10061JM	0.0001	1.582	112	1.7	27.535	259.4621	97.0545	TERRENO
E10063JM	E10061JM	0.0001	1.582	113	1.7	34.195	248.3611	91.3153	TERRENO
E10062JM	E10061JM	0	1.541	E10061JM	1.7	30.296	0	88.3524	
SD	88.88.3524								
E10062JM	E10061JM	0	1.541	E10065JM	1.7	32.826	182.1606	91.3337	DELTA
E10062JM	E10061JM	0	1.541	114	1.7	5.72	162.4252	88.1816	TERRENO
E10062JM	E10061JM	0	1.541	115	1.7	6.927	195.3108	98.0153	TERRENO
E10062JM	E10061JM	0	1.541	116	1.7	11.223	164.2338	86.5124	TERRENO
E10062JM	E10061JM	0	1.541	117	1.7	10.283	177.5514	90.3332	TERRENO
E10062JM	E10061JM	0	1.541	118	1.7	10.996	189.4735	95.5954	TERRENO
E10065JM	E10062JM	359.5959	1.531	E10062JM	1.7	32.837	359.5959	87.5231	
SD	87.87.5231								
E10065JM	E10062JM	359.5959	1.531	E10066JM	1.7	31.005	257.3723	92.1348	DELTA
E10065JM	E10062JM	359.5959	1.531	119	1.7	28.851	256.5903	93.2051	TERRENO
E10065JM	E10062JM	359.5959	1.531	120	1.7	1.413	256.5905	91.045	TERRENO
E10065JM	E10062JM	359.5959	1.531	121	1.7	26.191	257.3726	100.0846	TERRENO
E10065JM	E10062JM	359.5959	1.531	122	1.7	25.503	257.2523	101.2237	TERRENO
E10065JM	E10062JM	359.5959	1.531	123	0.085	24.813	258.0247	106.5637	AGUA_MIN
E10065JM	E10062JM	359.5959	1.531	124	1.7	3.551	253.2006	117.4512	TERRENO
E10065JM	E10062JM	359.5959	1.531	125	2.6	5.171	250.2852	111.0303	TERRENO
E10065JM	E10062JM	359.5959	1.531	126	1.7	25.457	246.4955	103.0133	BORDE_RIO
E10065JM	E10062JM	359.5959	1.531	127	1.7	26.383	238.1826	102.1018	BORDE_RIO
E10065JM	E10062JM	359.5959	1.531	128	1.7	33.967	258.5716	91.2845	TERRENO
E10065JM	E10062JM	359.5959	1.531	129	1.7	11.945	21.3705	86.3056	TERRENO
E10065JM	E10062JM	359.5959	1.531	130	1.7	8.474	348.1528	85.2252	TERRENO
E10065JM	E10062JM	359.5959	1.531	131	1.7	9.42	347.1931	84.3245	ARBOL
E10065JM	E10062JM	359.5959	1.531	132	1.7	39.337	260.1528	87.2608	TERRENO
E10065JM	E10062JM	359.5959	1.531	133	1.7	45.118	259.5343	87.4903	TERRENO
E10065JM	E10062JM	359.5959	1.531	134	1.7	5.438	339.5438	82.543	ARBOL
E10065JM	E10062JM	359.5959	1.531	135	1.7	2.775	283.1927	96.2909	ARBOL
E10065JM	E10062JM	359.5959	1.531	136	1.7	3.799	315.0051	91.2415	TERRENO
E10065JM	E10062JM	359.5959	1.531	137	1.7	10.201	63.3553	86.4105	TERRENO
E10065JM	E10062JM	359.5959	1.531	138	1.7	10.806	103.0657	86.5938	TERRENO
E10065JM	E10062JM	359.5959	1.531	139	1.7	4.121	177.1544	95.0151	TERRENO
E10065JM	E10062JM	359.5959	1.531	140	1.5	16.906	39.2214	86.2918	PARAMENTO
E10065JM	E10062JM	359.5959	1.531	141	2.4	15.554	55.195	82.5818	PARAMENTO
E10065JM	E10062JM	359.5959	1.531	142	1.7	15.069	75.5307	83.0703	PARAMENTO
E10065JM	E10062JM	359.5959	1.531	143	1.7	19.74	26.5458	84.3231	PARAMENTO
E10065JM	E10062JM	359.5959	1.531	144	2.1	18.778	23.3526	83.5345	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	E13013GP	1.7	35.99	359.5959	90.0425	
SD	90.90.0425								
E13014GP	E13013GP	359.5959	1.565	145	1.7	12.813	45.3445	88.1701	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	146	1.7	16.319	318.4026	89.3732	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	147	1.7	9.918	101.3425	88.0841	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	148	1.7	14.075	100.0211	88.4114	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	149	1.7	7.805	96.3712	87.5324	POSTE
E13014GP	E13013GP	359.5959	1.565	150	1.7	28.679	166.304	89.1039	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	151	1.7	37.967	182.5152	89.2119	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	152	1.7	38.456	176.2341	89.2118	PARAMENTO
E13014GP	E13013GP	359.5959	1.565	153	1.7	36.881	182.4306	89.2106	POSTE
E13014GP	E13013GP	359.5959	1.565	154	1.7	35.205	181.1149	89.3152	MANHOLE
E13014GP	E13013GP	359.5959	1.565	155	1.7	38.047	186.3716	89.5501	MANHOLE
E13014GP	E13013GP	359.5959	1.565	E10067JM	1.7	69.536	186.503	89.5148	DELTA
E13014GP	E13013GP	359.5959	1.565	156	1.7	8.369	261.1907	90.1332	POSTE
E13014GP	E13013GP	359.5959	1.565	157	1.7	35.197	189.3104	89.5501	ARBOL
E13014GP	E13013GP	359.5959	1.565	158	1.7	4.608	55.4122	89.1332	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



E10067JM	E13014GP	359.5959	1.583	E13014GP	1.7	69.543	359.5959	89.5556
SD	89.89.5556							
E10067JM	E13014GP	359.5959	1.583	159	1.7	48.524	3.0237	90.0008 TERRENO
E10067JM	E13014GP	359.5959	1.583	160	1.7	50.565	345.0622	90.1405 TERRENO
E10067JM	E13014GP	359.5959	1.583	161	1.7	26.494	3.1728	90.0447 TERRENO
E10067JM	E13014GP	359.5959	1.583	162	1.7	29.736	341.304	90.0803 TERRENO
E10067JM	E13014GP	359.5959	1.583	163	1.7	7.028	14.5136	89.1612 TERRENO
E10067JM	E13014GP	359.5959	1.583	164	1.7	4.371	9.4344	88.2631 MANHOLE
E10067JM	E13014GP	359.5959	1.583	165	1.7	10.284	266.5208	90.0025 TERRENO
E10067JM	E13014GP	359.5959	1.583	166	1.7	20.425	266.4352	90.1644 TERRENO
E10067JM	E13014GP	359.5959	1.583	167	1.7	6.3	28.5719	87.5803 PARAMENTO
E10067JM	E13014GP	359.5959	1.583	168	1.7	8.463	48.4322	87.2406 PARAMENTO
E10067JM	E13014GP	359.5959	1.583	169	1.7	3.862	347.3952	88.3832 POSTE
E10067JM	E13014GP	359.5959	1.583	170	1.7	8.072	88.2347	88.5352 TERRENO
E10067JM	E13014GP	359.5959	1.583	171	1.7	19.144	90.0834	89.085 TERRENO
E10067JM	E13014GP	359.5959	1.583	172	1.7	15.236	150.3305	89.1204 TERRENO
E10067JM	E13014GP	359.5959	1.583	173	1.7	21.575	126.4932	89.4133 TERRENO
E13013GP	E13012GP	0	1.58	E13012GP	1.7	92.31	0	89.5554
SD	89.89.5554							
E13013GP	E13012GP	0	1.58	E11013XC	1.7	28.949	185.1839	90.0458 DELTA
E13013GP	E13012GP	0	1.58	E10068JM	1.7	115.615	184.5312	90.0405 DELTA
E10068JM	E13013GP	0	1.512	E13013GP	1.7	115.622	0	89.4723
SD	89.89.4723							
E10068JM	E13013GP	0	1.512	E10069JM	1.7	57.497	167.3745	89.4857 DELTA
E10068JM	E13013GP	0	1.512	174	1.7	7.63	359.0629	88.3756 TERRENO
E10068JM	E13013GP	0	1.512	175	1.7	11.523	44.4423	89.1106 TERRENO
E10068JM	E13013GP	0	1.512	176	1.7	18.355	61.3018	89.2554 TERRENO
E10068JM	E13013GP	0	1.512	177	1.7	18.589	106.4217	89.1922 TERRENO
E10068JM	E13013GP	0	1.512	178	1.7	11.862	122.2927	89.1125 TERRENO
E10068JM	E13013GP	0	1.512	179	1.7	5.5	187.5528	89.1807 TERRENO
E10068JM	E13013GP	0	1.512	180	1.7	13.402	186.1417	89.4859 LINDERO
E10068JM	E13013GP	0	1.512	181	1.7	14.58	210.1712	90.4411 LINDERO
E10068JM	E13013GP	0	1.512	182	1.7	26.281	181.2122	88.4341 LINDERO
E10068JM	E13013GP	0	1.512	183	1.7	28.664	160.0632	89.4313 TERRENO
E10068JM	E13013GP	0	1.512	184	1.7	30.922	141.4938	89.2818 TERRENO
E10068JM	E13013GP	0	1.512	185	1.7	49.872	166.5816	89.4716 TERRENO
E10068JM	E13013GP	0	1.512	186	2.2	45.51	155.0904	89.0813 TERRENO
E10068JM	E13013GP	0	1.512	187	2.45	47.507	175.1107	88.5312 TERRENO
E10069JM	E10068JM	0	1.542	E10068JM	1.7	57.5	0	89.4955
SD	89.89.4955							
E10069JM	E10068JM	0	1.542	E10070JM	1.7	42.322	116.0631	89.4623 DELTA
E10069JM	E10068JM	0	1.542	188	1.7	2.664	333.594	84.343 LINDERO
E10069JM	E10068JM	0	1.542	189	1.7	2.099	20.1608	85.0608 LINDERO
E10069JM	E10068JM	0	1.542	190	1.7	6.899	177.0646	89.271 TERRENO
E10069JM	E10068JM	0	1.542	191	1.7	16.037	182.5244	89.4228 TERRENO
E10069JM	E10068JM	0	1.542	192	1.7	5.641	130.3347	89.0157 TERRENO
E10069JM	E10068JM	0	1.542	193	1.7	13.762	110.0611	90.1246 TERRENO
E10069JM	E10068JM	0	1.542	194	1.7	14.235	127.2222	89.3702 TERRENO
E10069JM	E10068JM	0	1.542	195	1.7	24.407	112.1018	90.0404 TERRENO
E10069JM	E10068JM	0	1.542	196	1.7	23.691	127.1937	89.4257 TERRENO
E10069JM	E10068JM	0	1.542	197	1.7	37.28	115.2419	89.4546 TERRENO
E10069JM	E10068JM	0	1.542	198	1.7	42.531	111.0728	89.4242 TERRENO
E10069JM	E10068JM	0	1.542	199	1.7	40.772	127.3137	89.5054 TERRENO
E10069JM	E10068JM	0	1.542	200	1.7	22.231	181.0117	89.4626 TERRENO
E10069JM	E10068JM	0	1.542	201	1.7	21.865	188.2842	89.3613 TERRENO
E10069JM	E10068JM	0	1.542	202	1.7	32.181	184.0801	89.5555 TERRENO
E10069JM	E10068JM	0	1.542	203	1.7	31.935	188.0309	89.3603 TERRENO
E10069JM	E10068JM	0	1.542	204	2.9	52.174	187.3339	88.4829 TERRENO
E10069JM	E10068JM	0	1.542	205	2.9	51.99	184.2526	88.5332 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



E10069JM	E10068JM	0	1.542	206	2.9	41.948	184.4429	87.5924	TERRENO
E10069JM	E10068JM	0	1.542	207	1.7	37.751	173.3642	90.0523	TERRENO
E10070JM	E10069JM	0	1.426	E10069JM	1.7	42.328	0	89.5524	
SD	89.89.5524								
E10070JM	E10069JM	0	1.426	E10071JM	1.7	55.972	188.015	89.3221	DELTA
E10070JM	E10069JM	0	1.426	208	1.7	10.767	303.0824	90.0907	TERRENO
E10070JM	E10069JM	0	1.426	209	1.7	12.828	287.0014	90.1046	TERRENO
E10070JM	E10069JM	0	1.426	210	1.7	26.024	287.4233	90.1326	TERRENO
E10070JM	E10069JM	0	1.426	211	1.7	31.547	302.3434	90.1427	TERRENO
E10070JM	E10069JM	0	1.426	212	1.7	4.304	229.4934	108.455	TERRENO
E10070JM	E10069JM	0	1.426	213	1.7	26.418	276.3859	90.5408	TERRENO
E10070JM	E10069JM	0	1.426	214	1.7	5.127	156.4217	105.533	TERRENO
E10070JM	E10069JM	0	1.426	215	1.7	34.434	275.4053	89.5348	TERRENO
E10070JM	E10069JM	0	1.426	216	1.7	14.066	126.4945	95.4544	TERRENO
E10070JM	E10069JM	0	1.426	217	1.7	10.805	120.2336	90.3846	TERRENO
E10070JM	E10069JM	0	1.426	218	1.7	10.493	78.3911	97.2812	TERRENO
E10070JM	E10069JM	0	1.426	219	1.7	8.391	77.5151	89.4041	TERRENO
E10070JM	E10069JM	0	1.426	220	1.7	35.088	232.4557	89.5605	TERRENO
E10070JM	E10069JM	0	1.426	221	1.7	15.476	25.5203	88.49	TERRENO
E10070JM	E10069JM	0	1.426	222	1.7	17.154	31.5021	94.1853	TERRENO
E10070JM	E10069JM	0	1.426	223	1.7	38.972	215.5948	90.0233	TERRENO
E10070JM	E10069JM	0	1.426	224	2.2	20.953	144.2009	92.3841	TERRENO
E10070JM	E10069JM	0	1.426	225	1.7	35.258	187.4913	90.0501	TERRENO
E10070JM	E10069JM	0	1.426	226	2.3	28.776	153.0944	91.5	TERRENO
E10070JM	E10069JM	0	1.426	227	1.7	26.314	155.5406	89.5825	TERRENO
E10070JM	E10069JM	0	1.426	228	1.7	18.449	146.58	89.4832	TERRENO
E10070JM	E10069JM	0	1.426	229	1.7	11.213	183.0206	88.5017	TERRENO
E10070JM	E10069JM	0	1.426	230	1.7	13.418	134.5917	90.4529	TERRENO
E10070JM	E10069JM	0	1.426	231	1.7	5.319	206.0432	90.0328	TERRENO
E10070JM	E10069JM	0	1.426	232	1.7	8.845	146.0453	90.334	TERRENO
E10070JM	E10069JM	0	1.426	233	1.7	10.007	252.094	88.4304	TERRENO
E10070JM	E10069JM	0	1.426	234	1.7	1.862	220.3214	90.5244	TERRENO
E10070JM	E10069JM	0	1.426	235	1.7	21.877	271.4906	90.1012	TERRENO
E10070JM	E10069JM	0	1.426	236	1.7	21.437	283.2159	90.252	TERRENO
E10070JM	E10069JM	0	1.426	237	1.7	21.647	278.152	93.1413	TERRENO
E10070JM	E10069JM	0	1.426	238	1.7	13.067	216.4446	89.2027	TERRENO
E10071JM	E10070JM	0	1.463	E10070JM	1.7	55.978	0	89.573	
SD	89.89.5730								
E10071JM	E10070JM	0	1.463	E10072JM	1.7	43.295	164.3239	89.4538	DELTA
E10071JM	E10070JM	0	1.463	239	1.7	6.827	250.1822	92.0402	TERRENO
E10071JM	E10070JM	0	1.463	240	1.7	6.046	248.251	98.3558	TERRENO
E10071JM	E10070JM	0	1.463	241	1.7	2.948	204.3427	94.0123	TERRENO
E10071JM	E10070JM	0	1.463	242	1.7	1.522	231.0408	92.0727	TERRENO
E10071JM	E10070JM	0	1.463	243	1.7	2.457	215.1958	113.0415	TERRENO
E10071JM	E10070JM	0	1.463	244	1.7	6.83	101.0914	98.5045	TERRENO
E10071JM	E10070JM	0	1.463	245	1.7	7.195	109.1947	88.5745	TERRENO
E10071JM	E10070JM	0	1.463	246	1.7	6.697	91.5241	88.3032	TERRENO
E10071JM	E10070JM	0	1.463	247	1.7	20.234	95.575	89.1337	TERRENO
E10071JM	E10070JM	0	1.463	248	2.4	20.39	92.4835	91.5213	TERRENO
E10071JM	E10070JM	0	1.463	249	1.7	20.713	87.0951	88.4546	TERRENO
E10071JM	E10070JM	0	1.463	250	1.7	21.114	68.5733	90.4433	TERRENO
E10071JM	E10070JM	0	1.463	251	2.9	23.092	68.5117	91.4906	TERRENO
E10071JM	E10070JM	0	1.463	252	2.9	23.859	92.4116	91.5436	TERRENO
E10071JM	E10070JM	0	1.463	253	1.9	27.73	116.461	89.5002	TERRENO
E10071JM	E10070JM	0	1.463	254	4	30.063	116.5803	89.5037	TERRENO
E10071JM	E10070JM	0	1.463	255	1.7	15.045	116.483	89.1702	TERRENO
E10071JM	E10070JM	0	1.463	256	1.7	13.372	231.4801	89.4745	TERRENO
E10071JM	E10070JM	0	1.463	257	1.7	10.317	151.1734	90.13	TERRENO
E10071JM	E10070JM	0	1.463	258	2.4	29.229	234.5337	88.5539	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



E10071JM	E10070JM	0	1.463	259	1.7	19.499	195.3002	90.4538	TERRENO
E10071JM	E10070JM	0	1.463	260	1.7	20.464	200.3452	90.2526	TERRENO
E10071JM	E10070JM	0	1.463	261	1.7	21.282	194.3335	92.2959	TERRENO
E10071JM	E10070JM	0	1.463	262	1.9	23.142	194.3005	89.2302	TERRENO
E10071JM	E10070JM	0	1.463	263	1.7	18.356	162.5548	90.082	TERRENO
E10071JM	E10070JM	0	1.463	264	1.7	20.148	163.5827	93.4552	TERRENO
E10071JM	E10070JM	0	1.463	265	1.7	22.194	164.42	89.4917	TERRENO
E10071JM	E10070JM	0	1.463	266	1.7	25.634	129.3144	89.401	TERRENO
E10071JM	E10070JM	0	1.463	267	2.5	29.352	130.5419	91.4859	TERRENO
E10071JM	E10070JM	0	1.463	268	1.7	30.589	136.3343	89.3544	TERRENO
E10071JM	E10070JM	0	1.463	269	1.7	32.644	136.3129	89.2352	TERRENO
E10072JM	E10071JM	0	1.488	E10071JM	1.7	43.298	0	89.3906	
SD	89.89.3906								
E10072JM	E10071JM	0	1.488	E10073JM	1.7	52.148	201.1627	90.3337	DELTA
E10072JM	E10071JM	0	1.488	270	1.7	18.545	354.2512	89.1617	TERRENO
E10072JM	E10071JM	0	1.488	271	1.7	22.615	329.3305	89.1617	TERRENO
E10072JM	E10071JM	0	1.488	272	1.7	9.388	355.0407	89.1254	TERRENO
E10072JM	E10071JM	0	1.488	273	1.7	15.398	311.3623	89.2832	TERRENO
E10072JM	E10071JM	0	1.488	274	1.7	13.064	283.0629	89.3518	TERRENO
E10072JM	E10071JM	0	1.488	275	1.7	13.918	53.265	88.3513	TERRENO
E10072JM	E10071JM	0	1.488	276	1.7	17.199	42.4721	88.4507	TERRENO
E10072JM	E10071JM	0	1.488	277	2.4	26.565	272.5451	89.0559	TERRENO
E10072JM	E10071JM	0	1.488	278	2.4	27.914	258.2638	88.5651	TERRENO
E10072JM	E10071JM	0	1.488	279	2.4	32.178	248.0203	88.4439	TERRENO
E10072JM	E10071JM	0	1.488	280	2.4	37.781	249.4906	88.3227	TERRENO
E10072JM	E10071JM	0	1.488	281	2.4	37.249	256.523	88.3858	TERRENO
E10072JM	E10071JM	0	1.488	282	1.7	33.925	294.3132	90.1332	TERRENO
E10072JM	E10071JM	0	1.488	283	1.7	21.992	47.2831	89.1456	TERRENO
E10072JM	E10071JM	0	1.488	284	1.7	22.839	50.373	90.1718	TERRENO
E10072JM	E10071JM	0	1.488	285	2.9	22.247	50.0634	90.5923	TERRENO
E10072JM	E10071JM	0	1.488	286	1.7	12.947	58.4233	88.5258	TERRENO
E10072JM	E10071JM	0	1.488	287	4	19.34	45.4137	90.0343	TERRENO
E10072JM	E10071JM	0	1.488	288	1.7	8.645	129.3346	89.2515	TERRENO
E10072JM	E10071JM	0	1.488	289	2.9	15.498	49.3737	88.3716	TERRENO
E10072JM	E10071JM	0	1.488	290	1.7	16.992	174.1531	90.3127	TERRENO
E10072JM	E10071JM	0	1.488	291	4	14.031	56.3229	93.3022	TERRENO
E10072JM	E10071JM	0	1.488	292	1.7	16.25	199.2706	89.2529	TERRENO
E10072JM	E10071JM	0	1.488	293	1.7	22.307	219.1802	89.1823	TERRENO
E10072JM	E10071JM	0	1.488	294	1.7	6.069	37.3306	89.0628	TERRENO
E10072JM	E10071JM	0	1.488	295	1.7	31.977	218.3037	89.5505	TERRENO
E10072JM	E10071JM	0	1.488	296	1.7	7.885	194.5156	89.14	TERRENO
E10072JM	E10071JM	0	1.488	297	1.7	22.231	194.5636	89.471	TERRENO
E10072JM	E10071JM	0	1.488	298	1.7	32.411	202.1038	89.3223	TERRENO
E10072JM	E10071JM	0	1.488	299	1.7	36.936	192.4041	89.5635	TERRENO
E10072JM	E10071JM	0	1.488	300	1.7	43.01	195.0131	90.1703	TERRENO
E10072JM	E10071JM	0	1.488	301	1.7	43.866	201.2806	90.212	TERRENO
E10073JM	E10072JM	0.0001	1.526	E10072JM	1.7	52.153	0.0001	89.0136	
SD	89.89.0136								
E10073JM	E10072JM	0.0001	1.526	E11029XC	1.7	16.034	199.38	91.1859	DELTA
E10073JM	E10072JM	0.0001	1.526	302	1.7	3.054	54.3719	79.3744	MANHOLE
E10073JM	E10072JM	0.0001	1.526	303	1.7	4.163	21.1754	82.2537	MANHOLE
E10073JM	E10072JM	0.0001	1.526	304	1.7	1.597	64.2717	70.0319	ESTRUCTURA
E10073JM	E10072JM	0.0001	1.526	305	1.7	4.944	21.5723	83.3836	ESTRUCTURA
E10073JM	E10072JM	0.0001	1.526	306	1.7	3.538	64.5411	81.0319	ESTRUCTURA
E10073JM	E10072JM	0.0001	1.526	307	1.7	3.812	0.5158	81.4806	ESTRUCTURA
E10073JM	E10072JM	0.0001	1.526	308	1.7	20.617	253.2815	89.0805	TERRENO
E10073JM	E10072JM	0.0001	1.526	309	1.7	24.074	153.4346	95.3701	TERRENO
E10073JM	E10072JM	0.0001	1.526	310	1.7	8.141	245.4803	87.1253	TERRENO
E10073JM	E10072JM	0.0001	1.526	311	1.7	9.708	152.1916	91.5824	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



E10073JM	E10072JM	0.0001	1.526	312	1.7	29.83	287.2729	89.2512	TERRENO
E11029XC	E10073JM	0.0001	1.516	E10073JM	1.7	16.04	0.0001	87.2509	
SD 87.87.2509									
E11029XC	E10073JM	0.0001	1.516	313	1.7	4.856	173.3139	90.1341	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	314	1.7	5.503	153.3608	90.2306	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	315	1.7	5.167	171.3712	90.2827	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	316	1.7	5.673	156.464	90.4443	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	317	1.7	5.569	153.1448	100.0542	TERRENO
E11029XC	E10073JM	0.0001	1.516	318	1.7	4.847	173.3459	95.2346	TERRENO
E11029XC	E10073JM	0.0001	1.516	319	1.7	5.103	173.5055	90.225	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	320	1.7	5.683	154.4035	90.2423	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	321	2.9	5.402	164.2031	94.2801	CLAVE
E11029XC	E10073JM	0.0001	1.516	322	2.9	5.605	164.1239	103.1348	BATEA
E11029XC	E10073JM	0.0001	1.516	323	6.5	5.829	156.5645	102.1658	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	324	6.5	5.387	171.5006	103.2034	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	325	2.9	17.264	173.365	103.1156	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	326	2.9	17.247	174.1521	103.1515	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	327	3.2	16.912	179.2738	102.2738	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	328	3	16.968	179.4953	103.0944	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	329	2.45	17.383	174.3347	105.262	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	330	3.2	16.917	179.1533	103.392	ESTRUCTURA
E11029XC	E10073JM	0.0001	1.516	331	1.7	5.749	271.0936	85.3307	TERRENO
E11029XC	E10073JM	0.0001	1.516	332	1.7	4.609	224.1613	91.2352	TERRENO
E11029XC	E10073JM	0.0001	1.516	333	1.7	6.34	66.3219	92.2704	TERRENO
E11029XC	E10073JM	0.0001	1.516	334	1.7	8.413	118.3106	94.1617	TERRENO
E11029XC	E10073JM	0.0001	1.516	335	1.7	8.98	150.2918	95.0019	TERRENO
E11029XC	E10073JM	0.0001	1.516	336	1.7	8.075	162.1847	99.2537	TERRENO
E11029XC	E10073JM	0.0001	1.516	337	1.7	13.212	275.2526	85.2208	TERRENO
E11029XC	E10073JM	0.0001	1.516	338	1.7	15.213	57.0207	93.1126	TERRENO
E11029XC	E10073JM	0.0001	1.516	339	1.7	13.392	78.1808	92.2247	TERRENO
E11029XC	E10073JM	0.0001	1.516	340	1.7	17.323	84.3156	95.2737	TERRENO
E11029XC	E10073JM	0.0001	1.516	341	1.7	6.245	203.581	96.4004	TERRENO
E10061JM	EAUX28CM	0	1.399	EAUX28CM	1.7	18.554	0	88.4045	
SD 88.88.4045									
E10061JM	EAUX28CM	0	1.399	E10074JM	1.7	29.685	316.584	88.5505	DELTA
E10061JM	EAUX28CM	0	1.399	342	0.085	22.002	316.2756	94.125	TERRENO
E10061JM	EAUX28CM	0	1.399	343	0.085	21.213	303.503	96.1748	TERRENO
E10061JM	EAUX28CM	0	1.399	344	0.085	21.339	287.3558	98.5027	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION B
INGENIERA XIMENA CRUZ



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	89.89.3850	11001	11000	0	1.455	11000	1.5	52.607	0	89.385	
SD	89.89.3850	11001	11000	0	1.455	11000	1.5	52.607	0	89.385	
		11001	11000	0	1.455	11002	2.6	95.566	243.3328	89.1731	DELTA
		11001	11000	0	1.455	1	1.5	41.153	3.0313	89.2947	PARAMENTO
		11001	11000	0	1.455	2	1.5	36.917	3.3939	89.2328	PARAMENTO
		11001	11000	0	1.455	3	1.5	36.848	5.5228	89.2027	PARAMENTO
		11001	11000	0	1.455	4	1.7	62.376	349.0202	89.2607	PARAMENTO
		11001	11000	0	1.455	5	1.7	60.469	349.3117	89.2607	ANT_JARDIN
		11001	11000	0	1.455	6	1.7	57.631	350.3053	89.3011	BORDE_VIA
		11001	11000	0	1.455	7	1.5	61.923	1.1945	89.4452	BORDE_VIA
		11001	11000	0	1.455	8	1.5	57.383	2.5243	89.4829	BORDE_VIA
		11001	11000	0	1.455	9	1.5	43.627	359.4552	89.3908	BORDE_VIA
		11001	11000	0	1.455	10	1.7	39.824	352.4813	89.1604	BORDE_VIA
		11001	11000	0	1.455	11	1.5	20.79	3.3551	89.1604	BORDE_VIA
		11001	11000	0	1.455	12	1.5	20.868	5.2117	89.0754	POSTE
		11001	11000	0	1.455	13	1.7	30.83	348.4031	88.5957	PARAMENTO
		11001	11000	0	1.455	14	1.7	27.819	348.5402	88.3515	PARAMENTO
		11001	11000	0	1.455	14	1.7	27.818	348.4032	88.3515	PARAMENTO
		11001	11000	0	1.455	15	1.5	6.96	37.3142	88.5822	PARAMENTO
		11001	11000	0	1.455	16	1.7	8.699	341.1523	86.1101	PARAMENTO
		11001	11000	0	1.455	17	1.7	27.827	350.5449	88.391	ANDEN
		11001	11000	0	1.455	18	1.7	23.513	350.5318	88.2626	ANDEN
		11001	11000	0	1.455	19	1.7	23.493	348.4304	88.3233	ANDEN
		11001	11000	0	1.455	20	1.7	22.639	351.4845	88.5046	BORDE_VIA
		11001	11000	0	1.455	21	1.7	10.466	348.4402	88.2738	BORDE_VIA
		11001	11000	0	1.455	22	1.7	5.202	332.2225	87.1008	BORDE_VIA
		11001	11000	0	1.455	23	1.7	5.103	295.063	86.5443	BORDE_VIA
		11001	11000	0	1.455	24	1.7	8.593	343.263	86.1642	ANDEN
		11001	11000	0	1.455	25	1.7	5.619	328.2018	86.4442	ANDEN
		11001	11000	0	1.455	26	1.7	6.003	311.3244	87.0559	ANDEN
		11001	11000	0	1.455	27	1.7	6.678	301.3343	87.1307	ANDEN
		11001	11000	0	1.455	28	1.7	9.259	282.3016	88.2449	ANDEN
		11001	11000	0	1.455	29	1.7	8.766	333.5011	87.1842	PARAMENTO
		11001	11000	0	1.455	30	1.7	7.834	326.3653	87.0835	PARAMENTO
		11001	11000	0	1.455	31	1.7	3.101	265.0341	84.2707	MANHOLE
		11001	11000	0	1.455	32	1.7	3.678	40.2808	86.095	VALVULA
		11001	11000	0	1.455	33	1.5	4.243	74.152	83.3408	PARAMENTO
		11001	11000	0	1.455	34	1.5	11.858	88.4305	88.4513	PARAMENTO
		11001	11000	0	1.455	35	1.5	4.227	120.0539	84.3022	PARAMENTO
		11001	11000	0	1.455	36	1.5	7.013	123.5026	87.2204	PARAMENTO
		11001	11000	0	1.455	37	1.5	7.213	20.0515	89.1809	BORDE_VIA
		11001	11000	0	1.455	38	1.5	1.962	40.5211	88.3526	BORDE_VIA
		11001	11000	0	1.455	39	1.5	5.059	222.0811	89.455	BORDE_VIA
		11001	11000	0	1.455	40	1.5	8.705	223.5418	89.2121	POSTE
		11001	11000	0	1.455	41	1.5	22.136	230.16	89.3235	PARAMENTO
		11001	11000	0	1.455	42	1.5	21.656	236.3238	89.4411	ANTE_JARDI
		11001	11000	0	1.455	43	1.5	21.225	242.2516	89.4147	BORDE_VIA
		11001	11000	0	1.455	44	1.7	22.249	261.5143	89.0625	ANTE_JARDI
		11001	11000	0	1.455	45	1.7	22.864	266.3548	88.5955	PARAMENTO
		11001	11000	0	1.455	46	1.5	39.566	243.3105	89.4509	BORDE_VIA
		11001	11000	0	1.455	47	1.7	22.109	257.2005	89.0212	BORDE_VIA
		11001	11000	0	1.455	48	1.7	29.39	262.0442	89.1057	PARAMENTO
		11001	11000	0	1.455	49	1.7	29.769	264.1728	89.1059	PARAMENTO
		11001	11000	0	1.455	50	1.7	15.772	272.2346	88.2321	POSTE
		11001	11000	0	1.455	50	1.7	15.771	271.4027	88.2324	POSTE
		11001	11000	0	1.455	51	1.7	61.089	352.3444	89.2711	POSTE
		11001	11000	0	1.455	52	1.5	51.604	348.4434	89.4127	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11001	11000	0	1.455	53	1.5	32.264	359.5823	89.2439	LINEAMIENT
	11001	11000	0	1.455	54	1.5	8.81	359.5823	89.0602	LINEAMIENT
	11002	11001	0	1.418	11001	1.7	95.569	0	89.5128	
SD	89.89.5128									
	11002	11001	0	1.418	11003	1.5	120.442	61.3819	90.0501	DELTA
	11002	11001	0	1.418	55	1.5	114.647	61.553	90.0805	SUMIDERO
	11002	11001	0	1.418	56	1.5	113.872	61.4241	90.0527	SUMIDERO
	11002	11001	0	1.418	57	1.5	114.761	57.4553	90.1042	SUMIDERO
	11002	11001	0	1.418	58	1.5	113.925	58.0008	90.0604	SUMIDERO
	11002	11001	0	1.418	59	1.5	113.891	58.0431	90.0415	BORDE_VIA
	11002	11001	0	1.418	60	1.5	113.866	61.3852	90.0446	BORDE_VIA
	11002	11001	0	1.418	61	1.5	108.363	57.0927	90.0235	POSTE
	11002	11001	0	1.418	62	1.5	78.956	56.1834	90.0132	POSTE
	11002	11001	0	1.418	63	1.5	78.959	56.3044	90.0132	BORDE_VIA
	11002	11001	0	1.418	63	1.5	78.967	56.3045	90.0131	BORDE_VIA
	11002	11001	0	1.418	64	1.5	78.357	54.3338	89.5657	PARAMENTO
	11002	11001	0	1.418	64	1.5	78.358	54.3338	89.5657	PARAMENTO
	11002	11001	0	1.418	64	1.5	78.358	54.2954	89.5657	PARAMENTO
	11002	11001	0	1.418	65	1.5	71.242	61.3706	90.0135	BORDE_VIA
	11002	11001	0	1.418	66	1.5	71.283	62.233	89.5853	POSTE
	11002	11001	0	1.418	67	1.5	64.735	54.2008	90.0101	POSTE
	11002	11001	0	1.418	68	1.5	65.536	54.5733	90.083	SUMIDERO
	11002	11001	0	1.418	69	1.5	64.637	55.1852	90.0152	SUMIDERO
	11002	11001	0	1.418	70	1.5	63.76	55.1353	90.0425	BORDE_VIA
	11002	11001	0	1.418	71	1.5	65.296	51.1954	90.0425	BORDE_VIA
	11002	11001	0	1.418	72	1.5	57.958	51.0125	90.0847	BORDE_VIA
	11002	11001	0	1.418	73	1.5	53.988	54.0954	90.0233	BORDE_VIA
	11002	11001	0	1.418	74	1.5	50.802	52.5921	90.0923	SUMIDERO
	11002	11001	0	1.418	75	1.5	49.925	53.2345	90.0115	SUMIDERO
	11002	11001	0	1.418	76	1.5	49.379	51.5613	89.5335	POSTE
	11002	11001	0	1.418	77	1.5	55.43	57.5033	89.5852	MANHOLE
	11002	11001	0	1.418	78	1.5	53.678	62.0649	89.5852	MANHOLE
	11002	11001	0	1.418	79	1.5	50.724	62.1606	90.1038	SUMIDERO
	11002	11001	0	1.418	80	1.5	49.946	61.4812	90.0133	SUMIDERO
	11002	11001	0	1.418	81	1.5	52.055	64.5234	89.4648	CERRAMIENT
	11002	11001	0	1.418	82	1.5	53.067	50.5613	89.5442	PARAMENTO
	11002	11001	0	1.418	83	1.5	40.18	47.2455	89.5724	PARAMENTO
	11002	11001	0	1.418	84	1.5	39.544	51.2605	89.5725	BORDE_VIA
	11002	11001	0	1.418	85	1.5	17.757	32.2839	89.3436	POSTE
	11002	11001	0	1.418	86	1.5	17.618	35.5639	90.2606	SUMIDERO
	11002	11001	0	1.418	87	1.5	16.715	36.103	90.0239	SUMIDERO
	11002	11001	0	1.418	88	1.5	14.334	29.5941	89.533	BORDE_VIA
	11002	11001	0	1.418	89	1.5	13.177	21.2228	89.3005	BORDE_VIA
	11002	11001	0	1.418	90	1.5	14.334	6.0441	89.4609	BORDE_VIA
	11002	11001	0	1.418	91	1.5	14.427	19.0311	89.2247	PARAMENTO
	11002	11001	0	1.418	92	1.5	15.213	9.3528	89.3015	PARAMENTO
	11002	11001	0	1.418	93	1.5	15.673	317.1119	89.0531	POSTE
	11002	11001	0	1.418	94	1.5	13.099	290.1038	89.1235	PARAMENTO
	11002	11001	0	1.418	95	1.5	11.483	286.0244	89.1235	POSTE
	11002	11001	0	1.418	96	1.5	12.628	279.0938	90.324	SUMIDERO
	11002	11001	0	1.418	97	1.5	11.675	279.1612	89.5319	SUMIDERO
	11002	11001	0	1.418	98	1.5	9.015	333.053	89.0537	MANHOLE
	11002	11001	0	1.418	99	1.5	4.055	297.4959	88.2314	MANHOLE
	11002	11001	0	1.418	100	1.5	3.657	223.5419	89.073	MANHOLE
	11002	11001	0	1.418	101	1.5	11.674	241.1723	89.3831	BORDE_VIA
	11002	11001	0	1.418	102	1.5	11.969	240.4008	89.5401	SUMIDERO
	11002	11001	0	1.418	103	1.5	11.246	237.5754	90.2841	SUMIDERO
	11002	11001	0	1.418	104	1.5	12.076	238.5247	89.1951	CORDON
	11002	11001	0	1.418	105	1.5	12.077	237.5107	89.2617	CORDON



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11002	11001	0	1.418	106	1.5	11.2	237.2356	89.2622	CORDON
	11002	11001	0	1.418	107	1.5	11.128	238.4118	89.4122	CORDON
	11002	11001	0	1.418	108	1.5	11.621	227.1054	89.1625	CERRAMIENT
	11002	11001	0	1.418	109	1.5	14.092	276.2356	89.2446	POSTE
	11002	11001	0	1.418	110	1.5	10.343	284.1933	89.475	BORDE_VIA
	11002	11001	0	1.418	111	1.5	10.555	309.3347	89.331	BORDE_VIA
	11002	11001	0	1.418	112	1.5	44.355	251.3302	89.5404	POSTE
	11002	11001	0	1.418	113	1.5	48.013	250.4217	89.5811	SUMIDERO
	11002	11001	0	1.418	114	1.5	47.161	250.2009	89.5416	SUMIDERO
	11002	11001	0	1.418	115	1.5	50.014	249.4004	89.5004	BORDE_VIA
	11002	11001	0	1.418	116	1.5	53.646	252.4554	89.4525	BORDE_VIA
	11002	11001	0	1.418	117	1.5	50.66	252.5017	89.3606	PARAMENTO
	11002	11001	0	1.418	118	1.5	61.391	244.5243	89.4449	MANHOLE
	11002	11001	0	1.418	119	1.5	67.501	251.524	89.2535	POSTE
	11002	11001	0	1.418	120	1.5	71.627	248.3129	89.3833	POSTE
	11002	11001	0	1.418	120	1.5	71.629	248.2129	89.3834	POSTE
	11002	11001	0	1.418	121	1.5	69.755	249.432	89.305	PARAMENTO
	11002	11001	0	1.418	122	1.5	69.469	247.25	89.4637	BORDE_VIA
	11002	11001	0	1.418	123	1.5	64.03	251.0613	89.3937	BORDE_VIA
	11002	11001	0	1.418	124	1.5	71.668	247.3953	89.4854	SUMIDERO
	11002	11001	0	1.418	125	1.5	70.815	247.2451	89.4603	SUMIDERO
	11002	11001	0	1.418	126	1.5	70.653	241.2638	89.4957	SUMIDERO
	11002	11001	0	1.418	127	1.5	69.884	241.0027	89.5233	SUMIDERO
	11002	11001	0	1.418	128	1.5	70.125	241.3752	89.4604	BORDE_VIA
	11002	11001	0	1.418	129	1.5	69.973	239.2257	89.3408	PARAMENTO
	11002	11001	0	1.418	130	1.5	70.788	241.0847	89.4309	CORDON
	11002	11001	0	1.418	131	1.5	12.616	278.213	89.2613	CORDON
	11002	11001	0	1.418	132	1.5	12.699	279.0408	89.3132	CORDON
	11002	11001	0	1.418	133	1.5	11.98	281.2903	89.3132	CORDON
	11002	11001	0	1.418	134	1.5	11.849	280.5915	89.2648	CORDON
	11002	11002	0	1.418	11002	1.7	120.448	0	89.4605	
SD	89.89.4605									
	11003	11002	359.5959	1.469	11002	1.7	120.436	359.5959	89.4617	
SD	89.89.4617									
	11002	11002	179.0514	1.469	11004	1.5	102.293	179.0514	90.1004	DELTA
	11002	11002	179.0514	1.469	135	1.7	66.029	12.044	89.4412	POSTE
	11002	11002	179.0514	1.469	136	1.7	5.727	358.3257	88.0348	SUMIDERO
	11002	11002	179.0514	1.469	137	1.7	6.539	354.2421	88.3818	SUMIDERO
	11002	11002	179.0514	1.469	138	1.7	7.932	356.0237	88.1045	CORDON
	11002	11002	179.0514	1.469	139	1.7	5.528	353.5449	86.5817	CORDON
	11002	11002	179.0514	1.469	140	1.7	5.53	359.4007	87.3113	BORDE_VIA
	11002	11002	179.0514	1.469	141	1.7	11.02	39.4125	88.3726	BORDE_VIA
	11002	11002	179.0514	1.469	142	1.7	10.203	48.0921	88.1504	CORDON
	11002	11002	179.0514	1.469	143	1.7	10.382	48.5729	88.1504	CORDON
	11002	11002	179.0514	1.469	144	1.7	9.768	53.0248	88.0255	CORDON
	11002	11002	179.0514	1.469	145	1.7	9.445	51.3215	88.2146	CORDON
	11002	11002	179.0514	1.469	146	1.7	7.976	68.1117	87.4805	CORDON
	11002	11002	179.0514	1.469	147	1.7	20.737	82.3651	88.4934	CORDON
	11002	11002	179.0514	1.469	148	1.7	11.634	71.0728	88.1222	POSTE
	11002	11002	179.0514	1.469	149	1.7	10.912	62.0907	87.5811	PARAMENTO
	11002	11002	179.0514	1.469	150	1.7	10.22	48.5745	89.4159	SUMIDERO
	11002	11002	179.0514	1.469	151	1.7	9.293	51.0814	88.5114	SUMIDERO
	11002	11002	179.0514	1.469	152	1.7	14.975	34.0911	88.4233	POSTE
	11002	11002	179.0514	1.469	153	1.7	2.123	184.5101	84.0807	MANHOLE
	11002	11002	179.0514	1.469	154	1.7	4.661	125.573	86.0717	MANHOLE
	11002	11002	179.0514	1.469	155	0.085	35.55	83.5002	91.5931	POSTE
	11002	11002	179.0514	1.469	156	1.7	38.193	82.3647	89.1424	PARAMENTO
	11002	11002	179.0514	1.469	157	2.37	42.568	100.3241	88.3119	PARAMENTO
	11002	11002	179.0514	1.469	158	1.7	25.039	104.4544	89.074	POSTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11002	11002	179.0514	1.469	159	1.7	12.439	129.1514	87.5711	PARAMENTO
	11002	11002	179.0514	1.469	160	1.7	9.615	133.0129	88.3223	BORDE_VIA
	11002	11002	179.0514	1.469	161	1.7	10.22	132.114	88.0153	ANDEN
	11002	11002	179.0514	1.469	162	1.7	13.298	145.2035	88.5047	ANDEN
	11002	11002	179.0514	1.469	163	1.7	13.578	143.3854	88.5047	ANDEN
	11002	11002	179.0514	1.469	164	1.7	12.808	140.5939	88.4447	ANDEN
	11002	11002	179.0514	1.469	165	1.7	12.479	142.4228	88.4447	ANDEN
	11002	11002	179.0514	1.469	166	1.7	12.821	141.3243	89.364	SUMIDERO
	11002	11002	179.0514	1.469	167	1.7	13.161	145.1256	89.3642	SUMIDERO
	11002	11002	179.0514	1.469	168	1.7	14.664	144.4549	88.3352	POSTE
	11002	11002	179.0514	1.469	169	1.5	56.74	170.0415	89.5637	PARAMENTO
	11002	11002	179.0514	1.469	170	1.5	55.24	172.0715	89.5637	ANDEN
	11002	11002	179.0514	1.469	171	1.5	53.488	172.2525	90.022	BORDE_VIA
	11002	11002	179.0514	1.469	172	1.5	54.57	167.3519	89.5955	BORDE_VIA
	11002	11002	179.0514	1.469	173	1.5	47.893	167.3821	89.5955	BORDE_VIA
	11002	11002	179.0514	1.469	174	1.5	46.408	171.1951	90.0155	BORDE_VIA
	11002	11002	179.0514	1.469	175	1.5	43.915	169.2613	89.4529	POSTE
	11002	11002	179.0514	1.469	176	1.5	42.849	169.494	90.0605	SUMIDERO
	11002	11002	179.0514	1.469	177	1.5	41.974	170.1549	90.0427	SUMIDERO
	11002	11002	179.0514	1.469	178	1.5	42.033	169.3735	89.5805	CORDON
	11002	11002	179.0514	1.469	179	1.5	42.076	169.2659	89.5805	CORDON
	11002	11002	179.0514	1.469	180	1.5	42.938	169.3907	89.5805	CORDON
	11002	11002	179.0514	1.469	181	1.5	42.971	169.5102	89.5805	CORDON
	11002	11002	179.0514	1.469	182	1.5	45.149	167.3048	89.4407	PARAMENTO
	11002	11002	179.0514	1.469	183	1.7	41.604	180.4421	89.4205	CORDON
	11002	11002	179.0514	1.469	184	1.7	41.644	181.053	89.405	CORDON
	11002	11002	179.0514	1.469	185	1.7	42.077	181.0522	89.4323	CORDON
	11002	11002	179.0514	1.469	186	1.7	42.518	180.165	89.52	SUMIDERO
	11002	11002	179.0514	1.469	187	1.7	41.699	180.5929	89.5658	SUMIDERO
	11002	11002	179.0514	1.469	188	1.7	41.573	184.0257	89.4113	CERRAMIENT
	11002	11002	179.0514	1.469	189	1.7	42.142	182.2928	89.4529	ARBOL
	11002	11002	179.0514	1.469	190	1.5	49.759	179.3302	90.0405	MANHOLE
	11002	11002	179.0514	1.469	191	1.5	50.926	176.0732	89.5803	MANHOLE
	11002	11002	179.0514	1.469	192	1.7	43.907	180.035	89.524	BORDE_VIA
	11002	11002	179.0514	1.469	193	1.5	53.225	180.0615	90.0517	BORDE_VIA
	11002	11002	179.0514	1.469	194	1.7	45.954	183.511	89.4828	BORDE_VIA
	11002	11002	179.0514	1.469	195	1.5	52.739	183.4619	90.0043	BORDE_VIA
	11002	11002	179.0514	1.469	196	1.5	83.223	0.0022	89.4951	LINEAMIENT
	11002	11002	179.0514	1.469	197	1.5	43.799	0.0023	89.4731	LINEAMIENT
	11004	11003	0.0001	1.51	11003	1.7	102.312	0.0001	89.4221	
SD	89.89.4221									
	11004	11003	0.0001	1.51	11003	1.7	102.309	0	89.4231	
SD	89.89.4231									
	11004	11003	0.0001	1.51	11005	1.7	129.673	180.5335	90.082	DELTA
	11004	11003	0.0001	1.51	198	1.7	46.955	354.2122	89.0502	CERRAMIENT
	11004	11003	0.0001	1.51	199	1.7	38.734	353.1523	88.5529	PARAMENTO
	11004	11003	0.0001	1.51	199	1.7	38.737	353.0929	88.5529	PARAMENTO
	11004	11003	0.0001	1.51	200	1.7	38.45	357.4024	89.2816	CORDON
	11004	11003	0.0001	1.51	201	1.7	44.781	8.4416	89.3315	SUMIDERO
	11004	11003	0.0001	1.51	202	1.7	43.936	8.1322	89.2906	SUMIDERO
	11004	11003	0.0001	1.51	203	1.7	43.768	8.4232	89.2008	CORDON
	11004	11003	0.0001	1.51	204	1.7	43.814	8.5811	89.1836	CORDON
	11004	11003	0.0001	1.51	205	1.7	44.952	8.4651	89.1946	CORDON
	11004	11003	0.0001	1.51	206	1.7	44.954	8.3001	89.1946	CORDON
	11004	11003	0.0001	1.51	207	1.7	31.399	355.3454	89.0422	POSTE
	11004	11003	0.0001	1.51	207	1.7	31.416	355.1351	89.0423	POSTE
	11004	11003	0.0001	1.51	208	1.7	29.287	14.2219	89.1034	POSTE
	11004	11003	0.0001	1.51	209	1.7	25.226	13.1223	89.1646	BORDE_VIA
	11004	11003	0.0001	1.51	210	1.7	24.931	348.4158	89.011	PARAMENTO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	11004	11003	0.0001	1.51	211	1.7	24.513	357.0019	89.2047	BORDE_VIA
	11004	11003	0.0001	1.51	212	1.7	13.863	27.2536	89.1303	SUMIDERO
	11004	11003	0.0001	1.51	213	1.7	12.83	27.1918	89.0915	SUMIDERO
	11004	11003	0.0001	1.51	214	1.7	12.867	28.2923	88.3346	CORDON
	11004	11003	0.0001	1.51	215	1.7	13.051	29.4626	88.3921	CORDON
	11004	11003	0.0001	1.51	11003	1.7	102.331	0	89.4234	
SD	89.89.4234									
	11004	11003	0.0001	1.51	11005	1.7	129.665	180.5319	90.0831	DELTA
	11004	11003	0.0001	1.51	216	1.7	13.889	28.0101	88.4206	CORDON
	11004	11003	0.0001	1.51	217	1.7	13.748	26.1718	88.3645	CORDON
	11004	11003	0.0001	1.51	218	1.7	13.005	39.3729	88.2129	PARAMENTO
	11004	11003	0.0001	1.51	219	1.7	18.294	56.5107	88.1802	PARAMENTO
	11004	11003	0.0001	1.51	220	1.7	17.101	64.1951	88.4245	PARAMENTO
	11004	11003	0.0001	1.51	221	1.7	30.158	76.1154	89.1242	POSTE
	11004	11003	0.0001	1.51	222	1.7	26.449	78.1028	89.0802	BORDE_VIA
	11004	11003	0.0001	1.51	223	1.7	25.475	86.2837	88.5728	BORDE_VIA
	11004	11003	0.0001	1.51	224	1.7	15.141	88.4326	88.0726	PARAMENTO
	11004	11003	0.0001	1.51	225	1.7	15.121	97.252	88.2316	PARAMENTO
	11004	11003	0.0001	1.51	226	1.7	8.235	102.1001	87.2252	PARAMENTO
	11004	11003	0.0001	1.51	226	1.7	8.236	102.4822	87.2252	PARAMENTO
	11004	11003	0.0001	1.51	227	1.7	9.832	94.372	87.4928	POSTE
	11004	11003	0.0001	1.51	228	1.7	7.138	107.1037	87.0507	POSTE
	11004	11003	0	1.51	11003	1.7	102.305	0	89.4223	
SD	89.89.4223									
	11004	11003	0	1.51	11005	1.7	129.67	180.5345	90.0813	DELTA
	11004	11003	0	1.51	229	1.7	18.616	340.0904	88.0442	PARAMENTO
	11004	11003	0	1.51	230	1.7	12.508	350.5307	88.3756	CORDON
	11004	11003	0	1.51	231	1.7	12.499	350.124	88.3756	CORDON
	11004	11003	0	1.51	232	1.7	11.807	349.4101	88.3756	CORDON
	11004	11003	0	1.51	233	1.7	17.53	353.3336	88.5952	CORDON
	11004	11003	0	1.51	234	1.7	12.311	353.1355	89.0447	SUMIDERO
	11004	11003	0	1.51	235	1.7	11.652	350.3338	89.3223	SUMIDERO
	11004	11003	0	1.51	236	1.7	12.225	328.5003	86.2804	PARAMENTO
	11004	11003	0	1.51	237	1.7	9.574	324.5848	87.3657	BORDE_VIA
	11004	11003	0	1.51	238	1.7	6.587	304.4851	86.5238	BORDE_VIA
	11004	11003	0	1.51	239	1.7	3.381	331.5148	86.5238	BORDE_VIA
	11004	11003	0	1.51	240	1.7	9.281	350.0242	88.553	BORDE_VIA
	11004	11003	0	1.51	241	1.7	5.377	26.3859	87.2441	MANHOLE
	11004	11003	0	1.51	242	1.7	6.861	1.1125	88.1159	MANHOLE
	11004	11003	0	1.51	243	1.7	2.29	308.2831	86.0601	EJE_COLECT
	11004	11003	0	1.51	244	1.7	6.445	277.5311	84.0418	PARAMENTO
	11004	11003	0	1.51	245	1.7	14.854	195.5442	87.5358	POSTE
	11004	11003	0	1.51	246	1.7	7.562	125.5503	89.3009	SUMIDERO
	11004	11003	0	1.51	247	1.7	6.745	122.2947	88.5423	SUMIDERO
	11004	11003	0	1.51	248	1.7	6.813	120.3929	87.3729	CORDON
	11004	11003	0	1.51	249	1.7	7.174	119.2107	87.4904	CORDON
	11004	11003	0	1.51	250	1.7	7.658	126.0309	87.5634	CORDON
	11004	11003	0	1.51	251	1.7	7.329	127.5731	87.5635	CORDON
	11004	11003	0	1.51	252	1.7	35.06	183.3612	90.0244	BORDE_VIA
	11004	11003	0	1.51	252-1	1.7	35.424	183.3746	90.0202	SUMIDERO
	11004	11003	0	1.51	253	1.7	32.933	184.4002	90.1323	SUMIDERO
	11004	11003	0	1.51	254	1.7	37.673	184.1835	89.5707	CORDON
	11004	11003	0	1.51	255	1.7	38.409	184.5935	90.0957	SUMIDERO
	11004	11003	0	1.51	256	1.7	38.097	186.1121	90.1149	SUMIDERO
	11004	11003	0	1.51	257	1.7	36.878	171.0948	90.1018	SUMIDERO
	11004	11003	0	1.51	258	1.7	36.016	171.4501	90.0558	SUMIDERO
	11004	11003	0	1.51	259	1.7	35.966	171.2726	89.502	CORDON
	11004	11003	0	1.51	260	1.7	36.032	170.4924	89.5253	CORDON
	11004	11003	0	1.51	261	1.7	36.964	171.0233	89.5253	CORDON



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11004	11003	0	1.51	262	1.7	36.899	171.4106	89.5149	CORDON
11004	11003	0	1.51	263	1.7	39.961	172.2514	89.5245	CORDON
11004	11003	0	1.51	264	1.7	39.375	171.1743	89.4644	POSTE
11004	11003	0	1.51	265	1.7	39.911	171.3912	89.292	CAJA_TELEF
11004	11003	0	1.51	266	1.7	40.39	170.2329	89.2747	CAJA_TELEF
11004	11003	0	1.51	267	1.7	39.611	170.5459	89.2747	CAJA_TELEF
11004	11003	0	1.51	268	1.7	38.478	168.4817	89.2247	PARAMENTO
11004	11003	0	1.51	269	1.7	42.471	173.3725	89.59	BORDE_VIA
11004	11003	0	1.51	270	1.7	47.32	174.241	90.0204	BORDE_VIA
11004	11003	0	1.51	271	1.7	48.074	168.5245	89.5728	BORDE_VIA
11004	11003	0	1.51	272	1.7	43.332	168.551	89.5313	BORDE_VIA
11004	11003	0	1.51	273	1.7	50.19	171.3354	89.315	PARAMENTO
11004	11003	0	1.51	274	1.7	51.117	173.5347	89.5955	SUMIDERO
11004	11003	0	1.51	275	1.7	51.835	174.2737	90.0618	SUMIDERO
11004	11003	0	1.51	276	1.7	51.969	174.2344	89.5728	CORDON
11004	11003	0	1.51	277	1.7	52.023	173.5259	89.5803	CORDON
11004	11003	0	1.51	278	1.7	51.053	173.4508	89.584	CORDON
11004	11003	0	1.51	279	1.7	50.973	174.1611	89.584	CORDON
11004	11003	0	1.51	280	1.7	47.977	173.5039	89.5929	CORDON
11004	11003	0	1.51	281	1.7	41.865	178.2419	89.5714	MANHOLE
11004	11003	0	1.51	282	1.7	39.488	181.2948	90.0324	MANHOLE
11004	11003	0	1.51	283	1.7	46.052	184.2352	90.0324	CAMA_TELEF
11004	11003	0	1.51	284	1.7	48.876	186.0313	89.2601	CAJ_CONT_T
11004	11003	0	1.51	285	1.7	48.003	188.5434	89.3901	CAJA_TELEF
11004	11003	0	1.51	286	1.7	47.389	188.55	89.3638	CAJA_TELEF
11004	11003	0	1.51	287	1.7	47.461	189.5225	89.3734	CAJA_TELEF
11004	11003	0	1.51	288	1.7	35.673	190.3226	88.5411	PARAMENTO
11004	11003	0	1.51	289	1.7	55.149	185.3947	89.5014	MANHOLE
11004	11003	0	1.51	290	1.7	68.163	175.003	89.5804	POSTE
11004	11003	0	1.51	291	1.7	47.846	182.5626	90.0722	BORDE_VIA
11004	11003	0	1.51	292	1.7	37.946	183.3102	90.0434	BORDE_VIA
11004	11003	0	1.51	293	1.7	39.383	190.0125	90.0004	BORDE_VIA
11004	11003	0	1.51	294	1.7	45.925	189.5311	90.0144	BORDE_VIA
11004	11003	0	1.51	295	1.7	49.481	183.3555	90.0144	CORDON
11005	11004	0	1.505	11004	1.7	129.673	0	89.4153	
SD	89.89.4153								
11005	11004	0	1.505	11006	1.7	115.832	270.0934	89.4304	DELTA
11005	11004	0	1.505	296	1.7	42.368	7.1118	89.4406	BORDE_VIA
11005	11004	0	1.505	297	1.7	39.301	7.4335	89.4012	BORDE_VIA
11005	11004	0	1.505	298	1.5	43.921	10.3236	89.4247	BORDE_VIA
11005	11004	0	1.505	298	1.5	43.941	10.332	89.4247	PARAMENTO
11005	11004	0	1.505	299	1.5	43.3	10.1243	89.4318	POSTE
11005	11004	0	1.505	300	1.5	42.802	13.384	90.0038	BORDE_VIA
11005	11004	0	1.505	301	1.5	39.807	13.3212	90.0039	BORDE_VIA
11005	11004	0	1.505	302	1.5	37.02	13.4328	89.2733	PARAMENTO
11005	11004	0	1.505	303	1.5	32.369	12.3233	89.4708	POSTE
11005	11004	0	1.505	304	1.7	28.99	17.3828	89.1157	PARAMENTO
11005	11004	0	1.505	305	1.7	32.312	31.0505	88.4959	PARAMENTO
11005	11004	0	1.505	305	1.7	32.313	31.0921	88.4959	PARAMENTO
11005	11004	0	1.505	306	1.7	30.294	33.192	89.2649	MURO_ESQ_P
11005	11004	0	1.505	307	1.7	20.107	17.2931	89.5721	SUMIDERO
11005	11004	0	1.505	308	1.7	19.222	16.3027	89.3515	SUMIDERO
11005	11004	0	1.505	309	1.7	18.818	22.2746	89.2304	POSTE
11005	11004	0	1.505	310	1.7	14.389	19.5135	89.2305	MANHOLE
11005	11004	0	1.505	311	1.7	18.993	18.0149	89.2509	CORDON
11005	11004	0	1.505	312	1.7	19.345	18.1645	89.251	CORDON
11005	11004	0	1.505	313	1.7	19.459	19.0702	89.2208	CORDON
11005	11004	0	1.505	314	1.7	20.449	18.1035	89.2405	CORDON
11005	11004	0	1.505	315	1.7	20.374	16.5229	89.2405	CORDON



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11005	11004	0	1.505	316	1.7	16.85	57.4636	88.5625	CORDON
	11005	11004	0	1.505	317	1.7	17.841	60.0624	88.391	CORDON
	11005	11004	0	1.505	318	1.7	17.605	60.5412	88.3912	CORDON
	11005	11004	0	1.505	319	1.7	17.497	60.2435	89.0648	SUMIDERO
	11005	11004	0	1.505	320	1.7	16.53	60.0856	88.5126	SUMIDERO
	11005	11004	0	1.505	321	1.7	19.046	51.3827	89.0552	POSTE
	11005	11004	0	1.505	322	1.7	16.386	60.1006	88.4714	BORDE_VIA
	11005	11004	0	1.505	323	1.7	18.444	16.5458	89.3424	BORDE_VIA
	11005	11004	0	1.505	324	1.7	24.732	50.3642	89.0545	PARAMENTO
	11005	11004	0	1.505	325	1.7	34.1	47.5409	89.2742	PARAMENTO
	11005	11004	0	1.505	326	1.7	28.113	70.2047	89.195	PARAMENTO
	11005	11004	0	1.505	327	1.7	35.866	63.2932	89.2132	PARAMENTO
	11005	11004	0	1.505	328	1.7	15.177	88.0634	88.4704	SUMIDERO
	11005	11004	0	1.505	329	1.7	14.448	87.4556	88.4704	SUMIDERO
	11005	11004	0	1.505	330	1.7	15.426	89.4308	88.1857	CORDON
	11005	11004	0	1.505	331	1.7	14.112	89.0122	88.1857	CORDON
	11005	11004	0	1.505	332	1.7	11.717	87.4454	88.0813	CORDON
	11005	11004	0	1.505	333	1.7	13.311	89.4502	88.1547	CAJA_TELEF
	11005	11004	0	1.505	334	1.7	12.619	92.0859	88.1547	CAJA_TELEF
	11005	11004	0	1.505	335	1.7	13.224	94.4727	88.1547	CAJA_TELEF
	11005	11004	0	1.505	336	1.7	13.771	92.1637	88.1548	CAJA_TELEF
	11005	11004	0	1.505	337	1.7	14.079	104.27	88.1004	CAMA_TELEF
	11005	11004	0	1.505	11004	1.7	129.684	0	89.4153	
SD	89.89.4153									
	11005	11004	0	1.505	11006	1.7	115.83	270.0927	89.4308	DELTA
	11005	11004	0	1.505	11007	1.7	132.437	2.1515	89.411	DELTA_AUXI
	11005	11004	0	1.505	337	1.7	202.357	359.3634	89.4355	LINEAMIENT
	11005	11004	0	1.505	338	1.7	161.032	359.3634	89.424	LINEAMIENT
	11005	11004	0	1.505	339	1.7	82.848	359.3634	89.4152	LINEAMIENT
	11005	11004	0	1.505	340	1.7	27.561	359.3634	89.4005	LINEAMIENT
	11005	11004	0	1.505	341	1.7	47.987	348.4032	89.0716	PARAMENTO
	11005	11004	0	1.505	342	2.4	45.83	349.4351	88.3051	POSTE
	11005	11004	0	1.505	343	2.4	44.788	347.5231	88.3347	BORDE_VIA
	11005	11004	0	1.505	344	2.4	42.53	347.2512	88.3033	BORDE_VIA
	11005	11004	0	1.505	345	1.5	40.161	346.1302	89.1519	PARAMENTO
	11005	11004	0	1.505	346	1.5	38.084	352.2707	89.3419	MANHOLE
	11005	11004	0	1.505	347	1.7	40.826	357.3726	89.4734	BORDE_VIA
	11005	11004	0	1.505	348	1.7	44.167	357.4654	89.4734	BORDE_VIA
	11005	11004	0	1.505	349	1.7	44.795	352.3123	89.2332	MANHOLE
	11005	11004	0	1.505	350	1.7	18.128	354.1012	89.4448	SUMIDERO
	11005	11004	0	1.505	351	1.7	17.352	352.3154	90.1058	SUMIDERO
	11005	11004	0	1.505	352	1.7	18.497	352.4639	89.3809	CORDON
	11005	11004	0	1.505	353	1.7	18.44	352.0752	89.4706	CORDON
	11005	11004	0	1.505	354	1.7	17.354	351.2932	89.3722	CORDON
	11005	11004	0	1.505	355	1.7	17.177	352.2316	89.4333	CORDON
	11005	11004	0	1.505	356	1.5	18.415	336.1325	89.0631	POSTE
	11005	11004	0	1.505	357	1.7	5.163	341.5846	88.4029	BORDE_VIA
	11005	11004	0	1.505	358	1.7	5.939	329.5252	89.4121	SUMIDERO
	11005	11004	0	1.505	359	1.7	5.977	322.2416	89.3526	SUMIDERO
	11005	11004	0	1.505	360	1.7	5.916	261.1416	88.1912	MANHOLE
	11005	11004	0	1.505	361	1.7	2.518	224.5725	86.2209	SUMIDERO
	11005	11004	0	1.505	362	1.7	2.816	220.0323	86.1017	SUMIDERO
	11005	11004	0	1.505	363	1.7	6.213	175.552	88.0949	MANHOLE
	11005	11004	0	1.505	364	1.7	6.061	117.2252	88.095	SUMIDERO
	11005	11004	0	1.505	365	1.7	5.928	113.5207	88.2925	SUMIDERO
	11005	11004	0	1.505	366	1.7	2.338	56.0237	84.4154	MANHOLE
	11005	11004	0	1.505	367	1.7	20.197	113.5407	89.4502	PARAMENTO
	11005	11004	0	1.505	368	1.7	35.694	69.1702	89.2058	PARAMENTO
	11005	11004	0	1.505	369	1.7	39.774	101.4143	89.403	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11005	11004	0	1.505	370	1.7	40.78	101.3032	89.4946 BORDE_VIA
	11005	11004	0	1.505	371	1.7	38.08	76.2834	89.2532 MANHOLE
	11005	11004	0	1.505	372	1.7	28.133	70.4132	89.1956 ANDEN
	11005	11004	0	1.505	373	1.7	27.834	73.5812	89.0849 ANDEN
	11005	11004	0	1.505	374	1.7	33.943	76.4654	89.1947 ANDEN
	11005	11004	0	1.505	375	1.7	34.87	72.0707	89.2823 ANTE_JARDI
	11005	11004	0	1.505	376	1.7	40.674	75.1116	89.3011 ANTE_JARDI
	11005	11004	0	1.505	377	1.7	39.71	79.0246	89.2517 ANDEN
	11005	11004	0	1.505	378	1.7	39.731	75.2458	89.3231 SUMIDERO
	11005	11004	0	1.505	379	1.7	39.051	74.2901	89.3232 SUMIDERO
	11005	11004	0	1.505	380	1.7	45.378	76.3502	89.1559 POSTE
	11005	11004	0	1.505	381	1.7	45.476	99.3249	89.3327 PARAMENTO
	11005	11004	0	1.505	382	1.7	43.548	100.3632	89.494 BORDE_VIA
	11005	11004	0	1.505	383	1.7	42.238	93.5805	89.3438 POSTE
	11005	11004	0	1.505	384	1.7	45.92	94.3426	89.3131 BORDE_VIA
	11005	11004	0	1.505	385	1.7	45.774	97.3227	89.3846 BORDE_VIA
	11005	11004	0	1.505	386	1.7	62.457	86.3655	88.313 BORDE_VIA
	11005	11004	0	1.505	387	1.5	60.983	93.1556	88.3744 BORDE_VIA
	11005	11004	0	1.505	388	1.7	62.636	86.0912	88.261 CORDON
	11005	11004	0	1.505	388	1.7	47.459	93.3158	88.3317 CORDON
	11005	11004	0	1.505	389	1.7	72.205	88.1206	88.2954 BORDE_VIA
	11005	11004	0	1.505	390	1.7	72.346	87.453	88.2729 CORDON
	11005	11004	0	1.505	391	1.7	11.533	85.0442	88.3732 BORDE_VIA
	11005	11004	0	1.505	392	1.7	82.172	89.1708	88.3019 CORDON
	11005	11004	0	1.505	393	1.7	82.01	89.4205	88.3315 BORDE_VIA
	11005	11004	0	1.505	394	1.7	5.959	113.3304	88.3318 BORDE_VIA
	11005	11004	0	1.505	395	1.7	37.603	149.5229	90.1709 PARAMENTO
	11005	11004	0	1.505	396	1.7	34.764	159.4145	90.0357 PARAMENTO
	11005	11004	0	1.505	397	1.7	52.99	166.4612	90.2138 PARAMENTO
	11005	11004	0	1.505	398	1.7	49.205	171.5748	90.2806 POSTE
	11005	11004	0	1.505	399	1.7	56.665	183	89.5807 MANHOLE
	11005	11004	0	1.505	400	1.7	55.526	182.5749	90.3021 TUBO_ALCAN
	11005	11004	0	1.505	401	1.7	55.533	183.1734	90.3021 TUBO_ALCAN
	11005	11004	0	1.505	402	1.7	56.638	181.542	90.3021 TUBO_ALCAN
	11005	11004	0	1.505	403	1.7	56.947	181.5237	90.3021 TUBO_ALCAN
	11005	11004	0	1.505	404	1.7	46.711	187.3644	90.5203 POSTE
	11005	11004	0	1.505	405	1.7	37.251	187.4005	90.5203 PARAMENTO
	11005	11004	0	1.505	406	1.7	22.401	185.3958	91.0134 POSTE
	11005	11004	0	1.505	407	1.7	14.506	189.2114	88.4848 PARAMENTO
	11005	11004	0	1.505	407	1.7	14.507	189.3024	88.4848 PARAMENTO
	11005	11004	0	1.505	408	1.7	7.319	192.4134	87.5304 PARAMENTO
	11005	11004	0	1.505	409	1.7	11.532	236.5455	89.2357 PARAMENTO
	11005	11004	0	1.505	410	1.7	18.599	215.5908	89.34 PARAMENTO
	11005	11004	0	1.505	411	1.7	11.976	303.3012	87.3727 PARAMENTO
	11005	11004	0	1.505	412	1.7	19.032	285.2207	89.2133 POSTE
	11005	11004	0	1.505	413	1.7	30.243	279.1706	89.2804 BORDE_VIA
	11005	11004	0	1.505	414	1.7	31.039	283.2612	89.1543 PARAMENTO
	11005	11004	0	1.505	415	1.7	82.677	275.1356	89.3914 POSTE
	11005	11004	0	1.505	416	1.7	81.704	274.5432	89.3643 SUMIDERO
	11005	11004	0	1.505	417	1.7	80.82	274.3348	89.3353 SUMIDERO
	11005	11004	0	1.505	418	1.7	78.904	274.3147	89.3242 BORDE_VIA
	11005	11004	0	1.505	419	1.7	78.489	273.294	89.2905 MANHOLE
	11005	11004	0	1.505	420	1.7	73.76	274.2953	89.3049 BORDE_VIA
	11005	11004	0	1.505	421	1.7	73.414	270.1425	89.305 BORDE_VIA
	11005	11004	0	1.505	422	2.6	47.953	278.2052	88.1445 POSTE
	11006	11005	0	1.47	11005	1.7	115.863	0	90.0342
SD	90.90.0342								
	11006	11005	0	1.47	11008	1.7	155.985	178.2812	90.0426 DELTA
	11006	11005	0	1.47	423	1.7	141.005	178.3458	90.0521 SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11006	11005	0	1.47	424	1.7	140.181	178.2303	90.0607 SUMIDERO
11006	11005	0	1.47	425	1.7	139.686	177.1308	90.0036 POSTE
11006	11005	0	1.47	426	1.7	137.419	178.5425	90.0157 BORDE_VIA
11006	11005	0	1.47	427	1.7	130.797	178.5324	90.0149 BORDE_VIA
11006	11005	0	1.47	428	1.7	129.339	178.5528	90.0251 SUMIDERO
11006	11005	0	1.47	429	1.7	128.516	178.4201	90.0402 SUMIDERO
11006	11005	0	1.47	430	1.7	129.978	174.4907	89.4726 PARAMENTO
11006	11005	0	1.47	431	1.7	112.073	174.2229	89.4325 PARAMENTO
11006	11005	0	1.47	432	1.7	87.129	349.3721	89.5151 PARAMENTO
11006	11005	0	1.47	433	1.7	134.526	182.3226	90.0013 MANHOLE
11006	11005	0	1.47	434	1.7	136.734	181.2505	89.5805 BORDE_VIA
11006	11005	0	1.47	435	1.7	131.476	181.3424	89.5805 BORDE_VIA
11006	11005	0	1.47	436	1.7	129.601	182.1311	90.0054 SUMIDERO
11006	11005	0	1.47	437	1.7	128.879	181.5813	90.0051 SUMIDERO
11006	11005	0	1.47	438	1.7	49.064	340.2649	89.1811 PARAMENTO
11006	11005	0	1.47	439	1.7	40.298	326.3718	89.0154 PARAMENTO
11006	11005	0	1.47	440	1.7	35.275	321.3143	89.2612 PARAMENTO
11006	11005	0	1.47	441	2.7	30.804	314.4104	87.4318 PARAMENTO
11006	11005	0	1.47	442	1.7	128.252	182.054	89.5941 POSTE
11006	11005	0	1.47	443	1.7	21.892	279.4205	88.2151 PARAMENTO
11006	11005	0	1.47	444	1.7	20.642	277.5947	88.5413 POSTE
11006	11005	0	1.47	445	1.7	99.661	182.5309	89.5533 POSTE
11006	11005	0	1.47	446	1.7	20.535	275.3458	88.4637 BORDE_VIA
11006	11005	0	1.47	447	1.7	20.469	268.222	88.4637 BORDE_VIA
11006	11005	0	1.47	448	1.7	63.969	184.1508	89.5307 BORDE_VIA
11006	11005	0	1.47	449	1.7	64.149	185.1546	89.5017 POSTE
11006	11005	0	1.47	450	1.7	67.261	178.5343	89.514 BORDE_VIA
11006	11005	0	1.47	451	1.7	71.706	178.5217	89.504 BORDE_VIA
11006	11005	0	1.47	452	1.7	20.44	266.0143	88.5004 POSTE
11006	11005	0	1.47	453	1.7	22.31	263.3854	88.413 PARAMENTO
11006	11005	0	1.47	454	1.7	73.508	173.301	90.0123 POSTE
11006	11005	0	1.47	455	1.7	23.004	248.3051	89.061 PARAMENTO
11006	11005	0	1.47	456	1.7	25.704	235.525	88.3245 PARAMENTO
11006	11005	0	1.47	457	1.7	29.416	226.054	88.4908 PARAMENTO
11006	11005	0	1.47	457	1.7	29.423	226.0554	88.4908 PARAMENTO
11006	11005	0	1.47	458	1.7	49.225	169.5316	89.5441 CERRAMIENT
11006	11005	0	1.47	459	1.7	49.27	168.0203	89.544 PARAMENTO
11006	11005	0	1.47	460	1.7	39.464	165.1124	89.4807 PARAMENTO
11006	11005	0	1.47	461	1.7	39.143	169.1431	89.4648 POSTE
11006	11005	0	1.47	462	1.7	33.806	218.4136	89.4 PARAMENTO
11006	11005	0	1.47	463	1.7	46.953	187.1922	89.5543 SUMIDERO
11006	11005	0	1.47	464	1.7	46.116	186.4906	89.5544 SUMIDERO
11006	11005	0	1.47	465	1.7	43.356	186.415	89.5423 BORDE_VIA
11006	11005	0	1.47	466	1.5	38.542	213.01	89.4722 PARAMENTO
11006	11005	0	1.47	467	1.5	38.85	210.4316	90.0141 POSTE
11006	11005	0	1.47	468	1.5	39.356	202.2557	89.5514 VALVULA
11006	11005	0	1.47	469	1.7	38.625	194.0208	89.3948 MANHOLE
11006	11005	0	1.47	470	1.7	15.78	272.4537	88.2902 MANHOLE
11006	11005	0	1.47	471	1.7	11.598	278.564	88.1001 MANHOLE
11006	11005	0	1.47	472	1.7	6.504	269.0033	87.394 MANHOLE
11006	11005	0	1.47	473	1.7	7.224	240.2154	88.5359 SUMIDERO
11006	11005	0	1.47	474	1.7	46.551	196.3612	89.3638 POSTE
11006	11005	0	1.47	474	1.7	46.546	196.5236	89.3637 POSTE
11006	11005	0	1.47	475	1.7	48.119	197.4539	89.2514 PARAMENTO
11006	11005	0	1.47	476	1.7	43.324	186.3721	89.5404 BORDE_VIA
11006	11005	0	1.47	477	1.7	40.545	328.4651	89.1046 POSTE
11006	11005	0	1.47	478	1.7	36.605	188.0403	89.5044 BORDE_VIA
11006	11005	0	1.47	479	1.7	34.7	186.3437	89.4205 MANHOLE
11006	11005	0	1.47	480	1.7	7.342	247.2812	89.1042 SUMIDERO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	11006	11005	0	1.47	481	1.7	32.437	191.483	89.4457	POSTE
	11006	11005	0	1.47	482	1.7	30.068	192.4739	89.5411	SUMIDERO
	11006	11005	0	1.47	483	1.7	29.159	192.1122	89.5209	SUMIDERO
	11006	11005	0	1.47	484	1.7	20.15	178.4719	89.3613	BORDE_VIA
	11006	11005	0	1.47	485	1.7	14.741	358.0858	88.4548	BORDE_VIA
	11006	11005	0	1.47	486	1.7	82.976	359.5931	89.5952	LINEAMIENT
	11006	11005	0	1.47	487	1.7	43.234	359.593	89.3645	LINEAMIENT
	11006	11005	0	1.47	488	1.7	34.493	176.293	90.0329	SUMIDERO
	11006	11005	0	1.47	489	1.7	33.707	177.1704	90.0328	SUMIDERO
	11006	11005	0	1.47	11009	1.7	83.374	269.3858	89.4525	DELTA
	11008	11006	0.0001	1.488	11006	1.7	155.997	0.0001	89.4554	
SD	89.89.4554									
	11008	11006	0	1.488	11006	1.7	155.992	0	89.4605	
SD	89.89.4605									
	11008	11006	0	1.488	11010	1.7	41.11	156.561	89.4219	DELTA
	11008	11006	0	1.488	490	1.7	32.344	166.3541	89.3845	POSTE
	11008	11006	0	1.488	491	1.7	31.585	163.1906	89.2645	BORDE_VIA
	11008	11006	0	1.488	492	1.7	30.094	154.162	89.5431	BORDE_VIA
	11008	11006	0	1.488	493	1.7	24.179	156.1229	89.5431	BORDE_VIA
	11008	11006	0	1.488	494	1.7	23.265	155.1638	89.5959	SUMIDERO
	11008	11006	0	1.488	495	1.7	24.158	156.1319	89.555	SUMIDERO
	11008	11006	0	1.488	496	1.7	18.09	158.3152	89.381	BORDE_VIA
	11008	11006	0	1.488	497	1.7	9.747	163.1225	88.5926	BORDE_VIA
	11008	11006	0	1.488	498	1.7	21.407	171.4204	89.0727	BORDE_VIA
	11008	11006	0	1.488	499	1.7	2.763	161.3204	86.3409	BORDE_VIA
	11008	11006	0	1.488	500	1.7	13.077	184.2608	88.1743	BORDE_VIA
	11008	11006	0	1.488	501	1.7	5.404	229.242	85.4644	BORDE_VIA
	11008	11006	0	1.488	502	1.7	7.214	236.0945	85.5753	POSTE
	11008	11006	0	1.488	503	1.7	5.415	281.1021	85.3346	BORDE_VIA
	11008	11006	0	1.488	504	1.7	5.521	352.4434	87.281	BORDE_VIA
	11008	11006	0	1.488	505	1.7	7.953	313.0828	86.5123	BORDE_VIA
	11008	11006	0	1.488	506	1.7	26.242	18.4311	88.5127	POSTE
	11008	11006	0	1.488	507	2.7	33.16	37.4023	87.425	PARAMENTO
	11008	11006	0	1.488	508	1.7	27.499	17.2918	88.0917	PARAMENTO
	11008	11006	0	1.488	509	1.7	33.829	334.0134	89.0006	MANHOLE
	11008	11006	0	1.488	510	1.7	30.935	329.14	89.1452	POSTE
	11008	11006	0	1.488	511	1.7	31.271	327.4851	88.48	PARAMENTO
	11008	11006	0	1.488	512	1.7	27.143	331.2549	89.2242	BORDE_VIA
	11008	11006	0	1.488	513	1.7	23.249	328.4811	89.1342	BORDE_VIA
	11008	11006	0	1.488	514	1.7	24.225	357.3726	89.0854	MANHOLE
	11008	11006	0	1.488	515	1.7	24.589	23.1001	88.4713	BORDE_VIA
	11008	11006	0	1.488	516	1.7	19.432	25.0436	88.384	BORDE_VIA
	11008	11006	0	1.488	517	1.7	82.625	4.5912	89.4551	CERRAMIENT
	11008	11006	0	1.488	518	1.7	93.888	0.0015	89.3925	LINEAMIENT
	11008	11006	0	1.488	519	1.7	36.71	0.0015	89.1456	LINEAMIENT
	11008	11006	0	1.488	520	1.7	19.659	312.0732	89.1617	LINDERO
	11008	11006	0	1.488	521	1.7	23.1	314.4026	89.4059	POSTE
	11008	11006	0	1.488	522	1.7	9.541	264.3141	90.1013	LINDERO
	11010	11008	359.5959	1.458	11008	1.7	41.118	359.5959	89.4016	
SD	89.89.4016									
	11010	11008	359.5959	1.458	110011	1.7	111.067	134.0731	90.0312	DELTA
	11010	11008	359.5959	1.458	523	1.7	107.898	131.5053	90.072	SUMIDERO
	11010	11008	359.5959	1.458	524	1.7	107.117	131.3405	90.0826	SUMIDERO
	11010	11008	359.5959	1.458	525	1.7	111.255	132.2753	90.0346	MANHOLE
	11010	11008	359.5959	1.458	526	1.7	108.591	132.2219	90.05	BORDE_VIA
	11010	11008	359.5959	1.458	527	1.7	114.574	132.212	90.0329	BORDE_VIA
	11010	11008	359.5959	1.458	528	1.7	18.086	322.3322	90.2813	LINDERO
	11010	11008	359.5959	1.458	529	1.7	78.405	133.0538	89.54	MANHOLE
	11010	11008	359.5959	1.458	530	1.7	10.463	265.4022	92.3655	LINDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11010	11008	359.5959	1.458	531	1.7	49.963	133.3249	89.5502 MANHOLE
11010	11008	359.5959	1.458	532	1.7	14.842	258.2713	90.574 LINDERO
11010	11008	359.5959	1.458	533	1.7	43.207	132.2715	90.0355 BORDE_VIA
11010	11008	359.5959	1.458	534	1.7	22.367	268.5802	91.0006 LINDERO
11010	11008	359.5959	1.458	535	1.7	31.99	134.0124	89.5326 BORDE_VIA
11010	11008	359.5959	1.458	536	1.7	35.667	140.3701	89.5642 MANHOLE
11010	11008	359.5959	1.458	537	1.7	48.782	136.0222	89.5415 EJE_COLECT
11010	11008	359.5959	1.458	538	1.7	26.716	249.0915	90.2819 BORDE_VIA
11010	11008	359.5959	1.458	539	1.7	57.78	135.184	89.5506 BORDE_VIA
11010	11008	359.5959	1.458	540	1.7	29.623	241.5426	90.2403 BORDE_VIA
11010	11008	359.5959	1.458	541	1.7	57.631	140.3102	89.511 PARAMENTO
11010	11008	359.5959	1.458	542	1.7	27.163	229.0349	90.1331 POSTE
11010	11008	359.5959	1.458	543	1.7	57.301	139.3232	89.5355 POSTE
11010	11008	359.5959	1.458	544	1.7	46.582	139.1818	89.5732 BORDE_VIA
11010	11008	359.5959	1.458	545	1.7	44.071	257.221	90.0929 PARAMENTO
11010	11008	359.5959	1.458	546	1.7	47.241	147.0638	89.3257 PARAMENTO
11010	11008	359.5959	1.458	547	1.7	47.951	262.3802	90.0647 POSTE
11010	11008	359.5959	1.458	548	1.7	23.865	229.5313	90.1643 BORDE_VIA
11010	11008	359.5959	1.458	549	1.7	21.366	234.3113	90.3448 BORDE_VIA
11010	11008	359.5959	1.458	550	1.7	45.301	156.1426	89.5151 PARAMENTO
11010	11008	359.5959	1.458	551	1.7	41.116	151.2636	89.5512 POSTE
11010	11008	359.5959	1.458	552	1.7	39.881	144.3159	90.0038 BORDE_VIA
11010	11008	359.5959	1.458	553	1.7	37.794	153.3401	90.1249 BORDE_VIA
11010	11008	359.5959	1.458	554	1.7	18.85	210.0706	90.2849 BORDE_VIA
11010	11008	359.5959	1.458	555	1.7	52.344	163.5516	89.521 PARAMENTO
11010	11008	359.5959	1.458	556	1.7	49.957	167.1846	90.1653 BORDE_VIA
11010	11008	359.5959	1.458	557	1.7	15.257	212.5612	91.0726 BORDE_VIA
11010	11008	359.5959	1.458	558	1.7	25.337	134.4545	89.5404 MANHOLE
11010	11008	359.5959	1.458	559	1.7	12.11	199.5132	91.1109 BORDE_VIA
11010	11008	359.5959	1.458	560	1.7	19.519	134.284	90.0055 BORDE_VIA
11010	11008	359.5959	1.458	561	1.7	7.22	188.2451	90.5438 BORDE_VIA
11010	11008	359.5959	1.458	562	1.7	7.203	104.3812	90.0258 BORDE_VIA
11010	11008	359.5959	1.458	563	1.7	3.747	162.1718	88.0244 BORDE_VIA
11010	11008	359.5959	1.458	564	1.7	26.585	173.3454	90.1926 VALVULA
11010	11008	359.5959	1.458	565	1.7	18.202	185.572	90.3221 BORDE_VIA
11010	11008	359.5959	1.458	566	1.7	21.529	168.1422	90.2045 BORDE_VIA
11010	11008	359.5959	1.458	567	1.7	25.583	163.0022	90.1856 BORDE_VIA
11010	11008	359.5959	1.458	568	1.7	29.241	163.3624	90.2318 BORDE_VIA
11010	11008	359.5959	1.458	569	1.7	35.635	170.23	90.2736 BORDE_VIA
11010	11008	359.5959	1.458	570	1.7	28.063	175.0615	90.2849 POSTE
11010	11008	359.5959	1.458	571	1.7	28.813	177.565	90.1519 PARAMENTO
11010	11008	359.5959	1.458	572	1.7	28.146	163.3805	89.4046 ANDEN
11010	11008	359.5959	1.458	573	1.7	28.684	163.3448	89.3906 ANDEN
11010	11008	359.5959	1.458	574	1.7	29.583	164.5446	89.3906 ANDEN
11010	11008	359.5959	1.458	575	1.7	28.713	167.0715	89.3906 ANDEN
11010	11008	359.5959	1.458	576	1.7	33.633	173.0715	89.4342 ANDEN
11010	11008	359.5959	1.458	577	1.7	34.205	171.3103	89.4151 ANDEN
11010	11008	359.5959	1.458	578	1.7	34.5	171.1555	89.4349 ANDEN
11010	11008	359.5959	1.458	579	1.7	34.759	171.2215	89.435 ANDEN
11010	11008	359.5959	1.458	580	1.7	37.269	173.4235	89.4601 ANDEN
11010	11008	359.5959	1.458	581	1.7	37.405	174.0452	89.4601 ANDEN
11010	11008	359.5959	1.458	582	1.7	22.091	218.3411	89.3952 ANDEN
11010	11008	359.5959	1.458	583	2	26.426	215.4704	88.4247 PARAMENTO
11010	11008	359.5959	1.458	584	1.7	34.163	173.3643	89.4452 ANDEN
11010	11008	359.5959	1.458	585	1.7	10.253	232.284	89.4448 MANHOLE
11010	11008	359.5959	1.458	586	1.7	25.294	168.3655	90.3244 SUMIDERO
11010	11008	359.5959	1.458	587	1.7	25.227	170.4535	90.3628 SUMIDERO
11010	11008	359.5959	1.458	588	1.7	27.797	169.5005	89.3542 ANDEN
11010	11008	359.5959	1.458	589	1.7	23.668	217.2356	89.3911 ANDEN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11010	11008	359.5959	1.458	11012	1.7	103.263	282.5436	89.5217 DELTA
	11010	11008	359.5959	1.458	590	1.7	28.786	136.0315	89.5401 LINEAMIENT
	11011	11010	0	1.489	11010	1.7	111.078	0	89.4247
SD	89.89.4247								
	11011	11010	0	1.489	11013	1.7	118.936	180.0529	89.5828 DELTA
	11011	11010	0	1.489	591	1.7	67.541	15.0138	89.1338 PARAMENTO
	11011	11010	0	1.489	592	1.7	67.265	12.5712	89.1436 ANDEN
	11011	11010	0	1.489	593	1.7	93.296	177.4156	89.5343 BORDE_VIA
	11011	11010	0	1.489	594	1.7	87.825	177.1215	89.5343 BORDE_VIA
	11011	11010	0	1.489	595	1.7	41.513	20.1529	88.5958 ANDEN
	11011	11010	0	1.489	596	1.7	64.833	187.0528	89.5057 PARAMENTO
	11011	11010	0	1.489	597	1.7	64.668	186.0726	89.5526 LINDERO
	11011	11010	0	1.489	598	1.7	37.106	22.5457	88.5146 ANDEN
	11011	11010	0	1.489	599	1.7	50.66	163.4117	89.385 POSTE
	11011	11010	0	1.489	600	1.7	23.419	37.2816	88.1658 ANDEN
	11011	11010	0	1.489	601	1.7	44.905	174.094	89.5337 BORDE_VIA
	11011	11010	0	1.489	602	1.7	44.727	180.5456	89.5513 BORDE_VIA
	11011	11010	0	1.489	603	1.7	25.036	41.4538	88.1722 PARAMENTO
	11011	11010	0	1.489	604	1.7	26.973	193.1002	89.2303 LINDERO
	11011	11010	0	1.489	605	1.7	25.509	43.161	88.1659 PARAMENTO
	11011	11010	0	1.489	606	1.7	33.491	207.3808	89.4637 PARAMENTO
	11011	11010	0	1.489	607	1.7	23.923	46.1609	88.2355 LINDERO
	11011	11010	0	1.489	608	1.7	33.635	207.1701	90.2842 LINDERO
	11011	11010	0	1.489	609	1.7	27.156	52.1317	88.1851 PARAMENTO
	11011	11010	0	1.489	610	1.7	26.259	230.5113	88.334 PARAMENTO
	11011	11010	0	1.489	611	1.7	25.361	232.5346	88.3217 POSTE
	11011	11010	0	1.489	612	1.7	23.78	239.5156	89.265 BORDE_VIA
	11011	11010	0	1.489	613	1.7	22.162	250.5604	89.2112 BORDE_VIA
	11011	11010	0	1.489	614	1.7	19.967	254.1706	89.181 MANHOLE
	11011	11010	0	1.489	615	1.7	17.308	253.0719	89.1721 BORDE_VIA
	11011	11010	0	1.489	616	1.7	43.873	16.4607	89.0658 POSTE
	11011	11010	0	1.489	617	1.7	25.405	259.4625	88.4843 PARAMENTO
	11011	11010	0	1.489	618	1.7	24.342	257.2636	88.4843 POSTE
	11011	11010	0	1.489	619	1.7	67.004	6.2039	89.25 CORDON
	11011	11010	0	1.489	620	1.7	51.103	8.12	89.1808 CORDON
	11011	11010	0	1.489	621	1.7	51.822	13.3613	89.1503 CORDON
	11011	11010	0	1.489	622	1.7	50.677	14.3723	89.0948 POSTE
	11011	11010	0	1.489	623	1.7	43.84	16.4458	89.0702 POSTE
	11011	11010	0	1.489	624	1.7	35.195	20.323	88.5859 POSTE
	11011	11010	0	1.489	625	1.7	29.703	23.2122	88.5511 CORDON
	11011	11010	0	1.489	626	1.7	28.254	14.5526	88.5712 CORDON
	11011	11010	0	1.489	627	1.7	15.962	266.1738	87.5903 PARAMENTO
	11011	11010	0	1.489	628	1.7	7.043	276.024	87.5006 POSTE
	11011	11010	0	1.489	629	1.7	7.545	288.2411	85.5014 PARAMENTO
	11011	11010	0	1.489	630	1.7	17.547	258.2906	89.074 BORDE_VIA
	11011	11010	0	1.489	631	1.7	21.786	257.5723	89.2149 BORDE_VIA
	11011	11010	0	1.489	632	1.7	22.39	33.0412	88.2321 POSTE
	11011	11010	0	1.489	633	1.7	12.204	212.1458	88.4849 POSTE
	11011	11010	0	1.489	634	1.7	18.368	53.2536	88.351 POSTE
	11011	11010	0	1.489	635	1.7	7.193	194.1924	88.0929 MANHOLE
	11011	11010	0	1.489	636	1.7	10.337	39.225	87.5018 ANDEN
	11011	11010	0	1.489	637	1.7	5.289	328.5115	89.2759 SUMIDERO
	11011	11010	0	1.489	638	1.7	4.284	328.4232	89.2759 SUMIDERO
	11011	11010	0	1.489	639	1.7	9.822	48.2456	87.5645 ANDEN
	11011	11010	0	1.489	640	1.7	5.085	345.2736	88.5015 BORDE_VIA
	11011	11010	0	1.489	641	1.7	3.043	299.3157	87.2636 BORDE_VIA
	11011	11010	0	1.489	642	1.7	5.986	259.2608	88.4524 BORDE_VIA
	11011	11010	0	1.489	643	1.7	18.858	55.2245	88.2956 ANDEN
	11011	11010	0	1.489	644	1.7	21.234	57.2159	88.3632 ANDEN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11011	11010	0	1.489	645	1.7	9.003	223.0749	88.3632 BORDE_VIA
	11011	11010	0	1.489	646	1.7	9.203	188.3829	88.582 BORDE_VIA
	11011	11010	0	1.489	647	1.7	23.837	45.2445	88.151 ANDEN
	11011	11010	0	1.489	648	1.7	15.425	182.0723	89.3102 BORDE_VIA
	11011	11010	0	1.489	649	1.7	34.026	65.4645	88.5246 ANDEN
	11011	11010	0	1.489	650	1.7	34.718	65.4516	89.0134 ANDEN
	11011	11010	0	1.489	651	1.7	35.251	65.0101	89.0341 ANDEN
	11011	11010	0	1.489	652	1.7	10.872	161.053	89.3226 BORDE_VIA
	11011	11010	0	1.489	653	1.7	6.912	136.4032	89.2023 BORDE_VIA
	11011	11010	0	1.489	654	1.7	8.733	105.0758	89.0306 BORDE_VIA
	11011	11010	0	1.489	655	1.7	13.151	69.3635	88.4548 BORDE_VIA
	11011	11010	0	1.489	656	1.7	9.029	48.4508	89.0629 BORDE_VIA
	11011	11010	0	1.489	657	1.7	12.107	18.2758	89.1151 BORDE_VIA
	11011	11010	0	1.489	658	1.7	34.417	63.1842	88.5416 ANDEN
	11011	11010	0	1.489	659	1.7	16.416	100.5833	88.2235 PARAMENTO
	11011	11010	0	1.489	660	2.2	35.063	58.115	87.5405 PARAMENTO
	11011	11010	0	1.489	661	1.7	28.458	154.1201	89.1304 ANDEN
	11011	11010	0	1.489	662	1.7	29.109	151.5117	89.1016 ANDEN
	11011	11010	0	1.489	663	1.7	34.725	66.0956	89.065 BORDE_VIA
	11011	11010	0	1.489	664	1.7	13	103.441	88.1338 ANDEN
	11011	11010	0	1.489	665	1.7	32.431	68.2156	89.0647 BORDE_VIA
	11011	11010	0	1.489	666	1.7	13.503	96.2327	88.2337 ANDEN
	11011	11010	0	1.489	667	2.9	43.392	61.3113	87.4655 BORDE_VIA
	11011	11010	0	1.489	668	1.7	15.38	91.3712	88.1436 ANDEN
	11011	11010	0	1.489	669	1.7	15.735	96.3249	88.1658 ANDEN
	11011	11010	0	1.489	670	1.7	42.555	63.4323	89.203 BORDE_VIA
	11011	11010	0	1.489	671	1.7	14.804	99.5926	88.1925 ANDEN
	11011	11010	0	1.489	672	1.7	42.775	65.4816	89.1804 BORDE_VIA
	11011	11010	0	1.489	673	1.7	14.46	103.184	88.1957 ANDEN
	11011	11010	0	1.489	674	1.7	17.074	84.0251	88.464 BORDE_VIA
	11011	11010	0	1.489	675	1.7	43.934	68.1133	89.1459 BORDE_VIA
	11011	11010	0	1.489	676	1.7	28.603	78.1936	89.0545 BORDE_VIA
	11011	11010	0	1.489	677	1.7	31.326	81.2113	89.0634 BORDE_VIA
	11011	11010	0	1.489	678	1.7	43.75	74.3813	89.1619 BORDE_VIA
	11011	11010	0	1.489	679	1.7	38.511	76.2929	89.0755 BORDE_VIA
	11011	11010	0	1.489	680	1.7	32.632	86.114	88.5825 BORDE_VIA
	11011	11010	0	1.489	681	1.7	36.326	82.5143	89.0015 BORDE_VIA
	11011	11010	0	1.489	682	1.7	31.775	87.1911	89.0016 ANDEN
	11011	11010	0	1.489	683	1.7	31.234	84.3759	89.0016 ANDEN
	11011	11010	0	1.489	684	1.7	29.541	82.3508	88.5636 ANDEN
	11011	11010	0	1.489	685	1.7	29.464	96.221	89.0002 PARAMENTO
	11011	11010	0	1.489	686	1.7	34.112	358.292	89.1855 LINEAMIENT
	11013	11011	0.0001	1.472	11011	1.7	118.936	0.0001	89.4926
SD	89.89.4926								
	11013	11011	0.0001	1.472	11014	1.7	134.761	180.1324	89.554 DELTA
	11013	11011	0.0001	1.472	687	1.7	37.678	347.23	89.3802 PARAMENTO
	11013	11011	0.0001	1.472	688	1.7	37.545	349.1137	89.3503 LINDERO
	11013	11011	0.0001	1.472	689	1.7	36.992	358.1434	89.3953 BORDE_VIA
	11013	11011	0.0001	1.472	690	1.7	36.462	7.035	89.33 BORDE_VIA
	11013	11011	0.0001	1.472	691	1.7	33.601	20.3633	88.5529 ANDEN
	11013	11011	0.0001	1.472	692	1.7	34.165	23.0157	88.5529 ANDEN
	11013	11011	0.0001	1.472	693	1.7	36.715	24.5135	88.3924 PARAMENTO
	11013	11011	0.0001	1.472	694	1.7	42.598	19.1706	89.1253 POSTE
	11013	11011	0.0001	1.472	695	1.7	26.952	24.5432	89.092 POSTE
	11013	11011	0.0001	1.472	696	1.7	27.586	29.4902	89.1113 ANDEN
	11013	11011	0.0001	1.472	697	1.7	27.991	25.1635	89.1204 ANDEN
	11013	11011	0.0001	1.472	698	1.7	25.869	35.5551	89.0257 PARAMENTO
	11013	11011	0.0001	1.472	699	1.7	111.907	173.445	89.5402 ANDEN
	11013	11011	0.0001	1.472	700	1.7	111.73	174.3039	89.5401 ANDEN



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	11013	11011	0.0001	1.472	701	1.7	11.465	106.2132	87.5815	POSTE
	11013	11011	0.0001	1.472	702	1.7	102.247	174.0434	89.5325	POSTE
	11013	11011	0.0001	1.472	703	1.7	42.574	165.2141	89.2752	POSTE
	11013	11011	0.0001	1.472	704	1.7	94.51	171.223	89.493	PARAMENTO
	11013	11011	0.0001	1.472	705	1.7	86.546	172.5726	89.5313	POSTE
	11013	11011	0.0001	1.472	706	1.7	79.194	175.5259	89.5649	BORDE_VIA
	11013	11011	0.0001	1.472	707	1.7	78.609	178.5617	89.5706	BORDE_VIA
	11013	11011	0.0001	1.472	708	1.7	73.626	178.5542	90.0002	BORDE_VIA
	11013	11011	0.0001	1.472	709	1.7	83.973	186.0214	89.5849	LINDERO
	11013	11011	0.0001	1.472	710	1.7	69.462	187.0759	89.5702	LINDERO
	11013	11011	0.0001	1.472	711	1.7	70.564	198.2248	89.5318	POSTE
	11013	11011	0.0001	1.472	712	1.7	74.915	199.2414	89.5203	PARAMENTO
	11013	11011	0.0001	1.472	713	1.5	87.411	197.3744	90.0029	PARAMENTO
	11013	11011	0.0001	1.472	714	1.7	76.166	203.2214	89.5135	PARAMENTO
	11013	11011	0.0001	1.472	715	1.7	74.84	203.3942	89.5213	PARAMENTO
	11013	11011	0.0001	1.472	716	1.7	76.483	207.1517	89.5213	PARAMENTO
	11013	11011	0.0001	1.472	717	1.7	78.822	209.2704	89.5859	PARAMENTO
	11013	11011	0.0001	1.472	718	1.7	41.962	162.2912	89.2717	ANDEN
	11013	11011	0.0001	1.472	719	1.7	62.62	170.1208	89.4959	POSTE
	11013	11011	0.0001	1.472	720	1.7	42.967	165.0039	89.2914	ANDEN
	11013	11011	0.0001	1.472	721	2.5	66.409	167.3001	89.0515	PARAMENTO
	11013	11011	0.0001	1.472	722	2	43.979	160.422	89.0512	ANDEN
	11013	11011	0.0001	1.472	723	2	42.616	159.5632	89.0216	ANDEN
	11013	11011	0.0001	1.472	724	2.1	67.211	164.353	89.2459	PARAMENTO
	11013	11011	0.0001	1.472	725	2.1	65.384	164.0914	89.2412	PARAMENTO
	11013	11011	0.0001	1.472	726	2.1	66.675	160.3719	89.2211	PARAMENTO
	11013	11011	0.0001	1.472	727	2.1	65.745	160.1742	89.2211	PARAMENTO
	11013	11011	0.0001	1.472	728	2.1	64.058	160.2532	89.2242	ANDEN
	11013	11011	0.0001	1.472	729	2.1	65.448	160.5825	89.2315	ANDEN
	11013	11011	0.0001	1.472	730	2.1	62.764	163.5131	89.1953	ANDEN
	11013	11011	0.0001	1.472	731	2.1	62.473	164.4418	89.1836	ANDEN
	11013	11011	0.0001	1.472	732	2.1	61.764	167.2613	89.1638	ANDEN
	11013	11011	0.0001	1.472	733	2.1	63.153	167.4616	89.1732	ANDEN
	11013	11011	0.0001	1.472	734	2.1	62.987	168.3108	89.2811	ANDEN
	11013	11011	0.0001	1.472	735	2.1	61.531	168.1611	89.2811	ANDEN
	11013	11011	0.0001	1.472	736	2.1	61.243	169.36	89.2707	ANDEN
	11013	11011	0.0001	1.472	737	2.4	39.68	158.2206	88.265	PARAMENTO
	11013	11011	0.0001	1.472	738	1.7	29.084	171.0903	89.435	BORDE_VIA
	11013	11011	0.0001	1.472	739	1.7	28.513	178.4248	89.5135	BORDE_VIA
	11013	11011	0.0001	1.472	740	1.7	32.194	344.0109	89.373	POSTE
	11013	11011	0.0001	1.472	741	1.7	87.138	0.0006	89.4752	LINEAMIENT
	11013	11011	0.0001	1.472	742	1.7	32.087	0.0006	89.2639	LINEAMIENT
	11013	11011	0.0001	1.472	743	5	41.712	332.44	85.2239	PARAMENTO
	11014	11013	0	1.469	11013	1.7	134.773	0	89.5248	
SD	89.89.5248									
	11014	11013	0	1.469	744	1.7	10.979	83.1051	89.0724	POSTE
	11014	11013	0	1.469	745	1.7	9.1	263.5414	90.1522	LINDERO
	11014	11013	0	1.469	746	1.7	2.041	190.2804	86.114	MANHOLE
	11014	11013	0	1.469	747	1.7	6.332	167.3735	88.3754	LINDERO
	11014	11013	0	1.469	748	1.7	6.905	155.3209	88.4403	LINDERO
	11014	11013	0	1.469	749	1.7	48.879	32.5733	89.3327	PARAMENTO
	11014	11013	0	1.469	11015	1.7	201.646	358.5025	89.5423	DELTA
	11014	11013	0	1.469	750	1.7	111.407	0.0013	89.5424	LINEAMIENT
	11014	11013	0	1.469	751	1.7	55.475	0.0012	89.4923	LINEAMIENT
	11014	11013	0	1.469	752	1.7	17.983	0.0011	89.42	LINEAMIENT
	11014	11013	0	1.469	11016	1.7	69.482	169.4606	90.0801	DELTA
	11015	11014	0	1.43	11014	1.7	201.657	0	89.5716	
SD	89.89.5716									
	11015	11014	0	1.43	11017	1.7	129.884	161.2636	89.5247	DELTA_AUXI



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		11015	11014	0	1.43	11011	1.7	52.219	185.0934	89.3642	DELTA
		11017	11015	0	1.463	11015	1.7	129.89	0	89.5329	
SD	89.89.5329										
		11017	11015	0	1.463	11018	1.7	122.895	177.4147	89.4944	DELTA_AUXI
		11017	11015	0	1.463	753	1.7	10.092	204.3518	87.44	PARAMENTO
		11017	11015	0	1.463	754	1.7	8.474	199.1424	88.3245	POSTE
		11017	11015	0	1.463	755	1.7	12.591	338.574	88.084	PARAMENTO
		11017	11015	0	1.463	756	1.7	11.38	340.5702	89.0038	POSTE
		11017	11015	0	1.463	757	1.7	8.49	191.1922	88.3054	BORDE_VIA
		11017	11015	0	1.463	758	1.7	11.845	350.0754	89.241	BORDE_VIA
		11017	11015	0	1.463	759	1.7	8.862	342.1355	89.1955	BORDE_VIA
		11017	11015	0	1.463	760	1.7	9.234	326.4534	89.1359	BORDE_VIA
		11017	11015	0	1.463	761	1.7	9.617	159.4544	88.3705	BORDE_VIA
		11017	11015	0	1.463	762	1.7	11.463	8.5846	89.4355	BORDE_VIA
		11017	11015	0	1.463	763	1.7	9.304	17.4218	88.5355	BORDE_VIA
		11017	11015	0	1.463	764	1.7	9.514	30.2531	89.2315	BORDE_VIA
		11017	11015	0	1.463	765	1.7	11.844	22.1209	89.412	POSTE
		11017	11015	0	1.463	766	1.7	16.517	43.2212	89.2929	PARAMENTO
		11017	11015	0	1.463	767	1.7	10.708	147.0134	88.0439	PARAMENTO
		11017	11015	0	1.463	768	1.7	15.333	61.0112	89.305	BORDE_VIA
		11017	11015	0	1.463	769	1.7	10.906	94.1912	88.4721	BORDE_VIA
		11017	11015	0	1.463	770	1.7	11.235	270.2339	88.4548	BORDE_VIA
		11017	11015	0	1.463	771	1.7	26.447	11.0836	89.2907	PARAMENTO
		11017	11015	0	1.463	772	1.7	28.242	23.1222	89.2907	PARAMENTO
		11018	11017	0.0001	1.449	11017	1.7	122.891	0.0001	89.5713	
SD	89.89.5713										
		11018	11017	0.0001	1.449	11012	1.7	41.741	270.5518	89.1752	DELTA_AUXI
		11018	11017	0.0001	1.449	773	1.7	8.198	225.375	88.3351	BORDE_VIA
		11018	11017	0.0001	1.449	774	1.7	5.757	179.141	87.5711	BORDE_VIA
		11018	11017	0.0001	1.449	775	1.7	48.52	260.0531	88.5907	PARAMENTO
		11018	11017	0.0001	1.449	776	1.7	12.187	183.2644	88.2409	BORDE_VIA
		11018	11017	0.0001	1.449	777	1.7	13.228	199.0628	89.1148	BORDE_VIA
		11018	11017	0.0001	1.449	778	1.7	44.79	263.5952	89.1822	BORDE_VIA
		11018	11017	0.0001	1.449	779	1.7	37.531	262.3336	89.2036	BORDE_VIA
		11018	11017	0.0001	1.449	780	1.7	42.345	271.5234	89.2237	BORDE_VIA
		11018	11017	0.0001	1.449	781	1.7	37.595	272.0017	89.2041	BORDE_VIA
		11018	11017	0.0001	1.449	782	1.7	9.899	162.5256	87.1227	PARAMENTO
		11018	11017	0.0001	1.449	783	1.7	7.763	299.2841	87.1228	PARAMENTO
		11018	11017	0.0001	1.449	784	1.7	5.899	293.1928	87.3314	POSTE
		11018	11017	0.0001	1.449	785	1.7	4.672	40.1918	85.543	PARAMENTO
		11018	11017	0.0001	1.449	786	1.7	4.186	87.1711	87.4406	BORDE_VIA
		11018	11017	0.0001	1.449	787	1.7	1.833	81.3858	85.3057	BORDE_VIA
		11018	11017	0.0001	1.449	788	1.7	7.585	146.0615	88.4926	BORDE_VIA
		11018	11017	0.0001	1.449	789	1.7	4.839	11.5726	87.5041	BORDE_VIA
		11018	11017	0.0001	1.449	790	1.7	6.166	318.5151	88.0211	BORDE_VIA
		11018	11017	0.0001	1.449	791	1.7	4.693	276.4213	86.5436	BORDE_VIA
		11018	11017	0.0001	1.449	792	1.7	1.756	321.1829	83.3604	MANHOLE
		11018	11017	0.0001	1.449	793	1.7	4.339	247.3647	85.1603	MANHOLE
		11018	11017	0.0001	1.449	794	1.7	4.415	199.4006	86.2439	MANHOLE
		11012	11018	0	1.498	11018	1.7	41.735	0	90.053	
SD	90.90.0530										
		11012	11018	359.5959	1.498	11018	1.7	41.74	359.5959	90.0533	
SD	90.90.0533										
		11012	11018	359.5959	1.498	11019	1.7	122.169	180.3118	89.5227	DELTA_AUXI
		11012	11018	359.5959	1.498	795	1.7	7.807	330.252	88.0951	PARAMENTO
		11012	11018	359.5959	1.498	796	1.7	5.975	333.0235	87.5423	POSTE
		11012	11018	359.5959	1.498	797	1.7	6.899	311.3056	88.5047	BORDE_VIA
		11012	11018	359.5959	1.498	798	1.7	8.464	264.1145	88.562	BORDE_VIA
		11012	11018	359.5959	1.498	799	1.7	3.838	247.0631	87.3805	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11012	11018	359.5959	1.498	800	1.7	2.812	208.0809	86.5238	BORDE_VIA
	11012	11018	359.5959	1.498	801	1.7	5.388	209.3541	86.3012	POSTE
	11012	11018	359.5959	1.498	802	1.7	7.122	186.2137	88.1131	BORDE_VIA
	11012	11018	359.5959	1.498	803	1.7	8.669	139.3042	88.2329	BORDE_VIA
	11012	11018	359.5959	1.498	804	1.7	12.362	94.4704	88.465	BORDE_VIA
	11012	11018	359.5959	1.498	805	1.7	13.515	69.2155	89.1845	BORDE_VIA
	11012	11018	359.5959	1.498	806	1.7	3.972	81.2407	86.5158	MANHOLE
	11012	11018	359.5959	1.498	807	1.7	2.219	105.2824	82.5001	MANHOLE
	11012	11018	359.5959	1.498	808	1.7	41.041	172.1132	89.3544	BORDE_VIA
	11012	11018	359.5959	1.498	809	1.7	36.643	171.12	89.3546	BORDE_VIA
	11012	11018	359.5959	1.498	810	1.7	35.112	165.124	89.2004	PARAMENTO
	11012	11018	359.5959	1.498	811	1.7	44.117	168.2211	89.2117	PARAMENTO
	11012	11018	359.5959	1.498	812	1.7	41.727	165.5124	89.3514	BORDE_VIA
	11012	11018	359.5959	1.498	813	1.7	37.818	165.2109	89.311	BORDE_VIA
	11012	11018	359.5959	1.498	814	1.7	37.232	181.1021	89.3251	BORDE_VIA
	11012	11018	359.5959	1.498	11010	1.7	103.269	259.3446	89.5308	DELTA
	11012	11018	359.5959	1.498	815	1.7	16.547	250.0439	88.4319	LINDERO
	11012	11018	359.5959	1.498	816	1.7	10.994	200.2857	88.4947	LINDERO
	11019	11012	359.5959	1.533	11012	1.7	122.177	359.5959	89.5735	
SD	89.89.5735									
	11019	11012	359.5959	1.533	11009	1.7	91.6	179.3121	89.3611	DELTA_AUXI
	11019	11012	359.5959	1.533	817	1.7	57.512	179.454	89.3425	BORDE_VIA
	11019	11012	359.5959	1.533	818	1.7	46.952	179.5531	89.3438	BORDE_VIA
	11019	11012	359.5959	1.533	819	1.7	50.114	179.5641	89.335	BORDE_VIA
	11019	11012	359.5959	1.533	820	1.7	53.631	180.0749	89.2924	BORDE_VIA
	11019	11012	359.5959	1.533	821	1.7	54.096	183.4025	89.2924	BORDE_VIA
	11019	11012	359.5959	1.533	822	1.7	50.375	183.4932	89.3553	BORDE_VIA
	11019	11012	359.5959	1.533	823	1.7	45.19	184.012	88.5742	PARAMENTO
	11019	11012	359.5959	1.533	824	1.7	52.903	10.1238	89.1643	PARAMENTO
	11019	11012	359.5959	1.533	825	1.7	45.844	172.3017	89.3049	BORDE_VIA
	11019	11012	359.5959	1.533	826	1.7	50.622	173.1428	89.2953	BORDE_VIA
	11019	11012	359.5959	1.533	827	1.7	55.658	173.4407	89.334	BORDE_VIA
	11019	11012	359.5959	1.533	828	1.7	60.306	174.1738	89.3455	BORDE_VIA
	11019	11012	359.5959	1.533	829	1.7	55.958	169.5735	89.324	BORDE_VIA
	11019	11012	359.5959	1.533	830	1.7	51.7	169.5346	89.2732	BORDE_VIA
	11019	11012	359.5959	1.533	831	1.7	47.998	9.1423	89.3923	BORDE_VIA
	11019	11012	359.5959	1.533	832	1.7	44.304	7.5554	89.3923	BORDE_VIA
	11019	11012	359.5959	1.533	833	1.7	42.919	11.0811	89.3407	BORDE_VIA
	11019	11012	359.5959	1.533	834	1.7	28.536	11.2838	89.3201	BORDE_VIA
	11019	11012	359.5959	1.533	835	1.7	39.19	359.3521	89.3201	BORDE_VIA
	11019	11012	359.5959	1.533	836	1.7	39.19	354.4945	88.514	PARAMENTO
	11019	11012	359.5959	1.533	837	1.7	40.734	358.5544	89.3248	BORDE_VIA
	11019	11012	359.5959	1.533	838	1.7	48.513	359.0059	89.4307	BORDE_VIA
	11019	11012	359.5959	1.533	839	1.7	65.355	171.1554	89.2013	PARAMENTO
	11019	11012	359.5959	1.533	840	1.7	15.415	347.0731	87.0942	PARAMENTO
	11019	11012	359.5959	1.533	841	1.7	19.591	296.5613	88.2436	PARAMENTO
	11019	11012	359.5959	1.533	842	2.4	27.089	219.1418	87.1017	PARAMENTO
	11019	11012	359.5959	1.533	843	1.7	21.299	188.58	88.5329	PARAMENTO
	11019	11012	359.5959	1.533	844	1.7	20.799	180.4713	89.1522	BORDE_VIA
	11019	11012	359.5959	1.533	845	1.7	3.966	129.3334	86.5842	MANHOLE
	11019	11012	359.5959	1.533	846	1.7	9.205	346.2217	87.3047	POSTE
	11019	11012	359.5959	1.533	847	1.7	10.661	50.3206	88.372	POSTE
	11019	11012	359.5959	1.533	848	1.7	15.203	187.5501	88.5321	POSTE
	11019	11012	359.5959	1.533	849	1.7	21.883	226.1814	88.3347	ESQ_PARQUE
	11009	11019	0	1.485	11019	1.7	91.599	0	90.0928	
SD	90.90.0928									
	11009	11019	0	1.485	11020	1.7	95.011	91.2341	89.4335	DELTA_AUXI
	11009	11019	0	1.485	850	1.7	9.571	72.4316	87.4011	PARAMENTO
	11009	11019	0	1.485	851	1.7	9.536	79.5553	90.0733	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11009	11019	0	1.485	852	1.7	9.926	100.402	90.0213 BORDE_VIA
	11009	11019	0	1.485	853	1.7	6.027	111.3639	88.4851 BORDE_VIA
	11009	11019	0	1.485	854	1.7	8.27	138.1104	88.3743 BORDE_VIA
	11009	11019	0	1.485	11006	1.7	83.379	270.5239	89.5611 DELTA
	11009	11019	0	1.485	855	1.7	5.802	71.111	90.2218 BORDE_VIA
	11009	11019	0	1.485	856	1.7	1.681	340.3801	84.0159 BORDE_VIA
	11009	11019	0	1.485	857	1.7	5.385	283.5623	87.3955 BORDE_VIA
	11009	11019	0	1.485	858	1.7	5.282	253.5226	87.3348 BORDE_VIA
	11009	11019	0	1.485	859	1.7	1.95	201.4926	85.4109 BORDE_VIA
	11009	11019	0	1.485	860	1.7	5.648	300.2204	85.1517 PARAMENTO
	11009	11019	0	1.485	861	1.7	4.788	185.4352	88.1337 BORDE_VIA
	11009	11019	0	1.485	862	1.7	3.246	306.4632	82.5049 POSTE
	11009	11019	0	1.485	863	1.7	3.416	234.0503	85.3926 POSTE
	11009	11019	0	1.485	864	1.7	16.631	101.2802	88.49 PARAMENTO
	11009	11019	0	1.485	865	1.7	2.759	101.1344	85.1424 MANHOLE
	11009	11019	0	1.485	866	1.7	2.879	32.4621	85.5153 MANHOLE
	11020	11009	359.5959	1.458	11009	1.7	95.011	359.5959	90.0003
SD	90.90.0003								
	11020	11009	359.5959	1.458	11021	1.7	55.315	267.4734	89.4756 DELTA_AUXI
	11020	11009	359.5959	1.458	867	1.7	44.88	267.5215	89.4857 BORDE_VIA
	11020	11009	359.5959	1.458	868	1.7	40.717	268.0559	89.4857 BORDE_VIA
	11020	11009	359.5959	1.458	869	1.7	35.014	268.1108	89.5127 BORDE_VIA
	11020	11009	359.5959	1.458	870	1.7	31.383	267.5138	90 BORDE_VIA
	11020	11009	359.5959	1.458	871	1.7	35.258	275.0739	89.481 BORDE_VIA
	11020	11009	359.5959	1.458	872	1.7	39.972	275.0927	89.4609 BORDE_VIA
	11020	11009	359.5959	1.458	873	1.7	31.419	275.2801	89.2635 PARAMENTO
	11020	11009	359.5959	1.458	874	1.7	32.935	250.3105	89.2635 PARAMENTO
	11020	11009	359.5959	1.458	875	1.7	33.408	250.4917	89.4605 CERRAMIENT
	11020	11009	359.5959	1.458	876	1.7	21.628	240.3655	89.1237 PARAMENTO
	11020	11009	359.5959	1.458	877	1.7	16.214	229.2957	89.0504 ENTR_URBAN
	11020	11009	359.5959	1.458	878	1.7	12.23	211.0151	88.2604 ENTR_URBAN
	11020	11009	359.5959	1.458	879	1.7	10.463	178.47	88.2045 PARAMENTO
	11020	11009	359.5959	1.458	880	1.7	16.143	129.1947	88.5509 PARAMENTO
	11020	11009	359.5959	1.458	881	1.7	6.21	167.2146	89.5732 BORDE_VIA
	11020	11009	359.5959	1.458	882	1.7	9.103	226.2352	89.4251 BORDE_VIA
	11020	11009	359.5959	1.458	883	1.7	12.172	215.1327	89.425 BORDE_VIA
	11020	11009	359.5959	1.458	884	1.7	15.245	228.0556	89.3238 BORDE_VIA
	11020	11009	359.5959	1.458	885	1.7	13.31	241.4529	89.2333 BORDE_VIA
	11020	11009	359.5959	1.458	886	1.7	17.901	249.2428	89.2333 BORDE_VIA
	11020	11009	359.5959	1.458	887	1.7	3.726	340.3936	85.1548 PARAMENTO
	11020	11009	359.5959	1.458	888	1.7	2.634	347.2005	82.064 POSTE
	11020	11009	359.5959	1.458	889	1.7	4.603	54.5651	86.2944 POSTE
	11020	11009	359.5959	1.458	890	1.7	1.599	34.3704	82.4157 MANHOLE
	11020	11009	359.5959	1.458	891	1.7	18.474	17.0214	88.4708 PARAMENTO
	11020	11009	359.5959	1.458	892	1.7	20.598	30.3126	87.1834 PARAMENTO
	11020	11009	359.5959	1.458	893	1.7	11.653	70.5043	88.0945 PARAMENTO
	11020	11009	359.5959	1.458	894	2	35.054	82.5514	88.4629 PARAMENTO
	11020	11009	359.5959	1.458	895	1.7	4.719	258.5203	88.1512 BORDE_VIA
	11020	11009	359.5959	1.458	896	1.5	0.611	191.4536	92.5313 BORDE_VIA
	11020	11009	359.5959	1.458	897	1.5	22.883	92.1339	90.4856 BORDE_VIA
	11021	11020	359.5959	1.458	11020	1.7	55.3	359.5959	89.4303
SD	89.89.4303								
	11021	11020	359.5959	1.458	11020	1.7	55.306	359.5959	89.4251
SD	89.89.4251								
	11021	11020	359.5959	1.458	11003	1.7	78.042	140.4004	89.4307 DELTA
	11021	11020	359.5959	1.458	888	1.7	13.471	340.3449	88.0226 PARAMENTO
	11021	11020	359.5959	1.458	889	1.7	13.575	345.4449	89.0339 POSTE
	11021	11020	359.5959	1.458	890	1.7	5.742	237.1103	87.0328 PARAMENTO
	11003	11021	0	1.487	11021	1.7	78.024	0	89.5643



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	89.89.5643								
	11003	11021	0	1.487	11004	1.7	102.306	310.201	90.0335 DELTA
	11002	11001	0.0001	1.495	11001	1.7	95.566	0.0001	89.5343
SD	89.89.5343								
	11002	11001	0.0001	1.495	11022	1.7	68.075	241.3555	89.4131 DELTA
	110022	11002	0	1.482	11002	1.7	68.057	0	89.5724
SD	89.89.5724								
	110022	11002	0	1.482	11000	1.7	151.924	303.1252	89.5322 DELTA
	110022	11002	0	1.482	891	1.7	8.826	249.5747	87.2545 POSTE
	110022	11002	0	1.482	892	1.7	12.066	277.4153	87.0443 POSTE
	110022	11002	0	1.482	893	1.7	7.638	332.1915	88.1915 MANHOLE
	11001	11022	359.5959	1.462	11022	1.7	151.95	359.5959	89.5636
SD	89.89.5636								
	11001	11022	359.5959	1.462	11001	1.7	52.599	291.3646	90.0237 DELTA
	11001	11022	359.5959	1.462	894	1.7	10.604	148.463	88.5626 MANHOLE
	11001	11022	359.5959	1.462	895	1.7	11.276	162.41	87.4637 PARAMENTO
	11001	11022	359.5959	1.462	896	1.7	11.197	162.4652	90.5703 LINDERO
	11001	11022	359.5959	1.462	897	1.7	5.819	196.1025	91.5943 LINDERO
	11001	11022	359.5959	1.462	898	1.7	14.718	130.333	89.1915 BORDE_VIA
	11001	11022	359.5959	1.462	899	1.7	14.935	119.4211	88.3336 PARAMENTO
	11001	11022	359.5959	1.462	900	1.7	28.764	134.4502	89.2801 BORDE_VIA
	11001	11022	359.5959	1.462	901	1.7	28.693	143.4921	89.2657 BORDE_VIA
	11001	11022	359.5959	1.462	902	1.7	33.508	143.445	89.2829 POSTE
	11001	11022	359.5959	1.462	903	1.7	39.756	144.3241	89.1603 PARAMENTO
	11001	11022	359.5959	1.462	904	1.7	39.895	143.4242	89.0513 PARAMENTO
	11001	11022	359.5959	1.462	905	1.7	49.007	142.0859	89.1731 PARAMENTO
	11001	11022	359.5959	1.462	906	1.7	46.084	135.0531	89.2605 BORDE_VIA
	11001	11022	359.5959	1.462	907	1.7	46.296	140.3038	89.2724 BORDE_VIA
	11001	11022	359.5959	1.462	908	1.7	21.891	1.0519	89.2603 POSTE
	11001	11022	359.5959	1.462	909	1.7	51.916	2.5432	89.4205 MANHOLE
	11001	11022	359.5959	1.462	910	2.3	14.81	348.4555	86.2143 PARAMENTO
	11001	11022	359.5959	1.462	911	1.7	57.12	5.3831	89.4927 SUMIDERO
	11001	11022	359.5959	1.462	912	1.7	58.008	6.0207	89.5302 SUMIDERO
	11001	11022	359.5959	1.462	913	1.7	22.472	357.47	90.0113 SUMIDERO
	11001	11022	359.5959	1.462	914	1.7	22.85	358.4041	89.5924 SUMIDERO
	11001	11022	359.5959	1.462	915	1.7	63.547	358.5459	89.4531 SUMIDERO
	11001	11022	359.5959	1.462	916	1.7	63.016	359.2357	89.4754 SUMIDERO
	11001	11022	359.5959	1.462	917	1.7	50.555	359.2948	89.5049 SUMIDERO
	11001	11022	359.5959	1.462	918	1.7	49.962	358.593	89.4908 SUMIDERO
	11001	11022	359.5959	1.462	919	1.7	17.183	190.082	95.4345 PARAMENTO
	11001	11022	359.5959	1.462	920	1.7	22.189	206.4442	96.0343 LINDERO
	11001	11022	359.5959	1.462	921	1.7	16.795	250.1146	89.174 PARAMENTO
	11001	11022	359.5959	1.462	922	1.7	22.543	241.5222	94.2244 DESCA_DOMI
	11001	11022	359.5959	1.462	11023	1.7	34.918	204.1039	94.4834 DELTA_AUXI
	11001	11022	359.5959	1.462	923	1.7	9.299	153.5808	91.5203 SUMIDERO
	11023	11000	359.5959	1.462	11000	1.7	34.987	359.5959	84.1947
SD	84.84.1947								
	11023	11000	359.5959	1.462	924	1.7	5.863	38.1011	81.4403 LINDERO
	11023	11000	359.5959	1.462	925	1.7	10.709	59.4333	82.304 LINDERO
	11023	11000	359.5959	1.462	926	1.7	20.729	49.0127	85.1258 LINDERO
	11023	11000	359.5959	1.462	927	2.6	12.814	337.2626	92.4411 DESCARGA
	11023	11000	359.5959	1.462	928	2.6	14.214	335.1604	92.5353 DESCARGA
	11023	11000	359.5959	1.462	929	2	13.771	340.123	89.3836 DESCARGA
	11023	11000	359.5959	1.462	930	1.7	15.968	276.0652	107.3056 CANO
	11023	11000	359.5959	1.462	931	1.7	15.605	275.3708	107.3554 CANO
	11023	11000	359.5959	1.462	932	1.7	15.838	276.0208	107.343 CANO
	11023	11000	0.0001	1.392	11000	1.7	34.984	0.0001	84.1806
SD	84.84.1806								
	11023	11000	0.0001	1.392	11024	1.7	43.621	131.0945	88.4804 DELTA_AUXI



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	11023	11000	0.0001	1.392	933	1.7	13.803	261.0636	108.1511	RIO
	11023	11000	0.0001	1.392	934	1.7	15.326	271.493	107.1802	RIO
	11023	11000	0.0001	1.392	935	1.7	19.281	288.0207	103.2527	RIO
	11023	11000	0.0001	1.392	936	1.7	21.176	290.1915	102.4235	RIO
	11023	11000	0.0001	1.392	937	2.9	26.644	169.4333	97.2004	CANO
	11023	11000	0.0001	1.392	938	2.9	28.046	159.005	96.4909	CANO
	11023	11000	0.0001	1.392	939	2.9	29.238	157.2957	96.4603	CANO
	11023	11000	0.0001	1.392	940	2.9	30.122	156.573	96.2327	CANO
	11023	11000	0.0001	1.392	941	4	35.809	154.0424	93.5442	RIO
	11023	11000	0.0001	1.392	942	1.7	21.537	170.4611	102.3449	RIO
	11024	11023	0	1.432	11023	1.7	43.63	0	90.2502	
SD	90.90.2502									
	11024	11023	0	1.432	943	1.7	6.491	103.5833	82.3538	ESTRUCTURA
	11024	11023	0	1.432	944	1.7	6.602	102.5024	82.5009	ESTRUCTURA
	11024	11023	0	1.432	945	1.7	8.036	95.0353	83.1221	ESTRUCTURA
	11024	11023	0	1.432	946	1.7	7.903	95.5229	83.1435	ESTRUCTURA
	11024	11023	0	1.432	947	1.7	7.647	111.3252	78.3435	ESTRUCTURA
	11024	11023	0	1.432	948	1.7	7.766	109.4841	78.5206	ESTRUCTURA
	11024	11023	0	1.432	949	1.7	7.891	112.3028	78.5206	ESTRUCTURA
	11024	11023	0	1.432	950	1.7	8.701	102.1853	79.5512	ESTRUCTURA
	11024	11023	0	1.432	951	1.7	8.889	101.3104	80.0013	ESTRUCTURA
	11024	11023	0	1.432	952	1.7	9.065	102.3804	80.1337	ESTRUCTURA
	11024	11023	0	1.432	953	2.9	8.225	105.3033	80.0448	COTA_CLAVE
	11024	11023	0	1.432	954	2.9	8.019	104.5431	86.0526	COTA_ABAJO
	11024	11023	0	1.432	955	2.45	8.294	21.3457	111.1446	ESTRUCTURA
	11024	11023	0	1.432	956	2.45	8.151	21.2209	111.3014	ESTRUCTURA
	11024	11023	0	1.432	957	2.65	8.087	22.1	111.325	CANO
	11024	11023	0	1.432	958	2.7	7.621	22.0304	112.45	CANO
	11024	11023	0	1.432	959	0.085	8.827	32.0803	116.0511	DES_DOMICI
	11024	11023	0	1.432	960	0.085	9.088	36.1928	112.4448	DES_DOMICI
	11024	11023	0	1.442	11023	1.7	43.626	0	90.2749	
SD	90.90.2749									
	11024	11023	0	1.442	961	1.7	7.701	114.3156	83.1051	LINDERO
	11024	11023	0	1.442	962	1.7	15.221	148.5345	87.1849	LINDERO
	11024	11023	0	1.442	963	1.7	15.727	147.29	84.4412	PARAMENTO
	11024	11023	0	1.442	964	1.7	37.429	117.163	87.1351	PARAMENTO
	11024	11023	0	1.442	965	1.7	46.374	111.4445	86.3804	PARAMENTO
	11024	11023	0	1.442	966	1.7	44.415	104.2548	86.3112	CERRAMIENT
	11024	11023	0	1.442	967	1.7	43.306	97.4028	86.2304	CERRAMIENT
	11024	11023	0	1.442	968	0.085	33.562	59.5525	87.2744	PARAMENTO
	11024	11023	0	1.442	969	1.7	30.729	58.2132	87.3554	LINDERO
	11024	11023	0	1.442	970	2.3	20.131	47.2109	86.5615	LINDERO
	11024	11023	0	1.442	971	2.3	12.061	29.0751	88.5404	LINDERO
	11024	11023	0	1.442	972	4	6.573	14.5856	101.3225	CANAL
	11024	11023	0	1.442	973	4	6.201	13.4837	101.3226	CANAL
	11024	11023	0	1.442	974	4	6.429	15.0746	105.0131	CANAL
	11024	11023	0	1.442	975	5	11.365	354.3603	93.1423	CANAL
	11024	11023	0	1.442	976	5	12.402	352.4009	93.0645	CANAL
	11024	11023	0	1.442	977	5	13.345	348.4633	93.0645	CANAL
	11024	11023	0	1.442	978	5	14.345	352.0311	92.5316	CANAL
	11024	11023	0	1.442	979	5	13.241	355.2622	92.4815	CANAL
	11024	11023	0	1.442	980	5	12.122	359.1648	92.5009	CANAL
	11024	11023	0	1.442	981	4	11.74	273.3447	104.2131	RIO
	11024	11023	0	1.442	982	4	11.918	233.563	104.0916	RIO
	11024	11023	0	1.442	983	5	20.787	204.2315	95.2405	RIO
	11024	11023	0	1.442	984	1.7	14.246	178.4716	91.1828	DES_DOMICI
	11024	11023	0	1.442	985	1.7	14.361	177.4725	89.1914	DES_DOMICI
	11024	11023	0	1.442	986	1.7	16.607	160.5343	88.3841	DES_DOMICI
	11024	11023	0	1.442	987	1.7	53.995	104.5634	87.0408	MANHOLE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	11024	11023	0	1.442	988	1.7	46.78	94.5156	86.3115 BORDE_VIA
	11024	11023	0	1.442	989	1.7	64.174	108.3537	87.4014 BORDE_VIA
	11024	11023	0	1.442	990	1.7	53.301	95.3129	87.0142 BORDE_VIA
	11024	11023	0	1.442	991	1.7	51.847	108.4059	87.0722 BORDE_VIA
	11024	11023	0	1.442	992	1.7	66.255	103.5043	87.4753 BORDE_VIA
	11024	11023	0	1.442	993	1.7	56.867	111.1927	87.311 BORDE_VIA
	11005	11004	0	1.47	11004	1.7	129.668	0	89.411
SD	89.89.4110								
	11005	11004	0	1.47	11025	1.7	72.556	178.545	91.1814 DELTA_AUXI
	11025	11005	0.0001	1.33	11005	1.7	72.575	0.0001	88.1334
SD	88.88.1334								
	11025	11005	0.0001	1.33	994	1.7	22.829	48.1158	85.5103 BORDE_VIA
	11025	11005	0.0001	1.33	995	1.7	28.731	56.4802	86.3247 POSTE
	11025	11005	0.0001	1.33	996	1.7	26.628	59.4029	86.2221 BORDE_VIA
	11025	11005	0.0001	1.33	997	2	34.312	57.5047	86.425 PARAMENTO
	11025	11005	0.0001	1.33	998	2	23.707	63.2242	85.1046 BORDE_VIA
	11025	11005	0.0001	1.33	999	2	19.485	53.4621	84.2045 BORDE_VIA
	11025	11005	0.0001	1.33	1000	4	16.973	153.415	101.0035 RIO
	11025	11005	0.0001	1.33	1001	1.7	9.401	150.0455	104.2927 BORDE_RIO
	11025	11005	0.0001	1.33	1002	4	15.284	162.4156	102.1129 RIO
	11025	11005	0.0001	1.33	1003	1.7	4.37	158.2526	110.5948 BORDE_RIO
	11025	11005	0.0001	1.33	1004	2.9	13.165	175.3021	109.2704 RIO
	11025	11005	0.0001	1.33	1005	1.7	4.494	177.4409	118.5021 ESTRUCTURA
	11025	11005	0.0001	1.33	1006	1.7	4.526	190.143	119.2157 ESTRUCTURA
	11025	11005	0.0001	1.33	1007	2.5	4.821	189.4529	117.5246 COTA_ABJ
	11025	11005	0.0001	1.33	1008	2.9	9.336	172.4313	118.564 RIO
	11025	11005	0.0001	1.33	1009	4	6.689	177.0104	115.4918 CAIDA_DESC
	11025	11005	0.0001	1.33	1010	4.6	14.526	222.1337	100.2013 BORDE_RIO
	11025	11005	0.0001	1.33	11026	1.7	19.842	294.1112	87.4922 DELTA_AUXI
	11026	11025	0	1.458	11025	1.7	19.828	0	90.5403
SD	90.90.5403								
	11026	11025	0	1.458	1011	2.5	10.081	82.5338	89.0944 DES_DOMICI
	11026	11025	0	1.458	1012	1.7	6.297	113.0038	88.4602 DES_DOMICI
	11026	11025	0	1.458	1013	2.15	12.666	291.3451	85.4229 PARAMENTO
	11026	11025	0	1.458	1014	2.5	14.217	32.301	91.0527 DES_DOMICI
	11026	11025	0	1.458	1015	1.7	9.596	33.2927	87.4833 DES_DOMICI
	11026	11025	0	1.458	1016	1.7	8.552	41.3406	87.5819 LINDERO
	11026	11025	0	1.458	1017	1.7	8.678	44.4217	88.3425 TERRENO
	11026	11025	0	1.458	1018	1.7	11.004	121.1333	92.5917 TERRENO
	11026	11025	0	1.458	1019	1.7	9.383	79.2112	90.1002 TERRENO
	11026	11025	0	1.458	1020	1.7	6.694	275.2957	85.5854 LINDERO
	11026	11025	0	1.458	1021	1.7	11.582	205.1239	88.0421 PARAMENTO
	11026	11025	0	1.458	1022	1.7	12.49	35.0144	91.2701 TERRENO
	11026	11025	0	1.458	1023	1.7	20.464	143.4733	91.2947 CANAL_COCH
	11026	11025	0	1.458	1024	1.7	17.358	158.0426	89.4232 CANAL_COCH
	11016	11014	0	1.442	11014	1.7	69.506	0	89.2758
SD	89.89.2758								
	11016	11014	0	1.442	11027	1.7	124.333	109.504	89.4522 DELTA_AUXI
	11016	11014	0	1.442	1025	1.5	11.817	286.5239	90.1521 CABLE_BANA
	11016	11014	0	1.442	1026	1.5	11.748	293.0129	90.18 CABLE_BANA
	11016	11014	0	1.442	1027	2.3	11.761	289.5149	86.1808 CABLE_BANA
	11016	11014	0	1.442	1028	1.5	4.054	299.1128	90.0738 CABLE_BANA
	11016	11014	0	1.442	1029	1.5	4.095	281.4013	90.2243 CABLE_BANA
	11016	11014	0	1.442	1030	2.3	4.162	290.1728	79.0644 CABLE_BANA
	11016	11014	0	1.442	1031	2.3	4.229	109.5006	78.484 CABLE_BANA
	11016	11014	0	1.442	1032	1.5	4.273	101.1301	88.5326 CABLE_BANA
	11016	11014	0	1.442	1033	1.5	4.17	117.4827	88.1436 CABLE_BANA
	11016	11014	0	1.442	1034	1.7	60.808	109.1043	89.3232 CABLE_BANA
	11016	11014	0	1.442	1035	1.7	60.738	110.2519	89.3052 CABLE_BANA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11027	11016	359.5959	1.468	11016	1.7	124.35	359.5959	90.0047	
SD	90.90.0047									
	11027	11016	359.5959	1.468	11028	1.7	41.145	197.4719	89.3952	DELTA_AUXI
	11027	11016	359.5959	1.468	1036	1.7	17.761	2.0334	90.2754	CABLE_BANA
	11027	11016	359.5959	1.468	1037	1.7	17.726	358.1147	90.1625	CABLE_BANA
	11027	11016	359.5959	1.468	1038	2.6	17.726	0.025	87.2723	CABLE_BANA
	11027	11016	359.5959	1.468	1039	2.5	6.438	0.3713	82.4545	CABLE_BANA
	11027	11016	359.5959	1.468	1040	1.7	6.428	5.4608	89.5345	CABLE_BANA
	11027	11016	359.5959	1.468	1041	1.7	6.493	355.1906	88.3617	CABLE_BANA
	11027	11016	359.5959	1.468	1042	1.7	1.526	178.0723	79.111	CABL_FIN_C
	11027	11016	359.5959	1.468	1043	2.15	1.652	175.2623	64.4432	CABL_FIN_C
	11028	11027	359.5959	1.448	11027	1.7	41.147	359.5959	89.3908	
SD	89.89.3908									
	11028	11027	359.5959	1.448	11029	1.7	21.89	114.1029	91.3546	DELTA_AUXI
	11028	11027	359.5959	1.448	1044	2.5	22.983	160.2334	91.2834	LINDERO
	11028	11027	359.5959	1.448	1045	2	41.05	180.2558	91.4316	LINDERO
	11028	11027	359.5959	1.448	1046	2.5	17.272	148.0408	91.344	LINDERO
	11028	11027	359.5959	1.448	1047	1.7	19.53	351.2531	89.045	LINDERO
	11028	11027	359.5959	1.448	1048	1.7	18.736	339.1211	92.2017	LINDERO
	11028	11027	359.5959	1.448	1049	1.7	20.978	325.125	92.1734	LINDERO
	11028	11027	359.5959	1.448	1050	1.7	22.933	319.2622	92.0742	LINDERO
	11028	11027	359.5959	1.448	1051	1.7	19.567	3.4941	89.052	LINDERO
	11028	11027	359.5959	1.448	1052	1.7	22.465	22.2011	89.5522	LINDERO
	11028	11027	359.5959	1.448	1053	1.7	23.419	27.1101	90.1005	LINDERO
	11029	11028	0	1.484	11028	1.7	21.899	0	87.41	
SD	87.87.4100									
	11029	11028	0	1.484	1054	1.7	5.491	242.5026	90.0205	ESTRUCTURA
	11029	11028	0	1.484	1055	1.7	5.614	245.2647	90.0206	ESTRUCTURA
	11029	11028	0	1.484	1056	1.7	5.66	247.0039	90.1449	ESTRUCTURA
	11029	11028	0	1.484	1057	1.7	7.552	251.2454	96.5544	ESTRUCTURA
	11029	11028	0	1.484	1058	1.7	7.538	253.063	96.5544	ESTRUCTURA
	11029	11028	0	1.484	1059	1.7	4.834	263.3935	89.4158	ESTRUCTURA
	11029	11028	0	1.484	1060	1.7	5.154	262.1309	90.091	ESTRUCTURA
	11029	11028	0	1.484	1061	1.7	7.019	266.2004	97.0229	ESTRUCTURA
	11029	11028	0	1.484	1062	1.7	7.146	264.4033	96.5715	ESTRUCTURA
	11029	11028	0	1.484	1063	4	16.616	269.091	99.4042	ESTRUCTURA
	11029	11028	0	1.484	1064	4	16.724	268.4442	99.3719	ESTRUCTURA
	11029	11028	0	1.484	1065	4	16.598	269.0109	100.5004	BORDE_CANO
	11029	11028	0	1.484	1066	4	16.663	266.4954	100.3725	CENTRO_CAN
	11029	11028	0	1.484	1067	4	17.086	264.3019	100.2349	BORDE_CANO
	11029	11028	0	1.484	1068	3.5	17.163	264.2	101.1033	ESTRUCTURA
	11029	11028	0	1.484	1069	3.5	17.218	263.4256	101.1033	ESTRUCTURA
	11029	11028	0	1.484	1070	3.5	18.479	264.4359	101.3628	BORDE_CANO
	11029	11028	0	1.484	1071	3.5	18.444	269.0628	101.4333	BORDE_CANO
	11029	11028	0	1.484	1072	3.5	18.299	267.0217	101.1324	BORDE_CANO
	11029	11028	0	1.484	1073	3.6	42.303	261.4846	96.5913	SALIDA_RIO
	11029	11028	0	1.484	1074	3.6	44.074	263.1104	96.1226	SALIDA_RIO
	11029	11028	0	1.484	1075	3.6	44.227	264.0614	96.1822	SALIDA_RIO
	11029	11028	0	1.484	1076	1.5	4.842	263.3236	96.5956	TERRENO
	11029	11028	0	1.484	1077	1.5	5.552	243.5154	102.0409	TERRENO
	11029	11028	0	1.484	1078	1.5	5.108	253.2305	99.2847	TERRENO
	11029	11028	0	1.484	1079	2.9	5.364	253.4408	94.0725	COTA_CLAVE
	11029	11028	0	1.484	1080	2.9	5.541	253.2408	102.5439	COTA_BATEA
	11029	11028	0	1.484	1081	1.5	17.112	93.3428	86.5014	CAJA_MANHO
	11029	11028	0	1.484	1082	1.5	18.631	97.441	87.0622	CAJA_MANHO
	11029	11028	0	1.484	1083	1.5	19.587	86.25	87.1448	CAJA_MANHO
	11029	11028	0	1.484	1084	1.5	20.94	90.3644	87.273	CAJA_MANHO
	11029	11028	0	1.484	1085	1.5	20.162	90.2254	87.1233	MANHOLE
	11029	11028	0	1.484	1086	1.5	18.534	95.1701	87.042	MANHOLE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		11014	11016	359.5959	1.456	11016	1.7	69.499	359.5959	90.062	
SD	90.90.0620										
		11014	11016	359.5959	1.456	11030	1.7	19.159	200.1919	89.2455	DELTA_AUXI
		11030	11014	0	1.456	11014	1.7	19.167	0	89.0723	
SD	89.89.0723										
		11030	11014	0	1.456	1087	1.7	102.571	281.4515	89.2729	MANHOLE
		11030	11014	0	1.456	1088	1.7	90.786	283.4017	89.3603	LINDERO
		11030	11014	0	1.456	1089	1.7	49.214	293.5428	89.515	LINDERO
		10001	10000	0	1.409	10000	1.7	18.245	0	89.1348	
SD	89.89.1348										



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10001	10000	0	1.409	10000	1.7	18.247	0	89.1347	
SD	89.89.1347									
	10001	10000	0	1.409	1	1.7	12.228	115.0315	91.5156	BORDE_VIA
	10001	10000	0	1.409	2	1.7	16.415	122.0223	91.3656	BORDE_VIA
	10001	10000	0	1.409	3	1.7	15.304	131.4127	91.3408	BORDE_VIA
	10001	10000	0	1.409	4	1.7	9.168	127.1644	91.4926	BORDE_VIA
	10001	10000	0	1.409	5	2.9	5.145	334.3852	85.5311	ESTRUCTURA
	10001	10000	0	1.409	6	1.7	5.809	323.5558	98.592	ESTRUCTURA
	10001	10000	0	1.409	7	1.7	5.641	326.414	95.0858	DES_DOMICI
	10001	10000	0	1.409	8	1.7	5.686	326.0047	89.0941	DES_DOMICI
	10001	10000	0	1.409	9	1.7	5.666	328.1036	96.0641	ESTRUCTURA
	10001	10000	0	1.409	10	1.7	5.337	315.4504	90.5127	DES_DOMICI
	10001	10000	0	1.409	11	2	4.293	295.3601	102.2114	ESTRUCTURA
	10001	10000	0	1.409	12	1.7	6.482	288.1404	93.081	TERRENO
	10001	10000	0	1.409	13	2.3	2.889	308.4756	100.3822	ESTRUCTURA
	10001	10000	0	1.409	14	1.7	11.987	299.1709	90.4519	TERRENO
	10001	10000	0	1.409	15	1.7	9.357	305.2233	91.2916	TERRENO
	10001	10000	0	1.409	16	1.7	5.904	253.2724	110.4823	TERRENO
	10001	10000	0	1.409	17	1.5	4.865	339.2434	90.5404	TERRENO
	10001	10000	0	1.409	18	1.7	2.425	328.4231	95.0015	TERRENO
	10001	10000	0	1.409	19	2.4	2.591	246.0646	111.3648	ESTRUCTURA
	10001	10000	0	1.409	20	2.4	9.026	202.3528	121.5138	BORDE_CANO
	10001	10000	0	1.409	21	2.4	9.511	224.2101	120.0307	BORDE_CANO
	10001	10000	0	1.409	22	2.4	9.304	216.2138	120.3426	BORDE_CANO
	10001	10000	0	1.409	23	2.4	12.744	259.053	111.533	RIO
	10001	10000	0	1.409	24	2.4	4.319	259.1624	121.1301	ESTRUCTURA
	10001	10000	0	1.409	25	2.4	4.432	259.4844	123.301	ESTRUCTURA
	10001	10000	0	1.409	26	2.9	3.015	254.1133	124.2934	ESTRUCTURA
	10001	10000	0	1.409	27	2.9	3.108	250.1311	126.0736	ESTRUCTURA
	10001	10000	0	1.409	28	2.9	3.988	272.3914	116.152	ESTRUCTURA
	10001	10000	0	1.409	29	2.9	3.899	273.0843	112.453	ESTRUCTURA
	10001	10000	0	1.409	30	2.9	2.993	277.1458	123.3524	ESTRUCTURA
	10001	10000	0	1.409	31	2.9	3.065	282.5937	120.2526	ESTRUCTURA
	10001	10000	0	1.409	32	2.9	4.019	295.4155	110.4733	ESTRUCTURA
	10001	10000	0	1.409	33	2.9	3.244	305.0826	117.1304	ESTRUCTURA
	10001	10000	0	1.409	34	2.9	3.12	306.5119	113.4046	ESTRUCTURA
	10001	10000	0	1.409	35	2.9	4.05	298.2211	108.5725	ESTRUCTURA
	10001	10000	0	1.409	36	2.9	4.046	321.3755	106.4937	ESTRUCTURA
	10001	10000	0	1.409	37	2.9	4.76	310.4529	104.2514	ESTRUCTURA
	10001	10000	0	1.409	38	2.9	4.075	321.4402	108.0551	ESTRUCTURA
	10001	10000	0	1.409	39	2.9	4.749	312.2016	105.4904	ESTRUCTURA
	10001	10000	0	1.409	40	2.9	5.64	327.1901	97.5256	DESCARGA
	10001	10000	0	1.409	41	2.9	5.666	327.2055	101.3046	DESCARGA
	10001	10000	0	1.409	42	2.9	5.675	327.154	102.0239	DESCARGA
	10001	10000	0	1.409	43	2.9	6.033	323.2043	101.0754	ESTRUCTURA
	10001	10000	0	1.409	44	2.9	5.285	332.3112	101.2223	ESTRUCTURA
	10001	10000	0	1.409	45	2.9	3.614	254.0828	118.3044	DESCARGA
	10003	10002	0	1.478	10002	1.7	41.012	0	89.58	
SD	89.89.5800									
	10003	10002	0	1.478	46	1.7	34.981	0.4716	89.5314	MANHOLE
	10003	10002	0	1.478	47	1.7	11.576	3.1809	89.1117	MANHOLE
	10003	10002	0	1.478	48	1.7	13.831	17.3154	89.501	SUMIDERO
	10003	10002	0	1.478	49	1.7	13.295	19.4105	89.511	SUMIDERO
	10003	10002	0	1.478	50	1.7	6.635	50.2943	88.1719	MANHOLE
	10003	10002	0	1.478	51	1.7	2.161	27.5401	84.3436	MANHOLE
	10003	10002	0	1.478	52	1.7	26.754	243.233	89.051	MANHOLE
	10003	10002	0	1.478	53	1.7	3.559	215.5518	86.4623	POSTE
	10013	10011	0	1.448	10011	1.7	56.806	0	89.321	
SD	89.89.3210									



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10013	10011	0	1.448	11031	1.7	10.269	152.0057	90.155	DELTA_AUXI
	11031	10013	0	1.361	10013	1.7	10.29	0	86.3324	
SD	86.86.3324									
	11031	10013	0	1.361	53	1.7	28.248	14.525	88.5942	MANHOLE
	11031	10013	0	1.361	54	1.7	28.392	12.3918	89.0334	MANHOLE
	11031	10013	0	1.361	55	2	12.727	324.1251	88.2514	TERRENO
	11031	10013	0	1.361	56	1.7	6.837	306.452	91.5551	TERRENO
	11031	10013	0	1.361	57	1.7	3.383	282.2016	97.39	TERRENO
	11031	10013	0	1.361	58	1.7	2.813	275.1745	113.3841	DES_DOMICI
	11031	10013	0	1.361	59	1.7	1.249	257.2059	101.1619	TERRENO
	11031	10013	0	1.361	60	1.7	2.657	220.45	95.3555	TERRENO
	11031	10013	0	1.361	61	1.7	2.577	223.2443	118.104	DES_DOMICI
	11031	10013	0	1.361	62	1.7	4.84	178.0544	94.3008	TERRENO
	11031	10013	0	1.361	63	1.7	8.45	161.54	89.5633	TERRENO
	11031	10013	0	1.361	64	1.7	18.843	158.5736	88.2128	TERRENO
	11031	10013	0	1.361	65	1.7	4.349	210.2451	99.124	ESTRUCTURA
	11031	10013	0	1.361	66	1.7	4.475	209.4756	98.5451	ESTRUCTURA
	11031	10013	0	1.361	67	1.7	4.485	211.4326	108.2409	ESTRUCTURA
	11031	10013	0	1.361	68	1.7	4.742	210.0635	107.2928	ESTRUCTURA
	11031	10013	0	1.361	69	1.7	4.179	190.5008	99.2313	ESTRUCTURA
	11031	10013	0	1.361	70	1.7	4.368	190.1221	99.0504	ESTRUCTURA
	11031	10013	0	1.361	71	1.7	6.264	227.1906	110.4753	ESTRUCTURA
	11031	10013	0	1.361	72	1.7	6.349	225.5731	110.1437	ESTRUCTURA
	11031	10013	0	1.361	73	2.3	4.706	208.4036	106.5403	ESTRUCTURA
	11031	10013	0	1.361	74	2.3	4.784	208.5805	106.5849	ESTRUCTURA
	11031	10013	0	1.361	75	2.3	4.603	194.5019	107.2806	ESTRUCTURA
	11031	10013	0	1.361	76	2.3	4.748	193.3539	108.0307	ESTRUCTURA
	11031	10013	0	1.361	77	2.3	4.864	208.2633	110.544	ESTRUCTURA
	11031	10013	0	1.361	78	2.3	4.854	193.5908	111.1052	ESTRUCTURA
	11031	10013	0	1.361	79	2.3	5.227	205.3627	110.3737	ESTRUCTURA
	11031	10013	0	1.361	80	2.3	5.526	193.1329	109.4325	ESTRUCTURA
	11031	10013	0	1.361	81	2.3	4.917	191.3559	106.4116	ESTRUCTURA
	11031	10013	0	1.361	82	2.3	4.884	192.5004	106.5058	ESTRUCTURA
	11031	10013	0	1.361	83	2.3	5.658	192.5225	111.204	ESTRUCTURA
	11031	10013	0	1.361	84	2.3	4.586	191.4712	107.3046	ESTRUCTURA
	11031	10013	0	1.361	85	2.3	4.591	193.3854	107.3339	ESTRUCTURA
	11031	10013	0	1.361	86	2.3	6.305	192.4729	111.223	ESTRUCTURA
	11031	10013	0	1.361	87	2.3	6.874	193.0347	110.1647	ESTRUCTURA
	11031	10013	0	1.361	88	2.3	6.986	192.5425	111.2125	ESTRUCTURA
	11031	10013	0	1.361	89	2.3	7.472	193.0739	110.5947	ESTRUCTURA
	11031	10013	0	1.361	90	2.3	7.526	192.3243	111.5846	ESTRUCTURA
	11031	10013	0	1.361	91	2.3	7.88	191.4232	111.2121	ESTRUCTURA
	11031	10013	0	1.361	92	2.3	7.769	191.5626	109.1501	ESTRUCTURA
	11031	10013	0	1.361	93	2.3	7.761	191.2313	109.1428	ESTRUCTURA
	11031	10013	0	1.361	94	2.3	8.017	203.2323	109.1628	ESTRUCTURA
	11031	10013	0	1.361	95	2.3	7.928	202.5621	109.3653	ESTRUCTURA
	11031	10013	0	1.361	96	2.3	8.058	202.4625	111.1006	ESTRUCTURA
	11031	10013	0	1.361	97	2.3	7.497	203.0636	112.0853	ESTRUCTURA
	11031	10013	0	1.361	98	2.3	7.414	203.3918	111.0721	ESTRUCTURA
	11031	10013	0	1.361	99	2.3	6.826	203.4218	112.0121	ESTRUCTURA
	11031	10013	0	1.361	100	2.3	6.712	203.5718	110.4802	ESTRUCTURA
	11031	10013	0	1.361	101	2.3	6.166	204.3705	112.0901	ESTRUCTURA
	11031	10013	0	1.361	102	2.3	6.007	204.541	110.3739	ESTRUCTURA
	11031	10013	0	1.361	103	2.3	5.41	206.3812	112.0257	ESTRUCTURA
	11031	10013	0	1.361	104	2.3	4.652	191.5929	108.5657	ESTRUCTURA
	11031	10013	0	1.361	105	2.3	4.806	192.4531	108.592	ESTRUCTURA
	11031	10013	0	1.361	106	2.3	5.365	188.2347	102.3205	ESTRUCTURA
	11031	10013	0	1.361	107	2.3	9.014	244.3327	114.262	BORDE_RIO
	11031	10013	0	1.361	108	2.3	8.897	230.0229	114.2956	BORDE_RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11031	10013	0	1.361	109	2.3	9.996	211.244	107.5227 BORDE_RIO
	11031	10013	0	1.361	110	2.9	8.632	205.1147	116.3 BORDE_RIO
	11031	10013	0	1.361	111	2.9	7.763	196.4214	107.2546 BORDE_RIO
	11031	10013	0	1.361	112	2.9	4.499	199.3121	101.1728 CENTRO_TUB
	11031	10013	0	1.361	113	2.9	4.546	198.4543	100.4751 COTA_BATEA
	11031	10013	0	1.361	114	2.9	4.496	199.1235	104.4644 COTA_CLAVE
	10010	10009	0	1.472	10009	1.7	63.729	0	89.3347
SD	89.89.3347								
	10010	10009	0	1.472	10011	1.7	62.94	168.5321	90.0634 DELTA
	10010	10009	0	1.472	115	1.7	66.183	359.4923	89.3649 SUMIDERO
	10010	10009	0	1.472	116	1.7	65.582	0.3528	89.355 SUMIDERO
	10010	10009	0	1.472	117	1.7	63.691	359.5835	89.351 MANHOLE
	10010	10009	0	1.472	118	1.7	24.636	356.5445	89.2204 MANHOLE
	10010	10009	0	1.472	119	1.5	64.567	357.3631	89.2203 PARAMENTO
	10010	10009	0	1.472	120	1.7	31.017	349.2102	88.4809 PARAMENTO
	10010	10009	0	1.472	121	1.7	27.376	349.132	88.4324 CANCHA
	10010	10009	0	1.472	122	1.7	31.465	331.1355	88.5321 CANCHA
	10010	10009	0	1.472	123	1.7	7.81	332.3452	85.4718 CANCHA
	10010	10009	0	1.472	124	1.5	25.089	5.2723	89.1209 PARAMENTO
	10010	10009	0	1.472	125	1.7	22.658	349.4401	89.0054 POSTE
	10010	10009	0	1.472	126	1.7	12.68	344.5958	88.3404 POSTE
	10010	10009	0	1.472	127	1.7	9.044	27.0238	88.2145 POSTE
	10010	10009	0	1.472	128	1.7	3.256	315.3057	86.3721 POSTE
	10010	10009	0	1.472	129	1.7	4.263	305.2215	85.5445 PARAMENTO
	10010	10009	0	1.472	130	1.7	4.084	220.06	87.2628 PARAMENTO
	10010	10009	0	1.472	131	1.7	10.248	126.4122	88.4916 PARAMENTO
	10010	10009	0	1.472	132	1.7	11.79	126.532	88.3224 PARAMENTO
	10010	10009	0	1.472	133	1.7	25.703	152.5809	89.3125 PARAMENTO
	10010	10009	0	1.472	134	1.7	25.633	154.2118	89.2417 PARAMENTO
	10010	10009	0	1.472	135	1.7	30.971	4.1701	88.4844 PARAMENTO
	10010	10009	0	1.472	136	1.5	53.428	162.3056	89.5913 PARAMENTO
	10018	10017	0	1.409	10017	1.7	91.801	0	88.3817
SD	88.88.3817								
	10018	10017	0	1.409	137	1.7	39.992	358.0539	89.1515 SUMIDERO
	10018	10017	0	1.409	138	1.7	39.241	357.505	89.1515 SUMIDERO
	10018	10017	0	1.409	139	1.7	38.188	359.11	89.1241 SUMIDERO
	10018	10017	0	1.409	140	1.7	37.439	359.0053	89.1508 SUMIDERO
	10018	10017	0	1.409	141	1.7	38.545	0.5918	89.0728 MANHOLE
	10018	10017	0	1.409	11032	1.7	37.227	3.4331	89.0156 DELTA_AUXI
	10018	10017	0	1.409	142	1.5	18.181	12.2742	89.1844 POSTE
	10018	10017	0	1.409	142	2	6.264	184.0257	107.3148 ESTRUCTURA
	10018	10017	0	1.409	143	2	6.424	173.3452	107.5324 ESTRUCTURA
	10018	10017	0	1.409	144	2	4.535	167.0024	109.1326 ESTRUCTURA
	10018	10017	0	1.409	145	2	4.405	185.3622	111.1929 ESTRUCTURA
	10018	10017	0	1.409	146	2	4.088	186.4706	109.3811 ESTRUCTURA
	10018	10017	0	1.409	147	2	4.071	164.4847	107.5353 ESTRUCTURA
	10018	10017	0	1.409	148	2	6.347	178.3834	107.5354 ESTRUCTURA
	10018	10017	0	1.409	149	2	4.008	179.09	110.273 ESTRUCTURA
	10018	10017	0	1.409	150	2	1.789	174.5754	107.0956 ESTRUCTURA
	10018	10017	0	1.409	151	2.9	1.866	173.1744	100.2236 C_BATEA
	10018	10017	0	1.409	152	2.9	1.811	154.3104	96.1133 ESTRUCTURA
	10018	10017	0	1.409	153	2.9	1.73	191.2816	99.2253 ESTRUCTURA
	10018	10017	0	1.409	154	1.7	1.516	174.48	98.2958 ESTRUCTURA
	10018	10017	0	1.409	155	1.7	1.525	176.3816	101.5028 C_CLAVE
	10018	10017	0	1.409	156	1.7	10.019	250.0344	90.5533 TERRENO
	10018	10017	0	1.409	157	1.7	4.36	193.5205	97.3804 TERRENO
	10018	10017	0	1.409	158	1.7	1.596	210.4801	88.3054 TERRENO
	10018	10017	0	1.409	159	1.7	1.402	155.5658	88.2234 TERRENO
	10018	10017	0	1.409	160	1.7	1.661	142.5129	101.4118 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10018	10017	0	1.409	161	1.7	2.233	149.0132	92.3209	TERRENO
	10018	10017	0	1.409	162	1.7	5.439	163.2427	102.0103	TERRENO
	10018	10017	0	1.409	163	1.7	6.097	142.0614	97.3635	TERRENO
	10018	10017	0	1.409	164	1.7	5.938	125.0314	94.3234	TERRENO
	10018	10017	0	1.409	165	1.7	7.64	104.3349	93.1522	TERRENO
	10018	10017	0	1.409	166	1.7	9.598	98.4049	94.2959	TERRENO
	10018	10017	0	1.409	167	1.7	11.446	98.0114	95.1945	TERRENO
	10018	10017	0	1.409	168	1.7	6.822	62.5748	87.1937	PARAMENTO
	10018	10017	0	1.409	169	1.7	4.454	312.2442	82.4127	PARAMENTO
	10018	10017	0	1.409	170	1.7	9.2	40.4459	87.1318	PARAMENTO
	10018	10017	0	1.409	171	1.7	7.111	280.4327	87.3703	PARAMENTO
	10018	10017	0	1.409	172	1.7	7.593	292.4019	86.4239	PARAMENTO
	10018	10017	0	1.409	173	1.7	11.264	73.0748	89.1227	PARAMENTO
	10018	10017	0	1.409	174	1.7	2.385	317.1735	82.4456	POSTE
	10018	10017	0	1.409	175	1.7	18.169	352.1854	88.4859	POSTE
	10018	10017	0	1.409	176	1.7	18.217	348.431	87.1542	PARAMENTO
	10018	10017	0	1.409	177	1.7	16.504	20.4323	84.0611	PARAMENTO
	11032	10018	0	1.488	10018	1.7	37.205	0	90.1304	
SD	90.90.1304									
	11032	10018	0	1.488	11033	1.7	52.034	65.0408	90.0435	DELTA_AUXI
	11032	10018	0	1.488	178	1.7	22.328	175.0928	88.5245	ANDEN
	11032	10018	0	1.488	179	1.7	22.361	179.0536	88.4918	ANDEN
	11032	10018	0	1.488	180	1.7	22.56	167.3806	88.4736	ANDEN
	11032	10018	0	1.488	181	1.7	22.936	164.0349	88.4736	ANDEN
	11032	10018	0	1.488	182	1.7	21.433	183.4806	88.5503	PARAMENTO
	11032	10018	0	1.488	183	1.7	23.515	159.0627	88.2728	PARAMENTO
	11032	10018	0	1.488	184	1.7	23.413	162.2932	88.4332	POSTE
	11032	10018	0	1.488	185	1.7	5.089	199.5941	85.5904	POSTE
	11032	10018	0	1.488	186	1.7	4.729	128.4212	86.5326	ANDEN
	11032	10018	0	1.488	187	1.7	1.149	160.3156	80.0341	ANDEN
	11032	10018	0	1.488	188	1.7	1.047	253.0102	79.282	ANDEN
	11032	10018	0	1.488	189	1.7	6.253	126.3442	87.3354	ANDEN
	11032	10018	0	1.488	190	1.7	3.015	87.1559	87.4006	ANDEN
	11032	10018	0	1.488	191	1.7	2.795	57.4237	87.0109	ANDEN
	11032	10018	0	1.488	192	1.7	6.673	126.1819	87.4032	POSTE
	11032	10018	0	1.488	193	1.7	5.046	119.0408	88.1809	ANDEN
	11032	10018	0	1.488	194	1.7	8.791	40.0802	89.2044	PARAMENTO
	11032	10018	0	1.488	195	1.7	8.914	120.1202	85.1438	PARAMENTO
	11032	10018	0	1.488	196	1.7	15.667	98.1318	86.5725	PARAMENTO
	11032	10018	0	1.488	197	1.7	15.433	95.5629	87.0016	PARAMENTO
	11032	10018	0	1.488	198	1.7	18.887	90.2518	87.221	PARAMENTO
	11032	10018	0	1.488	199	1.7	12.003	53.585	89.225	PARAMENTO
	11032	10018	0	1.488	200	1.7	30.432	61.2548	89.5144	ANDEN
	11032	10018	0	1.488	201	1.7	30.387	64.1518	89.5801	ANDEN
	11032	10018	0	1.488	202	1.7	30.723	69.4627	89.5802	ANDEN
	11032	10018	0	1.488	203	1.7	30.961	72.1644	89.5528	ANDEN
	11032	10018	0	1.488	204	2.2	27.317	85.5242	87.2905	PARAMENTO
	11032	10018	0	1.488	205	2.2	28.311	79.5047	88.3657	PARAMENTO
	11032	10018	0	1.488	206	1.7	37.863	68.18	90.0822	ANDEN
	11032	10018	0	1.488	207	1.7	38.047	70.3435	90.0511	ANDEN
	11032	10018	0	1.488	208	1.7	26.039	79.1104	88.5232	POSTE
	11032	10018	0	1.488	209	1.7	40.98	61.3041	89.5927	ANDEN
	11032	10018	0	1.488	210	1.7	48.619	63.1852	90.0628	ANDEN
	11033	11032	0	1.444	11032	1.7	52.047	0	89.2525	
SD	89.89.2525									
	11033	11032	0	1.444	211	1.7	12.981	13.2648	88.3958	SUMIDERO
	11033	11032	0	1.444	212	1.7	12.081	12.153	88.3403	SUMIDERO
	11033	11032	0	1.444	213	1.7	3.744	40.0813	83.2814	PUENTE
	11033	11032	0	1.444	214	1.7	3.756	39.2249	81.4337	PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11033	11032	0	1.444	215	1.7	10.813	33.2822	87.5746	PUENTE
11033	11032	0	1.444	216	1.7	9.862	34.0012	87.3006	PUENTE
11033	11032	0	1.444	217	1.7	4.05	53.3401	82.0847	PUENTE
11033	11032	0	1.444	218	1.7	9.78	27.5614	87.394	PUENTE
11033	11032	0	1.444	219	1.7	9.777	29.3412	86.5124	PUENTE
11033	11032	0	1.444	220	1.7	9.769	28.0824	87.0533	PUENTE
11033	11032	0	1.444	221	1.7	9.795	29.5505	86.0458	PUENTE
11033	11032	0	1.444	222	1.7	9.799	31.2948	86.0154	PUENTE
11033	11032	0	1.444	223	1.7	9.813	31.36	85.1638	PUENTE
11033	11032	0	1.444	224	1.7	9.849	33.0055	85.1017	PUENTE
11033	11032	0	1.444	225	1.7	9.828	33.2936	84.2005	PUENTE
11033	11032	0	1.444	226	1.7	6.787	35.4052	81.2302	PUENTE
11033	11032	0	1.444	227	1.7	6.768	35.2729	82.3714	PUENTE
11033	11032	0	1.444	228	1.7	6.765	33.1653	82.3714	PUENTE
11033	11032	0	1.444	229	1.7	6.738	32.5636	83.5529	PUENTE
11033	11032	0	1.444	230	1.7	6.722	30.4159	83.5723	PUENTE
11033	11032	0	1.444	231	1.7	6.691	30.2102	85.173	PUENTE
11033	11032	0	1.444	232	1.7	6.696	28.2006	85.2306	PUENTE
11033	11032	0	1.444	233	1.7	6.685	27.5002	87.0121	PUENTE
11033	11032	0	1.444	234	1.5	5.213	50.0229	78.3455	PUENTE
11033	11032	0	1.444	235	1.5	4.183	55.1003	75.4156	PUENTE
11033	11032	0	1.444	236	1.7	10.054	41.4256	86.5747	PUENTE
11033	11032	0	1.444	237	1.7	10.046	41.4603	84.3526	PUENTE
11033	11032	0	1.444	238	1.7	9.127	42.3143	83.4817	PUENTE
11033	11032	0	1.444	239	1.7	6.666	35.5109	86.5728	PUENTE
11033	11032	0	1.444	240	1.7	6.646	35.2633	88.3841	PUENTE
11033	11032	0	1.444	241	1.7	10.71	54.0339	86.1418	PUENTE
11033	11032	0	1.444	242	1.7	6.899	45.5047	87.0031	PUENTE
11033	11032	0	1.444	243	1.7	5.232	51.4638	86.0309	PUENTE
11033	11032	0	1.444	244	1.7	5.295	52.2021	84.09	PUENTE
11033	11032	0	1.444	245	1.7	11.591	52.1552	86.4105	PUENTE
11033	11032	0	1.444	246	1.7	6.922	46.2908	85.4447	PUENTE
11033	11032	0	1.444	247	1.7	11.913	56.1227	86.4807	PUENTE
11033	11032	0	1.444	248	1.7	7.292	54.3704	85.3357	PUENTE
11033	11032	0	1.444	249	1.7	5.752	62.0136	84.2835	PUENTE
11033	11032	0	1.444	250	1.7	5.791	62.2759	82.502	PUENTE
11033	11032	0	1.444	251	1.7	7.348	54.4703	84.212	PUENTE
11033	11032	0	1.444	252	1.7	10.071	60.4619	86.0244	PUENTE
11033	11032	0	1.444	253	1.7	9.793	56.1634	85.4647	PUENTE
11033	11032	0	1.444	254	1.7	10.091	65.1514	81.5032	PUENTE
11033	11032	0	1.444	255	1.7	10.091	60.0315	81.5852	PUENTE
11033	11032	0	1.444	256	1.7	9.056	43.195	81.4718	PUENTE
11033	11032	0	1.444	257	1.7	8.188	44.2529	80.5854	PUENTE
11033	11032	0	1.444	258	1.7	9.471	65.2909	81.1118	PUENTE
11033	11032	0	1.444	259	1.7	10.139	64.2823	81.5328	PUENTE
11033	11032	0	1.444	260	1.7	9.7	64.5313	81.2728	PUENTE
11033	11032	0	1.444	261	1.7	9.467	65.5318	81.1337	PUENTE
11033	11032	0	1.444	262	1.7	9.899	68.4341	81.3909	PUENTE
11033	11032	0	1.444	263	1.5	7.889	62.2602	84.3211	PUENTE
11033	11032	0	1.444	263	1.7	7.927	62.4445	83.0641	PUENTE
11033	11032	0	1.444	264	1.7	6.514	71.0241	81.4703	PUENTE
11033	11032	0	1.444	265	1.7	6.584	70.5021	80.2638	PUENTE
11033	11032	0	1.444	266	1.7	7.961	62.4744	82.0433	PUENTE
11033	11032	0	1.444	267	1.7	8.233	65.5603	82.1602	PUENTE
11033	11032	0	1.444	268	1.7	8.309	66.0843	81.0924	PUENTE
11033	11032	0	1.444	269	1.7	6.974	74.1512	80.5052	PUENTE
11033	11032	0	1.444	270	1.7	7.053	74.1336	79.3314	PUENTE
11033	11032	0	1.444	271	1.7	7.401	77.1415	79.5229	PUENTE
11033	11032	0	1.444	272	1.7	7.568	77.3859	79.1137	PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11033	11032	0	1.444	273	1.7	8.658	69.2102	81.2344	PUENTE
11033	11032	0	1.444	274	1.7	9.401	68.4444	81.1503	PUENTE
11033	11032	0	1.444	275	1.7	7.516	78.2534	79.0526	PUENTE
11033	11032	0	1.444	276	1.7	7.338	80.1151	78.5024	PUENTE
11033	11032	0	1.444	277	1.7	6.683	73.2951	73.241	PUENTE
11033	11032	0	1.444	278	1.7	6.891	71.5608	73.5324	PUENTE
11033	11032	0	1.444	279	1.7	7.745	83.5613	79.1524	PUENTE
11033	11032	0	1.444	280	1.7	6.278	83.5613	77.2311	PUENTE
11033	11032	0	1.444	281	1.7	10.957	77.0749	81.3631	PUENTE
11033	11032	0	1.444	282	1.7	9.529	87.1303	80.5053	PUENTE
11033	11032	0	1.444	283	1.7	1.222	248.2026	81.264	MANHOLE
11033	11032	0	1.444	284	1.7	1.302	297.3646	80.481	MANHOLE
11033	11032	0	1.444	285	1.7	2.215	285.3053	85.1438	MANHOLE
11033	11032	0	1.444	286	1.7	2.259	258.0959	85.5833	MANHOLE
11033	11032	0	1.444	287	1.7	1.584	197.151	79.3226	LINDERO
11033	11032	0	1.444	288	1.7	11.644	197.4522	88.2411	LINDERO
11033	11032	0	1.444	289	1.7	17.872	269.3414	88.2612	LINDERO
11033	11032	0	1.444	290	1.7	8.493	280.0225	88.081	POSTE
11033	11032	0	1.444	291	1.7	32.973	275.0814	89.1706	MANHOLE
11033	11032	0	1.444	292	1.7	32.909	273.3313	89.1707	MANHOLE
11033	11032	0	1.444	293	1.7	33.829	273.3311	89.2525	MANHOLE
11033	11032	0	1.444	294	1.5	33.929	274.4826	89.452	MANHOLE
11033	11032	0	1.444	295	1.7	25.693	343.3759	88.5239	PARAMENTO
11033	11032	0	1.444	296	1.7	19.811	332.3532	88.5708	PARAMENTO
11033	11032	0	1.444	297	1.7	29.04	271.3539	88.0127	PARAMENTO
11033	11032	0	1.444	298	1.7	18.646	263.2938	86.3647	PARAMENTO
11033	11032	0	1.444	299	1.7	10.859	244.4944	88.1841	PARAMENTO
11033	11032	0	1.444	300	1.7	27.357	285.2659	88.3709	PARAMENTO
11033	11032	0	1.444	301	1.7	20.464	287.2034	88.104	PARAMENTO
11033	11032	0	1.444	302	1.7	11.196	322.2546	88.3549	ESTR_PUENT
11033	11032	0	1.444	303	1.7	11.199	322.2545	86.3701	ESTR_PUENT
11033	11032	0	1.444	304	1.7	11.32	322.3616	85.4035	ESTR_PUENT
11033	11032	0	1.444	305	1.7	12.809	319.3917	88.481	ESTR_PUENT
11033	11032	0	1.444	306	1.7	12.99	321.174	88.4401	ESTR_PUENT
11033	11032	0	1.444	307	1.7	11.377	324.3048	88.3831	ESTR_PUENT
11033	11032	0	1.444	308	1.7	11.373	324.1824	86.284	ESTR_PUENT
11033	11032	0	1.444	309	1.7	11.49	324.0146	85.4522	ESTR_PUENT
11033	11032	0	1.444	310	1.7	12.651	335.131	88.4738	ESTR_PUENT
11033	11032	0	1.444	311	1.7	12.678	335.0129	87.1124	ESTR_PUENT
11033	11032	0	1.444	312	1.7	12.738	334.5827	86.1459	ESTR_PUENT
11033	11032	0	1.444	313	1.7	14.112	330.5541	88.5303	ESTR_PUENT
11033	11032	0	1.444	314	1.7	14.314	332.3215	88.5303	ESTR_PUENT
11033	11032	0	1.444	315	1.7	12.982	336.4144	88.4718	ESTR_PUENT
11033	11032	0	1.444	316	1.7	12.927	336.3204	87.1318	ESTR_PUENT
11033	11032	0	1.444	317	1.7	13.002	336.1004	86.2437	ESTR_PUENT
11033	11032	0	1.444	318	1.7	19.633	18.2235	88.152	POSTE
10022	10020	0	1.401	10020	1.7	72.509	0	89.2442	
SD	89.89.2442								
10022	10020	0	1.401	319	1.7	72.504	0.4217	89.2509	MANHOLE
10022	10020	0	1.401	320	1.5	5.136	283.5405	96.3133	DESCARGA
10022	10020	0	1.401	321	1.5	5.175	284.0928	96.121	DESCARGA
10022	10020	0	1.401	322	2.15	6.954	283.3402	89.2116	DESCARGA
10022	10020	0	1.401	323	2.15	6.891	284.1401	89.1558	DESCARGA
10022	10020	0	1.401	324	2.15	7.92	284.1305	89.4926	DESCARGA
10022	10020	0	1.401	325	2.9	6.876	281.0928	95.1159	DESCARGA
10022	10020	0	1.401	326	2.9	6.85	274.5434	99.2222	DESCARGA
10022	10020	0	1.401	327	2.9	6.169	282.3236	98.3623	DESCARGA
10022	10020	0	1.401	328	2.9	6.151	281.095	98.263	C_BATEA
10022	10020	0	1.401	329	1.7	6.142	282.3214	99.2253	C_CLAVE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10022	10020	0	1.401	330	1.5	6.142	282.0509	95.2433	DESCARGA
	10022	10020	0	1.401	331	1.5	9.584	282.4717	96.5542	TERRENO
	10022	10020	0	1.401	332	1.5	8.191	281.5352	96.3353	TERRENO
	10022	10020	0	1.401	333	1.5	7.545	278.2224	104.561	TERRENO
	10022	10020	0	1.401	334	2.9	5.198	283.403	97.245	DESCARGA
	10022	10020	0	1.401	335	2.9	5.23	275.084	103.254	DESCARGA
	10022	10020	0	1.401	336	5	6.897	273.1343	99.0602	DESCARGA
	10022	10020	0	1.401	336	5	5.313	272.4314	105.5741	DESCARGA
	10022	10020	0	1.401	337	1.7	6.275	274.4949	112.5848	DESCARGA
	10022	10020	0	1.421	10020	1.7	72.515	0	89.2524	
SD	89.89.2524									
	10022	10020	0	1.421	338	1.7	4.732	286.323	96.1141	TERRENO
	10022	10020	0	1.421	339	1.7	3.37	271.3605	99.0836	TERRENO
	10022	10020	0	1.421	340	1.7	3.645	244.0503	104.4801	TERRENO
	10022	10020	0	1.421	341	1.7	4.224	227.0551	105.3542	TERRENO
	10022	10020	0	1.421	342	2.5	4.567	206.5426	99.3743	TERRENO
	10022	10020	0	1.421	343	2.6	9.956	163.2948	112.5741	TERRENO
	10022	10020	0	1.421	344	1.7	9.193	163.1928	106.1319	TERRENO
	10022	10020	0	1.421	345	2.9	8.311	187.033	111.0524	TERRENO
	10022	10020	0	1.421	346	2.9	7.28	185.4759	102.4246	TERRENO
	10022	10020	0	1.421	347	1.7	4.674	4.4436	79.1434	ESTRUCTURA
	10022	10020	0	1.421	348	1.7	5.214	13.3045	66.0155	ESTRUCTURA
	10022	10020	0	1.421	349	1.7	5.63	12.2226	67.4914	ESTRUCTURA
	10022	10020	0	1.421	350	1.7	5.516	4.3111	67.0624	ESTRUCTURA
	10022	10020	0	1.421	351	1.7	5.088	4.5514	65.3432	ESTRUCTURA
	10022	10020	0	1.421	352	1.7	5.178	3.5343	79.37	ESTRUCTURA
	10022	10020	0	1.421	353	1.7	5.564	12.3006	69.4909	ESTRUCTURA
	10022	10020	0	1.421	354	1.7	5.082	13.0512	68.0135	ESTRUCTURA
	10022	10020	0	1.421	355	2.9	6.143	36.095	69.425	ESTRUCTURA
	10022	10020	0	1.421	356	3.1	6.585	34.0759	69.0741	ESTRUCTURA
	10022	10020	0	1.421	357	2	6.214	35.5358	67.4049	ESTRUCTURA
	10022	10020	0	1.421	358	2	6.529	33.2341	68.5233	ESTRUCTURA
	10022	10020	0	1.421	359	2	6.212	27.2559	67.3139	ESTRUCTURA
	10022	10020	0	1.421	360	2	5.857	29.4541	65.4901	ESTRUCTURA
	10022	10020	0	1.421	361	2	5.749	29.3331	67.3444	ESTRUCTURA
	10022	10020	0	1.421	362	1.7	6.029	26.5859	71.4008	ESTRUCTURA
	10022	10020	0	1.421	363	2.5	6.166	25.3343	59.0139	TUBO_ACUED
	10022	10020	0	1.421	364	1.7	5.487	18.2713	61.274	TUBO_ACUED
	10022	10020	0	1.421	365	0.085	2.284	51.2708	63.4505	TUBO_ACUED
	10020	10019	0.0001	1.498	10019	1.7	50.738	0.0001	87.2702	
SD	87.87.2702									
	10020	10019	0.0001	1.498	11034	1.7	35.49	259.1134	89.5559	DELTA
	10020	10019	0.0001	1.498	366	1.7	38.127	259.0917	90.0842	MANHOLE
	10020	10019	0.0001	1.498	367	1.7	38.017	260.1029	90.0935	MANHOLE
	10020	10019	0.0001	1.498	368	1.7	37.311	260.0513	90.0756	MANHOLE
	10020	10019	0.0001	1.498	369	1.7	37.407	258.5807	90.0756	MANHOLE
	10020	10019	0.0001	1.498	370	1.7	28.44	258.4142	89.0151	PARAMENTO
	10020	10019	0.0001	1.498	371	1.7	17.272	260.1102	90.0435	PARAMENTO
	10020	10019	0.0001	1.498	372	1.7	13.105	265.3756	91.0948	SUMIDERO
	10020	10019	0.0001	1.498	373	1.7	12.561	269.3244	91.2406	SUMIDERO
	10020	10019	0.0001	1.498	374	1.7	17.357	273.4145	90.154	PARAMENTO
	10020	10019	0.0001	1.498	375	1.7	18.431	285.2706	90.0129	PARAMENTO
	10020	10019	0.0001	1.498	376	1.7	19.463	294.1402	89.4902	PARAMENTO
	10020	10019	0.0001	1.498	377	1.7	8.749	343.0155	86.0446	PARAMENTO
	10020	10019	0.0001	1.498	378	1.7	2.077	217.5504	86.0938	POSTE
	10023	10021	0	1.405	10021	1.7	57.124	0	88.2303	
SD	88.88.2303									
	10023	10021	0	1.405	11035	1.7	9.464	219.0455	94.4131	DELTA
	10023	10021	0	1.405	379	1.7	16.85	125.344	95.4209	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



10023	10021	0	1.405	380	1.7	14.261	144.5232	97.1909	TERRENO
10023	10021	0	1.405	381	1.7	6.592	144.2323	94.1708	TERRENO
10023	10021	0	1.405	382	1.7	3.932	156.1119	94.0016	TERRENO
10023	10021	0	1.405	383	1.7	2.117	144.062	90.3346	CANAL
10023	10021	0	1.405	384	1.7	2.356	135.1044	90.1526	CANAL
10023	10021	0	1.405	385	1.7	2.246	138.4436	96.0845	CANAL
10023	10021	0	1.405	386	1.7	4.516	166.0451	99.3005	ESTRUCTURA
10023	10021	0	1.405	387	1.7	4.725	166.3213	100.0539	ESTRUCTURA
10023	10021	0	1.405	388	1.7	4.655	169.2608	102.3449	CANAL
10023	10021	0	1.405	389	1.7	4.574	166.2205	100.3	CANAL
10023	10021	0	1.405	390	1.7	4.51	171.1011	97.3215	CANAL
10023	10021	0	1.405	391	1.7	4.687	183.0849	98.2101	TERRENO
10023	10021	0	1.405	392	1.7	4.499	196.4939	103.2518	TERRENO
10023	10021	0	1.405	393	1.7	5.711	197.472	105.0405	TERRENO
10023	10021	0	1.405	394	2.6	6.881	194.0211	100.1938	TERRENO
10023	10021	0	1.405	395	2.6	5.377	191.3202	107.0229	DES_DOMICI
10023	10021	0	1.405	396	2.6	4.414	199.0616	92.2758	DES_DOMICI
10023	10021	0	1.405	397	2	10.633	193.3908	94.0716	TERRENO
10023	10021	0	1.405	398	2	11.133	182.4129	99.2332	TERRENO
10023	10021	0	1.405	399	2	13.224	174.1539	100.5258	TERRENO
10023	10021	0	1.405	400	2	16.189	186.5233	101.1923	TERRENO
10023	10021	0	1.405	401	1.7	14.749	173.5429	102.0011	TERRENO
10023	10021	0	1.405	402	2.6	11.662	168.5501	106.4634	BORDE_CANO
10023	10021	0	1.405	403	2.6	10.407	171.3852	107.5631	BORDE_CANO
10023	10021	0	1.405	404	2.6	11.592	166.5212	111.4407	CANO
10023	10021	0	1.405	405	4	8.128	179.2849	104.4606	BORDE_CANO
10023	10021	0	1.405	406	4	6.598	176.4054	108.5957	BORDE_CANO
10023	10021	0	1.405	407	4	7.414	170.2454	112.1925	CANO
10023	10021	0	1.405	408	4	5.763	169.3651	101.1145	CANO
10023	10021	0	1.405	409	4	6.023	167.4111	101.2035	CANO
10023	10021	0	1.405	410	4	6.286	173.3123	110.0916	CANO
10023	10021	0	1.405	411	4	5.353	169.4507	97.1408	C_BATEA
10023	10021	0	1.405	412	4	5.33	170.0636	96.164	C_CLAVE
10023	10021	0	1.405	413	3.5	6.083	179.0312	105.5207	ESTRUCTURA
10023	10021	0	1.405	414	3.5	6.178	166.362	105.5944	ESTRUCTURA
10023	10021	0	1.405	415	3.5	5.552	179.015	107.0153	ESTRUCTURA
10023	10021	0	1.405	416	3.5	5.626	166.5215	107.0152	ESTRUCTURA
10023	10021	0	1.405	417	1.7	9.371	97.3809	85.1316	CERRAMIENT
10023	10021	0	1.405	418	1.7	4.892	106.5031	79.2718	CERRAMIENT
10023	10021	0	1.405	419	1.7	1.899	124.1419	91.5228	CANAL
10023	10021	0	1.405	420	1.7	1.565	130.1015	91.0017	CANAL
10023	10021	0	1.405	421	1.7	1.768	127.545	94.0238	CANAL
10023	10021	0	1.405	422	1.7	2.066	135.1652	80.5304	CERRAMIENT
10023	10021	0	1.405	423	1.7	2.654	235.5704	81.2548	CERRAMIENT
10023	10021	0	1.405	424	2	4.131	249.4621	83.1838	PARAMENTO
10023	10021	0	1.405	425	1.7	10.514	334.4126	88.0743	PARAMENTO
10023	10021	0	1.405	426	1.7	8.822	24.2236	84.3123	PARAMENTO
10023	10021	0	1.405	427	1.7	21.693	7.0921	86.2854	PARAMENTO
10023	10021	0	1.405	428	1.7	2.626	92.4902	82.1803	POSTE
10023	10021	0	1.405	429	1.7	10.442	96.3845	85.0314	PARAMENTO
10023	10021	0	1.405	430	1.7	2.165	215.2141	79.3418	MANHOLE
11035	10023	359.5959	1.449	10023	1.7	9.515	359.5959	82.08	
SD	82.82.0800								
11035	10023	359.5959	1.449	431	1.5	17.607	34.5002	87.3015	DES_DOMICI
11035	10023	359.5959	1.449	432	1.5	17.659	33.5252	85.071	DES_DOMICI
11035	10023	359.5959	1.449	433	1.7	22.146	74.3918	102.2019	RIO
11035	10023	359.5959	1.449	434	1.7	17.512	84.0415	105.5432	RIO
11035	10023	359.5959	1.449	435	2	15.587	85.1924	107.2102	RIO
11035	10023	359.5959	1.449	436	2	14.83	82.0804	108.5525	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		11035	10023	359.5959	1.449	437	2	9.1	65.1939	109.3403	BORDE_CANO
		11035	10023	359.5959	1.449	438	2	9.203	56.2322	109.3156	BORDE_CANO
		11035	10023	359.5959	1.449	439	2	6.808	146.3338	93.1131	TERRENO
		11035	10023	359.5959	1.449	440	2	7.199	175.4143	89.0804	TERRENO
		11035	10023	359.5959	1.449	441	2	7.551	201.4212	87.2554	TERRENO
		11035	10023	359.5959	1.449	442	1.7	6.463	286.312	84.2813	PARAMENTO
		11035	10023	359.5959	1.449	443	1.7	7.399	272.0119	85.1041	PARAMENTO
		11035	10023	359.5959	1.449	444	1.7	5.62	257.0725	85.0603	PARAMENTO
		11035	10023	359.5959	1.449	445	1.7	9.722	242.1029	86.2425	PARAMENTO
		11035	10023	359.5959	1.449	446	1.7	11.943	236.5745	87.2454	PARAMENTO
		11035	10023	359.5959	1.449	447	1.7	11.606	231.1201	88.3432	PARAMENTO
		11035	10023	359.5959	1.449	448	1.7	15.613	222.2839	90.1843	PARAMENTO
		11035	10023	359.5959	1.449	449	1.7	17.521	220.0507	89.3236	PARAMENTO
		11035	10023	359.5959	1.449	450	2	10.493	203.2846	93.3406	DES_DOMICI
		11035	10023	359.5959	1.449	451	2	10.557	211.1005	92.2903	DES_DOMICI
		11035	10023	359.5959	1.449	452	2	12.442	212.5047	94.4511	DES_DOMICI
		11035	10023	359.5959	1.449	453	2	12.476	214.541	94.3543	DES_DOMICI
		11035	10023	359.5959	1.449	454	2	15.293	215.4943	89.3155	DES_DOMICI
		11035	10023	359.5959	1.449	455	2	15.593	217.2525	89.2412	DES_DOMICI
		11035	10023	359.5959	1.449	456	2.9	13.231	214.0518	93.2823	DES_DOMICI
		11035	10023	359.5959	1.449	457	2.9	13.207	214.4555	92.2549	DES_DOMICI
		11035	10023	359.5959	1.449	458	3.4	13.584	215.0027	93.3327	DES_DOMICI
		11035	10023	359.5959	1.449	459	3.4	14.021	215.2027	88.5616	DES_DOMICI
		11035	10023	359.5959	1.449	460	1.7	12.45	199.4737	94.4639	TERRENO
		11035	10023	359.5959	1.449	461	1.7	14.363	199.2619	94.3724	TERRENO
		11035	10023	359.5959	1.449	462	1.7	15.044	211.3456	93.0339	TERRENO
		11035	10023	359.5959	1.449	463	1.7	17.165	210.3816	92.0941	TERRENO
		11035	10023	359.5959	1.449	464	1.7	12.234	186.2314	95.5946	TERRENO
		11035	10023	359.5959	1.449	465	2.6	13.625	190.1411	91.3549	TERRENO
		11035	10023	359.5959	1.449	11036	1.5	17.434	56.3054	91.3904	DELTA
		11036	11035	0	1.395	11035	1.7	17.442	0	87.1303	
SD	87.87.1303										
		11036	11035	0	1.395	466	2	15.972	147.0844	84.312	DES_DOMICI
		11036	11035	0	1.395	467	2	16.418	145.3655	84.0955	DES_DOMICI
		11036	11035	0	1.395	468	2	23.395	160.105	86.5249	DES_DOMICI
		11036	11035	0	1.395	469	2	23.542	159.1354	86.0654	DES_DOMICI
		11036	11035	0	1.395	470	2	33.416	160.4515	86.4504	DES_DOMICI
		11036	11035	0	1.395	471	2	33.464	160.1924	86.4504	DES_DOMICI
		11036	11035	0	1.395	472	2	33.822	160.1607	86.4804	PARAMENTO
		11036	11035	0	1.395	473	1.7	14.585	133.3626	81.45	PARAMENTO
		11036	11035	0	1.395	474	1.7	9.117	120.5734	78.5624	PARAMENTO
		11036	11035	0	1.395	475	1.7	7.176	76.5016	75.0645	PARAMENTO
		11036	11035	0	1.395	476	1.7	8.008	76.4815	74.5358	PARAMENTO
		11036	11035	0	1.395	477	1.7	20.816	187.0728	99.3347	RIO
		11036	11035	0	1.395	478	1.7	15.305	192.3907	101.2811	RIO
		11036	11035	0	1.395	479	1.7	9.879	212.075	109.38	RIO
		11036	11035	0	1.395	480	1.7	11.464	135.0455	85.5313	DES_DOMICI
		11036	11035	0	1.395	481	1.7	12.031	132.1827	83.1248	DES_DOMICI
		10025	NO	359.5953	1.454	NO	1.7	69.361	359.5953	88.2605	
SD	88.88.2605										
		10025	10024	359.5953	1.454	10024	1.7	69.364	0	88.2549	
SD	88.88.2549										
		10025	10024	359.5953	1.454	482	1.7	65.441	0.1354	88.2138	MANHOLE
		10025	10024	359.5953	1.454	483	1.7	4.486	248.3144	82.143	PARAMENTO
		10025	10024	359.5953	1.454	484	1.7	4.695	246.5723	82.4252	CERRAMIENT
		10025	10024	359.5953	1.454	485	1.7	3.24	240.1811	85.2101	POSTE
		10025	10024	359.5953	1.454	486	1.7	31.404	3.1401	88.1142	MANHOLE
		10025	10024	359.5953	1.454	487	1.7	6.396	115.3944	86.5857	CERRAMIENT
		10025	10024	359.5953	1.454	488	1.7	7.773	112.5343	87.3546	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10025	10024	359.5953	1.454	489	1.7	15.141	343.4241	87.1322	PARAMENTO
	10025	10024	359.5953	1.454	490	1.7	7.75	74.2254	86.0249	PARAMENTO
	10025	10024	359.5953	1.454	491	1.7	4.886	63.2847	84.3212	PARAMENTO
	10025	10024	359.5953	1.454	492	1.7	26.919	8.5416	87.5219	PARAMENTO
	10025	10024	359.5953	1.454	493	1.7	7.994	22.4502	87.2911	POSTE
	10025	10024	359.5953	1.454	494	1.7	1.372	177.3116	76.3926	CAM_ACUED
	10025	10024	359.5953	1.454	11037	1.7	7.385	160.2655	99.4812	DELTA
	11037	10025	0.0001	1.321	10025	1.7	7.511	0.0001	75.4007	
SD	75.75.4007									
	11037	10025	0.0001	1.321	495	1.7	7.317	136.3529	111.3254	C_BATEA
	11037	10025	0.0001	1.321	496	1.7	7.184	135.4049	110.0636	C_CLAVE
	11037	10025	0.0001	1.321	497	1.7	7.442	136.2424	113.4635	DESCARGA
	11037	10025	0.0001	1.321	498	1.7	7.344	137.0504	113.2225	BORDE_CANO
	11037	10025	0.0001	1.321	499	1.7	7.346	135.3428	112.5045	BORDE_CANO
	11037	10025	0.0001	1.321	500	1.7	8.405	151.2303	120.3612	RIO
	11037	10025	0.0001	1.321	501	1.7	8.989	149.4522	119.2249	DESCARGA
	11037	10025	0.0001	1.321	502	1.7	9.456	145.4631	117.1905	RIO
	11037	10025	0.0001	1.321	503	1.7	9.403	145.4137	117.3223	BORDE_CANO
	11037	10025	0.0001	1.321	504	1.7	13.229	136.0022	109.0616	RIO
	11037	10025	0.0001	1.321	505	1.7	8.409	246.2533	119.3017	RIO
	11037	10025	0.0001	1.321	506	1.7	15.595	310.1149	82.1316	PARAMENTO
	11037	10025	0.0001	1.321	507	1.7	15.159	300.2055	82.5034	PARAMENTO
	11037	10025	0.0001	1.321	508	1.7	11.799	293.1622	90.165	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10001	10000	0	1.409	10000	1.7	18.247	0	89.1347	
SD	89.89.1347									
	10001	10000	0	1.409	1	1.7	12.228	115.0315	91.5156	BORDE_VIA
	10001	10000	0	1.409	2	1.7	16.415	122.0223	91.3656	BORDE_VIA
	10001	10000	0	1.409	3	1.7	15.304	131.4127	91.3408	BORDE_VIA
	10001	10000	0	1.409	4	1.7	9.168	127.1644	91.4926	BORDE_VIA
	10001	10000	0	1.409	5	2.9	5.145	334.3852	85.5311	ESTRUCTURA
	10001	10000	0	1.409	6	1.7	5.809	323.5558	98.592	ESTRUCTURA
	10001	10000	0	1.409	7	1.7	5.641	326.414	95.0858	DES_DOMICI
	10001	10000	0	1.409	8	1.7	5.686	326.0047	89.0941	DES_DOMICI
	10001	10000	0	1.409	9	1.7	5.666	328.1036	96.0641	ESTRUCTURA
	10001	10000	0	1.409	10	1.7	5.337	315.4504	90.5127	DES_DOMICI
	10001	10000	0	1.409	11	2	4.293	295.3601	102.2114	ESTRUCTURA
	10001	10000	0	1.409	12	1.7	6.482	288.1404	93.081	TERRENO
	10001	10000	0	1.409	13	2.3	2.889	308.4756	100.3822	ESTRUCTURA
	10001	10000	0	1.409	14	1.7	11.987	299.1709	90.4519	TERRENO
	10001	10000	0	1.409	15	1.7	9.357	305.2233	91.2916	TERRENO
	10001	10000	0	1.409	16	1.7	5.904	253.2724	110.4823	TERRENO
	10001	10000	0	1.409	17	1.5	4.865	339.2434	90.5404	TERRENO
	10001	10000	0	1.409	18	1.7	2.425	328.4231	95.0015	TERRENO
	10001	10000	0	1.409	19	2.4	2.591	246.0646	111.3648	ESTRUCTURA
	10001	10000	0	1.409	20	2.4	9.026	202.3528	121.5138	BORDE_CANO
	10001	10000	0	1.409	21	2.4	9.511	224.2101	120.0307	BORDE_CANO
	10001	10000	0	1.409	22	2.4	9.304	216.2138	120.3426	BORDE_CANO
	10001	10000	0	1.409	23	2.4	12.744	259.053	111.533	RIO
	10001	10000	0	1.409	24	2.4	4.319	259.1624	121.1301	ESTRUCTURA
	10001	10000	0	1.409	25	2.4	4.432	259.4844	123.301	ESTRUCTURA
	10001	10000	0	1.409	26	2.9	3.015	254.1133	124.2934	ESTRUCTURA
	10001	10000	0	1.409	27	2.9	3.108	250.1311	126.0736	ESTRUCTURA
	10001	10000	0	1.409	28	2.9	3.988	272.3914	116.152	ESTRUCTURA
	10001	10000	0	1.409	29	2.9	3.899	273.0843	112.453	ESTRUCTURA
	10001	10000	0	1.409	30	2.9	2.993	277.1458	123.3524	ESTRUCTURA
	10001	10000	0	1.409	31	2.9	3.065	282.5937	120.2526	ESTRUCTURA
	10001	10000	0	1.409	32	2.9	4.019	295.4155	110.4733	ESTRUCTURA
	10001	10000	0	1.409	33	2.9	3.244	305.0826	117.1304	ESTRUCTURA
	10001	10000	0	1.409	34	2.9	3.12	306.5119	113.4046	ESTRUCTURA
	10001	10000	0	1.409	35	2.9	4.05	298.2211	108.5725	ESTRUCTURA
	10001	10000	0	1.409	36	2.9	4.046	321.3755	106.4937	ESTRUCTURA
	10001	10000	0	1.409	37	2.9	4.76	310.4529	104.2514	ESTRUCTURA
	10001	10000	0	1.409	38	2.9	4.075	321.4402	108.0551	ESTRUCTURA
	10001	10000	0	1.409	39	2.9	4.749	312.2016	105.4904	ESTRUCTURA
	10001	10000	0	1.409	40	2.9	5.64	327.1901	97.5256	DESCARGA
	10001	10000	0	1.409	41	2.9	5.666	327.2055	101.3046	DESCARGA
	10001	10000	0	1.409	42	2.9	5.675	327.154	102.0239	DESCARGA
	10001	10000	0	1.409	43	2.9	6.033	323.2043	101.0754	ESTRUCTURA
	10001	10000	0	1.409	44	2.9	5.285	332.3112	101.2223	ESTRUCTURA
	10001	10000	0	1.409	45	2.9	3.614	254.0828	118.3044	DESCARGA
	10003	10002	0	1.478	10002	1.7	41.012	0	89.58	
SD	89.89.5800									
	10003	10002	0	1.478	46	1.7	34.981	0.4716	89.5314	MANHOLE
	10003	10002	0	1.478	47	1.7	11.576	3.1809	89.1117	MANHOLE
	10003	10002	0	1.478	48	1.7	13.831	17.3154	89.501	SUMIDERO
	10003	10002	0	1.478	49	1.7	13.295	19.4105	89.511	SUMIDERO
	10003	10002	0	1.478	50	1.7	6.635	50.2943	88.1719	MANHOLE
	10003	10002	0	1.478	51	1.7	2.161	27.5401	84.3436	MANHOLE
	10003	10002	0	1.478	52	1.7	26.754	243.233	89.051	MANHOLE
	10003	10002	0	1.478	53	1.7	3.559	215.5518	86.4623	POSTE
	10013	10011	0	1.448	10011	1.7	56.806	0	89.321	
SD	89.89.3210									



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10013	10011	0	1.448	11031	1.7	10.269	152.0057	90.155	DELTA_AUXI
	11031	10013	0	1.361	10013	1.7	10.29	0	86.3324	
SD	86.86.3324									
	11031	10013	0	1.361	53	1.7	28.248	14.525	88.5942	MANHOLE
	11031	10013	0	1.361	54	1.7	28.392	12.3918	89.0334	MANHOLE
	11031	10013	0	1.361	55	2	12.727	324.1251	88.2514	TERRENO
	11031	10013	0	1.361	56	1.7	6.837	306.452	91.5551	TERRENO
	11031	10013	0	1.361	57	1.7	3.383	282.2016	97.39	TERRENO
	11031	10013	0	1.361	58	1.7	2.813	275.1745	113.3841	DES_DOMICI
	11031	10013	0	1.361	59	1.7	1.249	257.2059	101.1619	TERRENO
	11031	10013	0	1.361	60	1.7	2.657	220.45	95.3555	TERRENO
	11031	10013	0	1.361	61	1.7	2.577	223.2443	118.104	DES_DOMICI
	11031	10013	0	1.361	62	1.7	4.84	178.0544	94.3008	TERRENO
	11031	10013	0	1.361	63	1.7	8.45	161.54	89.5633	TERRENO
	11031	10013	0	1.361	64	1.7	18.843	158.5736	88.2128	TERRENO
	11031	10013	0	1.361	65	1.7	4.349	210.2451	99.124	ESTRUCTURA
	11031	10013	0	1.361	66	1.7	4.475	209.4756	98.5451	ESTRUCTURA
	11031	10013	0	1.361	67	1.7	4.485	211.4326	108.2409	ESTRUCTURA
	11031	10013	0	1.361	68	1.7	4.742	210.0635	107.2928	ESTRUCTURA
	11031	10013	0	1.361	69	1.7	4.179	190.5008	99.2313	ESTRUCTURA
	11031	10013	0	1.361	70	1.7	4.368	190.1221	99.0504	ESTRUCTURA
	11031	10013	0	1.361	71	1.7	6.264	227.1906	110.4753	ESTRUCTURA
	11031	10013	0	1.361	72	1.7	6.349	225.5731	110.1437	ESTRUCTURA
	11031	10013	0	1.361	73	2.3	4.706	208.4036	106.5403	ESTRUCTURA
	11031	10013	0	1.361	74	2.3	4.784	208.5805	106.5849	ESTRUCTURA
	11031	10013	0	1.361	75	2.3	4.603	194.5019	107.2806	ESTRUCTURA
	11031	10013	0	1.361	76	2.3	4.748	193.3539	108.0307	ESTRUCTURA
	11031	10013	0	1.361	77	2.3	4.864	208.2633	110.544	ESTRUCTURA
	11031	10013	0	1.361	78	2.3	4.854	193.5908	111.1052	ESTRUCTURA
	11031	10013	0	1.361	79	2.3	5.227	205.3627	110.3737	ESTRUCTURA
	11031	10013	0	1.361	80	2.3	5.526	193.1329	109.4325	ESTRUCTURA
	11031	10013	0	1.361	81	2.3	4.917	191.3559	106.4116	ESTRUCTURA
	11031	10013	0	1.361	82	2.3	4.884	192.5004	106.5058	ESTRUCTURA
	11031	10013	0	1.361	83	2.3	5.658	192.5225	111.204	ESTRUCTURA
	11031	10013	0	1.361	84	2.3	4.586	191.4712	107.3046	ESTRUCTURA
	11031	10013	0	1.361	85	2.3	4.591	193.3854	107.3339	ESTRUCTURA
	11031	10013	0	1.361	86	2.3	6.305	192.4729	111.223	ESTRUCTURA
	11031	10013	0	1.361	87	2.3	6.874	193.0347	110.1647	ESTRUCTURA
	11031	10013	0	1.361	88	2.3	6.986	192.5425	111.2125	ESTRUCTURA
	11031	10013	0	1.361	89	2.3	7.472	193.0739	110.5947	ESTRUCTURA
	11031	10013	0	1.361	90	2.3	7.526	192.3243	111.5846	ESTRUCTURA
	11031	10013	0	1.361	91	2.3	7.88	191.4232	111.2121	ESTRUCTURA
	11031	10013	0	1.361	92	2.3	7.769	191.5626	109.1501	ESTRUCTURA
	11031	10013	0	1.361	93	2.3	7.761	191.2313	109.1428	ESTRUCTURA
	11031	10013	0	1.361	94	2.3	8.017	203.2323	109.1628	ESTRUCTURA
	11031	10013	0	1.361	95	2.3	7.928	202.5621	109.3653	ESTRUCTURA
	11031	10013	0	1.361	96	2.3	8.058	202.4625	111.1006	ESTRUCTURA
	11031	10013	0	1.361	97	2.3	7.497	203.0636	112.0853	ESTRUCTURA
	11031	10013	0	1.361	98	2.3	7.414	203.3918	111.0721	ESTRUCTURA
	11031	10013	0	1.361	99	2.3	6.826	203.4218	112.0121	ESTRUCTURA
	11031	10013	0	1.361	100	2.3	6.712	203.5718	110.4802	ESTRUCTURA
	11031	10013	0	1.361	101	2.3	6.166	204.3705	112.0901	ESTRUCTURA
	11031	10013	0	1.361	102	2.3	6.007	204.541	110.3739	ESTRUCTURA
	11031	10013	0	1.361	103	2.3	5.41	206.3812	112.0257	ESTRUCTURA
	11031	10013	0	1.361	104	2.3	4.652	191.5929	108.5657	ESTRUCTURA
	11031	10013	0	1.361	105	2.3	4.806	192.4531	108.592	ESTRUCTURA
	11031	10013	0	1.361	106	2.3	5.365	188.2347	102.3205	ESTRUCTURA
	11031	10013	0	1.361	107	2.3	9.014	244.3327	114.262	BORDE_RIO
	11031	10013	0	1.361	108	2.3	8.897	230.0229	114.2956	BORDE_RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11031	10013	0	1.361	109	2.3	9.996	211.244	107.5227 BORDE_RIO
	11031	10013	0	1.361	110	2.9	8.632	205.1147	116.3 BORDE_RIO
	11031	10013	0	1.361	111	2.9	7.763	196.4214	107.2546 BORDE_RIO
	11031	10013	0	1.361	112	2.9	4.499	199.3121	101.1728 CENTRO_TUB
	11031	10013	0	1.361	113	2.9	4.546	198.4543	100.4751 COTA_BATEA
	11031	10013	0	1.361	114	2.9	4.496	199.1235	104.4644 COTA_CLAVE
	10010	10009	0	1.472	10009	1.7	63.729	0	89.3347
SD	89.89.3347								
	10010	10009	0	1.472	10011	1.7	62.94	168.5321	90.0634 DELTA
	10010	10009	0	1.472	115	1.7	66.183	359.4923	89.3649 SUMIDERO
	10010	10009	0	1.472	116	1.7	65.582	0.3528	89.355 SUMIDERO
	10010	10009	0	1.472	117	1.7	63.691	359.5835	89.351 MANHOLE
	10010	10009	0	1.472	118	1.7	24.636	356.5445	89.2204 MANHOLE
	10010	10009	0	1.472	119	1.5	64.567	357.3631	89.2203 PARAMENTO
	10010	10009	0	1.472	120	1.7	31.017	349.2102	88.4809 PARAMENTO
	10010	10009	0	1.472	121	1.7	27.376	349.132	88.4324 CANCHA
	10010	10009	0	1.472	122	1.7	31.465	331.1355	88.5321 CANCHA
	10010	10009	0	1.472	123	1.7	7.81	332.3452	85.4718 CANCHA
	10010	10009	0	1.472	124	1.5	25.089	5.2723	89.1209 PARAMENTO
	10010	10009	0	1.472	125	1.7	22.658	349.4401	89.0054 POSTE
	10010	10009	0	1.472	126	1.7	12.68	344.5958	88.3404 POSTE
	10010	10009	0	1.472	127	1.7	9.044	27.0238	88.2145 POSTE
	10010	10009	0	1.472	128	1.7	3.256	315.3057	86.3721 POSTE
	10010	10009	0	1.472	129	1.7	4.263	305.2215	85.5445 PARAMENTO
	10010	10009	0	1.472	130	1.7	4.084	220.06	87.2628 PARAMENTO
	10010	10009	0	1.472	131	1.7	10.248	126.4122	88.4916 PARAMENTO
	10010	10009	0	1.472	132	1.7	11.79	126.532	88.3224 PARAMENTO
	10010	10009	0	1.472	133	1.7	25.703	152.5809	89.3125 PARAMENTO
	10010	10009	0	1.472	134	1.7	25.633	154.2118	89.2417 PARAMENTO
	10010	10009	0	1.472	135	1.7	30.971	4.1701	88.4844 PARAMENTO
	10010	10009	0	1.472	136	1.5	53.428	162.3056	89.5913 PARAMENTO
	10018	10017	0	1.409	10017	1.7	91.801	0	88.3817
SD	88.88.3817								
	10018	10017	0	1.409	137	1.7	39.992	358.0539	89.1515 SUMIDERO
	10018	10017	0	1.409	138	1.7	39.241	357.505	89.1515 SUMIDERO
	10018	10017	0	1.409	139	1.7	38.188	359.11	89.1241 SUMIDERO
	10018	10017	0	1.409	140	1.7	37.439	359.0053	89.1508 SUMIDERO
	10018	10017	0	1.409	141	1.7	38.545	0.5918	89.0728 MANHOLE
	10018	10017	0	1.409	11032	1.7	37.227	3.4331	89.0156 DELTA_AUXI
	10018	10017	0	1.409	142	1.5	18.181	12.2742	89.1844 POSTE
	10018	10017	0	1.409	142	2	6.264	184.0257	107.3148 ESTRUCTURA
	10018	10017	0	1.409	143	2	6.424	173.3452	107.5324 ESTRUCTURA
	10018	10017	0	1.409	144	2	4.535	167.0024	109.1326 ESTRUCTURA
	10018	10017	0	1.409	145	2	4.405	185.3622	111.1929 ESTRUCTURA
	10018	10017	0	1.409	146	2	4.088	186.4706	109.3811 ESTRUCTURA
	10018	10017	0	1.409	147	2	4.071	164.4847	107.5353 ESTRUCTURA
	10018	10017	0	1.409	148	2	6.347	178.3834	107.5354 ESTRUCTURA
	10018	10017	0	1.409	149	2	4.008	179.09	110.273 ESTRUCTURA
	10018	10017	0	1.409	150	2	1.789	174.5754	107.0956 ESTRUCTURA
	10018	10017	0	1.409	151	2.9	1.866	173.1744	100.2236 C_BATEA
	10018	10017	0	1.409	152	2.9	1.811	154.3104	96.1133 ESTRUCTURA
	10018	10017	0	1.409	153	2.9	1.73	191.2816	99.2253 ESTRUCTURA
	10018	10017	0	1.409	154	1.7	1.516	174.48	98.2958 ESTRUCTURA
	10018	10017	0	1.409	155	1.7	1.525	176.3816	101.5028 C_CLAVE
	10018	10017	0	1.409	156	1.7	10.019	250.0344	90.5533 TERRENO
	10018	10017	0	1.409	157	1.7	4.36	193.5205	97.3804 TERRENO
	10018	10017	0	1.409	158	1.7	1.596	210.4801	88.3054 TERRENO
	10018	10017	0	1.409	159	1.7	1.402	155.5658	88.2234 TERRENO
	10018	10017	0	1.409	160	1.7	1.661	142.5129	101.4118 TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10018	10017	0	1.409	161	1.7	2.233	149.0132	92.3209	TERRENO
	10018	10017	0	1.409	162	1.7	5.439	163.2427	102.0103	TERRENO
	10018	10017	0	1.409	163	1.7	6.097	142.0614	97.3635	TERRENO
	10018	10017	0	1.409	164	1.7	5.938	125.0314	94.3234	TERRENO
	10018	10017	0	1.409	165	1.7	7.64	104.3349	93.1522	TERRENO
	10018	10017	0	1.409	166	1.7	9.598	98.4049	94.2959	TERRENO
	10018	10017	0	1.409	167	1.7	11.446	98.0114	95.1945	TERRENO
	10018	10017	0	1.409	168	1.7	6.822	62.5748	87.1937	PARAMENTO
	10018	10017	0	1.409	169	1.7	4.454	312.2442	82.4127	PARAMENTO
	10018	10017	0	1.409	170	1.7	9.2	40.4459	87.1318	PARAMENTO
	10018	10017	0	1.409	171	1.7	7.111	280.4327	87.3703	PARAMENTO
	10018	10017	0	1.409	172	1.7	7.593	292.4019	86.4239	PARAMENTO
	10018	10017	0	1.409	173	1.7	11.264	73.0748	89.1227	PARAMENTO
	10018	10017	0	1.409	174	1.7	2.385	317.1735	82.4456	POSTE
	10018	10017	0	1.409	175	1.7	18.169	352.1854	88.4859	POSTE
	10018	10017	0	1.409	176	1.7	18.217	348.431	87.1542	PARAMENTO
	10018	10017	0	1.409	177	1.7	16.504	20.4323	84.0611	PARAMENTO
	11032	10018	0	1.488	10018	1.7	37.205	0	90.1304	
SD	90.90.1304									
	11032	10018	0	1.488	11033	1.7	52.034	65.0408	90.0435	DELTA_AUXI
	11032	10018	0	1.488	178	1.7	22.328	175.0928	88.5245	ANDEN
	11032	10018	0	1.488	179	1.7	22.361	179.0536	88.4918	ANDEN
	11032	10018	0	1.488	180	1.7	22.56	167.3806	88.4736	ANDEN
	11032	10018	0	1.488	181	1.7	22.936	164.0349	88.4736	ANDEN
	11032	10018	0	1.488	182	1.7	21.433	183.4806	88.5503	PARAMENTO
	11032	10018	0	1.488	183	1.7	23.515	159.0627	88.2728	PARAMENTO
	11032	10018	0	1.488	184	1.7	23.413	162.2932	88.4332	POSTE
	11032	10018	0	1.488	185	1.7	5.089	199.5941	85.5904	POSTE
	11032	10018	0	1.488	186	1.7	4.729	128.4212	86.5326	ANDEN
	11032	10018	0	1.488	187	1.7	1.149	160.3156	80.0341	ANDEN
	11032	10018	0	1.488	188	1.7	1.047	253.0102	79.282	ANDEN
	11032	10018	0	1.488	189	1.7	6.253	126.3442	87.3354	ANDEN
	11032	10018	0	1.488	190	1.7	3.015	87.1559	87.4006	ANDEN
	11032	10018	0	1.488	191	1.7	2.795	57.4237	87.0109	ANDEN
	11032	10018	0	1.488	192	1.7	6.673	126.1819	87.4032	POSTE
	11032	10018	0	1.488	193	1.7	5.046	119.0408	88.1809	ANDEN
	11032	10018	0	1.488	194	1.7	8.791	40.0802	89.2044	PARAMENTO
	11032	10018	0	1.488	195	1.7	8.914	120.1202	85.1438	PARAMENTO
	11032	10018	0	1.488	196	1.7	15.667	98.1318	86.5725	PARAMENTO
	11032	10018	0	1.488	197	1.7	15.433	95.5629	87.0016	PARAMENTO
	11032	10018	0	1.488	198	1.7	18.887	90.2518	87.221	PARAMENTO
	11032	10018	0	1.488	199	1.7	12.003	53.585	89.225	PARAMENTO
	11032	10018	0	1.488	200	1.7	30.432	61.2548	89.5144	ANDEN
	11032	10018	0	1.488	201	1.7	30.387	64.1518	89.5801	ANDEN
	11032	10018	0	1.488	202	1.7	30.723	69.4627	89.5802	ANDEN
	11032	10018	0	1.488	203	1.7	30.961	72.1644	89.5528	ANDEN
	11032	10018	0	1.488	204	2.2	27.317	85.5242	87.2905	PARAMENTO
	11032	10018	0	1.488	205	2.2	28.311	79.5047	88.3657	PARAMENTO
	11032	10018	0	1.488	206	1.7	37.863	68.18	90.0822	ANDEN
	11032	10018	0	1.488	207	1.7	38.047	70.3435	90.0511	ANDEN
	11032	10018	0	1.488	208	1.7	26.039	79.1104	88.5232	POSTE
	11032	10018	0	1.488	209	1.7	40.98	61.3041	89.5927	ANDEN
	11032	10018	0	1.488	210	1.7	48.619	63.1852	90.0628	ANDEN
	11033	11032	0	1.444	11032	1.7	52.047	0	89.2525	
SD	89.89.2525									
	11033	11032	0	1.444	211	1.7	12.981	13.2648	88.3958	SUMIDERO
	11033	11032	0	1.444	212	1.7	12.081	12.153	88.3403	SUMIDERO
	11033	11032	0	1.444	213	1.7	3.744	40.0813	83.2814	PUENTE
	11033	11032	0	1.444	214	1.7	3.756	39.2249	81.4337	PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11033	11032	0	1.444	215	1.7	10.813	33.2822	87.5746 PUENTE
11033	11032	0	1.444	216	1.7	9.862	34.0012	87.3006 PUENTE
11033	11032	0	1.444	217	1.7	4.05	53.3401	82.0847 PUENTE
11033	11032	0	1.444	218	1.7	9.78	27.5614	87.394 PUENTE
11033	11032	0	1.444	219	1.7	9.777	29.3412	86.5124 PUENTE
11033	11032	0	1.444	220	1.7	9.769	28.0824	87.0533 PUENTE
11033	11032	0	1.444	221	1.7	9.795	29.5505	86.0458 PUENTE
11033	11032	0	1.444	222	1.7	9.799	31.2948	86.0154 PUENTE
11033	11032	0	1.444	223	1.7	9.813	31.36	85.1638 PUENTE
11033	11032	0	1.444	224	1.7	9.849	33.0055	85.1017 PUENTE
11033	11032	0	1.444	225	1.7	9.828	33.2936	84.2005 PUENTE
11033	11032	0	1.444	226	1.7	6.787	35.4052	81.2302 PUENTE
11033	11032	0	1.444	227	1.7	6.768	35.2729	82.3714 PUENTE
11033	11032	0	1.444	228	1.7	6.765	33.1653	82.3714 PUENTE
11033	11032	0	1.444	229	1.7	6.738	32.5636	83.5529 PUENTE
11033	11032	0	1.444	230	1.7	6.722	30.4159	83.5723 PUENTE
11033	11032	0	1.444	231	1.7	6.691	30.2102	85.173 PUENTE
11033	11032	0	1.444	232	1.7	6.696	28.2006	85.2306 PUENTE
11033	11032	0	1.444	233	1.7	6.685	27.5002	87.0121 PUENTE
11033	11032	0	1.444	234	1.5	5.213	50.0229	78.3455 PUENTE
11033	11032	0	1.444	235	1.5	4.183	55.1003	75.4156 PUENTE
11033	11032	0	1.444	236	1.7	10.054	41.4256	86.5747 PUENTE
11033	11032	0	1.444	237	1.7	10.046	41.4603	84.3526 PUENTE
11033	11032	0	1.444	238	1.7	9.127	42.3143	83.4817 PUENTE
11033	11032	0	1.444	239	1.7	6.666	35.5109	86.5728 PUENTE
11033	11032	0	1.444	240	1.7	6.646	35.2633	88.3841 PUENTE
11033	11032	0	1.444	241	1.7	10.71	54.0339	86.1418 PUENTE
11033	11032	0	1.444	242	1.7	6.899	45.5047	87.0031 PUENTE
11033	11032	0	1.444	243	1.7	5.232	51.4638	86.0309 PUENTE
11033	11032	0	1.444	244	1.7	5.295	52.2021	84.09 PUENTE
11033	11032	0	1.444	245	1.7	11.591	52.1552	86.4105 PUENTE
11033	11032	0	1.444	246	1.7	6.922	46.2908	85.4447 PUENTE
11033	11032	0	1.444	247	1.7	11.913	56.1227	86.4807 PUENTE
11033	11032	0	1.444	248	1.7	7.292	54.3704	85.3357 PUENTE
11033	11032	0	1.444	249	1.7	5.752	62.0136	84.2835 PUENTE
11033	11032	0	1.444	250	1.7	5.791	62.2759	82.502 PUENTE
11033	11032	0	1.444	251	1.7	7.348	54.4703	84.212 PUENTE
11033	11032	0	1.444	252	1.7	10.071	60.4619	86.0244 PUENTE
11033	11032	0	1.444	253	1.7	9.793	56.1634	85.4647 PUENTE
11033	11032	0	1.444	254	1.7	10.091	65.1514	81.5032 PUENTE
11033	11032	0	1.444	255	1.7	10.091	60.0315	81.5852 PUENTE
11033	11032	0	1.444	256	1.7	9.056	43.195	81.4718 PUENTE
11033	11032	0	1.444	257	1.7	8.188	44.2529	80.5854 PUENTE
11033	11032	0	1.444	258	1.7	9.471	65.2909	81.1118 PUENTE
11033	11032	0	1.444	259	1.7	10.139	64.2823	81.5328 PUENTE
11033	11032	0	1.444	260	1.7	9.7	64.5313	81.2728 PUENTE
11033	11032	0	1.444	261	1.7	9.467	65.5318	81.1337 PUENTE
11033	11032	0	1.444	262	1.7	9.899	68.4341	81.3909 PUENTE
11033	11032	0	1.444	263	1.5	7.889	62.2602	84.3211 PUENTE
11033	11032	0	1.444	263	1.7	7.927	62.4445	83.0641 PUENTE
11033	11032	0	1.444	264	1.7	6.514	71.0241	81.4703 PUENTE
11033	11032	0	1.444	265	1.7	6.584	70.5021	80.2638 PUENTE
11033	11032	0	1.444	266	1.7	7.961	62.4744	82.0433 PUENTE
11033	11032	0	1.444	267	1.7	8.233	65.5603	82.1602 PUENTE
11033	11032	0	1.444	268	1.7	8.309	66.0843	81.0924 PUENTE
11033	11032	0	1.444	269	1.7	6.974	74.1512	80.5052 PUENTE
11033	11032	0	1.444	270	1.7	7.053	74.1336	79.3314 PUENTE
11033	11032	0	1.444	271	1.7	7.401	77.1415	79.5229 PUENTE
11033	11032	0	1.444	272	1.7	7.568	77.3859	79.1137 PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11033	11032	0	1.444	273	1.7	8.658	69.2102	81.2344	PUENTE
11033	11032	0	1.444	274	1.7	9.401	68.4444	81.1503	PUENTE
11033	11032	0	1.444	275	1.7	7.516	78.2534	79.0526	PUENTE
11033	11032	0	1.444	276	1.7	7.338	80.1151	78.5024	PUENTE
11033	11032	0	1.444	277	1.7	6.683	73.2951	73.241	PUENTE
11033	11032	0	1.444	278	1.7	6.891	71.5608	73.5324	PUENTE
11033	11032	0	1.444	279	1.7	7.745	83.5613	79.1524	PUENTE
11033	11032	0	1.444	280	1.7	6.278	83.5613	77.2311	PUENTE
11033	11032	0	1.444	281	1.7	10.957	77.0749	81.3631	PUENTE
11033	11032	0	1.444	282	1.7	9.529	87.1303	80.5053	PUENTE
11033	11032	0	1.444	283	1.7	1.222	248.2026	81.264	MANHOLE
11033	11032	0	1.444	284	1.7	1.302	297.3646	80.481	MANHOLE
11033	11032	0	1.444	285	1.7	2.215	285.3053	85.1438	MANHOLE
11033	11032	0	1.444	286	1.7	2.259	258.0959	85.5833	MANHOLE
11033	11032	0	1.444	287	1.7	1.584	197.151	79.3226	LINDERO
11033	11032	0	1.444	288	1.7	11.644	197.4522	88.2411	LINDERO
11033	11032	0	1.444	289	1.7	17.872	269.3414	88.2612	LINDERO
11033	11032	0	1.444	290	1.7	8.493	280.0225	88.081	POSTE
11033	11032	0	1.444	291	1.7	32.973	275.0814	89.1706	MANHOLE
11033	11032	0	1.444	292	1.7	32.909	273.3313	89.1707	MANHOLE
11033	11032	0	1.444	293	1.7	33.829	273.3311	89.2525	MANHOLE
11033	11032	0	1.444	294	1.5	33.929	274.4826	89.452	MANHOLE
11033	11032	0	1.444	295	1.7	25.693	343.3759	88.5239	PARAMENTO
11033	11032	0	1.444	296	1.7	19.811	332.3532	88.5708	PARAMENTO
11033	11032	0	1.444	297	1.7	29.04	271.3539	88.0127	PARAMENTO
11033	11032	0	1.444	298	1.7	18.646	263.2938	86.3647	PARAMENTO
11033	11032	0	1.444	299	1.7	10.859	244.4944	88.1841	PARAMENTO
11033	11032	0	1.444	300	1.7	27.357	285.2659	88.3709	PARAMENTO
11033	11032	0	1.444	301	1.7	20.464	287.2034	88.104	PARAMENTO
11033	11032	0	1.444	302	1.7	11.196	322.2546	88.3549	ESTR_PUENT
11033	11032	0	1.444	303	1.7	11.199	322.2545	86.3701	ESTR_PUENT
11033	11032	0	1.444	304	1.7	11.32	322.3616	85.4035	ESTR_PUENT
11033	11032	0	1.444	305	1.7	12.809	319.3917	88.481	ESTR_PUENT
11033	11032	0	1.444	306	1.7	12.99	321.174	88.4401	ESTR_PUENT
11033	11032	0	1.444	307	1.7	11.377	324.3048	88.3831	ESTR_PUENT
11033	11032	0	1.444	308	1.7	11.373	324.1824	86.284	ESTR_PUENT
11033	11032	0	1.444	309	1.7	11.49	324.0146	85.4522	ESTR_PUENT
11033	11032	0	1.444	310	1.7	12.651	335.131	88.4738	ESTR_PUENT
11033	11032	0	1.444	311	1.7	12.678	335.0129	87.1124	ESTR_PUENT
11033	11032	0	1.444	312	1.7	12.738	334.5827	86.1459	ESTR_PUENT
11033	11032	0	1.444	313	1.7	14.112	330.5541	88.5303	ESTR_PUENT
11033	11032	0	1.444	314	1.7	14.314	332.3215	88.5303	ESTR_PUENT
11033	11032	0	1.444	315	1.7	12.982	336.4144	88.4718	ESTR_PUENT
11033	11032	0	1.444	316	1.7	12.927	336.3204	87.1318	ESTR_PUENT
11033	11032	0	1.444	317	1.7	13.002	336.1004	86.2437	ESTR_PUENT
11033	11032	0	1.444	318	1.7	19.633	18.2235	88.152	POSTE
10022	10020	0	1.401	10020	1.7	72.509	0	89.2442	
SD	89.89.2442								
10022	10020	0	1.401	319	1.7	72.504	0.4217	89.2509	MANHOLE
10022	10020	0	1.401	320	1.5	5.136	283.5405	96.3133	DESCARGA
10022	10020	0	1.401	321	1.5	5.175	284.0928	96.121	DESCARGA
10022	10020	0	1.401	322	2.15	6.954	283.3402	89.2116	DESCARGA
10022	10020	0	1.401	323	2.15	6.891	284.1401	89.1558	DESCARGA
10022	10020	0	1.401	324	2.15	7.92	284.1305	89.4926	DESCARGA
10022	10020	0	1.401	325	2.9	6.876	281.0928	95.1159	DESCARGA
10022	10020	0	1.401	326	2.9	6.85	274.5434	99.2222	DESCARGA
10022	10020	0	1.401	327	2.9	6.169	282.3236	98.3623	DESCARGA
10022	10020	0	1.401	328	2.9	6.151	281.095	98.263	C_BATEA
10022	10020	0	1.401	329	1.7	6.142	282.3214	99.2253	C_CLAVE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10022	10020	0	1.401	330	1.5	6.142	282.0509	95.2433	DESCARGA
	10022	10020	0	1.401	331	1.5	9.584	282.4717	96.5542	TERRENO
	10022	10020	0	1.401	332	1.5	8.191	281.5352	96.3353	TERRENO
	10022	10020	0	1.401	333	1.5	7.545	278.2224	104.561	TERRENO
	10022	10020	0	1.401	334	2.9	5.198	283.403	97.245	DESCARGA
	10022	10020	0	1.401	335	2.9	5.23	275.084	103.254	DESCARGA
	10022	10020	0	1.401	336	5	6.897	273.1343	99.0602	DESCARGA
	10022	10020	0	1.401	336	5	5.313	272.4314	105.5741	DESCARGA
	10022	10020	0	1.401	337	1.7	6.275	274.4949	112.5848	DESCARGA
	10022	10020	0	1.421	10020	1.7	72.515	0	89.2524	
SD	89.89.2524									
	10022	10020	0	1.421	338	1.7	4.732	286.323	96.1141	TERRENO
	10022	10020	0	1.421	339	1.7	3.37	271.3605	99.0836	TERRENO
	10022	10020	0	1.421	340	1.7	3.645	244.0503	104.4801	TERRENO
	10022	10020	0	1.421	341	1.7	4.224	227.0551	105.3542	TERRENO
	10022	10020	0	1.421	342	2.5	4.567	206.5426	99.3743	TERRENO
	10022	10020	0	1.421	343	2.6	9.956	163.2948	112.5741	TERRENO
	10022	10020	0	1.421	344	1.7	9.193	163.1928	106.1319	TERRENO
	10022	10020	0	1.421	345	2.9	8.311	187.033	111.0524	TERRENO
	10022	10020	0	1.421	346	2.9	7.28	185.4759	102.4246	TERRENO
	10022	10020	0	1.421	347	1.7	4.674	4.4436	79.1434	ESTRUCTURA
	10022	10020	0	1.421	348	1.7	5.214	13.3045	66.0155	ESTRUCTURA
	10022	10020	0	1.421	349	1.7	5.63	12.2226	67.4914	ESTRUCTURA
	10022	10020	0	1.421	350	1.7	5.516	4.3111	67.0624	ESTRUCTURA
	10022	10020	0	1.421	351	1.7	5.088	4.5514	65.3432	ESTRUCTURA
	10022	10020	0	1.421	352	1.7	5.178	3.5343	79.37	ESTRUCTURA
	10022	10020	0	1.421	353	1.7	5.564	12.3006	69.4909	ESTRUCTURA
	10022	10020	0	1.421	354	1.7	5.082	13.0512	68.0135	ESTRUCTURA
	10022	10020	0	1.421	355	2.9	6.143	36.095	69.425	ESTRUCTURA
	10022	10020	0	1.421	356	3.1	6.585	34.0759	69.0741	ESTRUCTURA
	10022	10020	0	1.421	357	2	6.214	35.5358	67.4049	ESTRUCTURA
	10022	10020	0	1.421	358	2	6.529	33.2341	68.5233	ESTRUCTURA
	10022	10020	0	1.421	359	2	6.212	27.2559	67.3139	ESTRUCTURA
	10022	10020	0	1.421	360	2	5.857	29.4541	65.4901	ESTRUCTURA
	10022	10020	0	1.421	361	2	5.749	29.3331	67.3444	ESTRUCTURA
	10022	10020	0	1.421	362	1.7	6.029	26.5859	71.4008	ESTRUCTURA
	10022	10020	0	1.421	363	2.5	6.166	25.3343	59.0139	TUBO_ACUED
	10022	10020	0	1.421	364	1.7	5.487	18.2713	61.274	TUBO_ACUED
	10022	10020	0	1.421	365	0.085	2.284	51.2708	63.4505	TUBO_ACUED
	10020	10019	0.0001	1.498	10019	1.7	50.738	0.0001	87.2702	
SD	87.87.2702									
	10020	10019	0.0001	1.498	11034	1.7	35.49	259.1134	89.5559	DELTA
	10020	10019	0.0001	1.498	366	1.7	38.127	259.0917	90.0842	MANHOLE
	10020	10019	0.0001	1.498	367	1.7	38.017	260.1029	90.0935	MANHOLE
	10020	10019	0.0001	1.498	368	1.7	37.311	260.0513	90.0756	MANHOLE
	10020	10019	0.0001	1.498	369	1.7	37.407	258.5807	90.0756	MANHOLE
	10020	10019	0.0001	1.498	370	1.7	28.44	258.4142	89.0151	PARAMENTO
	10020	10019	0.0001	1.498	371	1.7	17.272	260.1102	90.0435	PARAMENTO
	10020	10019	0.0001	1.498	372	1.7	13.105	265.3756	91.0948	SUMIDERO
	10020	10019	0.0001	1.498	373	1.7	12.561	269.3244	91.2406	SUMIDERO
	10020	10019	0.0001	1.498	374	1.7	17.357	273.4145	90.154	PARAMENTO
	10020	10019	0.0001	1.498	375	1.7	18.431	285.2706	90.0129	PARAMENTO
	10020	10019	0.0001	1.498	376	1.7	19.463	294.1402	89.4902	PARAMENTO
	10020	10019	0.0001	1.498	377	1.7	8.749	343.0155	86.0446	PARAMENTO
	10020	10019	0.0001	1.498	378	1.7	2.077	217.5504	86.0938	POSTE
	10023	10021	0	1.405	10021	1.7	57.124	0	88.2303	
SD	88.88.2303									
	10023	10021	0	1.405	11035	1.7	9.464	219.0455	94.4131	DELTA
	10023	10021	0	1.405	379	1.7	16.85	125.344	95.4209	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10023	10021	0	1.405	380	1.7	14.261	144.5232	97.1909	TERRENO
	10023	10021	0	1.405	381	1.7	6.592	144.2323	94.1708	TERRENO
	10023	10021	0	1.405	382	1.7	3.932	156.1119	94.0016	TERRENO
	10023	10021	0	1.405	383	1.7	2.117	144.062	90.3346	CANAL
	10023	10021	0	1.405	384	1.7	2.356	135.1044	90.1526	CANAL
	10023	10021	0	1.405	385	1.7	2.246	138.4436	96.0845	CANAL
	10023	10021	0	1.405	386	1.7	4.516	166.0451	99.3005	ESTRUCTURA
	10023	10021	0	1.405	387	1.7	4.725	166.3213	100.0539	ESTRUCTURA
	10023	10021	0	1.405	388	1.7	4.655	169.2608	102.3449	CANAL
	10023	10021	0	1.405	389	1.7	4.574	166.2205	100.3	CANAL
	10023	10021	0	1.405	390	1.7	4.51	171.1011	97.3215	CANAL
	10023	10021	0	1.405	391	1.7	4.687	183.0849	98.2101	TERRENO
	10023	10021	0	1.405	392	1.7	4.499	196.4939	103.2518	TERRENO
	10023	10021	0	1.405	393	1.7	5.711	197.472	105.0405	TERRENO
	10023	10021	0	1.405	394	2.6	6.881	194.0211	100.1938	TERRENO
	10023	10021	0	1.405	395	2.6	5.377	191.3202	107.0229	DES_DOMICI
	10023	10021	0	1.405	396	2.6	4.414	199.0616	92.2758	DES_DOMICI
	10023	10021	0	1.405	397	2	10.633	193.3908	94.0716	TERRENO
	10023	10021	0	1.405	398	2	11.133	182.4129	99.2332	TERRENO
	10023	10021	0	1.405	399	2	13.224	174.1539	100.5258	TERRENO
	10023	10021	0	1.405	400	2	16.189	186.5233	101.1923	TERRENO
	10023	10021	0	1.405	401	1.7	14.749	173.5429	102.0011	TERRENO
	10023	10021	0	1.405	402	2.6	11.662	168.5501	106.4634	BORDE_CANO
	10023	10021	0	1.405	403	2.6	10.407	171.3852	107.5631	BORDE_CANO
	10023	10021	0	1.405	404	2.6	11.592	166.5212	111.4407	CANO
	10023	10021	0	1.405	405	4	8.128	179.2849	104.4606	BORDE_CANO
	10023	10021	0	1.405	406	4	6.598	176.4054	108.5957	BORDE_CANO
	10023	10021	0	1.405	407	4	7.414	170.2454	112.1925	CANO
	10023	10021	0	1.405	408	4	5.763	169.3651	101.1145	CANO
	10023	10021	0	1.405	409	4	6.023	167.4111	101.2035	CANO
	10023	10021	0	1.405	410	4	6.286	173.3123	110.0916	CANO
	10023	10021	0	1.405	411	4	5.353	169.4507	97.1408	C_BATEA
	10023	10021	0	1.405	412	4	5.33	170.0636	96.164	C_CLAVE
	10023	10021	0	1.405	413	3.5	6.083	179.0312	105.5207	ESTRUCTURA
	10023	10021	0	1.405	414	3.5	6.178	166.362	105.5944	ESTRUCTURA
	10023	10021	0	1.405	415	3.5	5.552	179.015	107.0153	ESTRUCTURA
	10023	10021	0	1.405	416	3.5	5.626	166.5215	107.0152	ESTRUCTURA
	10023	10021	0	1.405	417	1.7	9.371	97.3809	85.1316	CERRAMIENT
	10023	10021	0	1.405	418	1.7	4.892	106.5031	79.2718	CERRAMIENT
	10023	10021	0	1.405	419	1.7	1.899	124.1419	91.5228	CANAL
	10023	10021	0	1.405	420	1.7	1.565	130.1015	91.0017	CANAL
	10023	10021	0	1.405	421	1.7	1.768	127.545	94.0238	CANAL
	10023	10021	0	1.405	422	1.7	2.066	135.1652	80.5304	CERRAMIENT
	10023	10021	0	1.405	423	1.7	2.654	235.5704	81.2548	CERRAMIENT
	10023	10021	0	1.405	424	2	4.131	249.4621	83.1838	PARAMENTO
	10023	10021	0	1.405	425	1.7	10.514	334.4126	88.0743	PARAMENTO
	10023	10021	0	1.405	426	1.7	8.822	24.2236	84.3123	PARAMENTO
	10023	10021	0	1.405	427	1.7	21.693	7.0921	86.2854	PARAMENTO
	10023	10021	0	1.405	428	1.7	2.626	92.4902	82.1803	POSTE
	10023	10021	0	1.405	429	1.7	10.442	96.3845	85.0314	PARAMENTO
	10023	10021	0	1.405	430	1.7	2.165	215.2141	79.3418	MANHOLE
	11035	10023	359.5959	1.449	10023	1.7	9.515	359.5959	82.08	
SD	82.82.0800									
	11035	10023	359.5959	1.449	431	1.5	17.607	34.5002	87.3015	DES_DOMICI
	11035	10023	359.5959	1.449	432	1.5	17.659	33.5252	85.071	DES_DOMICI
	11035	10023	359.5959	1.449	433	1.7	22.146	74.3918	102.2019	RIO
	11035	10023	359.5959	1.449	434	1.7	17.512	84.0415	105.5432	RIO
	11035	10023	359.5959	1.449	435	2	15.587	85.1924	107.2102	RIO
	11035	10023	359.5959	1.449	436	2	14.83	82.0804	108.5525	BORDE_CANO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		11035	10023	359.5959	1.449	437	2	9.1	65.1939	109.3403	BORDE_CANO
		11035	10023	359.5959	1.449	438	2	9.203	56.2322	109.3156	BORDE_CANO
		11035	10023	359.5959	1.449	439	2	6.808	146.3338	93.1131	TERRENO
		11035	10023	359.5959	1.449	440	2	7.199	175.4143	89.0804	TERRENO
		11035	10023	359.5959	1.449	441	2	7.551	201.4212	87.2554	TERRENO
		11035	10023	359.5959	1.449	442	1.7	6.463	286.312	84.2813	PARAMENTO
		11035	10023	359.5959	1.449	443	1.7	7.399	272.0119	85.1041	PARAMENTO
		11035	10023	359.5959	1.449	444	1.7	5.62	257.0725	85.0603	PARAMENTO
		11035	10023	359.5959	1.449	445	1.7	9.722	242.1029	86.2425	PARAMENTO
		11035	10023	359.5959	1.449	446	1.7	11.943	236.5745	87.2454	PARAMENTO
		11035	10023	359.5959	1.449	447	1.7	11.606	231.1201	88.3432	PARAMENTO
		11035	10023	359.5959	1.449	448	1.7	15.613	222.2839	90.1843	PARAMENTO
		11035	10023	359.5959	1.449	449	1.7	17.521	220.0507	89.3236	PARAMENTO
		11035	10023	359.5959	1.449	450	2	10.493	203.2846	93.3406	DES_DOMICI
		11035	10023	359.5959	1.449	451	2	10.557	211.1005	92.2903	DES_DOMICI
		11035	10023	359.5959	1.449	452	2	12.442	212.5047	94.4511	DES_DOMICI
		11035	10023	359.5959	1.449	453	2	12.476	214.541	94.3543	DES_DOMICI
		11035	10023	359.5959	1.449	454	2	15.293	215.4943	89.3155	DES_DOMICI
		11035	10023	359.5959	1.449	455	2	15.593	217.2525	89.2412	DES_DOMICI
		11035	10023	359.5959	1.449	456	2.9	13.231	214.0518	93.2823	DES_DOMICI
		11035	10023	359.5959	1.449	457	2.9	13.207	214.4555	92.2549	DES_DOMICI
		11035	10023	359.5959	1.449	458	3.4	13.584	215.0027	93.3327	DES_DOMICI
		11035	10023	359.5959	1.449	459	3.4	14.021	215.2027	88.5616	DES_DOMICI
		11035	10023	359.5959	1.449	460	1.7	12.45	199.4737	94.4639	TERRENO
		11035	10023	359.5959	1.449	461	1.7	14.363	199.2619	94.3724	TERRENO
		11035	10023	359.5959	1.449	462	1.7	15.044	211.3456	93.0339	TERRENO
		11035	10023	359.5959	1.449	463	1.7	17.165	210.3816	92.0941	TERRENO
		11035	10023	359.5959	1.449	464	1.7	12.234	186.2314	95.5946	TERRENO
		11035	10023	359.5959	1.449	465	2.6	13.625	190.1411	91.3549	TERRENO
		11035	10023	359.5959	1.449	11036	1.5	17.434	56.3054	91.3904	DELTA
		11036	11035	0	1.395	11035	1.7	17.442	0	87.1303	
SD	87.87.1303										
		11036	11035	0	1.395	466	2	15.972	147.0844	84.312	DES_DOMICI
		11036	11035	0	1.395	467	2	16.418	145.3655	84.0955	DES_DOMICI
		11036	11035	0	1.395	468	2	23.395	160.105	86.5249	DES_DOMICI
		11036	11035	0	1.395	469	2	23.542	159.1354	86.0654	DES_DOMICI
		11036	11035	0	1.395	470	2	33.416	160.4515	86.4504	DES_DOMICI
		11036	11035	0	1.395	471	2	33.464	160.1924	86.4504	DES_DOMICI
		11036	11035	0	1.395	472	2	33.822	160.1607	86.4804	PARAMENTO
		11036	11035	0	1.395	473	1.7	14.585	133.3626	81.45	PARAMENTO
		11036	11035	0	1.395	474	1.7	9.117	120.5734	78.5624	PARAMENTO
		11036	11035	0	1.395	475	1.7	7.176	76.5016	75.0645	PARAMENTO
		11036	11035	0	1.395	476	1.7	8.008	76.4815	74.5358	PARAMENTO
		11036	11035	0	1.395	477	1.7	20.816	187.0728	99.3347	RIO
		11036	11035	0	1.395	478	1.7	15.305	192.3907	101.2811	RIO
		11036	11035	0	1.395	479	1.7	9.879	212.075	109.38	RIO
		11036	11035	0	1.395	480	1.7	11.464	135.0455	85.5313	DES_DOMICI
		11036	11035	0	1.395	481	1.7	12.031	132.1827	83.1248	DES_DOMICI
		10025	NO	359.5953	1.454	NO	1.7	69.361	359.5953	88.2605	
SD	88.88.2605										
		10025	10024	359.5953	1.454	10024	1.7	69.364	0	88.2549	
SD	88.88.2549										
		10025	10024	359.5953	1.454	482	1.7	65.441	0.1354	88.2138	MANHOLE
		10025	10024	359.5953	1.454	483	1.7	4.486	248.3144	82.143	PARAMENTO
		10025	10024	359.5953	1.454	484	1.7	4.695	246.5723	82.4252	CERRAMIENT
		10025	10024	359.5953	1.454	485	1.7	3.24	240.1811	85.2101	POSTE
		10025	10024	359.5953	1.454	486	1.7	31.404	3.1401	88.1142	MANHOLE
		10025	10024	359.5953	1.454	487	1.7	6.396	115.3944	86.5857	CERRAMIENT
		10025	10024	359.5953	1.454	488	1.7	7.773	112.5343	87.3546	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10025	10024	359.5953	1.454	489	1.7	15.141	343.4241	87.1322	PARAMENTO
	10025	10024	359.5953	1.454	490	1.7	7.75	74.2254	86.0249	PARAMENTO
	10025	10024	359.5953	1.454	491	1.7	4.886	63.2847	84.3212	PARAMENTO
	10025	10024	359.5953	1.454	492	1.7	26.919	8.5416	87.5219	PARAMENTO
	10025	10024	359.5953	1.454	493	1.7	7.994	22.4502	87.2911	POSTE
	10025	10024	359.5953	1.454	494	1.7	1.372	177.3116	76.3926	CAM_ACUED
	10025	10024	359.5953	1.454	11037	1.7	7.385	160.2655	99.4812	DELTA
	11037	10025	0.0001	1.321	10025	1.7	7.511	0.0001	75.4007	
SD	75.75.4007									
	11037	10025	0.0001	1.321	495	1.7	7.317	136.3529	111.3254	C_BATEA
	11037	10025	0.0001	1.321	496	1.7	7.184	135.4049	110.0636	C_CLAVE
	11037	10025	0.0001	1.321	497	1.7	7.442	136.2424	113.4635	DESCARGA
	11037	10025	0.0001	1.321	498	1.7	7.344	137.0504	113.2225	BORDE_CANO
	11037	10025	0.0001	1.321	499	1.7	7.346	135.3428	112.5045	BORDE_CANO
	11037	10025	0.0001	1.321	500	1.7	8.405	151.2303	120.3612	RIO
	11037	10025	0.0001	1.321	501	1.7	8.989	149.4522	119.2249	DESCARGA
	11037	10025	0.0001	1.321	502	1.7	9.456	145.4631	117.1905	RIO
	11037	10025	0.0001	1.321	503	1.7	9.403	145.4137	117.3223	BORDE_CANO
	11037	10025	0.0001	1.321	504	1.7	13.229	136.0022	109.0616	RIO
	11037	10025	0.0001	1.321	505	1.7	8.409	246.2533	119.3017	RIO
	11037	10025	0.0001	1.321	506	1.7	15.595	310.1149	82.1316	PARAMENTO
	11037	10025	0.0001	1.321	507	1.7	15.159	300.2055	82.5034	PARAMENTO
	11037	10025	0.0001	1.321	508	1.7	11.799	293.1622	90.165	TERRENO
	10029	10028	0	1.411	10028	1.7	45.742	0	90.0704	
SD	90.90.0704									
	10029	10028	0	1.411	11038	1.7	20.494	163.2142	102.5247	DELTA
	10029	10028	0	1.411	509	1.7	43.603	4.0351	90.0035	PUENTE
	10029	10028	0	1.411	510	1.7	42.216	3.56	89.5719	PUENTE
	10029	10028	0	1.411	511	1.7	41.633	5.1154	89.4758	PUENTE
	10029	10028	0	1.411	512	1.7	41.358	5.4424	89.4322	PUENTE
	10029	10028	0	1.411	513	1.7	40.243	6.494	89.3128	PUENTE
	10029	10028	0	1.411	514	1.7	42.835	5.5956	89.48	PUENTE
	10029	10028	0	1.411	515	1.7	27.621	14.2135	88.0312	PUENTE
	10029	10028	0	1.411	516	1.7	41.825	7.3956	89.4135	PUENTE
	10029	10028	0	1.411	517	1.7	27.91	16.0451	88.1443	PUENTE
	10029	10028	0	1.411	518	1.7	7.147	115.5112	74.0346	PUENTE
	10029	10028	0	1.411	519	1.7	7.901	112.4637	75.2923	PUENTE
	10029	10028	0	1.411	520	1.7	6.925	117.1214	72.2948	PUENTE
	10029	10028	0	1.411	521	1.7	7.307	115.3748	73.4209	PUENTE
	10029	10028	0	1.411	522	1.7	7.399	118.1309	73.3633	PUENTE
	10029	10028	0	1.411	523	1.7	7.044	119.1042	72.4715	PUENTE
	10029	10028	0	1.411	524	1.7	7.917	130.4515	75.043	PUENTE
	10029	10028	0	1.411	525	1.7	7.996	133.1039	74.3441	POSTE
	10029	10028	0	1.411	526	1.7	16.256	160.022	82.2841	PUENTE
	10029	10028	0	1.411	527	1.7	19.465	160.1152	83.3828	PUENTE
	10029	10028	0	1.411	528	1.7	5.561	83.1419	73.0716	POSTE
	10029	10028	0	1.411	529	1.7	16.441	109.205	82.4552	PUENTE
	10029	10028	0	1.411	530	1.7	16.66	109.2044	82.5212	PUENTE
	10029	10028	0	1.411	531	1.7	23.014	138.312	84.4058	PUENTE
	10029	10028	0	1.411	532	1.7	21.96	140.0624	84.2457	PUENTE
	10029	10028	0	1.411	533	1.7	15.664	102.2441	82.4656	PUENTE
	10029	10028	0	1.411	534	1.7	15.674	102.2143	82.273	PUENTE
	10029	10028	0	1.411	535	1.7	16.131	102.0557	82.3605	PUENTE
	10029	10028	0	1.411	536	1.7	16.088	102.1211	82.5943	PUENTE
	10029	10028	0	1.411	537	1.7	16.14	102.0811	82.372	PUENTE
	10029	10028	0	1.411	538	1.7	16.186	103.0535	82.384	PUENTE
	10029	10028	0	1.411	539	1.7	15.856	103.1627	82.2836	PUENTE
	10029	10028	0	1.411	540	1.7	22.058	47.4228	86.2742	PUENTE
	10029	10028	0	1.411	541	1.7	22.227	47.5539	86.2929	PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	10029	10028	0	1.411	542	1.7	21.282	45.2851	86.1247	PUENTE
	10029	10028	0	1.411	543	1.7	23.74	44.1156	86.5807	PUENTE
	10029	10028	0	1.411	544	1.7	23.133	41.2225	86.453	PUENTE
	10029	10028	0	1.411	545	1.7	24.862	42.0859	87.2638	PUENTE
	10029	10028	0	1.411	546	1.7	25.643	37.3323	87.3457	PUENTE
	10029	10028	0	1.411	547	1.7	26.213	40.4144	88.094	PUENTE
	10029	10028	0	1.411	548	1.7	27.376	39.0454	88.302	PUENTE
	10029	10028	0	1.411	549	1.7	26.772	37.3713	87.5514	PUENTE
	10029	10028	0	1.411	550	1.7	48.9	3.1939	90.0619	MANHOLE
	10029	10028	0	1.411	551	1.7	51.177	359.1051	90.1236	MANHOLE
	10029	10028	0	1.411	552	1.7	54.279	358.2933	90.2553	HIDRANTE
	10029	10028	0	1.411	553	1.7	41.368	8.5922	89.4204	SUMIDERO
	10029	10028	0	1.411	554	1.7	40.393	8.2851	89.4204	SUMIDERO
	10029	10028	0	1.411	555	1.7	42.04	349.4821	90.0755	PARAMENTO
	10029	10028	0	1.411	556	1.7	10.474	302.2355	91.2105	PARAMENTO
	10029	10028	0	1.411	557	1.7	9.137	275.0957	91.2901	PARAMENTO
	10029	10028	0	1.411	558	1.7	3.935	275.0328	90.2035	CERRAMIENT
	10029	10028	0	1.411	559	1.7	7.59	131.3433	90.1453	CERRAMIENT
	11038	10029	0	1.398	10029	1.7	20.629	0	75.2832	
SD	75.75.2832									
	11038	10029	0	1.398	560	1.8	24.304	341.1221	78.2946	CERRAMIENT
	11038	10029	0	1.398	561	1.8	25.04	339.1018	78.3703	CERRAMIENT
	11038	10029	0	1.398	562	4	10.32	338.1209	80.2626	C_BATEA
	11038	10029	0	1.398	563	2.9	10.273	337.5036	78.461	C_CLAVE
	11038	10029	0	1.398	564	1.7	9.322	353.5439	77.1504	TERRENO
	11038	10029	0	1.398	565	1.7	13.569	329.5631	84.0512	TERRENO
	11038	10029	0	1.398	566	1.7	11.215	341.2736	77.4257	TERRENO
	11038	10029	0	1.398	567	1.7	13.161	323.2341	89.5241	TERRENO
	11038	10029	0	1.398	568	1.7	12.063	314.2943	96.2632	TERRENO
	11038	10029	0	1.398	569	1.7	9.391	9.4144	78.4139	TERRENO
	11038	10029	0	1.398	570	1.7	3.788	2.5234	79.0813	TERRENO
	11038	10029	0	1.398	571	1.7	12.07	306.561	103.1737	TERRENO
	11038	10029	0	1.398	572	1.7	4.596	328.3037	102.1547	TERRENO
	11038	10029	0	1.398	573	1.7	2.933	298.123	121.0216	TERRENO
	11038	10029	0	1.398	574	1.7	3.609	270.3917	117.1217	TERRENO
	11038	10029	0	1.398	575	1.7	13.056	296.3443	105.1427	B_RIO
	11038	10029	0	1.398	576	1.7	10.18	274.0952	110.0833	B_RIO
	11038	10029	0	1.398	577	1.7	17.173	301.3418	101.2426	B_RIO
	11038	10029	0	1.398	578	1.7	9.34	248.1434	112.2817	B_RIO
	11038	10029	0	1.398	579	1.7	8.435	215.3008	114.5614	B_RIO
	11038	10029	0	1.398	580	1.7	19.743	306.2633	100.2414	B_RIO
	11038	10029	0	1.398	581	1.7	12.034	296.3351	106.5147	BORDE_CANO
	11038	10029	0	1.398	582	1.7	10.955	292.3824	109.2241	BORDE_CANO
	11038	10029	0	1.398	583	1.7	9.675	309.2521	109.5651	BORDE_CANO
	11038	10029	0	1.398	584	1.7	9.033	307.0643	111.3025	BORDE_CANO
	11038	10029	0	1.398	585	1.7	10.155	319.3436	107.0428	BORDE_CANO
	11038	10029	0	1.398	586	1.7	6.378	313.131	121.053	BORDE_CANO
	11038	10029	0	1.398	587	2.9	10.539	326.4029	100.1631	BORDE_CANO
	11038	10029	0	1.398	588	1.7	6.11	325.0952	124.1824	BORDE_CANO
	11038	10029	0	1.398	589	2.9	10.636	333.073	93.5318	BORDE_CANO
	11038	10029	0	1.398	590	2.9	10.677	330.1846	100.2042	BORDE_CANO
	11038	10029	0	1.398	591	2.9	10.691	334.5106	96.4258	BORDE_CANO
	11038	10029	0	1.398	592	1.7	11.518	293.5943	107.3839	CANO
	11038	10029	0	1.398	593	2.9	9.653	341.4926	96.401	BORDE_CANO
	11038	10029	0	1.398	594	3.7	8.037	347.0505	97.4151	BORDE_CANO
	11038	10029	0	1.398	595	2.9	7.066	353.582	89.0607	BORDE_CANO
	11038	10029	0	1.398	596	1.7	6.145	173.5844	100.2102	PUENTE
	11038	10029	0	1.398	597	1.7	6.282	178.1007	100.1024	PUENTE
	11038	10029	0	1.398	598	1.7	6.62	177.4849	101.1459	PUENTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11038	10029	0	1.398	599	1.7	8.694	149.3121	102.2538	PUENTE
	11038	10029	0	1.398	600	1.7	9.071	149.0251	101.2626	PUENTE
	10031	10030	0	1.501	10030	1.7	14.594	0	88.5528	
SD	88.88.5528									
	10031	10030	0	1.501	11039	1.7	56.388	275.1646	89.4743	DELTA
	10031	10030	0	1.501	601	1.7	7.084	222.4124	86.5932	PARAMENTO
	10031	10030	0	1.501	602	1.7	4.76	213.4113	85.3957	POSTE
	10031	10030	0	1.501	603	1.7	4.499	203.3912	85.3959	POSTE
	10031	10030	0	1.501	604	1.7	5.976	197.2803	86.4514	CORDON
	10031	10030	0	1.501	605	1.7	4.223	203.3233	87.2618	CORDON
	10031	10030	0	1.501	606	1.7	4.037	220.5932	85.0041	CORDON
	10031	10030	0	1.501	607	1.7	4.389	227.0708	88.0807	CORDON
	10031	10030	0	1.501	608	1.7	5.206	226.2122	88.4632	SUMIDERO
	10031	10030	0	1.501	609	1.7	5.061	237.1347	90.0326	SUMIDERO
	10031	10030	0	1.501	610	1.7	5.069	241.4636	88.211	CORDON
	10031	10030	0	1.501	611	1.7	5.451	251.3225	88.2119	CORDON
	10031	10030	0	1.501	612	1.7	12.849	261.351	88.1735	CORDON
	10031	10030	0	1.501	613	1.7	13.674	256.1411	88.2626	CORDON
	10031	10030	0	1.501	614	1.7	18.195	259.3223	88.5021	CORDON
	10031	10030	0	1.501	615	1.7	18.606	263.5326	88.4746	CORDON
	10031	10030	0	1.501	616	1.7	42.749	274.1513	90.1657	SUMIDERO
	10031	10030	0	1.501	617	1.7	42.444	273.3745	90.1158	SUMIDERO
	10031	10030	0	1.501	618	1.7	42.82	274.1815	89.4449	CORDON
	10031	10030	0	1.501	619	1.7	42.751	271.4056	89.4232	CORDON
	10031	10030	0	1.501	620	1.7	40.86	271.3611	89.4232	CORDON
	10031	10030	0	1.501	621	1.7	40.639	269.2633	89.401	CORDON
	10031	10030	0	1.501	622	1.7	38.698	269.172	89.3547	CORDON
	10031	10030	0	1.501	623	1.7	19.71	274.3448	89.2841	CORDON
	10031	10030	0	1.501	624	1.7	21.325	278.0555	89.1832	CORDON
	10031	10030	0	1.501	625	1.7	4.121	298.3336	85.3043	CORDON
	10031	10030	0	1.501	626	1.7	3.999	328.2532	84.5405	CORDON
	10031	10030	0	1.501	627	1.7	4.971	336.4419	85.3	CORDON
	10031	10030	0	1.501	628	1.7	4.726	344.2144	85.454	CORDON
	10031	10030	0	1.501	629	1.7	6.586	316.0657	85.584	PARAMENTO
	10031	10030	0	1.501	630	1.7	15.504	342.1753	88.1509	PARAMENTO
	11039	NO	359.5958	1.424	NO	1.7	56.384	359.5958	89.4309	
SD	89.89.4309									
	11039	10031	359.5958	1.424	10031	1.7	56.387	0	89.4253	
SD	89.89.4253									
	11039	10031	359.5958	1.424	11040	1.7	22.55	192.5159	96.0928	DELTA
	11039	10031	359.5958	1.424	631	2.6	7.875	98.0926	118.4007	ESTRUCTURA
	11039	10031	359.5958	1.424	632	2.6	7.753	98.0253	117.3743	ESTRUCTURA
	11039	10031	359.5958	1.424	633	2.6	7.634	96.4718	117.5026	ESTRUCTURA
	11039	10031	359.5958	1.424	634	2.6	7.448	96.1417	116.4343	ESTRUCTURA
	11039	10031	359.5958	1.424	635	2.6	7.301	94.2654	117.0219	ESTRUCTURA
	11039	10031	359.5958	1.424	636	2.6	7.192	94.1213	115.2816	ESTRUCTURA
	11039	10031	359.5958	1.424	637	2.6	7.085	92.5047	115.4956	ESTRUCTURA
	11039	10031	359.5958	1.424	638	2.6	6.946	92.3306	114.1204	ESTRUCTURA
	11039	10031	359.5958	1.424	639	2.6	6.339	93.1632	114.382	C_BATEA
	11039	10031	359.5958	1.424	640	2.6	6.352	93.0404	116.4226	DESCARGA
	11039	10031	359.5958	1.424	641	3.15	6.043	105.4902	122.4658	ESTRUCTURA
	11039	10031	359.5958	1.424	642	3.15	5.495	103.2636	121.0029	ESTRUCTURA
	11039	10031	359.5958	1.424	643	3.15	5.657	100.2546	119.5207	ESTRUCTURA
	11039	10031	359.5958	1.424	644	3.15	5.463	100.5315	118.0301	ESTRUCTURA
	11039	10031	359.5958	1.424	645	3.15	5.525	98.4857	117.2614	ESTRUCTURA
	11039	10031	359.5958	1.424	646	3.15	5.523	98.2258	114.5348	ESTRUCTURA
	11039	10031	359.5958	1.424	647	3.15	5.619	95.2408	114.1034	ESTRUCTURA
	11039	10031	359.5958	1.424	648	2.6	6.767	100.3042	122.341	ESTRUCTURA
	11039	10031	359.5958	1.424	649	2.6	9.114	115.0457	115.5219	ESTRUCTURA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	11039	10031	359.5958	1.424	650	2.6	9.241	116.2115	117.5651	BORDE_CANO
	11039	10031	359.5958	1.424	651	2.6	8.455	118.3403	120.0242	BORDE_CANO
	11039	10031	359.5958	1.424	652	3.15	6.848	125.4707	120.0242	ESTRUCTURA
	11039	10031	359.5958	1.424	653	3.15	7.15	124.3706	120.0242	BORDE_CANO
	11039	10031	359.5958	1.424	654	2.5	5.896	90.4757	109.2048	C_CLAVE
	11039	10031	359.5958	1.424	655	2.5	5.164	92.1408	105.4932	ESTRUCTURA
	11039	10031	359.5958	1.424	656	1.7	6.057	113.5029	126.1949	ESTRUCTURA
	11039	10031	359.5958	1.424	657	2.5	6.425	92.0121	103.003	ESTRUCTURA
	11039	10031	359.5958	1.424	658	2.5	6.419	91.3601	101.465	DES_DOMICI
	11039	10031	359.5958	1.424	659	2.5	6.218	90.2617	94.1859	DES_DOMICI
	11039	10031	359.5958	1.424	660	2.5	8.537	106.372	109.4052	ESTRUCTURA
	11039	10031	359.5958	1.424	661	1.7	11.324	145.0531	120.2432	BORDE_CANO
	11039	10031	359.5958	1.424	662	1.7	10.949	146.1502	121.5551	BORDE_CANO
	11039	10031	359.5958	1.424	663	1.7	10.555	147.5349	122.4042	BORDE_CANO
	11039	10031	359.5958	1.424	664	1.7	13.904	168.5914	116.2441	BORDE_CANO
	11039	10031	359.5958	1.424	665	1.7	14.477	163.5558	115.2217	BORDE_CANO
	11039	10031	359.5958	1.424	666	2	14.355	167.0121	114.2929	BORDE_CANO
	11039	10031	359.5958	1.424	667	1.7	3.456	79.1259	95.2241	TERRENO
	11039	10031	359.5958	1.424	668	1.7	3.446	179.4531	98.2743	TERRENO
	11039	10031	359.5958	1.424	669	2.6	18.875	17.0519	86.1125	CORDON
	11039	10031	359.5958	1.424	670	4.3	19.33	16.3912	82.254	SUMIDERO
	11039	10031	359.5958	1.424	671	4.3	18.939	15.4601	82.1042	SUMIDERO
	11039	10031	359.5958	1.424	672	1.7	5.996	358.365	87.0428	PARAMENTO
	11039	10031	359.5958	1.424	673	2.6	11.452	70.3622	83.1954	PARAMENTO
	11039	10031	359.5958	1.424	674	1.7	17.14	268.4956	96.0445	DES_DOMICI
	11039	10031	359.5958	1.424	675	1.7	17.138	272.3941	94.384	DES_DOMICI
	11039	10031	359.5958	1.424	676	1.7	18.276	278.1756	89.4724	DES_DOMICI
	11039	10031	359.5958	1.424	677	1.7	18.524	281.2418	89.1038	DES_DOMICI
	11039	10031	359.5958	1.424	678	1.7	22.347	280.0511	90.2606	PARAMENTO
	11039	10031	359.5958	1.424	679	1.7	22.276	272.3849	92.3942	DES_DOMICI
	11039	10031	359.5958	1.424	680	1.7	22.199	274.1251	92.1203	DES_DOMICI
	11039	10031	359.5958	1.424	681	1.7	25.134	276.2439	91.0948	DES_DOMICI
	11039	10031	359.5958	1.424	682	1.7	25.136	271.5002	92.1315	DES_DOMICI
	11039	10031	359.5958	1.424	683	1.7	17.821	267.5115	97.0104	CANO
	11039	10031	359.5958	1.424	684	1.7	17.862	264.2607	97.0919	CANO
	11039	10031	359.5958	1.424	685	1.7	17.871	262.121	96.5722	CANO
	11039	10031	359.5958	1.424	686	1.7	20.352	255.2829	96.1508	CANO
	11039	10031	359.5958	1.424	687	1.7	21.037	255.0318	96.2125	CANO
	11039	10031	359.5958	1.424	688	1.7	20.697	255.0915	96.2207	CANO
	11039	10031	359.5958	1.424	689	1.7	20.847	242.191	96.43	CANO
	11039	10031	359.5958	1.424	690	1.7	21.293	242.3207	96.2955	CANO
	11040	11039	359.5958	1.416	11039	1.7	22.634	359.5958	82.2808	
SD	82.82.2808									
	11040	11039	359.5958	1.416	11039	1.7	22.629	0	82.2801	
SD	82.82.2801									
	11040	11039	359.5958	1.416	691	1.7	8.907	135.0413	119.1543	BORDE_CANO
	11040	11039	359.5958	1.416	692	1.7	9.56	125.5547	119.1543	BORDE_CANO
	11040	11039	359.5958	1.416	693	1.7	9.249	130.1154	119.0716	BORDE_CANO
	11040	11039	359.5958	1.416	694	2.9	9.307	141.051	114.4017	RIO
	11040	11039	359.5958	1.416	695	2.9	8.646	159.0145	117.0458	RIO
	11040	11039	359.5958	1.416	696	2.5	10.431	125.1357	113.2241	RIO
	11040	11039	359.5958	1.416	697	2.5	13.251	126.2752	111.1352	RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1079	1077	0	1.495	1077	1.7	36.043	0	89.4627	DELTA
1079	1077	0	1.495	11000	1.7	65.295	92.0531	89.4754	DELTA
1079	1077	0	1.495	1	1.7	6.798	23.4815	84.4022	PARAMENTO
1079	1077	0	1.495	2	1.7	14.981	12.4852	87.3101	PARAMENTO
1079	1077	0	1.495	3	1.7	12.339	63.1612	87.3102	PARAMENTO
1079	1077	0	1.495	4	1.7	25.392	344.4055	88.5152	PARAMENTO
1079	1077	0	1.495	5	1.7	10.608	310.3225	85.4512	PARAMENTO
1079	1077	0	1.495	6	1.7	15.726	297.3337	87.4155	PARAMENTO
1079	1077	0	1.495	7	1.7	8.116	306.5438	87.4204	BORDE_VIA
1079	1077	0	1.495	8	1.7	4.07	5.4047	85.0624	BORDE_VIA
1079	1077	0	1.495	9	1.7	7.536	91.3833	88.134	BORDE_VIA
1079	1077	0	1.495	10	1.7	8.314	291.4551	88.4428	BORDE_VIA
1079	1077	0	1.495	11	2.6	11.835	277.3228	84.1138	BORDE_VIA
1079	1077	0	1.495	12	1.7	8.103	269.1619	88.2248	BORDE_VIA
1079	1077	0	1.495	13	1.7	2.63	285.4609	84.4759	MANHOLE
1079	1077	0	1.495	14	1.7	7.815	197.2425	86.4201	BORDE_VIA
1079	1077	0	1.495	15	1.7	27.818	80.4607	89.1752	CERRAMIENT
1079	1077	0	1.495	16	1.7	27.107	85.502	89.1547	CERRAMIENT
1079	1077	0	1.495	17	1.7	30.092	91.0907	89.1821	POSTE
11000	1079	0	1.468	1079	1.7	65.296	0	89.523	DELTA
11000	1079	0	1.468	13000	1.7	39.863	181.2348	89.4848	DELTA
11000	1079	0	1.468	18	1.7	27.026	4.4231	89.2922	CERRAMIENT
11000	1079	0	1.468	19	1.7	26.589	10.3945	89.2706	CERRAMIENT
11000	1079	0	1.468	20	1.7	21.935	12.3228	89.1531	CERRAMIENT
11000	1079	0	1.468	21	1.7	6.248	40.0855	87.2956	CERRAMIENT
11000	1079	0	1.468	22	1.7	3.894	99.07	86.2124	CERRAMIENT
11000	1079	0	1.468	23	1.7	23.179	49.1249	89.1526	PARAMENTO
11000	1079	0	1.468	24	1.7	13.2	33.4523	88.395	PARAMENTO
11000	1079	0	1.468	25	1.7	13.2	114.2628	86.1932	PARAMENTO
11000	1079	0	1.468	26	1.7	17.816	103.3429	89.1304	PARAMENTO
11000	1079	0	1.468	27	2.9	20.271	56.39	85.5534	PARAMENTO
11000	1079	0	1.468	28	1.7	17.939	91.1844	88.3148	PARAMENTO
11000	1079	0	1.468	29	2.9	18.293	66.5337	84.5119	PARAMENTO
11000	1079	0	1.468	30	2.9	19.515	68.4029	85.0628	PARAMENTO
11000	1079	0	1.468	31	2.9	18.582	77.3929	84.5039	PARAMENTO
11000	1079	0	1.468	32	2.9	17.785	78.2309	84.3948	PARAMENTO
11000	1079	0	1.468	33	2.9	17.702	78.4535	85.1711	PARAMENTO
11000	1079	0	1.468	34	1.7	17.231	89.4007	89.084	PARAMENTO
11000	1079	0	1.468	35	1.7	7.692	338.375	89.4538	BORDE_VIA
11000	1079	0	1.468	36	1.7	2.559	235.4811	86.4458	BORDE_VIA
11000	1079	0	1.468	37	1.7	12.569	309.4415	88.5508	BORDE_VIA
11000	1079	0	1.468	38	1.7	9.16	194.5211	89.1745	BORDE_VIA
11000	1079	0	1.468	39	1.7	9.95	186.3909	88.483	POSTE
11000	1079	0	1.468	40	1.7	10.127	173.4754	88.4146	ANDEN
11000	1079	0	1.468	41	1.7	1.504	91.4332	80.5603	ANDEN
11000	1079	0	1.468	42	1.7	3.66	93.0039	86.0717	ANDEN
11000	1079	0	1.468	43	1.7	5.033	2.032	87.1717	ANDEN
11000	1079	0	1.468	44	1.7	9.029	2.2445	88.294	ANDEN
11000	1079	0	1.468	45	1.7	25.425	205.1003	89.4112	BORDE_VIA
11000	1079	0	1.468	46	1.7	23.461	190.2313	89.5845	BORDE_VIA
11000	1079	0	1.468	47	1.7	2.352	240.1503	85.5438	ANDEN
11000	1079	0	1.468	48	1.7	6.746	344.4446	89.3132	ANDEN
11000	1079	0	1.468	49	1.7	8.391	1.4045	88.2955	ANDEN
11000	1079	0	1.468	50	2.9	8.195	154.0429	80.4545	CERRAMIENT
13000	11000	0	1.466	11000	1.7	39.863	0	89.321	DELTA
13000	11000	0	1.466	11001	1.7	37.44	73.4111	90.1828	DELTA
13000	11000	0	1.466	13001	1.7	73.631	181.1958	90.0043	DELTA
13000	11000	0	1.466	51	1.7	3.568	64.4958	85.4755	CERRAMIENT
13000	11000	0	1.466	52	1.7	3.868	124.1827	86.3007	CERRAMIENT



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13000	11000	0	1.466	53	1.7	7.11	153.3703	88.1144	CERRAMIENT
13000	11000	0	1.466	54	1.7	6.25	202.122	90.4928	SUMIDERO
13000	11000	0	1.466	55	1.7	5.497	199.0649	90.5343	SUMIDERO
13000	11000	0	1.466	56	1.7	6.566	201.5221	88.2919	ANDEN
13000	11000	0	1.466	57	1.7	9.328	181.3648	88.153	CAMA_TELEF
13000	11000	0	1.466	58	1.7	6.681	171.4735	87.5845	ANDEN
13000	11000	0	1.466	59	1.5	10.123	174.0043	89.4614	ANDEN
13000	11000	0	1.466	60	1.7	4.345	12.4658	86.3712	ANDEN
13000	11000	0	1.466	61	1.7	4.683	330.0738	87.1739	ANDEN
13000	11000	0	1.466	11000	1.7	39.865	0	89.3217	DELTA
13000	11000	0	1.466	11001	1.7	37.44	73.41	90.1826	DELTA
13000	11000	0	1.466	13001	1.7	73.632	181.201	90.0022	DELTA
13000	11000	0	1.466	62	1.7	6.812	212.0015	89.4924	BORDE_VIA
13000	11000	0	1.466	63	1.7	12.195	242.3445	89.141	BORDE_VIA
13000	11000	0	1.466	64	1.7	12.641	304.5519	89.0505	BORDE_VIA
13000	11000	0	1.466	65	1.7	36.601	26.412	89.2226	PARAMENTO
13000	11000	0	1.466	66	1.7	38.53	31.5932	89.2445	PARAMENTO
13000	11000	0	1.466	67	1.7	15.73	115.1322	90.2959	CERRAMIENT
13000	11000	0	1.466	68	1.7	7.717	126.5957	90.2319	ARBOL
13000	11000	0	1.466	69	1.7	11.287	112.0458	89.1448	ARBOL
11001	13000	0	1.431	13000	1.7	37.444	0	88.5558	DELTA
11001	13000	0	1.431	70	1.7	28.461	73.2103	87.1739	PARAMENTO
11001	13000	0	1.431	71	1.7	14.587	160.3418	87.5223	PARAMENTO
11001	13000	0	1.431	72	1.7	28.482	179.1703	88.4411	PARAMENTO
11001	13000	0	1.431	73	1.7	36.79	183.1447	89.2724	CERRAMIENT
11001	13000	0	1.431	74	1.7	3.153	41.4458	85.252	ARBOL
11001	13000	0	1.431	75	1.7	12.466	47.0058	86.2821	ARBOL
11001	13000	0	1.431	76	1.7	21.735	35.0957	88.314	ARBOL
11001	13000	0	1.431	77	1.7	25.909	23.591	89.0522	C_VIVA
11001	13000	0	1.431	78	1.7	19.077	2.4832	88.371	C_VIVA
11001	13000	0	1.431	79	1.7	17.728	358.4922	88.484	C_VIVA
11001	13000	0	1.431	80	2.6	17.465	323.5953	86.0227	ARBOL
11001	13000	0	1.431	81	2.6	15.69	316.573	85.2023	ARBOL
11001	13000	0	1.431	82	1.7	20.656	203.171	89.493	C_VIVA
11001	13000	0	1.431	11002	1.7	29.242	190.2041	89.2543	DELTA
11002	11001	0	1.458	11001	1.7	29.237	0	89.3632	DELTA
11002	11001	0	1.458	83	1.7	7.848	216.4325	86.4744	PARAMENTO
11002	11001	0	1.458	84	1.7	13.96	227.1337	88.4739	PARAMENTO
11002	11001	0	1.458	85	1.7	16.203	220.57	88.2309	PARAMENTO
11002	11001	0	1.458	86	1.7	20.632	231.4204	89.4556	ARBOL
11002	11001	0	1.458	87	1.7	22.192	253.1703	89.5436	CERRAMIENT
11002	11001	0	1.458	88	1.7	34.724	222.3515	89.3543	CERRAMIENT
11002	11001	0	1.458	89	1.7	12.663	281.5055	89.4115	ARBOL
11002	11001	0	1.458	90	1.7	2.472	151.4112	81.2031	ARBOL
11002	11001	0	1.458	91	1.7	20.417	91.1806	89.0648	PARAMENTO
11002	11001	0	1.458	92	1.7	19.056	106.2629	89.1102	ESCALERA
11002	11001	0	1.458	93	1.7	19.067	106.2451	88.5306	ESCALERA
11002	11001	0	1.458	94	1.7	19.345	106.1718	88.5306	ESCALERA
11002	11001	0	1.458	95	1.7	19.379	106.1517	88.2802	ESCALERA
11002	11001	0	1.458	96	1.7	19.652	106.0656	88.2855	ESCALERA
11002	11001	0	1.458	97	1.7	19.689	106.0349	88.025	ESCALERA
11002	11001	0	1.458	98	1.7	19.95	106.0037	88.0429	ESCALERA
11002	11001	0	1.458	99	1.7	19.982	105.572	87.4012	ESCALERA
11002	11001	0	1.458	100	1.7	20.251	105.4917	87.4012	ESCALERA
11002	11001	0	1.458	101	1.7	20.281	105.4946	87.1642	ESCALERA
11002	11001	0	1.458	102	1.7	20.534	105.4802	87.1642	ESCALERA
11002	11001	0	1.458	103	1.7	19.431	110.4835	89.2546	ESCALERA
11002	11001	0	1.458	104	1.7	19.451	110.4737	88.5408	ESCALERA
11002	11001	0	1.458	105	1.7	19.681	110.3701	88.5408	ESCALERA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11002	11001	0	1.458	106	1.7	19.748	110.3322	88.3031	ESCALERA
11002	11001	0	1.458	107	1.7	19.989	110.2211	88.3109	ESCALERA
11002	11001	0	1.458	108	1.7	20.033	110.2103	88.0555	ESCALERA
11002	11001	0	1.458	109	1.7	20.269	110.1244	88.0555	ESCALERA
11002	11001	0	1.458	110	1.7	20.324	110.1518	87.4235	ESCALERA
11002	11001	0	1.458	111	1.7	20.564	109.5302	87.4235	ESCALERA
11002	11001	0	1.458	112	1.7	20.853	109.4542	87.1941	ESCALERA
11002	11001	0	1.458	113	1.7	19.992	110.2359	89.2001	ESCALERA
11002	11001	0	1.458	114	1.7	20.28	110.2206	89.2001	ESCALERA
11002	11001	0	1.458	115	1.7	20.307	110.1605	88.5158	ESCALERA
11002	11001	0	1.458	116	1.7	20.586	110.0436	88.5304	ESCALERA
11002	11001	0	1.458	117	1.7	20.603	110.0405	88.2311	ESCALERA
11002	11001	0	1.458	118	1.7	20.868	109.4932	88.2417	ESCALERA
11002	11001	0	1.458	119	1.7	21.154	112.0509	87.5821	PARAMENTO
11002	11001	0	1.458	120	1.7	12.599	129.0059	88.2822	PARAMENTO
11002	11001	0	1.458	121	1.7	23.979	129.0736	88.1459	PARAMENTO
11002	11001	0	1.458	11003	1.7	15.302	126.3435	89.0715	DELTA
11003	11002	0	1.472	11002	1.7	15.303	0	89.0934	DELTA
11003	11002	0	1.472	11004	1.7	24.138	235.31	90.0149	DELTA
11003	11002	0	1.472	122	1.7	7.98	189.5447	88.4709	ESCALERA
11003	11002	0	1.472	123	1.7	8.176	188.4016	88.49	ESCALERA
11003	11002	0	1.472	124	1.7	8.215	188.4131	87.3416	ESCALERA
11003	11002	0	1.472	125	1.7	8.413	187.363	87.3732	ESCALERA
11003	11002	0	1.472	126	1.7	8.465	187.2457	86.241	ESCALERA
11003	11002	0	1.472	127	1.7	8.645	186.1214	86.2803	ESCALERA
11003	11002	0	1.472	128	1.7	8.691	186.0346	85.1429	ESCALERA
11003	11002	0	1.472	129	1.7	22.087	148.3154	88.0906	PARAMENTO
11003	11002	0	1.472	130	1.7	22.621	163.3054	88.1009	PARAMENTO
11003	11002	0	1.472	131	1.7	18.997	247.5433	88.5604	PARAMENTO
11003	11002	0	1.472	132	1.7	7.097	222.5052	88.5953	ARBOL
11003	11002	0	1.472	133	1.7	18.865	246.2247	88.5718	CAMINO
11003	11002	0	1.472	134	1.7	16.534	247.2107	88.4841	CAMINO
11003	11002	0	1.472	135	1.5	16.575	232.4312	89.2654	CAMINO
11003	11002	0	1.472	136	1.5	13.528	230.4611	89.3226	CAMINO
11003	11002	0	1.472	137	1.7	13.374	246.4023	88.4014	CAMINO
11003	11002	0	1.472	138	1.7	3.874	263.3507	84.4248	CAMINO
11003	11002	0	1.472	139	1.7	4.114	270.2507	85.1141	CAMINO
11004	11003	0	1.439	11003	1.7	24.149	0	88.505	DELTA
11004	11003	0	1.439	11005	1.7	24.43	185.5159	89.0343	DELTA
11004	11003	0	1.439	140	1.7	18.687	290.3341	87.5144	PARAMENTO
11004	11003	0	1.439	141	1.5	18.184	279.2404	89.3127	PARAMENTO
11004	11003	0	1.439	142	1.6	23.636	278.2408	89.5203	PARAMENTO
11004	11003	0	1.439	143	2.6	7.768	293.0126	80.4423	TANQUE
11004	11003	0	1.439	144	2.6	6.387	320.5021	78.1834	TANQUE
11004	11003	0	1.439	145	2.6	5.121	303.5436	75.4001	TANQUE
11004	11003	0	1.439	146	1.7	2.892	231.1229	85.5128	ARBOL
11004	11003	0	1.439	147	1.7	8.171	36.4919	87.5409	ARBOL
11004	11003	0	1.439	148	1.7	9.647	23.1319	86.3155	CAMINO
11004	11003	0	1.439	149	1.7	11.362	23.1511	86.5704	CAMINO
11004	11003	0	1.439	150	5	25.442	289.52	81.5915	PARAMENTO
11004	11003	0	1.439	151	5	31.653	286.1056	83.3647	PARAMENTO
11004	11003	0	1.439	152	1.7	25.222	113.5904	89.0102	PARAMENTO
11005	11004	0	1.433	11004	1.7	24.427	0	89.4306	DELTA
11005	11004	0	1.433	11006	1.7	38.569	93.2009	92.0147	DELTA
11005	11004	0	1.433	11007	1.7	27.202	236.4514	96.0247	DELTA
11005	11004	0	1.433	153	0.085	5.42	348.2132	106.1421	PARAMENTO
11005	11004	0	1.433	154	0.085	7.411	350.4802	101.4031	PARAMENTO
11005	11004	0	1.433	155	1.5	5.887	327.121	90.4618	PARAMENTO
11005	11004	0	1.433	156	1.5	4.21	253.5714	93.2018	ARBOL



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11005	11004	0	1.433	157	1.7	12.711	82.3935	90.0619	TERRENO
11005	11004	0	1.433	158	1.7	9.906	91.5348	91.2856	TERRENO
11005	11004	0	1.433	159	1.7	9.361	80.2816	88.5134	TERRENO
11005	11004	0	1.433	160	1.7	5.863	111.1257	94.1143	TERRENO
11005	11004	0	1.433	161	1.7	4.852	89.4822	91.0923	TERRENO
11005	11004	0	1.433	162	1.7	2.01	184.0103	99.4748	TERRENO
11005	11004	0	1.433	163	1.7	3.984	259.5615	90.3117	TERRENO
11005	11004	0	1.433	164	1.7	5.937	261.4236	89.2402	TERRENO
11005	11004	0	1.433	165	1.7	7.606	261.2041	91.5735	TERRENO
11005	11004	0	1.433	166	1.7	29.125	106.5334	93.0717	TERRENO
11005	11004	0	1.433	167	1.7	26.605	114.095	94.0619	TERRENO
11005	11004	0	1.433	168	1.7	20.623	130.5531	95.2954	TERRENO
11005	11004	0	1.433	169	1.7	23.033	118.2038	94.0317	ARBOL
11005	11004	0	1.433	170	1.7	17.462	163.3223	98.1152	TERRENO
11005	11004	0	1.433	171	1.7	16.961	183.3748	98.2623	TERRENO
11005	11004	0	1.433	172	1.7	19.726	207.4153	97.3107	TERRENO
11005	11004	0	1.433	173	1.7	15.809	196.081	98.1432	TERRENO
11005	11004	0	1.433	174	1.7	4.903	177.1732	114.0137	TERRENO
11005	11004	0	1.433	175	1.7	8.333	106.0224	101.2141	TERRENO
11005	11004	0	1.433	176	1.7	5.635	139.0448	108.5222	TERRENO
11005	11004	0	1.433	177	1.7	8.614	63.3336	89.0246	ARBOL
11007	11005	0	1.434	11005	1.7	27.269	0	82.5226	DELTA
11007	11005	0	1.434	178	1.7	17.533	189.0254	104.2	RIO
11007	11005	0	1.434	179	1.7	12.912	161.1104	109.1903	RIO
11007	11005	0	1.434	180	1.7	10.35	133.5712	114.2654	RIO
11007	11005	0	1.434	181	1.7	11.707	94.3227	110.4044	RIO
11007	11005	0	1.434	182	1.7	9.233	91.4834	110.1815	TERRENO
11007	11005	0	1.434	183	1.7	7.54	122.5916	114.0901	TERRENO
11007	11005	0	1.434	184	1.7	6.775	93.0227	106.5349	TERRENO
11007	11005	0	1.434	185	1.7	5.045	129.2046	117.0951	TERRENO
11007	11005	0	1.434	186	1.7	5.059	92.361	105.1133	TERRENO
11007	11005	0	1.434	187	1.7	3.981	127.3958	119.1516	TERRENO
11007	11005	0	1.434	188	1.7	4.506	92.1448	97.1346	TERRENO
11007	11005	0	1.434	189	1.7	2.025	134.0119	111.4141	TERRENO
11007	11005	0	1.434	190	1.7	5.455	66.1549	89.1247	TERRENO
11007	11005	0	1.434	191	1.7	3.021	66.3259	104.5956	TERRENO
11007	11005	0	1.434	192	1.7	4.089	213.3503	91.4614	TERRENO
11007	11005	0	1.434	193	1.7	7.934	219.4701	90.4138	TERRENO
11007	11005	0	1.434	194	1.7	13.666	229.3545	87.542	TERRENO
11007	11005	0	1.434	195	1.7	15.227	255.1359	86.0104	TERRENO
11007	11005	0	1.434	196	1.7	14.277	285.4248	80.4017	TERRENO
11007	11005	0	1.434	197	1.7	11.268	285.3914	84.1255	TERRENO
11007	11005	0	1.434	198	1.7	10.885	311.0035	84.1503	TERRENO
11007	11005	0	1.434	199	1.7	18.699	259.3838	82.0245	LINDERO
11007	11005	0	1.434	200	1.7	3.18	329.5454	78.5231	ARBOL
11006	11005	0	1.422	11005	1.7	38.591	0	87.1039	DELTA
11006	11005	0	1.422	201	1.7	19.081	43.3404	84.3008	PARAMENTO
11006	11005	0	1.422	202	2.6	22.714	62.2146	82.5613	PARAMENTO
11006	11005	0	1.422	203	1.7	14.934	39.5512	82.2319	TERRENO
11006	11005	0	1.422	204	1.7	13.81	40.2137	83.403	TERRENO
11006	11005	0	1.422	205	1.7	13.553	56.4613	84.0051	TERRENO
11006	11005	0	1.422	206	1.7	13.03	59.3304	84.0558	ARBOL
11006	11005	0	1.422	207	1.7	12.852	55.3203	86.4301	TERRENO
11006	11005	0	1.422	208	1.7	11.725	55.2518	88.3145	TERRENO
11006	11005	0	1.422	209	1.7	11.942	87.1116	88.0229	TERRENO
11006	11005	0	1.422	210	1.7	16.416	89.4346	83.2055	TERRENO
11006	11005	0	1.422	211	1.7	10.23	303.0108	96.1846	TERRENO
11006	11005	0	1.422	212	1.7	11.793	303.5834	98.2213	TERRENO
11006	11005	0	1.422	213	1.7	7.902	267.3759	102.5556	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11006	11005	0	1.422	214	1.7	4.778	270.5053	95.4321	TERRENO
11006	11005	0	1.422	215	1.7	5.329	202.1753	88.3907	TERRENO
11006	11005	0	1.422	216	1.7	4.678	201.3423	87.4919	LINDERO
11006	11005	0	1.422	217	1.7	8.797	349.0115	88.1823	LINDERO
11006	11005	0	1.422	218	1.7	2.016	244.5047	86.0843	ARBOL
11006	11005	0	1.422	219	1.7	12.358	172.2217	88.3634	TERRENO
11006	11005	0	1.422	220	1.7	15.509	165.1348	89.0828	TERRENO
11006	11005	0	1.422	221	1.7	15.676	114.3727	88.4859	TERRENO
11006	11005	0	1.422	222	1.7	22.056	111.3229	84.5222	TERRENO
11006	11005	0	1.422	11008	1.7	25.747	149.5251	89.2311	DELTA
11008	11006	0	1.413	11006	1.7	25.743	0	89.2343	DELTA
11008	11006	0	1.413	11009	1.7	20.189	136.3507	84.0035	DELTA
11008	11006	0	1.413	223	1.7	3.774	294.4404	84.433	LINDERO
11008	11006	0	1.413	224	1.7	5.036	212.3709	87.1841	LINDERO
11008	11006	0	1.413	225	1.7	16.3	185.5651	89.0151	MURO
11008	11006	0	1.413	226	1.7	15.609	171.2437	88.1304	TERRENO
11008	11006	0	1.413	227	1.7	7.575	133.474	84.1231	TERRENO
11008	11006	0	1.413	228	0.085	15.719	157.1215	88.4335	TERRENO
11008	11006	0	1.413	229	1.7	8.306	96.1509	79.0326	TERRENO
11008	11006	0	1.413	230	1.7	12.844	142.5414	83.2959	TERRENO
11008	11006	0	1.413	231	1.7	8.911	71.3244	79.0754	TERRENO
11008	11006	0	1.413	232	1.7	6.845	116.1615	84.2119	ARBOL
11008	11006	0	1.413	233	1.7	6.513	62.0206	86.2543	TERRENO
11009	11008	0	1.448	11008	1.7	20.141	0	94.2917	DELTA
11009	11008	0	1.448	11010	1.7	32.882	102.3912	89.5029	DELTA
11009	11008	0	1.448	234	1.7	9.049	273.3148	86.564	MURO
11009	11008	0	1.448	235	1.7	28.536	174.4838	88.5731	MURO
11009	11008	0	1.448	236	1.7	27.966	169.333	89.2215	PARAMENTO
11009	11008	0	1.448	237	1.7	9.67	281.0751	87.1831	TERRENO
11010	11009	0	1.497	11009	1.7	32.882	0	89.2347	DELTA
11010	11009	0	1.497	11011	1.7	45.138	243.2221	89.1442	DELTA
11010	11009	0	1.497	238	1.7	15.407	162.5636	89.0405	PARAMENTO
11010	11009	0	1.497	11009	1.7	32.883	0	89.2406	DELTA
11010	11009	0	1.497	11011	1.7	45.138	243.2248	89.1426	DELTA
11010	11009	0	1.497	239	1.7	19.73	187.5651	87.5134	PARAMENTO
11010	11009	0	1.497	240	1.7	14.217	213.3129	88.3707	PARAMENTO
11010	11009	0	1.497	241	1.7	28.914	225.1901	89.0556	PARAMENTO
11010	11009	0	1.497	242	1.7	29.304	252.1841	89.1207	CERRAMIENT
11010	11009	0	1.497	243	1.7	20.617	220.5132	88.1639	ANDEN
11010	11009	0	1.497	244	1.7	22.509	222.1523	88.2433	ANDEN
11010	11009	0	1.497	245	1.7	15.591	290.072	87.3017	PARAMENTO
11010	11009	0	1.497	246	1.7	22.636	266.1802	88.2703	ANDEN
11010	11009	0	1.497	247	1.7	24.336	264.0251	88.3325	ANDEN
11010	11009	0	1.497	248	1.7	21.912	264.2715	88.2549	ANDEN
11010	11009	0	1.497	249	1.7	18.322	270.4759	88.0652	ANDEN
11010	11009	0	1.497	250	1.7	22.453	266.4333	88.2802	ANDEN
11010	11009	0	1.497	251	1.7	18.294	270.4818	87.2248	ANDEN
11010	11009	0	1.497	252	1.7	17.112	277.5514	87.4432	ANDEN
11010	11009	0	1.497	253	1.7	17.927	280.3452	87.2	ANDEN
11010	11009	0	1.497	254	1.7	13.485	275.074	88.2907	ARBOL
11010	11009	0	1.497	255	1.7	19.467	261.4045	88.3407	ARBOL
11010	11009	0	1.497	256	1.7	25.163	255.4328	89.0235	ARBOL
11010	11009	0	1.497	257	1.7	10.922	286.091	87.1858	ARBOL
11010	11009	0	1.497	258	1.7	8.929	302.0222	87.4503	ARBOL
11010	11009	0	1.497	259	1.7	8.526	347.2114	88.3546	ARBOL
11010	11009	0	1.497	260	1.7	15.521	56.5034	89.2634	ARBOL
11010	11009	0	1.497	261	1.7	7.32	131.1032	88.2301	ARBOL
11010	11009	0	1.497	262	2.5	19.716	71.2559	87.0058	ARBOL
11010	11009	0	1.497	263	1.7	9.112	60.0924	89.1056	POSTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11010	11009	0	1.497	264	2	14.505	72.1056	87.5304	CAJA_ENERG
11010	11009	0	1.497	265	2	15.073	70.4608	87.5652	CAJA_ENERG
11010	11009	0	1.497	266	2.2	15.492	72.5052	87.142	CAJA_ENERG
11010	11009	0	1.497	267	2.2	14.971	74.3139	87.1232	CAJA_ENERG
11010	11009	0	1.497	268	1.7	12.843	219.2807	88.1939	CAJA
11010	11009	0	1.497	269	1.7	12.008	216.3434	88.1716	CAJA
11010	11009	0	1.497	270	1.7	11.395	220.3306	88.0838	CAJA
11010	11009	0	1.497	271	1.7	12.248	223.2456	88.1421	CAJA
11010	11009	0	1.497	272	1.7	11.504	316.1804	88.2148	CAMINO
11010	11009	0	1.497	273	1.7	12.883	322.0004	88.3032	CAMINO
11010	11009	0	1.497	274	1.7	13.81	290.0624	88.2812	CAMINO
11010	11009	0	1.497	275	1.7	15.133	293.5757	88.4307	CAMINO
11010	11009	0	1.497	276	1.7	20.623	140.3931	88.4754	CAMINO
11010	11009	0	1.497	277	1.7	19.45	140.2208	88.4416	CAMINO
11010	11009	0	1.497	278	0.085	19.994	130.4233	93.3203	CAMINO
11011	11010	0	1.486	11010	1.7	45.139	0	90.1421	DELTA
11011	11010	0	1.486	11012	1.7	32.695	191.4408	89.0907	DELTA
11011	11010	0	1.486	279	1.7	17.385	333.2521	89.1615	CERRAMIENT
11011	11010	0	1.486	280	1.7	28.915	343.1805	89.3334	CAJ_DOMI
11011	11010	0	1.486	281	1.7	29.569	343.3456	89.3434	CAJ_DOMI
11011	11010	0	1.486	282	1.7	7.959	292.2542	88.151	PARAMENTO
11011	11010	0	1.486	283	1.7	3.341	314.2941	86.1828	CERRAMIENT
11011	11010	0	1.486	284	1.7	30.806	51.02	89.3707	PARAMENTO
11011	11010	0	1.486	285	1.7	28.458	106.0111	89.534	PARAMENTO
11011	11010	0	1.486	286	0.085	23.428	111.4301	92.5454	PARAMENTO
11011	11010	0	1.486	287	0.085	22.87	111.1634	93.0036	CAMINO
11011	11010	0	1.486	288	0.085	21.972	112.2726	93.0806	CAMINO
11011	11010	0	1.486	289	0.085	19.588	116.4309	93.3425	PARAMENTO
11011	11010	0	1.486	290	1.7	24.199	41.5027	89.2313	CAMINO
11011	11010	0	1.486	291	1.7	25.01	43.2644	89.2313	CAMINO
11011	11010	0	1.486	292	1.7	19.978	72.574	89.1415	CAMINO
11011	11010	0	1.486	293	1.7	20.147	69.5228	89.1416	CAMINO
11011	11010	0	1.486	294	1.7	25.998	75.0601	89.2911	CAMINO
11011	11010	0	1.486	295	1.7	26.151	72.5256	89.2915	CAMINO
11011	11010	0	1.486	296	1.7	17.292	61.0156	88.4937	ARBOL
11011	11010	0	1.486	297	1.7	19.584	48.0554	89.3918	ARBOL
11011	11010	0	1.486	298	1.7	16.912	96.4229	89.1801	ARBOL
11011	11010	0	1.486	299	1.7	3.434	272.3353	83.2936	ARBOL
11011	11010	0	1.486	300	1.7	7.029	202.1637	87.5346	ARBOL
11011	11010	0	1.486	301	1.7	29.188	170.1838	89.254	POSTE
11011	11010	0	1.486	302	1.7	28.66	170.3611	89.074	CAJA_ENERG
11011	11010	0	1.486	303	1.7	27.861	170.2417	89.0614	CAJA_ENERG
11011	11010	0	1.486	304	1.7	27.841	172.2415	89.0614	CAJA_ENERG
11011	11010	0	1.486	305	1.7	27.963	181.2011	89.0613	CANCHA
11011	11010	0	1.486	306	1.7	33.173	206.1552	89.05	CANCHA
11011	11010	0	1.486	307	1.7	29.947	138.3822	89.1719	PARAMENTO
11011	11010	0	1.486	308	1.7	32.429	141.3917	89.1511	PARAMENTO
11012	11011	0	1.521	11011	1.7	32.692	0	90.1139	DELTA
11012	11011	0	1.521	309	1.7	35.053	335.2023	89.4923	PARAMENTO
11012	11011	0	1.521	310	1.7	35.726	327.501	89.5821	PARAMENTO
11012	11011	0	1.521	311	1.7	34.383	327.3858	89.4748	CANCHA
11012	11011	0	1.521	312	1.7	34.434	327.3051	89.503	CERRAMIENT
11012	11011	0	1.521	11013	1.7	16.842	257.2522	89.0909	DELTA
11013	11012	0	1.505	11012	1.7	16.843	0	89.3743	DELTA
11013	11012	0	1.505	1079	1.7	5.241	102.235	91.2459	DELTA
11013	11012	0	1.505	1077	1.7	31.283	255.4943	90.2145	DELTA
1077	11013	0	1.437	11013	1.7	31.289	0	88.4857	DELTA
1077	11013	0	1.437	1079	1.7	36.049	3.434	89.282	DELTA
13012	13008	0	1.415	13008	1.7	59.744	0	89.3732	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13012	13008	0	1.415	11014	1.7	22.232	180	88.3709 DELTA
13012	13008	0	1.415	313	1.7	20.128	180	88.0336 LINEAMIENT
13012	13008	0	1.415	314	1.7	18.743	180	90.2628 LINEAMIENT
13012	13008	0	1.415	315	1.7	16.194	180	89.3816 LINEAMIENT



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



1086	1085	0	1.45	1085	1.7	103.439	0	89.5542	DELTA
1086	1085	0	1.45	1	1.7	90.594	359.581	89.5558	BORDE_VIA
1086	1085	0	1.45	2	1.7	90.192	2.2615	89.5821	BORDE_VIA
1086	1085	0	1.45	3	1.7	81.794	358.1945	89.5647	POSTE
1086	1085	0	1.45	4	1.7	52.854	356.0526	89.5306	POSTE
1086	1085	0	1.45	5	1.7	60.014	5.5949	90.0204	SUMIDERO
1086	1085	0	1.45	6	1.7	59.2	5.3025	90.0328	SUMIDERO
1086	1085	0	1.45	7	1.7	59.143	7.35	89.5855	CERRAMIENT
1086	1085	0	1.45	8	1.7	42.547	358.0916	89.5318	BORDE_VIA
1086	1085	0	1.45	9	1.7	42.264	4.523	89.5921	BORDE_VIA
1086	1085	0	1.45	10	1.7	25.323	15.3236	89.465	CERRAMIENT
1086	1085	0	1.45	11	1.7	30.508	346.0153	89.4601	PARAMENTO
1086	1085	0	1.45	12	1.7	6.37	105.1501	87.3856	CERRAMIENT
1086	1085	0	1.45	13	1.7	4.367	251.3108	87.2702	CERRAMIENT
1086	1085	0	1.45	14	1.7	20.839	355.5142	89.3323	BORDE_VIA
1086	1085	0	1.45	15	1.7	18.69	11.5523	89.2521	BORDE_VIA
1086	1085	0	1.45	16	1.7	9.009	330.5329	88.2137	BORDE_VIA
1086	1085	0	1.45	17	1.7	9.711	16.474	88.2517	BORDE_VIA
1086	1085	0	1.45	18	1.7	5.521	11.2455	87.2833	BORDE_VIA
1086	1085	0	1.45	19	1.7	3.291	337.4049	85.4655	BORDE_VIA
1086	1085	0	1.45	20	1.7	10.005	308.4123	88.3918	BORDE_VIA
1086	1085	0	1.45	21	1.7	5.509	272.0755	87.3119	BORDE_VIA
1086	1085	0	1.45	22	1.7	11.994	317.5845	89.0712	PARAMENTO
1086	1085	0	1.45	23	1.7	10.892	326.0158	88.48	POSTE
1086	1085	0	1.45	24	1.7	5.973	102.2122	87.2835	POSTE
1086	1085	0	1.45	25	1.7	20.465	283.1803	89.1159	BORDE_VIA
1086	1085	0	1.45	26	1.7	16.267	265.2801	89.1317	BORDE_VIA
1086	1085	0	1.45	27	1.7	17.189	266.4552	89.0838	BORDE_VIA
1086	1085	0	1.45	28	1.7	19.899	265.5204	89.1434	BORDE_VIA
1086	1085	0	1.45	29	1.7	17.519	258.3008	89.2418	BORDE_VIA
1086	1085	0	1.45	30	1.7	19.794	259.2524	89.3211	BORDE_VIA
1086	1085	0	1.45	31	1.7	16.666	258.1733	88.5459	PARAMENTO
1086	1085	0	1.45	32	1.7	21.322	264.3725	89.213	POSTE
1086	1085	0	1.45	33	1.7	34.487	265.5444	89.2559	POSTE
1086	1085	0	1.45	11000	1.7	53.047	268.1346	89.3939	DELTA
11000	1086	0	1.447	1086	1.7	53.047	0	89.4825	DELTA
11000	1086	0	1.447	34	1.7	46.752	0	89.4826	LINEAMIENT
11000	1086	0	1.447	35	1.7	40.226	0	89.4255	LINEAMIENT
11000	1086	0	1.447	36	1.7	29.77	0	89.3816	LINEAMIENT
11000	1086	0	1.447	37	1.7	21.459	0	89.1345	LINEAMIENT
11000	1086	0	1.447	38	1.7	14.038	359.5614	88.5023	LINEAMIENT
11000	1086	0	1.447	39	1.7	6.449	359.5959	87.5721	LINEAMIENT
11000	1086	0	1.447	40	1.7	32.212	4.4534	89.1655	PARAMENTO
11000	1086	0	1.447	41	1.7	12.981	311.4033	89.0857	PARAMENTO
11000	1086	0	1.447	42	1.7	13.922	295.0636	89.1652	PARAMENTO
11000	1086	0	1.447	43	1.7	22.683	284.3849	89.2116	PARAMENTO
11000	1086	0	1.447	44	1.7	9.934	239.3641	88.1655	CERRAMIENT
11000	1086	0	1.447	45	1.7	18.252	254.1954	88.5059	CERRAMIENT
11000	1086	0	1.447	46	1.7	18.844	250.2541	88.5525	PARAMENTO
11000	1086	0	1.447	47	1.7	30.374	258.1633	89.2506	PARAMENTO
11000	1086	0	1.447	48	1.7	22.457	277.2823	89.3935	BORDE_VIA
11000	1086	0	1.447	49	1.7	22.102	263.5137	89.3102	BORDE_VIA
11000	1086	0	1.447	50	1.7	18.516	255.4501	88.2128	POSTE
11000	1086	0	1.447	51	1.7	10.669	255.2002	88.343	BORDE_VIA
11000	1086	0	1.447	52	1.7	10.559	292.1714	88.413	BORDE_VIA
11000	1086	0	1.447	53	1.7	8.044	225.2855	88.4551	BORDE_VIA
11000	1086	0	1.447	54	1.7	5.858	174.4859	88.1222	BORDE_VIA
11000	1086	0	1.447	55	1.7	17.002	199.5748	89.2031	BORDE_VIA
11000	1086	0	1.447	56	1.7	15.79	177.1844	89.2926	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11000	1086	0	1.447	57	1.7	13.583	174.0932	89.2324	POSTE
11000	1086	0	1.447	58	1.7	31.097	192.1154	89.4946	BORDE_VIA
11000	1086	0	1.447	59	1.7	30.329	178.4818	89.5614	BORDE_VIA
11000	1086	0	1.447	60	1.7	46.254	185.5723	90.0304	BORDE_VIA
11000	1086	0	1.447	61	1.7	39.476	178.0147	89.5819	POSTE
11000	1086	0	1.447	11001	1.7	60.665	180.0025	89.4735	DELTA
11000	1086	0	1.447	62	1.7	58.92	178.4824	89.4839	POSTE
11000	1086	0	1.447	63	1.7	2.861	56.5111	86.0835	PARAMENTO
11001	11000	0	1.48	11000	1.7	60.664	0	89.463	DELTA
11001	11000	0	1.48	64	1.7	52.221	0	89.5211	LINEAMIENT
11001	11000	0	1.48	65	1.7	41.106	0	89.5136	LINEAMIENT
11001	11000	0	1.48	66	1.7	29.663	0	89.5447	LINEAMIENT
11001	11000	0	1.48	67	1.7	15.733	0	89.4656	LINEAMIENT
11001	11000	0	1.48	68	1.7	4.664	0	88.5827	LINEAMIENT
11001	11000	0	1.48	69	1.7	29.66	341.031	89.4235	CERRAMIENT
11001	11000	0	1.48	70	2.5	30.399	337.5327	88.081	CERRAMIENT
11001	11000	0	1.48	71	1.7	19.517	257.1714	90.12	PARAMENTO
11001	11000	0	1.48	72	1.7	18.199	275.4847	90.152	PARAMENTO
11001	11000	0	1.48	73	1.7	19.248	275.5524	90.5047	PARAMENTO
11001	11000	0	1.48	74	1.7	3.788	138.2834	82.4844	PARAMENTO
11001	11000	0	1.48	75	1.7	8.293	110.3512	86.3951	PARAMENTO
11001	11000	0	1.48	76	1.7	14.409	201.5034	84.3756	BORDE_VIA
11001	11000	0	1.48	77	1.7	12.571	174.0435	84.4549	BORDE_VIA
11001	11000	0	1.48	78	1.7	20.426	224.025	85.1642	BORDE_VIA
11001	11000	0	1.48	79	1.7	15.72	163.5322	83.4558	BORDE_VIA
11001	11000	0	1.48	80	1.7	13.046	147.2906	83.0712	POSTE
11001	11000	0	1.48	81	1.7	11.162	142.0745	83.2436	POSTE
11001	11000	0	1.48	11002	1.7	26.44	170.191	86.434	DELTA
11002	11001	0	1.507	11001	1.7	26.422	0	92.2451	DELTA
11002	11001	0	1.507	82	1.7	21.008	0	92.1406	LINEAMIENT
11002	11001	0	1.507	83	1.7	16.895	0	91.332	LINEAMIENT
11002	11001	0	1.507	84	1.7	13.517	0	90.3039	LINEAMIENT
11002	11001	0	1.507	85	1.7	12.196	359.5959	88.5717	LINEAMIENT
11002	11001	0	1.507	86	1.7	10.716	0	87.4846	LINEAMIENT
11002	11001	0	1.507	87	1.7	2.383	0	80.042	LINEAMIENT
11002	11001	0	1.507	11003	1.7	13.549	190.5301	99.3734	DELTA
11002	11001	0	1.507	88	1.7	8.612	295.0443	87.1822	BORDE_VIA
11002	11001	0	1.507	89	1.7	8.101	83.1917	86.4214	ANDEN
11002	11001	0	1.507	90	1.7	9.161	81.12	86.5928	ANDEN
11002	11001	0	1.507	91	1.7	16.552	89.0257	88.0053	ANDEN
11002	11001	0	1.507	92	1.7	8.05	93.224	86.3541	ANDEN
11002	11001	0	1.507	93	1.7	9.529	88.2453	86.5253	ANDEN
11002	11001	0	1.507	94	1.7	13.308	91.5034	87.1443	ANDEN
11002	11001	0	1.507	95	1.7	13.314	93.4539	87.3437	VALVULA
11002	11001	0	1.507	96	1.7	13.087	98.3712	88.5236	POSTE
11002	11001	0	1.507	97	1.7	5.916	302.1138	85.5312	ANDEN
11002	11001	0	1.507	98	1.7	5.408	290.3428	85.4317	ANDEN
11002	11001	0	1.507	99	1.7	6.332	285.0615	86.2257	POSTE
11002	11001	0	1.507	100	1.7	1.834	257.5809	89.4518	ARBOL
11002	11001	0	1.507	101	1.7	1.969	113.1801	81.5718	ARBOL
11002	11001	0	1.507	102	1.7	6.04	267.1538	91.2533	TERRENO
11002	11001	0	1.507	103	1.7	2.877	244.4837	90.2612	TERRENO
11002	11001	0	1.507	104	1.7	2.853	221.4648	95.1418	TERRENO
11002	11001	0	1.507	105	1.7	3.233	154.3615	90.2406	TERRENO
11002	11001	0	1.507	106	1.7	6.323	124.3332	88.1257	TERRENO
11002	11001	0	1.507	107	1.7	8.824	159.413	91.5429	TERRENO
11002	11001	0	1.507	108	1.7	7.309	136.0626	91.0227	TERRENO
11002	11001	0	1.507	109	1.7	10.701	165.3123	93.5918	TERRENO
11002	11001	0	1.507	110	1.7	13.42	148.5033	93.4356	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11003	NO	0.0001	1.435	NO	1.7	13.63	0.0001	78.3045	DELTA
11003	11002	0.0001	1.435	11002	1.7	13.63	0	78.3111	DELTA
11003	11002	0.0001	1.435	111	1.7	12.463	0	77.5629	LINEAMIENT
11003	11002	0.0001	1.435	112	1.7	10.702	0	79.2853	LINEAMIENT
11003	11002	0.0001	1.435	113	1.7	8.66	0	81.5257	LINEAMIENT
11003	11002	0.0001	1.435	114	1.7	5.884	0	80.2806	LINEAMIENT
11003	11002	0.0001	1.435	115	1.7	2.408	0	76.1427	LINEAMIENT
11003	11002	0.0001	1.435	11004	1.7	47.027	179.3209	89.0811	DELTA
11003	11002	0.0001	1.435	116	1.7	10.203	24.5021	81.0507	TERRENO
11003	11002	0.0001	1.435	117	1.7	9.226	348.1357	81.023	TERRENO
11003	11002	0.0001	1.435	118	1.7	10.661	325.0339	83.5838	TERRENO
11003	11002	0.0001	1.435	119	1.7	17.04	302.1208	86.2236	TERRENO
11003	11002	0.0001	1.435	120	1.7	24.906	293.2559	86.3142	TERRENO
11003	11002	0.0001	1.435	121	1.7	24.258	278.5226	88.1658	TERRENO
11003	11002	0.0001	1.435	122	1.7	11.008	281.4557	87.3534	TERRENO
11003	11002	0.0001	1.435	123	1.7	7.145	275.4239	88.2919	TERRENO
11003	11002	0.0001	1.435	124	1.7	6.025	260.1032	89.2504	TERRENO
11003	11002	0.0001	1.435	125	1.7	16.942	280.34	90.1851	TERRENO
11003	11002	0.0001	1.435	126	1.7	3.22	239.4414	89.4844	TERRENO
11003	11002	0.0001	1.435	127	1.7	10.983	275.2338	90.3141	TERRENO
11003	11002	0.0001	1.435	128	1.7	3.655	231.1842	95.0154	TERRENO
11003	11002	0.0001	1.435	129	1.7	6.694	258.5926	92.0925	TERRENO
11003	11002	0.0001	1.435	130	1.7	2.4	169.4121	97.475	TERRENO
11003	11002	0.0001	1.435	131	1.7	1.551	148.3248	87.3806	TERRENO
11003	11002	0.0001	1.435	132	1.7	9.715	105.24	92.1512	TERRENO
11003	11002	0.0001	1.435	133	1.7	5.244	109.3711	90.1545	TERRENO
11003	11002	0.0001	1.435	134	1.7	9.436	99.1217	89.3423	TERRENO
11003	11002	0.0001	1.435	135	1.7	16.91	97.3055	90.4832	TERRENO
11003	11002	0.0001	1.435	136	1.7	16.471	94.5924	89.1534	TERRENO
11003	11002	0.0001	1.435	137	1.7	18.972	274.3805	88.453	TERRENO
11003	11002	0.0001	1.435	138	1.7	18.628	278.0243	90.07	TERRENO
11003	11002	0.0001	1.435	139	1.7	10.372	255.281	88.4524	TERRENO
11003	11002	0.0001	1.435	140	1.7	9.821	260.0008	91.4913	TERRENO
11003	11002	0.0001	1.435	141	1.7	6.606	220.3214	92.1521	TERRENO
11003	11002	0.0001	1.435	142	1.7	6.024	224.1221	93.3607	TERRENO
11003	11002	0.0001	1.435	143	1.7	7.832	138.1942	90.0257	TERRENO
11003	11002	0.0001	1.435	144	1.7	6.984	131.3555	93.2717	TERRENO
11003	11002	0.0001	1.435	145	1.7	16.906	108.3747	90.0942	TERRENO
11003	11002	0.0001	1.435	146	1.7	16.741	105.5007	91.322	TERRENO
11003	11002	0.0001	1.435	147	1.7	23.427	108.4406	91.1557	TERRENO
11003	11002	0.0001	1.435	148	1.7	22.792	126.0928	90.2537	TERRENO
11003	11002	0.0001	1.435	149	1.7	22.268	137.3541	90.1857	TERRENO
11003	11002	0.0001	1.435	150	1.7	29.042	154.475	89.13	TERRENO
11003	11002	0.0001	1.435	151	1.7	30.477	164.2738	89.105	TERRENO
11003	11002	0.0001	1.435	152	1.7	31.073	165.5449	89.105	ESTRUCTURA
11003	11002	0.0001	1.435	153	1.7	31.163	165.5405	87.5242	ESTRUCTURA
11003	11002	0.0001	1.435	154	1.7	37.248	170.1301	88.1433	ESTRUCTURA
11003	11002	0.0001	1.435	155	1.7	37.499	170.1535	88.5855	ESTRUCTURA
11003	11002	0.0001	1.435	156	1.7	31.483	166.0012	87.544	ESTRUCTURA
11003	11002	0.0001	1.435	157	1.7	37.432	170.1026	88.1414	ESTRUCTURA
11003	11002	0.0001	1.435	158	1.7	31.46	166.1542	89.1608	ESTRUCTURA
11003	11002	0.0001	1.435	159	1.7	30.834	181.0324	88.2704	CERRAMIENT
11003	11002	0.0001	1.435	160	1.7	16.457	182.5637	88.4157	CERRAMIENT
11003	11002	0.0001	1.435	161	1.7	15.719	185.481	88.4629	CERRAMIENT
11003	11002	0.0001	1.435	162	1.7	28.711	237.1613	88.3035	CERRAMIENT
11003	11002	0.0001	1.435	163	1.7	28.64	238.1648	88.2555	POSTE
11003	11002	0.0001	1.435	164	1.7	32.859	241.5557	88.3913	CERRAMIENT
11003	11002	0.0001	1.435	165	1.7	29.186	239.0903	88.0201	BORDE_VIA
11003	11002	0.0001	1.435	166	1.7	24.443	268.0028	87.3728	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11003	11002	0.0001	1.435	167	1.7	27.281	297.3538	84.1611	BORDE_VIA
11003	11002	0.0001	1.435	168	1.7	30.483	267.4721	88.0919	BORDE_VIA
11003	11002	0.0001	1.435	169	1.7	33.954	292.3832	85.1331	BORDE_VIA
11003	11002	0.0001	1.435	170	1.7	23.367	264.2251	88.534	ARBOL
11003	11002	0.0001	1.435	171	1.7	11.868	175.1608	89.2802	ARBOL
11003	11002	0.0001	1.435	172	1.7	15.012	183.4206	88.5119	ARBOL
11003	11002	0.0001	1.435	173	1.7	14.51	213.2203	88.512	ARBOL
11003	11002	0.0001	1.435	174	1.7	2.986	78.25	81.5127	ARBOL
11004	11003	0	1.483	11003	1.7	47.028	0	90.1714	DELTA
11004	11003	0	1.483	175	1.7	44.979	0	90.5035	LINEAMIENT
11004	11003	0	1.483	176	1.7	42.329	0.0001	91.0756	LINEAMIENT
11004	11003	0	1.483	177	1.7	40.784	0	90.4223	LINEAMIENT
11004	11003	0	1.483	178	1.7	36.236	0	90.4335	LINEAMIENT
11004	11003	0	1.483	179	1.7	30.13	0	90.1202	LINEAMIENT
11004	11003	0	1.483	180	1.7	23.525	0	89.2123	LINEAMIENT
11004	11003	0	1.483	181	1.7	17.843	0	89.0026	LINEAMIENT
11004	11003	0	1.483	182	1.7	12.7	0	88.144	LINEAMIENT
11004	11003	0	1.483	183	1.7	7.357	0	87.2003	LINEAMIENT
11004	11003	0	1.483	184	1.7	1.869	0	85.1027	LINEAMIENT
11004	11003	0	1.483	11005	1.7	63.869	188.2827	89.5157	DELTA
11004	11003	0	1.483	185	1.7	10.093	1.3136	87.0443	ESTRUCTURA
11004	11003	0	1.483	186	1.7	10.389	2.5715	87.1754	ESTRUCTURA
11004	11003	0	1.483	187	1.7	16.741	0.3801	88.2505	ESTRUCTURA
11004	11003	0	1.483	188	1.7	16.509	1.3803	88.2153	ESTRUCTURA
11004	11003	0	1.483	189	1.7	16.945	359.3721	89.5948	DES_DOMICI
11004	11003	0	1.483	190	1.7	18.086	12.5725	90.3226	DES_DOMICI
11004	11003	0	1.483	191	1.7	7.837	9.5023	93.4044	DES_DOMICI
11004	11003	0	1.483	192	1.7	7.937	12.1923	93.3737	DES_DOMICI
11004	11003	0	1.483	193	1.5	6.738	19.2209	91.2208	ESTRUCTURA
11004	11003	0	1.483	194	1.7	3.233	346.4445	80.4411	PARAMENTO
11004	11003	0	1.483	195	1.7	13.391	355.4304	88.5644	PARAMENTO
11004	11003	0	1.483	196	1.7	11.71	285.0551	87.2448	PARAMENTO
11004	11003	0	1.483	197	1.7	12.743	282.4643	88.2757	PARAMENTO
11004	11003	0	1.483	198	1.7	24.223	209.3409	89.0825	PARAMENTO
11004	11003	0	1.483	199	1.7	6.572	87.5617	88.101	TERRENO
11004	11003	0	1.483	200	1.7	7.913	107.4058	89.3811	TERRENO
11004	11003	0	1.442	11003	1.7	47.027	0	90.1335	DELTA
11004	11003	0	1.442	11005	1.7	66.242	187.0136	89.4953	DELTA
11005	11004	0	1.404	11004	1.7	66.242	0	89.4231	DELTA
11005	11004	0	1.404	11006	1.7	30.807	192.3951	89.5817	DELTA
11005	11004	0	1.404	201	1.7	34.502	237.2641	90.2427	BORDE_VIA
11005	11004	0	1.404	202	1.7	37.184	227.064	90.023	BORDE_VIA
11005	11004	0	1.404	203	1.7	33.584	241.1104	90.2249	BORDE_VIA
11005	11004	0	1.404	204	1.7	28.359	221.5648	90.0315	BORDE_VIA
11005	11004	0	1.404	205	1.7	31.404	236.3135	90.3039	BORDE_VIA
11005	11004	0	1.404	206	1.7	31.252	238.2027	90.3201	BV
11005	11004	0	1.404	207	1.7	30.301	238.0813	90.3038	BV
11005	11004	0	1.404	208	1.7	30.352	236.2003	90.3138	BV
11005	11004	0	1.404	209	1.7	31.164	238.0751	90.3748	SUMIDERO
11005	11004	0	1.404	210	1.7	30.461	237.0141	90.35	SUMIDERO
11005	11004	0	1.404	211	1.7	27.083	235.4649	90.2723	BORDE_VIA
11005	11004	0	1.404	212	1.7	27.533	221.3332	90.0323	BORDE_VIA
11005	11004	0	1.404	213	1.7	20.98	238.2005	90.2607	BORDE_VIA
11005	11004	0	1.404	214	1.7	19.407	219.4303	89.5839	BORDE_VIA
11005	11004	0	1.404	215	1.7	18.573	244.1334	90.2546	BORDE_VIA
11005	11004	0	1.404	216	1.7	13.23	227.343	89.5955	BORDE_VIA
11005	11004	0	1.404	217	1.7	16.741	256.2401	90.2201	BORDE_VIA
11005	11004	0	1.404	218	1.7	10.149	280.1006	90.1502	BORDE_VIA
11005	11004	0	1.404	219	1.7	16.809	269.2047	90.1502	BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11005	11004	0	1.404	220	1.7	9.448	304.2039	90.1101	BORDE_VIA
11005	11004	0	1.404	221	1.7	18.625	284.2627	90.1947	BORDE_VIA
11005	11004	0	1.404	222	1.7	8.686	323.252	90.1046	BORDE_VIA
11005	11004	0	1.404	223	1.7	21.431	281.16	89.5916	BORDE_VIA
11005	11004	0	1.404	224	1.7	7.82	350.1343	90.1905	BORDE_VIA
11005	11004	0	1.404	225	1.7	33.251	314.5811	90.23	BORDE_VIA
11005	11004	0	1.404	226	1.7	19.899	351.481	90.0909	BORDE_VIA
11005	11004	0	1.404	227	1.7	20.586	339.2118	90.1039	BORDE_VIA
11005	11004	0	1.404	228	1.7	22.382	332.0104	90.1613	BORDE_VIA
11005	11004	0	1.404	229	1.7	26.743	327.2421	90.2546	BORDE_VIA
11005	11004	0	1.404	230	1.7	29.635	328.0559	90.2854	BORDE_VIA
11005	11004	0	1.404	231	1.7	31.107	329.1016	90.333	BORDE_VIA
11005	11004	0	1.404	232	1.7	49.012	328.0719	90.4257	BORDE_VIA
11005	11004	0	1.404	233	1.7	35.458	332.1049	90.4517	BORDE_VIA
11005	11004	0	1.404	234	1.7	42.52	328.2552	90.5407	MANHOLE
11005	11004	0	1.404	235	1.7	44.321	324.2636	89.0722	MANHOLE
11005	11004	0	1.404	236	1.7	43.714	324.55	90.5448	SUMIDERO
11005	11004	0	1.404	237	1.7	44.014	325.0734	90.5428	SUMIDERO
11005	11004	0	1.404	238	1.7	43.03	327.5758	90.5428	SUMIDERO
11005	11004	0	1.404	239	1.7	42.643	327.4306	90.5503	SUMIDERO
11005	11004	0	1.404	240	1.7	42.532	329.092	90.5538	SUMIDERO
11005	11004	0	1.404	241	1.7	42.019	331.0126	90.5441	SUMIDERO
11005	11004	0	1.404	242	1.7	41.637	330.4957	90.5406	SUMIDERO
11005	11004	0	1.404	243	1.7	23.018	342.062	88.2925	CERRAMIENT
11005	11004	0	1.404	244	1.7	24.404	330.301	88.34	CERRAMIENT
11005	11004	0	1.404	245	1.7	29.787	329.1453	89.01	CERRAMIENT
11005	11004	0	1.404	246	1.7	32.527	331.1308	89.0301	CERRAMIENT
11005	11004	0	1.404	247	1.7	43.927	346.5609	89.3057	CERRAMIENT
11005	11004	0	1.404	248	1.7	44.187	323.07	89.0617	PARAMENTO
11005	11004	0	1.404	249	1.7	34.133	313.0539	89.113	PARAMENTO
11005	11004	0	1.404	250	1.7	23.331	284.1048	89.2122	PARAMENTO
11005	11004	0	1.404	251	1.7	26.299	281.3716	89.2702	PARAMENTO
11005	11004	0	1.404	252	1.7	18.697	281.0648	89.2114	PARAMENTO
11005	11004	0	1.404	253	1.7	17.776	269.2844	89.3205	PARAMENTO
11005	11004	0	1.404	254	1.7	17.023	269.1639	89.3609	PARAMENTO
11005	11004	0	1.404	255	1.7	17.353	252.3514	89.5017	PARAMENTO
11005	11004	0	1.404	256	1.7	23.283	245.5254	89.1806	TANQUE
11005	11004	0	1.404	257	1.7	22.841	210.5454	88.5556	PARAMENTO
11005	11004	0	1.404	258	1.7	25.036	197.123	89.3831	PARAMENTO
11005	11004	0	1.404	259	1.7	30.262	214.1444	89.1044	PARAMENTO
11005	11004	0	1.404	260	1.7	32.92	220.1627	90.0448	MANHOLE
11005	11004	0	1.404	261	1.7	21.331	218.0233	89.415	MANHOLE
11005	11004	0	1.404	262	1.7	31.257	8.0948	89.0137	ARBOL
11005	11004	0	1.404	263	0.085	32.39	349.0407	91.342	ARBOL
11005	11004	0	1.404	264	1.7	24.135	36.364	89.5634	TERRENO
11005	11004	0	1.404	265	1.7	17.529	72.4513	90.2627	TERRENO
11005	11004	0	1.404	266	1.7	18.326	54.2045	89.562	TERRENO
11005	11004	0	1.404	267	1.7	19.839	138.0226	91.1037	TERRENO
11005	11004	0	1.404	268	1.7	28.038	168.535	90.3435	TERRENO
11005	11004	0	1.404	269	1.7	10.749	187.3045	89.1151	ARBOL
11006	11005	0	1.417	11005	1.7	30.809	0	88.5831	DELTA
11006	11005	0	1.417	270	1.7	19.728	0	88.4243	LINEAMIENT
11006	11005	0	1.417	271	1.7	13.185	0	88.0439	LINEAMIENT
11006	11005	0	1.417	272	1.7	6.006	265.134	87.2529	PARAMENTO
11006	11005	0	1.417	273	1.7	3.696	88.2616	90.0628	TERRENO
11006	11005	0	1.417	274	1.7	3.396	171.0053	85.4633	TERRENO
11006	11005	0	1.417	275	1.7	6.104	87.2009	97.3958	TERRENO
11006	11005	0	1.417	276	1.7	6.596	119.4425	98.0917	TERRENO
11006	11005	0	1.417	277	1.7	19.284	120.0953	95.2948	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11006	11005	0	1.417	278	1.7	19.091	108.4545	94.2233	TERRENO
11006	11005	0	1.417	11007	1.7	59.325	253.2821	89.3544	DELTA
11006	11005	0	1.417	279	1.7	14.637	216.0042	88.3933	MANHOLE
11006	11005	0	1.417	280	1.7	31.06	260.3536	89.3734	MANHOLE
11007	11006	0	1.459	11006	1.7	59.325	0	89.5603	DELTA
11007	11006	0	1.459	281	1.7	48.806	0	89.5531	LINEAMIENT
11007	11006	0	1.459	282	1.7	30.309	0	89.3911	LINEAMIENT
11007	11006	0	1.459	283	1.7	10.838	0	89.234	LINEAMIENT
11007	11006	0	1.459	11008	1.7	45.86	179.2959	89.5326	DELTA
11007	11006	0	1.459	284	1.7	6.671	160.0405	88.5854	BORDE_VIA
11007	11006	0	1.459	285	1.7	17.913	170.2351	89.463	BORDE_VIA
11007	11006	0	1.459	286	1.7	21.114	186.1602	89.3626	BORDE_VIA
11007	11006	0	1.459	287	1.7	21.325	188.5706	89.3417	BORDE_VIA
11007	11006	0	1.459	288	1.7	19.923	208.3803	89.4512	BORDE_VIA
11007	11006	0	1.459	289	1.7	10.552	257.4037	89.3529	BORDE_VIA
11007	11006	0	1.459	290	1.7	3.384	278.2404	86.4133	BORDE_VIA
11007	11006	0	1.459	291	1.7	14.58	166.4711	89.3742	MANHOLE
11007	11006	0	1.459	292	1.7	7.136	219.2545	88.5232	MANHOLE
11008	11007	0	1.531	11007	1.7	45.86	0	89.372	DELTA
11008	11007	0	1.531	11009	1.7	14.338	102.3535	89.092	DELTA
11008	11007	0	1.531	293	1.7	7.27	343.3639	87.3955	POSTE
11008	11007	0	1.531	294	1.7	3.07	235.2849	87.0723	MANHOLE
11009	11008	0	1.49	11008	1.7	14.337	0	89.2257	DELTA
11009	11008	0	1.49	12027	1.7	93.832	166.2022	89.5437	DELTA
12027	11009	0	1.49	11009	1.7	93.832	0	89.5025	DELTA
12027	11009	0	1.49	12026	1.7	56.216	117.5742	89.3801	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



10064	10063	0	1.534	10063	1.7	31.109	0	86.0225	DELTA
10064	10063	0	1.534	1	1.7	10.098	177.3814	70.0158	TERRENO
10064	10063	0	1.534	2	1.5	11.375	190.4741	75.0154	TERRENO
10064	10063	0	1.534	3	1.5	12.522	200.1614	77.0325	TERRENO
10064	10063	0	1.534	4	1.5	8.253	169.1731	71.0458	TERRENO
10064	10063	0	1.534	5	1.5	8.973	176.1059	72.1925	TERRENO
10064	10063	0	1.534	6	1.5	10.335	191.0511	76.3426	TERRENO
10064	10063	0	1.534	7	1.7	40.579	301.5938	95.5812	RIO
10064	10063	0	1.534	8	1.7	33.978	308.4739	96.4249	RIO
10064	10063	0	1.534	9	1.7	30.77	317.5855	97.4348	RIO
10064	10063	0	1.534	10	1.7	26.037	332.1633	99.3812	RIO
10064	10063	0	1.534	11	1.7	23.067	350.4641	99.4712	RIO
10064	10063	0	1.534	12	1.7	21.944	8.511	100.2956	RIO
10064	10063	0	1.534	13	1.7	23.19	8.3624	97.0606	TERRENO
10064	10063	0	1.534	14	1.7	24.061	352.364	96.5624	TERRENO
10064	10063	0	1.534	15	1.7	26.89	338.2922	96.3802	TERRENO
10064	10063	0	1.534	16	1.7	28.049	330.3206	96.483	TERRENO
10064	10063	0	1.534	17	1.7	34.113	314.2947	95.2923	TERRENO
10064	10063	0	1.534	18	1.7	41.032	304.3533	94.2732	TERRENO
10064	10063	0	1.534	19	1.7	45.318	301.4957	94.2039	TERRENO
10064	10063	0	1.534	20	1.7	27.261	0	88.5535	TERRENO
10064	10063	0	1.534	21	1.7	24.624	0	94.4405	TERRENO
10064	10063	0	1.534	22	1.7	23.41	0	98.0744	TERRENO
10064	10063	0	1.534	23	1.7	22.376	0	100.5432	TERRENO
10064	10063	0	1.534	24	1.7	21.997	0	102.0539	RIO
10064	10063	0	1.534	25	1.7	21.921	0	100.5538	RIO
10064	10063	0	1.534	26	2.5	10.598	0	114.0826	RIO
10064	10063	0	1.534	27	2.5	9.712	0	110.1417	RIO
10064	10063	0	1.534	28	2.5	8.676	0	111.0159	TERRENO
10064	10063	0	1.534	29	2.5	7.169	0	110.4935	TERRENO
10064	10063	0	1.534	30	2.5	5.456	0	108.2214	TERRENO
10064	10063	0	1.534	31	1.7	3.766	0	96.0727	TERRENO
10064	10063	0	1.534	32	1.7	4.655	52.0634	91.2758	TERRENO
10064	10063	0	1.534	33	1.7	4.163	26.1258	94.4916	TERRENO
10064	10063	0	1.534	34	1.7	3.426	342.43	94.3525	TERRENO
10064	10063	0	1.534	35	1.7	4.154	309.5708	88.0206	TERRENO
10064	10063	0	1.534	36	1.7	4.868	290.2507	90.2503	TERRENO
10064	10063	0	1.534	37	1.7	4.456	265.4804	77.2805	TERRENO
10064	10063	0	1.534	38	1.7	2.69	262.0555	72.3745	TERRENO
10064	10063	0	1.534	39	1.7	1.733	259.4229	80.4045	TERRENO
10064	10063	0	1.534	40	1.7	1.806	96.0743	80.1924	TERRENO
10064	10063	0	1.534	41	1.7	2.406	134.1219	75.0947	TERRENO
10064	10063	0	1.534	42	1.7	1.979	189.3938	68.3218	TERRENO
10064	10063	0	1.534	43	1.7	2.796	244.4227	71.492	TERRENO
10064	10063	0	1.534	44	1.7	4.669	246.2954	76.1409	TERRENO
10064	10063	0	1.534	45	1.7	5.182	244.4353	76.5253	TERRENO
10064	10063	0	1.534	46	2.5	11.436	0	112.3638	RIO
10064	10063	0	1.534	47	1.5	11.765	0	112.0414	RIO
10064	10063	0	1.534	48	2.5	13.41	0	109.1156	RIO
10064	10063	0	1.534	49	1.5	13.491	0	108.5406	RIO
10064	10063	0	1.534	50	1.5	16.839	0	108.36	RIO
10064	10063	0	1.534	51	1.5	16.664	0	105.1717	RIO
10064	10063	0	1.534	52	1.5	20.734	0	104.5826	RIO
10064	10063	0	1.534	53	1.5	20.64	0	102.2258	RIO
10064	10063	0	1.534	54	1.5	3.614	354.4815	98.5828	AGUA_MAX
10064	10063	0	1.534	55	1.7	28.344	343.1333	93.1609	AGUA_MAX
10064	10063	0	1.534	56	1.7	24.92	359.0648	94.3459	AGUA_MAX
10064	10063	0	1.534	57	1.7	4.599	319.5803	99.3611	AGUA_MAX
10064	10063	0	1.534	58	1.5	5.254	312.2456	100.5654	AGUA_MAX



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



10064	10063	0	1.534	59	1.7	24.588	4.3658	94.2344	AGUA_MAX
10064	10063	0	1.534	60	1.5	1.958	201.1054	78.2536	TERRENO
10064	10063	0	1.534	61	1.5	1.909	158.4844	76.5356	TERRENO
10064	10063	0	1.534	62	1.5	2.523	135.4517	80.3421	TERRENO
10064	10063	0	1.534	63	1.5	3.674	139.5305	72.4257	TERRENO
10064	10063	0	1.534	64	1.5	3.569	171.2147	68.1425	TERRENO
10064	10063	0	1.534	65	1.5	4.354	198.2335	73.3739	TERRENO
10064	10063	0	1.534	66	1.7	28.393	338.0005	94.1403	AGUA_MAX
10064	10063	0	1.534	67	1.7	30.684	324.1004	93.3725	AGUA_MAX
10064	10063	0	1.534	68	1.7	35.964	314.5736	93.1006	AGUA_MAX
10064	10063	0	1.534	69	1.7	43.498	308.5457	91.4002	AGUA_MAX
10065	10066	0	1.422	10066	1.7	31.002	0	92.0352	DELTA
10065	10066	0	1.422	70	1.7	29.146	0	93.0341	TERRENO
10065	10066	0	1.422	71	1.7	28.321	0	94.2746	TERRENO
10065	10066	0	1.422	72	1.7	26.835	0	98.4241	TERRENO
10065	10066	0	1.422	73	1.7	25.672	0	100.4917	TERRENO
10065	10066	0	1.422	74	1.7	24.766	0	102.5537	TERRENO
10065	10066	0	1.422	75	1.7	24.083	0	103.421	RIO
10065	10066	0	1.422	76	1.7	24.072	0	103.0615	RIO
10065	10066	0	1.422	77	1.7	20.106	0	107.3533	RIO
10065	10066	0	1.422	78	1.7	19.909	0	105.5021	RIO
10065	10066	0	1.422	79	1.7	16.319	0	112.2104	RIO
10065	10066	0	1.422	80	1.7	16.128	0	109.4741	RIO
10065	10066	0	1.422	81	1.7	12.57	0	119.5856	RIO
10065	10066	0	1.422	82	1.7	12.156	0	116.4044	RIO
10065	10066	0	1.422	83	2.9	9.447	0	120.2618	RIO
10065	10066	0	1.422	84	2.9	9.488	0	117.4145	RIO
10065	10066	0	1.422	85	1.7	30.935	1.4758	92.2015	AGUA_MAX
10065	10066	0	1.422	86	1.7	31.751	352.4023	92.1115	AGUA_MAX
10065	10066	0	1.422	87	2.5	8.798	0	119.4716	TERRENO
10065	10066	0	1.422	88	2.5	6.475	0	116.0735	TERRENO
10065	10066	0	1.422	89	2.5	3.677	0	104.2423	TERRENO
10065	10066	0	1.422	10066	1.7	31.002	0	92.0434	DELTA
10065	10066	0	1.422	90	1.7	29.467	9.162	93.0711	AGUA_MAX
10065	10066	0	1.422	91	1.5	4.582	70.2759	86.4508	AGUA_MAX
10065	10066	0	1.422	92	1.5	4.366	268.3633	93.511	AGUA_MAX
10065	10066	0	1.422	93	1.5	7.938	274.2429	91.2953	AGUA_MAX
10074	10061	0	1.44	10061	1.7	29.653	0	90.0009	DELTA
10074	10061	0	1.44	11000	1.7	22.585	32.5802	99.1138	DELTA
11000	10074	0	1.393	10074	1.7	22.705	0	79.0956	DELTA
11000	10074	0	1.393	11001	1.5	32.371	231.312	88.3337	DELTA
11000	10074	0	1.393	94	1.5	30.422	234.1917	90.4348	TERRENO
11000	10074	0	1.393	95	1.5	30.777	241.3924	90.5958	TERRENO
11000	10074	0	1.393	96	1.7	30.188	229.2818	89.3238	TERRENO
11000	10074	0	1.393	97	1.7	28.578	223.5502	91.4625	TERRENO
11000	10074	0	1.393	98	1.7	27.122	235.0732	93.2243	TERRENO
11000	10074	0	1.393	99	2.4	27.574	242.094	93.0336	TERRENO
11000	10074	0	1.393	100	1.7	25.898	242.1611	97.2839	RIO
11000	10074	0	1.393	101	1.7	24.157	230.5733	97.4931	RIO
11000	10074	0	1.393	102	1.7	23.927	223.2829	97.5221	RIO
11000	10074	0	1.393	103	1.7	26.496	228.4917	95.0402	TERRENO
11000	10074	0	1.393	104	1.7	26.548	233.5435	94.4827	TERRENO
11000	10074	0	1.393	105	1.7	32.424	233.5649	89.3019	AGUA_MAX
11000	10074	0	1.393	106	1.7	32.466	230.2806	88.2409	AGUA_MAX
11000	10074	0	1.393	107	1.7	31.548	241.4916	90.17	AGUA_MAX
11000	10074	0	1.393	108	1.7	28.392	246.0134	88.371	TERRENO
11000	10074	0	1.393	109	1.7	30.171	244.0808	88.3509	TERRENO
11000	10074	0	1.393	110	0.085	28.037	246.2718	92.0712	TERRENO
11000	10074	0	1.393	111	1.7	28.442	244.0811	89.0811	TERRENO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11000	10074	0	1.393	112	1.6	32.135	252.2933	87.3905	TERRENO
11000	10074	0	1.393	113	1.7	33.013	257.0413	88.5804	TERRENO
11000	10074	0	1.393	114	1.7	36.598	260.595	88.4252	TERRENO
11000	10074	0	1.393	115	2	34.617	261.492	88.084	TERRENO
11000	10074	0	1.393	116	1.7	35.27	267.1603	90.355	TERRENO
11000	10074	0	1.393	117	1.7	33.448	262.2219	90.4904	TERRENO
11000	10074	0	1.393	118	1.7	32.304	258.4616	91.0425	TERRENO
11000	10074	0	1.393	119	1.7	30.591	261.0908	92.3107	TERRENO
11000	10074	0	1.393	120	1.7	31.026	265.1627	94.3531	TERRENO
11000	10074	0	1.393	121	1.5	29.85	262.1733	95.2344	TERRENO
11000	10074	0	1.393	122	1.5	27.523	255.5952	95.424	TERRENO
11000	10074	0	1.393	123	1.5	26.993	252.2608	95.3519	TERRENO
11000	10074	0	1.393	124	0.085	26.503	249.471	98.0344	TERRENO
11000	10074	0	1.393	125	1.5	26.16	251.1838	97.5252	RIO
11000	10074	0	1.393	126	1.5	26.623	259.3233	97.4928	RIO
11000	10074	0	1.393	127	1.5	28.66	267.2237	97.2115	RIO
11000	10074	0	1.393	128	0.085	31.946	277.3139	98.5035	RIO
11000	10074	0	1.393	129	1.7	12.233	286.2829	105.124	RIO
11000	10074	0	1.393	130	1.7	10.8	279.1407	107.5734	RIO
11000	10074	0	1.393	131	1.7	10.081	265.4848	109.4531	RIO
11000	10074	0	1.393	132	1.7	9.261	250.065	111.4454	RIO
11000	10074	0	1.393	133	1.7	8.581	231.5508	112.5536	RIO
11000	10074	0	1.393	134	1.7	9.675	205.2053	109.4912	RIO
11000	10074	0	1.393	135	2	10.633	191.3439	107.1638	RIO
11000	10074	0	1.393	136	5	11.404	174.3237	90.075	RIO
11000	10074	0	1.393	137	1.7	5.175	178.2622	83.5219	TERRENO
11000	10074	0	1.393	138	1.7	3.967	185.0019	83.5328	TERRENO
11000	10074	0	1.393	139	1.7	3.612	193.2654	90.1203	TERRENO
11000	10074	0	1.393	140	1.7	3.066	211.4133	94.5532	TERRENO
11000	10074	0	1.393	141	1.7	3.151	243.5949	104.1828	TERRENO
11000	10074	0	1.393	142	1.7	3.661	269.4659	104.4356	TERRENO
11000	10074	0	1.393	143	1.7	4.06	297.4623	90.5143	TERRENO
11000	10074	0	1.393	144	1.7	7.767	336.0642	75.3644	TERRENO
11000	10074	0	1.393	145	1.7	5.64	340.0327	75.3537	TERRENO
11000	10074	0	1.393	146	1.7	2.927	341.0629	71.2903	TERRENO
11000	10074	0	1.393	147	1.7	2.022	153.3358	77.0808	TERRENO
11000	10074	0	1.393	148	1.7	5.894	144.0838	81.3827	TERRENO
11000	10074	0	1.393	149	1.7	6.469	107.591	75.2216	TERRENO
11000	10074	0	1.393	150	1.7	4.483	33.093	65.3508	TERRENO
11000	10074	0	1.393	151	1.7	11.097	354.2121	76.4546	TERRENO
11000	10074	0	1.393	152	1.7	12.096	3.1407	76.0122	TERRENO
11000	10074	0	1.393	153	1.7	11.738	35.5332	72.2314	TERRENO
11000	10074	0	1.393	154	1.7	8.818	36.01	71.2432	TERRENO
11000	10074	0	1.393	155	1.7	8.278	55.3536	71.0031	TERRENO
11000	10074	0	1.393	156	1.7	8.685	107.3016	76.1258	TERRENO
11000	10074	0	1.393	157	1.7	11.249	103.4031	73.2353	TERRENO
11000	10074	0	1.393	158	1.7	29.115	231.312	89.2651	TERRENO
11000	10074	0	1.393	159	1.7	26.906	231.312	93.52	TERRENO
11000	10074	0	1.393	160	1.7	25.049	231.312	96.4444	TERRENO
11000	10074	0	1.393	161	1.7	24.176	231.312	97.5618	RIO
11000	10074	0	1.393	162	1.7	23.361	231.3121	100.0246	RIO
11000	10074	0	1.393	163	1.7	23.238	231.312	98.0816	RIO
11000	10074	0	1.393	164	1.7	9.135	231.3122	112.1925	RIO
11000	10074	0	1.393	165	1.7	9.102	231.312	111.0642	RIO
11000	10074	0	1.393	166	1.7	12.368	231.312	108.1241	RIO
11000	10074	0	1.393	167	1.7	12.166	231.312	105.5003	RIO
11000	10074	0	1.393	168	1.7	14.804	231.312	105.55	RIO
11000	10074	0	1.393	169	1.7	14.616	231.312	103.0237	RIO
11000	10074	0	1.393	170	1.7	20.11	231.312	102.0303	RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11000	10074	0	1.393	171	1.7	19.947	231.312	99.415	RIO
11029	10073	0	1.366	10073	1.7	16.033	0	86.5236	DELTA
11029	10073	0	1.366	11002	1.5	28.948	165.3534	94.2624	DELTA
11002	11029	0.0001	1.34	11029	1.7	28.983	0.0001	84.3641	DELTA
11002	11029	0.0001	1.34	172	5	12.28	206.5906	94.0408	BORDE_CANO
11002	11029	0.0001	1.34	173	5	13.666	206.1252	92.5132	BORDE_CANO
11002	11029	0.0001	1.34	174	5	13.737	204.091	92.0002	BORDE_CANO
11002	11029	0.0001	1.34	175	5	14.052	201.4057	92.0301	BORDE_CANO
11002	11029	0.0001	1.34	176	2.9	12.836	196.3159	100.1245	RIO
11002	11029	0.0001	1.34	177	2.9	11.058	187.5533	101.5032	RIO
11002	11029	0.0001	1.34	178	1.7	8.147	156.4417	112.5103	RIO
11002	11029	0.0001	1.34	179	1.7	7.296	135.4716	114.3154	RIO
11002	11029	0.0001	1.34	180	5	13.737	198.324	94.5107	RIO
11002	11029	0.0001	1.34	181	2.9	13.882	199.3233	100.3434	RIO
11002	11029	0.0001	1.34	182	1.7	20.127	173.5203	101.365	RIO
11002	11029	0.0001	1.34	183	1.7	20.116	173.5203	100.3846	RIO
11002	11029	0.0001	1.34	184	2.9	19.391	175.195	100.4509	RIO
11002	11029	0.0001	1.34	185	1.7	19.642	175.1951	100.5711	RIO
11002	11029	0.0001	1.34	186	1.7	21.198	174.2811	99.4812	RIO
11002	11029	0.0001	1.34	187	1.7	19.318	166.2153	100.2211	RIO
11002	11029	0.0001	1.34	188	1.7	19.24	160.2725	100.0944	RIO
11002	11029	0.0001	1.34	189	1.7	18.183	147.4637	100.5458	RIO
11002	11029	0.0001	1.34	190	1.7	18.999	135.3852	99.5616	RIO
11002	11029	0.0001	1.34	191	1.7	18.858	127.1244	100.1723	RIO
11002	11029	0.0001	1.34	192	1.7	22.393	136.2447	92.3656	AGUA_MAX
11002	11029	0.0001	1.34	193	1.7	22.57	156.4358	93.4123	AGUA_MAX
11002	11029	0.0001	1.34	194	1.5	7.333	196.0535	100.1057	AGUA_MAX
11002	11029	0.0001	1.34	195	1.5	4.99	191.1147	101.4526	AGUA_MAX
11002	11029	0.0001	1.34	196	1.5	4.391	92.0521	105.3853	AGUA_MAX
11002	11029	0.0001	1.34	197	2.9	15.818	188.4216	104.5031	RIO
11002	11029	0.0001	1.34	198	1.7	15.643	189.5523	103.4423	RIO
11002	11029	0.0001	1.34	199	2.9	14.936	193.3751	103.5541	RIO
11002	11029	0.0001	1.34	200	1.7	15.045	193.3752	104.1432	RIO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION C
INGENIERA CAROLINA MOSQUERA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12001	12000	0.0002	1.417	12000	1.7	113.823	0.0002	89.4017	
SD	89.89.4017									
	12001	12000	0.0002	1.417	12000	1.7	113.821	0.0002	89.4017	
SD	89.89.4017									
	12001	12000	0.0002	1.417	12000	1.7	113.8	0.0001	89.4016	
SD	89.89.4016									
	12001	12000	0.0002	1.417	1	1.7	12.268	187.2012	88.5624	BORDE_VIA
	12001	12000	0.0002	1.417	2	1.7	9.48	208.0448	88.1451	BORDE_VIA
	12001	12000	0.0002	1.417	3	1.7	16.421	243.2355	88.531	BORDE_VIA
	12001	12000	0.0002	1.417	4	1.7	5.469	346.4049	87.0706	BORDE_VIA
	12001	12000	0.0002	1.417	5	1.7	3.107	318.4014	86.0157	BORDE_VIA
	12001	12000	0.0002	1.417	6	1.7	12.922	265.2601	88.4938	BORDE_VIA
	12001	12000	0.0002	1.417	7	1.7	4.076	305.0856	88.4302	SUMEDERO
	12001	12000	0.0002	1.417	8	1.7	3.439	314.5813	88.132	SUMEDERO
	12001	12000	0.0002	1.417	9	1.7	6.894	288.5229	85.4537	CERRAMIENT
	12001	12000	0.0002	1.417	10	1.7	12.807	278.424	86.5748	CERRAMIENT
	12001	12000	0.0002	1.417	11	1.7	11.937	213.5746	87.3838	CERRAMIENT
	12001	12000	0.0002	1.417	12	1.7	19.487	242.245	88.3247	CERRAMIENT
	12001	12000	0.0002	1.417	13	1.7	10.468	200.4912	89.4338	SUMEDERO
	12001	12000	0.0002	1.417	14	1.7	10.24	196.4251	89.264	SUMEDERO
	12001	12000	0.0002	1.417	15	1.7	5.192	197.1632	87.1403	MANHOLE
	12001	12000	0.0002	1.417	12002	1.7	108.847	266.5403	89.5757	DELTA
	12001	12000	0.0002	1.417	16	1.7	78.349	266.5402	89.4832	LINEAMIENT
	12001	12000	0.0002	1.417	AUX_1	1.7	117.323	180.2952	90.0322	DELTA_AUX
	12002	12001	0	1.411	12001	1.7	108.814	0	89.4421	
SD	89.89.4421									
	12002	12001	0	1.411	17	1.7	57.653	9.4822	89.2847	CERRAMIENT
	12002	12001	0	1.411	18	1.7	54.676	10.5228	89.2412	BORDE_VIA
	12002	12001	0	1.411	19	1.7	46.747	9.13	89.172	BORDE_VIA
	12002	12001	0	1.411	20	1.7	45.818	11.3737	88.5611	PARAMENTO
	12002	12001	0	1.411	21	1.7	46.743	9.2747	89.123	POSTE
	12002	12001	0	1.411	22	1.7	51.179	4.5736	89.2019	MANHOLE
	12002	12001	0	1.411	23	1.7	57.654	359.3211	89.0542	POSTE
	12002	12001	0	1.411	24	1.7	18.849	356.504	89.0243	BORDE_VIA
	12002	12001	0	1.411	25	1.7	15.509	351.5222	89.1628	BORDE_VIA
	12002	12001	0	1.411	26	1.7	16.274	341.1011	89.0025	BORDE_VIA
	12002	12001	0	1.411	27	1.7	18.465	346.3738	88.2226	CERRAMIENT
	12002	12001	0	1.411	28	1.7	17.612	351.5554	88.2732	POSTE
	12002	12001	0	1.411	29	1.7	16.623	352.1936	89.3608	SUMEDERO
	12002	12001	0	1.411	30	1.7	15.777	350.4846	89.1729	SUMEDERO
	12002	12001	0	1.411	31	1.7	10.477	342.5801	88.3328	POSTE
	12002	12001	0	1.411	32	1.7	10.562	346.5434	88.2901	BORDE_VIA
	12002	12001	0	1.411	33	1.7	7.864	354.1148	87.3821	BORDE_VIA
	12002	12001	0	1.411	34	1.7	8.183	49.1453	88.2237	BORDE_VIA
	12002	12001	0	1.411	35	1.7	7.779	65.3124	87.5355	BORDE_VIA
	12002	12001	0	1.411	36	1.7	8.779	78.2411	88.4907	BORDE_VIA
	12002	12001	0	1.411	37	1.7	19.782	90.272	89.1507	BORDE_VIA
	12002	12001	0	1.411	38	1.7	10.312	59.3856	86.4557	PARAMENTO
	12002	12001	0	1.411	39	1.7	11.766	11.0004	88.0809	MANHOLE
	12002	12001	0	1.411	40	1.7	2.297	158.2724	82.0153	MANHOLE
	12002	12001	0	1.411	41	1.7	5.053	148.4451	86.2333	MANHOLE
	12002	12001	0	1.411	42	1.7	23.525	173.5448	88.5649	MANHOLE
	12002	12001	0	1.411	43	1.7	7.872	76.0208	89.0114	SUMEDERO
	12002	12001	0	1.411	44	1.7	6.98	74.1952	89.0005	SUMEDERO
	12002	12001	0	1.411	45	1.7	11.19	138.0314	89.5215	SUMEDERO
	12002	12001	0	1.411	46	1.7	10.759	142.3619	89.4741	SUMEDERO
	12002	12001	359.5959	1.406	12001	1.7	108.805	359.5959	89.4409	
SD	89.89.4409									
	12002	12001	359.5959	1.406	47	1.7	12.025	159.5808	89.0248	BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12002	12001	359.5959	1.406	48	1.7	9.694	143.0951	89.1906 BORDE_VIA
	12002	12001	359.5959	1.406	49	1.7	12.277	123.3235	89.1136 BORDE_VIA
	12002	12001	359.5959	1.406	50	1.7	34.77	99.1502	89.1654 BORDE_VIA
	12002	12001	359.5959	1.406	51	1.7	34.056	103.1006	89.1612 CERRAMIENT
	12002	12001	359.5959	1.406	52	1.7	34.684	107.5202	89.1738 CERRAMIENT
	12002	12001	359.5959	1.406	53	1.7	34.685	108.1529	89.1916 BORDE_VIA
	12002	12001	359.5959	1.406	54	1.7	30.326	105.5104	89.1917 ANDEN
	12002	12001	359.5959	1.406	55	1.7	31.146	105.5319	89.1917 POSTE
	12002	12001	359.5959	1.406	56	1.7	30.222	108.3614	89.0438 PARAMENTO
	12002	12001	359.5959	1.406	57	1.7	19.914	117.475	88.353 PARAMENTO
	12002	12001	359.5959	1.406	58	1.7	19.488	113.5526	88.3437 ANDEN
	12002	12001	359.5959	1.406	59	1.7	35.325	102.1944	88.5715 ARBOL
	12002	12001	359.5959	1.406	60	1.7	39.075	100.5929	88.5342 ARBOL
	12002	12001	359.5959	1.406	61	1.7	42.503	99.094	89.075 ARBOL
	12002	12001	359.5959	1.406	62	1.7	45.867	98.5633	88.5925 ARBOL
	12002	12001	359.5959	1.406	63	1.7	51.982	97.0841	89.2436 BORDE_VIA
	12002	12001	359.5959	1.406	64	1.7	56.346	97.0226	89.2546 MANHOLE
	12002	12001	359.5959	1.406	65	1.7	60.784	96.4439	89.2617 CERRAMIENT
	12002	12001	359.5959	1.406	66	1.7	60.799	97.4331	89.2914 CERRAMIENT
	12002	12001	359.5959	1.406	67	1.7	63.033	94.1847	89.2752 BORDE_VIA
	12002	12001	359.5959	1.406	68	1.7	60.58	98.1424	89.3503 SUMEDERO
	12002	12001	359.5959	1.406	69	1.7	60.696	99.0018	89.3329 SUMEDERO
	12002	12001	359.5959	1.406	12003	1.7	112.24	92.0354	89.5058 DELTA
	12002	12001	359.5959	1.406	70	1.7	80.582	92.0354	89.3922 LINEAMIENT
	12002	12001	359.5959	1.406	71	1.7	36.238	92.0356	89.1722 LINEAMIENT
	12003	12002	0	1.401	12002	1.7	112.221	0	89.5109
SD	89.89.5109								
	12003	12002	0	1.401	72	1.7	32.541	5.0519	89.1412 BORDE_VIA
	12003	12002	0	1.401	73	1.7	33.182	356.3353	89.0332 BORDE_VIA
	12003	12002	0	1.401	74	1.7	21.869	354.472	88.4011 BORDE_VIA
	12003	12002	0	1.401	75	1.7	22.301	12.2402	88.5755 CERRAMIENT
	12003	12002	0	1.401	76	1.7	22.21	349.1015	88.3213 CERRAMIENT
	12003	12002	0	1.401	77	1.7	8.18	330.4353	87.0603 CERRAMIENT
	12003	12002	0	1.401	78	1.7	14.354	20.4433	88.061 CERRAMIENT
	12003	12002	0	1.401	79	1.7	6.838	336.0737	87.0308 BORDE_VIA
	12003	12002	0	1.401	80	1.7	9.201	26.1826	88.0637 BORDE_VIA
	12003	12002	0	1.401	81	1.7	7.19	45.5043	88.0752 BORDE_VIA
	12003	12002	0	1.401	82	1.7	7.385	308.5149	86.5555 BORDE_VIA
	12003	12002	0	1.401	83	1.7	13.67	285.323	87.5935 BORDE_VIA
	12003	12002	0	1.401	84	1.7	14.495	72.3728	88.4302 BORDE_VIA
	12003	12002	0	1.401	85	1.7	16.85	70.3637	88.3521 POSTE
	12003	12002	0	1.401	86	1.7	14.13	290.5958	87.5724 CERRAMIENT
	12003	12002	0	1.401	87	1.7	7.054	323.3138	86.2118 POSTE
	12003	12002	0	1.401	88	1.7	4.663	300.2707	85.2451 VALVULA
	12003	12002	0	1.401	89	1.7	4.665	232.4038	88.0609 SUMEDERO
	12003	12002	0	1.401	90	1.7	4.024	224.392	86.3748 SUMEDERO
	12003	12002	0	1.401	91	1.7	9.394	61.0421	89.012 SUMEDERO
	12003	12002	0	1.401	92	1.7	8.46	61.3131	88.5743 SUMEDERO
	12003	12002	0	1.401	93	1.7	3.388	127.231	84.1151 MANHOLE
	12003	12002	0	1.401	94	1.7	14.44	128.3648	89.3509 SUMEDERO
	12003	12002	0	1.401	95	1.7	13.937	126.4834	89.5231 SUMEDERO
	12003	12002	0	1.401	96	1.7	24.737	109.053	88.5825 PARAMENTO
	12003	12002	0	1.401	97	1.7	23.552	104.4207	89.0805 BORDE_VIA
	12003	12002	0	1.401	98	1.7	14.015	123.4019	89.0906 BORDE_VIA
	12003	12002	0	1.401	99	1.7	16.127	140.5345	88.5731 BORDE_VIA
	12003	12002	0	1.401	100	1.7	17.577	128.152	88.4118 PARAMENTO
	12003	12002	0	1.401	101	1.7	17.957	136.1116	89.1055 POSTE
	12003	12002	0	1.401	102	1.7	27.909	143.5949	89.0927 PARAMENTO
	12003	12002	0	1.401	103	1.7	3.144	165.5232	84.3331 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12003	12002	0	1.401	104	1.7	3.729	240.5846	86.2101 BORDE_VIA
	12003	12002	0	1.401	105	1.7	16.392	264.014	88.5432 BORDE_VIA
	12003	12002	0	1.401	106	1.7	28.445	228.0242	88.3535 PARAMENTO
	12003	12002	0	1.401	107	2.6	14.055	181.4312	83.5317 PARAMENTO
	12003	12002	0	1.401	12004	1.7	162.966	164.0215	90.0035 DELTA
	12003	12002	0	1.401	108	1.7	97.013	164.0216	89.5917 LINEAMIENT
	12003	12002	0	1.401	109	1.7	95.815	162.2456	89.5848 BORDE_VIA
	12003	12002	0	1.401	110	1.7	93.956	160.1127	89.5125 PARAMENTO
	12003	12002	0	1.401	111	1.7	85.93	160.4807	89.545 POSTE
	12003	12002	0	1.401	112	1.7	86.031	162.0712	89.5904 SUMEDERO
	12003	12002	0	1.401	113	1.7	85.205	162.2329	89.5957 SUMEDERO
	12003	12002	0	1.401	114	1.7	86.009	163.3844	89.5647 MANHOLE
	12003	12002	0	1.401	115	1.7	16.105	147.4628	89.0619 MANHOLE
	12004	12003	0	1.386	12003	1.7	162.957	0	89.4451
SD	89.89.4451								
	12004	12003	0	1.386	116	1.7	90.964	357.1756	89.4246 ARBOL
	12004	12003	0	1.386	117	1.7	84.683	356.4713	89.4129 ARBOL
	12004	12003	0	1.386	118	1.7	81.279	357.3448	89.4347 BORDE_VIA
	12004	12003	0	1.386	119	1.7	78.667	356.5004	89.4412 SUMEDERO
	12004	12003	0	1.386	120	1.7	77.816	357.0744	89.4507 SUMEDERO
	12004	12003	0	1.386	12005	1.7	179.917	182.4054	89.5409 DELTA
	12004	12003	0	1.386	120	1.7	109.581	182.4055	90.0005 LINEAMIENT
	12004	12003	0	1.386	121	1.7	79.175	182.4056	89.5731 LINEAMIENT
	12004	12003	0	1.386	122	1.7	111.819	184.0757	89.5945 MANHOLE
	12004	12003	0	1.386	123	1.7	28.978	1.0245	89.263 BORDE_VIA
	12004	12003	0	1.386	124	1.7	29.291	9.2729	89.0333 PARAMENTO
	12004	12003	0	1.386	125	1.7	30.23	343.0647	89.1629 CERRAMIENT
	12004	12003	0	1.386	126	1.7	28.497	348.4552	89.2953 BORDE_VIA
	12004	12003	0	1.386	127	1.7	3.193	8.5228	85.1202 BORDE_VIA
	12004	12003	0	1.386	128	1.7	1.892	70.2208	81.0215 BORDE_VIA
	12004	12003	0	1.386	129	1.7	5.162	93.3333	86.4307 CANALETA
	12004	12003	0	1.386	130	1.7	5.204	88.2542	87.332 BORDE_VIA
	12004	12003	0	1.386	131	1.7	9.533	316.4302	88.4113 BORDE_VIA
	12004	12003	0	1.386	132	1.7	11.25	307.5638	88.4551 POSTE
	12004	12003	0	1.386	133	1.7	11.928	302.5319	88.2442 CERRAMIENT
	12004	12003	0	1.386	134	1.7	9.429	286.2835	88.2443 BORDE_VIA
	12004	12003	0	1.386	135	1.7	11.527	275.5647	88.4138 BORDE_VIA
	12004	12003	0	1.386	136	1.7	11.562	273.1556	88.2122 CANALETA
	12004	12003	0	1.386	137	1.7	22.334	273.0039	89.0757 CANALETA
	12004	12003	0	1.386	138	1.7	25.386	286.0606	88.5744 PARAMENTO
	12004	12003	0	1.386	139	1.7	24.782	274.1712	89.232 BORDE_VIA
	12004	12003	0	1.386	140	1.7	25.744	256.2158	89.212 BORDE_VIA
	12004	12003	0	1.386	141	1.7	25.646	257.2603	89.1402 CANALETA
	12004	12003	0	1.386	142	1.7	30.982	245.1515	89.2232 PARAMENTO
	12004	12003	0	1.386	143	1.7	17.461	218.2624	89.1508 PARAMENTO
	12004	12003	0	1.386	144	1.7	14.957	208.2642	89.1239 BORDE_VIA
	12004	12003	0	1.386	145	1.7	14.637	206.5712	88.5921 CANALETA
	12004	12003	0	1.386	146	1.7	11.634	215.4358	88.413 CANALETA
	12004	12003	0	1.386	147	1.7	12.093	223.4128	88.413 BORDE_VIA
	12004	12003	0	1.386	148	1.7	11.579	223.3853	88.3259 CANALETA
	12004	12003	0	1.386	149	1.7	13.254	223.5541	88.3302 POSTE
	12004	12003	0	1.386	150	1.7	12.152	226.4349	88.4546 SUMEDERO
	12004	12003	0	1.386	151	1.7	11.782	230.4815	88.3724 SUMEDERO
	12004	12003	0	1.386	152	1.7	8.337	215.4602	87.3842 MANHOLE
	12004	12003	0	1.386	153	1.7	4.466	221.4857	85.3607 MANHOLE
	12004	12003	0	1.386	154	1.7	59.78	93.1849	89.5215 CANALETA
	12004	12003	0	1.386	155	1.7	59.607	92.5058	89.5521 BORDE_VIA
	12004	12003	0	1.386	156	1.7	62.413	100.1514	89.5524 BORDE_VIA
	12004	12003	0	1.386	157	1.7	62.319	99.4909	89.5153 CANALETA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12004	12003	0	1.386	158	1.7	63.413	103.4027	89.4146	PARAMENTO
	12004	12003	0	1.386	159	1.7	59.717	97.0311	89.4845	MANHOLE
	12004	12003	0	1.386	160	1.7	3.078	84.591	86.1143	SUMEDERO
	12004	12003	0	1.386	161	1.7	3.247	68.3121	86.3458	SUMEDERO
	12004	12003	0	1.386	162	1.7	5.909	64.2736	86.2005	ARBOL
	12004	12003	0	1.386	163	1.7	10.537	153.2624	89.4513	SUMEDERO
	12004	12003	0	1.386	164	1.7	9.644	155.0851	89.2517	SUMEDERO
	12004	12003	0	1.386	165	1.7	11.67	168.3958	88.2917	CERRAMIENT
	12004	12003	0	1.386	166	1.7	8.658	147.5228	88.0434	CANALETA
	12004	12003	0	1.386	167	1.7	9.154	149.0034	88.2839	BORDE_VIA
	12004	12003	0	1.386	168	1.7	9.586	170.043	88.3058	CANALETA
	12004	12003	0	1.386	169	1.7	13.65	178.3241	88.5834	CANALETA
	12004	12003	0	1.386	170	1.7	13.604	176.2306	89.1534	BORDE_VIA
	12004	12003	0	1.386	171	1.7	25.934	176.5225	89.36	CERRAMIENT
	12004	12003	0	1.386	172	1.7	38.844	179.4445	89.3102	POSTE
	12004	12003	0	1.386	173	2	39.079	197.3553	89.024	PARAMENTO
	12004	12003	0	1.386	174	1.7	38.455	192.3632	89.5053	BORDE_VIA
	12004	12003	0	1.386	175	1.7	38.384	191.5443	89.4522	CANALETA
	12004	12003	0	1.386	176	1.7	25.616	200.5011	89.0507	ARBOL
	12004	12003	0	1.386	177	1.7	22.668	338.5114	89.1437	ARBOL
	12004	12003	0	1.386	178	1.7	15.753	293.5051	88.1638	ARBOL
	12005	12004	0	1.463	12004	1.7	179.924	0	89.5604	
SD	89.89.5604									
	12005	12004	0	1.463	179	1.7	16.703	100.1511	89.04	BORDE_VIA
	12005	12004	0	1.463	180	1.7	10.568	107.5322	88.2948	BORDE_VIA
	12005	12004	0	1.463	181	1.7	8.436	112.2439	86.451	SEMAFORO
	12005	12004	0	1.463	182	1.7	6.123	114.5458	87.5802	BORDE_VIA
	12005	12004	0	1.463	183	1.7	2.23	51.001	85.2418	BORDE_VIA
	12005	12004	0	1.463	184	1.7	3.227	10.5722	87.1739	BORDE_VIA
	12005	12004	0	1.463	185	1.7	3.133	0.5625	86.0343	CANALETA
	12005	12004	0	1.463	186	1.7	27.425	1.291	89.5658	BORDE_VIA
	12005	12004	0	1.463	187	1.7	27.503	0.2757	89.4558	CANALETA
	12005	12004	0	1.463	188	1.7	29.122	8.4248	89.3047	PARAMENTO
	12005	12004	0	1.463	189	1.7	35.467	4.3301	89.5829	POSTE
	12005	12004	0	1.463	190	1.7	98.568	354.4443	89.4611	ARBOL
	12005	12004	0	1.463	191	1.7	96.892	355.5441	90.0403	BORDE_VIA
	12005	12004	0	1.463	192	1.7	96.891	356.1057	90.0217	CANAL
	12005	12004	0	1.463	193	1.7	9.204	295.5437	87.171	SEMAFORO
	12005	12004	0	1.463	194	1.7	8.231	284.1357	88.3028	BORDE_VIA
	12005	12004	0	1.463	195	1.7	11.057	266.0202	88.4605	BORDE_VIA
	12005	12004	0	1.463	196	1.7	14.209	255.2029	88.4608	BORDE_VIA
	12005	12004	0	1.463	197	1.7	34.161	263.0029	89.2945	BORDE_VIA
	12005	12004	0	1.463	198	1.7	48.658	271.5053	89.3502	POSTE
	12005	12004	0	1.463	199	1.7	46.885	275.3757	89.4349	CERRAMIENT
	12005	12004	0	1.463	200	1.7	10.283	299.4303	88.3144	CERRAMIENT
	12005	12004	0	1.463	201	1.7	18.819	332.4404	89.1856	CERRAMIENT
	12005	12004	0	1.463	202	1.7	21.224	336.5903	88.2603	POSTE
	12005	12004	0	1.463	203	1.7	21.265	338.3426	89.1335	ARBOL
	12005	12004	0	1.463	204	1.7	6.754	44.5809	87.4132	PARAMENTO
	12005	12004	0	1.463	205	1.7	45.248	348.4313	89.5351	PARAMENTO
	12005	12004	0	1.463	206	1.7	11.285	15.1904	88.4009	POSTE
	12005	12004	0	1.463	207	1.7	5.125	88.0005	86.3151	POSTE
	12005	12004	0	1.463	208	1.7	2.701	30.0025	86.4121	SUMEDERO
	12005	12004	0	1.463	209	1.7	2.107	46.3117	84.152	SUMEDERO
	12005	12004	0	1.463	210	1.7	2.225	305.2343	83.4335	MANHOLE
	12005	12004	0	1.463	211	1.7	6.827	278.0314	88.1926	MANHOLE
	12005	12004	0	1.463	212	1.7	5.201	239.0122	87.0018	MANHOLE
	12005	12004	0	1.463	213	1.7	9.026	266.1555	88.2708	CAJA_TELEF
	12005	12004	0	1.463	214	1.7	18.785	75.2412	88.5222	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12005	12004	0	1.472	12004	1.7	179.924	0	89.5604	
SD	89.89.5604									
	12005	12004	359.5959	1.472	12004	1.7	179.93	359.5959	89.5511	
SD	89.89.5511									
	12005	12004	359.5959	1.472	12006	1.7	109.835	176.2632	90.1609 DELTA	
	12005	12004	359.5959	1.472	12007	1.7	109.97	177.1334	90.1608 DELTA	
	12005	12004	359.5959	1.472	213	1.7	74.934	177.1232	90.1949 BORDE_VIA	
	12005	12004	359.5959	1.472	214	1.7	74.483	175.5955	90.1112 CERRAMIENT	
	12005	12004	359.5959	1.472	215	1.7	57.898	176.4847	90.1216 POSTE	
	12005	12004	359.5959	1.472	216	1.7	29.664	200.4248	89.4733 PARAMENTO	
	12005	12004	359.5959	1.472	217	1.7	47.361	189.4842	90.0939 PARAMENTO	
	12005	12004	359.5959	1.472	218	1.7	46.845	187.3022	90.2554 BORDE_VIA	
	12005	12004	359.5959	1.472	219	1.7	24.536	180.4714	90.1005 BORDE_VIA	
	12005	12004	359.5959	1.472	220	1.7	23.615	176.2416	89.3342 ANDEN	
	12005	12004	359.5959	1.472	221	1.7	18.794	175.5422	89.4225 BORDE_VIA	
	12005	12004	359.5959	1.472	222	1.7	19.411	171.3435	89.0318 ANDEN	
	12005	12004	359.5959	1.472	223	1.7	15.19	163.3432	88.385 BORDE_VIA	
	12005	12004	359.5959	1.472	224	1.7	17.835	161.3805	89.0141 ANDEN	
	12005	12004	359.5959	1.472	225	1.7	35.393	192.0531	90.2924 SUMEDERO	
	12005	12004	359.5959	1.472	226	1.7	34.817	193.1304	90.3053 SUMEDERO	
	12005	12004	359.5959	1.472	227	1.7	34.106	180.0759	90.3437 SUMEDERO	
	12005	12004	359.5959	1.472	228	1.7	33.313	179.3137	90.3544 SUMEDERO	
	12005	12004	359.5959	1.472	229	1.7	26.864	198.4041	90.085 BORDE_VIA	
	12005	12004	359.5959	1.472	230	1.7	27.766	201.4604	89.3719 ANDEN	
	12005	12004	359.5959	1.472	231	1.7	23.231	204.594	89.4321 BORDE_VIA	
	12005	12004	359.5959	1.472	232	1.7	24.344	207.4218	89.2735 ANDEN	
	12005	12004	359.5959	1.472	233	1.7	21.092	227.0557	88.5308 ANDEN	
	12005	12004	359.5959	1.472	234	1.7	22.868	224.2033	88.4621 ANDEN	
	12005	12004	359.5959	1.472	235	1.7	23.18	228.3524	88.3602 SEMAFORO	
	12005	12004	359.5959	1.472	236	1.7	47.117	235.1032	89.545 PARAMENTO	
	12005	12004	359.5959	1.472	237	1.7	48.159	249.4912	89.5112 BORDE_VIA	
	12005	12004	359.5959	1.472	238	1.7	38.72	241.1411	89.4825 POSTE	
	12005	12004	359.5959	1.472	239	1.7	24.498	204.374	89.2243 MANHOLE	
	12005	12004	359.5959	1.472	240	1.7	18.986	192.2431	89.2243 MANHOLE	
	12005	12004	359.5959	1.472	241	1.7	18.739	208.472	89.1001 CAJA_TELEF	
	12005	12004	359.5959	1.472	242	1.7	24.006	209.5156	89.1003 MOJON	
	12005	12004	359.5959	1.472	243	1.7	52.363	106.364	89.2909 BORDE_VIA	
	12005	12004	359.5959	1.472	244	1.7	53.14	108.2132	89.2016 SEMAFORO	
	12005	12004	359.5959	1.472	245	1.7	59.008	120.0038	89.2224 PARAMENTO	
	12005	12004	359.5959	1.472	246	1.7	34.538	125.5955	90.012 CERRAMIENT	
	12007	12005	0	1.38	12005	1.7	109.932	0	89.2757	
SD	89.89.2757									
	12007	12005	0	1.38	247	1.7	110.124	358.2158	89.2654 EJE_TUBO	
	12007	12005	0	1.38	248	1.7	84.669	358.2158	89.3112 LINEAMIENT	
	12007	12005	0	1.38	249	1.7	22.332	358.2157	89.0227 LINEAMIENT	
	12007	12005	0	1.38	250	1.7	52.062	0.402	89.2 POSTE	
	12007	12005	0	1.38	251	1.7	23.956	356.5147	89.0721 MANHOLE	
	12007	12005	0	1.38	252	1.7	22.4	342.1417	89.1133 SUMEDERO	
	12007	12005	0	1.38	253	1.7	21.51	343.0829	89.083 SUMEDERO	
	12007	12005	0	1.38	254	1.7	20.929	9.1222	89.3148 PARAMENTO	
	12007	12005	0	1.38	255	1.7	20.824	5.2136	89.2932 POSTE	
	12007	12005	0	1.38	256	1.7	9.702	15.0509	87.4753 POSTE	
	12007	12005	0	1.38	257	1.7	11.116	21.2751	88.3529 CERRAMIENT	
	12007	12005	0	1.38	258	1.7	5.597	123.2906	86.164 PUERTA	
	12007	12005	0	1.38	259	1.7	6.496	133.3354	86.4946 PUERTA	
	12007	12005	0	1.38	260	1.7	7.385	155.1223	86.2314 POSTE	
	12007	12005	0	1.38	261	1.7	15.605	199.5923	88.302 PARAMENTO	
	12007	12005	0	1.38	262	1.7	15.924	193.0731	89.064 BORDE_VIA	
	12007	12005	0	1.38	263	1.7	18.333	196.1731	89.2103 ANDEN	



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



12007	12005	0	1.38	264	1.7	18.418	193.4207	89.1827	SUMEDERO
12007	12005	0	1.38	265	1.7	17.378	194.0407	89.1627	SUMEDERO
12007	12005	0	1.38	266	1.7	24.668	169.002	89.3022	SUMEDERO
12007	12005	0	1.38	267	1.7	23.8	170.0046	89.2745	SUMEDERO
12007	12005	0	1.38	268	1.7	24.02	177.5658	89.2241	MANHOLE
12007	12005	0	1.38	269	1.7	23.739	187.5302	89.2516	MANHOLE
12007	12005	0	1.38	270	1.7	26.555	189.0545	89.3226	BORDE_VIA
12007	12005	0	1.38	271	1.7	28.413	185.2819	89.3411	BORDE_VIA
12007	12005	0	1.38	272	1.7	28.16	170.361	89.073	POSTE
12007	12005	0	1.38	273	1.7	51.85	172.5549	89.3552	POSTE
12007	12005	0	1.38	274	1.7	54.035	173.0431	89.5235	SUMEDERO
12007	12005	0	1.38	275	1.7	53.24	173.2602	89.5208	SUMEDERO
12007	12005	0	1.38	276	1.7	63.961	172.1402	89.4258	CERRAMIENT
12007	12005	0	1.38	277	1.7	61.813	174.4416	89.5521	BORDE_VIA
12007	12005	0	1.38	278	1.7	68.727	175.5641	89.5716	BORDE_VIA
12007	12005	0	1.38	279	1.7	68.727	177.4216	89.5756	BORDE_VIA
12007	12005	0	1.38	280	1.7	81.099	176.4448	89.4532	BORDE_VIA
12007	12005	0	1.38	281	1.7	54.522	181.0623	89.524	BORDE_VIA
12007	12005	0	1.38	282	1.7	64.252	181.2915	89.5627	BORDE_VIA
12007	12005	0	1.38	283	1.7	81.908	179.5628	89.5747	MANHOLE
12007	12005	0	1.38	284	1.7	27.083	193.0925	90.193	SUMEDERO
12007	12005	0	1.38	285	1.7	26.463	191.3848	90.1842	SUMEDERO
12007	12005	0	1.38	286	1.7	28.996	194.3628	89.5444	CERRAMIENT
12007	12005	0	1.38	287	1.7	29.433	199.2247	89.5337	CERRAMIENT
12007	12005	0	1.38	288	1.7	25.22	192.4545	89.3802	BORDE_VIA
12007	12005	0	1.38	289	1.7	25.624	197.3658	89.4453	BORDE_VIA
12007	12005	0	1.38	290	1.7	78.732	177.0626	90.004	SUMEDERO
12007	12005	0	1.38	291	1.7	77.811	177.2106	90.004	SUMEDERO
12007	12005	0	1.38	292	1.7	78.007	177.5423	89.581	DELTA_REF
12007	12005	0	1.38	12008	1.7	77.789	178.5334	89.5723	DELTA
12007	12005	0	1.38	12006	1.7	1.485	85.5605	78.2852	DELTA_REF
12008	12007	0	1.473	12007	1.7	77.801	0	89.3923	
SD	89.89.3923								
12008	12007	0	1.473	293	1.7	24.324	0.0001	89.155	LINEAMIENT
12008	12007	0	1.473	294	1.7	25.26	355.2251	89.215	BORDE_VIA
12008	12007	0	1.473	295	1.7	15.597	350.1951	89.0856	BORDE_VIA
12008	12007	0	1.473	296	1.7	8.066	330.562	88.4011	BORDE_VIA
12008	12007	0	1.473	297	1.7	6.418	296.5737	88.3604	BORDE_VIA
12008	12007	0	1.473	298	1.7	11.013	275.4433	89.053	BORDE_VIA
12008	12007	0	1.473	299	1.7	30.991	274.3942	89.4357	BORDE_VIA
12008	12007	0	1.473	300	1.7	32.611	278.2154	89.3718	CERRAMIENT
12008	12007	0	1.473	301	1.7	11.207	286.5504	89.1317	CERRAMIENT
12008	12007	0	1.473	302	1.7	7.04	297.0745	88.3659	MANHOLE
12008	12007	0	1.473	303	1.7	7.53	286.4441	89.1557	SUMEDERO
12008	12007	0	1.473	304	1.7	7.851	280.1138	89.2201	SUMEDERO
12008	12007	0	1.473	305	1.7	14.123	264.0915	89.0957	MANHOLE
12008	12007	0	1.473	306	1.7	28.808	262.4133	89.4242	BORDE_VIA
12008	12007	0	1.473	307	1.7	29.117	260.2749	89.264	CERRAMIENT
12008	12007	0	1.473	308	1.7	21.514	253.5654	89.4556	CERRAMIENT
12008	12007	0	1.473	309	1.7	23.39	243.4642	89.3858	PARAMENTO
12008	12007	0	1.473	310	1.7	18.112	232.5954	89.3136	PARAMENTO
12008	12007	0	1.473	311	1.7	15.412	244.3302	89.5419	POSTE
12008	12007	0	1.473	312	1.7	14.9	244.3328	89.542	ANDEN
12008	12007	0	1.473	313	1.7	14.044	249.4653	89.1546	BORDE_VIA
12008	12007	0	1.473	314	1.7	10.871	236.3712	88.5834	BORDE_VIA
12008	12007	0	1.473	315	1.7	12.17	234.0632	89.5756	ANDEN
12008	12007	0	1.473	316	1.7	12.872	221.4019	89.4546	ANDEN
12008	12007	0	1.473	317	1.7	11.896	215.4243	89.0504	BORDE_VIA
12008	12007	0	1.473	318	1.7	16.68	217.1313	89.0227	ARBOL



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12008	12007	0	1.473	319	1.7	20.096	211.5125	89.2533	ARBOL
	12008	12007	0	1.473	320	1.7	51.865	199.3244	90.033	PARAMENTO
	12008	12007	0	1.473	321	1.7	49.786	198.3802	89.5235	ANDEN
	12008	12007	0	1.473	322	1.7	50.395	196.4623	89.5738	BORDE_VIA
	12008	12007	0	1.473	323	1.7	8.286	315.4133	87.4609	ANDEN
	12008	12007	0	1.473	324	1.7	15.054	343.0021	88.2543	ANDEN
	12008	12007	0	1.473	325	1.7	24.722	351.3245	88.5414	ANDEN
	12008	12007	0	1.473	326	1.7	49.13	354.251	89.2527	ANDEN
	12008	12007	0	1.473	327	1.7	11.499	235.0153	89.0926	SUMEDERO
	12008	12007	0	1.473	328	1.7	10.883	231.0948	89.0926	SUMEDERO
	12008	12007	0	1.473	329	1.7	35.114	187.1218	89.4928	BORDE_VIA
	12008	12007	0	1.473	330	1.7	35.646	183.0913	89.4113	ANDEN
	12008	12007	0	1.473	331	1.7	31.527	182.3057	89.2631	POSTE
	12008	12007	0	1.473	332	1.7	28.226	178.361	89.3406	PARAMENTO
	12008	12007	0	1.473	333	1.7	14.465	158.445	89.2823	PARAMENTO
	12008	12007	0	1.473	334	1.7	9.944	50.0304	89.195	PARAMENTO
	12008	12007	0	1.473	335	1.7	7.116	54.1526	89.0512	ANDEN
	12008	12007	0	1.473	336	1.7	65.811	192.4438	89.5856	DELTA_REF
	12008	12007	0	1.473	12009	1.7	65.139	194.3355	89.5703	DELTA
	12008	12007	0	1.473	337	1.7	23.883	194.344	89.3109	LINEAMIENT
	12009	12008	0	1.46	12008	1.7	65.14	0	89.3928	
SD	89.89.3928									
	12009	12008	0	1.46	338	1.7	23.317	19.463	89.2132	PARAMENTO
	12009	12008	0	1.46	339	1.7	22.583	12.4842	89.2257	BORDE_VIA
	12009	12008	0	1.46	340	1.7	17.037	18.173	89.1356	BORDE_VIA
	12009	12008	0	1.46	341	1.7	15.194	34.1413	89.0624	BORDE_VIA
	12009	12008	0	1.46	342	1.7	17.717	54.5529	89.1149	BORDE_VIA
	12009	12008	0	1.46	343	1.7	19.184	56.4952	89.0923	CERRAMIENT
	12009	12008	0	1.46	344	1.7	16.46	23.5928	89.0759	CERRAMIENT
	12009	12008	0	1.46	345	1.7	12.872	41.3802	88.5837	MANHOLE
	12009	12008	0	1.46	346	1.7	12.195	30.0747	89.0523	MANHOLE
	12009	12008	0	1.46	347	1.7	8.791	25.5326	88.4509	MANHOLE
	12009	12008	0	1.46	348	1.7	15.691	25.1454	89.2845	SUMEDERO
	12009	12008	0	1.46	349	1.7	15.612	21.5142	89.2207	SUMEDERO
	12009	12008	0	1.46	350	1.7	6.944	51.5829	88.4555	SUMEDERO
	12009	12008	0	1.46	351	1.7	6.146	55.2622	88.5926	SUMEDERO
	12009	12008	0	1.46	352	1.7	6.539	58.4743	91.2618	POSTE
	12009	12008	0	1.46	353	1.7	10.809	65.3647	88.4418	BORDE_VIA
	12009	12008	0	1.46	354	1.7	10.162	61.4539	88.385	BORDE_VIA
	12009	12008	0	1.46	355	1.7	5.915	55.5839	88.3105	BORDE_VIA
	12009	12008	0	1.46	356	1.7	7.915	66.2435	88.1254	PARAMENTO
	12009	12008	0	1.46	357	1.7	7.258	62.0134	88.5129	ANDEN
	12009	12008	0	1.46	358	1.7	4.162	58.0538	87.3306	BORDE_VIA
	12009	12008	0	1.46	359	1.7	12.905	350.4859	89.0729	BORDE_VIA
	12009	12008	0	1.46	360	1.7	13.587	344.3353	88.5445	ANDEN
	12009	12008	0	1.46	361	1.7	11.158	319.4812	88.5443	ANDEN
	12009	12008	0	1.46	362	1.7	9.661	323.4826	88.3043	BORDE_VIA
	12009	12008	0	1.46	363	1.7	9.546	315.5149	88.255	BORDE_VIA
	12009	12008	0	1.46	364	1.7	9.969	317.1114	88.5742	CANALETA
	12009	12008	0	1.46	365	1.7	23.047	279.3917	89.1332	BORDE_VIA
	12009	12008	0	1.46	366	1.7	22.967	280.5729	89.2305	CANALETA
	12009	12008	0	1.46	367	1.7	23.149	281.5155	89.035	POSTE
	12009	12008	0	1.46	368	1.7	17.505	288.4641	88.4832	POSTE
	12009	12008	0	1.46	369	1.7	31.316	286.1801	89.3619	PARAMENTO
	12009	12008	0	1.46	370	1.7	12.719	350.1008	89.2115	SUMEDERO
	12009	12008	0	1.46	371	1.7	12.144	346.5846	89.2449	SUMEDERO
	12009	12008	0	1.46	372	1.7	9.704	322.5547	89.4853	SUMEDERO
	12009	12008	0	1.46	373	1.7	10.095	318.1502	89.5118	SUMEDERO
	12009	12008	0	1.46	374	1.7	8.573	316.521	88.1823	MANHOLE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



12009	12008	0	1.46	375	1.7	8.738	261.2759	88.2112	MANHOLE
12009	12008	0	1.46	376	1.7	9.871	264.1909	88.4044	SUMEDERO
12009	12008	0	1.46	377	1.7	10.652	261.4534	88.584	SUMEDERO
12009	12008	0	1.46	378	1.7	22.092	261.5451	89.09	BORDE_VIA
12009	12008	0	1.46	379	1.7	22.044	260.3758	89.2112	CANALETA
12009	12008	0	1.46	380	1.7	13.029	243.3725	88.201	PARQUE
12009	12008	0	1.46	381	1.7	24.914	251.3332	89.0032	PARQUE
12009	12008	0	1.46	382	1.7	22.936	223.0942	88.5508	PARQUE
12009	12008	0	1.46	383	1.7	10.775	264.261	88.2912	BORDE_VIA
12009	12008	0	1.46	384	1.7	6.232	243.2216	87.564	BORDE_VIA
12009	12008	0	1.46	385	1.7	7.29	228.0336	87.4649	BORDE_VIA
12009	12008	0	1.46	386	1.7	10.508	235.3103	86.5548	ARBOL
12009	12008	0	1.46	387	1.7	15.852	224.5151	87.5448	ARBOL
12009	12008	0	1.46	388	1.7	19.638	217.5443	88.1826	ARBOL
12009	12008	0	1.46	389	1.7	22.722	190.3215	89.3626	POSTE
12009	12008	0	1.46	390	1.7	33.343	192.4036	89.5725	ANDEN
12009	12008	0	1.46	391	1.7	32.82	191.1222	89.3602	PARAMENTO
12009	12008	0	1.46	392	1.7	32.819	194.2705	90.0935	BORDE_VIA
12009	12008	0	1.46	393	1.7	34.558	192.2356	90.0824	SUMEDERO
12009	12008	0	1.46	394	1.7	34.459	193.5942	90.1203	SUMEDERO
12009	12008	0	1.46	395	1.7	38.713	197.1312	89.521	MANHOLE
12009	12008	0	1.46	396	1.7	41.167	200.3755	89.521	MANHOLE
12009	12008	0	1.46	397	1.7	42.317	195.0631	90.0339	SUMIDERO
12009	12008	0	1.46	398	1.7	42.926	194.1041	90.0701	SUMEDERO
12009	12008	0	1.46	399	1.7	43.048	191.3532	90.0601	BORDE_VIA
12009	12008	0	1.46	400	1.7	44.852	192.1729	90.0147	PARAMENTO
12009	12008	0	1.46	401	1.7	44.731	194.1142	90.0011	PARAMENTO
12009	12008	0	1.46	402	1.7	45.14	195.3957	90.0127	POSTE
12009	12008	0	1.46	403	1.7	51.199	196.5443	89.5627	POSTE
12009	12008	0	1.46	404	1.7	52.129	194.5853	89.5558	PARAMENTO
12009	12008	0	1.46	405	1.7	57.034	200.5055	89.5349	MANHOLE
12009	12008	0	1.46	406	1.7	52.88	204.4713	89.4842	BORDE_VIA
12009	12008	0	1.46	407	1.7	51.356	207.0653	89.2456	ARBOL
12009	12008	0	1.46	408	1.7	54.641	205.344	89.5109	BORDE_VIA
12009	12008	0	1.46	409	1.7	144.752	200.382	90.0912	DELTA_REF
12009	12008	0	1.46	12010	1.7	145.299	201.0906	90.0816	DELTA
12009	12008	0	1.46	410	1.7	81.718	201.0906	89.5925	LINEAMIENT
12010	12009	0.0001	1.432	12009	1.7	145.402	0.0001	89.4045	
SD	89.89.4045								
12010	12009	0.0001	1.432	411	1.7	40.25	2.4321	89.3335	BORDE_VIA
12010	12009	0.0001	1.432	412	1.7	56.683	1.1223	89.2623	MANHOLE
12010	12009	0.0001	1.432	413	1.7	55.181	359.374	89.2355	MANHOLE
12010	12009	0.0001	1.432	414	1.7	60.749	1.4804	89.2933	BORDE_VIA
12010	12009	0.0001	1.432	415	1.7	60.184	3.4013	89.2816	POSTE
12010	12009	0.0001	1.432	416	1.7	13.94	8.1545	89.1307	BORDE_VIA
12010	12009	0.0001	1.432	417	1.7	10.722	18.5659	89.131	BORDE_VIA
12010	12009	0.0001	1.432	418	1.7	11.893	42.1259	89.2106	BORDE_VIA
12010	12009	0.0001	1.432	419	1.7	21.924	352.1946	89.4722	BORDE_VIA
12010	12009	0.0001	1.432	420	1.7	20.214	60.3547	89.272	BORDE_VIA
12010	12009	0.0001	1.432	421	1.7	21.133	54.0632	89.1205	PARAMENTO
12010	12009	0.0001	1.432	422	1.7	13.609	29.3257	87.5618	PARAMENTO
12010	12009	0.0001	1.432	423	1.7	19.474	19.5708	88.2958	PARAMENTO
12010	12009	0.0001	1.432	424	1.7	17.608	17.5154	88.2513	POSTE
12010	12009	0.0001	1.432	425	1.7	12.396	27.483	88.08	POSTE
12010	12009	0.0001	1.432	426	1.7	11.323	25.002	89.1831	SUMEDERO
12010	12009	0.0001	1.432	427	1.7	10.763	20.3746	89.1518	SUMEDERO
12010	12009	0.0001	1.432	428	1.7	5.696	26.3135	86.4741	MANHOLE
12010	12009	0.0001	1.432	429	1.7	2.224	339.4452	81.501	MANHOLE
12010	12009	0.0001	1.432	430	1.7	11.537	290.3922	88.2444	MANHOLE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



12010	12009	0.0001	1.432	431	1.7	14.524	345.5449	89.4327 BORDE_VIA
12010	12009	0.0001	1.432	432	1.7	10.115	331.3218	89.5813 BORDE_VIA
12010	12009	0.0001	1.432	433	1.7	24.167	286.3025	89.1426 BORDE_VIA
12010	12009	0.0001	1.432	434	1.7	14.127	327.35	87.2131 PARAMENTO
12010	12009	0.0001	1.432	435	1.7	36.285	288.4105	89.1218 PARAMENTO
12010	12009	0.0001	1.432	436	1.7	11.261	322.0713	89.3511 SUMEDERO
12010	12009	0.0001	1.432	437	1.7	10.427	324.564	89.3642 SUMEDERO
12010	12009	0.0001	1.432	438	1.7	28.867	274.5815	89.1446 BORDE_VIA
12010	12009	0.0001	1.432	439	1.7	50.18	265.5008	89.0253 PARAMENTO
12010	12009	0.0001	1.432	440	1.7	14.833	271.2849	88.4202 BORDE_VIA
12010	12009	0.0001	1.432	441	1.7	13.24	257.1417	88.1528 BORDE_VIA
12010	12009	0.0001	1.432	442	1.7	13.244	243.1826	88.2934 BORDE_VIA
12010	12009	0.0001	1.432	443	1.7	15.263	262.1246	88.2243 POSTE
12010	12009	0.0001	1.432	444	1.7	17.259	255.0123	88.3957 PARAMENTO
12010	12009	0.0001	1.432	445	1.7	18.656	246.4258	88.515 PARAMENTO
12010	12009	0.0001	1.432	446	1.7	18.898	242.4727	88.2426 POSTE
12010	12009	0.0001	1.432	447	1.7	30.022	236.4207	88.5204 BORDE_VIA
12010	12009	0.0001	1.432	448	1.7	30.614	239.1406	88.3643 PARAMENTO
12010	12009	0.0001	1.432	449	1.7	34.705	225.5504	88.5118 PARAMENTO
12010	12009	0.0001	1.432	450	1.7	34.39	227.3842	88.5525 BORDE_VIA
12010	12009	0.0001	1.432	451	1.7	15.582	220.3709	87.5159 CERRAMIENT
12010	12009	0.0001	1.432	452	1.7	15.502	227.1102	87.52 BORDE_VIA
12010	12009	0.0001	1.432	453	1.7	10.158	205.1416	88.1916 PUERTA
12010	12009	0.0001	1.432	454	1.7	7.134	178.3437	87.422 PUERTA
12010	12009	0.0001	1.432	455	1.7	7.521	129.0546	89.3441 PARAMENTO
12010	12009	0.0001	1.432	456	1.7	4.667	94.5747	88.5707 POSTE
12010	12009	0.0001	1.432	457	1.7	1.43	66.595	80.1321 DELTA_REF
12010	12009	0.0001	1.432	458	1.7	27.247	87.3831	90.1617 PARAMENTO
12010	12009	0.0001	1.432	459	1.7	26.351	84.4608	90.4109 POSTE
12010	12009	0.0001	1.432	460	1.7	25.676	79.5443	90.1828 BORDE_VIA
12010	12009	0.0001	1.432	461	1.7	14.34	80.3629	90.2401 BORDE_VIA
12010	12009	0.0001	1.432	12011	1.7	83.771	230.2746	89.4444 DELTA
12010	12009	0.0001	1.432	462	1.7	53.537	230.2752	89.3108 LINEAMIENT
12010	12009	0.0001	1.432	463	1.7	50.445	227.1427	89.3138 POSTE
12011	12010	0	1.452	12010	1.7	83.793	0	89.5413
SD	89.89.5413							
12011	12010	0	1.452	464	1.7	31.783	4.3318	89.2606 BORDE_VIA
12011	12010	0	1.452	465	1.7	39.691	4.4922	89.2836 PARAMENTO
12011	12010	0	1.452	466	1.7	39.64	5.3841	89.1752 PARAMENTO
12011	12010	0	1.452	467	1.7	11.291	23.4825	87.4423 PARAMENTO
12011	12010	0	1.452	468	1.7	10.993	18.4749	87.5427 ANDEN
12011	12010	0	1.452	469	1.7	10.626	9.4428	88.5946 MANHOLE
12011	12010	0	1.452	470	1.7	33.571	4.5532	89.3138 POSTE
12011	12010	0	1.452	471	2.6	15.47	345.5533	86.0324 POSTE
12011	12010	0	1.452	472	1.7	32.71	356.0951	89.2826 BORDE_VIA
12011	12010	0	1.452	473	1.7	14.079	349.4415	89.2135 BORDE_VIA
12011	12010	0	1.452	474	1.7	9.152	337.5417	88.4905 BORDE_VIA
12011	12010	0	1.452	475	1.7	10.001	336.5402	88.3718 ARBOL
12011	12010	0	1.452	476	1.7	24.952	353.2719	89.2604 ARBOL
12011	12010	0	1.452	477	1.7	11.477	341.1609	89.5839 SUMEDERO
12011	12010	0	1.452	478	1.7	11.063	337.4329	89.3447 SUMEDERO
12011	12010	0	1.452	479	1.7	23.941	347.5003	89.0356 PARAMENTO
12011	12010	0	1.452	480	1.7	14.927	340.5219	88.3157 PARAMENTO
12011	12010	0	1.452	481	2.2	14.106	335.3607	86.2624 PARAMENTO
12011	12010	0	1.452	482	1.7	12.502	339.461	88.2233 CERRAMIENT
12011	12010	0	1.452	483	1.7	11.213	23.3211	90.5433 LINDERO
12011	12010	0	1.452	484	1.7	6.204	13.2903	88.5705 ARBOL
12011	12010	0	1.452	485	1.7	7.003	3.2453	89.225 BORDE_VIA
12011	12010	0	1.452	486	1.7	2.39	15.1128	86.1125 BORDE_VIA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12011	12010	0	1.452	487	1.7	5.74	57.1307	91.5755	LINDERO
	12011	12010	0	1.452	488	1.7	7.525	60.4542	93.4703	LINDERO
	12011	12010	0	1.452	489	1.7	2.736	156.0315	86.2503	BORDE_VIA
	12011	12010	0	1.452	490	1.7	6.115	154.0517	88.3519	BORDE_VIA
	12011	12010	0	1.452	491	1.7	11.471	152.4526	88.5656	BORDE_VIA
	12011	12010	0	1.452	492	1.7	11.696	141.4243	88.3746	PARAMENTO
	12011	12010	0	1.452	493	1.7	15.909	144.1118	88.5109	PARAMENTO
	12011	12010	0	1.452	494	1.7	20.441	176.174	89.0714	PARAMENTO
	12011	12010	0	1.452	495	1.7	19.076	171.5916	89.2706	CERRAMIENT
	12011	12010	0	1.452	496	1.7	18.435	167.3049	89.1344	BORDE_VIA
	12011	12010	0	1.452	497	1.7	10.667	219.4318	89.0248	BORDE_VIA
	12011	12010	0	1.452	498	1.7	12.592	217.5549	89.292	CERRAMIENT
	12011	12010	0	1.452	499	1.7	11.055	288.0303	88.2442	POSTE
	12011	12010	0	1.452	500	1.7	30.773	233.2541	89.3111	BORDE_VIA
	12011	12010	0	1.452	501	1.7	30.409	238.2514	89.1941	CERRAMIENT
	12011	12010	0	1.452	502	1.7	28.857	214.2835	89.3243	PARAMENTO
	12011	12010	0	1.452	503	1.7	28.781	218.4458	89.3139	CERRAMIENT
	12011	12010	0	1.452	504	1.7	28.931	222.3743	89.3216	BORDE_VIA
	12011	12010	0	1.452	505	1.7	22.008	222.1442	89.2946	POSTE
	12011	12010	0	1.452	506	1.7	22.899	220.0458	89.5922	SUMEDERO
	12011	12010	0	1.452	507	1.7	22.487	218.4753	90.0109	SUMEDERO
	12011	12010	0	1.452	508	1.7	2.486	196.4625	84.3608	MANHOLE
	12011	12010	0	1.452	12012	1.7	52.668	152.4252	90.0206	DELTA
	12011	12010	0	1.452	509	1.7	26.219	152.4251	89.2713	LINEAMIENT
	12011	12010	0	1.452	510	1.7	16.328	112.3444	89.413	PARAMENTO
	12012	12011	0	1.411	12011	1.7	52.668	0	89.2258	
SD	89.89.2258									
	12012	12011	0	1.411	511	1.7	25.859	7.5147	88.3859	PARAMENTO
	12012	12011	0	1.411	512	1.7	20.933	5.2439	88.2601	POSTE
	12012	12011	0	1.411	513	1.7	12.387	9.4246	88.0353	BORDE_VIA
	12012	12011	0	1.411	514	1.7	8.741	341.1542	85.5536	PARAMENTO
	12012	12011	0	1.411	515	1.7	6.013	327.1522	85.111	CERRAMIENT
	12012	12011	0	1.411	516	1.7	6.918	37.332	87.0416	PARAMENTO
	12012	12011	0	1.411	517	1.7	4.169	72.0501	82.0543	PARAMENTO
	12012	12011	0	1.411	518	1.7	7.069	123.555	85.3045	PARAMENTO
	12012	12011	0	1.411	519	1.7	8.161	83.3304	85.5523	PARAMENTO
	12012	12011	0	1.411	AUX_3	1.7	3.952	162.4451	87.1231	DELTA_AUX
	12012	12011	0	1.411	520	1.7	3.006	58.2959	85.291	BORDE_VIA
	12012	12011	0	1.411	521	1.7	3.2	168.1235	86.4542	BORDE_VIA
	12012	12011	0	1.411	522	1.7	4.533	318.4308	86.2715	BORDE_VIA
	12012	12011	0	1.411	523	1.7	9.072	228.0012	88.3858	BORDE_VIA
	12012	12011	0	1.411	524	1.7	21.899	257.1337	88.5444	BORDE_VIA
	12012	12011	0	1.411	525	1.7	8.688	223.4557	87.4443	POSTE
	12012	12011	0	1.411	526	1.7	22.295	261.5246	89.0014	CERRAMIENT
	12012	12011	0	1.411	527	1.7	21.759	236.352	89.0955	CERRAMIENT
	12012	12011	0	1.411	528	1.7	29.462	262.0444	89.0524	PARAMENTO
	12012	12011	0	1.411	529	1.7	22.179	230.1705	88.5508	PARAMENTO
	12012	12011	0	1.411	530	1.7	35.572	240.2142	89.1447	CERRAMIENT
	12012	12011	0	1.411	531	1.7	35.571	265.2109	83.4833	MANHOLE
	12012	12011	0	1.411	12013	1.7	95.567	243.331	89.4804	DELTA
	12012	12011	0	1.411	532	1.7	27.926	243.3312	89.0408	LINEAMIENT
	12012	12011	0	1.411	533	1.7	15.641	271.2806	88.1449	POSTE
	12012	12011	0	1.411	AUX_4	1.7	54.309	2.0333	89.2808	DELTA_AUX
	AUX_3	12012	0	1.455	12012	1.7	3.964	0	85.0737	
SD	85.85.0737									
	AUX_3	12012	0	1.455	AUX_4	1.7	58.054	18.0116	89.271	DELTA_AUX
	AUX_4	AUX_3	0.0001	1.4	AUX_3	1.7	58.045	0.0001	90.0102	
SD	90.90.0102									
	AUX_4	AUX_3	0.0001	1.4	AUX_3	1.7	58.045	0	90.0102	



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	90.90.0102							
	AUX_4 AUX_3	0.0001	1.4	12011	1.7	2.57	49.4716	82.0634 DELTA
	AUX_4 AUX_3	0.0001	1.4	AUX_5	1.7	82.393	207.3708	89.4839 DELTA_AUX
	AUX_5 AUX_4	0	1.415	AUX_4	1.7	82.392	0	89.4714
SD	89.89.4714							
	AUX_5 AUX_4	0	1.415	12010	1.7	2.769	69.2617	84.3247 DELTA
	AUX_5 AUX_4	0	1.415	AUX_6	1.7	82.231	201.1932	90.0412 DELTA_AUX
	AUX_5 AUX_4	0	1.415	534	1.7	84.065	202.1258	89.5717 PARAMENTO
	AUX_5 AUX_4	0	1.415	535	1.7	83.654	201.1105	90.0206 POSTE
	AUX_5 AUX_4	0	1.415	536	1.7	68.33	205.2744	89.4338 PARAMENTO
	AUX_5 AUX_4	0	1.415	537	1.7	17.102	215.4358	90.1145 PARAMENTO
	AUX_5 AUX_4	0	1.415	538	1.7	39.15	203.2159	90.323 SUMEDERO
	AUX_5 AUX_4	0	1.415	539	1.7	39.465	204.4151	90.3116 SUMEDERO
	AUX_6 AUX_5	0	1.485	AUX_5	1.7	82.229	0	89.3514
SD	89.89.3514							
	AUX_6 AUX_5	0	1.485	540	1.7	27.222	4.113	88.405 PARAMENTO
	AUX_6 AUX_5	0	1.485	541	1.7	19.941	6.2032	88.0658 PARAMENTO
	AUX_6 AUX_5	0	1.485	AUX_7	1.7	56.156	149.4931	89.2914 DELTA_AUX
	AUX_6 AUX_5	0	1.485	542	1.7	47.842	153.1019	89.2115 PARAMENTO
	AUX_6 AUX_5	0	1.485	543	1.7	16.964	164.5541	88.3752 PARAMENTO
	AUX_6 AUX_5	0	1.485	544	1.7	42.747	154.1452	89.1958 PARAMENTO
	AUX_6 AUX_5	0	1.485	545	1.7	30.728	147.0017	89.1159 PARAMENTO
	AUX_6 AUX_5	0	1.485	546	1.7	41.866	152.311	89.3141 POSTE
	AUX_7 AUX_6	0.0001	1.405	AUX_6	1.7	56.147	0.0001	89.5946
SD	89.89.5946							
	AUX_7 AUX_6	0.0001	1.405	547	1.7	20.88	24.1532	89.3717 MANHOLE
	AUX_7 AUX_6	0.0001	1.405	548	1.7	24.142	11.1425	89.2637 PARAMENTO
	AUX_7 AUX_6	0.0001	1.405	549	1.7	27.591	16.0739	89.2911 PARAMENTO
	AUX_7 AUX_6	0.0001	1.405	550	1.7	15.361	35.4123	89.0438 CERRAMIENT
	AUX_7 AUX_6	0.0001	1.405	551	1.7	9.089	30.3851	87.3522 CERRAMIENT
	AUX_7 AUX_6	0.0001	1.405	552	1.7	18.277	129.335	88.3441 CERRAMIENT
	AUX_7 AUX_6	0.0001	1.405	553	1.7	19.827	156.2424	88.2749 PARAMENTO
	AUX_7 AUX_6	0.0001	1.405	554	1.7	21.107	166.4424	88.3257 PARAMENTO
	AUX_7 AUX_6	0.0001	1.405	555	1.7	11.188	112.3152	88.0121 POSTE
	AUX_7 AUX_6	0.0001	1.405	AUX_8	1.7	67.749	144.512	89.2036 DELTA_AUX
	AUX_8 AUX_7	359.5959	1.383	AUX_7	1.7	67.747	359.5959	90.085
SD	90.90.0850							
	AUX_8 AUX_7	359.5959	1.383	AUX_7	1.7	67.747	0	90.0851
SD	90.90.0851							
	AUX_8 AUX_7	359.5959	1.383	556	1.7	8.567	351.3313	89.3141 POSTE
	AUX_8 AUX_7	359.5959	1.383	557	1.7	20.698	23.5218	88.5355 CERRAMIENT
	AUX_8 AUX_7	359.5959	1.383	558	1.7	32.2	12.3343	89.2028 PARAMENTO
	AUX_8 AUX_7	359.5959	1.383	559	1.7	32.89	22	89.4959 PARAMENTO
	AUX_8 AUX_7	359.5959	1.383	AUX_9	1.7	32.612	145.5151	88.3241 DELTA_AUX
	AUX_8 AUX_7	359.5959	1.383	560	1.7	32.612	152.1349	88.2846 POSTE
	AUX_8 AUX_7	359.5959	1.383	561	1.7	30.232	153.4252	88.2726 PUENTE
	AUX_8 AUX_7	359.5959	1.383	562	1.7	25.967	154.0841	87.2628 PUENTE
	AUX_8 AUX_7	359.5959	1.383	563	1.7	23.453	143.5108	88.3625 PARAMENTO
	AUX_8 AUX_7	359.5959	1.383	564	1.7	23.289	145.2546	88.4754 POSTE
	AUX_8 AUX_7	359.5959	1.383	565	1.7	9.254	349.3426	88.2441 ANDEN
	AUX_8 AUX_7	359.5959	1.383	566	1.7	1.098	313.4013	73.0519 ANDEN
	AUX_8 AUX_7	359.5959	1.383	567	1.7	0.881	357.1938	69.1832 ANDEN
	AUX_8 AUX_7	359.5959	1.383	568	1.7	11.206	167.0345	88.0807 ANDEN
	AUX_9 AUX_8	0	1.435	AUX_8	1.7	32.605	0	90.2651
SD	90.90.2651							
	AUX_9 AUX_8	0	1.435	AUX_10	1.7	52.402	110.0218	89.5314 DELTA_AUX
	AUX_9 AUX_8	0	1.435	569	1.7	5.2	303.5944	86.2733 PUENTE
	AUX_9 AUX_8	0	1.435	570	1.7	7.835	304.5124	84.5507 ESTRUCTURA
	AUX_9 AUX_8	0	1.435	571	1.7	7.262	306.4038	85.0917 ESTRUCTURA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_9 AUX_8	0	1.435	572	1.7	7.433	309.4018	83.1918	ESTRUCTURA
	AUX_9 AUX_8	0	1.435	573	1.7	6.663	313.2015	82.4416	PUENTE
	AUX_9 AUX_8	0	1.435	574	1.7	6.73	315.1552	82.5111	PUENTE
	AUX_9 AUX_8	0	1.435	575	1.7	6.488	314.0243	82.3425	ESCALERA
	AUX_9 AUX_8	0	1.435	576	1.7	6.391	314.4229	84.3536	ESCALERA
	AUX_9 AUX_8	0	1.435	577	1.7	5.969	316.5448	84.1907	ESCALERA
	AUX_9 AUX_8	0	1.435	578	1.7	5.88	316.5222	85.2614	ESCALERA
	AUX_9 AUX_8	0	1.435	579	1.7	5.648	318.3625	85.2614	ESCALERA
	AUX_9 AUX_8	0	1.435	580	1.7	5.591	318.4428	87.0923	ESCALERA
	AUX_9 AUX_8	0	1.435	581	1.7	7.8	328.01	85.0647	PUENTE
	AUX_9 AUX_8	0	1.435	581	1.7	7.63	329.1553	85.2732	ESCALERA
	AUX_9 AUX_8	0	1.435	582	1.7	7.453	333.1314	85.3107	ESCALERA
	AUX_9 AUX_8	0	1.435	583	1.7	7.44	333.2455	86.1927	ESCALERA
	AUX_9 AUX_8	0	1.435	584	1.7	7.19	335.3444	86.1503	ESCALERA
	AUX_9 AUX_8	0	1.435	585	1.7	7.17	336.0538	88.0806	ESCALERA
	AUX_9 AUX_8	0	1.435	586	1.7	9.457	330.5323	90.2549	ESTRUCTURA
	AUX_9 AUX_8	0	1.435	587	1.7	8.62	325.4322	84.1842	ESTRUCTURA
	AUX_9 AUX_8	0	1.435	588	1.7	9.622	320.3605	84.3624	ESTRUCTURA
	AUX_9 AUX_8	0	1.435	589	1.7	9.852	357.05	91.1211	BORDE_VIA
	AUX_9 AUX_8	0	1.435	590	1.7	6.777	6.5002	88.251	BORDE_VIA
	AUX_9 AUX_8	0	1.435	591	1.7	6.837	56.2546	87.5757	BORDE_VIA
	AUX_9 AUX_8	0	1.435	592	1.7	11.333	67.0904	89.4552	PARAMENTO
	AUX_9 AUX_8	0	1.435	593	1.7	4.169	280.1447	87.0336	BORDE_VIA
	AUX_9 AUX_8	0	1.435	594	1.7	8.405	270.4334	90.5035	PARAMENTO
	AUX_9 AUX_8	0	1.435	595	1.7	1.954	23.2013	80.5531	MANHOLE
	AUX_10 AUX_9	0	1.405	AUX_9	1.7	52.39	0	89.3318	
SD	89.89.3318								
	AUX_10 AUX_9	0	1.405	AUX_11	1.7	162.58	246.24	89.505	DELTA_AUX
	AUX_10 AUX_9	0	1.405	596	1.7	8.16	314.4724	88.1029	BORDE_VIA
	AUX_10 AUX_9	0	1.405	597	1.7	7.106	275.0124	88.103	BORDE_VIA
	AUX_10 AUX_9	0	1.405	598	1.7	22.118	254.0629	89.2528	BORDE_VIA
	AUX_10 AUX_9	0	1.405	599	1.7	22.679	261.2301	89.1046	PARAMENTO
	AUX_10 AUX_9	0	1.405	600	1.7	11.843	276.1945	87.4613	PARAMENTO
	AUX_10 AUX_9	0	1.405	601	1.7	9.303	293.5445	87.0453	PARAMENTO
	AUX_10 AUX_9	0	1.405	602	1.7	7.293	286.4121	86.4832	POSTE
	AUX_10 AUX_9	0	1.405	603	1.7	5.141	16.4021	85.5145	POSTE
	AUX_10 AUX_9	0	1.405	604	1.7	9.374	181.4149	88.4609	BORDE_VIA
	AUX_10 AUX_9	0	1.405	605	1.7	11.109	170.2231	89.3533	PARAMENTO
	AUX_10 AUX_9	0	1.405	606	1.7	16.448	217.4123	88.3202	PARAMENTO
	AUX_10 AUX_9	0	1.405	607	1.7	25.343	205.5058	89.1151	PARAMENTO
	AUX_10 AUX_9	0	1.405	608	1.7	24.788	200.3514	89.3956	BORDE_VIA
	AUX_10 AUX_9	0	1.405	609	1.7	14.814	216.3547	89.1328	BORDE_VIA
	AUX_10 AUX_9	0	1.405	610	1.7	15.813	232.2125	89.1111	BORDE_VIA
	AUX_10 AUX_9	0	1.405	611	1.7	16.643	224.4416	88.4907	PARAMENTO
	AUX_11 AUX_10	0	1.456	AUX_10	1.7	162.611	0	89.5901	
SD	89.89.5901								
	AUX_11 AUX_10	0	1.456	612	1.7	60.92	349.1608	89.4725	PARAMENTO
	AUX_11 AUX_10	0	1.456	613	1.7	72.74	350.4513	89.4953	PARAMENTO
	AUX_11 AUX_10	0	1.456	614	1.7	98.977	358.4504	89.5911	BORDE_VIA
	AUX_11 AUX_10	0	1.456	615	1.7	63.946	356.5309	90.0013	ANDEN
	AUX_11 AUX_10	0	1.456	616	1.7	59.582	355.4252	89.5806	ANDEN
	AUX_11 AUX_10	0	1.456	617	1.7	57.416	351.3047	89.5805	ANDEN
	AUX_11 AUX_10	0	1.456	618	1.7	51.832	352.4015	89.5627	SEPARADOR
	AUX_11 AUX_10	0	1.456	619	1.7	45.106	349.3938	90.0126	ANDEN
	AUX_11 AUX_10	0	1.456	620	1.7	40.444	354.5119	89.5358	ANDEN
	AUX_11 AUX_10	0	1.456	621	1.7	35.788	355.3143	89.5114	ANDEN
	AUX_11 AUX_10	0	1.456	622	1.7	41.497	344.3823	89.2449	PARAMENTO
	AUX_11 AUX_10	0	1.456	623	1.7	34.265	358.2754	89.5126	BORDE_VIA
	AUX_11 AUX_10	0	1.456	624	1.7	67.649	6.3818	89.5216	PARAMENTO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_11 AUX_10	0	1.456	625	1.7	60.817	5.1421	89.5636 BORDE_VIA
	AUX_11 AUX_10	0	1.456	626	1.7	16.308	144.2521	86.5953 CERRAMIENT
	AUX_11 AUX_10	0	1.456	627	1.7	34.756	163.0744	88.5448 PARAMENTO
	AUX_11 AUX_10	0	1.456	628	1.7	34.978	163.2653	88.5317 CERRAMIENT
	AUX_11 AUX_10	0	1.456	629	1.7	60.069	169.2205	89.3226 CERRAMIENT
	AUX_11 AUX_10	0	1.456	630	1.7	27.448	178.443	89.1635 BORDE_VIA
	AUX_11 AUX_10	0	1.456	631	1.7	38.982	193.2919	89.1312 PARAMENTO
	AUX_11 AUX_10	0	1.456	632	1.7	3.079	284.2502	85.461 PARAMENTO
	AUX_11 AUX_10	0	1.456	AUX_2	1.7	86.483	173.3421	89.1958 DELTA_AUX
	AUX_2 AUX_11	0	1.468	AUX_11	1.7	86.468	0	90.2114
SD	90.90.2114							
	AUX_2 AUX_11	0	1.468	AUX_12	1.7	65.96	204.4008	89.4856 DELTA_AUX
	AUX_2 AUX_11	0	1.468	633	1.7	61.449	202.1733	89.4145 BORDE_VIA
	AUX_2 AUX_11	0	1.468	634	1.7	33.629	217.3714	89.2454 BORDE_VIA
	AUX_2 AUX_11	0	1.468	635	1.7	31.034	226.0148	89.1335 BORDE_VIA
	AUX_2 AUX_11	0	1.468	636	1.7	37.43	239.3131	88.4605 BORDE_VIA
	AUX_2 AUX_11	0	1.468	637	1.7	22.605	196.1416	89.1318 BORDE_VIA
	AUX_2 AUX_11	0	1.468	638	1.7	28.52	206.1839	89.4003 BORDE_VIA
	AUX_2 AUX_11	0	1.468	639	1.7	40.649	200.5412	89.4915 BORDE_VIA
	AUX_2 AUX_11	0	1.468	640	1.7	2.924	46.2335	88.0227 PARAMENTO
	AUX_2 AUX_11	0	1.468	641	1.7	2.998	351.0506	90.0745 BORDE_VIA
	AUX_2 AUX_11	0	1.468	642	1.7	8.62	188.4211	87.5529 BORDE_VIA
	AUX_2 AUX_11	0	1.468	643	1.7	11.686	178.343	87.5745 BORDE_VIA
	AUX_2 AUX_11	0	1.468	644	1.7	7.939	285.5538	89.5154 BORDE_VIA
	AUX_2 AUX_11	0	1.468	645	1.7	9.928	263.2509	89.0117 BORDE_VIA
	AUX_2 AUX_11	0	1.468	646	1.7	17.317	252.3426	88.264 BORDE_VIA
	AUX_2 AUX_11	0	1.468	647	1.7	26.432	259.5859	88.3815 BORDE_VIA
	AUX_2 AUX_11	0	1.468	648	1.7	18.822	295.0043	90.1227 PARAMENTO
	AUX_2 AUX_11	0	1.468	649	1.7	33.286	286.0711	90.0905 PARAMENTO
	AUX_12 AUX_2	0	1.455	AUX_2	1.7	65.95	0	89.4635
SD	89.89.4635							
	AUX_12 AUX_2	0	1.455	AUX_13	1.7	148.691	154.4948	89.584 DELTA_AUX
	AUX_12 AUX_2	0	1.455	650	1.7	16.089	146.1906	89.1906 BORDE_VIA
	AUX_12 AUX_2	0	1.455	651	1.7	20.277	127.0936	89.4623 BORDE_VIA
	AUX_12 AUX_2	0	1.455	652	1.7	30.923	139.1731	89.5136 BORDE_VIA
	AUX_12 AUX_2	0	1.455	653	1.7	37.525	143.0439	89.5756 BORDE_VIA
	AUX_12 AUX_2	0	1.455	654	1.7	38.684	138.1407	90.0037 BORDE_VIA
	AUX_12 AUX_2	0	1.455	655	1.7	44.674	145.5214	89.5709 BORDE_VIA
	AUX_12 AUX_2	0	1.455	656	1.7	31.271	152.5838	89.4255 BORDE_VIA
	AUX_12 AUX_2	0	1.455	657	1.7	37.131	155.1735	89.4434 BORDE_VIA
	AUX_12 AUX_2	0	1.455	658	1.7	37.587	159.5842	89.5046 BORDE_VIA
	AUX_12 AUX_2	0	1.455	659	1.7	46.818	155.2537	89.4849 BORDE_VIA
	AUX_12 AUX_2	0	1.455	660	1.7	31.011	160.19	89.5205 BORDE_VIA
	AUX_12 AUX_2	0	1.455	661	1.7	4.2	164.0424	83.343 POSTE
	AUX_13 AUX_12	0.0001	1.45	AUX_12	1.7	148.682	0.0001	89.5021
SD	89.89.5021							
	AUX_13 AUX_12	0.0001	1.45	AUX_1	1.7	138.631	198.575	89.4551 DELTA_AUX
	AUX_13 AUX_12	0.0001	1.45	662	1.7	57.465	353.3852	89.3408 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	663	1.7	58.848	349.2852	89.4252 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	664	1.7	52.151	350.5701	89.4251 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	665	1.7	3.523	248.1547	85.4427 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	666	1.7	4.013	36.244	86.5953 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	667	1.7	15.358	82.41	89.0212 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	668	1.7	18.104	60.0848	89.113 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	669	1.7	10.531	4.15	88.4353 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	670	1.7	11.984	350.5815	88.5606 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	671	1.7	24.7	358.19	89.2655 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	672	1.7	51.798	350.2532	89.3848 BORDE_VIA
	AUX_13 AUX_12	0.0001	1.45	673	1.7	39.418	350.3823	89.2043 BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_13	AUX_12	0.0001	1.45	674	1.7	39.418	344.5846	89.1035	BORDE_VIA
	AUX1	AUX_13	0	1.463	AUX_13	1.7	138.619	0	90.0202	
SD	90.90.0202									
	AUX1	AUX_13	0	1.463	12001	1.7	117.325	181.043	89.4126	DELTA
	AUX1	AUX_13	0	1.463	675	1.7	3.819	297.412	83.0929	SEPARADOR
	AUX1	AUX_13	0	1.463	676	1.7	3.889	295.2653	85.0848	SEPARADOR
	AUX1	AUX_13	0	1.463	677	1.7	11.193	41.1516	88.0641	CERRAMIENT
	AUX1	AUX_13	0	1.463	678	1.7	24.964	18.17	89.0956	CERRAMIENT
	AUX1	AUX_13	0	1.463	679	1.7	15.366	57.0641	88.3807	CERRAMIENT
	AUX1	AUX_13	0	1.463	680	1.7	12.935	147.3838	87.4642	CERRAMIENT
	AUX1	AUX_13	0	1.463	681	1.7	14.716	137.0727	88.0006	CERRAMIENT
	AUX1	AUX_13	0	1.463	682	1.7	11.87	142.344	88.025	POSTE
	AUX1	AUX_13	0	1.463	683	1.7	17.294	156.4923	88.0941	CERRAMIENT
	AUX1	AUX_13	0	1.463	684	1.7	11.827	196.5806	88.1506	SEPARADOR
	AUX1	AUX_13	0	1.463	685	1.7	12.048	198.4524	88.2111	SEPARADOR
	AUX1	AUX_13	0	1.463	686	1.7	19.33	190.5622	88.1959	POSTE
	AUX1	AUX_13	0	1.463	12003	1.7	105.597	90.0918	89.4635	DELTA
	AUX1	AUX_13	0	1.463	687	1.7	10.517	272.2733	89.054	BORDE_VIA
	AUX1	AUX_13	0	1.463	688	1.7	24.585	206.5231	89.2442	BORDE_VIA
	12001	AUX_1	0	1.442	AUX_1	1.7	117.316	0	90.0405	
SD	90.90.0405									
	12000	1051	0.0001	1.308	1051	1.7	75.985	0.0001	89.4831	
SD	89.89.4831									
	12000	1051	0.0001	1.308	1051	1.7	75.975	0	89.4831	
SD	89.89.4831									
	12000	1051	0.0001	1.308	AUX_14	1.7	100.752	87.5333	90.2201	DELTA_AUX
	12000	1051	0.0001	1.308	689	1.7	17.061	55.0334	89.3541	BORDE_VIA
	12000	1051	0.0001	1.308	690	1.7	18.164	70.2606	89.3204	BORDE_VIA
	12000	1051	0.0001	1.308	691	1.7	21.381	75.01	89.1926	BORDE_VIA
	12000	1051	0.0001	1.308	692	1.7	23.005	88.0357	89.2228	BORDE_VIA
	12000	1051	0.0001	1.308	693	1.7	19.333	88.07	89.1434	BORDE_VIA
	12000	1051	0.0001	1.308	694	1.7	18.8	92.5733	89.2348	BORDE_VIA
	12000	1051	0.0001	1.308	695	1.7	14.063	95.2138	89.3149	BORDE_VIA
	12000	1051	0.0001	1.308	696	1.7	15.832	119.4525	89.4216	BORDE_VIA
	12000	1051	0.0001	1.308	697	1.7	13.896	83.2055	89.412	MANHOLE
	12000	1051	0.0001	1.308	698	2.2	17.611	78.3222	87.132	MANHOLE
	AUX_14	12000	0	1.433	12000	2.2	100.755	0	88.5955	
SD	88.88.5955									
	AUX_14	12000	0	1.433	AUX_15	1.7	15.826	174.2018	90.2704	DELTA_AUX
	AUX_14	12000	0	1.433	699	1.7	22.882	6.0636	88.0456	MANHOLE
	AUX_14	12000	0	1.433	700	1.7	20.037	6.4132	88.0609	ANDEN
	AUX_14	12000	0	1.433	701	1.7	9.805	357.2624	86.4325	ANDEN
	AUX_14	12000	0	1.433	702	1.7	2.886	190.5426	80.4828	ANDEN
	AUX_14	12000	0	1.433	703	1.7	6.435	170.1724	87.5511	ANDEN
	AUX_14	12000	0	1.433	704	1.7	6.496	162.083	87.453	ANDEN
	AUX_14	12000	0	1.433	705	1.7	3.525	136.3438	79.4305	MANHOLE
	AUX_14	12000	0	1.433	706	1.7	12.146	159.4055	89.3957	PUENTE
	AUX_14	12000	0	1.433	707	1.7	12.02	161.2502	89.3712	PUENTE
	AUX_14	12000	0	1.433	708	1.7	11.299	176.0228	90.3756	PUENTE
	AUX_14	12000	0	1.433	709	1.7	11.359	173.5412	91.0752	PUENTE
	AUX_14	12000	0	1.433	710	1.7	15.215	176.5817	90.3956	PUENTE
	AUX_14	12000	0	1.433	711	1.7	15.22	175.172	90.3025	PUENTE
	AUX_14	12000	0	1.433	712	1.7	15.797	164.2953	90.2712	PUENTE
	AUX_14	12000	0	1.433	713	1.7	15.708	165.5356	90.2712	PUENTE
	AUX_14	12000	0	1.433	714	1.7	22.792	169.0716	90.3045	PUENTE
	AUX_14	12000	0	1.433	715	1.7	23.348	177.3855	90.1448	PUENTE
	AUX_14	12000	0	1.433	716	1.7	24.625	176.4411	90.0904	PUENTE
	AUX_14	12000	0	1.433	717	1.7	24.485	177.3956	90.0617	PUENTE
	AUX_14	12000	0	1.433	718	1.7	24.895	169.5935	90.0816	PUENTE



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_14	12000	0	1.433	719	1.7	24.884	170.4114	90.0852	PUENTE
	AUX_15	AUX_14	0	1.448	AUX_14	1.7	15.839	0	87.3821	
SD	87.87.3821									
	AUX_15	AUX_14	0	1.448	720	1.7	68.515	6.2657	88.4959	MANHOLE
	AUX_15	AUX_14	0	1.448	AUX_16	1.7	14.442	94.5046	98.0302	DELTA_AUX
	AUX_15	AUX_14	0	1.448	721	1.7	16.12	98.5205	99.1347	DESCARGA
	AUX_15	AUX_14	0	1.448	722	1.7	15.424	101.0926	99.2255	DESCARGA
	AUX_16	AUX_15	359.5959	1.421	AUX_15	1.7	14.522	359.5959	79.5349	
SD	79.79.5349									
	AUX_16	AUX_15	359.5959	1.421	723	1.7	2.203	233.3845	110.4358	TUBO_DESC
	AUX_16	AUX_15	359.5959	1.421	724	1.7	2.201	233.0213	113.3045	TUBO_DESC
	AUX_16	AUX_15	359.5959	1.421	725	1.7	2.416	232.1108	113.4812	DESCARGA
	AUX_16	AUX_15	359.5959	1.421	726	2.9	4.123	231.3425	115.3132	DESCARGA
	AUX_16	AUX_15	359.5959	1.421	727	4	6.113	229.5808	107.3723	DESCARGA
	AUX_16	AUX_15	359.5959	1.421	728	4	7.289	232.4046	108.5439	DESCARGA
	AUX_16	AUX_15	359.5959	1.421	729	4	7.299	224.1447	108.1931	RIO
	AUX_16	AUX_15	359.5959	1.421	730	4	7.871	219.285	105.0609	RIO
	AUX_16	AUX_15	359.5959	1.421	731	4	10.646	214.3757	101.3258	RIO
	AUX_16	AUX_15	359.5959	1.421	732	4	8.223	265.4949	107.4009	RIO
	AUX_16	AUX_15	359.5959	1.421	733	4	8.755	274.1331	106.0144	RIO
	AUX_1	12001	0	1.422	12001	1.7	117.335	0	89.411	
SD	89.89.4110									
	AUX_1	12001	0	1.422	734	0.085	33.391	355.4853	91.5052	MANHOLE
	AUX_1	12001	0	1.422	735	1.7	6.304	334.4058	87.5511	MANHOLE
	AUX_1	12001	0	1.422	AUX_17	1.7	38.613	163.3947	89.4404	DELTA_AUX
	AUX_1	12001	359.5958	1.435	12001	1.7	117.325	359.5958	89.4038	
SD	89.89.4038									
	AUX_1	12001	359.5958	1.435	12001	1.7	117.324	0	89.4043	
SD	89.89.4043									
	AUX_1	12001	359.5958	1.435	AUX_18	1.7	49.69	15.573	89.3012	DELTA_AUX
	AUX_18	AUX_1	0	1.422	AUX_1	1.7	49.694	0	89.5214	
SD	89.89.5214									
	AUX_18	AUX_1	0	1.422	AUX_19	1.7	50.834	250.5816	89.4913	DELTA_AUX
	AUX_19	AUX_18	0	1.434	AUX_18	1.7	50.838	0	89.341	
SD	89.89.3410									
	AUX_19	AUX_18	0	1.434	AUX_20	1.7	63.107	151.3152	90.2818	DELTA_AUX
	AUX_20	AUX_19	0	1.44	AUX_19	1.7	63.101	0	89.0339	
SD	89.89.0339									
	AUX_20	AUX_19	0	1.44	AUX_21	1.7	46.46	294.4218	89.0735	DELTA_AUX
	AUX_21	AUX_20	0	1.414	AUX_20	1.7	46.45	0	90.1313	
SD	90.90.1313									
	AUX_21	AUX_20	0	1.414	AUX_22	1.7	33.224	138.2707	91.2953	DELTA_AUX
	AUX_21	AUX_20	0	1.414	736	0.085	12.793	113.0411	100.0256	MANHOLE
	AUX_22	AUX_21	0	1.435	AUX_21	1.7	33.23	0	87.3258	
SD	87.87.3258									
	AUX_22	AUX_21	0	1.435	AUX_23	1.7	10.796	92.2338	97.3237	DELTA_AUX
	AUX_23	AUX_22	0	1.32	AUX_22	1.7	10.877	0	79.0723	
SD	79.79.0723									
	AUX_23	AUX_22	0	1.32	737	3	2.17	285.1932	92.1319	TUBO_DESC
	AUX_23	AUX_22	0	1.32	738	3	2.447	285.4649	105.5342	TUBO_DESC
	AUX_23	AUX_22	0	1.32	739	3	2.65	272.4058	118.4418	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	740	3	4.202	261.2024	108.1	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	741	3	4.13	255.5205	106.1539	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	742	3	4.587	271.384	106.4649	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	743	3	4.76	274.2324	104.5335	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	744	3	4.41	267.1843	107.21	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	745	3	4.408	268.0159	104.4437	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	746	3	4.45	267.3755	104.4057	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	747	3	4.576	271.1151	104.351	ESTRUCTURA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_23	AUX_22	0	1.32	748	3	4.61	270.5116	104.0642	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	749	2.7	4.557	270.5611	102.0455	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	750	2.7	4.616	271.2929	102.0038	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	751	2.7	4.076	260.2217	104.3016	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	752	2.7	4.053	256.4425	104.3402	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	753	2.7	3.655	292.0358	113.475	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	754	2.7	3.731	273.1744	115.4721	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	755	2.7	3.661	271.053	115.3832	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	756	2.7	4.464	266.5508	111.3446	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	757	2.7	4.389	264.5725	111.4627	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	758	2.7	4.427	262.0942	111.28	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	759	2.7	4.342	262.5015	111.5841	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	760	2.7	4.388	261.4717	110.5648	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	761	2.7	4.335	262.1551	111.1258	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	762	2.7	4.359	260.561	110.3612	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	763	2.7	4.289	261.3638	111.2649	ESTRUCTURA
	AUX_23	AUX_22	0	1.32	764	2.7	2.935	279.5754	122.4552	DESCARGA
	AUX_23	AUX_22	0	1.32	765	4	5.099	267.5034	108.1554	BORDE_CANO
	AUX_23	AUX_22	0	1.32	766	4	6.252	264.4017	105.2011	BORDE_CANO
	AUX_23	AUX_22	0	1.32	767	4	6.953	261.112	104.5603	BORDE_CANO
	AUX_23	AUX_22	0	1.32	768	4	8.512	254.3322	103.2814	BORDE_CANO
	AUX_23	AUX_22	0	1.32	769	4	9.1	256.5852	103.0608	RIO
	AUX_23	AUX_22	0	1.32	770	4	9.771	265.2017	102.0654	RIO
	AUX_23	AUX_22	0	1.32	771	4	7.273	239.4252	105.4339	RIO
	AUX_23	AUX_22	0	1.32	772	4	7.026	219.0823	106.2452	RIO
	AUX_23	AUX_22	0	1.32	773	4	6.901	245.5653	106.1856	BORDE_CANO
	AUX_23	AUX_22	0	1.32	774	4	5.454	247.4422	105.0004	BORDE_CANO
	AUX_23	AUX_22	0	1.32	775	4	4.308	254.1917	103.3137	BORDE_CANO
	AUX_23	AUX_22	0	1.32	776	4	4.691	262.5628	108.4443	CANO
	AUX_23	AUX_22	0	1.32	777	4	6.881	255.0454	105.5345	CANO
	AUX_24	AUX_11	0	1.268	AUX_11	1.7	44.843	0	89.24	
SD	89.89.2400									
	AUX_24	AUX_11	0	1.268	AUX_25	1.7	89.49	114.4247	89.4551	DELTA_AUX
	AUX_24	AUX_11	0	1.268	778	1.7	6.553	287.0632	87.1846	MANHOLE
	AUX_24	AUX_11	0	1.268	779	1.7	10.216	244.2606	88.2346	MANHOLE
	AUX_24	AUX_11	0	1.268	780	1.7	12.352	203.3942	88.4757	MANHOLE
	AUX_24	AUX_11	0	1.268	781	1.7	11.264	196.0649	88.4149	MANHOLE
	AUX_24	AUX_11	0	1.268	782	1.7	3.726	353.5814	81.5716	MANHOLE
	AUX_24	AUX_11	0	1.268	783	1.7	23.851	99.3106	89.1528	MANHOLE
	AUX_24	AUX_11	0	1.268	784	1.7	27.955	127.0943	89.2419	MANHOLE
	AUX_24	AUX_11	0	1.268	785	1.7	34.307	108.5848	89.2616	MANHOLE
	AUX25	AUX_24	0	1.37	AUX_24	1.7	89.483	0	89.4534	
SD	89.89.4534									
	AUX25	AUX_24	0	1.37	AUX_26	1.7	27.119	169.1826	93.0638	DELTA_AUX
	AUX25	AUX_24	0	1.37	787	1.7	1.657	73.1936	80.1613	MANHOLE
	AUX_26	AUX_25	0	1.387	AUX_25	1.7	27.152	0	85.3343	
SD	85.85.3343									
	AUX_26	AUX_25	0	1.387	788	4	3.408	302.535	94.5809	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	788	4	2.151	289.3105	105.1951	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	789	4	2.561	300.0857	91.2831	TUBO_DESC
	AUX_26	AUX_25	0	1.387	790	4	2.671	299.1839	102.4331	TUBO_DESC
	AUX_26	AUX_25	0	1.387	791	4	2.161	291.5825	105.2913	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	792	1.7	1.926	293.1958	91.4041	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	793	1.7	3.438	307.0427	91.485	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	794	1.7	4.308	282.5546	101.2941	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	795	1.7	4.514	278.3505	102.4919	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	796	1.7	3.476	270.3146	105.0709	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	797	1.7	3.697	266.3233	106.4535	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	798	4	6.103	265.1751	97.0512	ESTRUCTURA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_26	AUX_25	0	1.387	799	5	6.015	266.2035	95.5356	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	800	1.7	6.289	265.075	104.3844	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	801	1.7	5.938	264.5742	104.544	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	802	1.7	5.601	255.3046	104.4747	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	803	1.7	5.359	256.0929	106.5346	ESTRUCTURA
	AUX_26	AUX_25	0	1.387	804	1.7	1.995	200.1229	107.301	DES_DOMICI
	AUX_26	AUX_25	0	1.387	805	1.7	3.538	193.4718	104.5033	DES_DOMICI
	1027	1026	0	1.411	1026	1.7	60.222	0	88.0555	
SD	88.88.0555									
	1027	1026	0	1.411	AUX_27	1.7	12.128	209.4443	93.1953	DELTA_AUX
	AUX_27	1027	0.0001	1.433	1027	1.7	12.172	0.0001	84.0329	
SD	84.84.0329									
	AUX_27	1027	0.0001	1.433	1027	1.7	12.169	0	84.0329	
SD	84.84.0329									
	AUX_27	1027	0.0001	1.433	806	1.7	23.19	106.3902	102.4211	RIO
	AUX_27	1027	0.0001	1.433	807	1.7	23.329	93.3526	102.4518	RIO
	AUX_27	1027	0.0001	1.433	808	1.7	25.544	85.0248	101.5329	RIO
	AUX_27	1027	0.0001	1.433	809	1.7	28.105	85.0928	100.5029	RIO
	AUX_27	1027	0.0001	1.433	810	1.7	29.6	84.0922	100.0808	RIO
	AUX_27	1027	0.0001	1.433	811	1.7	27.525	87.1749	100.3552	BORDE_CANO
	AUX_27	1027	0.0001	1.433	812	1.7	27.964	88.3349	100.0333	BORDE_CANO
	AUX_27	1027	0.0001	1.433	813	1.7	28.666	89.1101	98.4337	BORDE_CANO
	AUX_27	1027	0.0001	1.433	814	1.7	26.17	89.4514	100.5807	BORDE_CANO
	AUX_27	1027	0.0001	1.433	815	1.7	26.402	91.2228	100.1011	BORDE_CANO
	AUX_27	1027	0.0001	1.433	816	1.7	27.077	92.5253	99.264	BORDE_CANO
	AUX_27	1027	0.0001	1.433	817	1.7	28.218	90.1514	99.3126	DESCARGA
	AUX_27	1027	0.0001	1.433	818	1.7	27.005	92.4627	97.1441	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	819	1.7	27.265	93.2124	97.0837	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	820	1.7	27.312	93.4907	96.0011	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	821	1.7	27.315	93.2957	95.5831	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	822	1.7	28.776	89.0052	96.4452	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	823	1.7	28.892	89.0859	96.3007	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	824	1.7	28.969	89.2621	95.431	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	825	1.7	28.993	88.5207	95.5908	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	826	1.7	29.395	91.1059	95.2429	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	827	1.7	29.338	91.1819	94.3507	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	828	1.7	27.416	93.231	95.564	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	829	1.7	28.418	93.3917	95.3021	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	830	1.7	28.438	93.5215	94.3218	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	831	1.7	28.833	93.5009	94.234	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	832	1.7	29.545	91.4707	94.2847	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	833	1.7	29.607	91.5928	93.3417	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	834	1.7	29.606	92.1508	93.3219	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	835	1.7	28.915	94.0218	93.3036	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	836	1.7	29.04	94.022	93.3157	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	837	1.7	28.906	92.2906	94.3604	DESCARGA
	AUX_27	1027	0.0001	1.433	838	1.7	29.065	93.3831	91.473	TUBO_DESC
	AUX_27	1027	0.0001	1.433	839	1.7	29.044	93.3253	91.264	TUBO_DESC
	AUX_27	1027	0.0001	1.433	840	1.7	28.744	94.1034	91.3603	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	841	0.085	28.532	96.1633	92.515	ESTRUCTURA
	AUX_27	1027	0.0001	1.433	842	0.085	29.169	93.4827	92.5336	ESTRUCTURA
	AUX_27	1027	0	1.433	1027	1.7	12.17	0	84.0227	
SD	84.84.0227									
	AUX_27	1027	0	1.433	843	1.7	11.178	11.353	100.53	ESTRUCTURA
	AUX_27	1027	0	1.433	844	1.7	10.988	11.0725	100.3033	ESTRUCTURA
	AUX_27	1027	0	1.433	845	1.7	12.044	18.1037	101.2647	ESTRUCTURA
	AUX_27	1027	0	1.433	846	1.7	12.08	18.4555	101.2601	ESTRUCTURA
	AUX_27	1027	0	1.433	847	1.7	12.079	18.0118	102.1607	ESTRUCTURA
	AUX_27	1027	0	1.433	848	1.7	11.09	12.3851	102.3445	ESTRUCTURA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_27	1027	0	1.433	849	1.7	9.401	25.0301	107.1837	ESTRUCTURA
	AUX_27	1027	0	1.433	850	1.7	9.491	25.372	106.541	ESTRUCTURA
	AUX_27	1027	0	1.433	851	1.7	9.595	25.3619	108.0224	ESTRUCTURA
	AUX_27	1027	0	1.433	852	1.7	10.903	31.0631	105.471	ESTRUCTURA
	AUX_27	1027	0	1.433	853	1.7	10.737	30.5607	106.061	ESTRUCTURA
	AUX_27	1027	0	1.433	854	1.7	10.78	30.5118	107.1013	ESTRUCTURA
	AUX_27	1027	0	1.433	855	1.7	11.772	13.5611	102.1857	DESCARGA
	AUX_27	1027	0	1.433	856	2.9	10.196	33.0609	108.32	ESTRUCTURA
	AUX_27	1027	0	1.433	857	2.9	11.127	33.1537	106.1333	BORDE_CANO
	AUX_27	1027	0	1.433	857	4	11.484	11.4325	85.293	TUBO_DESC
	AUX_27	1027	0	1.433	858	4	11.464	10.4355	80.0329	TUBO_DESC
	AUX_27	1027	0	1.433	859	4	12.025	15.054	86.1557	ESTRUCTURA
	AUX_27	1027	0	1.433	860	4	12.538	18.3119	86.0004	ESTRUCTURA
	AUX_27	1027	0	1.433	861	2.6	10.405	8.3331	83.3028	ESTRUCTURA
	AUX_27	1027	0	1.433	862	2.6	12.415	16.3419	84.2448	ESTRUCTURA
	AUX_27	1027	0	1.433	863	1.7	8.972	52.4552	116.483	BORDE_CANO
	AUX_27	1027	0	1.433	864	1.7	8.535	65.0003	119.2942	BORDE_CANO
	AUX_27	1027	0	1.433	865	1.7	14.126	112.2746	111.31	RIO
	AUX_27	1027	0	1.433	866	1.7	13.82	99.1508	111.4719	RIO
	AUX_27	1027	0	1.433	867	1.7	15.056	87.165	110.1743	RIO
SD	12015	12014	0.0001	1.438	12014	1.7	105.382	0.0001	89.3444	
	89.89.3444									
	12015	12014	0.0001	1.438	868	1.7	13.759	348.3855	88.29	ARBOL
	12015	12014	0.0001	1.438	869	1.7	10.648	344.275	88.245	ARBOL
	12015	12014	0.0001	1.438	870	1.7	15.188	345.1941	89.0545	CERRAMIENT
	12015	12014	0.0001	1.438	871	1.7	9.339	335.3501	88.2009	CERRAMIENT
	12015	12014	0.0001	1.438	872	1.7	9.042	334.2359	88.2731	POSTE
	12015	12014	0.0001	1.438	873	1.7	16.844	299.3616	89.1913	CERRAMIENT
	12015	12014	0.0001	1.438	874	1.7	14.289	300.4643	89.1342	ANDEN
	12015	12014	0.0001	1.438	875	1.7	8.642	329.2501	88.322	ANDEN
	12015	12014	0.0001	1.438	876	1.7	8.024	323.4815	88.4806	SUMEDERO
	12015	12014	0.0001	1.438	877	1.7	7.291	328.4344	88.4853	SUMEDERO
	12015	12014	0.0001	1.438	878	1.7	13.41	350.5058	89.0115	BORDE_VIA
	12015	12014	0.0001	1.438	879	1.7	14.849	15.3238	89.2651	BORDE_VIA
	12015	12014	0.0001	1.438	880	1.7	7.815	342.3327	88.114	BORDE_VIA
	12015	12014	0.0001	1.438	881	1.7	7.097	330.2436	88.2507	BORDE_VIA
	12015	12014	0.0001	1.438	882	1.7	7.832	314.4751	88.0717	BORDE_VIA
	12015	12014	0.0001	1.438	883	1.7	15.279	293.3235	89.0618	BORDE_VIA
	12015	12014	0.0001	1.438	884	1.7	7.738	29.441	88.442	BORDE_VIA
	12015	12014	0.0001	1.438	885	1.7	7.073	42.3352	88.2037	BORDE_VIA
	12015	12014	0.0001	1.438	886	1.7	7.563	60.1211	88.0704	BORDE_VIA
	12015	12014	0.0001	1.438	887	1.7	18.179	87.3153	89.013	BORDE_VIA
	12015	12014	0.0001	1.438	888	1.7	13.809	271.1154	88.5609	BORDE_VIA
	12015	12014	0.0001	1.438	889	1.7	16.545	105.5718	89.0319	BORDE_VIA
	12015	12014	0.0001	1.438	890	1.7	4.014	338.2433	85.1838	MANHOLE
	12015	12014	0.0001	1.438	891	1.7	4.019	17.2554	88.5919	CERRAMIENT
	12015	12014	0.0001	1.438	892	1.7	9.146	40.0001	88.2206	CERRAMIENT
	12015	12014	0.0001	1.438	893	1.7	14.272	17.1354	89.0444	ANDEN
	12015	12014	0.0001	1.438	894	1.7	8.337	31.1109	88.512	ANDEN
	12015	12014	0.0001	1.438	895	1.7	10.113	33.5517	88.1244	POSTE
	12015	12014	0.0001	1.438	896	1.7	7.764	42.3302	88.483	SUMEDERO
	12015	12014	0.0001	1.438	897	1.7	7.111	48.1125	88.2917	SUMEDERO
12015	12014	0.0001	1.438	898	1.7	19.004	68.0307	89.3357	CERRAMIENT	
12015	12014	0.0001	1.438	899	1.7	12.361	60.202	88.3754	ARBOL	
12015	12014	0.0001	1.438	900	1.7	22.675	67.0705	89.4019	LINDERO	
12015	12014	0.0001	1.438	901	1.7	20.973	88.3205	89.291	LINDERO	
12015	12014	0.0001	1.438	902	1.7	25.752	115.04	89.1351	POSTE	
12015	12014	0.0001	1.438	903	1.7	14.634	124.3221	89.0123	ARBOL	
12015	12014	0.0001	1.438	904	1.7	9.05	147.5944	87.4102	ARBOL	



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12015	12014	0.0001	1.438	905	1.7	8.434	167.3402	86.0955	ARBOL
	12015	12014	0.0001	1.438	906	1.7	6.828	177.4236	87.465	ARBOL
	12015	12014	0.0001	1.438	12016	1.7	51.648	105.1735	89.1843	DELTA
	12015	12014	0.0001	1.438	907	1.7	35.884	97.093	89.2134	BORDE_VIA
	12015	12014	0.0001	1.438	908	1.7	41.506	95.5705	89.2407	BORDE_VIA
	12015	12014	0.0001	1.438	909	1.7	36.766	93.2746	89.2854	ARBOL
	12015	12014	0.0001	1.438	910	1.7	38.726	92.5403	89.2636	LINDERO
	12015	12014	0.0001	1.438	911	1.7	41.591	105.3709	89.2216	BORDE_VIA
	12016	12015	0	1.405	12015	1.7	51.641	0	90.0333	
SD	90.90.0333									
	12016	12015	0	1.405	912	1.7	32.576	359.5958	89.5925	LINEAMIENT
	12016	12015	0	1.405	913	1.7	15.843	25.0701	89.4916	MANHOLE
	12016	12015	0	1.402	12015	1.7	51.649	0	90.041	
SD	90.90.0410									
	12016	12015	0	1.402	914	1.7	27.073	76.0503	89.225	BORDE_VIA
	12016	12015	0	1.402	915	1.7	14.487	59.4125	89.1623	BORDE_VIA
	12016	12015	0	1.402	916	1.7	19.695	60.3648	89.0704	BORDE_VIA
	12016	12015	0	1.402	917	1.7	19.818	58.5741	88.5812	SEPARADOR
	12016	12015	0	1.402	918	1.7	19.847	58.422	88.5811	SEPARADOR
	12016	12015	0	1.402	919	1.7	27.294	77.1334	89.1506	SEPARADOR
	12016	12015	0	1.402	920	1.7	27.297	77.2407	89.1546	SEPARADOR
	12016	12015	0	1.402	921	1.7	26.426	59.5728	89.091	SEPARADOR
	12016	12015	0	1.402	922	1.7	26.44	59.4243	89.091	SEPARADOR
	12016	12015	0	1.402	923	1.7	26.563	61.0905	89.1854	BORDE_VIA
	12016	12015	0	1.402	924	1.7	29.591	80.0401	89.3618	LINDERO
	12016	12015	0	1.402	925	1.7	29.987	50.1249	89.2029	PARAMENTO
	12016	12015	0	1.402	926	1.7	19.937	39.2819	89.1438	PARAMENTO
	12016	12015	0	1.402	927	1.7	20.329	87.0942	89.5735	ARBOL
	12016	12015	0	1.402	928	1.7	15.532	58.0355	89.2543	SUMEDERO
	12016	12015	0	1.402	929	1.7	16.362	59.5255	89.0916	SUMEDERO
	12016	12015	0	1.402	930	1.7	7.797	122.06	88.5854	SUMEDERO
	12016	12015	0	1.402	931	1.7	7.023	125.5331	88.0943	SUMEDERO
	12016	12015	0	1.402	932	1.7	12.373	74.16	88.3537	MANHOLE
	12016	12015	0	1.402	933	1.7	3.125	262.4502	88.1744	SUMEDERO
	12016	12015	0	1.402	934	1.7	2.197	259.0143	83.4527	SUMEDERO
	12016	12015	0	1.402	935	1.7	3.066	338.0456	86.3447	BORDE_VIA
	12016	12015	0	1.402	936	1.7	1.955	258.4337	82.1313	BORDE_VIA
	12016	12015	0	1.402	937	1.7	2.317	274.0854	81.2635	SEPARADOR
	12016	12015	0	1.402	938	1.7	2.271	275.3939	81.3752	SEPARADOR
	12016	12015	0	1.402	939	1.7	2.408	279.5044	81.3347	SEPARADOR
	12016	12015	0	1.402	940	1.7	2.418	276.5131	81.3238	SEPARADOR
	12016	12015	0	1.402	941	1.7	3.316	266.4437	83.5243	SEPARADOR
	12016	12015	0	1.402	942	1.7	3.367	267.4606	84.1202	SEPARADOR
	12016	12015	0	1.402	943	1.7	3.306	262.3436	84.1201	SEPARADOR
	12016	12015	0	1.402	944	1.7	3.449	262.023	84.1202	SEPARADOR
	12016	12015	0	1.402	945	1.7	3.382	259.3605	84.0808	SEPARADOR
	12016	12015	0	1.402	946	1.7	3.411	261.144	84.152	SEPARADOR
	12016	12015	0	1.402	947	1.7	7.997	121.2053	87.2455	SEPARADOR
	12016	12015	0	1.402	948	1.7	8.3	122.521	87.3008	SEPARADOR
	12016	12015	0	1.402	949	1.7	8.353	122.0206	87.3008	SEPARADOR
	12016	12015	0	1.402	950	1.7	8.044	120.4734	87.241	SEPARADOR
	12016	12015	0	1.402	951	1.7	7.518	129.4746	87.194	SEPARADOR
	12016	12015	0	1.402	952	1.7	7.554	129.0205	87.2707	SEPARADOR
	12016	12015	0	1.402	953	1.7	7.816	129.4911	87.2916	SEPARADOR
	12016	12015	0	1.402	954	1.7	7.774	130.2728	87.361	SEPARADOR
	12016	12015	0	1.402	955	1.7	12.683	205.4356	88.2251	SEPARADOR
	12016	12015	0	1.402	956	1.7	19.119	243.0328	89.0246	SEPARADOR
	12016	12015	0	1.402	957	1.7	19.144	243.1645	89.041	SEPARADOR
	12016	12015	0	1.402	958	1.7	19.203	241.2247	89.1507	BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12016	12015	0	1.402	959	1.7	12.236	208.0441	88.4426 BORDE_VIA
	12016	12015	0	1.402	960	1.7	12.964	204.0253	88.2435 POSTE
	12016	12015	0	1.402	961	1.7	20.468	247.1025	89.2835 POSTE
	12016	12015	0	1.402	962	1.7	13.153	198.3835	88.4001 LINDERO
	12016	12015	0	1.402	963	1.7	3.713	298.3704	83.2444 POSTE
	12016	12015	0	1.402	12017	1.7	121.543	239.3628	89.5429 DELTA
	12016	12015	0	1.402	964	1.7	72.574	239.3621	89.5009 LINEAMIENT
	12016	12015	0	1.402	964	1.7	72.57	239.3628	89.501 LINEAMIENT
	12016	12015	0	1.402	965	1.7	58.286	236.3454	89.4545 MANHOLE
	12016	12015	0	1.402	966	1.7	47.875	240.1658	89.4544 BORDE_VIA
	12016	12015	0	1.402	967	1.7	49.244	243.0443	89.4131 BORDE_VIA
	12016	12015	0	1.402	968	1.7	49.961	244.2641	89.4015 BORDE_VIA
	12016	12015	0	1.402	969	1.7	58.757	257.3829	89.11 BORDE_VIA
	12016	12015	0	1.402	970	1.7	47.241	240.574	89.5639 SUMEDERO
	12016	12015	0	1.402	971	1.7	46.423	240.2438	89.4903 SUMEDERO
	12016	12015	0	1.402	972	1.7	40.06	242.0446	89.3201 POSTE
	12017	12016	0	1.422	12016	1.7	121.613	0	89.5829
SD	89.89.5829								
	12017	12016	0	1.422	973	1.7	58.867	347.4711	89.3008 BORDE_VIA
	12017	12016	0	1.422	974	1.7	58.235	347.3903	89.2444 CORDON
	12017	12016	0	1.422	975	1.7	58.37	347.393	89.2444 CORDON
	12017	12016	0	1.422	976	1.7	53.971	359.2913	89.5404 BORDE_VIA
	12017	12016	0	1.422	977	1.7	53.497	358.3039	89.562 CORDON
	12017	12016	0	1.422	978	1.7	53.509	358.2152	89.5538 CORDON
	12017	12016	0	1.422	979	1.7	52.564	357.0555	89.52 POSTE
	12017	12016	0	1.422	980	1.7	50.609	356.3537	89.5308 ANDEN
	12017	12016	0	1.422	981	1.7	48.617	356.2914	89.5 ANDEN
	12017	12016	0	1.422	982	1.7	46.948	354.2939	89.58 ANDEN
	12017	12016	0	1.422	983	1.7	32.286	359.0828	89.4306 BORDE_VIA
	12017	12016	0	1.422	984	1.7	24.703	15.2106	89.3749 BORDE_VIA
	12017	12016	0	1.422	985	1.7	32.102	358.1012	89.364 CORDON
	12017	12016	0	1.422	986	1.7	32.102	357.5747	89.3853 CORDON
	12017	12016	0	1.422	987	1.7	24.996	16.3153	89.2339 CORDON
	12017	12016	0	1.422	988	1.7	24.99	16.4636	89.2429 CORDON
	12017	12016	0	1.422	989	1.7	20.77	20.0231	89.1923 CORDON
	12017	12016	0	1.422	990	1.7	20.935	21.0144	89.1922 CORDON
	12017	12016	0	1.422	991	1.7	20.845	21.1124	89.2021 CORDON
	12017	12016	0	1.422	992	1.7	19.6	21.18	89.1455 CORDON
	12017	12016	0	1.422	993	1.7	19.826	22.2139	89.1947 CORDON
	12017	12016	0	1.422	994	1.7	19.685	22.3141	89.2041 CORDON
	12017	12016	0	1.422	995	1.7	19.513	21.2838	89.1415 CORDON
	12017	12016	0	1.422	996	1.7	17.605	24.0918	89.1454 CORDON
	12017	12016	0	1.422	997	1.7	17.587	23.5322	89.1454 CORDON
	12017	12016	0	1.422	998	1.7	20.432	19.105	89.4412 SUMEDERO
	12017	12016	0	1.422	999	1.7	19.856	21.0839	90.2104 SUMEDERO
	12017	12016	0	1.422	1000	1.7	19.639	356.5327	89.5117 SUMEDERO
	12017	12016	0	1.422	1001	1.7	18.763	358.2146	89.2725 SUMEDERO
	12017	12016	0	1.422	1002	1.7	21.969	7.4708	89.1556 MANHOLE
	12017	12016	0	1.422	1003	1.7	32.103	354.4937	89.4323 POSTE
	12017	12016	0	1.422	1004	1.7	19.909	357.0906	89.0647 CORDON
	12017	12016	0	1.422	1005	1.7	19.915	356.5417	89.0854 CORDON
	12017	12016	0	1.422	1006	1.7	19.627	356.0822	89.113 CORDON
	12017	12016	0	1.422	1007	1.7	19.568	355.4906	89.165 CORDON
	12017	12016	0	1.422	1008	1.7	18.759	355.5255	89.1803 CORDON
	12017	12016	0	1.422	1009	1.7	18.838	355.4154	89.2017 CORDON
	12017	12016	0	1.422	1010	1.7	18.57	356.2921	89.052 CORDON
	12017	12016	0	1.422	1011	1.7	18.575	356.5125	89.052 CORDON
	12017	12016	0	1.422	1012	1.7	13.687	355.5543	88.3809 CORDON
	12017	12016	0	1.422	1013	1.7	13.603	355.3409	88.423 CORDON



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12017	12016	0	1.422	1014	1.7	14.052	343.5006	88.4915	POSTE
	12017	12016	0	1.422	1015	1.7	12.354	340.0838	88.2954	ANDEN
	12017	12016	0	1.422	1016	1.7	12.853	334.0558	88.2557	ANDEN
	12017	12016	0	1.455	12016	1.7	121.605	0	89.5022	
SD	89.89.5022									
	12017	12016	0	1.455	1017	1.7	26.073	17.5659	89.1514	ARBOL
	12017	12016	0	1.455	1018	1.7	15.873	34.2628	89.0555	ARBOL
	12017	12016	0	1.455	1019	1.7	18.665	25.545	89.5027	LINDERO
	12017	12016	0	1.455	1020	1.7	18.874	58.0023	90.1932	LINDERO
	12017	12016	0	1.455	1021	1.7	7.964	81.5806	87.4742	ARBOL
	12017	12016	0	1.455	1022	1.7	7.877	91.3733	88.281	ARBOL
	12017	12016	0	1.455	1023	1.7	9.218	127.443	89.0408	ARBOL
	12017	12016	0	1.455	1024	1.7	11.349	131.4639	90.0831	ARBOL
	12017	12016	0	1.455	1025	1.7	17.484	153.4427	90.234	ARBOL
	12017	12016	0	1.455	1026	1.7	15.379	159.1101	89.3841	BORDE_VIA
	12017	12016	0	1.455	1027	1.7	15.764	157.1921	89.2911	CORDON
	12017	12016	0	1.455	1028	1.7	15.735	157.3515	89.2744	CORDON
	12017	12016	0	1.455	1029	1.7	7.808	225.0124	86.5932	ANDEN
	12017	12016	0	1.455	1030	1.7	6.916	215.4116	86.385	ANDEN
	12017	12016	0	1.455	1031	1.7	6.041	198.1109	87.0317	ANDEN
	12017	12016	0	1.455	1032	1.7	15.289	188.4613	89.2342	ANDEN
	12017	12016	0	1.455	1033	1.7	15.54	196.0514	88.3325	ANDEN
	12017	12016	0	1.455	1034	1.7	8.867	186.5418	89.0057	BORDE_VIA
	12017	12016	0	1.455	1035	1.7	9.174	190.4128	88.3823	CORDON
	12017	12016	0	1.455	1036	1.7	9.179	190.1759	88.3823	CORDON
	12017	12016	0	1.455	1037	1.7	12.864	196.5403	88.095	POSTE
	12017	12016	0	1.455	12018	1.7	45.914	185.3632	90.082	DELTA
	12017	12016	0	1.455	1038	1.7	19.513	185.3632	89.4428	LINEAMIENT
	12018	12017	0	1.463	12017	1.7	45.911	0	89.1542	
SD	89.89.1542									
	12018	12017	0	1.463	1039	1.7	6.763	324.0956	86.3737	ANDEN
	12018	12017	0	1.463	1040	1.7	6.113	335.15	85.2907	ANDEN
	12018	12017	0	1.463	1041	1.7	4.276	323.0108	84.3824	ANDEN
	12018	12017	0	1.463	1042	1.7	3.038	295.1627	85.0955	ANDEN
	12018	12017	0	1.463	1043	1.7	3.075	326.1256	85.2941	ANDEN
	12018	12017	0	1.463	1044	1.7	11.396	322.5454	88.0038	ANDEN
	12018	12017	0	1.463	1045	1.7	11.468	316.0816	88.055	ANDEN
	12018	12017	0	1.463	1046	1.7	6.4	355.0603	87.4248	BORDE_VIA
	12018	12017	0	1.463	1047	1.7	6.717	350.1026	87.1422	CORDON
	12018	12017	0	1.463	1048	1.7	6.759	349.0533	87.1422	CORDON
	12018	12017	0	1.463	1049	1.7	13.014	33.2217	88.3629	CORDON
	12018	12017	0	1.463	1050	1.7	13.077	33.3958	88.3941	CORDON
	12018	12017	0	1.463	1051	1.7	12.774	30.4316	88.5122	BORDE_VIA
	12018	12017	0	1.463	1052	1.7	19.956	38.0605	89.3206	LINDERO
	12018	12017	0	1.463	1053	1.7	6.197	349.3343	88.5308	SUMEDERO
	12018	12017	0	1.463	1054	1.7	5.284	353.2412	87.2337	SUMEDERO
	12018	12017	0	1.463	1055	1.7	8.02	344.0806	86.3231	POSTE
	12018	12017	0	1.463	1056	1.7	10.835	54.2724	88.1119	ARBOL
	12018	12017	0	1.463	1057	1.7	8.967	102.1703	88.2556	ARBOL
	12018	12017	0	1.463	1058	1.7	7.086	95.2846	90.0607	SUMEDERO
	12018	12017	0	1.463	1059	1.7	6.556	88.4237	88.5515	SUMEDERO
	12018	12017	0	1.463	1060	1.7	6.231	190.5135	89.544	SUMEDERO
	12018	12017	0	1.463	1061	1.7	5.349	187.2824	88.5703	SUMEDERO
	12018	12017	0	1.463	1062	1.7	41.489	180.5557	90.0254	BORDE_VIA
	12018	12017	0	1.463	1063	1.7	41.367	181.3956	90.0326	CORDON
	12018	12017	0	1.463	1064	1.7	41.325	181.4619	90.0326	CORDON
	12018	12017	0	1.463	1065	1.7	5.287	196.463	87.4857	CORDON
	12018	12017	0	1.463	1066	1.7	5.444	196.3934	88.0102	CORDON
	12018	12017	0	1.463	1067	1.7	5.312	193.0443	88.0025	CORDON



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12018	12017	0	1.463	1068	1.7	5.228	193.1928	88.0026	CORDON
	12018	12017	0	1.463	1069	1.7	6.427	191.1231	88.1707	CORDON
	12018	12017	0	1.463	1070	1.7	6.372	191.1446	88.2904	CORDON
	12018	12017	0	1.463	1071	1.7	6.403	194.2507	88.1747	CORDON
	12018	12017	0	1.463	1072	1.7	6.401	193.3541	88.1747	CORDON
	12018	12017	0	1.463	1073	1.7	28.575	188.3623	89.3636	CERRAMIENT
	12018	12017	0	1.463	1074	1.7	12.31	201.3744	89.1507	CERRAMIENT
	12018	12017	0	1.463	1075	1.7	15.658	217.4108	89.0712	CERRAMIENT
	12018	12017	0	1.463	1076	1.7	36.435	225.2734	89.4433	CERRAMIENT
	12018	12017	0	1.463	1077	1.7	15.914	187.2604	88.5722	POSTE
	12018	12017	0	1.463	1078	1.7	3.014	101.573	85.0226	MANHOLE
	12018	12017	0	1.463	1079	1.7	10.685	246.5616	88.4719	MANHOLE
	12018	12017	0	1.463	1080	1.7	15.503	221.0629	88.5923	BOLARDO
	12018	12017	0	1.463	1081	1.7	15.243	224.5537	88.5001	BOLARDO
	12018	12017	0	1.463	1082	1.7	15.08	229.2256	88.58	BOLARDO
	12018	12017	0	1.463	1083	1.7	14.97	233.2915	88.5652	BOLARDO
	12018	12017	0	1.463	1084	1.7	14.876	237.5345	88.503	BOLARDO
	12018	12017	0	1.463	12019	1.7	48.965	234.4052	89.4738	DELTA
	12018	12017	0	1.463	1085	1.7	32.743	234.4053	89.3922	LINEAMIENT
	12019	12018	0	1.44	12018	1.7	48.967	0	89.3824	
SD	89.89.3824									
	12019	12018	0	1.44	1086	1.7	20.091	354.5735	89.1521	POSTE
	12019	12018	0	1.44	1087	1.7	22.881	350.2613	89.0121	ARBOL
	12019	12018	0	1.44	1088	1.7	16.907	347.441	88.5858	ARBOL
	12019	12018	0	1.44	1089	1.7	15.763	356.592	88.3844	ARBOL
	12019	12018	0	1.44	1090	1.7	7.809	87.1221	85.4544	ARBOL
	12019	12018	0	1.44	1091	1.7	20.786	49.3736	88.4118	PARAMENTO
	12019	12018	0	1.44	1092	1.7	6.465	86.5752	88.4649	BORDE_VIA
	12019	12018	0	1.44	1093	1.7	7.886	108.5737	89.3405	BORDE_VIA
	12019	12018	0	1.44	1094	1.7	12.886	125.0352	90.0156	BORDE_VIA
	12019	12018	0	1.44	1095	1.7	20.412	127.5109	90.0349	BORDE_VIA
	12019	12018	0	1.44	1096	1.7	20.909	124.1051	88.2751	PARAMENTO
	12019	12018	0	1.44	1097	1.7	16.7	146.4833	88.4538	CERRAMIENT
	12019	12018	0	1.44	1098	1.7	9.694	165.53	87.3642	CERRAMIENT
	12019	12018	0	1.44	1099	1.7	16.203	143.205	89.5941	BORDE_VIA
	12019	12018	0	1.44	1100	1.7	8.892	164.002	89.2519	BORDE_VIA
	12019	12018	0	1.44	1101	1.7	9.186	170.0712	89.0645	BORDE_VIA
	12019	12018	0	1.44	1102	1.7	30.85	188.473	89.3426	BORDE_VIA
	12019	12018	0	1.44	1103	1.7	16.958	205.1906	89.2454	BORDE_VIA
	12019	12018	0	1.44	1104	1.7	31.519	198.2717	89.5249	BORDE_VIA
	12019	12018	0	1.44	1105	1.7	30.002	187.2002	89.2527	CERRAMIENT
	12019	12018	0	1.44	1106	1.7	3.548	164.235	86.2234	MANHOLE
	12019	12018	0	1.44	12020	1.7	80.219	192.2748	89.4922	DELTA
	12019	12018	0	1.44	1107	1.7	23.107	192.275	89.2334	LINEAMIENT
	12020	12019	0	1.442	12019	1.7	80.218	0	89.4854	
SD	89.89.4854									
	12020	12019	0	1.442	1108	1.7	16.148	1.1901	88.5917	CERRAMIENT
	12020	12019	0	1.442	1109	1.7	12.675	2.5552	88.545	POSTE
	12020	12019	0	1.442	1110	1.7	6.354	117.2205	87.5425	CERRAMIENT
	12020	12019	0	1.442	1111	1.7	1.301	306.5859	76.2314	CERRAMIENT
	12020	12019	0	1.442	1112	1.7	9.706	122.3919	88.5653	CERRAMIENT
	12020	12019	0	1.442	1113	1.7	19.428	229.2228	89.2114	CERRAMIENT
	12020	12019	0	1.442	1114	1.7	29.477	136.1336	89.2346	CERRAMIENT
	12020	12019	0	1.442	1115	1.7	29.421	190.0637	89.4347	CERRAMIENT
	12020	12019	0	1.442	1116	1.7	36.08	170.4745	89.4035	CERRAMIENT
	12020	12019	0	1.442	1117	1.7	38.017	178.5414	89.0116	PARAMENTO
	12020	12019	0	1.442	1118	1.7	32.553	164.0904	89.0806	CANCHA
	12020	12019	0	1.442	1119	1.7	15.718	223.0905	88.0556	CANCHA
	12020	12019	0	1.442	1120	1.7	28.634	137.1628	89.0339	CANCHA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12020	12019	0	1.442	1121	1.7	1.117	183.3048	64.4147	CANCHA
	12020	12019	0	1.442	1122	1.7	16.124	128.4836	89.0113	POSTE
	12020	12019	0	1.442	1123	1.7	24.055	184.0209	89.0431	POSTE
	12020	12019	0	1.442	1124	1.7	41.042	121.1233	90.0515	BORDE_VIA
	12020	12019	0	1.442	1125	1.7	38.544	130.582	89.593	BORDE_VIA
	12020	12019	0	1.442	1126	1.7	46.75	126.4441	90.0315	BORDE_VIA
	12020	12019	0	1.442	1127	1.7	44.781	131.4533	90.0232	BORDE_VIA
	12020	12019	0	1.442	1128	1.7	32.432	126.4611	89.563	BORDE_VIA
	12020	12019	0	1.442	1129	1.7	36.919	140.2539	89.5134	BORDE_VIA
	12020	12019	0	1.442	1130	1.7	39.626	159.2301	89.4155	BORDE_VIA
	12020	12019	0	1.442	1131	1.7	46.966	169.2842	89.4244	PARAMENTO
	12020	12019	0	1.442	12021	1.7	36.347	135.1841	89.4819	DELTA
	12021	12020	0	1.457	12020	1.7	36.351	0	89.2532	
SD	89.89.2532									
	12021	12020	0	1.457	1132	1.7	6.746	356.4659	88.1406	CANCHA
	12021	12020	0	1.457	1133	1.7	12.599	96.3823	89.3404	BORDE_VIA
	12021	12020	0	1.457	1134	1.7	27.631	93.1811	89.4659	BORDE_VIA
	12021	12020	0	1.457	1135	1.7	11.451	70.1659	89.493	BORDE_VIA
	12021	12020	0	1.457	1136	1.7	28.347	83.0634	89.5626	BORDE_VIA
	12021	12020	0	1.457	1137	1.7	31.551	83.0159	89.5108	CERRAMIENT
	12021	12020	0	1.457	1138	1.7	15.128	47.234	88.5137	CERRAMIENT
	12021	12020	0	1.457	1139	1.7	31.425	97.1708	89.5336	CERRAMIENT
	12021	12020	0	1.457	1140	1.7	14.76	101.1519	89.0204	CERRAMIENT
	12021	12020	0	1.457	1141	1.7	16.101	143.3701	88.4032	CERRAMIENT
	12021	12020	0	1.457	1142	1.7	17.039	142.1221	88.4033	PARAMENTO
	12021	12020	0	1.457	1143	1.7	17.039	84.451	89.2148	MANHOLE
	12021	12020	0	1.457	1144	1.7	11.319	115.5304	90.2123	SUMEDERO
	12021	12020	0	1.457	1145	1.7	10.894	111.5155	90.0523	SUMEDERO
	12021	12020	0	1.457	1146	1.7	13.769	98.3732	88.5033	POSTE
	12021	12020	0	1.457	1147	1.7	12.572	67.3929	90.1845	SUMEDERO
	12021	12020	0	1.457	1148	1.7	12.192	63.4505	90.1551	SUMEDERO
	12021	12020	0	1.457	1149	1.7	11.482	262.1321	88.5441	POSTE
	12021	12020	0	1.457	1150	1.7	12.874	203.3239	88.2638	PARAMENTO
	12021	12020	0	1.457	1151	1.7	10.803	205.5133	89.1612	PARAMENTO
	12021	12020	0	1.457	1152	1.7	39.017	283.3548	88.5755	PARAMENTO
	12021	12020	0	1.457	1153	1.7	37.842	272.2238	89.1909	POSTE
	12021	12020	0	1.457	1154	1.7	54.547	280.5557	89.3017	POSTE
	12021	12020	0	1.457	1155	1.7	37.916	270.2807	89.1724	PARAMENTO
	12021	12020	0	1.457	12022	1.7	95.311	277.542	89.4621	DELTA
	12021	12020	0	1.457	1156	1.7	56.469	277.542	89.3044	LINEAMIENT
	12022	12021	0	1.407	12021	1.7	95.299	0	89.5429	
SD	89.89.5429									
	12022	12021	0	1.407	1157	1.7	15.27	4.0831	88.5638	POSTE
	12022	12021	0	1.407	1158	1.7	23.13	349.1618	89.0814	POSTE
	12022	12021	0	1.407	1159	1.7	8.725	20.2513	87.4619	PARAMENTO
	12022	12021	0	1.407	1160	1.7	5.242	74.5144	87.4849	PARAMENTO
	12022	12021	0	1.407	1161	1.7	8.546	80.3737	87.3849	PARAMENTO
	12022	12021	0	1.407	1162	1.7	8.473	89.1003	88.0614	PARAMENTO
	12022	12021	0	1.407	1163	1.7	5.148	190.0526	91.5442	PARAMENTO
	12022	12021	0	1.407	1164	1.7	4.266	183.3815	89.2202	MANHOLE
	12022	12021	0	1.407	1165	1.7	5.409	142.3047	88.3536	MANHOLE
	12022	12021	0	1.407	1166	1.7	8.567	143.1325	90.5445	POSTE
	12022	12021	0	1.407	1167	1.7	16.492	128.4123	89.0559	PARAMENTO
	12022	12021	0	1.407	1168	1.7	17.448	134.1548	89.5554	PARAMENTO
	12022	12021	0	1.407	1169	1.7	24.251	116.4131	89.3716	PARAMENTO
	12022	12021	0	1.407	1170	1.7	48.789	100.5518	90.0134	POSTE
	12022	12021	0	1.407	1171	1.7	40.894	106.4517	90.0419	PARAMENTO
	12022	12021	0	1.407	1172	1.7	38.649	107.4159	90.0412	LINDERO
	12022	12021	0	1.407	12023	1.7	80.033	98.5017	89.5702	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12022	12021	0	1.407	1173	1.7	46.14	98.5017	89.5307 LINEAMIENT
	12023	12022	0	1.417	12022	1.7	80.031	0	89.3852
SD	89.89.3852								
	12023	12022	0	1.417	1174	1.7	6.926	341.422	88.2559 POSTE
	12023	12022	0	1.417	1175	1.7	14.767	17.3956	88.3148 POSTE
	12023	12022	0	1.417	1176	1.7	3.222	302.4417	86.2858 PARAMENTO
	12023	12022	0	1.417	1177	1.7	10.376	43.563	87.361 PARAMENTO
	12023	12022	0	1.417	1178	1.7	10.376	55.135	88.1348 PARAMENTO
	12023	12022	0	1.417	1179	1.7	11.517	274.302	91.1241 PARAMENTO
	12023	12022	0	1.417	1180	1.7	12.273	73.0748	87.1257 PARAMENTO
	12023	12022	0	1.417	1181	1.7	12.565	99.1032	87.1702 PARAMENTO
	12023	12022	0	1.417	1182	1.7	11.014	143.3435	87.1937 PARAMENTO
	12023	12022	0	1.417	1183	1.7	10.081	151.4523	87.4701 POSTE
	12023	12022	0	1.417	1184	1.7	14.53	195.045	89.1855 ARBOL
	12023	12022	0	1.417	1185	1.7	17.646	196.5249	90.0549 ARBOL
	12023	12022	0	1.417	1186	1.7	20.079	195.3527	90.2151 ARBOL
	12023	12022	0	1.417	1187	1.7	28.862	186.2127	89.4336 ARBOL
	12023	12022	0	1.417	1188	1.7	31.927	185.1135	89.2017 ARBOL
	12023	12022	0	1.417	1189	1.7	36.273	182.2115	89.132 ARBOL
	12023	12022	0	1.417	1190	1.7	28.392	168.0643	89.1923 POSTE
	12023	12022	0	1.417	1191	1.7	22.261	197.1337	91.0933 POSTE
	12023	12022	0	1.417	1192	1.7	33.787	164.3935	89.1107 POSTE
	12023	12022	0	1.417	12024	1.7	87.733	170.4928	89.4827 DELTA
	12023	12022	0	1.417	1193	1.7	68.313	170.1848	89.3751 PARAMENTO
	12023	12022	0	1.417	1194	1.7	68.044	166.5316	89.1915 PARAMENTO
	12023	12022	0	1.417	1195	1.7	21.021	160.1618	88.1556 PARAMENTO
	12023	12022	0	1.417	1196	1.7	5.312	21.2031	86.2642 MANHOLE
	12023	12022	0	1.417	1197	1.7	46.326	170.4829	89.2738 LINEAMIENT
	12023	12022	0	1.417	1198	1.7	40.74	168.5437	89.2511 MANHOLE
	12023	12022	0	1.417	1199	1.7	42.65	175.2134	89.3613 MANHOLE
	12024	12023	0	1.396	12023	1.7	87.724	0	89.4921
SD	89.89.4921								
	12024	12023	0	1.396	1200	1.7	24.106	345.2623	89.0234 PARAMENTO
	12024	12023	0	1.396	1201	1.7	26.024	346.04	88.5916 PARAMENTO
	12024	12023	0	1.396	1202	1.7	24.357	341.0856	89.262 PARAMENTO
	12024	12023	0	1.396	1203	1.7	19.469	1.4837	88.4348 PARAMENTO
	12024	12023	0	1.396	1204	1.7	11.446	6.1018	88.3946 PARAMENTO
	12024	12023	0	1.396	1205	1.7	11.627	10.334	88.1931 PARAMENTO
	12024	12023	0	1.396	1206	1.7	4.858	60.5429	84.5504 PARAMENTO
	12024	12023	0	1.396	1207	1.7	7.648	70.4404	87.335 PARAMENTO
	12024	12023	0	1.396	1208	1.7	11.257	4.4955	88.4356 POSTE
	12024	12023	0	1.396	1209	1.7	10.603	138.5708	88.2547 POSTE
	12024	12023	0	1.396	1210	1.7	6.013	165.1926	85.1335 ARBOL
	12024	12023	0	1.396	1211	1.7	10.147	114.4857	88.123 PARAMENTO
	12024	12023	0	1.396	1212	1.7	8.254	129.5012	87.5023 PARAMENTO
	12024	12023	0	1.396	12023	1.7	87.727	0	89.4834
SD	89.89.4834								
	12024	12023	0	1.396	1213	1.7	11.397	137.3313	88.2528 PARAMENTO
	12024	12023	0	1.396	1214	1.7	3.888	90.541	85.3504 MANHOLE
	12024	12023	0	1.396	1215	1.7	23.26	145.2038	89.1414 PARAMENTO
	12024	12023	0	1.396	1216	1.7	48.732	148.2937	89.3604 PARAMENTO
	12024	12023	0	1.396	1217	1.7	36.952	156.4538	89.3752 POSTE
	12024	12023	0	1.396	1218	1.7	49.437	149.5302	89.4235 POSTE
	12024	12023	0	1.396	1219	1.7	43.342	155.5055	89.4235 POSTE
	12024	12023	0	1.396	1220	1.7	71.638	154.1526	89.4819 POSTE
	12024	12023	0	1.396	1221	1.7	52.157	151.2107	89.4251 MANHOLE
	12024	12023	0	1.396	12025	1.7	122.835	150.3237	90.0043 DELTA
	12024	12023	0	1.396	1222	1.7	6.12	343.3927	88.5341 SUMEDERO
	12024	12023	0	1.396	1223	1.7	5.398	350.0158	88.2002 SUMEDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12024	12023	0	1.396	1224	1.7	75.766	150.324	89.5037 LINEAMIENT
	12025	12024	0	1.44	12024	1.7	122.83	0	89.4416
SD	89.89.4416								
	12025	12024	0	1.44	1225	1.7	38.074	9.5402	89.0049 PARAMENTO
	12025	12024	0	1.44	1226	1.7	33.314	350.1427	89.144 PARAMENTO
	12025	12024	0	1.44	1227	1.7	37.221	3.3733	89.1953 POSTE
	12025	12024	0	1.44	1228	1.7	17.028	22.1732	88.533 POSTE
	12025	12024	0	1.44	1229	1.7	4.983	289.2525	85.2828 PARAMENTO
	12025	12024	0	1.44	1230	1.7	8.894	280.2348	87.1729 PARAMENTO
	12025	12024	0	1.44	1231	1.7	8.082	55.2937	88.4919 PARAMENTO
	12025	12024	0	1.44	1232	1.7	10.528	62.3437	89.0107 PARAMENTO
	12025	12024	0	1.44	1233	1.7	4.493	108.3621	87.2118 POSTE
	12025	12024	0	1.44	1234	1.7	13.748	7.3807	88.2711 ARBOL
	12025	12024	0	1.44	1235	1.7	3.99	186.1428	85.2455 BANANERA
	12025	12024	0	1.44	1236	1.7	9.036	121.2843	88.4528 BANANERA
	12025	12024	0	1.44	1237	1.7	31.414	0.2551	89.1703 MANHOLE
	12025	12024	0	1.44	AUX_28	1.7	71.954	0.4805	89.3712 DELTA_AUX
	AUX_28	12025	0	1.451	12025	1.7	71.944	0	89.5846
SD	89.89.5846								
	AUX_28	12025	0	1.451	1238	1.7	16.154	295.1837	89.2409 PARAMENTO
	AUX_28	12025	0	1.451	1239	1.7	17.341	261.3111	89.3508 PARAMENTO
	AUX_28	12025	0	1.451	AUX_29	1.7	44.939	181.0349	89.3144 DELTA_AUX
	AUX_29	AUX_28	0	1.448	AUX_28	1.7	44.957	0	89.5025
SD	89.89.5025								
	AUX_29	AUX_28	0	1.448	1240	1.7	12.745	264.2856	88.3153 PARAMENTO
	AUX_29	AUX_28	0	1.448	1241	1.7	21.389	281.3947	88.4325 PARAMENTO
	AUX_29	AUX_28	0	1.448	AUX_30	1.7	16.354	273.1211	89.014 DELTA_AUX
	AUX_31	AUX_29	0	1.41	AUX_29	1.7	16.354	0	89.0408
SD	89.89.0408								
	AUX_31	AUX_29	0	1.41	AUX_31	1.7	55.895	129.5343	89.5052 DELTA_AUX
	AUX_31	AUX_29	0	1.41	1242	1.7	24.991	103.2951	88.5543 PARAMENTO
	AUX_31	AUX_30	0	1.47	AUX_30	1.7	55.899	0	89.3702
SD	89.89.3702								
	AUX_31	AUX_30	0	1.47	AUX_32	1.7	140.401	249.0141	90.0302 DELTA_AUX
	AUX_31	AUX_30	0	1.47	1243	1.7	139.628	248.4638	90.0355 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1244	1.7	9.411	23.0428	88.5345 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1245	1.7	13.945	42.3147	89.0008 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1246	1.7	11.701	67.2216	88.4141 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1247	1.7	7.953	82.3324	87.063 PARAMENTO
	AUX_31	AUX_30	0	1.47	1248	1.7	8.106	97.5752	86.5144 PARAMENTO
	AUX_31	AUX_30	0	1.47	1249	1.7	14.328	241.5541	89.0443 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1250	1.7	15.695	230.4322	89.1042 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1251	1.7	23.59	246.5137	89.3833 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1252	1.7	21.124	233.2215	89.2829 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1253	1.7	31.744	246.4521	89.4402 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1254	1.7	32.652	257.1535	89.5112 BORDE_VIA
	AUX_31	AUX_30	0	1.47	1255	1.7	8.471	311.2127	87.2943 CERRAMIENT
	AUX_32	AUX_31	0	1.443	AUX_31	1.7	140.4	0	89.453
SD	89.89.4530								
	AUX_32	AUX_31	0	1.443	AUX_33	1.7	108.365	173.3045	89.5906 DELTA_AUX
	AUX_32	AUX_31	0	1.443	1257	1.7	23.627	16.1946	89.232 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1258	1.7	23.516	23.2542	89.3321 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1259	1.7	19.753	36.4743	89.2202 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1260	1.7	15.285	26.0732	89.1002 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1261	1.7	7.235	101.2736	89.065 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1262	1.7	96.785	172.582	90.011 BORDE_VIA
	AUX_32	AUX_31	0	1.443	1263	1.7	43.53	178.4131	89.4938 CERRAMIENT
	AUX_32	AUX_31	0	1.443	1264	1.7	44.934	176.2229	89.5631 BORDE_VIA
	AUX_33	AUX_32	0	1.44	AUX_32	1.7	108.366	0	89.451



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	89.89.4510							
	AUX_33 AUX_32	0	1.44	AUX_34	1.7	130.165	81.0823	89.4334 DELTA_AUX
	AUX_33 AUX_32	0	1.44	1265	1.7	7.192	21.0157	87.5826 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1266	1.7	17.81	65.0848	89.0835 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1267	1.7	13.303	88.4747	88.5959 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1268	1.7	8.415	318.3532	88.2126 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1269	1.7	11.298	296.323	88.3152 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1270	1.7	16.635	264.1402	88.5947 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1271	1.7	45.55	78.3006	89.3223 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1272	1.7	80.711	86.4444	89.3455 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1273	1.7	47.741	72.1738	89.3949 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1274	1.7	54.706	74.234	89.4138 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1275	1.7	56.727	80.075	89.3746 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1276	1.7	79.55	81.4713	89.3944 BORDE_VIA
	AUX_33 AUX_32	0	1.44	1277	1.7	120.714	82.0338	89.4406 BORDE_VIA
	AUX_34 AUX_33	0	1.475	AUX_33	1.7	130.168	0	90.0553
SD	90.90.0553							
	AUX_34 AUX_33	0	1.475	AUX_35	1.7	140.154	170.5809	89.3739 DELTA_AUX
	AUX_34 AUX_33	0	1.475	1277	1.7	27.587	4.4826	89.5011 BORDE_VIA
	AUX_34 AUX_33	0	1.475	1278	1.7	30.095	20.0009	89.5034 BORDE_VIA
	AUX_34 AUX_33	0	1.475	1279	1.7	35.091	19.3608	89.5034 BORDE_VIA
	AUX_34 AUX_33	0	1.475	1280	1.7	36.416	1.1512	89.5034 BORDE_VIA
	AUX_35 AUX_34	0	1.38	AUX_34	1.7	140.15	0	90.1149
SD	90.90.1149							
	AUX_35 AUX_34	0	1.38	AUX_36	1.7	177.926	175.1622	89.4859 DELTA_AUX
	AUX_35 AUX_34	0	1.38	12018	1.7	26.058	13.2922	89.461 DELTA
	AUX_36 AUX_35	0	1.364	AUX_35	1.7	177.925	0	90.01
SD	90.90.0100							
	AUX_36 AUX_35	0	1.364	10040	1.7	105.097	188.582	89.561 DELTA
	AUX_36 AUX_35	0	1.364	1281	1.7	2.078	253.404	82.3941 BORDE_VIA
	AUX_36 AUX_35	0	1.364	1282	1.7	10.17	261.3339	89.0233 BORDE_VIA
	AUX_36 AUX_35	0	1.364	1283	1.7	20.309	272.1102	89.4754 BORDE_VIA
	AUX_36 AUX_35	0	1.364	1284	1.7	21.982	260.2949	89.3948 BORDE_VIA
	AUX_36 AUX_35	0	1.364	1285	1.7	9.143	190.5033	87.503 BORDE_VIA
	AUX_36 AUX_35	0	1.364	1286	1.7	17.634	187.4158	89.0435 BORDE_VIA
	10040 AUX_36	0	1.4	AUX_36	1.7	105.1	0	89.4444
SD	89.89.4444							
	10040 AUX_36	0	1.4	1287	1.7	5.84	14.5238	87.1343 BORDE_VIA
	10040 AUX_36	0	1.4	1288	1.7	11.495	67.2422	88.2431 BORDE_VIA
	10040 AUX_36	0	1.4	1289	1.7	9.355	96.4438	88.0915 BORDE_VIA
	10040 AUX_36	0	1.4	1290	1.7	1.785	129.5642	80.58 BORDE_VIA
	10040 AUX_36	0	1.4	1291	1.7	14.73	185.3859	89.2154 BORDE_VIA
	10040 AUX_36	0	1.4	1292	1.7	13.665	216.1507	89.1833 BORDE_VIA
	10040 AUX_36	0	1.4	1293	1.7	9.062	241.0224	89.1322 BORDE_VIA
	10040 AUX_36	0	1.4	1294	1.7	11.761	269.5839	89.5737 BORDE_VIA
	10040 AUX_36	0	1.4	1295	1.7	21.123	273.3038	89.5514 BORDE_VIA
	10040 AUX_36	0	1.4	1296	1.7	20.868	293.0352	89.5323 BORDE_VIA
	10040 AUX_36	0	1.4	1297	1.7	9.872	317.014	88.3418 BORDE_VIA
	10040 AUX_36	0	1.4	AUX_37	1.7	35.252	96.104	89.1153 DELTA_AUX
	AUX_37 10040	0.0001	1.4	10040	1.7	35.234	0.0001	89.4901
SD	89.89.4901							
	AUX_37 10040	0.0001	1.4	12014	1.7	22.564	97.1809	89.0449 DELTA
	AUX_37 10040	0.0001	1.4	1038	1.7	80.09	266.3512	89.3613 DELTA
	12014 AUX_37	0	1.34	AUX_37	1.7	22.567	0	89.1232
SD	89.89.1232							
	12014 AUX_37	0	1.34	10038	1.7	102.344	351.3811	89.4154 DELTA
	12014 AUX_37	0	1.34	12015	1.7	105.366	171.2945	90.043 DELTA
	12017 12018	359.5959	1.425	12018	1.7	45.904	359.5959	90.064
SD	90.90.0640							



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12017	12018	359.5959	1.425	AUX_38	1.7	27.855	121.0857	91.0754	DELTA_AUX
	AUX_38	12017	0	1.453	12017	1.7	27.864	0	87.4752	
SD	87.87.4752									
	AUX_38	12017	0	1.453	AUX_39	1.7	9.426	145.4852	94.262	DELTA_AUX
	AUX_39	AUX_38	0	1.395	AUX_38	1.7	9.477	0	82.1647	
SD	82.82.1647									
	AUX_39	AUX_38	0	1.395	1298	2.6	5.983	49.1007	97.1401	TUBO_DESC
	AUX_39	AUX_38	0	1.395	1299	4	5.823	48.2318	95.4846	TUBO_DESC
	AUX_39	AUX_38	0	1.395	1300	5	5.876	50.0548	96.592	TUBO_DESC
	AUX_39	AUX_38	0	1.395	1301	4	7.204	53.0233	99.5735	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1302	4	7.436	65.3732	99.3608	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1303	4	8.329	70.0318	99.4103	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1304	4	8.31	73.2308	99.185	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1305	4	8.779	74.1611	99.5524	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1306	4	9.167	71.5603	99.0504	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1307	4	5.175	102.2552	111.0401	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1308	4	5.993	101.1033	102.5244	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1309	4	6.195	96.352	102.0122	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1310	4	7.572	95.3558	99.2522	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1311	4	8.048	88.3637	99.1009	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1312	4	7.966	80.2644	99.271	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1313	4	8.557	79.221	99.4959	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1314	4	9.936	81.5419	99.1756	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1315	4	10.883	80.133	99.0844	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1316	4	10.541	74.4225	99.062	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1317	4	11.901	77.5341	98.4206	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1318	4	12.321	81.2748	98.5115	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1319	4	11.101	83.4139	99.2056	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1320	4	10.434	92.5357	101.0324	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1321	4	11.452	91.2944	99.4748	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1322	4	9.173	102.0814	102.3927	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1323	4	9.808	104.4118	102.3957	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1324	4	8.88	109.5849	104.5119	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1325	4	9.493	108.1451	103.2002	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1326	4	9.369	119.3517	105.5158	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1327	4	9.989	123.1427	104.4315	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1328	4	9.392	129.521	106.1214	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1329	4	9.801	127.404	107.1634	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1330	4	9.707	139.5707	106.4236	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1331	4	10.621	139.3902	104.5009	BORDE_CANO
	AUX_39	AUX_38	0	1.395	1332	4	14.151	144.4946	104.3742	RIO
	AUX_39	AUX_38	0	1.395	1333	4	14.089	144.2529	104.4536	RIO
	AUX_39	AUX_38	0	1.395	1334	4	14.424	143.2845	104.5137	RIO
	AUX_39	AUX_38	0	1.395	1335	4	9.509	122.2217	102.0727	TUBO_DESC
	AUX_39	AUX_38	0	1.395	1336	4	9.334	111.0517	106.1727	DESCARGA
	AUX_39	AUX_38	0	1.395	1337	2.9	10.098	123.3042	99.5647	TUBO_DESC
	AUX_39	AUX_38	0	1.395	1338	1.7	9.901	131.3903	99.1658	ESTRUCTURA
	AUX_39	AUX_38	0	1.395	1339	1.7	11.091	125.1639	97.3328	ESTRUCTURA
	AUX_39	AUX_38	0	1.395	1340	1.7	11.256	126.3711	97.3327	ESTRUCTURA
	AUX_39	AUX_38	0	1.395	1341	1.7	10.025	132.4314	99.2014	ESTRUCTURA
	AUX_39	AUX_38	0	1.395	1342	4	9.464	129.3427	98.5643	ESTRUCTURA
	12023	12024	0	1.451	12024	1.7	87.732	0	89.503	
SD	89.89.5030									
	12023	12024	0	1.451	AUX_40	1.7	45.248	78.2415	92.431	DELTA_AUX
	AUX_40	12023	0.0001	1.465	12023	1.7	45.265	0.0001	86.4112	
SD	86.86.4112									
	AUX_40	12023	0.0001	1.465	1343	2	12.172	306.4812	92.5034	TUBO_DESC
	AUX_40	12023	0.0001	1.465	1344	2	12.061	306.5054	91.2828	TUBO_DESC
	AUX_40	12023	0.0001	1.465	1345	2	12.247	306.2315	92.3213	ESTRUCTURA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	AUX_40	12023	0.0001	1.465	1346	2	11.916	308.0214	92.3014 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1347	2	12.259	300.4423	92.3015 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1348	2	10.67	306.4855	90.2055 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1349	1.7	12.494	306.0057	88.3138 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1350	1.7	12.567	305.2301	88.4138 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1351	1.7	12.49	300.4946	90.0719 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1352	1.7	12.384	300.3951	90.1852 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1353	2	12.17	306.2359	92.3017 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1354	2	11.983	306.2035	92.4112 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1355	2	11.7	302.2019	92.3442 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1356	2	11.374	303.4339	92.3845 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1357	2	12.056	306.4248	92.5442 DESCARGA
	AUX_40	12023	0.0001	1.465	1358	2	10.293	289.1424	97.3546 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1359	2	9.411	291.4545	98.1614 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1360	2	9.971	290.3348	97.5357 ESTRUCTURA
	AUX_40	12023	0.0001	1.465	1361	2	8.682	287.5028	99.1712 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1362	2	7.338	282.2231	101.5225 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1363	2	6.159	270.3114	103.5039 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1364	3.1	4.587	245.5359	101.2109 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1365	4.1	4.539	210.2734	100.3857 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1364	5	8.841	182.3729	92.1731 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1365	5	10.145	176.2319	93.0806 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1366	5	11.702	172.0439	93.3611 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1367	4	14.944	172.1244	97.1216 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1368	4	16.442	178.3957	96.3716 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1369	4	18.607	181.1446	96.3716 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1370	4	20.071	180.4622	96.145 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1371	4	21.31	177.3345	96.5639 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1372	4	22.526	175.1344	96.4027 RIO
	AUX_40	12023	0.0001	1.465	1372	4	22.104	174.1513	96.4327 RIO
	AUX_40	12023	0.0001	1.465	1373	4	21.778	172.0927	96.5925 RIO
	AUX_40	12023	0.0001	1.465	1374	4	20.697	167.0219	97.2505 RIO
	AUX_40	12023	0.0001	1.465	1375	4	21.636	178.575	97.2406 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1376	4	19.992	184.4016	96.2207 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1377	5	16.976	188.0436	93.3633 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1378	5	15.98	185.5141	93.0713 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1379	5	14.108	178.505	97.3023 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1380	4	12.011	180.1947	96.5311 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1381	4	11.061	187.0234	96.5312 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1382	4	9.438	202.0104	96.1855 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1383	4	8.646	207.5754	97.521 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1384	4	6.746	213.2428	95.4108 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1385	4	6.336	240.5207	91.131 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1386	2.9	6.948	262.2144	97.0712 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1387	2.9	8.625	279.0339	93.1052 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1388	1.7	9.996	282.1544	99.5917 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1389	1.7	10.398	287.2808	99.41 BORDE_CANO
	AUX_40	12023	0.0001	1.465	1390	0.085	13.411	281.1737	91.5735 DES_DOMICI
	AUX_40	12023	0.0001	1.465	1391	1.7	12.118	307.283	85.3451 DES_DOMICI
	AUX_40	12023	0.0001	1.465	1392	1.7	12.61	311.5631	83.5826 DES_DOMICI
	AUX_40	12023	0.0001	1.465	1393	1.7	10.763	320.464	84.4402 PARAMENTO
	AUX_40	12023	0.0001	1.465	1394	1.7	11.811	325.3345	82.4717 PARAMENTO
	AUX_40	12023	0.0001	1.465	1395	0.085	14.439	308.0643	91.013 PARAMENTO
	AUX_40	12023	0.0001	1.465	1396	1.7	13.31	279.1318	89.164 PARAMENTO
	12023	12024	359.5959	1.478	12024	1.7	87.725	359.5959	89.5047
SD	89.89.5047								
	12023	12024	359.5959	1.478	AUX_41	1.7	58.38	17.4009	90.5519 DELTA_AUX
	AUX_41	12023	0.0001	1.43	12023	1.7	58.379	0.0001	88.3521
SD	88.88.3521								



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



AUX_41	12023	0.0001	1.43	1397	3	3.099	267.5619	107.4918	TUBO_DESC
AUX_41	12023	0.0001	1.43	1398	3	3.128	270.3022	98.5559	TUBO_DESC
AUX_41	12023	0.0001	1.43	1399	3	3.455	272.1728	105.2012	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1400	3	2.668	266.4926	110.2214	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1401	3	4.305	246.2947	103.033	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1402	3	3.552	237.5332	105.3958	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1403	3	3.66	235.2648	108.2821	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1404	3	4.36	245.4305	105.3502	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1405	3	5.773	230.3655	104.2847	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1406	3	5.866	230.2024	106.2123	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1407	3	5.229	220.1133	105.58	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1408	3	5.341	219.1517	107.5137	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1409	3	7.399	219.5139	104.554	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1410	3	7.565	219.4454	106.1358	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1411	3	7.106	213.3512	105.3828	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1412	3	7.286	212.0708	106.4345	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1413	3	8.803	210.0547	105.3417	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1414	3	8.984	210.1814	106.4249	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1415	3	9.279	215.0045	105.0705	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1416	3	9.433	215.0717	106.1342	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1417	3	10.963	205.1328	104.4914	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1418	3	11.045	205.4624	105.3947	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1419	3	11.308	211.1744	104.1313	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1420	3	11.286	211.2648	105.1346	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1421	3	13.193	209.0044	103.5914	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1422	3	13.219	209.111	105.1009	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1423	3	12.879	203.3416	104.2537	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1424	3	13.015	203.381	105.2206	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1425	4	14.853	206.3351	102.5821	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1426	4	15.036	206.4705	105.4306	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1427	3.4	14.735	202.5953	105.2835	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1428	3.4	14.876	202.4246	106.4156	ESTRUCTURA
AUX_41	12023	0.0001	1.43	1429	5	15.417	207.18	102.2326	RIO
AUX_41	12023	0.0001	1.43	1430	3.5	15.776	203.0936	105.542	RIO
AUX_41	12023	0.0001	1.43	1431	1.7	7.108	219.0342	113.1603	DES_DOMICI
AUX_41	12023	0.0001	1.43	1432	1.7	5.155	139.0403	76.094	DES_DOMICI



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



AUX_28	12024	0	1.425	12024	1.7	50.916	0	89.3606	
SD	89.89.3606								
AUX_28	12024	0	1.425	AUX_42	1.7	20.405	252.2217	90.5146	DELTA_AUX
AUX_42	AUX_28	0	1.487	AUX_28	1.7	20.428	0	87.4549	
SD	87.87.4549								
AUX_42	AUX_28	0	1.487	1433	1.7	2.897	226.4151	107.5128	TUBO_DESC
AUX_42	AUX_28	0	1.487	1434	1.7	6.163	204.5706	105.1708	TUBO_DESC
AUX_42	AUX_28	0	1.487	1435	1.7	6.209	204.1733	106.5238	TUBO_DESC
AUX_42	AUX_28	0	1.487	1436	1.7	15.726	194.4356	116.2245	RIO
AUX_42	AUX_28	0	1.487	1437	1.7	15.929	188.3045	115.5956	RIO
AUX_42	AUX_28	0	1.487	1438	1.7	15.923	204.3924	116.071	RIO
AUX_42	AUX_28	0	1.487	1439	1.7	16.419	213.5832	115.071	RIO
AUX_42	AUX_28	0	1.487	1440	1.7	17.646	223.4616	113.1917	RIO
AUX_42	AUX_28	0	1.487	1441	1.7	2.171	113.0348	80.564	ARBOL
	12015 12014	0	1.465	12014	1.7	105.367	0	89.3553	
SD	89.89.3553								
	12015 12014	0	1.465	AUX_43	1.7	48.45	235.1957	90.2652	DELTA_AUX
AUX_43	12015	0	1.317	12015	1.7	48.465	0	88.4856	
SD	88.88.4856								
AUX_43	12015	0	1.317	1442	3	11.204	173.4336	114.2848	TUBO_DESC
AUX_43	12015	0	1.317	1443	3	11.452	173.312	116.0926	TUBO_DESC
AUX_43	12015	0	1.317	1444	3	11.318	157.4104	116.512	RIO
AUX_43	12015	0	1.317	1445	3	11.036	148.0631	118.0053	RIO
AUX_43	12015	0	1.317	1446	3	12.043	181.2406	115.2816	RIO
AUX_43	12015	0	1.317	1447	3	13.244	192.1829	112.5344	RIO
AUX_43	12015	0	1.317	1448	1.7	1.759	142.3532	96.3621	ARBOL
AUX_43	12015	0	1.317	1449	1.7	2.93	207.4928	97.0912	ARBOL
	10036 10034	0	1.495	10034	1.7	135.708	0	89.5555	
SD	89.89.5555								
	10036 10034	0	1.495	AUX_44	1.7	67.134	186.2728	90.1703	DELTA_AUX
AUX_44	10036	359.5958	1.49	10036	1.7	67.142	359.5958	89.2148	
SD	89.89.2148								
AUX_44	10036	359.5958	1.49	10036	1.7	67.151	0	89.2202	
SD	89.89.2202								
AUX_44	10036	359.5958	1.49	AUX_45	1.7	43.759	260.0022	89.1907	DELTA_AUX
AUX_45	AUX_44	0	1.378	AUX_44	1.7	43.763	0	89.5944	
SD	89.89.5944								
AUX_45	AUX_44	0	1.378	1450	1.7	8.136	199.4818	110.0503	TUBO_DESC
AUX_45	AUX_44	0	1.378	1451	1.7	8.622	199.2359	116.2104	TUBO_DESC
AUX_45	AUX_44	0	1.378	1452	1.7	8.723	199.3821	116.5949	DESCARGA
AUX_45	AUX_44	0	1.378	1453	1.7	8.45	193.4621	116.0837	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1454	1.7	9.678	191.573	114.3242	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1455	1.7	10.702	191.1928	113.271	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1456	1.7	11.66	190.5603	111.4123	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1457	1.7	11.809	190.5116	112.3008	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1458	1.7	12.86	190.2858	111.0522	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1459	1.7	12.868	190.3442	111.05	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1460	1.7	12.821	190.3114	111.1031	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1461	1.7	11.855	190.2812	112.2639	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1462	1.7	11.821	190.59	112.3053	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1463	1.7	11.638	190.2921	111.4755	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1464	1.7	11.681	190.5319	111.4038	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1465	1.7	10.704	190.5019	113.233	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1466	1.7	10.728	191.2312	113.2331	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1467	1.7	10.624	190.5058	112.3437	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1468	1.7	10.646	191.3803	112.31	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1469	1.7	9.624	191.5555	114.4234	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1470	1.7	9.81	192.232	114.1558	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1471	1.7	8.408	193.2944	116.1506	ESTRUCTURA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



AUX_45	AUX_44	0	1.378	1472	1.7	8.489	194.1732	116.0007	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1473	1.7	8.761	203.4238	115.0457	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1474	1.7	8.745	202.2925	115.0244	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1475	1.7	9.734	202.05	113.2727	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1476	1.7	9.623	201.2116	113.5103	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1477	1.7	9.851	201.4015	114.0637	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1478	1.7	9.836	201.0133	114.1649	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1479	1.7	10.666	201.0637	112.3734	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1480	1.7	10.718	200.0647	112.3358	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1481	1.7	10.93	200.1835	113.0652	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1482	1.7	10.823	199.4745	113.3029	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1483	1.7	11.726	199.5449	111.4924	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1484	1.7	11.732	199.1201	111.4459	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1485	1.7	12.758	199.2907	112.2853	ESTRUCTURA
AUX_45	AUX_44	0	1.378	1486	2.3	17.295	184.0355	111.5327	RIO
AUX_45	AUX_44	0	1.378	1487	2.3	14.734	193.1101	116.4323	RIO
AUX_45	AUX_44	0	1.378	1488	2.9	13.776	235.2454	115.0745	RIO
AUX_45	AUX_44	0	1.378	1489	1.7	5.355	348.3545	86.1326	MANHOLE
AUX_11	AUX_2	0.0002	1.418	AUX_2	1.7	86.487	0.0002	89.1839	
SD	89.89.1839								
AUX_11	AUX_2	0.0002	1.418	AUX_2	1.7	86.49	0.0002	89.1817	
SD	89.89.1817								
AUX_11	AUX_2	0.0002	1.418	AUX_2	1.7	86.483	0	89.1807	
SD	89.89.1807								
AUX_11	AUX_2	0.0002	1.418	AUX_24	2.5	44.832	176.084	88.3957	DELTA_AUX



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



		12016	12015	359.5959	1.462	12015	1.7	51.667	359.5959	90.0721	
SD	90.90.0721										
		12016	12015	359.5959	1.462	12000	1.7	41.102	62.4513	89.2902	DELTA
		12000	12016	0	1.427	12016	1.7	41.114	0	89.4852	
SD	89.89.4852										
		12000	12016	0	1.427	1	1.7	2.181	148.0634	84.5611	POSTE
		12000	12016	0	1.427	2	1.7	6.038	175.1458	87.4333	SUMIDERO
		12000	12016	0	1.427	3	1.7	6.657	172.2957	88.165	SUMIDERO
		12000	12016	0	1.427	4	1.7	9.249	232.5556	88.4947	SUMIDERO
		12000	12016	0	1.427	5	1.7	9.388	228.3731	88.5621	SUMIDERO
		12000	12016	0	1.427	6	1.7	21.023	214.123	89.2223	CERRAMIENT
		12000	12016	0	1.427	7	1.7	10.016	246.5224	88.3239	CERRAMIENT
		12000	12016	0	1.427	8	1.7	17.008	263.1754	89.0409	CERRAMIENT
		12000	12016	0	1.427	9	1.7	11.747	251.0624	88.2423	POSTE
		12000	12016	0	1.427	10	1.7	38.304	273.4354	89.4921	CERRAMIENT
		12000	12016	0	1.427	11	1.7	11.027	307.0609	88.1222	LINDERO
		12000	12016	0	1.427	12	1.7	3.329	243.1046	85.5225	MANHOLE
		12000	12016	0	1.427	13	2.1	16.848	286.4305	88.1204	POSTE
		12000	12016	0	1.427	12001	1.7	81.883	281.3642	90.0643	DELTA
		12000	12016	0	1.427	14	1.7	50.96	281.3642	90.1157	LINEAMIENT
		12000	12016	0	1.427	15	1.7	14.606	281.3642	89.4256	LINEAMIENT
		12000	12016	0	1.427	16	1.7	6.405	281.3642	88.1412	LINEAMIENT
		12000	12016	0	1.427	17	1.7	7.575	261.4122	88.4512	MHVIRTUAL
		12001	12000	0	1.372	12000	1.7	81.892	0	89.2843	
SD	89.89.2843										
		12001	12000	0	1.372	18	1.7	45.885	18.3247	89.2159	CERRAMIENT
		12001	12000	0	1.372	19	1.7	36.983	21.2642	89.2848	LINDERO
		12001	12000	0	1.372	20	1.7	39.556	14.2931	89.3254	MANHOLE
		12001	12000	0	1.372	21	1.7	34.775	8.5213	89.2831	LINDERO
		12001	12000	0	1.372	22	1.7	8.617	37.4435	89.0732	LINDERO
		12001	12000	0	1.372	23	1.7	31.116	79.0859	89.4021	LINDERO
		12001	12000	0	1.372	24	1.7	19.883	103.4443	89.3014	POSTE
		12001	12000	0	1.372	25	1.7	20.289	109.1833	89.3338	PARAMENTO
		12001	12000	0	1.372	26	1.7	10.678	128.2337	87.0418	PARAMENTO
		12001	12000	0	1.372	27	1.7	43.828	180.5453	90.0755	MANHOLE
		12001	12000	0	1.372	28	1.7	14.2	144.2538	87.4937	PARAMENTO
		12001	12000	0	1.372	29	1.7	13.361	148.2225	87.4645	PARAMENTO
		12001	12000	0	1.372	30	1.7	29.217	166.2226	89.5537	PARAMENTO
		12001	12000	0	1.372	31	1.7	36.552	169.18	90.0808	CERRAMIENT
		12001	12000	0	1.372	32	1.7	36.544	169.18	90.0533	CERRAMIENT
		12001	12000	0	1.372	33	1.7	29.216	166.2207	89.4501	PARAMENTO
		12001	12000	0	1.372	34	1.7	12.07	195.3656	90.3927	LINDERO
		12001	12000	0	1.372	35	1.7	28.987	186.1049	89.4336	LINDERO
		12001	12000	0	1.372	36	1.7	39.608	172.4734	90.0528	POSTE
		12001	12000	0	1.372	37	1.7	11.806	85.5811	89.1242	MHVIRTUAL
		12001	12000	0	1.372	38	1.7	50.764	173.2239	90.2507	CERRAMIENT
		12001	12000	0	1.372	39	1.7	51.208	169.42	90.2259	CERRAMIENT
		12001	12000	0	1.372	12002	1.7	72.994	181.0741	90.1352	DELTA
		12001	12000	0	1.372	40	1.7	50.497	181.0741	90.123	LINEAMIENT
		12001	12000	0	1.372	41	1.7	15.353	181.0741	89.1726	LINEAMIENT
		12001	12000	0	1.372	42	1.7	3.243	323.5308	85.2538	POSTE
		12002	12001	359.5959	1.385	12001	1.7	72.996	359.5959	89.1636	
SD	89.89.1636										
		12002	12001	359.5959	1.385	43	1.7	11.07	132.0159	90.2407	PARAMENTO
		12002	12001	359.5959	1.385	44	1.7	13.04	133.1909	90.2124	POSTE
		12002	12001	359.5959	1.385	45	1.7	11.845	147.4914	90.5429	SUMIDERO
		12002	12001	359.5959	1.385	46	1.7	12.729	149.3544	90.5658	SUMIDERO
		12002	12001	359.5959	1.385	47	1.7	18.865	158.0301	90.3357	SUMIDERO
		12002	12001	359.5959	1.385	48	1.7	19.525	159.1835	90.4203	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12002	12001	359.5959	1.385	49	1.7	18.551	151.0453	90.1428	MANHOLE
	12002	12001	359.5959	1.385	50	1.7	24.854	140.4612	90.1606	PARAMENTO
	12002	12001	359.5959	1.385	51	1.7	20.85	159.1619	90.0731	PARAMENTO
	12002	12001	359.5959	1.385	52	1.7	21.675	152.593	90.045	POSTE
	12002	12001	359.5959	1.385	53	1.7	14.146	167.1436	89.2923	MANHOLE
	12002	12001	359.5959	1.385	12003	1.7	54.693	173.3731	90.0232	DELTA
	12002	12001	359.5959	1.385	54	1.7	13.582	173.3731	88.5052	LINEAMIENT
	12002	12001	359.5959	1.385	55	1.7	40.375	173.3731	89.4754	LINEAMIENT
	12003	12002	0	1.427	12002	1.7	54.707	0	89.2128	
SD	89.89.2128									
	12003	12002	0	1.427	56	1.7	7.533	312.4045	87.0445	POSTE
	12003	12002	0	1.427	57	1.7	7.32	266.2445	86.2728	LINDERO
	12003	12002	0	1.427	58	1.7	5.574	312.195	86.0006	EJE_COLEC
	12003	12002	0	1.427	59	1.7	2.767	253.1815	84.2408	MANHOLE
	12003	12002	0	1.427	60	1.7	3.353	152.5916	85.4958	MANHOLE
	12003	12002	0	1.427	61	1.7	4.767	178.4913	88.031	SUMIDERO
	12003	12002	0	1.427	62	1.7	5.636	174.0136	88.4205	SUMIDERO
	12003	12002	0	1.427	63	1.7	1.919	64.5155	83.4636	SUMIDERO
	12003	12002	0	1.427	64	1.7	1.633	34.2303	81.4337	SUMIDERO
	12003	12002	0	1.427	65	1.7	3.282	41.5738	82.4328	PARAMENTO
	12003	12002	0	1.427	66	1.7	10.245	79.5511	87.4049	PARAMENTO
	12003	12002	0	1.427	67	1.7	29.689	106.4347	89.5409	PARAMENTO
	12003	12002	0	1.427	68	1.7	6.73	159.3511	86.5955	PARAMENTO
	12003	12002	0	1.427	69	1.7	16.074	174.1358	88.3242	PARAMENTO
	12003	12002	0	1.427	70	1.7	7.638	146.0304	87.475	POSTE
	12003	12002	0	1.427	71	1.7	30.384	106.2806	89.5311	POSTE
	12003	12002	0	1.427	72	1.7	5.414	67.4656	85.4044	POSTE
	12003	12002	0	1.427	73	1.7	37.142	96.1631	90.0135	MANHOLE
	12003	12002	0	1.427	12004	1.7	88.396	96.4218	89.4603	DELTA
	12004	12003	0.0001	1.447	12003	1.7	88.399	0.0001	89.533	
SD	89.89.5330									
	12004	12003	0.0001	1.447	74	1.7	31.297	8.3551	89.4752	POSTE
	12004	12003	0.0001	1.447	75	1.7	30.792	352.3218	89.5106	POSTE
	12004	12003	0.0001	1.447	76	1.7	17.506	17.5517	89.2857	CERRAMIENT
	12004	12003	0.0001	1.447	77	2.25	18.197	24.1453	87.0623	CERRAMIENT
	12004	12003	0.0001	1.447	78	1.7	8.168	74.222	87.1753	PARAMENTO
	12004	12003	0.0001	1.447	79	2.6	15.299	83.3001	85.1904	PARAMENTO
	12004	12003	0.0001	1.447	80	1.7	3.073	268.1445	84.092	CERRAMIENT
	12004	12003	0.0001	1.447	12005	1.7	20.496	202.4824	88.5706	DELTA
	12004	12003	0.0001	1.447	81	1.7	3.887	73.2645	87.2451	EJE_COLEC
	12004	12003	0.0001	1.447	82	1.7	6.894	74.5159	86.5424	HIDRANTE
	12004	12003	0.0001	1.447	83	1.7	3.309	37.3215	84.035	MANHOLE
	12004	12003	0.0001	1.447	84	1.7	4.917	157.0839	85.3945	MANHOLE
	12005	12004	0	1.431	12004	1.7	20.499	0	89.3727	
SD	89.89.3727									
	12005	12004	0	1.431	85	1.7	19.329	356.0209	89.3841	SUMIDERO
	12005	12004	0	1.431	86	1.7	18.587	354.1212	89.3454	SUMIDERO
	12005	12004	0	1.431	87	1.7	13.725	24.0512	89.284	SUMIDERO
	12005	12004	0	1.431	88	1.7	14.515	22.0649	89.2348	SUMIDERO
	12005	12004	0	1.431	89	1.7	22.907	13.4128	89.5529	SUMIDERO
	12005	12004	0	1.431	90	1.7	22.051	12.4009	89.4241	SUMIDERO
	12005	12004	0	1.431	91	1.7	23.159	7.2831	89.5122	EJE_COLEC
	12005	12004	0	1.431	92	1.7	19.97	351.2129	89.25	POSTE
	12005	12004	0	1.431	93	1.7	18.841	342.3412	88.491	PARAMENTO
	12005	12004	0	1.431	94	1.7	17.727	335.2643	89.0344	BORDE_VIA
	12005	12004	0	1.431	95	1.7	27.763	26.4016	89.3407	BORDE_VIA
	12005	12004	0	1.431	96	1.7	9.893	334.2334	88.4846	BORDE_VIA
	12005	12004	0	1.431	97	1.7	2.097	303.1415	82.4734	BORDE_VIA
	12005	12004	0	1.431	98	1.7	24.387	40.0805	89.3125	BORDE_VIA



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



	12005	12004	0	1.431	99	1.7	21.753	53.1748	88.0831	CERRAMIENT
	12005	12004	0	1.431	100	1.7	14.048	47.3018	86.285	CERRAMIENT
	12005	12004	0	1.431	101	1.7	13	75.2806	86.5006	CERRAMIENT
	12005	12004	0	1.431	102	1.7	16.171	24.4818	89.1628	BORDE_VIA
	12005	12004	0	1.431	103	1.7	11.989	25.1858	89.0643	BORDE_VIA
	12005	12004	0	1.431	104	1.7	7.155	56.0813	88.0203	BORDE_VIA
	12005	12004	0	1.431	105	1.7	9.488	98.2205	88.1522	BORDE_VIA
	12005	12004	0	1.431	106	1.7	20.608	118.4216	89.0619	BORDE_VIA
	12005	12004	0	1.431	107	1.7	6.345	142.0653	87.2158	BORDE_VIA
	12005	12004	0	1.431	108	1.7	6.446	167.2013	85.2757	POSTE
	12005	12004	0	1.431	12006	1.7	78.959	132.5429	89.3636	DELTA
	12005	12004	0	1.431	109	1.7	71.172	128.3306	89.3747	BORDE_VIA
	12005	12004	0	1.431	110	1.7	69.772	133.2726	89.35	BORDE_VIA
	12006	12005	0	1.428	12005	1.7	78.954	0	89.5937	
SD	89.89.5937									
	12006	12005	0	1.428	APA06	1.7	35.469	159.3105	89.052	MOJON
	12006	12005	0	1.428	111	1.7	15.308	143.4546	87.3926	CERRAMIENT
	12006	12005	0	1.428	112	1.7	14.185	157.0435	88.5416	BORDE_VIA
	12006	12005	0	1.428	113	1.7	23.535	162.3344	89.1237	MANHOLE
	12006	12005	0	1.428	114	1.7	30.605	180.4639	89.2357	BORDE_VIA
	12006	12005	0	1.428	115	1.7	2.178	196.4821	83.0105	BORDE_VIA
	12006	12005	0	1.428	116	1.7	1.58	212.2023	80.5148	BORDE_VIA
	12006	12005	0	1.428	117	1.7	1.851	247.3748	83.3937	BORDE_VIA
	12006	12005	0	1.428	118	1.7	2.989	256.4527	85.4403	PARAMENTO
	12006	12005	0	1.428	119	1.7	26.872	186.0551	89.0634	PARAMENTO
	12006	12005	0	1.428	120	1.7	10.915	266.4303	89.5504	PARAMENTO
	12006	12005	0	1.428	121	1.7	8.135	353.2445	88.1854	BORDE_VIA
	12006	12005	0	1.428	122	1.7	7.327	345.0933	88.1207	BORDE_VIA
	12006	12005	0	1.428	123	1.7	5.558	334.0645	87.3106	MANHOLE
	12006	12005	0	1.428	124	1.7	8.206	333.1012	87.4542	POSTE
	12006	12005	0	1.428	12007	1.7	46.268	270.4234	90.1102	DELTA
	12006	12005	0	1.428	125	1.7	32.786	270.4234	90.1123	LINEAMIENT
	12006	12005	0	1.428	126	1.7	17.57	270.4235	90.4409	LINEAMIENT
	12006	12005	0	1.428	127	1.7	3.656	270.4235	87.525	LINEAMIENT
	12007	12006	0	1.421	12006	1.7	46.279	0	89.0903	
SD	89.89.0903									
	12007	12006	0	1.421	128	1.7	4.866	32.1221	85.0731	PARAMENTO
	12007	12006	0	1.421	129	1.7	27.203	81.4804	88.2936	PARAMENTO
	12007	12006	0	1.421	130	1.7	26.856	85.3312	88.3045	POSTE
	12007	12006	0	1.421	131	1.7	25.304	105.3923	88.5803	POSTE
	12007	12006	0	1.421	132	1.7	28.259	107.1939	88.405	PARAMENTO
	12007	12006	0	1.421	133	1.7	23.712	169.5507	87.5718	PARAMENTO
	12007	12006	0	1.421	134	1.7	14.013	128.2908	86.2427	PARAMENTO
	12007	12006	0	1.421	135	1.7	9.885	156.4852	88.0832	LINDERO
	12007	12006	0	1.421	136	1.7	7.388	161.2407	86.4813	POSTE
	12007	12006	0	1.421	137	1.7	25.665	154.1927	89.1415	PARAMENTO
	12007	12006	0	1.421	138	1.7	55.972	92.3947	89.3326	MANHOLE
	12007	12006	0	1.421	139	1.7	2.959	199.4806	85.2608	MHVIRTUAL
	12007	12006	0	1.421	12008	1.7	85.604	89.4809	89.4405	DELTA
	12007	12006	0	1.421	140	1.7	45.816	98.135	89.2255	POSTE
	12007	12006	0	1.421	141	1.7	44.651	100.2026	89.2346	PARAMENTO
	12008	12007	0.0001	1.449	12007	1.7	85.608	0.0001	89.5447	
SD	89.89.5447									
	12008	12007	0.0001	1.449	142	1.7	38.264	0	89.3447	LINEAMIENT
	12008	12007	0.0001	1.449	143	1.7	12.307	0	89.1251	LINEAMIENT
	12008	12007	0.0001	1.449	144	1.7	18.454	11.5056	88.3528	PARAMENTO
	12008	12007	0.0001	1.449	145	1.7	19.905	336.2621	88.1241	PARAMENTO
	12008	12007	0.0001	1.449	146	1.7	17.705	9.42	89.5501	POSTE
	12008	12007	0.0001	1.449	147	1.7	7.126	305.4857	87.4638	POSTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12008	12007	0.0001	1.449	148	1.7	9.051	300.1606	88.3916	PARAMENTO
	12008	12007	0.0001	1.449	149	1.7	12.637	291.131	89.3051	PARAMENTO
	12008	12007	0.0001	1.449	150	1.7	10.271	216.2149	88.0257	POSTE
	12008	12007	0.0001	1.449	151	1.7	7.656	160.4822	87.4725	POSTE
	12008	12007	0.0001	1.449	152	1.7	23.814	194.1847	88.4749	POSTE
	12008	12007	0.0001	1.449	153	1.7	32.671	174.1635	89.0852	POSTE
	12008	12007	0.0001	1.449	154	1.7	30.21	172.2131	89.132	PARAMENTO
	12008	12007	0.0001	1.449	155	1.7	2.999	87.2824	85.0835	PARAMENTO
	12008	12007	0.0001	1.449	156	1.7	30.136	183.4011	89.0157	MANHOLE
	12008	12007	0.0001	1.449	157	1.7	35.96	182.2025	89.2327	MANHOLE
	12008	12007	0.0001	1.449	158	1.7	39.62	182.0205	89.2855	MANHOLE
	12008	12007	0.0001	1.449	159	1.7	42.981	176.5533	89.3623	SUMIDERO
	12008	12007	0.0001	1.449	160	1.7	42.099	176.3559	89.3422	SUMIDERO
	12008	12007	0.0001	1.449	161	1.7	45.871	174.3012	89.2155	PARAMENTO
	12008	12007	0.0001	1.449	162	1.7	43.723	177.4129	89.3338	BORDE_VIA
	12008	12007	0.0001	1.449	163	1.7	43.792	186.2726	89.3411	BORDE_VIA
	12008	12007	0.0001	1.449	164	1.7	35.629	188.2737	89.2836	BORDE_VIA
	12008	12007	0.0001	1.449	165	1.7	35.031	175.1214	89.2652	BORDE_VIA
	12008	12007	0.0001	1.449	166	1.7	35.364	172.2957	89.2413	BORDE_VIA
	12008	12007	0.0001	1.449	167	1.7	42.031	172.4744	89.2959	BORDE_VIA
	12008	12007	0.0001	1.449	12009	1.7	97.407	178.4252	89.3613	DELTA
	12008	12007	0.0001	1.449	168	1.7	44.714	178.4252	89.3329	LINEAMIENT
	12008	12007	0.0001	1.449	169	1.7	21.295	178.4252	89.0621	LINEAMIENT
	12008	12007	0.0001	1.449	170	1.7	72.102	178.4253	89.3501	LINEAMIENT
	12009	12008	0	1.465	12008	1.7	97.419	0	90.0709	
SD	90.90.0709									
	12009	12008	0	1.465	171	0.085	10.497	11.4758	97.0209	POSTE
	12009	12008	0	1.465	172	1.7	40.681	350.2321	89.5349	POSTE
	12009	12008	0	1.465	173	1.7	10.516	324.3631	89.0652	BORDE_VIA
	12009	12008	0	1.465	174	1.7	7.951	3.57	88.5303	BORDE_VIA
	12009	12008	0	1.465	175	1.7	11.007	319.1502	88.1808	POSTE
	12009	12008	0	1.465	176	1.7	22.144	199.2746	88.3318	POSTE
	12009	12008	0	1.465	177	1.7	23.407	202.1543	87.2803	PARAMENTO
	12009	12008	0	1.465	178	1.7	22.02	171.5221	87.5753	PARAMENTO
	12009	12008	0	1.465	179	1.7	23.149	195.3223	88.5739	BORDE_VIA
	12009	12008	0	1.465	180	1.7	22.331	178.5708	89.0209	BORDE_VIA
	12009	12008	0	1.465	181	1.7	24.249	172.2038	89.0642	BORDE_VIA
	12009	12008	0	1.465	182	1.7	25.194	198.5623	88.5403	BORDE_VIA
	12009	12008	0	1.465	183	1.7	27.033	186.0405	89.0318	MANHOLE
	12009	12008	0	1.465	184	1.7	19.826	187.0241	88.5654	MANHOLE
	12009	12008	0	1.465	185	1.7	32.921	196.2632	89.2158	BORDE_VIA
	12009	12008	0	1.465	186	1.7	34.479	191.3314	89.1949	BORDE_VIA
	12009	12008	0	1.465	187	1.7	33.738	179.03	89.1613	BORDE_VIA
	12009	12008	0	1.465	188	1.7	31.785	172.5916	89.1613	BORDE_VIA
	12009	12008	0	1.465	12010	1.7	88.095	180.1455	89.0825	DELTA
	12009	12008	0	1.465	189	1.7	33.919	173.103	87.5154	PARAMENTO
	12009	12008	0	1.465	190	1.7	34.76	194.5004	88.3002	PARAMENTO
	12009	12008	0	1.465	191	1.7	36.041	201.1807	88.3255	PARAMENTO
	12009	12008	0	1.465	192	1.7	41.043	192.3112	88.3939	PARAMENTO
	12009	12008	0	1.465	193	1.7	33.11	177.3955	89.3422	SUMIDERO
	12009	12008	0	1.465	194	1.7	32.434	176.3234	89.2858	SUMIDERO
	12009	12008	0	1.465	195	1.7	32.628	196.383	89.1613	SUMIDERO
	12009	12008	0	1.465	196	1.7	33.321	197.4327	89.1442	SUMIDERO
	12010	12009	0	1.441	12009	1.7	88.099	0	90.3359	
SD	90.90.3359									
	12010	12009	0	1.441	197	1.7	5.328	36.0646	84.5817	PARAMENTO
	12010	12009	0	1.441	198	1.7	9.726	19.0752	87.1635	PARAMENTO
	12010	12009	0	1.441	199	1.7	11.545	68.0525	87.43	PARAMENTO
	12010	12009	0	1.441	200	1.7	9.587	295.5402	87.5341	PARAMENTO



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



12010	12009	0	1.441	201	1.7	15.125	286.0424	88.003	PARAMENTO
12010	12009	0	1.441	202	1.7	12.525	165.1252	87.1359	PARAMENTO
12010	12009	0	1.441	203	1.7	16.358	137.5646	87.5331	PARAMENTO
12010	12009	0	1.441	204	1.7	18.582	170.1337	88.1025	PARAMENTO
12010	12009	0	1.441	205	1.7	13.498	212.5043	87.3621	PARAMENTO
12010	12009	0	1.441	206	1.7	19.002	234.4631	88.2827	PARAMENTO
12010	12009	0	1.441	207	1.7	16.748	206.0515	88.0141	PARAMENTO
12010	12009	0	1.441	208	1.7	11.076	167.374	88.16	POSTE
12010	12009	0	1.441	209	1.7	6.855	297.1922	88.0755	POSTE
12010	12009	0	1.441	210	1.7	8.226	288.4012	89.0926	SUMIDERO
12010	12009	0	1.441	211	1.7	7.259	288.3344	88.5933	SUMIDERO
12010	12009	0	1.441	212	1.7	11.723	220.5029	89.2104	SUMIDERO
12010	12009	0	1.441	213	1.7	11.061	223.442	89.0232	SUMIDERO
12010	12009	0	1.441	214	1.7	9.399	143.3617	88.4545	SUMIDERO
12010	12009	0	1.441	215	1.7	10.092	142.2215	89.0218	SUMIDERO
12010	12009	0	1.441	216	1.7	9.669	163.5338	88.5304	SUMIDERO
12010	12009	0	1.441	217	1.7	10.433	167.101	88.574	SUMIDERO
12010	12009	0	1.441	218	1.7	5.644	89.5238	87.5805	SUMIDERO
12010	12009	0	1.441	219	1.7	6.284	93.4115	88.0759	SUMIDERO
12010	12009	0	1.441	220	1.7	3.041	220.3046	85.1229	MANHOLE
12010	12009	0	1.441	221	1.7	9.286	214.2313	88.0321	CAMA_TELEF
12010	12009	0	1.441	222	1.7	7.503	165.0848	87.4626	CAMA_TELEF
12010	12009	0	1.441	223	1.7	5.905	294.56	87.1539	CAMA_TELEF
12010	12009	0	1.441	224	1.7	10.955	173.0355	88.3617	BORDE_VIA
12010	12009	0	1.441	225	1.7	12.484	206.5556	88.5508	BORDE_VIA
12010	12009	0	1.441	226	1.7	12.104	127.5401	88.574	BORDE_VIA
12010	12009	0	1.441	227	1.7	8.616	160.1343	88.1314	BORDE_VIA
12010	12009	0	1.441	228	1.7	9.469	92.482	88.3841	BORDE_VIA
12010	12009	0	1.441	229	1.7	1.864	82.4644	83.4841	BORDE_VIA
12010	12009	0	1.441	230	1.7	5.556	10.0248	88.4951	BORDE_VIA
12010	12009	0	1.441	12011	1.7	92.71	180.521	89.2829	DELTA
12011	12010	0	1.456	12010	1.7	92.727	0	90.1329	
SD	90.90.1329								
12011	12010	0	1.456	231	1.7	6.281	269.4103	88.2245	POSTE
12011	12010	0	1.456	232	1.7	30.917	5.1405	89.5803	POSTE
12011	12010	0	1.456	233	1.7	32.639	7.1234	89.4052	PARAMENTO
12011	12010	0	1.456	234	1.7	32.655	7.4104	89.4053	PARAMENTO
12011	12010	0	1.456	235	1.7	31.788	3.2911	90.0435	SUMIDERO
12011	12010	0	1.456	236	1.7	31.078	4.2305	90.1026	SUMIDERO
12011	12010	0	1.456	237	1.7	23.886	3.275	90.055	SUMIDERO
12011	12010	0	1.456	238	1.7	23.164	4.4626	90.204	SUMIDERO
12011	12010	0	1.456	239	1.7	25.68	347.0212	89.5944	SUMIDERO
12011	12010	0	1.456	240	1.7	25.031	345.2809	90.1914	SUMIDERO
12011	12010	0	1.456	241	1.7	32.293	3.1138	89.5807	BORDE_VIA
12011	12010	0	1.456	242	1.7	31.66	7.303	90.1118	BORDE_VIA
12011	12010	0	1.456	243	1.7	27.393	354.5012	89.493	MANHOLE
12011	12010	0	1.456	244	1.7	22.587	8.1337	89.3237	PARAMENTO
12011	12010	0	1.456	245	1.7	21.775	3.2917	89.4411	BORDE_VIA
12011	12010	0	1.456	246	1.7	27.192	199.0619	89.0249	PARAMENTO
12011	12010	0	1.456	247	1.7	24.818	171.0913	88.4534	PARAMENTO
12011	12010	0	1.456	248	1.7	14.253	166.0523	88.3142	PARAMENTO
12011	12010	0	1.456	249	1.7	37.316	173.4708	89.0836	PARAMENTO
12011	12010	0	1.456	250	1.7	24.943	168.4341	88.5445	PARAMENTO
12011	12010	0	1.456	251	1.7	24.088	167.415	88.5338	POSTE
12011	12010	0	1.456	252	1.7	23.411	170.0134	89.1119	BORDE_VIA
12011	12010	0	1.456	253	1.7	16.479	166.3822	88.5735	BORDE_VIA
12011	12010	0	1.456	254	1.9	16.019	176.225	88.0202	BORDE_VIA
12011	12010	0	1.456	255	1.7	15.54	173.3245	88.5846	SUMIDERO
12011	12010	0	1.456	256	1.7	15.834	170.1759	89.0425	SUMIDERO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



		12011	12010	0	1.456	257	1.7	19.588	189.2345	88.5301	MANHOLE
		12011	12010	0	1.456	12012	1.7	83.889	183.0856	89.3107	DELTA
		12012	12011	0.0001	1.451	12011	1.7	83.899	0.0001	90.0919	
SD	90.90.0919										
		12012	12011	0.0001	1.451	12011	1.7	83.897	0	90.0919	
SD	90.90.0919										
		12012	12011	0.0001	1.451	258	2	49.962	355.1623	89.4812	SUMIDERO
		12012	12011	0.0001	1.451	259	2	49.265	355.2814	89.4846	SUMIDERO
		12012	12011	0.0001	1.451	260	2	56.941	355.3802	89.4858	SUMIDERO
		12012	12011	0.0001	1.451	261	2	56.029	355.1737	89.484	SUMIDERO
		12012	12011	0.0001	1.451	262	1.7	60.899	2.4102	90.0911	SUMIDERO
		12012	12011	0.0001	1.451	263	1.7	59.979	2.2924	90.0717	SUMIDERO
		12012	12011	0.0001	1.451	264	1.7	68.126	2.4155	90.0859	SUMIDERO
		12012	12011	0.0001	1.451	265	1.7	69.015	2.2357	90.0918	SUMIDERO
		12012	12011	0.0001	1.451	266	1.7	53.409	358.4738	89.5736	MANHOLE
		12012	12011	0.0001	1.451	267	2	51.779	355.1542	89.3849	CAMA_TELEF
		12012	12011	0.0001	1.451	268	1.7	34.215	354.1129	89.3617	POSTE
		12012	12011	0.0001	1.451	269	1.7	34.455	352.1514	89.3801	PARAMENTO
		12012	12011	0.0001	1.451	270	2.6	36.335	334.2106	88.1236	PARAMENTO
		12012	12011	0.0001	1.451	271	2.6	26.826	331.2116	87.2511	PARAMENTO
		12012	12011	0.0001	1.451	272	2.6	22.989	331.0154	86.5135	PARAMENTO
		12012	12011	0.0001	1.451	273	1.7	19.944	326.5648	88.5901	PARAMENTO
		12012	12011	0.0001	1.451	274	1.7	20.422	320.5609	87.4701	PARAMENTO
		12012	12011	0.0001	1.451	275	1.7	17.098	315.3025	89.0141	PARAMENTO
		12012	12011	0.0001	1.451	276	1.7	20.42	307.275	88.5821	PARAMENTO
		12012	12011	0.0001	1.451	277	1.7	16.109	247.4744	88.5134	PARAMENTO
		12012	12011	0.0001	1.451	278	1.7	5.963	206.2619	87.2318	PARAMENTO
		12012	12011	0.0001	1.451	10030	1.7	56.156	170.3034	89.4835	DELTA
		10030	12012	0	1.413	12012	1.7	56.169	0	89.3943	
SD	89.89.3943										



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12000	10017	0	1.423	10017	1.7	8.284	0	90.4428	
SD	90.90.4428									
	12000	10017	0	1.423	1	1.7	2.932	40.4545	83.0124	PARAMENTO
	12000	10017	0	1.423	2	1.7	7.622	225.0322	85.4224	PARAMENTO
	12000	10017	0	1.423	3	1.7	7.46	116.4416	84.3936	POSTE
	12000	10017	0	1.423	4	1.7	23.116	149.1329	88.49	POSTE
	12000	10017	0	1.423	5	1.7	27.874	128.173	89.0357	PARAMENTO
	12000	10017	0	1.423	6	1.7	35.411	146.1737	89.2317	PARAMENTO
	12000	10017	0	1.423	7	1.7	40.813	132.2132	89.3323	POSTE
	12000	10017	0	1.423	8	1.7	53.367	140.2504	89.4404	POSTE
	12000	10017	0	1.423	9	1.7	57.754	131.392	89.3414	PARAMENTO
	12000	10017	0	1.423	10	1.7	59.112	141.1734	89.4806	PARAMENTO
	12000	10017	0	1.423	11	1.7	63.173	136.3411	89.4406	MANHOLE
	12000	10017	0	1.423	12001	1.7	125.377	133.472	89.5006	DELTA
	12000	10017	0	1.423	12	1.7	63.034	134.3545	89.4307	EJE_COLEC
	12000	10017	0	1.423	13	1.7	22.219	134.3545	89.032	LINEAMIENT
	12001	12000	0	1.414	12000	1.7	125.376	0	89.5537	
SD	89.89.5537									
	12001	12000	0	1.414	14	1.7	62.356	359.1102	89.4825	EJE_COLEC
	12001	12000	0	1.414	15	1.7	56.611	0.5355	89.5341	POSTE
	12001	12000	0	1.414	16	1.7	45.039	351.4734	89.5143	POSTE
	12001	12000	0	1.414	17	1.7	47.798	352.5135	89.5656	SUMIDERO
	12001	12000	0	1.414	18	1.7	48.607	352.1519	89.5938	SUMIDERO
	12001	12000	0	1.414	19	1.7	38.474	0.4038	89.575	SUMIDERO
	12001	12000	0	1.414	20	1.7	37.68	359.55	89.5629	SUMIDERO
	12001	12000	0	1.414	21	1.7	19.07	340.1807	89.2113	POSTE
	12001	12000	0	1.414	22	1.7	28.096	2.0452	89.4502	POSTE
	12001	12000	0	1.414	23	1.7	18.069	7.154	88.3344	PARAMENTO
	12001	12000	0	1.414	24	1.7	19.689	337.0145	89.0403	PARAMENTO
	12001	12000	0	1.414	25	1.7	4.062	163.02	86.4932	POSTE
	12001	12000	0	1.414	26	1.7	9.564	250.0355	88.2143	POSTE
	12001	12000	0	1.414	27	1.7	9.462	178.3919	88.1013	POSTE
	12001	12000	0	1.414	28	2.3	12.182	169.3336	85.3832	PARAMENTO
	12001	12000	0	1.414	29	1.7	7.959	254.5337	87.3647	PARAMENTO
	12001	12000	0	1.414	30	1.7	18.769	231.2848	88.1949	PARAMENTO
	12001	12000	0	1.414	31	1.7	7.892	244.1748	88.3821	SUMIDERO
	12001	12000	0	1.414	32	1.7	8.815	244.1611	88.3448	SUMIDERO
	12001	12000	0	1.414	33	1.7	11.335	203.272	88.2224	MANHOLE
	12001	12000	0	1.414	12002	1.7	14.539	238.1646	88.324	DELTA
	12002	12001	0	1.421	12001	1.7	14.549	0	89.1557	
SD	89.89.1557									
	12002	12001	0	1.421	34	1.7	21.917	203.5932	89.1925	POSTE
	12002	12001	0	1.421	35	1.7	32.095	219.2015	89.1041	POSTE
	12002	12001	0	1.421	36	1.7	21.497	200.2109	89.0542	PARAMENTO
	12002	12001	0	1.421	37	1.7	21.659	226.3417	88.5613	PARAMENTO
	12002	12001	0	1.421	38	1.7	45.497	205.5013	89.1636	PARAMENTO
	12002	12001	0	1.421	39	1.7	43.995	218.5717	89.1823	PARAMENTO
	12002	12001	0	1.421	12003	1.7	48.187	209.3125	89.3055	DELTA
	12002	12001	0	1.421	40	1.7	51.401	212.3048	89.3508	MHVIRTUAL
	12003	12002	0	1.45	12002	1.7	48.198	0	89.5202	
SD	89.89.5202									
	12003	12002	0	1.45	41	1.7	22.553	0	89.2957	LINEAMIENT
	12003	12002	0	1.45	42	1.7	8.459	230.4054	88.3929	POSTE
	12003	12002	0	1.45	43	1.7	20.04	276.5016	89.5332	POSTE
	12003	12002	0	1.45	44	1.7	19.802	280.2715	89.002	PARAMENTO
	12003	12002	0	1.45	45	1.7	9.304	290.1202	87.4401	PARAMENTO
	12003	12002	0	1.45	46	1.7	19.097	250.3531	89.5803	PARAMENTO
	12003	12002	0	1.45	47	1.7	15.613	118.4718	88.4039	PARAMENTO
	12003	12002	0	1.45	48	1.7	16.583	81.5002	89.1148	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



	12003	12002	0	1.45	49	1.7	17.805	98.2813	89.4827	MANHOLE
	12003	12002	0	1.45	50	1.7	25.826	98.4745	90.5006	MANHOLE
	12003	12002	0	1.45	51	1.7	17.21	103.4336	89.4007	MANHOLE
	12003	12002	0	1.45	52	1.7	27.3	118.4418	89.5326	POSTE
	12003	12002	0	1.45	53	1.7	28.299	116.5438	89.2054	PARAMENTO
	12003	12002	0	1.45	54	1.7	26.079	111.0253	89.1529	PARAMENTO
	12003	12002	0	1.45	55	1.7	26.642	107.035	89.3429	PARAMENTO
	12003	12002	0	1.45	56	1.7	30.64	104.5802	89.3913	PARAMENTO
	12003	12002	0	1.45	57	1.7	29.601	103.5306	89.3831	POSTE
	12003	12002	0	1.45	12004	1.7	45.368	95.2655	92.0441	DELTA
	12003	12002	0	1.45	58	1.7	21.558	95.2655	90.2206	LINEAMIENT
	12003	12002	0	1.45	59	1.7	28.183	95.2655	91.1857	LINEAMIENT
	12003	12002	0	1.45	60	1.7	32.115	95.2655	91.3739	LINEAMIENT
	12003	12002	0	1.45	61	1.7	37.942	95.2655	92.0834	LINEAMIENT
	12004	12003	0	1.429	12003	1.7	45.398	0	87.1613	
SD	87.87.1613									
	12004	12003	0	1.429	62	1.7	3.277	176.0604	88.011	MANHOLE
	12004	12003	0	1.429	63	1.7	3.893	45.4117	77.4001	POSTE
	12004	12003	0	1.429	64	1.7	5.237	68.4833	81.5235	PARAMENTO
	12004	12003	0	1.429	65	1.7	4.049	283.421	85.1318	PARAMENTO
	12004	12003	0	1.429	66	1.7	15.372	192.5852	89.4006	POSTE
	12004	12003	0	1.429	67	1.7	16.033	209.042	90.0322	POSTE
	12004	12003	0	1.429	68	1.7	15.887	188.0916	86.5327	PARAMENTO
	12004	12003	0	1.429	69	1.7	28.267	207.5304	90.1312	PARAMENTO
	12004	12003	0	1.429	12005	1.7	36.774	200.1426	90.1621	DELTA
	12004	12003	0	1.429	70	1.7	47.706	202.1615	90.3712	MANHOLE
	12005	12004	0.0001	1.388	12004	1.7	36.783	0.0001	88.5048	
SD	88.88.5048									
	12005	12004	0.0001	1.388	12004	1.7	36.783	0	88.5048	
SD	88.88.5048									
	12005	12004	0.0001	1.388	71	1.7	20.686	353.0944	88.485	POSTE
	12005	12004	0.0001	1.388	72	1.7	9.483	336.5545	87.5032	PARAMENTO
	12005	12004	0.0001	1.388	73	1.7	10.085	329.5513	87.3049	PARAMENTO
	12005	12004	0.0001	1.388	74	1.7	3.023	56.0954	83.4507	PARAMENTO
	12005	12004	0.0001	1.388	75	1.7	7.507	171.0718	88.365	POSTE
	12005	12004	0.0001	1.388	76	1.7	15.839	209.3046	89.2253	PARAMENTO
	12005	12004	0.0001	1.388	77	1.7	17.106	172.0354	89.171	PARAMENTO
	12005	12004	0.0001	1.388	78	1.7	23.242	141.2411	89.1954	PARAMENTO
	12005	12004	0.0001	1.388	79	2.5	22.399	177.3454	87.1	PARAMENTO
	12005	12004	0.0001	1.388	80	1.7	15.998	89.4909	89.5311	LINDERO
	12005	12004	0.0001	1.388	81	1.7	12.547	153.3205	89.293	ARBOL
	12005	12004	0.0001	1.388	82	1.7	25.873	138.1826	89.2826	ARBOL
	12005	12004	0.0001	1.388	12006	1.7	23.759	137.0432	89.1329	DELTA
	12006	12005	0	1.395	12005	1.7	23.763	0	89.1835	
SD	89.89.1835									
	12006	12005	0	1.395	83	1.7	12.094	0	89.2758	LINEAMIENT
	12006	12005	0	1.395	84	1.7	7.145	241.3217	87.5351	PARAMENTO
	12006	12005	0	1.395	85	1.7	7.108	214.5955	87.4924	ARBOL
	12006	12005	0	1.395	86	1.7	1.803	143.0046	83.1103	ARBOL
	12006	12005	0	1.395	87	1.7	3.338	112.172	85.5732	ARBOL
	12006	12005	0	1.395	88	1.7	5.837	153.0641	87.4719	ARBOL
	12006	12005	0	1.395	12007	1.7	27.189	237.2017	89.4017	DELTA
	12006	12005	0	1.395	89	1.7	15.694	237.2017	89.1333	LINEAMIENT
	12007	12006	0	1.423	12006	1.7	27.189	0	89.074	
SD	89.89.0740									
	12007	12006	0	1.423	90	1.7	14.584	230.2345	88.574	EJE_COLEC
	12007	12006	0	1.423	10011	1.7	47.63	249.143	89.2321	DELTA
	12007	12006	0	1.423	91	1.7	9.326	230.2345	89.0514	LINEAMIENT
	10011	12007	344.4047	1.44	12007	1.7	47.614	344.4047	89.5924	



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



SD	89.89.5924								
	10011	12007	344.4047	1.44	92	1.7	34.155	352.3638	89.5958 EJE_COLEC
	10011	12007	344.4047	1.44	93	1.7	15.871	352.3638	89.4714 EJE_COLEC



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



12020	12010	0.0002	1.432	12010	1.7	58.665	0	89.1557	
SD 89.89.1557									
12020	12010	0.0002	1.432	1	1.7	37.861	0.0001	89.315	LINEAMIENT
12020	12010	0.0002	1.432	2	1.7	19.77	0	89.4934	LINEAMIENT
12020	12010	0.0002	1.432	12021	1.7	24.657	167.2052	89.0835	DELTA
12021	12020	0	1.417	12020	1.7	24.644	0	89.3527	
SD 89.89.3527									
12021	12020	0	1.417	3	1.7	12.116	0	88.5948	LINEAMIENT
12021	12020	0	1.417	4	1.7	43.595	4.1421	89.5744	SUMIDERO
12021	12020	0	1.417	5	1.7	44.381	3.3632	89.5942	SUMIDERO
12021	12020	0	1.417	12022	1.7	27.776	168.5721	89.1218	DELTA
12022	12021	0	1.394	12021	1.7	27.747	0	89.3559	
SD 89.89.3559									
12022	12021	0	1.394	6	1.7	13.018	0	88.4412	LINEAMIENT
12022	12021	0	1.394	7	1.7	2.049	295.0822	84.1451	MHVIRTUAL
12022	12021	0	1.394	8	1.7	6.214	139.0547	87.2853	SUMIDERO
12022	12021	0	1.394	9	1.7	6.718	132.1531	87.3623	SUMIDERO
12022	12021	0	1.394	12023	1.7	36.26	161.2046	89.1342	DELTA
12023	12022	0	1.435	12022	1.7	36.239	0	89.5244	
SD 89.89.5244									
12023	12022	0	1.435	10	1.7	15.532	0	89.2935	LINEAMIENT
12023	12022	0	1.435	11	1.7	29.933	153.0213	89.09	MANHOLE
12023	12022	0	1.435	12024	1.7	52.275	155.2421	89.2711	DELTA
12024	12023	0	1.435	12023	1.7	52.252	0	89.5836	
SD 89.89.5836									
12024	12023	0	1.435	12	1.7	19.387	0	89.2931	LINEAMIENT
12024	12023	0	1.435	13	1.7	17.978	20.4643	89.5009	SUMIDERO
12024	12023	0	1.435	14	1.7	18.703	22.382	89.4348	SUMIDERO
12024	12023	0	1.435	15	1.7	25.82	12.3726	89.4854	SUMIDERO
12024	12023	0	1.435	16	1.7	26.554	13.5349	89.4628	SUMIDERO
12024	12023	0	1.435	17	1.7	22.43	18.1305	89.3029	MANHOLE
12024	12023	0	1.435 AUX_8	1.7	3.991	190.5625	82.445	DELTA_AUX	
12024	12023	0	1.435	12025	1.7	27.324	160.47	88.3139	DELTA
12024	12023	0	1.435	18	1.7	26.118	156.095	88.3536	VALVULA
12025	12024	0	1.397	12024	1.7	27.302	0	90.1751	
SD 90.90.1751									
12025	12024	0	1.397	19	1.7	16.503	0.0001	90.1242	LINEAMIENT
12025	12024	0	1.397	20	1.7	8.321	0	89.4849	LINEAMIENT
12025	12024	0	1.397	21	1.7	2.264	0	86.512	LINEAMIENT
12025	12024	0	1.397	12026	1.7	7.699	117.4024	85.165	DELTA
12025	12024	0	1.397 AUX_9	1.7	9.805	142.0414	86.2237	DELTA_AUX	
12026	12025	0	1.451	12025	1.7	7.67	0	90.3922	
SD 90.90.3922									
12026	12025	0	1.451	22	1.7	3.764	0	86.4124	LINEAMIENT
12026	12025	0	1.451 AUX_9	1.7	4.241	252.405	86.5203	DELTA_AUX	
12026	12025	0	1.451	12027	1.7	56.236	163.0923	89.5503	DELTA
12026	12025	0	1.451 AUX_10	1.7	52.26	162.4618	89.5413	DELTA_AUX	
12027	12026	0	1.435	12026	1.7	56.233	0	89.3332	
SD 89.89.3332									
12027	12026	0	1.435	12028	1.7	53.935	180.2241	90.0044	DELTA
12028	12027	0	1.445	12027	1.7	53.971	0	89.2748	
SD 89.89.2748									
12028	12027	0	1.445 AUX_10	1.7	57.935	0.1858	89.2937	DELTA_AUX	
12028	12027	0	1.445	12009	1.7	8.153	100.0407	88.1519	DELTA
12009	12028	0	1.443	12028	1.7	8.17	0	88.1704	
SD 88.88.1704									



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



10017	11032	0	1.381	11032	1.7	54.666	0	91.1824	
SD 91.91.1824									
10017	11032	0	1.381	12000	1.7	8.313	134.1726	85.1103	DELTA
12010	12009	0.0001	1.392	12009	0.085	146.936	0.0001	90.19	
SD 90.90.1900									
12010	12009	0.0001	1.392	12009	0.085	146.936	0	90.19	
SD 90.90.1900									
12010	12009	0.0001	1.392	12020	1.7	58.554	75.344	90.1051	DELTA
12020	12010	0	1.412	12010	1.7	58.572	0	89.1447	
SD 89.89.1447									
12020	12010	0	1.412	12021	1.7	25.216	161.5837	89.0845	DELTA
12021	12020	0	1.403	12020	1.7	25.206	0	89.331	
SD 89.89.3310									
12021	12020	359.5959	1.584	12020	1.7	25.213	359.5959	89.5723	
SD 89.89.5723									
12021	12020	359.5959	1.584	12022	1.7	27.755	172.3903	89.3157	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



12009	12028	0	1.482	12028	1.7	8.156	0	88.3157	
SD 88.88.3157									
12009	12028	0	1.482	12028	1.7	8.157	0	88.3158	
SD 88.88.3158									
12009	12028	0	1.482	12010	1.7	146.925	170.5719	90.0641	DELTA
12010	12009	0	1.461	12009	1.7	146.928	0	89.4303	
SD 89.89.4303									
12010	12009	0	1.461	12020	1.7	58.553	75.3431	90.1507	DELTA
12020	12010	0	1.396	12010	1.7	58.556	0	89.132	
SD 89.89.1320									
12020	12010	0	1.396	12021	1.7	25.209	161.5801	89.053	DELTA
12021	12020	0	1.388	12020	1.7	25.206	0	89.3117	
SD 89.89.3117									
12021	12020	0	1.388	12022	1.7	27.745	172.3913	89.0735	DELTA
12022	12021	0	1.436	12021	1.7	27.743	0	89.4145	
SD 89.89.4145									
12022	12021	0	1.436	12023	1.7	36.247	161.2119	89.1704	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



12023	12022	0	1.448	12022	1.7	36.248	0	89.5456	
SD 89.89.5456									
12023	12022	0	1.448	12024	1.7	52.272	155.2416	89.282	DELTA
12024	12023	0	1.423	12023	1.7	52.262	0	89.4726	
SD 89.89.4726									
12024	12023	0	1.423	AUX_8	1.7	4	190.55	82.4426	DELTA_AUX
12024	12023	0	1.423	12025	1.7	27.354	160.3707	88.2225	DELTA
12025	12024	0	1.437	12024	1.7	27.357	0	90.1347	
SD 90.90.1347									
12025	12024	0	1.437	12026	1.7	7.593	117.501	85.2355	DELTA
12025	12024	0	1.437	AUX_9	1.7	9.726	142.2745	86.2642	DELTA_AUX
12026	12025	0	1.427	12025	1.7	7.566	0	90.1343	
SD 90.90.1343									
12026	12025	0	1.427	AUX_10	1.7	52.263	162.4707	89.4149	DELTA_AUX
12026	12025	0	1.427	12027	1.7	56.23	163.0942	89.4304	DELTA
12027	12026	0	1.428	12026	1.7	56.231	0	89.2246	
SD 89.89.2246									
12027	12026	0	1.428	12028	1.7	53.952	180.2247	89.4842	DELTA
12028	12027	0	1.43	12027	1.7	53.952	0	89.151	
SD 89.89.1510									
12028	12027	0	1.43	12009	1.7	8.173	100.042	87.5806	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION D
INGENIERA YINNA XIMENA PERAFAN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13001	13000	0	1.466	13000	1.7	73.595	0	89.383	
SD	89.89.3830								
13001	13000	0	1.466	13002	1.7	46.717	180.2645	90.0508	DELTA
13001	13000	0	1.466	1	1.7	66.355	1.1133	89.36	CERRAMIENT
13001	13000	0	1.466	2	1.7	29.794	2.511	89.1939	CERRAMIENT
13001	13000	0	1.466	3	1.7	3.327	148.5748	85.5333	CERRAMIENT
13001	13000	0	1.466	4	1.7	10.064	169.484	88.4807	CERRAMIENT
13001	13000	0	1.466	5	1.7	17.407	173.4435	89.2324	CERRAMIENT
13001	13000	0	1.466	6	1.7	49.855	358.1353	89.34	POSTE
13001	13000	0	1.466	7	1.7	7.652	350.4751	88.0701	POSTE
13001	13000	0	1.466	8	1.7	31.638	182.0653	89.463	POSTE
13001	13000	0	1.466	9	1.7	44.124	357.0822	89.3541	ANDEN
13001	13000	0	1.466	10	1.7	6.836	344.2313	87.5847	ANDEN
13001	13000	0	1.466	11	1.7	11.866	188.1835	89.5946	ANDEN
13002	13001	0.0001	1.434	13001	1.7	46.717	0.0001	89.1843	
SD	89.89.1843								
13002	13001	0.0001	1.434	13003	1.7	41.53	181.094	89.42	DELTA
13002	13001	0.0001	1.434	12	1.7	29.412	5.5613	88.5612	CERRAMIENT
13002	13001	0.0001	1.434	13	1.7	16.011	18.342	88.3052	CERRAMIENT
13002	13001	0.0001	1.434	14	1.7	15.284	8.27	88.15	CERRAMIENT
13002	13001	0.0001	1.434	15	1.7	14.558	8.445	88.0525	CERRAMIENT
13002	13001	0.0001	1.434	16	1.7	10.679	12.3021	87.362	CERRAMIENT
13002	13001	0.0001	1.434	17	1.7	3.314	44.0912	84.4954	CERRAMIENT
13002	13001	0.0001	1.434	18	2.35	11.791	166.2633	85.2931	CERRAMIENT
13002	13001	0.0001	1.434	19	2.35	15.634	170.0308	86.3252	CERRAMIENT
13002	13001	0.0001	1.434	20	1.7	11.353	55.3815	89.2642	CERRAMIENT
13002	13001	0.0001	1.434	21	1.7	29.617	174.2146	89.3326	CERRAMIENT
13002	13001	0.0001	1.434	22	1.7	9.819	164.3958	88.2013	CERRAMIENT
13002	13001	0.0001	1.434	23	1.7	10.784	153.1706	89.0702	CERRAMIENT
13002	13001	0.0001	1.434	24	1.7	21.522	179.081	89.1959	POSTE
13002	13001	0.0001	1.434	25	1.7	11.384	189.085	89.0022	BORDE_VIA
13002	13001	0.0001	1.434	26	1.7	24.762	183.5847	89.3522	BORDE_VIA
13002	13001	0.0001	1.434	27	1.7	8.649	345.2827	88.1335	BORDE_VIA
13002	13001	0.0001	1.434	28	1.7	25.024	11.3418	88.5109	PARAMENTO
13002	13001	0.0001	1.434	29	1.7	20.609	42.1156	89.4311	PARAMENTO
13002	13001	0.0001	1.434	30	1.7	16.073	18.4507	88.2127	PARAMENTO
13002	13001	0.0001	1.434	31	1.7	20.729	42.2245	89.3856	CERRAMIENT
13002	13001	0.0001	1.434	32	1.7	29.359	58.1828	90.0249	CERRAMIENT
13002	13001	0.0001	1.434	33	1.7	29.075	59.2759	89.5946	CERRAMIENT
13002	13001	0.0001	1.434	34	1.7	26.481	70.272	89.5904	CERRAMIENT
13002	13001	0.0001	1.434	35	1.7	32.187	73.5745	90.0213	CERRAMIENT
13002	13001	0.0001	1.434	36	1.7	23.174	93.0249	89.4756	CERRAMIENT
13002	13001	0.0001	1.434	37	1.7	26.775	92.2647	89.5932	CERRAMIENT
13002	13001	0.0001	1.434	38	1.7	26.701	114.4345	89.5212	PARAMENTO
13002	13001	0.0001	1.434	39	1.7	30.312	117.1442	89.4415	PARAMENTO
13002	13001	0.0001	1.434	40	1.7	31.651	121.4024	89.4541	PARAMENTO
13002	13001	0.0001	1.434	41	1.7	29.661	124.2029	89.5703	PARAMENTO
13002	13001	0.0001	1.434	42	1.7	32.24	129.4012	89.3046	PARAMENTO
13002	13001	0.0001	1.434	43	1.7	32.443	155.5636	89.4815	CERRAMIENT
13002	13001	0.0001	1.434	44	1.7	38.265	141.2341	90.0119	CERRAMIENT
13002	13001	0.0001	1.434	45	1.7	25.891	123.4136	89.5939	POSTE
13002	13001	0.0001	1.434	46	1.7	29.661	174.2323	89.3359	PARAMENTO
13002	13001	0.0001	1.434	47	1.7	29.825	171.5307	89.1018	PARAMENTO
13002	13001	0.0001	1.434	48	1.7	23.588	145.0822	89.0705	ARBOL
13002	13001	0.0001	1.434	49	1.7	14.586	110.1443	89.174	ARBOL
13002	13001	0.0001	1.434	50	1.7	15.118	55.221	89.3804	ARBOL
13002	13001	0.0001	1.434	51	1.7	12.263	155.0259	89.2621	CAMINO
13002	13001	0.0001	1.434	52	1.7	15.469	161.3751	89.2621	CAMINO
13002	13001	0.0001	1.434	53	1.7	14.739	154.3243	89.2621	CAMINO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13002	13001	0.0001	1.434	54	1.7	24.438	152.3109	89.4836	CAMINO
13002	13001	0.0001	1.434	55	1.7	13.805	143.242	89.3205	CAMINO
13002	13001	0.0001	1.434	56	1.7	24.758	157.3322	89.435	CAMINO
13002	13001	0.0001	1.434	57	1.7	11.118	142.1217	89.3019	CAMINO
13002	13001	0.0001	1.434	58	1.7	28.042	156.2406	89.4425	CAMINO
13002	13001	0.0001	1.434	59	1.7	10.179	96.3833	89.3734	CAMINO
13002	13001	0.0001	1.434	60	1.7	27.124	151.3134	89.4819	CAMINO
13002	13001	0.0001	1.434	61	1.7	12.731	97.1751	89.4613	CAMINO
13002	13001	0.0001	1.434	62	1.7	14.009	80.4734	89.3849	CAMINO
13002	13001	0.0001	1.434	63	1.7	15.085	91.0916	89.5145	CAMINO
13003	13002	0	1.379	13002	1.7	41.531	0	89.2917	
SD	89.89.2917								
13003	13002	0	1.379	13004	1.7	43.98	91.5512	89.413	DELTA
13003	13002	0	1.38	13002	1.7	41.529	0	89.2932	
SD	89.89.2932								
13003	13002	0	1.38	13004	1.7	43.979	91.5524	89.4115	DELTA
13003	13002	0	1.38	AUXJ	1.7	101.818	182.1219	89.5623	DELTA
13003	13002	0	1.38	64	1.7	12.444	16.1954	88.2959	PARAMENTO
13003	13002	0	1.38	65	1.7	7.225	31.3221	87.214	PARAMENTO
13003	13002	0	1.38	66	1.7	6.639	23.4944	87.3152	PARAMENTO
13003	13002	0	1.38	67	1.7	3.064	73.5435	84.4046	PARAMENTO
13003	13002	0	1.38	68	1.7	9.761	83.0852	88.1515	PARAMENTO
13003	13002	0	1.38	69	1.7	10.578	114.535	88.0738	PARAMENTO
13003	13002	0	1.38	70	1.7	15.537	140.4442	88.3948	PARAMENTO
13003	13002	0	1.38	71	1.7	12.903	165.0022	88.4946	CERRAMIENT
13003	13002	0	1.38	72	1.7	15.763	142.181	87.0604	CERRAMIENT
13003	13002	0	1.38	73	1.7	23.754	170.0527	89.254	CERRAMIENT
13003	13002	0	1.38	74	1.7	26.497	117.3737	88.3505	CERRAMIENT
13003	13002	0	1.38	75	1.7	34.798	110.1531	89.1035	CERRAMIENT
13003	13002	0	1.38	76	1.7	45.421	104.4614	89.4825	CERRAMIENT
13003	13002	0	1.38	77	1.8	45.252	103.4652	89.4744	PARAMENTO
13003	13002	0	1.38	78	1.7	12.926	180.2759	89.0717	BORDE_VIA
13003	13002	0	1.38	79	1.7	2.241	192.1238	84.2951	BORDE_VIA
13003	13002	0	1.38	80	1.7	2.786	345.3121	84.5346	BORDE_VIA
13003	13002	0	1.38	81	1.7	1.656	68.1558	77.5941	ARBOL
13003	13002	0	1.38	82	1.7	12.194	11.3102	88.4429	ANDEN
13003	13002	0	1.38	83	1.7	11.83	358.4059	88.3714	ANDEN
13003	13002	0	1.38	84	1.7	12.922	165.433	88.4402	ANDEN
13003	13002	0	1.38	85	1.7	12.69	177.5908	89.0004	ANDEN
13004	13003	0.0001	1.432	13003	1.7	43.98	0.0001	89.3337	
SD	89.89.3337								
13004	13003	0.0001	1.432	13005	1.7	47.157	185.2011	89.493	DELTA
13004	13003	0.0001	1.432	86	1.7	7.855	188.3154	87.482	PARAMENTO
13004	13003	0.0001	1.432	87	1.7	1.632	272.3541	86.2132	PARAMENTO
13004	13003	0.0001	1.432	88	1.7	15.096	85.1204	88.4052	CERRAMIENT
13004	13003	0.0001	1.432	89	1.7	30.336	145.2455	89.2411	CERRAMIENT
13004	13003	0.0001	1.432	90	1.7	12.768	96.435	87.4415	PISINA
13004	13003	0.0001	1.432	91	1.7	22.716	142.1816	88.4243	PISINA
13004	13003	0.0001	1.432	92	1.7	23.063	143.5436	88.4243	PISINA
13004	13003	0.0001	1.432	93	1.7	5.107	107.1904	84.2032	PISINA
13004	13003	0.0001	1.432	94	1.7	20.162	162.0008	88.3359	PISINA
13004	13003	0.0001	1.432	95	1.7	2.98	99.4554	82.3118	CAMINO
13004	13003	0.0001	1.432	96	1.7	22.848	180.4124	89.1934	CAMINO
13004	13003	0.0001	1.432	97	1.7	1.279	220.3143	74.1101	CAMINO
13004	13003	0.0001	1.432	98	1.7	24.389	188.1113	89.1422	CAMINO
13005	13004	0.0001	1.402	13004	1.7	47.157	0.0001	89.2953	
SD	89.89.2953								
13005	13004	0.0001	1.402	13006	1.7	30.071	148.2526	93.0118	DELTA
13005	13004	0.0001	1.402	99	1.7	38.776	355.1814	89.2814	PARAMENTO



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13005	13004	0.0001	1.402	100	1.7	39.012	358.0522	89.2326	PARAMENTO
13005	13004	0.0001	1.402	101	1.7	30.244	353.3621	89.2009	PARAMENTO
13005	13004	0.0001	1.402	102	1.7	28.53	346.1138	89.005	CERRAMIENT
13005	13004	0.0001	1.402	103	1.7	2.508	232.2937	90.5648	CERRAMIENT
13005	13004	0.0001	1.402	104	1.7	15.193	178.2801	95.5101	CERRAMIENT
13005	13004	0.0001	1.402	105	1.7	21.863	20.4935	88.2011	PISINA
13005	13004	0.0001	1.402	106	1.7	23.926	8.4312	88.2827	PISINA
13005	13004	0.0001	1.402	107	1.7	25.44	12.3931	88.3311	PISINA
13005	13004	0.0001	1.402	108	1.7	20.376	16.1702	88.1216	PISINA
13005	13004	0.0001	1.402	109	1.7	25.36	17.0902	88.3253	PISINA
13005	13004	0.0001	1.402	110	1.7	21.536	9.0804	88.1805	PISINA
13005	13004	0.0001	1.402	111	1.7	23.414	80.134	90.1843	CERRAMIENT
13005	13004	0.0001	1.402	112	1.7	25.151	55.0415	89.1543	CERRAMIENT
13005	13004	0.0003	1.405	13004	1.7	47.157	0.0003	89.301	
SD 89.89.3010									
13005	13004	0.0003	1.405	13004	1.7	47.157	0	89.301	
SD 89.89.3010									
13005	13004	0.0003	1.405	99	1.7	38.783	355.1628	89.2913	PARAMENTO
13005	13004	0.0003	1.405	100	1.7	39.023	358.055	89.2415	PARAMENTO
13005	13004	0.0003	1.405	101	1.7	30.253	353.3527	89.204	PARAMENTO
13005	13004	0.0003	1.405	102	1.7	28.256	346.1142	89.1035	CERRAMIENT
13005	13004	0.0003	1.405	103	1.7	2.516	232.1147	90.3303	CERRAMIENT
13005	13004	0.0003	1.405	104	1.7	15.026	178.2942	95.532	CERRAMIENT
13005	13004	0.0003	1.405	13006	1.7	30.072	148.2451	93.0122	DELTA
13005	13004	0.0003	1.405	105	1.7	23.472	80.1343	90.1621	CERRAMIENT
13005	13004	0.0003	1.405	106	1.7	25.092	55.3221	89.0418	CERRAMIENT
13006	13005	359.5959	1.476	13005	1.7	30.108	359.5959	86.0004	
SD 86.86.0004									
13006	13005	359.5959	1.476	13005	1.7	30.109	0	86.0004	
SD 86.86.0004									
13006	13005	359.5959	1.476	13007	1.7	53.416	120.2647	89.2642	DELTA
13006	13005	359.5959	1.476	107	1.7	16.863	251.5808	89.5811	CERRAMIENT
13006	13005	359.5959	1.476	108	1.7	13.169	299.1356	88.5851	CERRAMIENT
13006	13005	359.5959	1.476	109	1.7	19.667	242.383	89.4353	CERRAMIENT
13006	13005	359.5959	1.476	110	1.7	21.518	240.3031	89.551	CERRAMIENT
13006	13005	359.5959	1.476	111	1.7	23.43	239.4555	89.5856	CERRAMIENT
13006	13005	359.5959	1.476	112	1.7	9.458	288.2442	87.1852	ARBOL
13006	13005	359.5959	1.476	113	1.7	22.797	234.4551	88.4858	ARBOL
13006	13005	359.5959	1.476	114	1.7	25.694	212.5055	90.1232	ARBOL
13006	13005	359.5959	1.476	115	1.7	22.753	198.1407	89.4218	ARBOL
13006	13005	359.5959	1.476	116	1.7	29.988	209.4603	89.4527	RIO
13006	13005	359.5959	1.476	117	1.7	31.415	218.4223	90.0434	RIO
13006	13005	359.5959	1.476	118	1.7	29.616	194.5755	90.1954	RIO
13006	13005	0	1.476	13005	1.7	30.109	0	86.0013	
SD 86.86.0013									
13006	13005	0	1.476	119	1.7	15.899	94.073	88.2428	ARBOL
13006	13005	0	1.476	120	1.7	39.328	62.19	87.1725	LINDERO
13006	13005	0	1.476	121	1.7	36.772	56.16	87.1831	LINDERO
13006	13005	0	1.476	122	1.7	34.477	48.2037	86.5609	LINDERO
13006	13005	0	1.476	123	1.7	50.351	77.1447	87.3035	LINDERO
13006	13005	0	1.476	124	1.7	9.197	273.1158	88.3726	PARAMENTO
13006	13005	0	1.476	125	1.7	11.35	252.5009	88.3813	PARAMENTO
13006	13005	0	1.476	126	1.7	12.346	278.4903	89.0802	PARAMENTO
13006	13005	0	1.476	127	1.7	47.293	284.4935	84.3033	ESTRUCTURA
13006	13005	0	1.476	128	1.7	47.144	284.5952	84.2905	ESTRUCTURA
13006	13005	0	1.476	129	1.7	47.708	284.4457	84.3407	ESTRUCTURA
13006	13005	0	1.476	130	1.7	47.536	284.3945	84.4051	ESTRUCTURA
13006	13005	0	1.476	131	1.7	49.028	281.484	84.4339	ESTRUCTURA
13006	13005	0	1.476	132	1.7	48.74	281.4551	84.4654	ESTRUCTURA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13006	13005	0	1.476	133	1.7	48.896	281.0655	84.404	ESTRUCTURA
13006	13005	0	1.476	134	1.7	49.158	281.3637	84.4256	ESTRUCTURA
13006	13005	0	1.476	135	2.6	55.671	282.5441	85.1956	ESTRUCTURA
13006	13005	0	1.476	136	2.6	55.596	283.1218	85.1918	ESTRUCTURA
13007	13006	0	1.404	13006	1.7	53.417	0	89.5946	
SD 89.89.5946									
13007	13006	0	1.404	13008	1.7	27.901	143.565	85.5505	DELTA
13007	13006	0	1.404	137	1.7	41.704	333.3928	89.1438	LINDERO
13007	13006	0	1.404	138	1.7	40.384	349.0618	90.0026	LINDERO
13007	13006	0	1.404	139	1.7	41.254	331.4932	89.1906	ARBOL
13007	13006	0	1.404	140	1.7	14.565	321.3828	88.4159	ARBOL
13007	13006	0	1.404	141	1.7	25.129	353.3231	89.2119	ARBOL
13007	13006	0	1.404	142	1.7	2.839	184.045	82.3933	ARBOL
13007	13006	0	1.404	143	1.7	24.567	297.3604	89.2425	ARBOL
13007	13006	0	1.404	144	1.7	36.975	318.5304	89.4107	RIO
13007	13006	0	1.404	145	1.7	26.087	295.1056	90.382	RIO
13007	13006	0	1.404	146	1.7	18.819	256.5921	90.382	RIO
13007	13006	0	1.404	147	2.2	21.483	239.4713	92.4228	RIO
13007	13006	0	1.404	148	2.5	19.976	245.2035	91.5918	DESCARGA
13007	13006	0	1.404	149	1.7	21.603	211.5105	89.2748	RIO
13007	13006	0	1.404	150	1.7	17.188	201.3621	88.3239	CERRAMIENT
13007	13006	0	1.404	151	1.7	15.88	154.3524	88.2812	CERRAMIENT
13007	13006	0	1.404	152	1.7	35.847	86.0121	87.1316	CERRAMIENT
13007	13006	0	1.404	153	1.7	37.794	105.0718	87.2745	CERRAMIENT
13007	13006	0	1.404	154	1.7	26.819	122.113	85.5638	CERRAMIENT
13007	13006	0	1.404	155	1.7	44.524	144.1034	87.4239	CERRAMIENT
13007	13006	0	1.404	156	1.7	10.552	9.3641	89.2531	PISINA
13007	13006	0	1.404	157	1.7	16.862	6.2527	89.3828	PISINA
13007	13006	0	1.404	158	1.7	12.52	19.0255	89.2822	PISINA
13007	13006	0	1.404	159	1.7	15.545	356.2127	89.3117	PISINA
13007	13006	0	1.404	160	1.7	14.815	18.0925	89.3415	PISINA
13007	13006	0	1.404	161	1.7	13.155	353.0835	89.245	PISINA
13007	13006	0	1.404	162	1.7	16.35	12.5345	89.373	PISINA
13007	13006	0	1.404	163	1.7	10.787	0.1805	89.2118	PISINA
13007	13006	0	1.404	164	1.7	7.435	55.5343	89.3621	ESTRUCTURA
13007	13006	0	1.404	165	1.7	9.907	35.2629	89.1249	ESTRUCTURA
13007	13006	0	1.404	166	1.7	3.367	347.3557	89.174	ESTRUCTURA
13007	13006	0	1.404	167	1.7	7.013	350.3051	88.2255	ESTRUCTURA
13008	13007	359.5959	1.397	13007	1.7	27.872	359.5959	92.5157	
SD 92.92.5157									
13008	13007	359.5959	1.397	13009	1.7	50.885	57.3722	89.5107	DELTA
13008	13007	359.5959	1.397	168	1.7	42.016	197.0025	90.4205	CERRAMIENT
13008	13007	359.5959	1.397	169	1.7	76.57	201.371	89.4358	CERRAMIENT
13008	13007	359.5959	1.397	170	1.7	50.626	213.2027	89.1334	PUENTE
13008	13007	359.5959	1.397	171	1.7	51.901	212.5443	89.4506	PUENTE
13008	13007	359.5959	1.397	172	1.7	50.641	213.2018	88.5618	PUENTE
13008	13007	359.5959	1.397	173	1.7	51.877	212.5519	88.59	PUENTE
13008	13007	359.5959	1.397	174	1.7	51.503	216.2018	90.0957	PUENTE
13008	13007	359.5959	1.397	175	1.7	52.809	216.0223	90.0821	PUENTE
13008	13007	359.5959	1.397	176	1.7	51.548	216.1851	88.2701	PUENTE
13008	13007	359.5959	1.397	177	1.7	52.932	216.202	88.2504	PUENTE
13008	13007	359.5959	1.397	178	1.7	50.41	213.0218	89.1126	TUBO
13008	13007	359.5959	1.397	179	1.7	50.85	212.574	89.2451	TUBO
13008	13007	359.5959	1.397	180	1.7	50.941	213.1058	89.2259	TUBO
13008	13007	359.5959	1.397	181	1.7	51.29	214.2938	89.2259	TUBO
13008	13007	359.5959	1.397	182	1.7	51.034	212.0837	90.001	TUBO
13008	13007	359.5959	1.397	183	1.7	50.774	211.5202	89.3256	TUBO
13008	13007	359.5959	1.397	184	1.7	58.476	203.032	89.462	MANHOLE
13008	13007	359.5959	1.397	185	1.7	13.203	327.2404	93.0549	MANHOLE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



13008	13007	359.5959	1.397	186	1.7	27.385	212.3326	92.0531	ESTRUCTURA
13008	13007	359.5959	1.397	187	1.7	27.428	210.3103	92.0531	ESTRUCTURA
13008	13007	359.5959	1.397	188	1.7	28.158	210.2939	92.0908	ESTRUCTURA
13008	13007	359.5959	1.397	189	1.7	39.146	209.5218	91.2718	ESTRUCTURA
13008	13007	359.5959	1.397	190	1.7	39.15	210.5154	91.2841	ESTRUCTURA
13008	13007	359.5959	1.397	191	1.7	40.134	210.4619	91.2356	ESTRUCTURA
13008	13007	359.5959	1.397	192	1.7	31.738	211.4715	92.0537	ESTRUCTURA
13008	13007	359.5959	1.397	193	1.7	32.564	210.3052	92.0239	ESTRUCTURA
13008	13007	359.5959	1.397	194	1.7	31.686	210.3501	92.0635	ESTRUCTURA
13008	13007	359.5959	1.397	195	1.7	28.245	211.3033	92.1228	TUBO
13008	13007	359.5959	1.397	196	1.7	31.681	211.1018	92.1229	TUBO
13008	13007	359.5959	1.397	197	1.7	32.612	211.0619	92.1056	TUBO
13008	13007	359.5959	1.397	198	1.7	39.074	210.223	91.3656	TUBO
13008	13007	359.5959	1.397	199	1.7	36.115	223.2027	89.0228	POSTE
13008	13007	359.5959	1.397	200	1.7	29.026	241.1912	91.1111	RIO
13008	13007	359.5959	1.397	201	1.7	23.279	285.4024	92.2628	RIO
13008	13007	359.5959	1.397	202	2.2	25.047	266.5217	90.261	RIO
13008	13007	359.5959	1.397	203	1.7	40.874	237.3901	92.1302	RIO
13008	13007	359.5959	1.397	204	2.6	43.439	226.2837	91.091	RIO
13008	13007	359.5959	1.397	205	1.7	60.886	220.0933	90.4829	RIO
13008	13007	359.5959	1.397	206	1.7	4.355	278.5821	90.5312	ARBOL
13008	13007	359.5959	1.397	207	1.7	13.301	74.5144	90.2132	ARBOL
13009	13008	0	1.357	13008	1.7	50.885	0	89.2507	
SD 89.89.2507									
13009	13008	0	1.357	13010	1.7	21.602	282.2531	88.1243	DELTA
13009	13008	0	1.357	208	1.7	12.812	274.254	86.4454	PARAMENTO
13009	13008	0	1.357	209	1.7	17.434	186.4612	88.3649	PARAMENTO
13009	13008	0	1.357	210	1.7	24.035	178.5702	89.0727	CERRAMIENT
13009	13008	0	1.357	211	1.7	26.166	186.1617	89.0019	CERRAMIENT
13009	13008	0	1.357	212	1.7	8.92	304.1049	86.1716	ARBOL
13009	13008	0	1.357	213	1.7	15.945	302.1417	86.5246	ARBOL
13009	13008	0	1.357	214	1.7	14.564	317.4042	86.4404	ARBOL
13010	13009	0.0001	1.393	13009	1.7	21.588	0.0001	90.0452	
SD 90.90.0452									
13010	13009	0.0001	1.393	13011	1.7	67.049	144.0105	89.332	DELTA
13010	13009	0.0001	1.393	215	1.7	9.007	11.1951	87.4243	PARAMENTO
13010	13009	0.0001	1.393	216	1.7	7.939	70.2934	87.1644	PARAMENTO
13010	13009	0.0001	1.393	217	1.7	9.163	70.2932	87.3416	PARAMENTO
13010	13009	0.0001	1.393	218	1.7	27.097	119.135	89.4542	PARAMENTO
13010	13009	0.0001	1.393	219	1.7	15.891	306.4202	91.3212	CERRAMIENT
13010	13009	0.0001	1.393	220	1.7	10.321	150.3454	89.1831	CERRAMIENT
13010	13009	0.0001	1.393	221	1.7	30.413	141.291	89.4934	CERRAMIENT
13010	13009	0.0001	1.393	222	1.7	41.103	167.3225	89.4446	CERRAMIENT
13010	13009	0.0001	1.393	223	1.7	36.699	150.3834	89.5355	CERRAMIENT
13010	13009	0.0001	1.393	224	1.7	35.146	175.5731	89.2406	LINDERO
13010	13009	0.0001	1.393	225	1.7	22.514	180.2015	89.1007	ARBOL
13010	13009	0.0001	1.393	226	1.7	31.263	177.1942	88.2901	ARBOL
13010	13009	0.0001	1.393	227	1.7	28.101	270.0915	90.293	LINDERO
13011	13010	0.0001	1.445	13010	1.7	67.049	0.0001	89.5738	
SD 89.89.5738									
13011	13010	0.0001	1.445	13001	1.7	32.774	259.0301	89.2811	DELTA
13001	13011	0	1.477	13011	1.7	32.774	0	89.4239	
SD 89.89.4239									
13001	13011	0	1.477	13002	1.7	46.717	5.444	90.0631	DELTA
13001	13011	0	1.477	13000	1.7	73.596	185.1749	89.392	DELTA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



11010	11009	0.0002	1.532	11009	1.7	41.167	0.0002	89.4602	DELTA
11010	11009	0.0002	1.532	11009	1.7	41.167	0.0001	89.4603	DELTA
11010	11009	0.0002	1.532	11009	1.7	41.163	0.0001	89.4603	DELTA
11010	11009	0.0002	1.532	11009	1.7	41.162	0.0000	89.4603	DELTA
11010	11009	0.0002	1.532	11009	1.7	41.165	0.0000	89.4603	DELTA
11010	11009	0.0002	1.532	13012	1.7	108.985	133.0243	90.0530	DELTA
13012	11010	0.0000	1.45	11010	1.7	108.978	0.0000	89.4314	DELTA
13012	11010	0.0000	1.45	13013	1.7	92.329	180.5250	89.5020	DELTA
13013	13012	0.0002	1.486	13012	1.7	92.309	0.0002	89.5155	DELTA
13013	13012	0.0002	1.486	13012	1.7	92.31	0.0002	89.5156	DELTA
13013	13012	0.0002	1.486	13012	1.7	92.309	0.0002	89.5155	DELTA
13013	13012	0.0002	1.486	13012	1.7	92.309	0.0000	89.5155	DELTA
13013	13012	0.0002	1.486	13014	1.7	35.967	84.4401	89.2414	DELTA
13013	13012	0.0002	1.486	1	1.7	6.828	15.5356	88.5536	BORDE_VIA
13013	13012	0.0002	1.486	2	1.7	6.921	334.0746	89.1746	BORDE_VIA
13013	13012	0.0002	1.486	3	1.7	26.581	95.5010	89.1952	BORDE_VIA
13013	13012	0.0002	1.486	4	1.7	26.627	86.2103	89.4456	BORDE_VIA
13013	13012	0.0002	1.486	5	1.7	6.624	204.1319	89.3511	BORDE_VIA
13013	13012	0.0002	1.486	6	1.7	6.242	167.5349	88.5528	BORDE_VIA
13013	13012	0.0002	1.486	7	1.7	9.652	81.4116	89.1840	BORDE_VIA
13013	13012	0.0002	1.486	8	1.7	9.318	104.0549	89.5758	BORDE_VIA
13013	13012	0.0002	1.486	9	1.7	25.142	101.2740	89.3056	PARAMENTO
13013	13012	0.0002	1.486	10	1.7	22.736	102.4018	89.2738	PARAMENTO
13013	13012	0.0002	1.486	11	1.7	17.207	110.2703	89.2642	PARAMENTO
13013	13012	0.0002	1.486	12	1.7	22.921	105.1223	89.3733	PARAMENTO
13013	13012	0.0002	1.486	13	1.7	14.903	122.0323	89.0343	PARAMENTO
13013	13012	0.0002	1.486	14	2	17.911	116.3303	88.0540	PARAMENTO
13013	13012	0.0002	1.486	15	1.7	17.361	133.3637	89.2003	PARAMENTO
13013	13012	0.0002	1.486	16	1.7	18.68	137.4952	88.4237	PARAMENTO
13013	13012	0.0002	1.486	17	1.7	21.777	145.0507	89.1918	PARAMENTO
13013	13012	0.0002	1.486	18	1.7	14.989	73.4324	88.2825	PARAMENTO
13013	13012	0.0002	1.486	19	1.7	16.799	59.2124	87.3615	PARAMENTO
13013	13012	0.0002	1.486	20	1.7	15.478	57.0912	87.2309	PARAMENTO
13013	13012	0.0002	1.486	21	2	26.213	81.0622	88.2839	PARAMENTO
13013	13012	0.0002	1.486	22	2	15.455	56.0902	88.0530	PARAMENTO
13013	13012	0.0002	1.486	23	1.7	17.558	47.3411	88.3955	PARAMENTO
13013	13012	0.0002	1.486	24	1.7	23.503	33.4037	89.0140	PARAMENTO
13013	13012	0.0002	1.486	25	1.7	9.714	74.2732	87.1958	ANDEN
13013	13012	0.0002	1.486	26	1.7	11.486	72.1312	87.4342	ANDEN
13013	13012	0.0002	1.486	27	1.7	15.185	38.3534	88.3226	ANDEN
13013	13012	0.0002	1.486	28	1.7	28.305	85.0712	88.5506	ANDEN
13013	13012	0.0002	1.486	29	1.7	15.919	43.5846	88.3536	ANDEN
13013	13012	0.0002	1.486	30	1.7	27.297	82.5309	88.4843	ANDEN
13013	13012	0.0002	1.486	31	1.7	24.884	98.1432	89.3206	ANDEN
13013	13012	0.0002	1.486	32	1.7	12.254	113.5957	89.0021	ANDEN
13013	13012	0.0002	1.486	33	1.7	25.111	101.0328	89.3001	ANDEN
13013	13012	0.0002	1.486	34	1.7	9.457	111.5416	88.4352	ANDEN
13013	13012	0.0002	1.486	35	1.7	10.558	124.4458	89.1602	ANDEN
13013	13012	0.0002	1.486	36	1.7	10.966	123.1010	88.4904	ANDEN
13013	13012	0.0002	1.486	37	1.7	12.683	117.5844	89.0425	ANDEN
13013	13012	0.0002	1.486	38	1.7	31.027	84.1151	89.0033	MANHOLE
13013	13012	0.0002	1.486	39	1.7	13.336	306.4828	89.1107	PARAMENTO
13013	13012	0.0002	1.486	40	1.7	27.822	338.1542	89.5525	PARAMENTO
13013	13012	0.0002	1.486	41	1.7	16.313	45.1102	88.3453	POSTE
13013	13012	0.0002	1.486	42	1.7	9.909	119.0714	88.5728	POSTE



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



PLANTILLAS DE CÁLCULOS



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION A
INGENIERO LUIS JORGE MONCADA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1000		0.0000				ESTACION		0.0000		1362448.614	1051059.213	30.673
E1001	E1000	0.0000	100.948	89.1337	1.50	ESTACION	1.57	213.4127		1362364.350	1051003.624	29.234
	E1002	271.5913	38.463	89.4044	1.50	DELTA	1.57	305.3996	38.462	1362386.631	1050972.272	29.517
	EAPA_13	304.3706	2.424	87.1009	1.50	DELTA	1.57	338.0310	2.421	1362366.596	1051002.718	29.421
	E1003	130.3330	37.374	92.3647	1.50	DELTA	1.57	163.9710	37.335	1362328.467	1051013.933	27.597
	1	350.0835	12.012	86.5550	1.50	PARAMENTO	1.57	23.5558	11.995	1362375.346	1051008.418	29.944
	2	336.0658	12.754	87.1515	1.50	PARAMENTO	1.57	9.5288	12.739	1362376.914	1051005.733	29.912
	3	319.0531	7.799	86.0054	1.50	PARAMENTO	1.57	352.5046	7.780	1362372.064	1051002.609	29.843
	4	11.2543	22.061	88.1803	1.50	PARAMENTO	1.57	44.8413	22.051	1362379.986	1051019.174	29.955
	5	16.2840	13.469	88.2613	1.50	BORDE_VIA	1.57	49.8905	13.464	1362373.024	1051013.922	29.668
	6	353.5348	12.739	88.3957	1.50	BORDE_VIA	1.57	27.3094	12.736	1362375.666	1051009.467	29.598
	7	355.3904	33.327	88.5319	1.50	PARAMENTO	1.57	29.0638	33.321	1362393.475	1051019.811	29.947
	8	5.5210	46.769	89.1123	1.50	PARAMENTO	1.57	39.2821	46.764	1362400.548	1051033.233	29.962
	9	3.4405	42.413	89.0109	1.50	BORDE_VIA	1.57	37.1474	42.407	1362398.152	1051029.232	30.027
	10	358.0203	34.184	88.5119	1.50	BORDE_VIA	1.57	31.4469	34.177	1362393.508	1051021.455	29.984
	11	203.4118	6.310	86.4805	1.50	PARAMENTO	1.57	237.1010	6.300	1362360.928	1050998.334	29.653
	12	229.2802	9.036	85.1657	1.50	PARAMENTO	1.57	262.8799	9.005	1362363.234	1050994.688	30.044
	13	259.1343	7.246	86.3616	1.50	PARAMENTO	1.57	292.6413	7.233	1362367.135	1050996.948	29.730
	14	299.0414	2.244	89.3109	1.50	POSTE	1.57	332.4833	2.244	1362366.340	1051002.587	29.320
	15	28.2226	3.277	86.4401	1.50	MANHOL	1.57	61.7866	3.272	1362365.897	1051006.507	29.488
	16	9.1552	2.597	86.3733	1.50	ESTRUCTURA	1.57	42.6771	2.592	1362366.256	1051005.382	29.454
	17	16.3908	4.156	87.3512	1.50	ESTRUCTURA	1.57	50.0649	4.152	1362367.016	1051006.808	29.476
	18	39.4609	4.052	87.4856	1.50	ESTRUCTURA	1.57	73.1819	4.049	1362365.522	1051007.500	29.455
	19	44.5810	2.470	86.1256	1.50	ESTRUCTURA	1.57	78.3821	2.465	1362364.847	1051006.038	29.464
	20	97.5517	5.332	95.0005	1.50	EJE_TUBO	1.57	131.3341	5.312	1362360.842	1051007.613	28.836
	21	52.2632	48.552	91.3205	1.50	CANCHA	1.57	85.8549	48.535	1362367.858	1051052.032	28.001
	22	48.0749	53.078	91.2435	1.50	CANCHA	1.57	81.5430	53.062	1362372.154	1051056.109	27.995
	23	72.2938	115.449	90.3854	1.50	CANCHA	1.57	105.9066	115.442	1362332.711	1051114.646	27.995
	24	75.1317	113.290	90.3958	1.50	CANCHA	1.57	108.6341	113.282	1362328.154	1051110.968	27.984
	25	74.1603	39.803	91.3451	1.50	CANCHA	1.57	107.6802	39.788	1362352.267	1051041.533	28.203
	26	65.4205	119.885	90.4236	1.50	CANCHA	1.57	99.1141	119.876	1362345.362	1051121.987	27.815
	27	190.2153	12.792	89.1003	1.50	PARAMENTO	1.57	223.7774	12.791	1362355.115	1050994.775	29.487
E1002-E1001	E1001	0.0000	38.467	90.2409	1.50	ESTACION	1.51	305.3996	38.462	1362386.631	1050972.272	29.517
	E1005	176.0824	63.271	90.2106	1.50	DELTA	1.51	301.5396	63.270	1362419.726	1050918.349	29.141
	80	140.1442	2.472	89.3744	1.50	MANHOL	1.51	265.6446	2.472	1362386.443	1050969.807	29.546
	81	46.2607	3.513	90.4617	1.50	POSTE	1.51	171.8349	3.513	1362383.154	1050972.771	29.482



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	82	65.4059	3.931	90.4808	1.50	PARAMENTO	1.51	191.0827	3.931	1362382.773	1050971.517	29.475
	83	73.5620	6.865	90.2511	1.50	PARAMENTO	1.51	199.3385	6.865	1362380.153	1050969.999	29.479
	84	152.1108	8.719	90.0026	1.50	PARAMENTO	1.51	277.5852	8.719	1362387.782	1050963.630	29.528
	85	111.4203	16.353	90.0026	1.50	PARAMENTO	1.51	237.1005	16.353	1362377.748	1050958.542	29.527
	86	194.3041	9.590	88.2922	1.50	PARAMENTO	1.51	319.9110	9.587	1362393.965	1050966.099	29.782
	87	223.3234	13.501	88.5126	1.50	PARAMENTO	1.51	348.9424	13.498	1362399.878	1050969.683	29.799
	88	318.1015	4.895	89.4749	1.50	PARAMENTO	1.51	83.5705	4.895	1362387.179	1050977.136	29.547
	89	277.0245	16.630	89.3939	1.50	PARAMENTO	1.51	42.4455	16.630	1362398.902	1050983.495	29.628
	90	307.0045	2.686	91.2710	1.50	SUMIDERO	1.51	72.4121	2.685	1362387.442	1050974.832	29.461
	91	291.0507	2.726	91.5923	1.50	SUMIDERO	1.51	56.4849	2.724	1362388.135	1050974.544	29.435
	92	200.2121	7.468	90.1615	1.50	SUMIDERO	1.51	325.7555	7.468	1362392.804	1050968.070	29.494
	93	194.2158	7.334	90.0041	1.50	SUMIDERO	1.51	319.7658	7.334	1362392.229	1050967.535	29.528
	94	202.4645	6.856	89.5058	1.50	BORDE_VIA	1.51	328.1788	6.856	1362392.456	1050968.657	29.548
	95	283.0102	2.912	90.3229	1.50	BORDE_VIA	1.51	48.4169	2.912	1362388.563	1050974.450	29.502
E1005-E1002	E1002	0.0000	63.274	89.4122	1.50	ESTACION	1.54	301.5396	63.270	1362419.726	1050918.349	29.141
	E1006	177.4035	15.990	91.1537	1.50	DELTA	1.54	299.2160	15.986	1362427.529	1050904.396	28.833
	96	39.4237	10.691	88.2746	1.50	PARAMENTO	1.54	161.2499	10.687	1362409.606	1050921.784	29.471
	97	352.1645	18.805	88.0359	1.50	PARAMENTO	1.54	113.8188	18.794	1362412.136	1050935.542	29.819
	98	10.4957	14.523	88.4953	1.50	MANHOL	1.54	132.3721	14.520	1362409.941	1050929.076	29.480
	99	13.3027	21.578	89.0757	1.50	PARAMENTO	1.54	135.0471	21.576	1362404.458	1050933.592	29.511
	100	346.4429	12.718	87.3949	1.50	SUMIDERO	1.54	108.2810	12.707	1362415.740	1050930.415	29.703
	101	349.4548	12.311	87.3340	1.50	SUMIDERO	1.54	111.3030	12.300	1362415.258	1050929.808	29.708
	102	354.4029	17.639	88.1033	1.50	SUMIDERO	1.54	116.2144	17.630	1362411.939	1050934.166	29.746
	103	352.2157	17.621	88.0134	1.50	SUMIDERO	1.54	113.9055	17.611	1362412.590	1050934.449	29.791
	104	325.4817	11.625	82.5506	1.50	PARAMENTO	1.54	87.3444	11.536	1362420.261	1050929.873	30.617
	105	29.0539	11.039	89.3643	1.50	POSTE	1.54	150.6338	11.039	1362410.106	1050923.762	29.259
	106	174.3158	16.146	91.0155	1.50	POSTE	1.54	296.0724	16.143	1362426.821	1050903.848	28.893
	107	263.2736	7.131	84.5234	1.50	POSTE	1.54	24.9996	7.103	1362426.163	1050921.350	29.821
	108	249.4340	4.278	88.3243	1.50	POSTE	1.54	11.2674	4.277	1362423.921	1050919.184	29.293
	109	216.1216	9.028	91.2839	1.50	POSTE	1.54	337.7441	9.025	1362428.079	1050914.931	28.951
	110	214.5342	14.486	90.0133	1.50	POSTE	1.54	336.4346	14.486	1362433.004	1050912.557	29.178
	111	224.1810	9.798	90.3726	1.50	POSTE	1.54	345.8424	9.797	1362429.226	1050915.952	29.078
	112	345.0428	13.541	86.3514	1.50	BORDE_VIA	1.54	106.6141	13.517	1362415.862	1050931.301	29.990
	113	349.1126	17.591	87.1207	1.50	BORDE_VIA	1.54	110.7302	17.570	1362413.507	1050934.781	30.043
E1006-E1005	E1005	0.0000	15.996	88.3220	1.50	ESTACION	1.37	299.2160	15.986	1362427.529	1050904.396	28.833
	E1007	144.5828	34.059	92.5622	2.00	DELTA	1.37	264.1905	34.014	1362424.086	1050870.557	26.456



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E1008	219.4531	54.296	89.4129	1.50	DELTA	1.37	338.9746	54.295	1362478.210	1050884.916	28.995
	114	110.4105	12.380	92.3935	1.50	PARAMENTO	1.37	229.9008	12.367	1362419.564	1050894.937	28.128
	115	210.2418	12.924	91.4514	1.50	PARAMENTO	1.37	329.6210	12.918	1362438.674	1050897.864	28.307
	116	246.2445	15.049	89.2828	1.50	PARAMENTO	1.37	5.6285	15.048	1362442.505	1050905.872	28.841
E1008-E1006	E1006	0.0000	54.298	90.0720	1.50	ESTACION	1.46	338.9746	54.295	1362478.210	1050884.916	28.995
	E1009	185.4444	79.194	88.4406	1.50	DELTA	1.46	344.7202	79.175	1362554.585	1050864.051	30.703
	141	184.2203	32.265	89.3218	1.50	MANHOL	1.46	343.3421	32.264	1362509.120	1050875.668	29.215
	142	174.3242	31.238	89.2642	1.50	PARAMENTO	1.46	333.5196	31.237	1362506.169	1050870.988	29.258
	143	179.0712	30.169	89.2642	1.50	POSTE	1.46	338.0946	30.168	1362506.199	1050873.661	29.247
	144	188.2524	39.973	89.1451	1.50	PARAMENTO	1.46	347.3980	39.970	1362517.216	1050876.196	29.480
	145	198.5322	42.702	88.1817	1.50	PARAMENTO	1.46	357.8641	42.683	1362520.863	1050883.325	30.218
	146	6.1253	11.723	90.1451	1.50	POSTE	1.46	165.1894	11.723	1362466.876	1050887.913	28.904
	147	310.4610	7.912	89.0509	1.50	POSTE	1.46	109.7441	7.911	1362475.537	1050892.362	29.081
	148	342.2749	25.557	89.5423	1.50	PARAMENTO	1.46	141.4383	25.557	1362458.226	1050900.847	28.997
	149	1.2601	25.965	90.1852	1.50	PARAMENTO	1.46	160.4083	25.965	1362453.748	1050893.623	28.812
	150	202.5256	15.456	89.2037	1.50	PARAMENTO	1.46	1.8569	15.455	1362493.656	1050885.417	29.132
	151	68.1205	3.659	90.0803	1.50	PARAMENTO	1.46	227.1760	3.659	1362475.722	1050882.233	28.946
	152	75.4745	5.289	88.3632	1.50	PARAMENTO	1.46	234.7705	5.287	1362475.159	1050880.597	29.083
	153	7.1138	12.092	90.0023	1.50	PARAMENTO	1.46	166.1685	12.092	1362466.468	1050887.807	28.954
	154	15.4208	12.507	89.1615	1.50	PARAMENTO	1.46	174.6769	12.506	1362465.758	1050886.076	29.114
	155	188.2747	65.441	88.2846	1.50	PARAMENTO	1.46	347.4377	65.418	1362542.061	1050870.688	30.691
E1009-E1008	E1008	359.5959	79.209	91.1812	1.50	ESTACION	1.60	344.7202	79.175	1362554.585	1050864.051	30.703
	E1010	203.4915	25.585	86.4557	1.50	DELTA	1.60	8.5410	25.544	1362579.846	1050867.845	32.247
	156	51.2807	4.347	93.1658	1.50	PARAMENTO	1.60	216.1888	4.340	1362551.083	1050861.489	30.554
	157	25.3939	6.675	92.3648	1.50	POSTE	1.60	190.3810	6.668	1362548.027	1050862.850	30.499
	158	66.2331	5.929	83.4316	1.50	POSTE	1.60	231.1121	5.893	1362550.886	1050859.464	31.452
	159	155.2347	5.456	87.3834	1.50	PARAMENTO	1.60	320.1166	5.451	1362558.769	1050860.556	31.028
	160	233.1917	5.969	80.5249	1.50	PARAMENTO	1.60	38.0416	5.894	1362559.227	1050867.683	31.749
	161	219.3045	6.130	84.2650	1.50	PARAMENTO	1.60	24.2327	6.101	1362560.149	1050866.555	31.396
	162	211.2108	9.990	83.2500	1.50	PARAMENTO	1.60	16.0724	9.924	1362564.122	1050866.799	31.949
	163	211.0435	15.786	85.1912	1.50	PARAMENTO	1.60	15.7966	15.733	1362569.725	1050868.334	32.091
	164	190.0520	10.577	83.4117	1.50	PARAMENTO	1.60	354.8091	10.513	1362565.055	1050863.100	31.966
	165	191.5802	10.959	83.5907	1.50	MANHOL	1.60	356.6874	10.899	1362565.466	1050863.421	31.952
	166	188.0058	10.156	83.3501	1.50	MANHOL	1.60	352.7363	10.092	1362564.597	1050862.775	31.938
	167	194.1332	20.321	85.5839	1.50	MANHOL	1.60	358.9458	20.271	1362574.853	1050863.678	32.229
E1010-E1009	E1009	0.0000	25.578	93.2231	1.50	ESTACION	1.47	8.5410	25.544	1362579.846	1050867.845	32.247



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E1011	197.5128	60.392	89.0627	1.50	DELTA	1.47	26.3988	60.385	1362633.934	1050894.693	33.153
	168	44.5914	15.934	89.4422	1.50	PARAMENTO	1.47	233.5283	15.934	1362570.375	1050855.032	32.285
	169	93.4453	5.179	86.5851	1.50	POSTE	1.47	282.2891	5.172	1362580.947	1050862.792	32.486
	170	298.5539	5.486	83.3317	1.50	POSTE	1.47	127.4685	5.451	1362576.530	1050872.172	32.829
	171	337.5556	7.193	86.3248	1.50	PARAMENTO	1.47	166.4733	7.180	1362572.866	1050869.524	32.646
	172	281.4212	5.145	86.2229	1.50	PARAMENTO	1.47	110.2444	5.135	1362578.070	1050872.662	32.538
	173	278.0955	6.488	86.1924	1.50	PARAMENTO	1.47	106.7063	6.475	1362577.985	1050874.046	32.629
E1011-E1010	E1010	0.0000	60.399	90.5326	1.50	ESTACION	1.54	26.3988	60.385	1362633.934	1050894.693	33.153
	E1012	83.1723	52.932	90.1849	1.50	DELTA	1.54	289.6885	52.931	1362651.767	1050844.856	32.903
	174	49.3539	4.020	90.3942	1.50	PARAMENTO	1.54	255.9930	4.020	1362632.961	1050890.793	33.146
	175	242.4845	3.061	92.1428	1.50	MANHOL	1.54	89.2113	3.059	1362633.976	1050897.751	33.073
	176	250.2706	7.585	89.2828	1.50	MANHOL	1.54	96.8505	7.585	1362633.030	1050902.223	33.262
	177	273.0128	8.667	89.2337	1.50	PARAMENTO	1.54	119.4233	8.667	1362629.677	1050902.242	33.284
	178	234.1832	14.110	89.1254	1.50	PARAMENTO	1.54	80.7077	14.109	1362636.212	1050908.616	33.386
	179	156.4502	7.511	88.4245	1.50	PARAMENTO	1.54	3.1494	7.509	1362641.432	1050895.105	33.361
	180	166.1646	6.387	89.5020	1.50	POSTE	1.54	12.6783	6.387	1362640.165	1050896.095	33.210
	181	284.5308	9.278	89.0322	1.50	POSTE	1.54	131.2844	9.277	1362627.813	1050901.664	33.345
E1012-E1011	E1011	0.0000	52.927	89.4532	1.50	ESTACION	1.50	289.6885	52.931	1362651.767	1050844.856	32.903
	E1013	102.0024	36.494	90.5435	1.50	DELTA	1.50	211.6952	36.489	1362620.720	1050825.685	32.319
	E1014	182.4634	48.211	90.0406	1.50	DELTA	1.50	292.4646	48.211	1362670.189	1050800.304	32.841
	182	272.1621	3.178	88.4129	1.50	SUMIDERO	1.50	21.9610	3.177	1362654.714	1050846.044	32.971
	183	12.3033	5.445	88.2045	1.50	POSTE	1.50	122.1977	5.443	1362648.867	1050849.462	33.056
	184	2.4624	5.973	89.0440	1.50	PARAMENTO	1.50	112.4619	5.972	1362649.485	1050850.375	32.995
	185	315.2657	9.057	90.5941	1.50	SUMIDERO	1.50	65.1377	9.056	1362655.574	1050853.073	32.741
	186	312.5400	10.361	90.3810	1.50	SUMIDERO	1.50	62.5885	10.360	1362656.537	1050854.053	32.784
	187	319.3156	12.061	87.2309	1.50	PARAMENTO	1.50	69.2208	12.048	1362656.042	1050856.121	33.449
	188	197.0843	8.522	88.1200	1.50	PARAMENTO	1.50	306.8338	8.518	1362656.874	1050838.039	33.166
	189	133.1008	12.751	90.1155	1.50	PARAMENTO	1.50	242.8574	12.751	1362645.950	1050833.509	32.855
	190	111.3613	35.794	89.2408	2.40	PARAMENTO	1.50	221.2921	35.792	1362624.875	1050821.237	32.372
	191	94.0419	42.651	90.4458	1.70	PARAMENTO	1.50	203.7605	42.647	1362612.735	1050827.673	32.141
	192	102.0221	21.321	90.0055	1.50	MANHOL	1.50	211.7277	21.321	1362633.632	1050833.644	32.893
	193	146.0715	10.690	90.3059	1.50	POSTE	1.50	255.8094	10.690	1362649.147	1050834.493	32.802
E1012		0.0000				ESTACION		0.0000		1362651.767	1050844.856	33.023
E1014	E1012	0.0000	48.212	89.5857	1.50	ESTACION	1.53	292.4646		1362670.189	1050800.304	32.961
	E1015	148.3716	10.425	90.4750	1.50	DELTA	1.53	261.0858	10.424	1362668.574	1050790.006	32.848
	194	204.3735	7.666	90.3336	1.50	MANHOL	1.53	317.0910	7.666	1362675.804	1050795.085	32.918



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	195	167.4351	7.639	90.4039	1.50	MANHOL	1.53	280.1955	7.638	1362671.541	1050792.786	32.903
	196	169.2748	8.911	90.4039	1.50	MANHOL	1.53	281.9280	8.910	1362672.031	1050791.586	32.888
	197	173.3047	9.404	90.3443	1.50	ESTRUCTURA	1.53	285.9777	9.404	1362672.778	1050791.263	32.898
	198	165.0343	8.467	90.3730	1.50	ESTRUCTURA	1.53	277.5266	8.466	1362671.298	1050791.910	32.901
	199	173.0902	8.178	90.3333	1.50	ESTRUCTURA	1.53	285.6152	8.178	1362672.390	1050792.428	32.913
	200	162.4749	7.096	90.3618	1.50	ESTRUCTURA	1.53	275.2616	7.096	1362670.840	1050793.238	32.918
	201	230.3853	5.843	92.1134	1.50	SUMIDERO	1.53	343.1127	5.839	1362675.776	1050798.608	32.769
	202	237.0303	6.880	92.0449	1.50	SUMIDERO	1.53	349.5155	6.875	1362676.950	1050799.053	32.743
	203	137.1159	4.454	92.5026	1.50	SUMIDERO	1.53	249.6644	4.449	1362668.643	1050796.132	32.772
	204	126.1006	4.474	92.3153	1.50	SUMIDERO	1.53	238.6330	4.470	1362667.863	1050796.487	32.795
	205	127.0232	4.846	91.5810	1.50	POSTE	1.53	239.5069	4.843	1362667.732	1050796.130	32.826
	206	98.4803	4.111	90.5739	1.50	PARAMENTO	1.53	211.2655	4.110	1362666.676	1050798.170	32.924
	207	98.2914	6.925	90.0126	1.50	PARAMENTO	1.53	210.9519	6.925	1362664.250	1050796.742	32.990
	208	114.3200	7.363	91.3225	1.50	PARAMENTO	1.53	226.9980	7.360	1362665.169	1050794.921	32.795
	209	277.5323	7.657	89.2357	1.50	PARAMENTO	1.53	30.3544	7.657	1362676.796	1050804.173	33.073
	210	149.0644	18.553	90.2523	1.50	PARAMENTO	1.53	261.5769	18.552	1362667.472	1050781.951	32.856
	211	187.1316	14.622	88.4204	1.90	PARAMENTO	1.53	299.6858	14.618	1362677.429	1050787.604	32.924
	212	154.1630	17.164	90.5438	1.90	SUMIDERO	1.53	266.7396	17.162	1362669.213	1050783.170	32.320
	213	152.4330	15.864	91.0055	1.90	SUMIDERO	1.53	265.1896	15.862	1362668.859	1050784.498	32.312
	214	201.1543	13.331	90.3101	1.90	POSTE	1.53	313.7266	13.330	1362679.403	1050790.670	32.473
	215	148.2640	16.601	90.5812	1.90	POSTE	1.53	260.9091	16.599	1362667.567	1050783.914	32.312
	216	138.1351	20.297	90.2537	1.90	MANHOL	1.53	250.6955	20.296	1362663.479	1050781.148	32.442
E1015-E1014	E1014	0.0000	10.400	89.2124	1.50	ESTACION	1.49	261.0858	10.424	1362668.574	1050790.006	32.848
	E1016	114.3221	55.704	95.4238	1.50	DELTA	1.49	195.6249	55.428	1362615.195	1050775.077	27.290
	217	155.0615	14.492	90.3951	1.50	PARAMENTO	1.49	236.1899	14.491	1362660.511	1050777.965	32.665
	218	105.4703	14.544	90.3526	1.50	PARAMENTO	1.49	186.8699	14.543	1362654.135	1050788.266	32.683
E1015-E1014	E1014	359.5959	10.418	89.3158	1.50	ESTACION	1.51	261.0858	10.424	1362668.574	1050790.006	32.848
	E1017	215.0604	53.696	90.1328	1.50	DELTA	1.51	296.1869	53.696	1362692.270	1050741.821	32.650
E1017-E1015	E1015	0.0000	53.706	89.4855	1.50	ESTACION	1.51	296.1869	53.696	1362692.270	1050741.821	32.650
	E1018	177.0458	54.829	90.1442	1.50	DELTA	1.51	293.2696	54.828	1362713.930	1050691.453	32.427
	259	21.1811	6.273	89.0348	1.50	PARAMENTO	1.51	137.4899	6.272	1362687.646	1050746.060	32.764
	260	304.4336	9.073	89.3204	1.50	POSTE	1.51	60.9135	9.073	1362696.680	1050749.750	32.735
	261	271.4115	3.713	90.0639	1.50	MANHOL	1.51	27.8744	3.713	1362695.552	1050743.557	32.654
	262	303.2456	12.057	88.5712	1.50	PARAMENTO	1.51	59.6024	12.055	1362698.370	1050752.219	32.882
	263	200.5348	7.310	89.4410	1.50	PARAMENTO	1.51	317.0835	7.310	1362697.623	1050736.844	32.695
	264	190.1619	8.389	89.5239	1.50	PARAMENTO	1.51	306.4588	8.389	1362697.255	1050735.074	32.680



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	265	124.2827	10.044	91.2711	1.50	SUMIDERO	1.51	240.6610	10.041	1362687.350	1050733.068	32.407
	266	126.3756	8.869	91.3300	1.50	SUMIDERO	1.51	242.8191	8.866	1362688.220	1050733.935	32.422
	267	68.1526	9.391	90.0801	1.50	POSTE	1.51	184.4441	9.391	1362682.907	1050741.094	32.640
	268	129.4229	11.624	90.3211	1.50	POSTE	1.51	245.8949	11.623	1362687.523	1050731.211	32.553
	269	135.3504	12.238	89.2618	1.50	PARAMENTO	1.51	251.7713	12.237	1362688.442	1050730.198	32.782
	270	76.3937	10.405	90.0739	1.50	PARAMENTO	1.51	192.8471	10.405	1362682.125	1050739.508	32.638
	271	62.2417	11.677	89.2318	1.50	PARAMENTO	1.51	178.5916	11.676	1362680.597	1050742.108	32.786
	272	84.1836	18.526	89.5916	1.50	PARAMENTO	1.51	200.4969	18.526	1362674.917	1050735.334	32.666
	273	74.4149	19.017	89.3510	1.50	PARAMENTO	1.51	190.8838	19.017	1362673.595	1050738.231	32.799
E1018-E1017	E1017	0.0000	54.835	89.4432	1.50	ESTACION	1.46	293.2696	54.828	1362713.930	1050691.453	32.427
	E1019	101.1959	11.637	90.0058	1.50	DELTA	1.46	214.6027	11.637	1362704.352	1050684.844	32.386
	274	29.2503	6.870	88.0434	1.50	PARAMENTO	1.46	142.6871	6.866	1362708.469	1050695.615	32.620
E1019-E1018	E1018	0.0000	11.639	89.4500	1.50	ESTACION	1.48	214.6027	11.637	1362704.352	1050684.844	32.386
	E1022	260.3518	51.935	90.2329	1.50	DELTA	1.48	295.1910	51.934	1362726.457	1050637.850	32.012
	E1023	174.2215	105.287	90.1207	1.50	DELTA	1.48	208.9735	105.286	1362612.243	1050633.843	31.996
	470	13.2120	21.945	89.3600	1.50	PARAMENTO	1.48	47.9583	21.944	1362719.047	1050701.142	32.520
	471	6.5210	20.507	90.1211	1.50	SUMIDERO	1.48	41.4721	20.507	1362719.717	1050698.425	32.294
	472	6.5806	19.280	90.0914	1.50	SUMIDERO	1.48	41.5710	19.280	1362718.776	1050697.637	32.315
	473	354.5559	12.894	90.2234	1.50	MANHOL	1.48	29.5358	12.894	1362715.570	1050691.201	32.282
	474	303.1604	10.567	89.3118	1.50	PARAMENTO	1.48	337.8705	10.567	1362714.140	1050680.864	32.455
	475	292.0701	11.193	89.3546	1.50	PARAMENTO	1.48	326.7196	11.193	1362713.709	1050678.702	32.446
	476	220.0301	6.789	90.5923	1.50	SUMIDERO	1.48	254.6530	6.788	1362702.555	1050678.298	32.250
	477	213.0130	7.691	90.5517	1.50	SUMIDERO	1.48	247.6277	7.690	1362701.425	1050677.733	32.243
	478	225.0016	8.898	90.4317	1.50	POSTE	1.48	259.6071	8.897	1362702.747	1050676.093	32.255
	479	216.2802	8.369	89.2756	1.50	PARAMENTO	1.48	251.0699	8.369	1362701.637	1050676.928	32.445
	480	188.0309	24.270	90.2329	1.50	PARAMENTO	1.48	222.6552	24.269	1362686.503	1050668.400	32.201
	481	194.3543	24.304	88.1221	2.60	PARAMENTO	1.48	229.1980	24.292	1362688.478	1050666.456	32.028
	481	194.3617	24.313	88.1221	2.30	PARAMENTO	1.48	229.2074	24.301	1362688.475	1050666.446	32.328
	482	84.2253	5.640	90.1826	1.50	POSTE	1.48	118.9841	5.640	1362701.619	1050689.778	32.337
E1022-E1019	E1019	0.0000	51.938	89.3513	1.50	ESTACION	1.47	295.1910	51.934	1362726.457	1050637.850	32.012
	E1025	96.4340	126.417	90.4113	1.50	DELTA	1.47	211.9188	126.408	1362619.162	1050571.016	30.468
	617	36.3108	4.463	86.5836	1.50	PARAMENTO	1.47	151.7099	4.457	1362722.532	1050639.962	32.220
	618	295.2030	10.201	90.1958	1.50	PARAMENTO	1.47	50.5327	10.201	1362732.941	1050645.725	31.925
	619	283.2618	8.469	91.3054	1.50	SUMIDERO	1.47	38.6294	8.466	1362733.070	1050643.135	31.760
	620	279.2930	7.409	91.3054	1.50	SUMIDERO	1.47	34.6827	7.406	1362732.547	1050642.064	31.788
	621	217.1328	5.101	89.0508	1.50	MANHOL	1.47	332.4155	5.100	1362730.977	1050635.488	32.066



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	622	120.0956	16.778	90.0608	1.50	SUMIDERO	1.47	235.3566	16.778	1362716.919	1050624.046	31.954
	623	118.1431	15.613	90.0608	1.50	SUMIDERO	1.47	233.4330	15.613	1362717.155	1050625.310	31.956
	624	132.4739	18.088	89.3310	1.50	PARAMENTO	1.47	247.9852	18.087	1362719.677	1050621.081	32.125
	625	127.3707	18.451	87.4525	2.20	POSTE	1.47	242.8096	18.437	1362718.032	1050621.450	32.006
	626	126.1845	30.456	88.5121	1.80	PARAMENTO	1.47	241.5035	30.450	1362711.929	1050611.089	32.292
	627	122.3528	34.029	89.3619	1.50	PARAMENTO	1.47	237.7821	34.028	1362708.315	1050609.061	32.219
	628	116.2118	32.537	87.5255	2.40	PARAMENTO	1.47	231.5460	32.515	1362706.236	1050612.387	32.287
	629	114.4842	29.203	89.2357	2.40	POSTE	1.47	230.0027	29.201	1362707.687	1050615.479	31.390
	630	172.0936	11.141	88.5806	1.50	PARAMENTO	1.47	287.3510	11.139	1362729.779	1050627.217	32.185
E1025-E1022	E1022	0.0000	126.426	89.1530	1.50	ESTACION	1.41	211.9188	126.408	1362619.162	1050571.016	30.468
	E1027	256.2500	60.117	90.5733	1.50	DELTA	1.41	288.3355	60.109	1362638.071	1050513.959	29.372
	E1026	166.0338	21.340	98.4856	1.50	DELTA	1.41	197.9794	21.088	1362599.104	1050564.506	27.108
	631	20.4624	4.646	82.3849	1.50	EJE_TUBO	1.41	52.6921	4.608	1362621.955	1050574.681	30.973
	632	251.0223	10.707	89.1239	1.50	EJE_TUBO	1.41	282.9585	10.706	1362621.563	1050560.582	30.526
	633	319.4724	5.353	82.4307	1.50	VALVULA	1.41	351.7088	5.310	1362624.416	1050570.250	31.057
	634	349.1603	6.514	83.0148	1.50	MANHOL	1.41	21.1863	6.466	1362625.191	1050573.353	31.169
	635	76.0433	6.486	80.4011	1.50	PARAMENTO	1.41	107.9946	6.400	1362617.185	1050577.103	31.430
	636	42.4338	5.030	80.2110	1.50	ARBOL	1.41	74.6460	4.959	1362620.475	1050575.798	31.221
	637	244.2720	1.289	61.2450	1.50	PARAMENTO	1.41	276.3744	1.132	1362619.288	1050569.891	30.995
	638	170.3740	5.276	101.5732	1.50	PARAMENTO	1.41	202.5466	5.161	1362614.395	1050569.037	29.285
	639	245.4232	5.218	82.3845	1.50	PARAMENTO	1.41	277.6277	5.175	1362619.849	1050565.886	31.046
	640	281.2656	9.412	86.1957	1.50	PARAMENTO	1.41	313.3677	9.393	1362625.612	1050564.188	30.981
E1025		0.0000				ESTACION		0.0000		1362619.162	1050571.016	30.544
E1027	E1025	0.0000	60.116	88.5922	1.50	ESTACION	1.43	288.3355		1362638.071	1050513.959	29.445
	E1028	186.1254	56.820	90.2012	1.50	DELTA	1.43	294.5505	56.819	1362661.679	1050462.277	29.040
	E1029	116.1217	29.695	95.0803	1.50	DELTA	1.43	224.5402	29.576	1362616.990	1050493.214	26.717
	741	325.4123	4.371	84.1815	1.50	MANHOL	1.43	74.0252	4.349	1362639.268	1050518.140	29.808
	742	213.2311	2.905	88.0112	1.50	PARAMENTO	1.43	321.7219	2.903	1362640.350	1050512.160	29.474
	743	342.1908	13.098	87.1708	1.50	PARAMENTO	1.43	90.6544	13.083	1362637.921	1050527.041	29.994
	744	316.0950	18.818	86.4703	1.50	PARAMENTO	1.43	64.4994	18.788	1362646.160	1050530.917	30.430
	745	17.1558	8.085	85.0846	1.50	PARAMENTO	1.43	125.6016	8.056	1362633.381	1050520.509	30.058
	746	97.1517	7.575	84.5218	1.50	PARAMENTO	1.43	205.5902	7.545	1362631.266	1050510.700	30.051
	747	127.0724	11.656	89.2950	1.50	PARAMENTO	1.43	235.4588	11.656	1362631.462	1050504.358	29.476
	748	4.2642	27.982	87.5216	1.50	PARAMENTO	1.43	112.7805	27.963	1362627.244	1050539.740	30.413
	749	7.3051	28.121	87.5216	1.50	PARAMENTO	1.43	115.8496	28.102	1362625.818	1050539.249	30.419
	750	3.5757	8.264	86.3924	1.50	POSTE	1.43	112.3013	8.250	1362634.940	1050521.592	29.856



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1028-E1027	E1027	0.0000	56.836	89.3037	1.50	ESTACION	1.57	294.5505	56.819	1362661.679	1050462.277	29.040
	E1031	89.0356	61.159	91.4924	1.50	DELTA	1.57	203.6160	61.128	1362605.670	1050437.788	27.164
	E1032	187.0715	65.152	90.4242	1.50	DELTA	1.57	301.6713	65.147	1362695.884	1050406.832	28.301
	930	30.3907	6.108	88.0617	1.50	PARAMENTO	1.57	145.2024	6.105	1362656.666	1050465.760	29.312
	931	327.4455	10.228	90.1855	1.50	PARAMENTO	1.57	82.2991	10.228	1362663.049	1050472.412	29.054
	932	292.4532	24.115	89.4813	1.50	PARAMENTO	1.57	47.3094	24.115	1362678.030	1050480.002	29.193
	933	245.4217	7.678	90.2935	1.50	PARAMENTO	1.57	0.2552	7.678	1362669.357	1050462.311	29.044
	934	300.4700	25.200	89.1149	1.50	PARAMENTO	1.57	55.3338	25.198	1362676.011	1050483.001	29.463
	935	259.3824	15.242	94.4133	0.08	PARAMENTO	1.57	14.1905	15.191	1362676.406	1050466.001	29.288
	936	133.3909	4.419	90.5907	1.50	PARAMENTO	1.57	248.2030	4.418	1362660.038	1050458.174	29.034
	937	21.3704	5.366	89.3859	1.50	POSTE	1.57	136.1683	5.366	1362657.808	1050465.993	29.143
	938	334.3545	4.064	88.2748	1.50	MANHOL	1.57	89.1463	4.063	1362661.739	1050466.339	29.219
	939	110.0904	12.242	91.1834	1.50	PARAMENTO	1.57	224.7016	12.239	1362652.980	1050453.668	28.830
	940	83.2141	22.602	90.3615	1.50	PARAMENTO	1.57	197.9119	22.601	1362640.174	1050455.326	28.872
	941	96.5412	4.086	92.0450	1.50	POSTE	1.57	211.4538	4.083	1362658.196	1050460.146	28.962
	942	340.5722	3.017	88.2614	1.50	ESTRUCTURA	1.57	95.5066	3.016	1362661.389	1050465.278	29.192
	943	319.3135	3.840	88.5936	1.50	ESTRUCTURA	1.57	74.0769	3.839	1362662.732	1050465.969	29.178
	944	330.3607	5.063	89.0951	1.50	ESTRUCTURA	1.57	85.1524	5.062	1362662.107	1050467.321	29.184
	945	347.4256	4.462	88.5007	1.50	ESTRUCTURA	1.57	102.2660	4.461	1362660.731	1050466.636	29.201
	946	187.0717	12.515	91.2630	1.50	LINEAMIENT	1.57	301.6719	12.511	1362668.248	1050451.629	28.795
	947	187.0717	35.813	90.3647	1.50	LINEAMIENT	1.57	301.6719	35.811	1362680.482	1050431.799	28.727
	948	0.0000	14.284	90.1437	1.50	LINEAMIENT	1.57	114.5505	14.284	1362655.744	1050475.269	29.049
	949	0.0000	39.748	89.2841	1.50	LINEAMIENT	1.57	114.5505	39.746	1362645.164	1050498.430	29.472
	950	179.0204	5.013	91.5528	1.50	ARBOL	1.57	293.5849	5.010	1362663.683	1050457.685	28.942
	951	173.3159	13.222	89.2117	1.50	PARAMENTO	1.57	288.0835	13.221	1362665.783	1050449.708	29.259
	952	187.1923	12.702	90.5413	1.50	PARAMENTO	1.57	301.8735	12.700	1362668.385	1050451.491	28.910
	953	188.1944	32.442	90.5853	1.50	PARAMENTO	1.57	302.8794	32.437	1362679.288	1050435.035	28.554
E1028		0.0000				ESTACION		0.0000		1362661.679	1050462.277	29.017
E1032	E1028	0.0000	65.148	89.2231	1.50	ESTACION	1.51	301.6713		1362695.884	1050406.832	28.277
	E1036	178.5420	95.286	90.0232	1.50	DELTA	1.51	300.5769	95.286	1362744.355	1050324.795	28.217
	1433	301.2715	9.921	88.4457	1.50	PARAMENTO	1.51	63.1255	9.919	1362700.368	1050415.679	28.504
	1434	0.3343	17.302	87.4443	1.50	PARAMENTO	1.51	122.2333	17.289	1362686.663	1050421.456	28.968
	1435	4.4248	12.039	86.4411	1.50	PARAMENTO	1.51	126.3846	12.019	1362688.754	1050416.508	28.973
	1436	340.2937	4.978	90.1755	1.50	MANHOL	1.51	102.1649	4.978	1362694.835	1050411.698	28.261
	1437	341.2715	23.118	88.4327	1.50	PARAMENTO	1.51	103.1255	23.112	1362690.636	1050429.340	28.802
	1438	344.5713	23.709	89.1419	1.50	POSTE	1.51	106.6249	23.707	1362689.101	1050429.548	28.602



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1036-E1032	E1032	0.0001	95.272	89.5923	1.50	ESTACION	1.52	300.5769	95.286	1362744.355	1050324.795	28.217
	E1037	118.3511	95.170	90.4312	1.50	DELTA	1.52	239.1633	95.162	1362695.576	1050243.086	27.036
	E1038	183.4216	88.726	90.1022	1.50	DELTA	1.52	304.2813	88.726	1362794.331	1050251.483	27.965
	1439	356.2412	92.888	90.0047	1.50	POSTE	1.52	116.9802	92.888	1362702.214	1050407.574	28.211
	1440	330.5923	14.687	89.2526	1.50	POSTE	1.52	91.5666	14.686	1362743.954	1050339.476	28.380
	1441	2.3913	12.729	89.5142	1.50	POSTE	1.52	123.2305	12.729	1362737.380	1050335.443	28.263
	1442	326.5242	18.211	89.3910	1.50	PARAMENTO	1.52	87.4552	18.211	1362745.164	1050342.988	28.343
	1443	332.5306	17.057	89.5112	1.50	PARAMENTO	1.52	93.4619	17.057	1362743.325	1050341.821	28.276
	1444	348.0644	9.934	89.3237	1.50	MANHOL	1.52	108.6891	9.934	1362741.172	1050334.205	28.311
	1445	334.1901	7.857	89.3019	1.50	MANHOL	1.52	94.8938	7.857	1362743.685	1050332.623	28.300
	1446	339.5642	5.001	89.4426	1.50	MANHOL	1.52	100.5219	5.001	1362743.442	1050329.712	28.255
	1447	270.4041	10.195	89.1911	1.50	PARAMENTO	1.52	31.2549	10.194	1362753.070	1050330.085	28.353
	1448	263.0030	6.982	90.1510	1.50	BORDE_VIA	1.52	23.5852	6.982	1362750.754	1050327.589	28.201
	1449	287.1219	10.358	90.0549	1.50	BORDE_VIA	1.52	47.7821	10.358	1362751.315	1050332.466	28.215
	1450	288.1402	15.265	90.1338	1.50	BORDE_VIA	1.52	48.8108	15.265	1362754.408	1050336.283	28.172
	1451	332.2503	14.238	89.5133	1.50	BORDE_VIA	1.52	92.9944	14.238	1362743.612	1050339.014	28.267
	1452	327.3211	13.710	89.5257	1.50	BORDE_VIA	1.52	88.1133	13.710	1362744.807	1050338.498	28.260
	1453	317.1209	14.601	90.1844	1.50	BORDE_VIA	1.52	77.7794	14.601	1362747.446	1050339.065	28.153
	1454	281.1338	25.864	90.2339	1.50	BORDE_VIA	1.52	41.8041	25.863	1362763.635	1050342.036	28.054
	1455	295.0049	25.908	90.2230	1.50	BORDE_VIA	1.52	55.5905	25.907	1362758.996	1050346.170	28.063
	1456	319.0126	20.294	89.4350	1.50	PARAMENTO	1.52	79.6008	20.294	1362748.019	1050344.756	28.328
	1457	328.1225	13.648	89.5819	1.50	BORDE_VIA	1.52	88.7838	13.648	1362744.645	1050338.440	28.239
	1458	359.5956	11.992	90.0244	1.50	BORDE_VIA	1.52	120.5758	11.992	1362738.255	1050335.120	28.223
	1459	220.5324	9.561	90.3759	1.50	BORDE_VIA	1.52	341.4669	9.560	1362753.420	1050321.757	28.127
	1460	181.1204	14.495	89.5930	1.50	BORDE_VIA	1.52	301.7780	14.495	1362751.989	1050312.473	28.234
	1461	200.0258	21.956	90.0825	1.50	POSTE	1.52	320.6263	21.956	1362761.328	1050310.867	28.178
	1462	169.4205	9.605	92.2537	1.50	ARBOL	1.52	290.2783	9.596	1362747.681	1050315.794	27.825
	1463	165.3214	50.003	91.2352	1.50	CANCHA	1.52	286.1141	49.988	1362758.230	1050276.771	27.012
	1464	15.2218	35.732	91.0617	1.50	CANCHA	1.52	135.9485	35.725	1362718.679	1050349.635	27.543
	1465	142.3124	58.830	91.0532	1.50	CANCHA	1.52	263.1002	58.819	1362737.289	1050266.402	27.111
	1466	43.3410	46.808	91.1106	1.50	CANCHA	1.52	164.1463	46.798	1362699.337	1050337.580	27.264
	1467	136.5819	63.292	90.5926	1.50	CANCHA	1.52	257.5488	63.283	1362730.711	1050263.001	27.138
	1468	49.3646	52.088	91.0453	1.50	CANCHA	1.52	170.1896	52.079	1362693.038	1050333.669	27.249
	1469	122.0540	83.418	90.5215	1.50	CANCHA	1.52	242.6713	83.408	1362706.063	1050250.696	26.964
	1470	63.0720	74.436	90.3856	1.50	CANCHA	1.52	183.6991	74.431	1362670.079	1050319.993	27.389
	1471	41.4310	52.747	90.4512	1.50	CANCHA	1.52	162.2963	52.742	1362694.111	1050340.834	27.539



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1472	32.0653	66.467	90.3629	1.50	CANCHA	1.52	152.6916	66.463	1362685.299	1050355.287	27.527
	1473	7.4101	57.161	90.4227	1.50	CANCHA	1.52	128.2605	57.157	1362708.962	1050369.675	27.526
	1474	183.4214	37.435	90.2532	1.50	LINEAMIENT	1.52	304.2808	37.434	1362765.440	1050293.864	27.954
	1475	183.4214	61.759	90.3030	1.50	LINEAMIENT	1.52	304.2808	61.757	1362779.140	1050273.767	27.684
	1476	0.0002	29.550	90.2010	1.50	LINEAMIENT	1.52	120.5774	29.549	1362729.324	1050350.236	28.059
	1477	0.0002	61.886	90.0145	1.50	LINEAMIENT	1.52	120.5774	61.886	1362712.874	1050378.076	28.201
E1038-E1036	E1036	359.5959	88.714	89.5001	1.50	ESTACION	1.49	304.2813	88.726	1362794.331	1050251.483	27.965
	E1040	182.0431	85.959	90.4451	1.50	DELTA	1.49	306.3566	85.952	1362845.284	1050182.262	26.828
	E1041	265.2845	172.439	89.3620	1.50	DELTA	1.49	29.7605	172.435	1362944.023	1050337.075	29.137
	1626	179.4404	70.820	90.4339	1.50	EJE_TUBO	1.49	304.0158	70.814	1362833.946	1050192.786	27.050
	1627	179.4403	51.559	91.1019	1.50	LINEAMIENT	1.49	304.0155	51.548	1362823.168	1050208.755	26.895
	1628	179.4403	23.300	91.1508	1.50	LINEAMIENT	1.49	304.0155	23.294	1362807.362	1050232.175	27.440
	1629	179.4403	9.432	89.2531	1.50	LINEAMIENT	1.49	304.0155	9.432	1362799.607	1050243.665	28.044
	1630	218.4533	9.013	90.2944	1.50	PARAMENTO	1.49	343.0405	9.013	1362802.951	1050248.854	27.872
	1631	201.3707	7.428	89.5229	1.50	POSTE	1.49	325.8999	7.428	1362800.481	1050247.319	27.966
	1632	167.2845	25.155	91.0640	1.50	PARAMENTO	1.49	291.7605	25.150	1362803.655	1050228.125	27.462
	1633	169.5124	28.791	91.1115	1.50	PARAMENTO	1.49	294.1380	28.785	1362806.102	1050225.215	27.353
	1634	204.2850	7.248	90.1703	1.50	BORDE_VIA	1.49	328.7619	7.248	1362800.528	1050247.724	27.914
	1635	193.4924	12.066	90.5709	1.50	BORDE_VIA	1.49	318.1046	12.064	1362803.311	1050243.427	27.749
	1636	146.2422	31.214	91.4749	1.50	PARAMENTO	1.49	270.6874	31.199	1362794.705	1050220.287	26.971
	1637	132.5623	11.262	87.0715	1.50	BORDE_VIA	1.49	257.2210	11.248	1362791.843	1050240.514	28.515
	1638	108.3607	46.894	86.1211	1.50	PUENTE	1.49	232.8833	46.791	1362766.095	1050214.171	31.055
	1639	95.0745	46.461	86.0931	1.50	PUENTE	1.49	219.4105	46.357	1362758.515	1050222.053	31.062
	1640	96.5354	46.267	86.2348	1.50	BORDE_VIA	1.49	221.1796	46.176	1362759.577	1050221.080	30.857
	1641	106.4800	46.653	86.2130	1.50	BORDE_VIA	1.49	231.0813	46.559	1362765.082	1050215.258	30.913
	1642	94.5137	24.264	87.0133	1.50	BORDE_VIA	1.49	219.1416	24.231	1362775.537	1050236.187	29.209
	1643	93.4405	22.281	87.1057	1.50	BORDE_VIA	1.49	218.0160	22.254	1362776.798	1050237.777	29.045
	1644	90.4102	19.346	87.2421	1.50	BORDE_VIA	1.49	214.9652	19.326	1362778.493	1050240.408	28.825
	1645	100.4143	13.185	85.1834	1.50	BORDE_VIA	1.49	224.9766	13.141	1362785.035	1050242.195	29.028
	1646	87.3456	13.191	87.3803	1.50	BORDE_VIA	1.49	211.8635	13.180	1362783.137	1050244.525	28.494
	1647	96.5410	12.570	85.2537	1.50	BORDE_VIA	1.49	221.1841	12.530	1362784.901	1050243.232	28.952
	1648	104.0931	12.567	85.1810	1.50	BORDE_VIA	1.49	228.4399	12.525	1362786.022	1050242.111	28.979
	1649	66.3028	13.129	88.5051	1.50	BORDE_VIA	1.49	190.7891	13.126	1362781.436	1050249.026	28.214
	1650	73.5038	7.893	85.1309	1.50	BORDE_VIA	1.49	198.1252	7.866	1362786.855	1050249.036	28.607
	1651	30.2155	13.310	90.5021	1.50	BORDE_VIA	1.49	154.6466	13.309	1362782.304	1050257.182	27.755
	1652	24.0531	7.966	88.1108	1.50	BORDE_VIA	1.49	148.3733	7.962	1362787.551	1050255.658	28.202



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1653	22.1401	7.843	88.2118	1.50	BORDE_VIA	1.49	146.5149	7.840	1362787.792	1050255.808	28.175
	1654	20.5846	5.514	88.1549	1.50	BORDE_VIA	1.49	145.2608	5.511	1362789.802	1050254.624	28.117
	1655	23.0823	14.335	91.0034	1.50	BORDE_VIA	1.49	147.4210	14.333	1362782.253	1050259.201	27.697
	1656	11.4234	18.145	90.5818	1.50	BORDE_VIA	1.49	135.9908	18.142	1362781.282	1050264.088	27.642
	1657	9.3504	20.070	90.5539	1.50	BORDE_VIA	1.49	133.8658	20.067	1362780.425	1050265.951	27.625
	1658	49.5255	1.693	80.1832	1.50	BORDE_VIA	1.49	174.1633	1.669	1362792.670	1050251.653	28.235
	1659	107.4515	1.462	75.3237	1.50	BORDE_VIA	1.49	232.0355	1.416	1362793.460	1050250.367	28.315
	1660	119.4337	2.474	80.0448	1.50	BORDE_VIA	1.49	244.0083	2.437	1362793.263	1050249.292	28.376
	1661	75.0046	2.289	79.4750	1.50	MANHOL	1.49	199.2941	2.253	1362792.204	1050250.739	28.355
	1662	8.1331	23.317	90.5657	1.50	SUMIDERO	1.49	132.5066	23.314	1362778.578	1050268.670	27.563
	1663	9.0917	24.206	90.4202	1.50	SUMIDERO	1.49	133.4360	24.204	1362777.689	1050269.059	27.654
	1664	30.1144	16.404	90.2046	1.50	PARAMENTO	1.49	154.4769	16.404	1362779.528	1050258.551	27.850
	1665	303.2836	7.393	88.2920	1.50	PARAMENTO	1.49	67.7580	7.390	1362797.128	1050258.324	28.145
	1666	15.1600	34.664	90.0359	1.50	PARAMENTO	1.49	139.5480	34.664	1362767.953	1050273.973	27.909
	1667	272.4322	6.803	91.4008	1.50	BORDE_VIA	1.49	37.0041	6.800	1362799.761	1050255.576	27.751
	1668	275.5614	5.822	91.2517	1.50	BORDE_VIA	1.49	40.2185	5.820	1362798.775	1050255.241	27.805
	1669	304.5325	4.680	91.5451	1.50	BORDE_VIA	1.49	69.1716	4.677	1362795.994	1050255.855	27.793
	1670	332.4939	6.014	91.4342	1.50	BORDE_VIA	1.49	97.1088	6.011	1362793.587	1050257.448	27.768
	1671	342.2949	11.674	90.2537	1.50	POSTE	1.49	106.7783	11.674	1362790.961	1050262.660	27.863
	1672	163.5720	3.016	86.4612	1.50	MANHOL	1.49	288.2369	3.011	1362795.273	1050248.623	28.120
	1673	176.0045	19.653	90.3356	1.50	MANHOL	1.49	300.2938	19.652	1362804.244	1050234.514	27.756
	1674	274.1601	37.905	90.1139	1.50	PARAMENTO	1.49	38.5483	37.905	1362823.975	1050275.104	27.821
	1675	256.3649	38.503	90.2519	1.50	PARAMENTO	1.49	20.8949	38.502	1362830.301	1050265.215	27.666
	1676	259.0809	38.471	90.3607	1.50	BORDE_VIA	1.49	23.4171	38.469	1362829.631	1050266.771	27.545
	1677	268.1821	37.447	90.3028	1.50	BORDE_VIA	1.49	32.5871	37.446	1362825.881	1050271.650	27.618
	1678	179.3330	40.147	90.4909	1.50	MANHOL	1.49	303.8396	40.143	1362816.685	1050218.140	27.376
	1679	175.3415	42.479	91.2044	1.50	ARBOL	1.49	299.8521	42.467	1362815.469	1050214.651	26.952
	1680	249.0058	17.927	91.4435	1.50	SUMIDERO	1.49	13.2974	17.919	1362811.769	1050255.604	27.404
	1681	250.5311	18.606	91.3646	1.50	SUMIDERO	1.49	15.1677	18.599	1362812.281	1050256.349	27.426
	1682	269.1515	23.103	91.0552	1.50	SUMIDERO	1.49	33.5355	23.099	1362813.584	1050264.244	27.507
	1683	270.0433	23.927	91.1001	1.50	SUMIDERO	1.49	34.3571	23.922	1362814.079	1050264.983	27.462
	1684	267.5536	46.086	90.2118	1.50	BORDE_VIA	1.49	32.2080	46.085	1362833.324	1050276.046	27.664
	1685	260.0214	44.132	90.2743	1.50	BORDE_VIA	1.49	24.3185	44.131	1362834.546	1050269.656	27.594
	1686	257.1832	44.595	90.2326	1.50	PARAMENTO	1.49	21.5902	44.594	1362835.796	1050267.892	27.646
	1687	271.1109	46.335	90.0653	1.50	PARAMENTO	1.49	35.4671	46.335	1362832.068	1050278.368	27.857
	1688	270.3721	66.359	89.5338	1.50	PARAMENTO	1.49	34.9038	66.359	1362848.753	1050289.454	28.072



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1689	261.5559	83.269	90.1418	1.50	PARAMENTO	1.49	26.2144	83.268	1362869.035	1050288.265	27.603
	1690	266.5843	82.033	90.1729	1.50	BORDE_VIA	1.49	31.2599	82.032	1362864.453	1050294.051	27.532
	1691	262.5330	83.372	90.1730	1.50	BORDE_VIA	1.49	27.1730	83.371	1362868.500	1050289.557	27.525
	1692	266.3214	86.018	90.1748	1.50	MANHOL	1.49	30.8185	86.017	1362868.201	1050295.551	27.504
	1693	267.1319	83.603	90.1916	1.50	SUMIDERO	1.49	31.5033	83.602	1362865.610	1050295.169	27.481
	1694	267.3548	82.832	90.1917	1.50	SUMIDERO	1.49	31.8780	82.831	1362864.668	1050295.227	27.485
	1695	267.0659	88.039	90.1955	1.50	SUMIDERO	1.49	31.3977	88.038	1362869.477	1050297.348	27.440
	1696	267.2541	88.876	90.1956	1.50	SUMIDERO	1.49	31.7094	88.875	1362869.938	1050298.196	27.434
E1041-E1038	E1038	359.5959	172.428	90.2501	1.50	ESTACION	1.47	29.7605	172.435	1362944.023	1050337.075	29.137
	E1042	181.2254	151.785	89.3958	1.50	DELTA	1.47	31.1421	151.782	1363073.931	1050415.572	29.992
	1778	0.0001	46.643	91.5230	1.50	EJE_TUBO	1.47	209.7608	46.618	1362903.553	1050313.935	27.582
	1779	0.0001	104.814	90.5022	1.50	EJE_TUBO	1.47	209.7608	104.803	1362853.043	1050285.054	27.572
	1780	359.5959	132.166	90.4123	1.50	EJE_TUBO	1.47	209.7602	132.156	1362829.296	1050271.477	27.517
	1781	357.1801	82.510	91.0359	1.50	PARAMENTO	1.47	207.0608	82.496	1362870.558	1050299.545	27.572
	1782	357.4537	59.785	91.3516	1.50	BORDE_VIA	1.47	207.5208	59.762	1362891.023	1050309.461	27.451
	1783	357.5013	59.913	91.3421	1.50	SUMIDERO	1.47	207.5974	59.890	1362890.946	1050309.331	27.464
	1784	357.2431	60.756	91.3421	1.50	SUMIDERO	1.47	207.1691	60.733	1362889.991	1050309.344	27.440
	1785	2.4851	60.423	91.3548	1.50	SUMIDERO	1.47	212.5746	60.400	1362893.125	1050304.556	27.424
	1786	3.2712	59.594	91.3753	1.50	SUMIDERO	1.47	213.2138	59.570	1362894.185	1050304.445	27.411
	1787	356.5628	47.575	91.5150	1.50	BORDE_VIA	1.47	206.7016	47.550	1362901.544	1050315.709	27.560
	1788	355.0742	47.964	93.2102	0.09	BORDE_VIA	1.47	204.8888	47.882	1362900.588	1050316.924	27.719
	1789	5.1203	49.372	91.3603	1.50	PARAMENTO	1.47	214.9613	49.353	1362903.576	1050308.795	27.728
	1790	349.0517	41.501	91.4937	1.50	PARAMENTO	1.47	198.8485	41.480	1362904.767	1050323.675	27.785
	1791	4.0853	48.149	91.4955	1.50	BORDE_VIA	1.47	213.9085	48.124	1362904.083	1050310.228	27.568
	1792	4.1937	48.044	91.5152	1.50	POSTE	1.47	214.0874	48.019	1362904.255	1050310.163	27.545
	1793	357.3256	45.522	91.5417	1.50	MANHOL	1.47	207.3094	45.497	1362903.597	1050316.202	27.595
	1794	358.3739	43.782	91.5509	1.50	MANHOL	1.47	208.3880	43.757	1362905.527	1050316.271	27.641
	1795	4.4643	41.930	92.0304	1.50	BORDE_VIA	1.47	214.5391	41.903	1362909.506	1050313.318	27.607
	1796	356.3211	40.663	91.5835	1.50	BORDE_VIA	1.47	206.2969	40.639	1362907.590	1050319.072	27.705
	1797	353.2413	22.712	91.5542	1.50	BORDE_VIA	1.47	203.1641	22.699	1362923.154	1050328.146	28.343
	1798	355.4832	18.509	91.5058	1.50	MANHOL	1.47	205.5694	18.499	1362927.335	1050329.091	28.510
	1799	351.3526	19.284	91.4652	1.50	MANHOL	1.47	201.3510	19.275	1362926.071	1050330.058	28.508
	1800	348.5637	14.214	91.3814	1.50	BORDE_VIA	1.47	198.7041	14.208	1362930.565	1050332.519	28.702
	1801	338.0003	14.844	91.0215	1.50	PARAMENTO	1.47	187.7613	14.842	1362929.317	1050335.071	28.839
	1802	159.1723	8.790	88.4844	1.50	BORDE_VIA	1.47	9.0502	8.788	1362952.702	1050338.458	29.290
	1802	130.2400	9.977	87.3649	1.50	PARAMENTO	1.47	340.1605	9.968	1362953.400	1050333.692	29.523



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1803	196.1617	21.249	88.2803	1.50	PARAMENTO	1.47	46.0319	21.241	1362958.770	1050352.363	29.676
	1804	154.0558	16.762	88.0046	1.50	PARAMENTO	1.47	3.8599	16.752	1362960.737	1050338.203	29.689
	1805	160.3656	26.725	88.0510	1.50	PARAMENTO	1.47	10.3760	26.710	1362970.296	1050341.886	30.000
	1806	166.4747	26.397	88.1447	1.50	PARAMENTO	1.47	16.5569	26.385	1362969.313	1050344.594	29.916
	1807	187.2303	23.344	89.1141	1.50	BORDE_VIA	1.47	37.1446	23.342	1362962.629	1050351.170	29.436
	1808	165.0820	14.898	88.4644	1.50	BORDE_VIA	1.47	14.8994	14.895	1362958.417	1050340.905	29.425
	1809	168.2009	16.034	88.4144	1.50	BORDE_VIA	1.47	18.0963	16.030	1362959.260	1050342.055	29.473
	1810	185.2418	33.292	89.1436	1.50	BORDE_VIA	1.47	35.1655	33.289	1362971.236	1050356.248	29.547
	1811	142.5605	14.235	88.3814	1.50	MANHOL	1.47	352.6952	14.231	1362958.138	1050335.266	29.446
	1812	90.1352	5.996	87.4503	1.50	PARAMENTO	1.47	299.9916	5.991	1362947.018	1050331.886	29.343
	1813	90.1508	6.869	87.5329	1.50	PARAMENTO	1.47	300.0127	6.864	1362947.456	1050331.131	29.360
	1814	190.5447	33.818	91.1041	0.09	PARAMENTO	1.47	40.6735	33.811	1362969.666	1050359.112	29.827
	1815	170.2051	36.411	88.3956	1.50	PARAMENTO	1.47	20.1080	36.401	1362978.205	1050349.590	29.956
	1816	184.5523	39.482	89.1912	1.50	MANHOL	1.47	34.6835	39.479	1362976.487	1050359.541	29.576
	1817	175.1930	36.280	89.2228	1.50	BORDE_VIA	1.47	25.0855	36.278	1362976.879	1050352.456	29.504
	1818	185.4537	48.604	89.1459	1.50	PARAMENTO	1.47	35.5208	48.600	1362983.578	1050365.312	29.744
	1819	171.4013	45.269	89.2019	1.50	PARAMENTO	1.47	21.4308	45.266	1362986.159	1050353.615	29.630
	1820	184.3207	62.650	89.3244	1.50	PARAMENTO	1.47	34.2958	62.648	1362995.779	1050372.375	29.605
	1821	176.1239	43.931	89.2954	1.50	BORDE_VIA	1.47	25.9713	43.929	1362983.516	1050356.313	29.492
	1822	183.0254	68.022	89.4755	1.50	BORDE_VIA	1.47	32.8088	68.022	1363001.194	1050373.932	29.347
	1823	174.1016	55.441	89.2855	1.50	PARAMENTO	1.47	23.9316	55.439	1362994.695	1050359.564	29.609
	1824	177.5537	67.687	89.4751	1.50	BORDE_VIA	1.47	27.6874	67.687	1363003.959	1050368.526	29.347
	1825	173.0330	55.448	89.1429	1.50	PARAMENTO	1.47	22.8188	55.443	1362995.127	1050358.577	29.842
	1826	175.0954	66.136	89.3441	1.50	PARAMENTO	1.47	24.9255	66.134	1363003.997	1050364.947	29.595
	1827	182.3259	66.476	89.5019	1.50	SUMIDERO	1.47	32.3102	66.476	1363000.206	1050372.607	29.295
	1828	183.0005	67.286	89.5020	1.50	SUMIDERO	1.47	32.7619	67.286	1363000.605	1050373.487	29.297
	1829	182.2046	69.070	89.4747	1.50	MANHOL	1.47	32.1066	69.070	1363002.529	1050373.786	29.353
	1830	180.5921	70.115	89.4924	1.50	MANHOL	1.47	30.7496	70.115	1363004.280	1050372.924	29.324
E1041		0.0000				ESTACION		0.0000		1362944.023	1050337.075	29.137
E1042	E1041	359.5959	151.775	90.1753	1.50	ESTACION	1.41	31.1421		1363073.931	1050415.572	29.992
	E1044	269.2113	143.684	89.4610	1.50	DELTA	1.41	120.4958	143.683	1363001.016	1050539.378	30.484
E1044-E1042	E1042	0.0000	143.697	90.0636	1.70	ESTACION	1.47	120.4958	143.683	1363001.016	1050539.378	30.484
	E1055	177.5349	104.844	89.1822	1.70	DELTA	1.47	118.3927	104.836	1362951.165	1050631.604	31.524
	2542	43.5933	9.363	88.5507	1.70	ANDEN	1.47	344.4883	9.361	1363010.036	1050536.875	30.431
	2543	33.3303	8.174	88.5056	1.70	ANDEN	1.47	334.0466	8.172	1363008.364	1050535.802	30.419
	2544	92.4538	6.567	86.2511	1.70	ANDEN	1.47	33.2563	6.554	1363006.497	1050542.973	30.664



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2545	94.3607	4.618	85.1729	1.70	ANDEN	1.47	35.0977	4.602	1363004.782	1050542.025	30.633
	2546	81.4906	3.359	85.3208	1.70	VALVULA	1.47	22.3141	3.349	1363004.114	1050540.650	30.516
	2547	335.1453	7.566	86.5110	1.70	BORDE_VIA	1.47	275.7438	7.555	1363001.772	1050531.862	30.670
	2548	193.2508	12.540	87.0904	1.70	BORDE_VIA	1.47	133.9146	12.525	1362992.329	1050548.401	30.878
	2549	104.3641	3.638	85.0307	1.70	BORDE_VIA	1.47	45.1071	3.624	1363003.574	1050541.946	30.568
	2550	120.1115	3.313	85.5222	1.70	BORDE_VIA	1.47	60.6833	3.304	1363002.634	1050542.260	30.493
	2551	141.1825	4.239	86.0145	1.70	BORDE_VIA	1.47	81.8027	4.229	1363001.619	1050543.564	30.548
	2552	160.3315	8.040	87.5103	1.70	BORDE_VIA	1.47	101.0499	8.034	1362999.476	1050547.264	30.556
	2553	141.2402	10.624	86.5720	1.70	ANDEN	1.47	81.8963	10.609	1363002.512	1050549.881	30.819
	2554	151.0033	9.520	86.4815	1.70	ANDEN	1.47	91.5049	9.505	1363000.766	1050548.880	30.785
E1055-E1044	E1044	0.0000	104.845	90.2833	1.70	ESTACION	1.47	118.3927	104.836	1362951.165	1050631.604	31.524
	E1028	271.5554	335.322	90.2558	1.70	DELTA	1.47	210.3244	335.312	1362661.730	1050462.306	28.765
	E1056	182.5311	117.650	89.3619	1.70	DELTA	1.47	121.2791	117.647	1362890.082	1050732.151	32.109
	2555	355.0115	113.579	90.2414	1.70	BORDE_VIA	1.47	293.4135	113.576	1362996.296	1050527.379	30.497
	2556	353.3541	93.522	90.2118	1.70	BORDE_VIA	1.47	291.9874	93.520	1362986.179	1050544.886	30.719
	2557	4.1427	33.758	89.5850	1.70	ANDEN	1.47	302.6335	33.758	1362969.370	1050603.175	31.310
	2558	7.3129	33.932	89.5737	1.70	ANDEN	1.47	305.9174	33.932	1362971.070	1050604.124	31.322
	2559	351.4217	34.828	90.0645	1.70	BORDE_VIA	1.47	290.0974	34.828	1362963.133	1050598.897	31.230
	2560	21.0945	4.541	87.2512	1.70	ANDEN	1.47	319.5552	4.536	1362954.617	1050628.661	31.503
	2561	40.4345	5.532	87.3318	1.70	ANDEN	1.47	339.1219	5.527	1362956.329	1050629.634	31.534
	2562	340.5549	37.052	90.2203	1.70	BORDE_VIA	1.47	279.3230	37.051	1362957.167	1050595.042	31.060
	2563	72.1444	12.753	89.3846	1.70	BORDE_VIA	1.47	10.6383	12.753	1362963.699	1050633.958	31.377
	2564	303.3432	16.701	89.4753	1.70	BORDE_VIA	1.47	241.9683	16.701	1362943.316	1050616.862	31.357
	2565	290.0923	19.719	89.4236	1.70	BORDE_VIA	1.47	228.5491	19.719	1362938.112	1050616.824	31.398
	2566	255.1553	18.631	89.1822	1.70	BORDE_VIA	1.47	193.6574	18.630	1362933.062	1050627.205	31.524
	2567	252.5734	18.890	89.0419	1.70	BORDE_VIA	1.47	191.3521	18.888	1362932.647	1050627.886	31.604
	2568	256.2442	23.131	89.1858	1.70	BORDE_VIA	1.47	194.8044	23.129	1362928.804	1050625.694	31.574
	2569	244.4617	15.793	89.3204	1.70	BORDE_VIA	1.47	183.1641	15.792	1362935.397	1050630.732	31.426
	2570	225.0444	20.327	89.1710	1.70	BORDE_VIA	1.47	163.4716	20.325	1362931.680	1050637.386	31.551
	2571	122.5727	1.790	81.4502	1.70	ANDEN	1.47	61.3502	1.771	1362952.014	1050633.158	31.555
	2572	107.3601	3.792	85.3555	1.70	ANDEN	1.47	45.9930	3.781	1362953.792	1050634.323	31.589
	2573	98.0526	8.437	89.1912	1.70	BORDE_VIA	1.47	36.4833	8.436	1362957.948	1050636.620	31.398
	2574	323.3406	9.404	87.5344	1.70	BORDE_VIA	1.47	261.9610	9.398	1362949.851	1050622.299	31.643
	2575	220.4009	9.098	88.0521	1.70	BORDE_VIA	1.47	159.0619	9.093	1362942.673	1050634.853	31.601
	2576	188.4407	3.239	84.2931	1.70	BORDE_VIA	1.47	127.1280	3.224	1362949.219	1050634.174	31.609
	2577	183.3252	11.122	88.1007	1.70	BORDE_VIA	1.47	121.9405	11.116	1362945.284	1050641.037	31.654



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1056-E1055	E1055	0.0001	117.644	90.1226	1.70	ESTACION	1.48	121.2791	117.647	1362890.082	1050732.151	32.109
	E1025	269.2742	315.137	90.1612	1.70	DELTA	1.48	210.7408	315.134	1362619.228	1050571.069	30.406
	E1024	268.4113	188.766	89.5902	1.70	DELTA	1.48	209.9660	188.766	1362726.550	1050637.865	31.944
	E1057	177.4200	111.818	89.3955	1.70	DELTA	1.48	118.9791	111.816	1362835.908	1050829.967	32.544
	2578	14.3621	15.188	89.3816	1.70	ANDEN	1.48	315.8849	15.188	1362900.986	1050721.579	31.987
	2579	21.0814	15.779	89.2117	1.70	ANDEN	1.48	322.4163	15.778	1362902.585	1050722.528	32.068
	2580	22.5635	9.968	89.0936	1.70	ANDEN	1.48	324.2221	9.967	1362898.168	1050726.324	32.037
	2581	32.1217	10.960	88.5704	1.70	ANDEN	1.48	333.4838	10.958	1362899.887	1050727.259	32.091
	2582	30.5154	15.889	90.0725	1.70	BORDE_VIA	1.48	332.1441	15.889	1362904.130	1050724.727	31.856
	2583	41.2611	18.363	90.1515	1.70	BORDE_VIA	1.48	342.7155	18.363	1362907.615	1050726.695	31.809
	2584	345.1955	14.230	89.2655	1.70	BORDE_VIA	1.48	286.6110	14.229	1362894.150	1050718.515	32.028
	2585	38.2337	13.658	90.0928	1.70	BORDE_VIA	1.48	339.6727	13.658	1362902.889	1050727.406	31.853
	2586	46.1323	15.655	90.1738	1.70	BORDE_VIA	1.48	347.5021	15.655	1362905.366	1050728.763	31.810
	2587	190.1813	16.916	88.5910	1.70	BORDE_VIA	1.48	131.5827	16.913	1362878.856	1050744.802	32.190
	2588	171.4138	31.605	89.2845	1.70	ANDEN	1.48	112.9730	31.604	1362877.747	1050761.248	32.178
	2589	188.2704	32.207	89.2725	1.70	ANDEN	1.48	129.7302	32.206	1362869.497	1050756.919	32.196
	2590	299.1020	16.154	89.5746	1.70	BORDE_VIA	1.48	240.4513	16.154	1362882.115	1050718.098	31.901
	2591	288.3621	24.501	89.4346	1.70	BORDE_VIA	1.48	229.8849	24.501	1362874.295	1050713.414	32.006
	2592	314.3505	16.398	89.5213	1.70	BORDE_VIA	1.48	255.8638	16.398	1362886.077	1050716.249	31.928
	2593	329.5233	23.590	89.3806	1.70	BORDE_VIA	1.48	271.1549	23.590	1362890.557	1050708.566	32.041
	2594	263.4727	14.929	89.4916	1.70	BORDE_VIA	1.48	205.0699	14.929	1362876.559	1050725.825	31.937
	2595	247.4430	12.303	89.2207	1.70	BORDE_VIA	1.48	189.0208	12.302	1362877.932	1050730.222	32.026
	2596	215.3958	19.181	88.5647	1.70	BORDE_VIA	1.48	156.9452	19.178	1362872.436	1050739.661	32.243
E1057-E1056	E1056	0.0001	111.808	90.0938	1.70	ESTACION	1.47	118.9791	111.816	1362835.908	1050829.967	32.544
	E1017	272.3349	168.383	89.5616	1.70	DELTA	1.47	211.5427	168.383	1362692.404	1050741.880	32.497
	E1058	180.5809	104.671	89.4943	1.70	DELTA	1.47	119.9483	104.671	1362783.655	1050920.662	32.627
	2597	3.5335	36.458	89.5500	1.70	ANDEN	1.47	302.8721	36.458	1362855.696	1050799.347	32.367
	2598	7.0235	36.578	89.4957	1.70	ANDEN	1.47	306.0221	36.578	1362857.419	1050800.383	32.421
	2599	8.3818	29.130	90.0111	1.70	ANDEN	1.47	307.6174	29.130	1362853.689	1050806.893	32.304
	2600	4.4319	28.906	90.0313	1.70	ANDEN	1.47	303.7010	28.906	1362851.947	1050805.919	32.287
	2601	347.0550	23.204	89.4218	1.70	BORDE_VIA	1.47	286.0763	23.204	1362842.334	1050807.671	32.433
	2602	308.1723	17.221	89.3414	1.70	BORDE_VIA	1.47	247.2688	17.221	1362829.254	1050814.084	32.443
	2603	325.5451	23.751	89.4930	1.70	BORDE_VIA	1.47	264.8933	23.751	1362833.794	1050806.311	32.386
	2604	204.0344	14.515	89.3116	1.70	BORDE_VIA	1.47	143.0413	14.514	1362824.310	1050838.694	32.435
	2605	303.1022	17.672	89.3116	1.70	BORDE_VIA	1.47	242.1519	17.671	1362827.653	1050814.342	32.462
	2606	298.1651	20.736	89.3632	1.70	BORDE_VIA	1.47	237.2599	20.736	1362824.694	1050812.526	32.455



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2607	291.5241	19.885	89.3949	1.70	BORDE_VIA	1.47	230.8571	19.885	1362823.356	1050814.545	32.431
	2608	286.1708	27.496	89.3457	1.70	BORDE_VIA	1.47	225.2646	27.495	1362816.556	1050810.436	32.514
	2609	271.1751	25.506	90.0121	1.70	BORDE_VIA	1.47	210.2766	25.506	1362813.881	1050817.108	32.304
	2610	270.2225	17.642	89.5209	1.70	BORDE_VIA	1.47	209.3527	17.642	1362820.531	1050821.319	32.354
	2611	256.1401	15.480	89.3757	1.70	BORDE_VIA	1.47	195.2127	15.480	1362820.971	1050825.905	32.413
	2612	230.5111	17.980	89.2325	1.70	BORDE_VIA	1.47	169.8321	17.979	1362818.211	1050833.141	32.505
	2613	165.5809	7.215	89.0748	1.70	ANDEN	1.47	104.9483	7.214	1362834.047	1050836.937	32.423
	2614	152.1729	7.927	89.0002	1.70	ANDEN	1.47	91.2705	7.926	1362835.732	1050837.891	32.452
	2615	166.3558	15.019	89.2603	1.70	ANDEN	1.47	105.5785	15.018	1362831.875	1050844.434	32.462
	2616	174.0850	14.643	89.4156	1.70	ANDEN	1.47	113.1263	14.643	1362830.157	1050843.433	32.391
	2617	113.5302	5.464	87.1013	1.70	ESTRUCTURA	1.47	52.8630	5.457	1362839.203	1050834.318	32.584
	2618	144.3814	16.944	90.0252	1.70	PARAMENTO	1.47	83.6163	16.944	1362837.792	1050846.806	32.300
	2619	100.1545	12.492	85.4015	2.25	ESTRUCTURA	1.47	39.2416	12.456	1362845.555	1050837.847	32.707
	2620	48.4356	6.864	88.1216	1.70	ESTRUCTURA	1.47	347.7113	6.861	1362842.611	1050828.507	32.529
	2621	130.0309	19.688	89.5047	1.70	PARAMENTO	1.47	69.0316	19.688	1362842.953	1050848.351	32.367
	2622	155.0717	31.401	89.3641	1.70	PARAMENTO	1.47	94.1005	31.400	1362833.663	1050861.287	32.527
	2623	173.5345	29.828	89.1249	1.70	ANDEN	1.47	112.8749	29.825	1362824.314	1050857.447	32.723
	2624	177.4408	29.708	89.2540	1.70	ANDEN	1.47	116.7146	29.707	1362822.554	1050856.503	32.611
E1058-E1057	E1057	0.0000	104.657	90.0005	1.70	ESTACION	1.51	119.9483	104.671	1362783.655	1050920.662	32.627
	E1012	269.5724	151.963	89.5117	1.70	DELTA	1.51	209.9049	151.963	1362651.925	1050844.899	32.818
	E1059	179.5943	112.791	89.3828	1.70	DELTA	1.51	119.9435	112.789	1362727.357	1051018.395	33.139
	2625	354.0150	55.719	89.4852	1.70	BORDE_VIA	1.51	293.9788	55.719	1362806.299	1050869.752	32.613
	2626	343.1930	48.146	89.5326	1.70	BORDE_VIA	1.51	283.2733	48.146	1362794.709	1050873.802	32.525
	2627	331.4016	29.375	89.2653	1.70	BORDE_VIA	1.51	271.6194	29.374	1362784.485	1050891.300	32.716
	2628	1.4542	60.673	89.5839	1.70	ANDEN	1.51	301.7099	60.673	1362815.546	1050869.046	32.457
	2629	6.1329	46.753	89.5625	1.70	PARAMENTO	1.51	306.1730	46.753	1362811.249	1050882.921	32.482
	2630	290.0425	15.132	88.3427	1.70	BORDE_VIA	1.51	230.0219	15.127	1362773.935	1050909.070	32.809
	2631	262.0346	35.307	89.2658	1.70	BORDE_VIA	1.51	202.0110	35.305	1362750.923	1050907.430	32.772
	2632	247.4426	16.126	88.2718	1.70	BORDE_VIA	1.51	187.6888	16.120	1362767.679	1050918.505	32.868
	2633	218.1333	22.793	88.4441	1.70	BORDE_VIA	1.51	158.1741	22.788	1362762.501	1050929.134	32.932
	2634	257.2152	35.887	88.5623	1.70	PARAMENTO	1.51	197.3127	35.881	1362749.399	1050909.984	33.097
	2635	245.4612	20.879	88.0850	1.70	PARAMENTO	1.51	185.7183	20.868	1362762.890	1050918.583	33.108
	2636	214.1142	33.926	88.5009	1.70	PARAMENTO	1.51	154.1433	33.919	1362753.131	1050935.455	33.122
	2637	196.5421	20.318	88.2051	1.70	BORDE_VIA	1.51	136.8541	20.310	1362768.836	1050934.551	33.019
	2638	118.2252	19.925	89.5158	1.70	PARAMENTO	1.51	58.3294	19.925	1362794.116	1050937.620	32.480
	2639	109.5638	23.882	90.0412	1.70	PARAMENTO	1.51	49.8921	23.882	1362799.040	1050938.928	32.404



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2640	129.0152	23.953	89.4905	1.70	PARAMENTO	1.51	68.9794	23.953	1362792.247	1050943.021	32.509
	2641	103.5738	18.637	89.1629	1.70	PARAMENTO	1.51	43.9088	18.636	1362797.080	1050933.586	32.669
	2642	24.2119	4.113	86.3518	1.70	POSTE	1.51	324.3035	4.106	1362786.989	1050918.266	32.678
	2643	315.3823	8.187	86.5820	1.70	POSTE	1.51	255.5880	8.176	1362781.620	1050912.743	32.865
	2644	280.2500	1.442	79.1029	1.70	MANHOLE	1.51	220.3649	1.416	1362782.575	1050919.744	32.704
E1059-E1058	E1058	0.0001	112.791	90.1006	1.70	ESTACION	1.49	119.9435	112.789	1362727.357	1051018.395	33.139
	E1060	186.2612	181.748	89.4850	1.50	DELTA	1.49	126.3802	181.747	1362619.555	1051164.720	33.715
	2645	336.1807	15.739	88.4956	1.70	BORDE_VIA	1.49	276.2455	15.736	1362729.068	1051002.753	33.245
	2646	326.0220	4.263	85.5054	1.70	MANHOLE	1.49	265.9824	4.252	1362727.059	1051014.154	33.233
	2647	220.5511	8.617	87.3321	1.70	POSTE	1.49	160.8633	8.609	1362719.223	1051021.218	33.292
	2648	201.5527	14.816	88.5452	1.70	BORDE_VIA	1.49	141.8677	14.813	1362715.705	1051027.542	33.205
	2649	191.4339	22.924	89.2353	1.70	BORDE_VIA	1.49	131.6710	22.923	1362712.116	1051035.518	33.165
	2650	185.4311	33.257	89.2559	1.70	BORDE_VIA	1.49	125.6633	33.255	1362707.968	1051045.414	33.254
	2651	191.4014	42.931	89.0928	1.70	BORDE_VIA	1.49	131.6141	42.926	1362698.849	1051050.489	33.555
	2652	194.2108	41.987	89.1208	1.70	POSTE	1.49	134.2958	41.983	1362698.037	1051048.444	33.509
	2653	202.5501	29.212	88.3857	1.70	BORDE_VIA	1.49	142.8605	29.204	1362704.076	1051036.027	33.613
	2654	250.4812	13.977	87.5952	1.70	BORDE_VIA	1.49	190.7469	13.968	1362713.633	1051015.791	33.413
	2655	271.3621	19.633	89.0119	1.70	VALVULA	1.49	211.5494	19.630	1362710.628	1051008.124	33.260
	2656	267.2940	26.675	89.1122	1.70	BORDE_VIA	1.49	207.4380	26.672	1362703.685	1051006.105	33.302
	2657	267.4354	30.345	89.2152	1.70	BORDE_VIA	1.49	207.6752	30.343	1362700.485	1051004.302	33.261
	2658	305.5648	16.545	88.3416	1.70	BORDE_VIA	1.49	245.8902	16.540	1362720.600	1051003.298	33.337
	2659	324.1013	23.259	89.0101	1.70	BORDE_VIA	1.49	264.1138	23.256	1362724.972	1050995.262	33.323
	2660	130.5137	12.647	87.5000	1.70	PARAMENTO	1.49	70.8038	12.638	1362731.512	1051030.331	33.403
	2661	120.0253	11.695	87.3628	1.70	PARAMENTO	1.49	59.9916	11.685	1362733.200	1051028.514	33.413
	2662	137.5651	10.020	88.1153	1.70	PARAMENTO	1.49	77.8910	10.015	1362729.457	1051028.187	33.240
	2663	82.5957	10.309	89.0713	1.70	PARAMENTO	1.49	22.9427	10.308	1362736.849	1051022.413	33.083
	2664	66.2936	17.773	90.0218	1.70	PARAMENTO	1.49	6.4369	17.773	1362745.017	1051020.388	32.913
	2665	73.3000	24.329	88.5450	1.70	PARAMENTO	1.49	13.4435	24.325	1362751.015	1051024.050	33.386
	2666	69.1130	27.037	89.1109	1.70	PARAMENTO	1.49	9.1352	27.034	1362754.048	1051022.687	33.309
	2667	71.5941	26.957	89.0426	1.70	PARAMENTO	1.49	11.9383	26.953	1362753.727	1051023.971	33.360
	2668	68.1159	16.469	88.4425	1.70	PARAMENTO	1.49	8.1433	16.465	1362743.656	1051020.728	33.287
	2669	61.4606	12.690	88.3852	1.70	PARAMENTO	1.49	1.7119	12.686	1362740.037	1051018.774	33.224
	2670	78.4855	11.413	88.1542	1.70	PARAMENTO	1.49	18.7588	11.408	1362738.158	1051022.064	33.271
E1060-E1059	E1059	359.5959	181.745	90.0756	1.50	ESTACION	1.53	126.3802	181.747	1362619.555	1051164.720	33.715
	E1061	265.4729	166.423	90.0545	1.70	DELTA	1.53	212.1716	166.423	1362478.685	1051076.107	33.261
E1060-E1059	E1059	0.0001	181.753	90.0638	1.70	ESTACION	1.46	126.3802	181.747	1362619.555	1051164.720	33.715



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E1061	265.4733	166.427	90.0439	1.70	DELTA	1.46	212.1727	166.427	1362478.683	1051076.102	33.252
	2671	21.0300	4.599	89.1243	1.70	BORDE_VIA	1.46	327.4302	4.599	1362623.430	1051162.244	33.540
	2672	13.1603	6.461	89.0743	1.70	BORDE_VIA	1.46	319.6477	6.460	1362624.478	1051160.537	33.575
	2673	349.2434	4.957	87.5316	1.70	PARAMENTO	1.46	295.7896	4.954	1362621.710	1051160.259	33.660
	2674	348.0847	7.954	88.3524	1.70	PARAMENTO	1.46	294.5266	7.952	1362622.856	1051157.486	33.673
	2675	55.5342	11.599	88.2644	1.70	PARAMENTO	1.46	2.2752	11.595	1362631.141	1051165.180	33.791
	2676	57.5303	10.152	88.2832	1.70	PARAMENTO	1.46	4.2644	10.148	1362629.675	1051165.474	33.747
	2677	55.2138	8.279	89.4152	1.70	BORDE_VIA	1.46	1.7408	8.279	1362627.830	1051164.971	33.520
	2678	357.3358	2.830	88.0649	1.70	BORDE_VIA	1.46	303.9463	2.828	1362621.134	1051162.373	33.570
	2679	40.4536	10.091	89.3610	1.70	BORDE_VIA	1.46	347.1402	10.091	1362629.393	1051162.474	33.547
	2680	284.4644	8.687	89.1122	1.70	BORDE_VIA	1.46	231.1591	8.686	1362614.107	1051157.954	33.600
	2681	298.3354	9.402	88.5039	1.70	PARAMENTO	1.46	244.9452	9.400	1362615.574	1051156.204	33.666
	2682	67.5235	9.149	89.2624	1.70	BORDE_VIA	1.46	14.2566	9.149	1362628.422	1051166.973	33.566
	2683	72.3807	12.083	89.3145	1.70	BORDE_VIA	1.46	19.0155	12.083	1362630.978	1051168.656	33.576
	2684	60.5632	13.906	88.4339	1.70	PARAMENTO	1.46	7.3224	13.903	1362633.344	1051166.492	33.786
	2685	69.3049	17.676	89.0249	1.70	PARAMENTO	1.46	15.8938	17.674	1362636.553	1051169.560	33.771
	2686	100.3235	9.175	89.5601	1.70	BORDE_VIA	1.46	46.9233	9.175	1362625.821	1051171.421	33.487
	2687	95.2824	13.452	89.4927	1.70	BORDE_VIA	1.46	41.8535	13.452	1362629.575	1051173.695	33.518
	2688	112.3403	11.299	88.5631	1.70	PARAMENTO	1.46	58.9477	11.297	1362625.382	1051174.398	33.685
	2689	106.5637	13.956	88.5631	1.70	PARAMENTO	1.46	53.3238	13.954	1362627.889	1051175.911	33.735
	2690	113.5519	8.231	90.0003	1.70	BORDE_VIA	1.46	60.3021	8.231	1362623.633	1051171.869	33.477
	2691	134.1000	10.977	89.4219	1.70	BORDE_VIA	1.46	80.5469	10.977	1362621.358	1051175.547	33.533
	2692	129.1710	13.976	89.0406	1.70	PARAMENTO	1.46	75.6663	13.974	1362623.015	1051178.259	33.704
	2693	247.2840	7.574	89.0949	1.70	BORDE_VIA	1.46	193.8580	7.573	1362612.202	1051162.906	33.587
	2694	159.0906	2.468	88.5055	1.70	BORDE_VIA	1.46	105.5319	2.468	1362618.894	1051167.097	33.526
	2695	146.2839	4.125	90.1414	1.70	BORDE_VIA	1.46	92.8577	4.125	1362619.349	1051168.839	33.460
	2696	185.0944	5.252	88.4157	1.70	PARAMENTO	1.46	131.5424	5.251	1362616.073	1051168.650	33.596
	2697	165.5314	12.478	89.3508	1.70	BORDE_VIA	1.46	112.2674	12.478	1362614.827	1051176.267	33.567
	2698	180.3420	10.536	89.0632	1.70	PARAMENTO	1.46	126.9524	10.535	1362613.222	1051173.138	33.641
	2699	232.1928	9.442	89.0331	1.70	PARAMENTO	1.46	178.7046	9.441	1362610.117	1051164.933	33.632
	2700	82.0939	4.764	87.3855	1.70	MANHOLE	1.46	28.5410	4.760	1362623.737	1051166.994	33.672
E1061-E1060	E1060	0.0000	166.426	89.4636	1.70	ESTACION	1.52	212.1716	166.423	1362478.685	1051076.107	33.261
	E1000	177.1110	34.346	94.0057	1.70	DELTA	1.52	209.3577	34.262	1362448.824	1051059.310	30.673
	2701	165.1302	14.833	94.2117	1.70	BORDE_VIA	1.52	197.3888	14.790	1362464.571	1051071.687	31.952
	2702	189.4703	17.015	94.1143	1.70	BORDE_VIA	1.52	221.9558	16.969	1362466.066	1051064.762	31.834
	2703	196.5500	17.619	93.3752	1.70	BORDE_VIA	1.52	229.0883	17.584	1362467.170	1051062.818	31.963



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2704	165.0559	15.902	94.3556	1.70	BORDE_VIA	1.52	197.2713	15.851	1362463.549	1051071.401	31.803
	2705	186.0404	11.717	94.2835	1.70	BORDE_VIA	1.52	218.2394	11.681	1362469.510	1051068.877	32.164
	2706	163.3702	16.917	94.5027	1.70	BORDE_VIA	1.52	195.7888	16.857	1362462.465	1051071.520	31.651
	2707	197.0050	14.444	88.5446	1.70	PARAMENTO	1.52	229.1855	14.441	1362469.246	1051065.177	33.353
	2708	154.4243	15.317	97.5930	0.09	PARAMENTO	1.52	186.8835	15.168	1362463.626	1051074.289	32.564
	2709	326.2124	8.655	87.5620	1.70	PARAMENTO	1.52	358.5283	8.649	1362487.332	1051075.885	33.390
	2710	349.2114	8.631	89.0632	1.70	BORDE_VIA	1.52	21.5255	8.630	1362486.713	1051079.273	33.213
	2711	19.3150	8.986	87.5945	1.70	BORDE_VIA	1.52	51.7021	8.981	1362484.251	1051083.155	33.393
	2712	41.1946	9.851	87.3415	1.70	PARAMENTO	1.52	73.5010	9.842	1362481.480	1051085.544	33.496
	2713	176.1804	20.197	94.2247	1.70	MANHOLE	1.52	208.4727	20.138	1362460.983	1051066.506	31.536
	2714	175.0335	21.727	94.3105	1.70	MANHOLE	1.52	207.2313	21.659	1362459.426	1051066.196	31.367
	2715	170.2305	23.818	94.4940	1.70	BORDE_VIA	1.52	202.5563	23.733	1362456.767	1051067.003	31.074
	2716	164.1911	25.596	94.3042	1.70	PARAMENTO	1.52	196.4913	25.517	1362454.218	1051068.863	31.065
	2717	158.4238	26.355	94.3631	1.70	PARAMENTO	1.52	190.8821	26.270	1362452.888	1051071.147	30.961
	2718	165.3911	22.563	94.4916	1.70	BORDE_VIA	1.52	197.8246	22.483	1362457.281	1051069.225	31.182
	2719	171.3434	27.081	94.4448	1.70	BORDE_VIA	1.52	203.7477	26.988	1362453.982	1051065.238	30.837
	2720	165.4008	27.970	94.2106	1.70	PARAMENTO	1.52	197.8405	27.889	1362452.137	1051067.562	30.956
	2721	182.1553	27.694	94.3958	1.70	BORDE_VIA	1.52	214.4363	27.602	1362455.920	1051060.498	30.826
	2722	188.4155	27.617	92.1927	1.70	PARAMENTO	1.52	220.8702	27.594	1362457.819	1051058.050	31.958
	2723	189.3806	25.191	91.4921	1.70	PARAMENTO	1.52	221.8066	25.178	1362459.917	1051059.322	32.277
	2724	187.4746	22.152	93.5924	1.70	BORDE_VIA	1.52	219.9677	22.098	1362461.749	1051061.912	31.537
	2725	182.4427	23.802	94.4141	1.70	BORDE_VIA	1.52	214.9124	23.722	1362459.232	1051062.530	31.130
	2726	195.1249	25.712	90.2235	1.70	PARAMENTO	1.52	227.3852	25.711	1362461.277	1051057.185	32.910
E1000-E1061	E1061	0.0000	34.384	85.2249	1.70	ESTACION	1.51	209.3577	34.262	1362448.824	1051059.310	30.673
	E1001	184.0250	100.958	90.4226	1.70	DELTA	1.51	213.4049	100.950	1362364.550	1051003.731	29.234
	2727	27.2935	22.172	84.4724	1.70	PARAMENTO	1.51	56.8508	22.080	1362460.898	1051077.796	32.493
	2728	336.5444	22.790	82.2241	1.70	PARAMENTO	1.51	6.2699	22.589	1362471.277	1051061.777	33.503
	2729	28.0513	19.040	87.3455	1.70	BORDE_VIA	1.51	57.4446	19.023	1362459.060	1051075.344	31.283
	2730	335.0434	13.929	84.4020	1.70	BORDE_VIA	1.51	4.4338	13.869	1362462.651	1051060.382	31.773
E1041		0.0000				ESTACION		0.0000		1362944.023	1050337.075	29.137
E1042	E1041	0.0000	151.779	90.1729	1.50	ESTACION	1.39	31.1421		1363073.931	1050415.572	29.992
	E1043	89.4121	125.761	90.0016	1.50	DELTA	1.39	300.8313	125.761	1363138.385	1050307.583	29.870
	1831	0.0000	117.164	90.1330	1.50	ALINEAMENT	1.39	211.1421	117.163	1362973.653	1050354.979	29.420
	1832	0.0000	73.269	90.2731	1.50	ALINEAMIENT	1.39	211.1421	73.267	1363011.223	1050377.681	29.294
	1833	356.5038	74.350	90.1936	1.50	PARAMENTO	1.39	207.9860	74.349	1363008.277	1050380.683	29.456
	1834	358.2344	75.070	90.2627	1.50	BORDE_VIA	1.39	209.5377	75.068	1363008.620	1050378.564	29.303



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1835	355.4236	57.660	90.2408	1.50	PARAMENTO	1.39	206.8521	57.659	1363022.490	1050389.528	29.475
	1836	354.0533	57.613	90.2150	1.50	PARAMENTO	1.39	205.2346	57.612	1363021.817	1050391.010	29.514
	1837	4.5832	77.749	90.1655	1.50	PARAMENTO	1.39	216.1177	77.748	1363011.126	1050369.743	29.498
	1838	2.5838	76.769	90.2606	1.50	BORDE_VIA	1.39	214.1194	76.767	1363010.378	1050372.512	29.297
	1839	355.3127	39.607	90.5404	1.50	BORDE_VIA	1.39	206.6663	39.602	1363038.542	1050397.799	29.257
	1840	350.5342	40.398	90.4005	1.50	PARAMENTO	1.39	202.0371	40.395	1363036.487	1050400.415	29.409
	1841	9.5451	36.538	90.3251	1.50	PARAMENTO	1.39	221.0563	36.536	1363046.381	1050391.575	29.531
	1842	15.5358	26.088	90.1642	1.50	PARAMENTO	1.39	227.0416	26.088	1363056.153	1050396.479	29.753
	1843	357.3400	47.028	90.5316	1.50	SUMIDERO	1.39	208.7088	47.022	1363032.689	1050392.984	29.152
	1844	357.0550	47.866	90.5317	1.50	SUMIDERO	1.39	208.2394	47.860	1363031.768	1050392.926	29.138
	1845	4.5219	48.283	90.4850	1.50	SUMIDERO	1.39	216.0141	48.278	1363034.881	1050387.185	29.194
	1846	4.1433	47.426	90.4849	1.50	SUMIDERO	1.39	215.3846	47.421	1363035.270	1050388.112	29.207
	1847	358.3413	49.203	90.5111	1.50	MANHOL	1.39	209.7124	49.198	1363031.202	1050391.187	29.148
	1848	358.1423	35.743	90.5350	1.50	MANHOL	1.39	209.3819	35.739	1363042.790	1050398.037	29.321
	1849	354.2647	33.155	90.5801	1.50	BORDE_VIA	1.39	205.5885	33.150	1363044.033	1050401.254	29.321
	1850	5.4605	25.251	90.5357	1.50	BORDE_VIA	1.39	216.9102	25.248	1363053.744	1050400.409	29.484
	1851	7.3751	17.028	90.2238	1.50	BORDE_VIA	1.39	218.7730	17.028	1363060.656	1050404.908	29.768
	1852	11.4147	14.197	90.0444	1.50	BORDE_VIA	1.39	222.8385	14.197	1363063.521	1050405.919	29.861
	1853	25.0003	12.933	89.5957	1.50	BORDE_VIA	1.39	236.1430	12.933	1363066.726	1050404.832	29.880
	1854	347.2027	17.051	90.3430	1.50	BORDE_VIA	1.39	198.4830	17.050	1363057.761	1050410.166	29.709
	1855	343.5941	14.883	90.2453	1.50	BORDE_VIA	1.39	195.1369	14.883	1363059.565	1050411.685	29.773
	1856	337.0757	13.736	90.2452	1.50	BORDE_VIA	1.39	188.2746	13.736	1363060.339	1050413.595	29.781
	1857	328.2610	13.609	90.0942	1.50	BORDE_VIA	1.39	179.5783	13.609	1363060.323	1050415.672	29.842
	1858	29.1207	14.390	89.2907	1.50	MANHOL	1.39	240.3441	14.389	1363066.812	1050403.067	30.010
	1859	304.3235	20.311	89.4834	1.50	BORDE_VIA	1.39	155.6852	20.311	1363055.422	1050423.935	29.948
	1860	287.5728	36.431	89.4919	1.50	BORDE_VIA	1.39	139.0999	36.431	1363046.395	1050439.424	29.993
	1861	275.1622	34.556	89.4600	1.50	BORDE_VIA	1.39	126.4149	34.556	1363053.418	1050443.380	30.021
	1862	274.3426	34.545	89.3313	1.50	BORDE_VIA	1.39	125.7160	34.544	1363053.766	1050443.619	30.149
	1863	262.4311	35.138	89.4413	1.50	BORDE_VIA	1.39	113.8619	35.138	1363059.717	1050447.706	30.042
	1864	242.3646	25.020	88.4450	1.50	PARAMENTO	1.39	93.7549	25.014	1363072.293	1050440.532	30.427
	1865	286.2940	12.379	89.2640	1.50	BORDE_VIA	1.39	137.6366	12.378	1363064.785	1050423.913	30.000
	1866	284.3304	12.264	89.0924	1.50	BORDE_VIA	1.39	135.6933	12.263	1363065.156	1050424.137	30.061
	1867	250.2444	12.476	89.1434	1.50	BORDE_VIA	1.39	101.5544	12.475	1363071.433	1050427.794	30.045
	1868	242.3026	13.171	88.5739	1.50	ANDEN	1.39	93.6494	13.169	1363073.093	1050428.714	30.119
	1869	197.5731	4.245	86.5445	1.50	BORDE_VIA	1.39	49.1008	4.239	1363076.707	1050418.776	30.109
	1870	162.1417	2.278	85.5857	1.50	BORDE_VIA	1.39	13.3802	2.272	1363076.142	1050416.098	30.040



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1871	147.5530	2.319	87.0525	1.50	BORDE_VIA	1.39	359.0671	2.316	1363076.247	1050415.534	29.998
	1872	131.0849	2.940	89.2416	1.50	SUMIDERO	1.39	342.2891	2.940	1363076.732	1050414.677	29.911
	1873	128.5245	4.215	90.3513	1.50	SUMIDERO	1.39	340.0213	4.215	1363077.893	1050414.132	29.837
	1874	114.1521	4.675	88.3647	1.50	BORDE_VIA	1.39	325.3980	4.674	1363077.778	1050412.918	29.993
	1875	115.5636	5.777	88.4036	1.50	BORDE_VIA	1.39	327.0855	5.775	1363078.780	1050412.433	30.014
	1876	123.5903	6.938	88.5139	1.50	BORDE_VIA	1.39	335.1263	6.937	1363080.225	1050412.654	30.018
	1877	134.5722	8.313	88.4249	1.50	ANDEN	1.39	346.0983	8.311	1363081.999	1050413.575	30.067
	1878	149.5137	13.524	89.2428	1.50	PARAMENTO	1.39	1.0024	13.523	1363087.453	1050415.808	30.020
	1879	150.3439	7.068	90.4157	1.50	SUMIDERO	1.39	1.7196	7.067	1363080.996	1050415.784	29.794
	1880	147.2203	7.905	90.2859	1.50	SUMIDERO	1.39	358.5096	7.905	1363081.833	1050415.366	29.814
	1881	123.3706	20.805	89.5837	1.50	PARAMENTO	1.39	334.7605	20.805	1363092.750	1050406.700	29.889
	1882	148.1022	30.520	89.4535	1.50	PARAMENTO	1.39	359.3149	30.520	1363104.449	1050415.207	30.008
	1883	104.3439	14.830	89.5417	1.50	ANDEN	1.39	315.7196	14.830	1363084.549	1050405.218	29.905
	1884	111.4454	15.458	89.4352	1.50	ANDEN	1.39	322.8905	15.458	1363086.259	1050406.245	29.953
	1885	96.2847	15.855	90.1017	1.50	BORDE_VIA	1.39	307.6219	15.855	1363083.610	1050403.014	29.833
	1886	92.0445	39.350	89.5432	1.50	BORDE_VIA	1.39	303.2213	39.350	1363095.490	1050382.653	29.943
	1887	75.0252	14.909	88.5622	1.50	SEPARADOR	1.39	286.1899	14.906	1363078.088	1050401.256	30.156
	1888	76.0711	14.853	88.5043	1.50	SEPARADOR	1.39	287.2619	14.850	1363078.338	1050401.391	30.180
	1889	80.2011	21.615	89.1800	1.50	POSTE	1.39	291.4785	21.613	1363081.845	1050395.459	30.144
	1890	86.1804	77.751	89.5752	1.50	SEPARADOR	1.39	297.4433	77.751	1363109.764	1050346.570	29.928
E1043-E1042	E1042	359.5959	125.752	89.5433	1.50	ESTACION	1.43	300.8313	125.761	1363138.385	1050307.583	29.870
	E1046	179.2024	210.915	90.0208	1.50	DELTA	1.43	300.1713	210.915	1363244.389	1050125.242	29.671
	E1045	179.4234	106.286	90.0109	1.50	DELTA	1.43	300.5408	106.286	1363192.395	1050216.043	29.766
	2097	359.5959	46.296	90.0239	1.50	LINEAMIENT	1.43	120.8310	46.296	1363114.658	1050347.337	29.766
	2098	0.0000	18.053	89.5252	1.50	LINEAMIENT	1.43	120.8313	18.053	1363129.133	1050323.085	29.839
	2098	0.0001	18.053	89.4544	1.50	LINEAMIENT	1.43	120.8316	18.053	1363129.133	1050323.085	29.876
	2099	6.3942	40.202	89.4910	1.50	SEPARADOR	1.43	127.4930	40.202	1363113.916	1050339.480	29.928
	2100	6.0534	40.153	89.5038	1.50	SEPARADOR	1.43	126.9241	40.153	1363114.263	1050339.683	29.911
	2100	7.1330	34.950	89.5059	1.50	POSTE	1.43	128.0563	34.950	1363116.841	1050335.103	29.893
	2101	20.0215	14.479	89.3825	1.50	SEPARADOR	1.43	140.8688	14.479	1363127.154	1050316.721	29.892
	2102	18.1352	14.376	89.4153	1.50	SEPARADOR	1.43	139.0624	14.376	1363127.526	1050317.003	29.877
	2103	356.3610	40.242	88.4318	2.60	SUMIDERO	1.43	117.4341	40.232	1363119.849	1050343.291	29.599
	2104	357.0828	39.400	88.4144	2.60	SUMIDERO	1.43	117.9724	39.390	1363119.910	1050342.371	29.598
	2105	25.1703	11.692	89.3830	1.50	SUMIDERO	1.43	146.1155	11.692	1363128.679	1050314.102	29.875
	2106	23.2151	11.505	89.3612	1.50	SUMIDERO	1.43	144.1955	11.505	1363129.055	1050314.314	29.881
	2107	356.0058	40.012	89.0608	1.50	HIDRANTE	1.43	116.8474	40.007	1363120.318	1050343.278	30.428



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2108	352.0225	8.766	89.4740	1.50	VALVULA	1.43	112.8716	8.766	1363134.978	1050315.660	29.833
	2109	325.0833	13.463	90.1313	1.50	POSTE	1.43	85.9738	13.463	1363139.331	1050321.013	29.750
	2110	344.4905	5.606	90.0030	1.50	MANHOL	1.43	105.6494	5.606	1363136.873	1050312.981	29.801
	2111	320.1537	16.149	87.4300	2.10	PARAMENTO	1.43	81.0916	16.136	1363140.884	1050323.525	29.845
	2112	172.0747	35.875	89.5912	1.50	SEPARADOR	1.43	292.9610	35.875	1363152.380	1050274.551	29.810
	2113	171.1327	35.841	89.3754	1.50	SEPARADOR	1.43	292.0555	35.840	1363151.844	1050274.366	30.032
	2114	171.4612	35.880	89.3754	1.50	POSTE	1.43	292.6013	35.879	1363152.174	1050274.459	30.032
	2115	314.3009	3.497	90.1403	1.50	ANDEN	1.43	75.3338	3.497	1363139.271	1050310.966	29.787
	2116	325.4209	2.155	87.4840	1.50	BORDE_VIA	1.43	86.5338	2.153	1363138.516	1050309.733	29.884
	2117	329.3034	1.261	84.5634	1.50	BORDE_VIA	1.43	90.3408	1.256	1363138.378	1050308.839	29.913
	2118	307.5356	0.824	85.1028	1.50	BORDE_VIA	1.43	68.7302	0.821	1363138.683	1050308.348	29.871
	2119	301.5500	23.107	90.2131	1.50	PARAMENTO	1.43	62.7480	23.107	1363148.966	1050328.125	29.657
	2120	200.3136	36.382	89.5019	1.50	PARAMENTO	1.43	321.3580	36.382	1363166.802	1050284.864	29.904
	2121	196.3247	35.493	89.0145	1.50	PARAMENTO	1.43	317.3777	35.488	1363164.499	1050283.552	30.403
	2122	191.2514	49.049	89.1214	2.00	PARAMENTO	1.43	312.2519	49.044	1363171.362	1050271.281	29.983
	2123	299.5925	5.216	90.1842	1.50	ANDEN	1.43	60.8216	5.216	1363140.928	1050312.137	29.773
E1045-E1043	E1043	0.0000	106.278	89.5100	1.50	ESTACION	1.33	300.5408	106.286	1363192.395	1050216.043	29.766
	E1046	179.1501	104.646	89.5757	1.50	DELTA	1.33	299.7910	104.646	1363244.387	1050125.226	29.659
	2125	2.2601	105.864	89.5018	1.50	POSTE	1.33	122.9744	105.864	1363134.777	1050304.853	29.896
	2126	7.1344	111.109	89.4840	1.50	MANHOL	1.33	127.7696	111.108	1363124.342	1050303.871	29.963
	2127	7.3605	110.362	89.4915	1.50	POSTE	1.33	128.1421	110.361	1363124.234	1050302.840	29.942
	2128	6.5407	108.941	89.5357	1.50	BORDE_VIA	1.33	127.4427	108.941	1363126.162	1050302.537	29.789
	2129	7.4754	96.705	89.5420	1.50	BORDE_VIA	1.33	128.3391	96.705	1363132.407	1050291.893	29.756
	2130	356.5658	87.249	89.4532	1.50	POSTE	1.33	117.4902	87.248	1363152.121	1050293.440	29.964
	2131	357.0846	87.612	89.4820	1.50	ANDEN	1.33	117.6869	87.611	1363151.687	1050293.623	29.894
	2132	358.2659	87.556	89.4820	1.50	ANDEN	1.33	118.9905	87.555	1363149.960	1050292.627	29.894
	2133	350.0838	59.173	89.3724	1.50	ANDEN	1.33	110.6846	59.172	1363171.494	1050271.400	29.986
	2134	357.4538	58.615	89.4923	1.50	BORDE_VIA	1.33	118.3013	58.615	1363164.605	1050267.651	29.778
	2135	350.0944	44.900	89.5322	1.50	POSTE	1.33	110.7030	44.900	1363176.522	1050258.043	29.684
	2136	350.1812	44.003	90.1035	1.50	BORDE_VIA	1.33	110.8441	44.003	1363176.737	1050257.165	29.461
	2137	349.1443	39.444	90.1829	1.50	BORDE_VIA	1.33	109.7860	39.443	1363179.043	1050253.157	29.385
	2138	348.4355	37.726	90.3534	1.50	BORDE_VIA	1.33	109.2727	37.724	1363179.943	1050251.652	29.207
	2139	353.4443	37.408	89.4816	1.50	ANDEN	1.33	114.2860	37.408	1363177.009	1050250.140	29.725
	2140	356.5500	37.167	89.5102	1.50	ANDEN	1.33	117.4574	37.167	1363175.258	1050249.023	29.694
	2141	358.0607	36.561	90.0034	1.50	BORDE_VIA	1.33	118.6427	36.561	1363174.869	1050248.129	29.591
	2142	359.2913	35.476	89.5617	1.50	BORDE_VIA	1.33	120.0277	35.476	1363174.642	1050246.757	29.635



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2143	359.4556	34.475	89.5024	1.50	BORDE_VIA	1.33	120.3063	34.475	1363174.998	1050245.806	29.693
	2144	335.5739	25.148	88.0305	2.60	PARAMENTO	1.33	96.5016	25.133	1363189.549	1050241.014	29.352
	2145	192.0300	42.054	91.4035	0.09	PARAMENTO	1.33	312.5908	42.036	1363220.843	1050185.095	29.782
	2146	192.4454	40.070	91.4701	0.09	ANDEN	1.33	313.2891	40.051	1363219.857	1050186.890	29.765
	2147	180.5206	39.880	89.5036	1.50	ANDEN	1.33	301.4091	39.880	1363213.178	1050182.006	29.706
	2148	179.3644	41.845	89.5036	1.50	ANDEN	1.33	300.1530	41.845	1363213.414	1050179.860	29.711
	2149	183.2351	27.705	90.0339	1.50	ANDEN	1.33	303.9383	27.705	1363207.862	1050193.057	29.568
	2150	187.2957	28.115	90.0108	1.50	ANDEN	1.33	308.0399	28.115	1363209.720	1050193.900	29.588
	2151	181.3313	46.516	91.0148	1.50	HIDRANTE	1.33	302.0944	46.508	1363217.105	1050176.642	28.761
	2152	181.3315	27.057	90.1810	1.50	BORDE_VIA	1.33	302.0949	27.057	1363206.771	1050193.121	29.454
	2153	179.5727	25.839	90.0619	1.50	BORDE_VIA	1.33	300.4983	25.839	1363205.508	1050193.779	29.549
	2154	178.0409	29.508	90.0350	1.50	MANHOL	1.33	298.6099	29.508	1363206.524	1050190.137	29.564
	2155	179.4711	23.773	90.2915	1.50	SUMIDERO	1.33	300.3271	23.772	1363204.398	1050195.523	29.395
	2156	180.5130	24.569	90.3057	1.50	SUMIDERO	1.33	301.3991	24.568	1363205.195	1050195.072	29.376
	2157	179.2227	23.602	90.1246	1.50	BORDE_VIA	1.33	299.9149	23.602	1363204.165	1050195.585	29.509
	2158	167.3305	24.560	89.5459	1.50	POSTE	1.33	288.0921	24.560	1363200.022	1050192.697	29.633
	2159	211.2002	9.738	89.5709	1.50	POSTE	1.33	331.8746	9.738	1363200.983	1050211.452	29.605
	2160	216.4536	6.557	89.0441	1.50	POSTE	1.33	337.3008	6.556	1363198.443	1050213.513	29.702
	2161	168.0146	28.649	89.4546	1.50	SEPARADOR	1.33	288.5702	28.649	1363201.518	1050188.885	29.716
	2162	168.5645	28.557	89.5408	1.50	SEPARADOR	1.33	289.4866	28.557	1363201.921	1050189.121	29.646
	2163	55.5352	6.405	88.3618	1.50	POSTE	1.33	176.4385	6.403	1363186.004	1050216.440	29.753
	2164	172.0954	40.828	89.5458	1.50	SEPARADOR	1.33	292.7058	40.828	1363208.154	1050178.379	29.657
	2165	171.3244	40.886	89.5056	1.50	SEPARADOR	1.33	292.0863	40.886	1363207.768	1050178.157	29.705
	2166	204.4036	25.185	90.1104	1.80	PARAMENTO	1.33	325.2174	25.185	1363213.080	1050201.675	29.216
	2167	174.2925	59.419	89.5523	1.50	POSTE	1.33	295.0310	59.419	1363217.535	1050162.204	29.677
	2168	195.2625	29.285	90.5731	1.50	SUMIDERO	1.33	315.9810	29.281	1363213.451	1050195.695	29.107
	2169	196.3138	29.940	90.5248	1.50	SUMIDERO	1.33	317.0680	29.936	1363214.313	1050195.652	29.137
	2170	165.2258	51.492	90.0356	1.50	BORDE_VIA	1.33	285.9235	51.492	1363206.522	1050166.526	29.538
	2171	61.5045	16.709	89.2514	1.50	MANHOL	1.33	182.3866	16.708	1363175.701	1050215.347	29.766
	2172	359.4106	40.599	89.4812	1.50	MANHOL	1.33	120.2258	40.599	1363171.957	1050251.122	29.736
	2173	359.0705	41.933	90.0603	1.50	VALVULA	1.33	119.6588	41.933	1363171.645	1050252.482	29.523
	2174	359.3758	45.862	89.5629	1.50	SUMIDERO	1.33	120.1735	45.862	1363169.344	1050255.691	29.644
	2175	358.5744	46.673	89.5849	1.50	SUMIDERO	1.33	119.5030	46.673	1363169.410	1050256.663	29.613
	2176	352.3924	38.014	90.2031	1.50	SUMIDERO	1.33	113.1974	38.013	1363177.421	1050250.983	29.370
	2177	351.3447	38.620	90.1949	1.50	SUMIDERO	1.33	112.1205	38.619	1363177.852	1050251.819	29.374
	2178	13.5733	59.731	89.4125	1.50	MANHOL	1.33	134.4999	59.730	1363150.529	1050258.645	29.920



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2179	196.4242	42.865	92.0352	0.09	PARAMENTO	1.33	317.2524	42.837	1363223.852	1050186.966	29.468
	2180	174.3833	43.750	89.5247	1.50	CAMA_TELEF	1.33	295.1833	43.750	1363211.011	1050176.451	29.689
	2181	193.0110	23.957	90.1132	1.50	CAJA_TELEF	1.33	313.5602	23.957	1363208.904	1050198.682	29.517
	2182	0.0001	49.005	89.5321	1.50	LINEAMIENT	1.33	120.5410	49.005	1363167.493	1050258.249	29.692
	2183	89.5416	1.472	89.0132	1.50	EJE_TUBO	1.33	210.4452	1.472	1363191.126	1050215.297	29.622
E1046-E1045	E1045	0.0000	104.632	89.5116	1.70	ESTACION	1.51	299.7910	104.646	1363244.387	1050125.226	29.659
	E1047	180.0039	119.687	90.0747	1.70	DELTA	1.51	299.8019	119.687	1363303.871	1050021.368	29.198
	2184	23.5257	11.711	89.0834	1.70	POSTE	1.51	143.6735	11.710	1363234.953	1050132.163	29.645
	2185	352.4352	8.170	88.2153	1.70	MANHOL	1.51	112.5221	8.167	1363241.259	1050132.770	29.702
	2186	279.4033	5.808	86.3720	1.70	POSTE	1.51	39.4669	5.798	1363248.863	1050128.912	29.812
	2187	341.5139	3.696	90.1604	1.70	SUMIDERO	1.51	101.6519	3.696	1363243.640	1050128.846	29.452
	2188	347.3047	2.764	89.3554	1.70	SUMIDERO	1.51	107.3041	2.764	1363243.565	1050127.865	29.489
	2189	54.1327	17.145	89.2824	1.70	MANHOL	1.51	174.0152	17.144	1363227.336	1050127.014	29.627
	2190	45.4244	18.464	90.1529	1.70	SUMIDERO	1.51	165.5033	18.464	1363226.511	1050129.848	29.386
	2191	45.0023	19.357	90.1217	1.70	SUMIDERO	1.51	164.7974	19.357	1363225.707	1050130.302	29.400
	2192	59.4836	18.586	89.3720	1.70	VALVULA	1.51	179.6010	18.586	1363225.802	1050125.356	29.592
	2193	45.5233	18.218	90.2233	1.70	BORDE_VIA	1.51	165.6669	18.218	1363226.736	1050129.736	29.350
	2194	48.2920	17.622	89.5228	1.70	BORDE_VIA	1.51	168.2799	17.622	1363227.132	1050128.806	29.508
	2195	58.3654	18.441	89.4347	1.70	BORDE_VIA	1.51	178.4060	18.441	1363225.953	1050125.739	29.556
	2196	77.1027	19.702	89.4345	1.70	BORDE_VIA	1.51	196.9652	19.702	1363225.542	1050119.477	29.562
	2197	72.0826	14.604	89.5238	1.70	BORDE_VIA	1.51	191.9316	14.604	1363230.098	1050122.207	29.501
	2198	75.0005	13.474	89.5828	1.70	BORDE_VIA	1.51	194.7924	13.474	1363231.359	1050121.786	29.475
	2199	79.4646	18.204	89.2447	1.70	HIDRANTE	1.51	199.5705	18.203	1363227.235	1050119.129	29.656
	2200	95.5550	4.805	85.3758	1.70	SEPARADOR	1.51	215.7216	4.791	1363240.497	1050122.429	29.835
	2201	100.5244	5.159	85.5338	1.70	SEPARADOR	1.51	220.6699	5.146	1363240.484	1050121.873	29.839
	2202	326.1027	17.928	88.5732	1.70	PARAMENTO	1.51	85.9652	17.925	1363245.648	1050143.107	29.795
	2203	318.1631	15.316	88.4727	1.70	PARAMENTO	1.51	78.0663	15.313	1363247.553	1050140.208	29.793
	2204	204.5957	25.299	89.1646	1.70	CERRAMIENT	1.51	324.7902	25.297	1363265.056	1050110.641	29.787
	2205	354.1742	4.843	89.1000	1.70	BORDE_VIA	1.51	114.0860	4.842	1363242.411	1050129.647	29.540
	2206	196.2526	24.002	89.4204	1.70	ANDEN	1.51	316.2149	24.002	1363261.715	1050108.618	29.595
	2207	169.3946	25.819	89.4624	1.70	POSTE	1.51	289.4538	25.819	1363252.986	1050100.881	29.571
	2208	183.1519	37.286	89.5044	1.70	VALVULA	1.51	303.0463	37.286	1363264.719	1050093.972	29.570
	2209	182.1140	75.855	89.5934	1.70	MANHOL	1.51	301.9855	75.855	1363284.568	1050060.887	29.479
	2210	175.4454	60.277	90.0056	1.70	POSTE	1.51	295.5394	60.277	1363270.374	1050070.839	29.453
	2211	180.0038	59.773	90.0357	1.70	LINEAMIENT	1.51	299.8016	59.773	1363274.094	1050073.358	29.401
	2212	180.5229	52.679	90.0024	1.70	BORDE_VIA	1.51	300.6658	52.679	1363271.255	1050079.914	29.463



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2213	165.4703	52.290	90.0024	1.70	BORDE_VIA	1.51	285.5752	52.290	1363258.427	1050074.856	29.463
	2214	186.5407	58.119	90.0734	1.70	ANDEN	1.51	306.6930	58.119	1363279.114	1050078.624	29.341
E1047-E1046	E1046	0.0000	119.684	89.4208	1.70	ESTACION	1.54	299.8019	119.687	1363303.871	1050021.368	29.198
	E1048	180.4636	126.703	90.0303	1.70	DELTA	1.54	300.5785	126.703	1363368.328	1049912.285	28.921
	2215	347.3406	13.681	88.4307	1.70	MANHOL	1.54	107.3702	13.678	1363299.788	1050034.422	29.339
	2216	345.0823	26.831	89.1051	1.70	POSTE	1.54	104.9416	26.828	1363296.954	1050047.289	29.417
	2217	349.5656	9.832	88.0025	1.70	VALVULA	1.54	109.7508	9.826	1363300.551	1050030.616	29.375
	2218	9.3505	25.369	89.2010	1.70	POSTE	1.54	129.3866	25.367	1363287.775	1050040.974	29.327
	2219	354.5014	19.245	89.4456	1.70	SUMIDERO	1.54	114.6391	19.245	1363295.848	1050038.861	29.118
	2220	355.5630	18.328	89.4001	1.70	SUMIDERO	1.54	115.7435	18.328	1363295.911	1050037.877	29.140
	2221	13.4752	19.014	88.4259	1.70	SEPARADOR	1.54	133.5996	19.009	1363290.762	1050035.134	29.459
	2222	12.2645	18.935	89.0159	1.70	SEPARADOR	1.54	132.2477	18.932	1363291.143	1050035.383	29.353
	2223	32.3839	8.440	87.2144	1.70	SEPARADOR	1.54	152.4460	8.431	1363296.397	1050025.268	29.422
	2224	29.3426	8.218	87.5306	1.70	SEPARADOR	1.54	149.3758	8.212	1363296.804	1050025.552	29.337
	2225	320.0308	11.332	88.2122	1.70	CERRAMIENT	1.54	79.8541	11.327	1363305.867	1050032.518	29.358
	2226	17.5024	52.069	89.3719	1.70	MANHOL	1.54	137.6419	52.068	1363265.396	1050056.450	29.377
	2227	32.1739	23.546	89.2542	1.70	BORDE_VIA	1.54	152.0960	23.545	1363283.064	1050032.387	29.268
	2228	36.2348	22.847	89.0856	1.70	BORDE_VIA	1.54	156.1985	22.844	1363282.970	1050030.587	29.373
	2229	16.0631	47.610	89.3012	1.70	BORDE_VIA	1.54	135.9105	47.608	1363269.677	1050054.493	29.446
	2230	39.5951	23.430	89.0359	1.70	BORDE_VIA	1.54	159.7994	23.427	1363281.886	1050029.458	29.415
	2231	349.3613	98.206	90.0033	1.70	CERRAMIENT	1.54	109.4055	98.206	1363271.242	1050113.995	29.018
	2232	16.0433	47.597	89.3000	1.70	BORDE_VIA	1.54	135.8777	47.595	1363269.705	1050054.504	29.449
	2233	15.4957	46.804	89.3000	1.70	BORDE_VIA	1.54	135.6344	46.802	1363270.413	1050054.094	29.442
	2234	48.1237	17.673	89.1420	1.70	BORDE_VIA	1.54	168.0121	17.671	1363286.585	1050025.039	29.268
	2235	50.3347	16.645	89.0609	1.70	BORDE_VIA	1.54	170.3649	16.643	1363287.463	1050024.154	29.294
	2236	13.0540	56.421	89.3610	1.70	BORDE_VIA	1.54	132.8963	56.420	1363265.468	1050062.700	29.424
	2237	14.0053	55.155	89.3419	1.70	BORDE_VIA	1.54	133.8166	55.153	1363265.686	1050061.165	29.445
	2238	14.5755	54.931	89.3732	1.70	BORDE_VIA	1.54	134.7671	54.930	1363265.188	1050060.367	29.392
	2239	55.4458	20.754	89.4328	1.70	BORDE_VIA	1.54	175.5513	20.754	1363283.180	1050022.978	29.133
	2240	18.1946	55.834	89.4520	1.70	BORDE_VIA	1.54	138.1313	55.833	1363262.294	1050058.633	29.272
	2241	20.4002	53.197	89.5059	1.70	BORDE_VIA	1.54	140.4691	53.197	1363262.842	1050055.228	29.173
	2242	45.3451	25.619	89.3508	1.70	BORDE_VIA	1.54	165.3827	25.618	1363279.082	1050027.833	29.219
	2243	47.1409	25.024	88.5514	1.70	BORDE_VIA	1.54	167.0377	25.020	1363279.489	1050026.980	29.505
	2244	51.4747	27.558	89.0330	1.70	BORDE_VIA	1.54	171.5983	27.554	1363276.613	1050025.394	29.486
	2245	189.0207	20.218	89.2857	1.70	MANHOL	1.54	308.8371	20.217	1363316.550	1050005.620	29.216
	2246	190.4528	20.019	89.3313	1.70	SUMIDERO	1.54	310.5596	20.018	1363316.888	1050006.160	29.189



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2247	191.5613	20.868	89.2709	1.70	SUMIDERO	1.54	311.7388	20.867	1363317.763	1050005.797	29.233
	2248	184.0858	19.320	90.0640	1.70	SUMIDERO	1.54	303.9513	19.320	1363314.661	1050005.342	28.996
	2249	185.3155	20.130	90.0057	1.70	SUMIDERO	1.54	305.3338	20.130	1363315.513	1050004.946	29.028
	2250	157.5255	10.712	88.5517	1.70	POSTE	1.54	277.6838	10.710	1363305.303	1050010.754	29.235
	2251	169.2901	21.317	89.3158	1.70	SEPARADOR	1.54	289.2855	21.316	1363310.912	1050001.248	29.207
	2252	168.1536	21.413	89.0518	1.70	SEPARADOR	1.54	288.0619	21.410	1363310.510	1050001.013	29.374
	2253	184.0147	18.643	89.4345	1.70	BORDE_VIA	1.54	303.8316	18.643	1363314.251	1050005.882	29.121
	2254	181.4938	44.705	89.5352	1.70	BORDE_VIA	1.54	301.6291	44.705	1363327.316	1049983.304	29.113
	2255	189.2203	47.511	89.4930	1.70	PARAMENTO	1.54	309.1694	47.511	1363333.880	1049984.534	29.178
	2256	188.3935	51.783	89.5306	1.70	PARAMENTO	1.54	308.4616	51.783	1363336.080	1049980.821	29.137
	2257	183.4106	53.266	89.5202	1.70	MANHOL	1.54	303.4869	53.266	1363333.261	1049976.944	29.157
	2258	185.3341	76.765	89.5615	1.70	POSTE	1.54	305.3633	76.765	1363348.300	1049958.766	29.117
	2259	185.4627	76.769	89.5614	1.70	POSTE	1.54	305.5760	76.769	1363348.534	1049958.929	29.117
	2260	185.1619	91.522	90.0503	1.70	CERRAMIENT	1.54	305.0738	91.522	1363356.463	1049946.465	28.899
	2261	181.2203	83.442	90.0748	1.70	SUMIDERO	1.54	301.1694	83.442	1363347.058	1049949.972	28.844
	2262	181.3809	84.242	90.0934	1.70	SUMIDERO	1.54	301.4377	84.242	1363347.809	1049949.493	28.799
	2263	181.4121	96.337	90.0430	1.70	MANHOL	1.54	301.4910	96.337	1363354.194	1049939.220	28.907
	2264	146.2738	24.812	89.2902	1.70	MANHOL	1.54	266.2624	24.811	1363302.254	1049996.610	29.257
	2265	144.5921	22.134	89.3906	1.70	BORDE_VIA	1.54	264.7910	22.134	1363301.862	1049999.326	29.168
	2266	152.1821	27.239	89.4210	1.70	BORDE_VIA	1.54	272.1077	27.239	1363304.873	1049994.148	29.175
	2267	134.4224	26.236	89.3251	1.70	BORDE_VIA	1.54	254.5085	26.235	1363296.864	1049996.086	29.241
	2268	142.0405	30.489	90.0953	1.70	BORDE_VIA	1.54	261.8699	30.489	1363299.560	1049991.186	28.946
E1048-E1047	E1047	0.0000	126.668	89.4602	1.70	ESTACION	1.43	300.5785	126.703	1363368.328	1049912.285	28.921
	E1049	179.4246	116.096	89.5309	1.70	DELTA	1.43	300.2913	116.096	1363426.886	1049812.040	28.885
	2317	238.0606	12.510	90.3605	1.70	POSTE	1.43	358.6802	12.509	1363380.834	1049911.997	28.523
	2318	166.3639	22.574	88.5922	1.70	POSTE	1.43	287.1894	22.570	1363374.998	1049890.723	29.052
	2319	169.5128	29.751	89.1432	1.70	SEPARADOR	1.43	290.4363	29.748	1363378.715	1049884.409	29.047
	2320	169.0339	29.782	89.1541	1.70	SEPARADOR	1.43	289.6394	29.780	1363378.336	1049884.238	29.038
	2321	173.0946	48.870	89.2926	1.70	SEPARADOR	1.43	293.7413	48.868	1363388.002	1049867.553	29.088
	2322	173.3308	48.848	89.3413	1.70	SEPARADOR	1.43	294.1308	48.847	1363388.297	1049867.707	29.020
	2323	174.1936	56.390	89.3834	1.70	POSTE	1.43	294.9052	56.389	1363392.074	1049861.140	29.006
	2324	181.1338	31.530	89.2355	1.70	BORDE_VIA	1.43	301.8058	31.528	1363384.944	1049885.491	28.985
	2325	179.4429	45.995	89.4334	1.70	BORDE_VIA	1.43	300.3199	45.994	1363391.547	1049872.582	28.874
	2326	185.2019	33.879	89.4018	1.70	BORDE_VIA	1.43	305.9171	33.878	1363388.201	1049884.848	28.848
	2327	180.4230	44.150	89.3657	1.70	BORDE_VIA	1.43	301.2869	44.149	1363391.255	1049874.557	28.950
	2328	183.5121	42.223	89.4245	1.70	BORDE_VIA	1.43	304.4344	42.222	1363392.203	1049877.461	28.866



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2329	181.4556	38.298	89.3917	1.70	MANHOL	1.43	302.3441	38.297	1363388.817	1049879.930	28.885
	2330	182.4916	35.558	89.3840	1.70	VALVULA	1.43	303.3996	35.557	1363387.901	1049882.600	28.875
	2331	194.4328	42.116	89.4645	1.70	BORDE_VIA	1.43	315.3030	42.116	1363398.265	1049882.663	28.816
	2332	197.3541	42.113	89.3408	1.70	ANDEN	1.43	318.1733	42.112	1363399.708	1049884.202	28.971
	2333	197.1323	36.276	89.1502	1.70	POSTE	1.43	317.8016	36.273	1363395.199	1049887.921	29.128
	2334	187.5313	56.325	89.3254	1.70	MANHOL	1.43	308.4655	56.323	1363403.363	1049868.185	29.098
	2335	185.2522	55.741	89.3254	1.70	POSTE	1.43	306.0013	55.739	1363401.091	1049867.192	29.093
	2336	185.2220	52.461	89.3005	1.70	ANDEN	1.43	305.9508	52.459	1363399.126	1049869.819	29.110
	2337	161.1021	62.473	89.3732	1.70	BORDE_VIA	1.43	281.7510	62.472	1363381.051	1049851.123	29.062
	2338	163.1019	68.753	89.3751	1.70	BORDE_VIA	1.43	283.7505	68.752	1363384.669	1049845.504	29.097
	2339	165.2446	56.655	89.3717	1.70	BORDE_VIA	1.43	285.9913	56.654	1363383.935	1049857.824	29.028
	2340	164.0809	65.351	89.4008	1.70	MANHOL	1.43	284.7144	65.350	1363384.927	1049849.079	29.032
E1048-E1047	E1047	0.0000	126.709	89.4848	1.70	ESTACION	1.53	300.5785	126.703	1363368.328	1049912.285	28.921
	E1050	178.3641	113.939	89.5947	1.70	DELTA	1.53	299.1899	113.939	1363423.896	1049812.816	28.759
E1050-E1048	E1048	0.0000	113.943	89.5210	1.70	ESTACION	1.53	299.1899	113.939	1363423.896	1049812.816	28.759
	E1051	181.2611	113.892	90.0335	1.70	DELTA	1.53	300.6263	113.892	1363481.917	1049714.811	28.473
	2341	8.4836	23.124	89.1544	1.70	POSTE	1.53	127.9999	23.122	1363409.661	1049831.036	28.890
	2342	350.5432	12.949	89.3810	1.70	SUMIDERO	1.53	110.0988	12.949	1363419.447	1049824.976	28.674
	2343	349.2517	13.851	89.5121	1.70	SUMIDERO	1.53	108.6113	13.851	1363419.476	1049825.942	28.627
	2344	318.3000	13.431	90.1606	1.70	SUMIDERO	1.53	77.6899	13.431	1363426.760	1049825.938	28.529
	2345	317.5002	12.450	90.1655	1.70	SUMIDERO	1.53	77.0238	12.450	1363426.692	1049824.948	28.531
	2346	350.3401	12.076	89.0625	1.70	BORDE_VIA	1.53	109.7569	12.075	1363419.815	1049824.180	28.780
	2347	347.1536	11.065	89.0625	1.70	BORDE_VIA	1.53	106.4499	11.064	1363420.763	1049823.427	28.765
	2348	338.1912	10.561	89.4808	1.70	BORDE_VIA	1.53	97.5099	10.561	1363422.516	1049823.286	28.629
	2349	324.2632	12.122	88.2135	1.70	ANDEN	1.53	83.6321	12.117	1363425.240	1049824.858	28.939
	2350	323.4707	7.174	88.5741	1.70	VALVULA	1.53	82.9752	7.173	1363424.774	1049819.935	28.722
	2351	335.5559	7.658	87.4928	1.70	MANHOL	1.53	95.1230	7.652	1363423.213	1049820.438	28.883
	2352	282.4442	7.370	88.1715	1.70	ANDEN	1.53	41.9349	7.367	1363429.376	1049817.739	28.812
	2353	291.0442	4.216	87.3512	1.70	BORDE_VIA	1.53	50.2683	4.212	1363426.589	1049816.055	28.770
	2354	282.2319	2.600	85.0040	1.70	BORDE_VIA	1.53	41.5785	2.590	1363425.834	1049814.535	28.818
	2355	233.0314	2.648	86.2614	1.70	BORDE_VIA	1.53	352.2438	2.643	1363426.515	1049812.459	28.757
	2356	199.1215	6.578	88.2350	1.70	BORDE_VIA	1.53	318.3941	6.575	1363428.813	1049808.450	28.776
	2357	165.5515	12.422	89.0247	1.70	POSTE	1.53	285.1108	12.420	1363427.134	1049800.825	28.799
	2358	303.5507	17.848	89.5429	1.70	PARAMENTO	1.53	63.1085	17.848	1363431.969	1049828.734	28.621
	2359	294.4812	24.108	90.0309	1.70	PARAMENTO	1.53	53.9933	24.108	1363438.069	1049832.318	28.570
	2360	274.5714	15.249	90.1535	1.70	PARAMENTO	1.53	34.1438	15.249	1363436.517	1049821.375	28.523



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2361	283.1811	14.446	90.1306	1.70	POSTE	1.53	42.4930	14.446	1363434.548	1049822.574	28.537
	2362	187.4224	23.258	89.5930	1.70	SUMIDERO	1.53	306.8966	23.258	1363437.860	1049794.216	28.595
	2363	186.4030	22.343	89.5725	1.70	SUMIDERO	1.53	305.8649	22.343	1363436.987	1049794.709	28.609
	2364	173.5124	25.760	89.0527	1.70	SEPARADOR	1.53	293.0466	25.757	1363433.980	1049789.115	29.001
	2365	173.2213	25.701	89.1055	1.70	SEPARADOR	1.53	292.5602	25.698	1363433.756	1049789.084	28.959
	2366	174.2647	28.354	89.1055	1.70	SEPARADOR	1.53	293.6363	28.351	1363435.263	1049786.843	28.997
	2367	173.5112	28.391	89.1055	1.70	SEPARADOR	1.53	293.0433	28.388	1363435.008	1049786.693	28.997
	2368	186.1239	23.943	89.3939	1.70	BORDE_VIA	1.53	305.4008	23.943	1363437.766	1049793.300	28.734
	2369	187.2200	25.278	89.4529	1.70	BORDE_VIA	1.53	306.5566	25.278	1363438.952	1049792.511	28.699
	2370	189.4937	26.284	89.5806	1.70	BORDE_VIA	1.53	309.0169	26.284	1363440.443	1049792.394	28.607
	2371	196.3722	26.857	89.3936	1.70	BORDE_VIA	1.53	315.8127	26.857	1363443.154	1049794.097	28.751
	2372	187.5331	28.864	89.5046	1.70	MANHOL	1.53	307.0819	28.864	1363441.300	1049789.789	28.670
	2373	188.3554	29.894	90.0356	1.70	VALVULA	1.53	307.7883	29.894	1363442.214	1049789.191	28.558
	2374	194.4437	33.781	90.0921	1.70	SUMIDERO	1.53	313.9335	33.781	1363447.334	1049788.489	28.500
	2375	193.2222	34.281	90.1158	1.70	SUMIDERO	1.53	312.5627	34.281	1363447.084	1049787.567	28.473
	2376	207.5414	30.958	90.0958	1.70	POSTE	1.53	327.0938	30.958	1363449.887	1049795.997	28.502
	2377	211.1224	30.006	92.2341	0.09	PARAMENTO	1.53	330.3966	29.980	1363449.963	1049798.006	28.953
	2378	204.4717	34.589	90.0903	1.70	POSTE	1.53	323.9780	34.589	1363451.872	1049792.474	28.501
	2379	205.5006	36.349	90.0640	1.70	PARAMENTO	1.53	325.0249	36.349	1363453.681	1049791.980	28.522
	2380	207.0244	31.131	90.0755	1.70	BORDE_VIA	1.53	326.2355	31.131	1363449.776	1049795.514	28.520
	2381	204.3733	34.062	90.0653	1.70	BORDE_VIA	1.53	323.8158	34.062	1363451.389	1049792.706	28.524
	2382	206.2354	36.510	90.0857	1.70	PARAMENTO	1.53	325.5883	36.510	1363454.017	1049792.183	28.497
	2383	193.1504	33.907	89.4429	1.70	ANDEN	1.53	312.4410	33.907	1363446.778	1049787.794	28.745
	2384	187.5623	33.388	89.4803	1.70	BORDE_VIA	1.53	307.1296	33.388	1363444.050	1049786.197	28.708
	2385	185.1517	34.453	90.0156	1.70	BORDE_VIA	1.53	304.4446	34.453	1363443.383	1049784.403	28.573
	2386	184.2123	35.880	89.5754	1.70	BORDE_VIA	1.53	303.5463	35.880	1363443.724	1049782.912	28.614
	2387	183.5823	39.540	89.5445	1.70	BORDE_VIA	1.53	303.1630	39.540	1363445.526	1049779.716	28.652
	2388	176.5734	47.045	89.5003	1.70	POSTE	1.53	296.1494	47.045	1363444.630	1049770.586	28.728
	2389	191.3250	40.828	90.0513	1.70	POSTE	1.53	310.7371	40.828	1363450.540	1049781.880	28.530
	2390	183.0617	59.559	90.0910	1.70	SUMIDERO	1.53	302.2946	59.559	1363455.717	1049762.470	28.433
	2391	183.3321	60.373	90.0751	1.70	SUMIDERO	1.53	302.7458	60.373	1363456.553	1049762.037	28.454
	2392	182.5655	60.658	90.0503	1.70	BORDE_VIA	1.53	302.1385	60.658	1363456.164	1049761.453	28.503
	2393	182.5904	60.987	90.0503	1.70	BORDE_VIA	1.53	302.1744	60.987	1363456.372	1049761.195	28.503
	2394	183.2308	61.333	90.0715	1.70	BORDE_VIA	1.53	302.5755	61.333	1363456.919	1049761.132	28.463
	2395	184.4008	61.505	90.0602	1.70	BORDE_VIA	1.53	303.8588	61.505	1363458.164	1049761.741	28.484
	2396	183.4852	64.236	89.5727	1.70	MANHOL	1.53	303.0044	64.236	1363458.886	1049758.946	28.640



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2397	187.4319	61.778	90.0046	1.70	ANDEN	1.53	306.9119	61.778	1363460.999	1049763.421	28.578
	2398	184.1549	68.524	89.5641	1.70	BORDE_VIA	1.53	303.4535	68.524	1363461.671	1049755.644	28.658
	2399	183.0737	69.545	90.0446	1.70	BORDE_VIA	1.53	302.3169	69.545	1363461.075	1049754.043	28.496
	2400	182.3628	70.998	90.0239	1.70	BORDE_VIA	1.53	301.7977	70.998	1363461.307	1049752.474	28.537
	2401	187.3302	68.719	90.1637	1.70	SUMIDERO	1.53	306.7405	68.718	1363465.003	1049757.748	28.260
	2402	187.5240	69.572	90.1716	1.70	SUMIDERO	1.53	307.0677	69.571	1363465.831	1049757.303	28.243
	2403	193.2238	62.656	89.5943	1.70	PARAMENTO	1.53	312.5671	62.656	1363466.280	1049766.671	28.597
	2404	186.5411	68.924	91.1658	0.09	ANDEN	1.53	306.0930	68.907	1363464.489	1049757.135	28.664
	2405	167.4349	52.635	89.5419	1.70	BORDE_VIA	1.53	286.9202	52.635	1363439.215	1049762.459	28.679
	2406	151.2319	31.887	89.3844	1.70	MANHOL	1.53	270.5785	31.886	1363424.218	1049780.931	28.789
	2407	147.1601	28.726	89.3357	1.70	VALVULA	1.53	266.4569	28.725	1363422.121	1049784.146	28.810
	2408	75.2147	12.456	88.4025	1.70	BORDE_VIA	1.53	194.5530	12.453	1363411.843	1049809.687	28.880
E1051-E1050	E1050	0.0000	113.879	89.4539	1.70	ESTACION	1.57	300.6263	113.892	1363481.917	1049714.811	28.473
	E1052	179.1936	75.924	89.5729	1.70	DELTA	1.57	299.9530	75.924	1363519.825	1049649.028	28.396
	2409	350.2841	15.515	89.1647	1.70	VALVULA	1.57	111.1044	15.514	1363476.331	1049729.284	28.535
	2410	355.0428	21.866	89.5110	1.70	SUMIDERO	1.57	115.7008	21.866	1363472.434	1049734.514	28.397
	2411	356.0857	21.045	89.4736	1.70	SUMIDERO	1.57	116.7755	21.045	1363472.436	1049733.599	28.416
	2412	356.2753	20.789	89.3048	1.70	BORDE_VIA	1.57	117.0910	20.788	1363472.450	1049733.318	28.517
	2413	355.1207	19.454	89.2332	1.70	BORDE_VIA	1.57	115.8283	19.453	1363473.442	1049732.320	28.547
	2414	349.5958	18.094	89.0640	1.70	BORDE_VIA	1.57	110.6258	18.092	1363475.544	1049731.743	28.621
	2415	340.2015	18.871	89.0310	1.70	ANDEN	1.57	100.9638	18.868	1363478.329	1049733.335	28.652
	2416	340.5426	20.190	88.5404	1.70	POSTE	1.57	101.5335	20.186	1363477.881	1049734.590	28.728
	2417	345.2224	11.064	89.0622	1.70	BORDE_VIA	1.57	105.9996	11.063	1363478.868	1049725.445	28.513
	2418	329.5529	12.712	89.2303	1.70	BORDE_VIA	1.57	90.5510	12.711	1363481.795	1049727.522	28.477
	2419	329.5529	12.706	89.2303	1.70	BORDE_VIA	1.57	90.5510	12.705	1363481.795	1049727.516	28.477
	2420	349.3838	9.975	88.5520	1.70	BORDE_VIA	1.57	110.2702	9.973	1363478.462	1049724.166	28.528
	2421	351.5257	8.519	88.4459	1.70	BORDE_VIA	1.57	112.5088	8.517	1363478.657	1049722.679	28.526
	2422	323.5651	13.920	89.4433	1.70	POSTE	1.57	84.5738	13.920	1363483.233	1049728.668	28.403
	2423	31.0616	8.016	87.0725	1.70	SEPARADOR	1.57	151.7308	8.006	1363474.866	1049718.603	28.743
	2423	33.1616	8.229	87.1039	1.70	SEPARADOR	1.57	153.8974	8.219	1363474.536	1049718.427	28.746
	2424	321.0054	15.342	89.4852	1.70	SUMIDERO	1.57	81.6413	15.342	1363484.147	1049729.990	28.390
	2425	321.5505	14.433	89.4852	1.70	SUMIDERO	1.57	82.5444	14.433	1363483.790	1049729.122	28.387
	2426	66.0532	18.316	89.1521	1.70	MANHOLE	1.57	186.7185	18.314	1363463.728	1049712.668	28.578
	2427	70.4154	13.749	89.3247	1.70	BORDE_VIA	1.57	191.3246	13.749	1363468.436	1049712.111	28.449
	2428	54.0422	15.978	89.3448	1.70	BORDE_VIA	1.57	174.6991	15.978	1363466.008	1049716.287	28.458
	2429	63.2019	20.973	89.2328	1.70	BORDE_VIA	1.57	183.9649	20.972	1363460.995	1049713.361	28.563



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2430	75.1402	19.080	89.1458	1.70	BORDE_VIA	1.57	195.8602	19.078	1363463.565	1049709.597	28.590
	2431	320.2436	21.739	89.3936	1.70	BORDE_VIA	1.57	81.0363	21.739	1363485.304	1049736.284	28.469
	2432	317.0332	15.286	89.4603	1.70	BORDE_VIA	1.57	77.6852	15.286	1363485.177	1049729.745	28.402
	2433	320.0914	23.032	88.5350	1.70	PARAMENTO	1.57	80.7802	23.028	1363485.607	1049737.541	28.784
	2434	306.3826	18.599	88.1241	1.70	PARAMENTO	1.57	67.2669	18.590	1363489.101	1049731.957	28.921
	2435	124.4423	5.303	87.4539	1.70	POSTE	1.57	245.3660	5.299	1363479.708	1049709.994	28.548
	2436	183.3233	15.434	89.5038	1.70	SUMIDERO	1.57	304.1688	15.434	1363490.585	1049702.041	28.382
	2437	185.0957	16.272	89.5559	1.70	SUMIDERO	1.57	305.7921	16.272	1363491.434	1049701.612	28.359
	2438	183.1815	18.910	89.3924	1.70	BORDE_VIA	1.57	303.9305	18.910	1363492.472	1049699.121	28.454
	2439	187.4626	20.598	89.5550	1.70	BORDE_VIA	1.57	308.4002	20.598	1363494.712	1049698.668	28.365
	2440	184.4402	22.269	89.5831	1.70	VALVULA	1.57	305.3602	22.269	1363494.804	1049696.650	28.350
	2441	179.4905	23.814	89.3848	1.70	VALVULA	1.57	300.4444	23.814	1363493.983	1049694.281	28.487
	2442	179.2810	25.313	89.5043	1.70	MANHOLE	1.57	300.0958	25.313	1363494.610	1049692.910	28.409
	2443	196.2712	21.221	89.3701	1.70	ANDEN	1.57	317.0796	21.221	1363497.457	1049700.360	28.482
	2444	200.3038	22.479	90.4819	1.70	SUMIDERO	1.57	321.1369	22.477	1363499.419	1049700.708	28.024
	2445	202.0346	23.032	90.3802	1.70	SUMIDERO	1.57	322.6891	23.031	1363500.235	1049700.851	28.086
	2446	183.5509	31.311	90.0254	1.70	HIDRANTE	1.57	304.5455	31.311	1363499.672	1049689.021	28.314
	2447	184.5456	31.736	89.5608	1.70	POSTE	1.57	305.5419	31.736	1363500.365	1049688.988	28.376
	2448	185.4615	32.027	89.5608	1.70	ANDEN	1.57	306.3971	32.027	1363500.921	1049689.032	28.376
	2449	183.0520	32.538	90.0344	1.70	BORDE_VIA	1.57	303.7152	32.538	1363499.978	1049687.746	28.305
	2450	181.2127	33.812	90.0004	1.70	BORDE_VIA	1.57	301.9838	33.812	1363499.827	1049686.132	28.340
	2451	181.0927	37.057	89.5616	1.70	BORDE_VIA	1.57	301.7838	37.057	1363501.436	1049683.311	28.381
	2452	172.0804	32.935	89.4632	1.70	POSTE	1.57	292.7608	32.935	1363494.659	1049684.441	28.469
	2453	185.1104	37.115	89.4150	1.70	PARAMENTO	1.57	305.8108	37.114	1363503.633	1049684.713	28.537
	2454	198.2736	39.098	89.4149	1.70	PARAMENTO	1.57	319.0863	39.097	1363511.463	1049689.205	28.547
	2455	218.4335	23.586	90.0558	1.70	PARAMENTO	1.57	339.3527	23.586	1363503.988	1049706.494	28.299
	2456	214.5226	25.770	90.2321	1.70	BORDE_VIA	1.57	335.5002	25.769	1363505.366	1049704.125	28.165
	2457	207.0104	33.756	90.1445	1.70	BORDE_VIA	1.57	327.6441	33.756	1363510.432	1049696.746	28.196
	2458	175.4920	64.845	89.5005	1.70	POSTE	1.57	296.4485	64.845	1363510.799	1049656.753	28.527
	2459	178.3955	54.496	89.5852	1.70	MANHOLE	1.57	299.2916	54.496	1363508.579	1049667.283	28.358
	2460	179.1936	51.458	89.5841	1.70	LINEAMIENT	1.57	299.9530	51.458	1363507.609	1049670.226	28.360
	2461	179.1936	26.485	89.5008	1.70	LINEAMIENT	1.57	299.9530	26.485	1363495.141	1049691.863	28.416
	2462	0.0000	34.247	89.3250	1.70	LINEAMIENT	1.57	120.6263	34.246	1363464.471	1049744.280	28.611
	2463	359.5959	57.459	89.4558	1.70	LINEAMIENT	1.57	120.6260	57.459	1363452.646	1049764.255	28.575
E1052-E1051	E1051	0.0000	75.921	89.5230	1.70	ESTACION	1.61	299.9530	75.924	1363519.825	1049649.028	28.396
	E1053	180.0620	113.859	90.0437	1.70	DELTA	1.61	300.0585	113.859	1363576.855	1049550.481	28.149



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E1054	267.4422	1.309	79.2755	1.70	DELTA	1.61	27.6924	1.287	1363520.965	1049649.626	28.541
	2464	84.2117	12.623	90.0607	1.70	MANHOLE	1.61	204.3077	12.623	1363508.321	1049643.832	28.280
	2465	79.1458	16.463	86.3328	2.45	MANHOLE	1.61	199.2024	16.433	1363504.306	1049643.623	28.540
	2466	62.1910	15.078	90.2702	1.70	SUMIDERO	1.61	182.2724	15.078	1363504.759	1049648.430	28.183
	2467	64.3257	15.783	90.2347	1.70	SUMIDERO	1.61	184.5021	15.783	1363504.091	1049647.789	28.193
	2468	105.5751	13.637	90.1249	1.70	SUMIDERO	1.61	225.9171	13.637	1363510.338	1049639.232	28.251
	2469	102.5639	12.878	90.1249	1.70	SUMIDERO	1.61	222.8971	12.878	1363510.391	1049640.262	28.254
	2470	50.3815	16.518	89.4923	1.70	BORDE_VIA	1.61	170.5905	16.518	1363503.529	1049651.728	28.353
	2471	102.2826	12.597	90.0850	1.70	BORDE_VIA	1.61	222.4269	12.597	1363510.527	1049640.529	28.270
	2472	60.1533	15.716	89.1320	1.70	BORDE_VIA	1.61	180.2121	15.715	1363504.111	1049648.969	28.515
	2473	97.1405	12.776	89.5738	1.70	BORDE_VIA	1.61	217.1877	12.776	1363509.647	1049641.305	28.311
	2474	68.5409	16.590	89.4602	1.70	BORDE_VIA	1.61	188.8555	16.590	1363503.433	1049646.474	28.369
	2475	95.2454	14.234	89.3856	1.70	BORDE_VIA	1.61	215.3680	14.234	1363508.218	1049640.789	28.389
	2476	73.3544	18.822	89.3102	1.70	BORDE_VIA	1.61	193.5485	18.821	1363501.528	1049644.618	28.461
	2477	94.1408	18.178	89.2938	1.70	BORDE_VIA	1.61	214.1885	18.177	1363504.789	1049638.813	28.463
	2478	68.0921	19.669	89.1854	1.70	PARAMENTO	1.61	188.1088	19.668	1363500.354	1049646.253	28.537
	2479	100.4639	18.684	88.5031	1.70	PARAMENTO	1.61	220.7305	18.680	1363505.669	1049636.839	28.680
	2480	120.5321	14.316	90.2013	1.70	BORDE_VIA	1.61	240.8421	14.316	1363512.850	1049636.526	28.218
	2481	168.5705	22.319	89.1337	1.70	SEPARADOR	1.61	288.9044	22.317	1363527.056	1049627.914	28.603
	2482	169.3758	22.270	89.1058	1.70	SEPARADOR	1.61	289.5858	22.268	1363527.290	1049628.048	28.620
	2483	167.1948	17.960	89.3335	1.70	POSTE	1.61	287.2830	17.959	1363525.161	1049631.879	28.440
	2484	209.0932	4.739	90.4447	1.70	SUMIDERO	1.61	329.1119	4.739	1363523.892	1049646.595	28.240
	2485	206.1117	5.719	90.2304	1.70	SUMIDERO	1.61	326.1410	5.719	1363524.574	1049645.841	28.264
	2486	191.1848	18.005	88.5942	1.70	MANHOLE	1.61	311.2663	18.002	1363531.699	1049635.496	28.618
	2487	222.1925	5.465	86.5447	1.70	POSTE	1.61	342.2766	5.457	1363525.023	1049647.366	28.596
	2488	195.3238	16.636	90.4610	1.70	SUMIDERO	1.61	315.4969	16.634	1363531.689	1049637.368	28.079
	2489	194.3513	17.439	90.4838	1.70	SUMIDERO	1.61	314.5399	17.437	1363532.056	1049636.599	28.055
	2490	254.0701	3.807	85.4153	1.70	PARAMENTO	1.61	14.0699	3.796	1363523.507	1049649.951	28.588
	2491	198.1350	21.472	89.0458	1.70	PARAMENTO	1.61	318.1835	21.469	1363535.826	1049634.713	28.646
	2492	196.0838	25.077	89.1603	1.70	PARAMENTO	1.61	316.0969	25.075	1363537.892	1049631.640	28.623
	2493	244.1235	7.485	87.1141	1.70	PARAMENTO	1.61	4.1627	7.476	1363527.281	1049649.570	28.668
	2494	199.0014	3.809	87.3546	1.70	BORDE_VIA	1.61	318.9569	3.806	1363522.695	1049646.529	28.462
	2495	210.0530	7.618	89.1041	1.70	BORDE_VIA	1.61	330.0446	7.617	1363526.425	1049645.224	28.411
	2496	175.0325	41.033	89.5258	1.70	MANHOLE	1.61	295.0099	41.033	1363537.173	1049611.842	28.386
	2497	194.3236	16.260	89.5815	1.70	BORDE_VIA	1.61	314.4963	16.260	1363531.221	1049637.429	28.310
	2498	183.5257	18.970	89.4510	1.70	BORDE_VIA	1.61	303.8355	18.970	1363530.388	1049633.271	28.384



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2499	183.4524	20.307	89.4814	1.70	BORDE_VIA	1.61	303.7096	20.307	1363531.095	1049632.135	28.371
	2500	180.1833	46.417	89.5528	1.70	MANHOLE	1.61	300.2621	46.417	1363543.217	1049608.936	28.363
	2501	182.2430	30.862	89.5221	1.70	BORDE_VIA	1.61	302.3613	30.862	1363536.344	1049622.959	28.371
	2502	182.0149	38.023	89.5221	1.70	BORDE_VIA	1.61	301.9833	38.023	1363539.965	1049616.776	28.387
	2503	183.2817	38.978	89.4828	1.70	BORDE_VIA	1.61	303.4244	38.978	1363541.295	1049616.496	28.433
	2504	183.5049	44.612	89.4827	1.70	BORDE_VIA	1.61	303.7999	44.612	1363544.642	1049611.956	28.452
	2505	181.4640	45.695	89.5514	1.70	BORDE_VIA	1.61	301.7308	45.695	1363543.857	1049610.163	28.365
	2506	175.3338	49.271	89.5309	1.70	SEPARADOR	1.61	295.5135	49.271	1363541.047	1049604.561	28.400
	2507	175.1207	49.302	89.5357	1.70	SEPARADOR	1.61	295.1549	49.302	1363540.782	1049604.401	28.389
	2508	175.4900	52.315	89.5502	1.70	POSTE	1.61	295.7696	52.315	1363542.569	1049601.915	28.378
	2509	180.0620	77.281	90.0310	1.70	LINEAMIENT	1.61	300.0585	77.281	1363558.534	1049582.140	28.231
	2510	180.0621	47.419	89.5650	1.70	LINEAMIENT	1.61	300.0588	47.419	1363543.577	1049607.986	28.346
E1053-E1051	E1051	359.5959	113.862	89.4647	1.70	ESTACION	1.52	300.0163	113.859	1363576.855	1049550.481	28.149
	E1054	359.2030	113.816	89.4214	1.70	DELTA	1.52	119.3580	113.814	1363521.056	1049649.679	28.557
	E12002	266.1457	108.809	90.0312	1.70	DELTA	1.52	26.2655	108.809	1363674.430	1049598.632	27.868
	2511	43.5101	5.472	87.2329	1.70	SEPARADOR	1.52	163.8666	5.466	1363571.604	1049552.000	28.218
	2512	46.5153	5.833	87.3634	1.70	SEPARADOR	1.52	166.8810	5.828	1363571.179	1049551.804	28.212
	2513	33.3908	6.902	88.1319	1.70	POSTE	1.52	153.6685	6.899	1363570.672	1049553.541	28.183
	2514	6.2047	34.512	89.2849	1.70	POSTE	1.52	126.3627	34.511	1363556.394	1049578.272	28.282
	2515	357.2306	30.350	89.2849	1.70	BORDE_VIA	1.52	117.4013	30.349	1363562.888	1049577.425	28.244
	2516	344.4112	5.069	88.5705	1.70	BORDE_VIA	1.52	104.7030	5.068	1363575.569	1049555.383	28.062
	2517	327.5436	3.508	87.2551	1.70	BORDE_VIA	1.52	87.9263	3.504	1363576.982	1049553.983	28.126
	2518	314.5602	3.453	90.3803	1.70	SUMIDERO	1.52	74.9502	3.453	1363577.752	1049553.815	27.931
	2519	303.5557	4.019	90.4527	1.70	SUMIDERO	1.52	63.9488	4.019	1363578.620	1049554.091	27.916
	2520	294.3244	3.342	87.3856	1.70	BORDE_VIA	1.52	54.5619	3.339	1363578.791	1049553.202	28.106
	2521	270.4919	6.612	88.3734	1.70	BORDE_VIA	1.52	30.8382	6.610	1363582.531	1049553.870	28.128
	2522	288.5446	6.930	87.1358	1.70	PARAMENTO	1.52	48.9291	6.922	1363581.403	1049555.700	28.304
	2523	213.2553	11.958	88.2522	1.70	PARAMENTO	1.52	333.4477	11.953	1363587.548	1049545.138	28.298
	2524	218.4655	10.097	89.0037	1.70	BORDE_VIA	1.52	338.7982	10.095	1363586.267	1049546.830	28.143
	2525	200.3720	9.720	89.0428	1.70	BORDE_VIA	1.52	320.6385	9.719	1363584.369	1049544.317	28.126
	2526	200.4239	10.533	90.0857	1.70	SUMIDERO	1.52	320.7271	10.533	1363585.009	1049543.814	27.942
	2527	195.3828	10.299	90.2059	1.70	SUMIDERO	1.52	315.6574	10.299	1363584.221	1049543.283	27.906
	2528	193.1153	10.275	89.4511	1.70	BORDE_VIA	1.52	313.2144	10.275	1363583.891	1049542.993	28.013
	2529	188.3312	11.364	89.4510	1.70	BORDE_VIA	1.52	308.5696	11.364	1363583.940	1049541.596	28.018
	2530	186.0158	12.835	90.0626	1.70	BORDE_VIA	1.52	306.0491	12.835	1363584.408	1049540.104	27.945
	2531	160.1823	11.320	89.0711	1.70	SEPARADOR	1.52	280.3227	11.319	1363578.883	1049539.346	28.143



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2532	158.2144	11.554	89.1012	1.70	SEPARADOR	1.52	278.3785	11.553	1363578.539	1049539.052	28.136
	2533	196.1822	5.175	89.1012	1.70	MANHOLE	1.52	316.3224	5.174	1363580.598	1049546.908	28.044
	2534	82.3039	12.291	90.0333	1.70	BORDE_VIA	1.52	202.5271	12.291	1363565.502	1049545.772	27.956
	2535	172.3342	28.976	89.5200	1.70	POSTE	1.52	292.5780	28.976	1363587.980	1049523.726	28.037
	2536	172.1522	28.167	89.3108	1.70	SEPARADOR	1.52	292.2724	28.166	1363587.530	1049524.417	28.206
	2537	171.3316	28.259	89.3108	1.70	SEPARADOR	1.52	291.5707	28.258	1363587.244	1049524.202	28.206
	2538	73.1735	18.749	89.1059	1.70	CERRAMIENT	1.52	193.3094	18.747	1363558.612	1049546.165	28.236
	2539	135.2335	22.489	89.2645	1.70	CERRAMIENT	1.52	255.4094	22.488	1363571.190	1049528.718	28.187
	2540	195.1932	25.309	89.2514	1.70	PARAMENTO	1.52	315.3419	25.308	1363594.857	1049532.693	28.225
	2541	182.5248	27.584	90.0652	1.70	BORDE_VIA	1.52	302.8963	27.584	1363591.837	1049527.320	27.914
E12002-E1053	E1053	0.0000	108.812	89.4716	1.70	ESTACION	1.51	26.2655	108.809	1363674.430	1049598.632	27.868
	E12003	92.0320	112.241	89.5417	1.70	DELTA	1.51	298.3210	112.241	1363727.678	1049499.826	27.868
E1005		0.0000				ESTACION		0.0000		1362419.726	1050918.349	29.141
E1008	E1005	0.0000	67.377	89.4850	1.70	ESTACION	1.52	330.2451		1362478.210	1050884.916	28.995
	2731	0.0000	36.749	90.1154	1.70	LINEAMIENT	1.52	150.2451	36.749	1362446.306	1050903.154	28.686
	2732	0.0000	18.525	90.2445	1.70	LINEAMIENT	1.52	150.2451	18.525	1362462.127	1050894.110	28.680
	2733	194.2859	67.911	88.4139	1.70	LINEAMIENT	1.52	344.7281	67.893	1362543.705	1050867.033	30.361
	2734	194.2859	54.605	89.1245	1.70	LINEAMIENT	1.52	344.7281	54.600	1362530.881	1050870.535	29.563
	2735	194.2859	24.494	89.0502	1.70	LINEAMIENT	1.52	344.7281	24.491	1362501.836	1050878.465	29.205
E1008		0.0000				ESTACION		0.0000		1362478.210	1050884.916	28.995
E1009	E1008	0.0000	79.204	91.0730	1.70	ESTACION	1.54	344.7202		1362554.585	1050864.051	30.703
	2736	203.4841	17.484	85.1018	1.70	LINEAMIENT	1.54	8.5316	17.422	1362571.815	1050866.636	32.018
	2737	203.4841	10.190	84.3806	1.70	LINEAMIENT	1.54	8.5316	10.145	1362564.619	1050865.556	31.499
	2738	203.4842	4.080	81.5929	1.70	LINEAMIENT	1.54	8.5319	4.040	1362558.581	1050864.650	31.115
E1038		0.0000				ESTACION		0.0000		1362794.331	1050251.483	27.881
E1041	E1038	0.0000	172.433	90.2143	1.70	ESTACION	1.49	29.7605		1362944.023	1050337.075	29.173
	E1065	179.3154	73.073	89.4110	1.70	DELTA	1.49	29.2921	73.072	1363007.751	1050372.827	29.362
E1065-E1041	E1041	0.0000	73.086	89.5726	1.70	ESTACION	1.46	29.2921	73.072	1363007.751	1050372.827	29.362
	E1066	83.4301	113.340	89.5949	1.70	DELTA	1.46	293.0091	113.340	1363052.053	1050268.504	29.126
	1	108.0728	4.583	83.3743	1.70	PARAMENTO	1.46	317.4166	4.555	1363011.105	1050369.745	29.629
	2	101.0747	7.763	84.4458	1.70	PARAMENTO	1.46	310.4219	7.730	1363012.764	1050366.942	29.831
	3	35.0712	8.768	86.4454	1.70	PARAMENTO	1.46	244.4121	8.754	1363003.971	1050364.931	29.618
	4	53.5026	12.276	87.0750	1.70	PARAMENTO	1.46	263.1327	12.261	1363006.285	1050360.654	29.735
	5	71.1231	7.963	87.2921	1.70	MANHOLE	1.46	280.5008	7.955	1363009.201	1050365.005	29.469
	6	35.4112	6.802	86.3018	1.70	POSTE	1.46	244.9788	6.789	1363004.880	1050366.675	29.535
	7	45.1410	6.961	87.1822	1.70	BORDE_VIA	1.46	254.5283	6.953	1363005.897	1050366.125	29.447



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	8	21.3848	5.580	87.1934	1.70	BORDE_VIA	1.46	230.9388	5.574	1363004.239	1050368.499	29.381
	9	19.0030	5.800	87.2348	1.70	BORDE_VIA	1.46	228.3005	5.794	1363003.897	1050368.501	29.384
	10	10.2943	11.790	88.4242	1.70	BORDE_VIA	1.46	219.7874	11.787	1362998.694	1050365.284	29.385
	11	321.1159	6.632	87.5023	1.70	BORDE_VIA	1.46	170.4919	6.627	1363001.215	1050373.922	29.370
	12	341.2558	12.069	88.3940	1.70	BORDE_VIA	1.46	190.7249	12.066	1362995.897	1050370.581	29.402
	13	332.4028	12.022	87.3305	1.70	PARAMENTO	1.46	181.9666	12.011	1362995.748	1050372.415	29.634
	14	339.3437	15.674	88.0630	1.70	PARAMENTO	1.46	188.8691	15.665	1362992.273	1050370.412	29.638
	15	309.4108	8.192	87.2910	1.70	BORDE_VIA	1.46	158.9777	8.184	1363000.112	1050375.763	29.480
	16	319.1320	14.131	87.1055	1.70	PARAMENTO	1.46	168.5144	14.114	1362993.920	1050375.637	29.815
	17	314.2935	14.273	87.1234	1.70	PARAMENTO	1.46	163.7852	14.256	1362994.062	1050376.808	29.815
	18	306.4903	16.651	87.3052	1.70	PARAMENTO	1.46	156.1096	16.635	1362992.541	1050379.564	29.842
	19	290.2300	14.518	87.5852	1.70	PARAMENTO	1.46	139.6755	14.509	1362996.690	1050382.216	29.632
	20	286.2808	17.815	88.0625	1.70	PARAMENTO	1.46	135.7610	17.805	1362994.995	1050385.249	29.709
	21	244.2231	7.334	87.1930	1.70	BORDE_VIA	1.46	93.6674	7.326	1363007.283	1050380.138	29.463
	22	256.5500	12.622	87.4819	1.70	BORDE_VIA	1.46	106.2088	12.613	1363004.231	1050384.938	29.604
	23	232.1731	5.801	87.3155	1.70	BORDE_VIA	1.46	81.5841	5.796	1363008.600	1050378.560	29.370
	24	203.4232	12.244	88.5058	1.70	BORDE_VIA	1.46	53.0010	12.242	1363015.118	1050382.603	29.366
	25	174.3909	11.692	89.0148	1.70	BORDE_VIA	1.46	23.9446	11.690	1363018.436	1050377.571	29.318
	26	151.1036	8.458	87.0235	1.70	PARAMENTO	1.46	0.4688	8.447	1363016.198	1050372.896	29.557
	27	329.1817	3.488	85.5353	1.70	MANHOLE	1.46	178.5969	3.479	1363004.273	1050372.912	29.370
	28	320.2438	5.333	87.0028	1.70	MANHOLE	1.46	169.7027	5.326	1363002.512	1050373.779	29.399
	29	328.5558	6.905	88.0830	1.70	SUMIDERO	1.46	178.2249	6.901	1363000.853	1050373.041	29.344
	30	329.0924	7.870	88.1913	1.70	SUMIDERO	1.46	178.4488	7.867	1362999.888	1050373.040	29.351
E1066-E1065	E1065	0.0000	113.344	89.4652	1.70	ESTACION	1.50	293.0091	113.340	1363052.053	1050268.504	29.126
	E1067	275.1110	43.071	88.4812	1.70	DELTA	1.50	28.1952	43.062	1363090.006	1050288.849	29.823
	31	0.0000	61.662	89.1923	1.70	LINEAMIENT	1.50	113.0091	61.658	1363027.953	1050325.256	29.652
	32	268.0536	8.516	89.4213	1.70	LINEAMIENT	1.50	21.1024	8.516	1363059.998	1050271.570	28.967
	33	270.3811	15.561	89.1432	1.70	LINEAMIENT	1.50	23.6455	15.560	1363066.307	1050274.744	29.129
	34	148.0048	5.799	86.0037	1.70	PARAMENTO	1.50	261.0224	5.785	1363051.151	1050262.790	29.327
	35	246.4726	11.395	89.3045	1.70	PARAMENTO	1.50	359.7996	11.395	1363063.448	1050268.464	29.020
	36	329.2932	6.350	87.5443	1.70	PARAMENTO	1.50	82.5013	6.346	1363052.882	1050274.795	29.155
	37	346.5543	13.820	88.2746	1.70	PARAMENTO	1.50	99.9377	13.815	1363049.669	1050282.112	29.294
	38	47.2338	7.034	83.2415	1.70	PARAMENTO	1.50	160.4030	6.987	1363045.471	1050270.847	29.731
	39	123.1431	9.293	85.3023	1.70	PARAMENTO	1.50	236.2510	9.264	1363046.907	1050260.801	29.651
	40	24.5624	12.356	86.1804	1.70	PARAMENTO	1.50	137.9491	12.330	1363042.898	1050276.763	29.720
	41	106.0104	20.197	88.1211	1.70	PARAMENTO	1.50	219.0269	20.187	1363036.371	1050255.792	29.557



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	42	74.3523	17.122	87.3152	1.70	PARAMENTO	1.50	187.5988	17.106	1363035.098	1050266.242	29.661
	43	125.2603	9.531	85.3616	1.70	PARAMENTO	1.50	238.4433	9.503	1363047.080	1050260.406	29.654
	44	134.4241	5.096	87.0804	1.70	POSTE	1.50	247.7205	5.090	1363050.124	1050263.794	29.178
	45	49.0046	5.831	87.4917	1.70	POSTE	1.50	162.0219	5.827	1363046.511	1050270.302	29.145
	46	294.4535	9.895	85.2120	3.00	BOXCOULVER	1.50	47.7688	9.863	1363058.682	1050275.806	28.425
	47	295.2540	10.100	85.2810	3.00	BOXCOULVER	1.50	48.4369	10.068	1363058.733	1050276.037	28.421
	48	282.2009	11.344	91.0318	1.70	BOXCOULVER	1.50	35.3449	11.342	1363061.305	1050275.065	28.714
	49	283.3241	11.492	91.1825	1.70	BOXCOULVER	1.50	36.5538	11.489	1363061.283	1050275.346	28.661
	50	282.2920	11.876	88.5754	1.70	BOXCOULVER	1.50	35.4980	11.874	1363061.721	1050275.399	29.138
	51	283.1216	11.885	89.0115	1.70	BOXCOULVER	1.50	36.2135	11.883	1363061.641	1050275.524	29.126
	52	281.2657	13.312	88.3822	1.80	BOXCOULVER	1.50	34.4583	13.308	1363063.027	1050276.034	29.139
	53	282.1436	13.292	88.3336	1.80	BOXCOULVER	1.50	35.2524	13.288	1363062.905	1050276.173	29.157
	54	283.3732	11.957	90.0211	4.00	CANO	1.50	36.6346	11.957	1363061.648	1050275.639	26.616
	55	282.5946	12.892	90.2210	4.00	CANO	1.50	36.0052	12.892	1363062.482	1050276.082	26.540
	56	249.0213	13.100	90.0708	1.70	BOXCOULVER	1.50	2.0460	13.100	1363065.145	1050268.972	28.896
	57	252.3148	15.047	90.1433	1.70	BOXCOULVER	1.50	5.5391	15.047	1363067.030	1050269.956	28.860
	58	253.0821	15.391	91.5033	1.70	BOXCOULVER	1.50	6.1483	15.383	1363067.348	1050270.151	28.429
	59	252.5647	16.607	91.3606	1.70	BOXCOULVER	1.50	5.9555	16.601	1363068.564	1050270.226	28.459
	60	251.2422	15.001	92.3636	2.90	DESC_CLAVE	1.50	4.4152	14.985	1363066.994	1050269.657	27.040
	61	249.4511	14.173	92.3821	2.90	DESC_CLAVE	1.50	2.7621	14.158	1363066.195	1050269.186	27.071
E1067-E1066	E1066	0.0001	43.068	90.3754	1.70	ESTACION	1.48	28.1952	43.062	1363090.006	1050288.849	29.823
	E1068	92.0808	120.066	90.0122	1.70	DELTA	1.48	300.3308	120.066	1363150.638	1050185.218	29.554
	62	359.4253	50.149	90.3012	1.70	MANHOLE	1.48	207.9099	50.147	1363045.691	1050265.376	29.161
	63	2.2053	45.156	90.3906	1.70	MANHOLE	1.48	210.5433	45.153	1363051.118	1050265.903	29.088
	64	135.0019	7.532	86.0218	1.70	PARAMENTO	1.48	343.2005	7.514	1363097.199	1050286.678	30.122
	65	159.0044	14.064	87.4559	1.70	PARAMENTO	1.48	7.2074	14.053	1363103.948	1050290.613	30.150
	66	114.3432	13.394	88.0542	1.70	PARAMENTO	1.48	322.7708	13.387	1363100.664	1050280.750	30.047
	67	67.0552	6.282	88.4319	1.70	PARAMENTO	1.48	275.2930	6.280	1363090.585	1050282.596	29.742
	68	31.4051	11.067	90.1055	1.70	PARAMENTO	1.48	239.8760	11.067	1363084.451	1050279.277	29.567
	69	79.3506	13.081	89.3943	1.70	PARAMENTO	1.48	287.7802	13.081	1363094.000	1050276.393	29.679
	70	52.1130	2.278	84.5243	1.70	MANHOLE	1.48	260.3869	2.269	1363089.627	1050286.612	29.805
	71	115.3308	4.249	86.3510	1.70	MANHOLE	1.48	323.7474	4.241	1363093.426	1050286.341	29.855
	72	315.0609	2.141	84.3137	1.70	POSTE	1.48	163.2977	2.131	1363087.964	1050289.462	29.806
	73	347.5416	8.435	88.3318	1.70	CERRAMIENT	1.48	196.0996	8.432	1363081.904	1050286.511	29.815
	74	193.2800	8.324	87.1753	1.70	CERRAMIENT	1.48	41.6619	8.315	1363096.217	1050294.377	29.994
	75	92.3103	107.242	90.0628	1.70	MANHOLE	1.48	300.7127	107.242	1363144.778	1050196.649	29.400



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	77	93.1424	53.196	89.5344	1.70	MANHOLE	1.48	301.4352	53.196	1363117.749	1050243.461	29.699
	76	91.3830	46.621	89.5531	1.70	LINEAMIENT	1.48	299.8369	46.621	1363113.201	1050248.408	29.663
	78	91.3831	105.746	89.3657	2.60	LINEAMIENT	1.48	299.8371	105.744	1363142.617	1050197.123	29.411
E1068-E1067	E1067	0.0000	120.066	89.4648	1.70	ESTACION	1.49	300.3308	120.066	1363150.638	1050185.218	29.554
	E1069	179.0421	90.378	90.1357	1.70	DELTA	1.49	299.4033	90.377	1363195.009	1050106.482	28.977
	79	337.1006	10.212	88.4126	1.70	PARAMENTO	1.49	97.4991	10.209	1363149.305	1050195.340	29.578
	80	304.4405	4.854	88.2822	1.70	PARAMENTO	1.49	65.0655	4.852	1363152.683	1050189.618	29.474
	81	47.0942	4.083	86.1429	1.70	PARAMENTO	1.49	167.4924	4.074	1363146.660	1050186.100	29.612
	82	16.5337	9.961	87.2807	1.70	PARAMENTO	1.49	137.2244	9.951	1363143.333	1050191.976	29.784
	83	13.0537	10.297	87.4343	1.70	POSTE	1.49	133.4244	10.289	1363143.565	1050192.690	29.752
	84	343.4140	9.820	89.0335	1.70	POSTE	1.49	104.0252	9.819	1363148.258	1050194.743	29.505
	85	346.1058	17.638	89.0920	1.70	PARAMENTO	1.49	106.5135	17.636	1363145.625	1050202.126	29.604
	86	339.4644	18.130	89.0920	1.70	PARAMENTO	1.49	100.1096	18.128	1363147.456	1050203.064	29.611
	87	11.0251	16.871	89.3158	1.70	PARAMENTO	1.49	131.3783	16.870	1363139.486	1050197.876	29.482
	88	16.0347	17.123	89.0908	1.70	PARAMENTO	1.49	136.3938	17.121	1363138.240	1050197.026	29.597
	89	4.4723	14.939	89.2902	1.70	ESTACA	1.49	125.1205	14.938	1363142.044	1050197.436	29.479
	90	180.3325	37.434	89.4620	1.70	MANHOLE	1.49	300.8877	37.434	1363169.855	1050153.093	29.493
E1069-E1068	E1068	0.0001	90.384	89.3128	1.70	ESTACION	1.53	299.4033	90.377	1363195.009	1050106.482	28.977
	E1070	179.4736	76.528	89.5924	1.70	DELTA	1.53	299.1966	76.528	1363232.340	1050039.677	28.818
	91	0.0001	52.951	89.1830	1.70	LINEAMIENT	1.53	119.4035	52.947	1363169.014	1050152.609	29.444
	92	181.0839	78.207	89.5209	1.70	MANHOLE	1.53	300.5474	78.207	1363234.757	1050039.130	28.983
	93	231.2026	2.402	78.3208	1.70	MANHOLE	1.53	350.7438	2.354	1363197.332	1050106.103	29.282
	94	291.0030	5.083	87.3136	1.70	PARAMENTO	1.53	50.4116	5.078	1363198.245	1050110.396	29.024
	95	50.1938	3.126	86.5128	1.70	PARAMENTO	1.53	169.7305	3.121	1363191.937	1050107.039	28.976
	96	155.2518	6.164	86.4149	1.70	PARAMENTO	1.53	274.8249	6.154	1363195.526	1050100.350	29.160
	97	223.3827	7.148	88.1536	1.70	PARAMENTO	1.53	343.0441	7.145	1363201.843	1050104.398	29.021
	98	236.2646	9.422	87.4733	1.70	PARAMENTO	1.53	355.8494	9.415	1363204.399	1050105.801	29.167
	99	281.0518	10.522	87.5344	1.70	PARAMENTO	1.53	40.4916	10.515	1363203.005	1050113.310	29.191
	100	37.5141	1.945	74.0817	1.70	CAMA_TELEF	1.53	157.2646	1.871	1363193.283	1050107.205	29.336
	101	49.5351	2.315	76.5209	1.70	CAMA_TELEF	1.53	169.3008	2.254	1363192.793	1050106.901	29.330
	102	27.4823	2.587	78.2407	1.70	CAMA_TELEF	1.53	147.2096	2.534	1363192.878	1050107.855	29.324
	103	38.2902	2.874	79.3023	1.70	CAMA_TELEF	1.53	157.8871	2.826	1363192.391	1050107.546	29.328
	104	66.0403	4.621	87.5827	1.70	PARAMENTO	1.53	185.4708	4.618	1363190.412	1050106.042	28.968
	105	133.2934	8.167	89.2256	1.70	PARAMENTO	1.53	252.8960	8.167	1363192.607	1050098.677	28.892
	106	95.1818	30.720	89.4649	1.70	MANHOLE	1.53	214.7083	30.720	1363169.755	1050088.990	28.922
	107	53.0923	2.446	86.5628	1.70	POSTE	1.53	172.5596	2.443	1363192.587	1050106.798	28.935



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	108	224.1016	6.048	88.0239	1.70	POSTE	1.53	343.5744	6.044	1363200.807	1050104.773	29.011
E1070-E1069	E1069	0.0001	76.530	89.4353	1.70	ESTACION	1.49	299.1966	76.528	1363232.340	1050039.677	28.818
	E1071	95.1512	12.428	90.1923	1.70	DELTA	1.49	214.4499	12.428	1363222.091	1050032.647	28.542
	109	2.5955	49.908	89.3920	1.70	PARAMENTO	1.49	122.1952	49.907	1363205.749	1050081.910	28.912
	110	101.5142	10.638	89.2659	1.70	MANHOLE	1.49	221.0583	10.638	1363224.319	1050032.690	28.714
	111	89.3430	9.245	89.5629	1.70	LINEAMIENT	1.49	208.7716	9.245	1363224.236	1050035.227	28.621
	112	126.1713	9.511	88.3824	1.70	PARAMENTO	1.49	245.4835	9.508	1363228.394	1050031.026	28.837
	113	283.0116	6.233	88.1444	1.70	PARAMENTO	1.49	42.2177	6.230	1363236.954	1050043.863	28.803
	114	277.3452	11.564	88.3920	1.70	PARAMENTO	1.49	36.7777	11.561	1363241.600	1050046.599	28.883
	115	173.3630	5.701	89.1320	1.70	PARAMENTO	1.49	292.8049	5.700	1363234.549	1050034.422	28.689
	116	280.5328	5.548	88.1143	1.70	POSTE	1.49	40.0877	5.545	1363236.582	1050043.248	28.786
E1071-E1070	E1070	0.0000	12.424	88.0708	1.70	ESTACION	1.57	214.4499	12.428	1363222.091	1050032.647	28.542
	E1072	266.1418	140.162	89.4755	1.70	DELTA	1.57	300.6883	140.161	1363293.625	1049912.114	28.899
	117	287.0417	12.254	88.2114	1.70	PARAMENTO	1.57	321.5213	12.249	1363231.680	1050025.025	28.759
	118	265.0606	36.457	89.2047	1.70	MANHOLE	1.57	299.5516	36.455	1363240.071	1050000.934	28.823
	119	269.4240	33.758	89.2942	1.70	POSTE	1.57	304.1610	33.757	1363241.047	1050004.714	28.704
	120	294.4441	7.474	86.3638	1.70	POSTE	1.57	329.1946	7.461	1363228.500	1050028.826	28.849
	121	266.1419	93.343	89.4513	1.70	LINEAMIENT	1.57	300.6885	93.342	1363269.731	1049952.377	28.808
	122	265.4756	70.481	89.3737	1.70	MANHOLE	1.57	300.2488	70.480	1363257.596	1049971.763	28.866
	123	264.4646	74.618	89.4712	1.70	SUMIDERO	1.57	299.2294	74.617	1363258.528	1049967.530	28.685
	124	265.1826	73.798	89.4540	1.70	SUMIDERO	1.57	299.7571	73.797	1363258.719	1049968.580	28.714
E1072-E1071	E1071	0.0000	140.165	90.0611	1.70	ESTACION	1.57	300.6883	140.161	1363293.625	1049912.114	28.899
	E1073	268.4243	15.763	89.2109	1.70	DELTA	1.57	29.4002	15.762	1363307.357	1049919.852	28.951
	125	1.2809	33.687	90.1223	1.70	MANHOLE	1.57	122.1574	33.687	1363275.695	1049940.633	28.652
	126	356.3723	35.892	90.1825	1.70	SUMIDERO	1.57	117.3113	35.891	1363277.157	1049944.005	28.581
	127	356.5701	36.839	90.1348	1.70	SUMIDERO	1.57	117.6385	36.839	1363276.536	1049944.749	28.625
	128	336.4737	1.532	85.4516	1.70	VALVULA	1.57	97.4819	1.528	1363293.426	1049913.629	28.887
	129	126.4310	1.921	84.1905	1.70	MANHOLE	1.57	247.4077	1.912	1363292.891	1049910.349	28.964
	130	23.1219	9.269	89.0807	1.70	PARAMENTO	1.57	143.8935	9.268	1363286.137	1049917.576	28.913
	131	12.2227	16.868	89.2236	1.70	PARAMENTO	1.57	133.0624	16.867	1363282.108	1049924.437	28.957
	132	341.0944	9.826	88.4347	1.70	PARAMENTO	1.57	101.8505	9.824	1363291.608	1049921.728	28.991
	133	306.5611	4.158	83.5715	1.70	PARAMENTO	1.57	67.6246	4.135	1363295.199	1049915.938	29.211
	134	339.0558	4.133	88.1415	1.70	POSTE	1.57	99.7877	4.131	1363292.923	1049916.185	28.900
	135	51.3200	13.589	88.1054	1.70	PARAMENTO	1.57	172.2216	13.582	1363280.168	1049913.952	29.205
	136	72.5140	11.535	88.0459	1.70	PARAMENTO	1.57	193.5494	11.529	1363282.417	1049909.413	29.159
	137	80.0522	11.137	88.0734	1.70	PARAMENTO	1.57	200.7777	11.131	1363283.218	1049908.165	29.138



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	138	59.4338	3.419	87.5037	1.70	POSTE	1.57	180.4155	3.417	1363290.209	1049912.089	28.902
	139	84.5831	21.067	89.4630	1.70	PARAMENTO	1.57	205.6635	21.067	1363274.636	1049902.990	28.856
	140	240.5157	10.716	89.2748	1.70	CANCHA	1.57	1.5541	10.716	1363304.337	1049912.405	28.874
	141	98.4838	37.072	90.0216	1.70	CANCHA	1.57	219.4988	37.072	1363265.019	1049888.534	28.749
	142	193.2806	35.427	90.0113	1.70	CANCHA	1.57	314.1566	35.427	1363318.304	1049886.697	28.761
	143	132.0009	52.395	89.5927	1.70	CANCHA	1.57	252.6908	52.395	1363278.036	1049862.092	28.782
	144	282.5814	10.816	87.5446	1.70	PARAMENTO	1.57	43.6588	10.809	1363301.445	1049919.576	29.167
	145	273.4634	17.449	89.0336	1.70	POSTE	1.57	34.4644	17.447	1363308.009	1049921.987	29.060
	146	251.4715	23.244	89.2716	1.70	PARAMENTO	1.57	12.4758	23.243	1363316.319	1049917.135	28.995
	147	255.2912	28.834	89.3629	1.70	PARAMENTO	1.57	16.1749	28.833	1363321.317	1049920.146	28.971
	148	233.0804	27.373	90.1120	1.70	PARAMENTO	1.57	353.8227	27.373	1363320.839	1049909.169	28.683
	149	206.2017	47.051	89.5236	1.70	PARAMENTO	1.57	327.0263	47.051	1363333.097	1049886.507	28.875
	150	212.5410	49.903	89.5611	1.70	PARAMENTO	1.57	333.5910	49.903	1363338.320	1049889.919	28.829
	151	203.2922	52.772	89.5203	1.70	PARAMENTO	1.57	324.1777	52.772	1363336.414	1049881.228	28.895
	152	196.2948	44.408	89.1352	1.70	PARAMENTO	1.57	317.1849	44.404	1363326.198	1049881.936	29.369
	153	196.4003	47.420	89.3603	1.70	PARAMENTO	1.57	317.3558	47.419	1363328.505	1049879.991	29.104
	154	190.0848	43.125	89.4615	1.70	PARAMENTO	1.57	310.8349	43.125	1363321.823	1049879.486	28.946
E1073-E1072	E1072	0.0000	15.761	89.3531	1.70	ESTACION	1.54	29.4002	15.762	1363307.357	1049919.852	28.951
	E1074	91.2100	97.780	90.0910	1.70	DELTA	1.54	300.7502	97.780	1363357.351	1049835.820	28.527
	155	91.2100	61.984	90.0529	1.70	LINEAMIENT	1.54	300.7502	61.984	1363339.049	1049866.583	28.689
E1074-E1073	E1073	0.0001	97.784	89.3931	1.70	ESTACION	1.55	300.7502	97.780	1363357.351	1049835.820	28.527
	E1075	179.4903	78.311	90.1031	1.70	DELTA	1.55	300.5677	78.311	1363397.177	1049768.392	28.136
	156	356.5418	62.716	89.3749	1.70	MANHOLE	1.55	117.6552	62.715	1363328.242	1049891.369	28.780
	157	216.3614	3.671	84.3749	1.70	MANHOLE	1.55	337.3541	3.655	1363360.725	1049834.412	28.719
	158	289.4613	4.668	82.4614	1.70	PARAMENTO	1.55	50.5205	4.631	1363360.296	1049839.394	28.963
	159	284.4118	6.313	84.1840	1.70	PARAMENTO	1.55	45.4385	6.282	1363361.759	1049840.295	29.002
	160	60.5338	5.968	87.4637	1.70	PARAMENTO	1.55	181.6441	5.964	1363351.390	1049835.648	28.607
	161	60.5257	3.212	86.4753	1.70	PARAMENTO	1.55	181.6327	3.207	1363354.146	1049835.728	28.555
	162	81.2759	11.642	89.0548	1.70	PARAMENTO	1.55	202.2166	11.641	1363346.575	1049831.418	28.559
	163	123.0127	9.455	88.5049	1.70	PARAMENTO	1.55	243.7744	9.453	1363353.174	1049827.340	28.566
	164	211.3912	8.213	85.0941	1.70	PARAMENTO	1.55	332.4035	8.184	1363364.604	1049832.028	29.069
	165	151.3732	6.150	87.1420	1.70	PARAMENTO	1.55	272.3758	6.143	1363357.606	1049829.682	28.672
	166	234.1547	9.487	86.1416	1.70	PARAMENTO	1.55	355.0133	9.467	1363366.782	1049834.997	28.998
	167	218.0838	7.022	83.5804	1.70	PARAMENTO	1.55	338.8941	6.983	1363363.866	1049833.305	29.114
	168	220.5941	6.049	87.5913	1.70	POSTE	1.55	341.7449	6.045	1363363.092	1049833.926	28.588
	169	277.5627	3.761	85.1214	1.70	POSTE	1.55	38.6910	3.748	1363360.277	1049838.162	28.690



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	170	67.2211	2.584	86.5225	1.70	POSTE	1.55	188.1199	2.580	1363354.797	1049835.455	28.517
E1075-E1074	E1074	0.0000	78.310	89.3615	1.70	ESTACION	1.55	300.5677	78.311	1363397.177	1049768.392	28.136
	E1076	178.3911	81.072	89.3827	1.70	DELTA	1.55	299.2208	81.070	1363436.753	1049697.638	28.491
	171	73.2845	3.426	86.5925	1.70	PARAMENTO	1.55	194.0469	3.421	1363393.858	1049767.561	28.163
	172	83.4108	9.438	87.3857	1.70	PARAMENTO	1.55	204.2533	9.430	1363388.579	1049764.518	28.370
	173	213.5104	6.372	87.5532	1.70	PARAMENTO	1.55	334.4188	6.368	1363402.920	1049765.642	28.214
	174	150.5902	6.995	89.1124	1.70	PARAMENTO	1.55	271.5516	6.994	1363397.366	1049761.400	28.082
	175	198.0127	10.938	88.2754	1.70	PARAMENTO	1.55	318.5919	10.934	1363405.378	1049761.160	28.276
	176	117.3231	13.012	89.2609	1.70	PARAMENTO	1.55	238.1096	13.011	1363390.303	1049757.344	28.111
	177	242.2647	11.852	88.4501	1.70	PARAMENTO	1.55	3.0141	11.849	1363409.010	1049769.015	28.242
	178	266.0421	3.713	85.1604	1.70	PARAMENTO	1.55	26.6402	3.700	1363400.484	1049770.051	28.289
	179	268.1728	9.750	88.2946	1.70	PARAMENTO	1.55	28.8588	9.747	1363405.713	1049773.096	28.239
	180	190.4227	2.547	84.3637	1.70	MANHOLE	1.55	311.2752	2.536	1363398.850	1049766.486	28.222
	181	279.0840	2.812	86.0353	1.70	POSTE	1.55	39.7121	2.805	1363399.335	1049770.184	28.176
	182	206.5656	5.936	88.4921	1.70	POSTE	1.55	327.5166	5.935	1363402.183	1049765.205	28.105
	183	156.1922	5.905	88.5705	1.70	POSTE	1.55	276.8905	5.904	1363397.885	1049762.530	28.091
	184	145.4707	6.529	89.0832	1.70	SUMIDERO	1.55	266.3530	6.528	1363396.762	1049761.877	28.081
	185	150.5530	5.668	89.0238	1.70	SUMIDERO	1.55	271.4927	5.667	1363397.324	1049762.727	28.078
	186	96.3502	1.102	79.3750	1.70	LINEAMIENT	1.55	217.1516	1.084	1363396.313	1049767.737	28.182
E1076-E1075	E1075	0.0000	81.072	90.0702	1.70	ESTACION	1.52	299.2208	81.070	1363436.753	1049697.638	28.491
	E1077	180.2929	82.141	90.0419	1.70	DELTA	1.52	299.7121	82.141	1363477.466	1049626.296	28.204
	187	0.0001	49.116	90.0448	1.70	LINEAMIENT	1.52	119.2210	49.116	1363412.776	1049740.504	28.239
	188	180.2926	46.749	89.5249	1.70	LINEAMIENT	1.52	299.7113	46.749	1363459.924	1049657.035	28.405
	189	231.4806	6.583	88.2944	1.70	PARAMENTO	1.52	351.0224	6.581	1363443.254	1049696.611	28.480
	190	34.3301	3.547	86.1134	1.70	PARAMENTO	1.52	153.7710	3.539	1363433.579	1049699.202	28.543
	191	250.2702	11.779	87.3559	1.70	PARAMENTO	1.52	9.6713	11.769	1363448.355	1049699.615	28.801
	192	70.4548	8.476	88.3437	1.70	PARAMENTO	1.52	189.9841	8.473	1363428.408	1049696.169	28.518
	193	300.1525	5.932	87.4620	1.70	PARAMENTO	1.52	59.4777	5.928	1363439.764	1049702.744	28.538
	194	153.0256	4.718	85.4830	1.70	PARAMENTO	1.52	272.2696	4.705	1363436.940	1049692.936	28.652
	195	114.2131	10.850	88.1009	1.70	PARAMENTO	1.52	233.5794	10.844	1363430.315	1049688.912	28.654
	196	285.5844	11.252	88.1948	1.70	PARAMENTO	1.52	45.1996	11.247	1363444.679	1049705.619	28.635
	197	227.4036	2.500	85.1836	1.70	MANHOLE	1.52	346.8974	2.492	1363439.180	1049697.073	28.512
	198	302.4232	3.246	87.0412	1.70	POSTE	1.52	61.9296	3.242	1363438.279	1049700.498	28.473
	199	179.0938	29.009	90.0052	1.70	POSTE	1.52	298.3813	29.009	1363450.542	1049672.116	28.300
	200	1.3824	40.067	89.5314	1.70	ARBOL	1.52	120.8608	40.067	1363416.201	1049732.032	28.386
E1077-E1076	E1076	0.0000	82.146	89.4119	1.70	ESTACION	1.54	299.7121	82.141	1363477.466	1049626.296	28.204



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E1078	88.4419	134.132	90.1952	1.70	DELTA	1.54	208.4508	134.130	1363359.535	1049562.397	27.266
	E1079	266.1204	36.053	89.3157	1.70	DELTA	1.54	25.9133	36.052	1363509.893	1049642.051	28.335
	201	1.0256	36.173	87.2446	2.90	POSTE	1.54	120.7610	36.136	1363458.984	1049657.348	28.474
	202	2.1657	17.912	88.4752	1.70	POSTE	1.54	121.9946	17.908	1363467.978	1049641.484	28.417
	203	17.3727	6.212	87.3616	1.70	PARAMENTO	1.54	137.3363	6.207	1363472.902	1049630.503	28.301
	204	322.3416	8.129	85.4309	1.70	PARAMENTO	1.54	82.2833	8.106	1363478.554	1049634.329	28.648
	205	339.5059	16.224	88.0244	1.70	PARAMENTO	1.54	99.5619	16.215	1363474.773	1049642.286	28.595
	206	3.1523	20.851	88.0618	1.70	PARAMENTO	1.54	122.9685	20.840	1363466.125	1049643.780	28.731
	207	52.1149	10.265	89.3101	1.50	PARAMENTO	1.54	171.9091	10.265	1363467.303	1049627.741	28.328
	208	328.0718	2.491	83.1949	1.70	MANHOLE	1.54	87.8338	2.474	1363477.559	1049628.769	28.331
	209	106.3506	8.091	88.5854	1.70	PARAMENTO	1.54	226.2971	8.090	1363471.877	1049620.448	28.185
	210	170.3132	2.432	84.5825	1.70	PARAMENTO	1.54	290.2377	2.423	1363478.304	1049624.023	28.254
	211	254.1210	9.110	88.1010	1.70	PARAMENTO	1.54	13.9149	9.105	1363486.304	1049628.486	28.332
	212	279.1950	12.973	88.4234	1.70	BORDE_VIA	1.54	39.0427	12.970	1363487.539	1049634.466	28.333
	213	267.1536	13.578	88.4444	1.70	BORDE_VIA	1.54	26.9721	13.575	1363489.564	1049632.453	28.338
	214	92.2038	10.662	89.3449	1.70	BORDE_VIA	1.54	212.0560	10.662	1363468.430	1049620.638	28.119
	215	77.4256	10.824	89.3557	1.70	BORDE_VIA	1.54	197.4277	10.824	1363467.139	1049623.055	28.117
E1079-E1077	E1077	0.0000	36.057	90.1618	1.50	ESTACION	1.54	25.9133	36.052	1363509.893	1049642.051	28.335
	E1080	271.3534	164.551	89.5008	1.50	DELTA	1.54	117.5060	164.550	1363433.897	1049788.001	28.849
E1080-E1079	E1079	0.0000	164.554	90.1258	1.50	ESTACION	1.56	117.5060	164.550	1363433.897	1049788.001	28.849
	E1081	179.2230	166.139	89.5649	1.50	DELTA	1.56	116.8810	166.139	1363358.779	1049936.188	29.065
E1081-E1080	E1080	0.0000	166.145	90.0557	1.50	ESTACION	1.58	116.8810	166.139	1363358.779	1049936.188	29.065
	E1082	184.0110	212.012	89.5028	1.50	DELTA	1.58	120.9005	212.011	1363249.901	1050118.107	29.730
E1082-E1081	E1081	0.0000	212.015	90.1207	1.50	ESTACION	1.55	120.9005	212.011	1363249.901	1050118.107	29.730
	E1083	178.3543	161.374	89.5823	1.50	DELTA	1.55	119.4958	161.374	1363170.447	1050258.566	29.851
E1083-E1082	E1082	0.0000	161.379	90.0433	1.50	ESTACION	1.55	119.4958	161.374	1363170.447	1050258.566	29.851
	E1084	180.4306	183.141	89.5540	1.50	DELTA	1.55	120.2141	183.141	1363078.284	1050416.827	30.131
E1084-E1083	E1083	0.0001	183.144	90.0640	1.50	ESTACION	1.53	120.2141	183.141	1363078.284	1050416.827	30.131
	E1065	271.4236	83.091	90.3553	1.50	DELTA	1.53	211.9241	83.086	1363007.765	1050372.891	29.296
E1065-E1084	E1084	0.0000	83.090	89.3142	1.50	ESTACION	1.53	211.9241	83.086	1363007.765	1050372.891	29.296
	E1066	261.0436	113.340	90.0748	1.50	DELTA	1.53	293.0008	113.340	1363052.052	1050268.562	29.066
	E1041	177.2127	73.085	90.1538	1.50	DELTA	1.53	209.2816	73.084	1362944.019	1050337.146	28.991



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1001		0.0000				ESTACION		0.0000		1362364.350	1051003.624	29.234
E1003	E1001	0.0000	37.356	87.2518	1.50	ESTACION	1.46	163.9710		1362328.467	1051013.933	27.597
	E1004	154.5842	11.032	93.1226	1.50	DELTA	1.46	138.9494	11.015	1362320.160	1051021.167	26.937
	28	170.0359	9.226	96.3437	1.50	ESTRUCTURA	1.46	154.0374	9.165	1362320.226	1051017.946	26.497
	29	170.5530	9.405	96.2717	1.50	ESTRUCTURA	1.46	154.8960	9.345	1362320.004	1051017.898	26.497
	30	148.5702	15.416	93.4814	1.50	ESTRUCTURA	1.46	132.9216	15.382	1362317.992	1051025.197	26.531
	31	149.5929	15.447	93.4814	1.50	ESTRUCTURA	1.46	133.9624	15.413	1362317.767	1051025.027	26.529
	32	157.3334	12.742	94.1956	2.60	DESCARGA	1.46	141.5305	12.706	1362318.519	1051021.837	25.492
	33	157.3926	13.019	99.1106	2.60	DESCARGA	1.46	141.6283	12.852	1362318.391	1051021.911	24.376
	34	156.2553	13.488	98.0931	2.60	DESCARGA	1.46	140.4024	13.351	1362318.179	1051022.443	24.540
	35	155.0942	13.437	98.0931	2.60	ESTRUCTURA	1.46	139.1327	13.301	1362318.408	1051022.636	24.547
	36	158.4227	12.929	100.0815	3.60	ESTRUCTURA	1.46	142.6785	12.727	1362318.345	1051021.650	23.178
	36	158.4228	12.926	100.0815	2.60	ESTRUCTURA	1.46	142.6788	12.724	1362318.348	1051021.648	24.179
	37	158.3842	12.883	100.1130	2.60	ESTRUCTURA	1.46	142.6160	12.680	1362318.392	1051021.632	24.175
	38	158.3304	12.953	100.0846	2.60	ESTRUCTURA	1.46	142.5221	12.750	1362318.348	1051021.691	24.172
	39	159.5206	11.882	99.1121	2.60	ESTRUCTURA	1.46	143.8394	11.730	1362318.997	1051020.854	24.557
	40	161.1646	12.098	99.0435	2.60	ESTRUCTURA	1.46	145.2505	11.947	1362318.651	1051020.743	24.546
	41	156.2408	13.771	99.2113	2.60	ESTRUCTURA	1.46	140.3733	13.588	1362318.001	1051022.599	24.216
	42	157.5207	14.005	99.1355	2.60	ESTRUCTURA	1.46	141.8396	13.824	1362317.597	1051022.474	24.207
	43	160.0526	13.077	95.1156	4.02	ESTRUCTURA	1.46	144.0616	13.023	1362317.922	1051021.577	23.854
	44	161.3117	12.003	94.0130	4.02	ESTRUCTURA	1.46	145.4924	11.973	1362318.600	1051020.716	24.197
	45	163.1157	12.195	100.3356	4.02	ESTRUCTURA	1.46	147.1702	11.988	1362318.393	1051020.433	22.803
	45	162.5647	12.260	93.5738	4.02	ESTRUCTURA	1.46	146.9174	12.231	1362318.219	1051020.609	24.192
	46	168.1530	5.817	111.5151	2.00	CANO	1.46	152.2294	5.399	1362323.690	1051016.449	24.888
	47	133.5151	4.375	107.2212	2.00	CANO	1.46	117.8352	4.175	1362326.517	1051017.626	25.748
	48	82.1042	5.007	100.4112	2.00	CANO	1.46	66.1494	4.920	1362330.456	1051018.433	26.126
	49	53.5728	8.476	94.5752	2.00	CANO	1.46	37.9288	8.444	1362335.127	1051019.124	26.321
	50	42.0628	14.435	92.2312	2.00	CANO	1.46	26.0788	14.422	1362341.421	1051020.274	26.453
	51	194.0121	2.857	100.4503	2.00	TERRENO	1.46	177.9935	2.807	1362325.662	1051014.032	26.521
	52	196.5526	7.103	104.5757	2.00	TERRENO	1.46	180.8949	6.862	1362321.605	1051013.826	25.220
	53	155.0515	5.880	98.3712	2.00	TERRENO	1.46	139.0585	5.814	1362324.075	1051017.743	26.173
	54	165.2846	9.365	96.3019	2.00	TERRENO	1.46	149.4505	9.305	1362320.454	1051018.663	25.993
	55	144.0752	8.817	86.3414	2.00	TERRENO	1.46	128.1021	8.801	1362323.036	1051020.859	27.582
E1004-E1003	E1003	0.0000	11.023	86.5912	1.50	ESTACION	1.57	138.9494	11.015	1362320.160	1051021.167	26.937
	56	114.1647	3.016	83.0147	2.00	TERRENO	1.57	73.2291	2.994	1362321.024	1051024.033	26.875
	57	147.2009	10.342	109.2445	2.00	TERRENO	1.57	106.2852	9.754	1362317.425	1051030.530	23.072



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	58	205.2740	7.928	115.1848	2.00	RIO	1.57	164.4105	7.167	1362313.257	1051023.093	23.119
	59	209.0013	6.393	122.0403	2.00	RIO	1.57	167.9530	5.418	1362314.862	1051022.298	23.115
	60	207.3030	5.095	126.5001	2.60	RIO	1.57	166.4577	4.078	1362316.196	1051022.122	22.854
	61	255.3923	3.949	135.3140	2.60	RIO	1.57	214.6058	2.767	1362317.883	1051019.596	23.091
	62	257.3938	4.961	123.0145	2.60	RIO	1.57	216.6099	4.159	1362316.821	1051018.687	23.205
	63	291.5448	12.012	103.2800	2.60	RIO	1.57	250.8627	11.682	1362316.330	1051010.131	23.112
	64	195.1510	3.532	125.0045	2.60	ESTRUCTURA	1.57	154.2021	2.893	1362317.556	1051022.426	23.882
	65	199.3901	3.804	122.1547	2.60	ESTRUCTURA	1.57	158.5996	3.217	1362317.165	1051022.341	23.878
	66	214.2142	3.552	131.3237	2.60	ESTRUCTURA	1.57	173.3110	2.658	1362317.520	1051021.477	23.553
	67	237.3503	2.928	134.0922	2.60	ESTRUCTURA	1.57	196.5335	2.101	1362318.146	1051020.569	23.869
	68	237.3915	3.255	128.5831	2.60	ESTRUCTURA	1.57	196.6035	2.530	1362317.735	1051020.444	23.862
	69	237.3426	3.451	132.0815	2.60	ESTRUCTURA	1.57	196.5233	2.559	1362317.707	1051020.439	23.594
	70	240.2912	3.442	132.3050	2.60	ESTRUCTURA	1.57	199.4360	2.537	1362317.768	1051020.323	23.583
	71	239.3007	4.129	124.0808	2.60	ESTRUCTURA	1.57	198.4513	3.418	1362316.918	1051020.085	23.592
	72	237.0745	4.120	124.0808	2.60	ESTRUCTURA	1.57	196.0785	3.410	1362316.883	1051020.222	23.597
	73	230.4111	4.305	124.3844	2.60	ESTRUCTURA	1.57	189.6358	3.542	1362316.668	1051020.574	23.461
	74	230.5619	4.294	129.4101	2.60	ESTRUCTURA	1.57	189.8880	3.305	1362316.905	1051020.599	23.167
	75	199.2223	3.987	125.1553	2.60	ESTRUCTURA	1.57	158.3224	3.255	1362317.135	1051022.369	23.607
	76	207.1731	4.551	120.0314	2.60	ESTRUCTURA	1.57	166.2413	3.939	1362316.334	1051022.104	23.630
	77	189.1904	5.895	110.3122	2.60	TERRENO	1.57	148.2671	5.521	1362315.465	1051024.071	23.842
	78	165.4618	6.223	106.3626	2.60	TERRENO	1.57	124.7210	5.963	1362316.763	1051026.068	24.130
	79	138.4830	5.851	96.5252	2.60	TERRENO	1.57	97.7577	5.809	1362319.376	1051026.923	25.208
E1006		0.0000				ESTACION		0.0000		1362427.529	1050904.396	28.833
E1007	E1006	0.0000	34.091	86.0653	1.50	ESTACION	1.57	264.1905		1362424.086	1050870.557	26.456
	117	75.3214	2.595	97.0430	2.60	DESCARGA	1.57	159.7277	2.575	1362421.671	1050871.449	25.109
	118	48.0846	1.911	98.0045	2.60	DESCARGA	1.57	132.3366	1.892	1362422.812	1050871.956	25.163
	119	36.1337	2.920	93.2610	2.60	DESCARGA	1.57	120.4174	2.915	1362422.611	1050873.070	25.254
	120	60.1935	2.103	78.2502	2.60	TERRENO	1.57	144.5169	2.060	1362422.409	1050871.753	25.851
	121	54.4344	2.837	70.3714	2.60	TERRENO	1.57	138.9194	2.676	1362422.069	1050872.315	26.370
	122	38.2504	4.182	81.5436	1.50	TERRENO	1.57	122.6083	4.140	1362421.855	1050874.045	27.117
	123	70.3753	5.043	81.1406	1.50	TERRENO	1.57	154.8219	4.984	1362419.576	1050872.677	27.297
	124	80.1552	4.701	85.1016	1.50	TERRENO	1.57	164.4549	4.684	1362419.573	1050871.812	26.925
	125	1.1719	3.509	85.1909	1.50	TERRENO	1.57	85.4791	3.497	1362424.362	1050874.043	26.815
	126	118.2849	1.240	101.4153	1.50	TERRENO	1.57	202.6708	1.214	1362422.966	1050870.089	26.278
	127	116.1401	1.443	101.5806	1.50	ESTRUCTURA	1.57	200.4241	1.412	1362422.763	1050870.064	26.230
	128	121.1655	1.582	101.1921	1.50	ESTRUCTURA	1.57	205.4724	1.551	1362422.686	1050869.890	26.218



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	129	94.0216	3.723	98.5801	1.50	ESTRUCTURA	1.57	178.2283	3.677	1362420.411	1050870.671	25.949
	130	96.4721	3.760	99.1001	1.50	ESTRUCTURA	1.57	180.9796	3.712	1362420.375	1050870.493	25.930
	131	108.5348	6.109	102.3325	2.60	TERRENO	1.57	193.0871	5.963	1362418.278	1050869.207	24.101
	132	108.5649	11.151	104.3617	2.60	RIO	1.57	193.1374	10.791	1362413.578	1050868.104	22.617
	133	217.4745	8.009	110.1932	2.60	RIO	1.57	301.9863	7.510	1362428.065	1050864.187	22.647
	134	133.1221	6.593	115.2126	2.60	RIO	1.57	217.3963	5.958	1362419.353	1050866.939	22.605
	135	188.3437	4.502	125.1340	2.60	RIO	1.57	272.7674	3.678	1362424.264	1050866.884	22.832
	136	291.3446	2.854	87.0319	1.50	TERRENO	1.57	15.7699	2.850	1362426.829	1050871.331	26.676
	137	33.5232	2.490	127.3209	2.60	TERRENO	1.57	118.0660	1.975	1362423.157	1050872.299	23.912
	138	29.1715	3.678	81.2442	1.50	TERRENO	1.57	113.4780	3.637	1362422.637	1050873.893	27.078
	139	2.5805	1.586	96.5232	1.50	TERRENO	1.57	87.1585	1.575	1362424.164	1050872.130	26.339
	140	322.5235	2.777	78.0033	1.50	ARBOL	1.57	47.0669	2.716	1362425.937	1050872.546	27.106
E1015		0.0000				ESTACION		0.0000		1362668.574	1050790.006	32.848
E1016	E1015	0.0001	55.718	84.1443	1.50	ESTACION	1.46	195.6249		1362615.195	1050775.077	27.290
	219	349.2334	34.858	91.3959	0.08	DESCARGA	1.46	5.0177	34.843	1362649.904	1050778.124	27.662
	220	351.1705	34.485	91.4327	0.08	DESCARGA	1.46	6.9096	34.469	1362649.414	1050779.224	27.638
	221	349.1829	34.746	90.5552	1.50	DESCARGA	1.46	4.9330	34.741	1362649.807	1050778.064	26.686
	222	351.2021	34.365	90.5552	1.50	DESCARGA	1.46	6.9641	34.360	1362649.302	1050779.243	26.692
	223	349.2220	31.685	91.2308	1.50	DESCARGA	1.46	4.9971	31.676	1362646.750	1050777.836	26.484
	224	347.2842	32.278	91.1938	1.50	DESCARGA	1.46	3.1033	32.269	1362647.417	1050776.824	26.503
	225	347.2510	32.302	92.0638	0.08	DESCARGA	1.46	3.0444	32.280	1362647.429	1050776.791	27.486
	226	349.2455	31.647	92.1343	0.08	DESCARGA	1.46	5.0402	31.623	1362646.695	1050777.855	27.445
	227	350.1224	34.732	89.2900	1.50	DESCARGA	1.46	5.8316	34.731	1362649.746	1050778.606	27.563
	228	349.2142	34.867	88.4140	0.08	DESCARGA	1.46	4.9866	34.858	1362649.921	1050778.107	29.470
	229	351.2628	27.231	90.4445	2.00	CANO	1.46	7.0660	27.229	1362642.217	1050778.426	26.396
	230	349.0447	27.539	94.1117	2.00	CANO	1.46	4.7046	27.465	1362642.568	1050777.329	24.739
	231	345.1005	27.999	93.0020	2.60	CANO	1.46	0.7930	27.960	1362643.152	1050775.464	24.682
	232	341.1252	23.888	94.0036	2.60	CANO	1.46	356.8394	23.830	1362638.988	1050773.763	24.480
	233	336.5144	25.172	93.5732	2.60	CANO	1.46	352.4871	25.112	1362640.091	1050771.793	24.412
	234	328.0949	22.758	95.0134	2.60	CANO	1.46	343.7885	22.670	1362636.964	1050768.748	24.156
	235	327.5704	21.706	95.2339	2.60	CANO	1.46	343.5760	21.610	1362635.923	1050768.967	24.110
	236	308.4020	21.541	99.1251	1.50	CANO	1.46	324.2971	21.263	1362632.461	1050762.668	23.801
	237	309.1750	22.300	98.5810	1.50	CANO	1.46	324.9221	22.027	1362633.221	1050762.418	23.773
	238	309.3307	23.003	98.2126	1.50	CANO	1.46	325.1769	22.759	1362633.878	1050762.081	23.907
	239	294.2619	22.305	96.2811	2.60	CANO	1.46	310.0635	22.163	1362629.460	1050758.115	23.637
	240	294.4109	23.319	95.4137	2.60	CANO	1.46	310.3108	23.204	1362630.206	1050757.383	23.837



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	241	294.5424	24.258	95.0523	2.60	CANO	1.46	310.5316	24.162	1362630.897	1050756.712	23.998
	242	289.1319	28.628	95.0108	2.60	CANO	1.46	304.8469	28.518	1362631.490	1050751.672	23.646
	243	289.3540	30.119	94.5831	2.60	CANO	1.46	305.2194	30.006	1362632.499	1050750.564	23.538
	244	338.2327	32.372	90.3844	1.50	CANO	1.46	354.0158	32.370	1362647.388	1050771.702	26.885
	245	339.2542	28.828	93.0001	2.60	CANO	1.46	355.0533	28.788	1362643.876	1050772.594	24.641
	246	345.1641	23.809	93.0931	1.50	CANO	1.46	0.9030	23.773	1362638.965	1050775.451	25.938
	247	329.3945	25.699	93.4030	2.60	CANO	1.46	345.2874	25.646	1362640.000	1050768.563	24.503
	248	339.5613	20.993	92.3010	1.50	CANO	1.46	355.5619	20.973	1362636.105	1050773.454	26.334
	249	327.5025	27.685	92.5854	1.50	CANO	1.46	343.4652	27.648	1362641.699	1050767.208	25.810
	250	329.1748	20.144	94.0005	1.50	CANO	1.46	344.9216	20.095	1362634.598	1050769.849	25.845
	251	317.2528	26.859	91.5841	1.60	CANO	1.46	333.0494	26.843	1362639.122	1050762.911	26.223
	252	319.3355	18.336	93.5628	1.50	CANO	1.46	335.1902	18.293	1362631.799	1050767.401	25.990
	253	305.5523	20.209	96.2708	1.50	CANO	1.46	321.5480	20.081	1362630.921	1050762.589	24.979
	254	305.4642	26.059	94.4127	0.08	CANO	1.46	321.4033	25.972	1362635.493	1050758.875	26.544
	255	294.4518	20.072	94.4932	1.50	CANO	1.46	310.3799	20.001	1362628.152	1050759.841	25.562
	256	295.3733	27.844	92.1649	1.80	CANO	1.46	311.2508	27.822	1362633.539	1050754.159	25.842
	257	287.0550	23.509	94.5013	1.50	CANO	1.46	302.7221	23.425	1362627.858	1050755.369	25.268
E1015		0.0000				ESTACION		0.0000		1362668.574	1050790.006	32.848
E1016	E1015	359.5959	55.715	84.1311	1.50	ESTACION	1.45	195.6249		1362615.195	1050775.077	27.290
	E1020	273.0332	34.992	91.0017	1.50	DELTA	1.45	288.6838	34.987	1362626.402	1050741.934	26.627
	275	142.3230	9.189	88.5513	1.50	DESCARGA	1.45	158.1666	9.187	1362606.666	1050778.494	27.413
	276	141.2001	9.124	88.4742	1.50	DESCARGA	1.45	156.9585	9.122	1362606.800	1050778.647	27.432
	277	141.2900	7.377	88.1353	1.50	DESCARGA	1.45	157.1083	7.373	1362608.402	1050777.945	27.468
	278	140.2354	7.491	88.1629	1.50	DESCARGA	1.45	156.0233	7.488	1362608.353	1050778.119	27.466
	279	137.3909	8.446	89.2733	1.50	TERRENO	1.45	153.2774	8.446	1362607.651	1050778.875	27.320
	280	142.5812	7.133	88.0701	1.50	TERRENO	1.45	158.5949	7.129	1362608.557	1050777.679	27.475
	281	144.0932	7.833	90.2538	1.90	TERRENO	1.45	159.7838	7.833	1362607.844	1050777.783	26.782
	282	143.1513	9.403	91.0020	1.50	TERRENO	1.45	158.8785	9.402	1362606.425	1050778.465	27.075
	283	143.5936	8.740	92.3444	1.50	TERRENO	1.45	159.6183	8.731	1362607.010	1050778.118	26.847
	284	152.5339	6.778	86.0400	1.50	TERRENO	1.45	168.5191	6.762	1362608.568	1050776.423	27.705
	285	152.3615	7.583	90.0436	1.50	TERRENO	1.45	168.2291	7.583	1362607.771	1050776.624	27.230
	286	150.2751	9.102	93.2100	1.50	TERRENO	1.45	166.0891	9.086	1362606.375	1050777.261	26.708
	287	150.4728	8.643	95.3013	1.50	TERRENO	1.45	166.4160	8.603	1362606.832	1050777.097	26.411
	288	163.4414	6.983	87.2029	1.50	TERRENO	1.45	179.3621	6.975	1362608.220	1050775.154	27.564
	289	163.1417	7.552	89.2930	1.90	TERRENO	1.45	178.8630	7.552	1362607.644	1050775.227	26.907
	290	159.1943	9.253	94.3835	2.20	TERRENO	1.45	174.9535	9.223	1362606.008	1050775.888	25.791



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	291	144.5750	9.630	91.1654	1.80	TERRENO	1.45	160.5888	9.628	1362606.114	1050778.276	26.725
	292	147.2127	9.805	93.4702	1.80	TERRENO	1.45	162.9824	9.784	1362605.839	1050777.940	26.293
	293	152.0824	10.076	95.3210	1.80	TERRENO	1.45	167.7649	10.029	1362605.393	1050777.202	25.968
	294	142.3451	8.321	92.4615	2.60	TERRENO	1.45	158.2058	8.311	1362607.477	1050778.163	25.738
	295	142.3607	8.476	90.5729	2.60	TERRENO	1.45	158.2269	8.475	1362607.324	1050778.220	25.999
	296	147.0223	8.300	92.5408	2.60	TERRENO	1.45	162.6646	8.289	1362607.282	1050777.547	25.720
	297	150.3701	8.244	94.2059	2.60	TERRENO	1.45	166.2419	8.220	1362607.210	1050777.032	25.515
	298	154.3624	8.385	95.5633	2.60	TERRENO	1.45	170.2316	8.340	1362606.976	1050776.492	25.272
	299	158.0920	8.489	97.2842	2.60	TERRENO	1.45	173.7805	8.417	1362606.827	1050775.989	25.035
	300	159.1813	8.465	96.1053	3.06	DESCARGA	1.45	174.9285	8.416	1362606.812	1050775.821	24.771
	301	162.2353	8.707	97.5122	3.06	DESCARGA	1.45	178.0230	8.625	1362606.575	1050775.374	24.492
	302	167.0826	8.855	96.1309	3.54	DESCARGA	1.45	182.7655	8.803	1362606.402	1050774.652	24.237
	303	171.2059	8.954	97.5947	3.54	DESCARGA	1.45	186.9746	8.867	1362606.393	1050774.000	23.951
	304	69.5654	38.407	89.4618	1.50	MANHOL	1.45	85.5733	38.407	1362618.159	1050813.369	27.393
	305	69.3448	39.519	91.0815	0.08	MANHOL	1.45	85.2049	39.511	1362618.497	1050814.450	27.881
	306	69.2605	42.677	89.4839	0.08	TUBO	1.45	85.0596	42.677	1362618.870	1050817.595	28.806
	307	157.0247	4.858	87.0232	1.50	TERRENO	1.45	172.6713	4.852	1362610.383	1050775.696	27.491
	308	135.2224	4.484	87.5917	1.50	TERRENO	1.45	150.9983	4.481	1362611.275	1050777.249	27.398
	309	116.5007	10.027	89.3713	1.50	TERRENO	1.45	132.4602	10.027	1362608.426	1050782.474	27.307
	310	134.3930	12.605	88.0944	1.50	TERRENO	1.45	150.2833	12.599	1362604.253	1050781.322	27.644
	311	172.2745	5.959	87.1325	1.50	TERRENO	1.45	188.0874	5.952	1362609.302	1050774.239	27.529
	312	190.1840	5.231	86.5549	1.50	TERRENO	1.45	205.9360	5.223	1362610.497	1050772.792	27.520
E1020-E1016	E1016	0.0001	34.996	88.5023	1.50	ESTACION	1.45	288.6838	34.987	1362626.402	1050741.934	26.627
	312	150.4806	7.579	112.3811	2.60	CANO	1.45	259.4855	6.995	1362625.126	1050735.056	22.562
	313	152.3146	7.459	117.5848	2.60	CANO	1.45	261.2133	6.587	1362625.396	1050735.424	21.979
	314	156.2733	6.895	121.5526	2.60	CANO	1.45	265.1430	5.852	1362625.907	1050736.103	21.833
	315	173.0145	4.423	114.2440	2.60	TERRENO	1.45	281.7130	4.028	1362627.220	1050737.990	23.651
	316	169.4703	7.957	112.0855	2.60	CANO	1.45	278.4680	7.370	1362627.488	1050734.644	22.479
	317	167.4919	8.711	112.4246	2.60	CANO	1.45	276.5058	8.035	1362627.313	1050733.950	22.115
	318	167.4847	8.921	112.1527	2.60	CANO	1.45	276.4969	8.256	1362627.337	1050733.731	22.100
	319	190.4250	7.790	110.5359	2.60	CANO	1.45	299.3977	7.277	1362629.975	1050735.594	22.700
	320	191.2751	8.390	110.1638	2.60	CANO	1.45	300.1480	7.870	1362630.355	1050735.128	22.571
	321	193.5811	8.725	108.4219	2.60	CANO	1.45	302.6535	8.264	1362630.861	1050734.976	22.681
	322	220.3906	7.549	106.5735	2.60	CANO	1.45	329.3355	7.221	1362632.613	1050738.251	23.277
	323	219.3021	6.484	112.1307	2.60	CANO	1.45	328.1896	6.003	1362631.503	1050738.770	23.027
	324	221.5242	5.136	115.1422	2.60	CANO	1.45	330.5621	4.646	1362630.448	1050739.651	23.289



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	325	226.4219	2.346	107.5913	1.50	TERRENO	1.45	335.3891	2.231	1362628.431	1050741.005	25.854
	326	270.3947	5.238	119.0738	2.60	CANO	1.45	19.3469	4.576	1362630.720	1050743.450	22.929
	327	267.3156	5.598	118.3200	2.60	CANO	1.45	16.2160	4.918	1362631.125	1050743.307	22.805
	328	265.1524	5.660	111.5711	2.60	CANO	1.45	13.9405	5.250	1362631.497	1050743.199	23.363
	329	261.1358	8.291	102.1302	1.50	TERRENO	1.45	9.9166	8.103	1362634.385	1050743.329	24.824
	330	283.4909	2.728	106.0416	1.50	TERRENO	1.45	32.5030	2.621	1362628.613	1050743.342	25.823
	331	227.2146	9.242	102.5934	1.50	TERRENO	1.45	336.0466	9.005	1362634.632	1050738.278	24.501
	332	325.5320	2.468	90.1658	1.50	TERRENO	1.45	74.5727	2.468	1362627.059	1050744.313	26.566
	333	206.4740	9.353	108.1652	1.50	TERRENO	1.45	315.4783	8.881	1362632.734	1050735.707	23.645
	334	41.0203	2.356	74.0408	1.50	TERRENO	1.45	149.7180	2.266	1362624.446	1050743.076	27.225
	335	137.0652	2.262	97.4355	1.50	TERRENO	1.45	245.7983	2.241	1362625.484	1050739.889	26.274
	336	93.2346	1.862	80.1610	1.50	TERRENO	1.45	202.0799	1.835	1362624.702	1050741.244	26.893
	337	181.4936	10.285	109.4200	1.50	TERRENO	1.45	290.5105	9.683	1362629.795	1050732.865	23.112
	338	164.3159	9.558	117.2034	0.08	TERRENO	1.45	273.2169	8.490	1362626.879	1050733.457	23.614
	339	130.3204	3.215	108.0314	2.60	TERRENO	1.45	239.2183	3.057	1362624.838	1050739.308	24.482
	340	158.3941	9.443	99.3938	1.50	TERRENO	1.45	267.3452	9.309	1362625.971	1050732.635	24.994
	341	164.3536	11.651	89.5933	1.50	TERRENO	1.45	273.2771	11.651	1362627.068	1050730.302	26.580
	342	178.4508	12.285	90.2125	1.50	TERRENO	1.45	287.4360	12.285	1362630.083	1050730.214	26.502
	343	160.3201	20.268	88.5159	1.50	TERRENO	1.45	269.2174	20.264	1362626.126	1050721.672	26.980
	344	188.5410	14.572	83.3536	1.50	TERRENO	1.45	297.5866	14.481	1362633.108	1050729.099	28.205
	345	177.4224	10.870	104.0432	1.50	TERRENO	1.45	286.3905	10.544	1362629.378	1050731.819	23.935
	346	203.5236	13.481	89.5448	1.50	TERRENO	1.45	312.5605	13.481	1362635.521	1050732.004	26.599
	347	178.5945	11.784	100.0529	1.50	TERRENO	1.45	287.6796	11.602	1362629.926	1050730.880	24.514
	348	217.2811	13.691	87.2026	1.50	TERRENO	1.45	326.1535	13.676	1362637.761	1050734.317	27.214
	349	229.3028	12.274	95.4653	1.50	TERRENO	1.45	338.1916	12.212	1362637.740	1050737.397	25.342
	350	247.1139	12.589	91.2635	1.50	TERRENO	1.45	355.8780	12.585	1362638.955	1050741.029	26.262
	351	264.3736	13.384	90.5322	1.50	TERRENO	1.45	13.3105	13.382	1362639.425	1050745.015	26.371
	352	276.4026	14.094	90.2938	1.50	TERRENO	1.45	25.3577	14.093	1362639.138	1050747.970	26.457
	353	300.3650	18.762	89.1128	1.50	TERRENO	1.45	49.2977	18.760	1362638.636	1050756.156	26.844
	354	314.4732	24.583	92.4108	1.50	TERRENO	1.45	63.4760	24.556	1362637.368	1050763.905	25.427
	355	342.1102	18.114	90.1942	1.50	TERRENO	1.45	90.8677	18.114	1362626.128	1050760.046	26.475
	356	337.3508	18.586	92.1956	1.50	TERRENO	1.45	86.2694	18.571	1362627.611	1050760.465	25.822
	357	330.1840	20.210	94.3943	1.50	TERRENO	1.45	78.9949	20.143	1362630.248	1050761.707	24.936
	358	332.0657	19.712	96.0959	1.50	TERRENO	1.45	80.7996	19.598	1362629.536	1050761.280	24.461
	359	338.2653	23.934	91.5522	1.50	TERRENO	1.45	87.1319	23.921	1362627.599	1050765.824	25.776
	360	330.3755	23.734	92.0736	1.50	TERRENO	1.45	79.3158	23.718	1362630.800	1050765.240	25.698



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	361	337.2046	24.731	91.0050	2.60	TERRENO	1.45	86.0299	24.727	1362628.114	1050766.602	25.041
	362	341.5913	25.867	91.3030	2.60	TERRENO	1.45	90.6708	25.858	1362626.100	1050767.790	24.798
	363	333.2558	25.461	93.0913	2.60	TERRENO	1.45	82.1166	25.422	1362629.889	1050767.116	24.078
	364	342.1911	24.901	93.1751	2.60	TERRENO	1.45	91.0035	24.860	1362625.967	1050766.790	24.046
	365	332.1339	27.701	90.2844	1.50	TERRENO	1.45	80.9113	27.700	1362630.778	1050769.286	26.347
	366	344.0012	23.688	89.5755	1.50	TERRENO	1.45	92.6871	23.688	1362625.292	1050765.596	26.593
	367	353.0328	25.077	89.2101	1.50	TERRENO	1.45	101.7416	25.075	1362621.300	1050766.485	26.863
	368	337.0647	27.260	92.2650	1.50	TERRENO	1.45	85.7969	27.235	1362628.399	1050769.096	25.415
	369	349.4628	25.978	92.0147	2.00	TERRENO	1.45	98.4583	25.962	1362622.584	1050767.613	25.159
	370	337.2806	29.937	89.5837	1.50	TERRENO	1.45	86.1521	29.937	1362628.411	1050771.803	26.591
	371	342.0110	27.273	91.5144	1.50	TERRENO	1.45	90.7033	27.259	1362626.068	1050769.190	25.692
	372	353.0230	30.763	89.4724	1.50	TERRENO	1.45	101.7255	30.763	1362620.151	1050772.055	26.691
	373	344.2426	30.054	90.0700	1.50	TERRENO	1.45	93.0910	30.054	1362624.782	1050771.944	26.517
	374	349.2708	30.410	92.1127	2.00	TERRENO	1.45	98.1360	30.388	1362622.102	1050772.016	24.916
	375	344.1602	27.907	91.2641	1.50	TERRENO	1.45	92.9510	27.898	1362624.966	1050769.795	25.875
	376	352.3635	33.829	89.4335	1.50	TERRENO	1.45	101.2935	33.829	1362619.778	1050775.107	26.740
	377	344.0341	34.079	89.4748	1.50	TERRENO	1.45	92.7452	34.079	1362624.770	1050775.974	26.700
	378	347.4036	33.467	91.4549	1.50	TERRENO	1.45	96.3605	33.451	1362622.697	1050775.179	25.549
	379	343.5746	36.512	90.0521	1.50	TERRENO	1.45	92.6466	36.512	1362624.717	1050778.407	26.522
	380	352.4736	36.390	89.1840	1.50	TERRENO	1.45	101.4771	36.387	1362619.162	1050777.594	27.016
	381	347.4513	35.865	91.0229	1.50	TERRENO	1.45	96.4374	35.859	1362622.382	1050777.567	25.927
	382	349.1438	37.061	90.5043	1.50	TERRENO	1.45	97.9277	37.057	1362621.291	1050778.637	26.032
	383	359.3045	28.527	88.3612	1.50	TERRENO	1.45	108.1963	28.519	1362617.497	1050769.026	27.274
	384	7.1506	28.377	88.3209	1.50	TERRENO	1.45	115.9355	28.368	1362613.996	1050767.445	27.304
	385	9.4225	16.620	87.4245	1.50	TERRENO	1.45	118.3908	16.607	1362618.506	1050756.543	27.242
	386	358.4908	15.838	88.1008	1.50	TERRENO	1.45	107.5027	15.830	1362621.642	1050757.031	27.085
E1021		0.0000				ESTACION		0.0000		1362626.909	1050693.988	31.652
E1016	E1021	0.0002	35.010	90.5805	1.50	ESTACION	1.43	98.2201		1362615.195	1050775.077	27.290
	387	83.4307	26.907	89.4001	1.50	TERRENO	1.43	1.9387	26.907	1362642.086	1050775.987	27.381
	388	94.2748	26.314	89.1740	1.50	TERRENO	1.43	12.6834	26.312	1362640.865	1050780.854	27.548
	389	89.2201	26.256	89.1740	1.50	TERRENO	1.43	7.5870	26.254	1362641.219	1050778.543	27.548
	390	86.3356	30.226	88.1420	1.50	TERRENO	1.43	4.7856	30.212	1362645.301	1050777.597	28.153
	391	94.0019	30.444	88.1420	1.50	TERRENO	1.43	12.2253	30.430	1362644.934	1050781.520	28.160
	392	90.0349	30.057	88.0924	1.50	TERRENO	1.43	8.2837	30.041	1362644.923	1050779.405	28.191
	393	86.3847	34.999	85.2055	1.50	TERRENO	1.43	4.8664	34.884	1362649.953	1050778.036	30.062
	394	91.3656	35.256	85.2054	1.50	TERRENO	1.43	9.8356	35.140	1362649.818	1050781.079	30.083



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	395	89.2343	35.226	85.1352	1.50	TERRENO	1.43	7.6153	35.104	1362649.989	1050779.729	30.153
	396	91.2121	38.508	85.1618	0.08	TERRENO	1.43	9.5759	38.377	1362653.037	1050781.461	31.823
	397	86.3330	39.230	85.1033	0.08	TERRENO	1.43	4.7784	39.091	1362654.150	1050778.333	31.948
	398	89.0435	39.444	85.0917	0.08	TERRENO	1.43	7.2964	39.303	1362654.179	1050780.068	31.981
	399	91.2045	41.061	84.1928	0.08	TERRENO	1.43	9.5659	40.860	1362655.486	1050781.867	32.710
	400	86.5547	41.660	84.2817	0.08	TERRENO	1.43	5.1498	41.466	1362656.493	1050778.799	32.663
	401	88.4647	41.333	84.2342	0.08	TERRENO	1.43	6.9998	41.135	1362656.023	1050780.090	32.686
	402	172.3617	6.661	90.4853	1.50	TERRENO	1.43	90.8248	6.660	1362615.099	1050781.736	27.130
	403	125.0109	23.382	90.5710	1.50	TERRENO	1.43	43.2392	23.379	1362632.226	1050791.092	26.835
	404	196.1157	12.463	89.2359	1.50	TERRENO	1.43	114.4192	12.462	1362610.043	1050786.424	27.355
	405	129.3306	17.132	91.4629	1.50	TERRENO	1.43	47.7717	17.124	1362626.703	1050787.756	26.694
	406	155.0851	7.299	89.1702	1.50	TERRENO	1.43	73.3676	7.298	1362617.284	1050782.070	27.315
	407	95.4502	11.692	92.1653	1.50	TERRENO	1.43	13.9706	11.683	1362626.532	1050777.897	26.759
	408	122.1830	8.766	99.0420	1.50	CANO	1.43	40.5284	8.656	1362621.774	1050780.702	25.842
	409	144.1459	13.790	95.4301	1.50	CANO	1.43	62.4698	13.721	1362621.537	1050787.244	25.851
	410	96.0812	7.448	102.5401	1.50	CANO	1.43	14.3567	7.260	1362622.228	1050776.877	25.561
	411	87.3317	17.413	90.4526	1.50	TERRENO	1.43	5.7748	17.411	1362632.518	1050776.829	26.994
	412	0.0523	30.359	90.2055	1.50	ARBOL	1.43	278.3098	30.358	1362619.582	1050745.037	27.040
E1015		0.0000				ESTACION		0.0000		1362668.574	1050790.006	32.848
E1017	E1015	0.0000	53.698	89.4609	1.50	ESTACION	1.46	296.1869		1362692.270	1050741.821	32.650
	E1021	100.0039	81.000	90.4045	1.50	DELTA	1.46	216.1977	80.994	1362626.909	1050693.988	31.652
E1021-E1017	E1017	359.5959	80.993	89.1155	1.50	ESTACION	1.35	216.1977	80.994	1362626.909	1050693.988	31.652
	413	26.2841	15.392	89.4833	1.70	MANHOL	1.35	62.6758	15.392	1362633.974	1050707.663	31.354
	414	73.2313	12.668	121.0735	0.08	DESCARGA	1.35	109.5846	10.844	1362623.274	1050704.205	26.379
	415	67.0520	11.673	109.2704	1.50	TERRENO	1.35	103.2866	11.007	1362624.379	1050704.700	27.615
	416	57.4223	12.046	107.1631	1.50	TERRENO	1.35	93.9041	11.503	1362626.126	1050705.464	27.925
	417	36.5955	13.369	98.1608	1.50	TERRENO	1.35	73.1963	13.230	1362630.733	1050706.653	29.580
	418	31.0816	14.483	95.4445	1.50	TERRENO	1.35	67.3355	14.410	1362632.461	1050707.286	30.052
	419	34.5315	16.928	93.1622	1.50	TERRENO	1.35	71.0852	16.900	1362632.387	1050709.976	30.536
	420	43.2019	16.062	96.0323	1.50	TERRENO	1.35	79.5363	15.972	1362629.809	1050709.695	29.808
	421	53.3654	15.155	101.4454	1.50	TERRENO	1.35	89.8127	14.838	1362626.957	1050708.826	28.417
	422	69.1524	15.884	101.5741	2.60	TERRENO	1.35	105.4544	15.539	1362622.768	1050708.966	27.110
	423	71.5126	13.598	107.0443	2.60	TERRENO	1.35	108.0549	12.998	1362622.880	1050706.347	26.409
	424	54.0200	7.028	107.4456	1.80	TERRENO	1.35	90.2310	6.693	1362626.882	1050700.682	29.060
	425	31.1119	8.601	98.3621	1.80	TERRENO	1.35	67.3863	8.504	1362630.179	1050701.839	29.915
	426	26.0013	12.040	92.5442	1.80	TERRENO	1.35	62.2013	12.024	1362632.516	1050704.625	30.591



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	427	17.4538	15.648	85.5447	2.60	TERRENO	1.35	53.9583	15.608	1362636.092	1050706.609	31.518
	428	9.4306	14.775	86.4630	1.50	TERRENO	1.35	45.9160	14.752	1362637.172	1050704.585	32.334
	429	17.0811	10.135	88.4237	1.50	TERRENO	1.35	53.3341	10.132	1362632.959	1050702.116	31.731
	430	21.1902	6.556	90.5140	1.50	TERRENO	1.35	57.5149	6.555	1362630.429	1050699.518	31.404
	431	26.5453	3.177	89.2150	1.50	TERRENO	1.35	63.1124	3.177	1362628.345	1050696.822	31.538
	432	343.2012	1.432	83.5141	1.50	PARAMENTO	1.35	19.5344	1.424	1362628.251	1050694.464	31.656
	433	351.4024	6.598	85.2227	1.50	PARAMENTO	1.35	27.8710	6.577	1362632.722	1050697.063	32.035
	434	357.1543	14.282	88.2219	1.50	POSTE	1.35	33.4596	14.276	1362638.819	1050701.859	31.908
	435	6.5033	25.336	87.4756	1.50	TERRENO	1.35	43.0402	25.317	1362645.412	1050711.268	32.476
	436	20.0740	29.182	86.4007	2.20	PARAMENTO	1.35	56.3255	29.133	1362643.062	1050718.232	32.498
	437	92.5002	21.721	114.5830	1.50	RIO	1.35	129.0316	19.690	1362614.509	1050709.283	22.331
	438	91.4958	22.001	114.3039	1.50	RIO	1.35	128.0305	20.018	1362614.576	1050709.756	22.375
	439	90.3048	22.225	113.3100	1.50	RIO	1.35	126.7110	20.379	1362614.726	1050710.325	22.634
	440	87.5426	18.003	115.5144	1.50	CANO	1.35	124.1049	16.200	1362617.825	1050707.402	23.649
	441	84.4935	18.081	115.4848	1.50	CANO	1.35	121.0241	16.277	1362618.520	1050707.937	23.629
	442	83.3753	18.056	116.3836	1.50	CANO	1.35	119.8291	16.139	1362618.881	1050707.989	23.406
	443	89.1232	14.103	119.5328	1.50	CANO	1.35	125.4066	12.227	1362619.825	1050703.954	24.474
	444	91.1513	13.925	117.3959	1.50	TERRENO	1.35	127.4513	12.333	1362619.409	1050703.779	25.037
	445	85.4118	14.470	122.3138	1.50	CANO	1.35	121.8860	12.200	1362620.464	1050704.347	23.722
	446	84.1833	14.262	121.0914	1.50	CANO	1.35	120.5069	12.205	1362620.713	1050704.504	24.124
	447	81.3003	14.068	118.1305	1.50	TERRENO	1.35	117.6985	12.396	1362621.147	1050704.964	24.851
	448	91.1323	11.212	120.1036	1.50	TERRENO	1.35	127.4208	9.693	1362621.019	1050701.686	25.867
	449	87.4801	11.759	123.2609	1.50	CANO	1.35	123.9980	9.813	1362621.422	1050702.124	25.023
	450	76.2324	10.701	123.0630	1.50	CANO	1.35	112.5877	8.964	1362623.466	1050702.264	25.657
	451	76.4315	10.170	121.0217	0.75	TUBO	1.35	112.9185	8.714	1362623.515	1050702.014	27.009
	452	73.0715	12.899	123.0811	0.75	DESCARGA	1.35	109.3185	10.801	1362623.335	1050704.181	25.201
	453	69.0238	10.956	121.0122	1.50	TERRENO	1.35	105.2416	9.389	1362624.440	1050703.047	25.856
	454	63.3613	8.192	121.3133	1.50	TERRENO	1.35	99.8013	6.983	1362625.720	1050700.869	27.219
	455	89.0539	8.785	123.1847	1.50	TERRENO	1.35	125.2919	7.341	1362622.667	1050699.980	26.678
	456	112.4146	7.585	127.5206	1.50	TERRENO	1.35	148.8938	5.988	1362621.782	1050697.082	26.846
	457	50.2929	4.533	122.5435	1.50	TERRENO	1.35	86.6891	3.806	1362627.128	1050697.787	29.040
	458	120.5752	3.706	133.0629	1.50	TERRENO	1.35	157.1621	2.706	1362624.415	1050695.038	28.970
	459	120.3012	11.220	123.5045	1.50	TERRENO	1.35	156.7010	9.319	1362618.350	1050697.674	25.253
	460	94.1001	17.154	116.1556	1.50	TERRENO	1.35	130.3646	15.383	1362616.946	1050705.709	23.911
	461	91.4051	16.797	113.4533	1.50	TERRENO	1.35	127.8785	15.373	1362617.470	1050706.123	24.735
	462	94.1830	18.292	115.2604	1.50	TERRENO	1.35	130.5060	16.519	1362616.179	1050706.548	23.646



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	463	174.3319	2.380	89.2956	1.50	TERRENO	1.35	210.7530	2.380	1362624.863	1050692.771	31.523
	464	32.2532	2.217	95.1601	1.50	TERRENO	1.35	68.6233	2.208	1362627.713	1050696.044	31.299
	465	266.1855	2.277	86.0223	1.50	TERRENO	1.35	302.5130	2.272	1362628.130	1050692.073	31.660
	466	208.0501	3.521	87.1708	1.50	TERRENO	1.35	244.2813	3.517	1362625.382	1050690.820	31.669
	467	270.0813	10.986	89.2029	1.50	PARAMENTO	1.35	306.3346	10.985	1362633.417	1050685.139	31.629
	468	8.5323	2.748	83.3808	1.50	MANHOL	1.35	45.0874	2.731	1362628.837	1050695.922	31.807
	469	10.0508	17.957	87.2143	1.50	VALVULA	1.35	46.2833	17.938	1362639.305	1050706.953	32.329
E1019		0.0000				ESTACION		0.0000		1362704.352	1050684.844	32.386
E1023	E1019	0.0000	105.299	89.4805	1.50	ESTACION	1.53	208.9735		1362612.243	1050633.843	31.996
	E1024	202.5118	28.522	99.1313	1.50	DELTA	1.53	231.8285	28.153	1362594.843	1050611.710	27.459
	483	103.1326	3.706	88.1210	1.50	PARAMENTO	1.53	132.1974	3.704	1362609.755	1050636.587	32.145
	484	126.5658	1.374	85.1710	1.50	PARAMENTO	1.53	155.9230	1.369	1362610.992	1050634.402	32.142
	485	13.3810	6.361	88.3035	1.50	PARAMENTO	1.53	42.6096	6.359	1362616.923	1050638.148	32.194
	486	321.1024	14.176	91.4204	1.50	PARAMENTO	1.53	350.1469	14.170	1362626.203	1050631.418	31.608
	487	309.2959	16.086	91.4510	1.50	PARAMENTO	1.53	338.4733	16.078	1362627.200	1050627.943	31.537
	488	284.5445	26.139	92.1235	1.50	PARAMENTO	1.53	313.8860	26.120	1362630.349	1050615.018	31.021
	489	281.4952	30.816	91.2325	1.50	PARAMENTO	1.53	310.8046	30.807	1362632.374	1050610.524	31.281
	490	298.2608	29.298	91.4814	1.50	PARAMENTO	1.53	327.4091	29.283	1362636.915	1050618.070	31.107
	491	347.0047	4.804	90.5117	1.50	TERRENO	1.53	15.9866	4.803	1362616.860	1050635.166	31.957
	492	261.0731	10.966	92.3527	1.50	TERRENO	1.53	290.0988	10.955	1362616.007	1050623.555	31.533
	493	191.4606	1.694	96.1618	1.50	TERRENO	1.53	220.7419	1.684	1362610.967	1050632.744	31.844
	494	229.3428	10.652	93.2834	1.50	TERRENO	1.53	258.5480	10.632	1362610.132	1050623.422	31.383
	495	228.3733	4.454	97.3430	1.50	TERRENO	1.53	257.5994	4.415	1362611.295	1050629.531	31.442
	496	212.3427	9.444	97.4202	1.50	TERRENO	1.53	241.5477	9.359	1362607.784	1050625.615	30.763
	497	215.0729	5.335	103.1929	1.50	TERRENO	1.53	244.0983	5.191	1362609.975	1050629.173	30.799
	498	134.2329	3.679	101.0217	1.50	TERRENO	1.53	163.3649	3.611	1362608.783	1050634.877	31.324
	499	202.2346	7.103	104.5242	1.50	TERRENO	1.53	231.3696	6.865	1362607.957	1050628.480	30.205
	500	169.3918	4.345	105.3003	1.50	TERRENO	1.53	198.6285	4.187	1362608.275	1050632.506	30.868
	501	133.5943	5.332	101.2516	1.50	TERRENO	1.53	162.9688	5.226	1362607.245	1050635.374	30.973
	502	175.0440	6.970	113.3750	1.50	TERRENO	1.53	204.0513	6.386	1362606.411	1050631.241	29.235
	503	137.0908	7.567	107.4949	1.50	TERRENO	1.53	166.1258	7.204	1362605.249	1050635.570	29.712
	504	198.0308	9.305	106.0037	1.50	TERRENO	1.53	227.0258	8.944	1362606.146	1050627.299	29.462
	505	170.1004	9.103	114.5401	1.50	TERRENO	1.53	199.1413	8.257	1362604.442	1050631.136	28.196
	506	130.1525	10.667	108.4311	1.50	TERRENO	1.53	159.2305	10.103	1362602.796	1050637.426	28.605
	507	196.0745	12.481	105.5518	1.50	TERRENO	1.53	225.1027	12.002	1362603.771	1050625.341	28.605
	508	170.0538	12.057	111.0902	1.50	TERRENO	1.53	199.0674	11.245	1362601.615	1050630.170	27.678



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	509	142.4310	12.846	109.2625	1.50	TERRENO	1.53	171.6930	12.114	1362600.256	1050635.593	27.753
	510	168.3900	18.736	106.0509	1.50	TERRENO	1.53	197.6235	18.002	1362595.085	1050628.393	26.837
	511	144.5631	16.223	107.5653	1.50	TERRENO	1.53	173.9155	15.434	1362596.896	1050635.479	27.030
	512	220.2750	13.656	99.4458	1.50	TERRENO	1.53	249.4374	13.459	1362607.516	1050621.242	29.716
	513	213.2817	14.432	102.2602	1.50	TERRENO	1.53	242.4449	14.093	1362605.723	1050621.348	28.921
	514	224.5320	16.607	99.3757	1.50	TERRENO	1.53	253.8624	16.373	1362607.692	1050618.115	29.250
	515	142.1529	20.543	107.2701	2.60	TERRENO	1.53	171.2316	19.598	1362592.874	1050636.831	24.768
	516	166.4047	25.058	103.5140	2.60	TERRENO	1.53	195.6533	24.328	1362588.817	1050627.279	24.926
	517	153.0130	23.337	107.4433	1.50	TERRENO	1.53	181.9985	22.227	1362590.029	1050633.068	24.917
	518	171.5259	20.989	105.3113	1.50	TERRENO	1.53	200.8566	20.224	1362593.344	1050626.643	26.413
	519	146.1220	28.075	110.2711	1.50	RIO	1.53	175.1791	26.305	1362586.031	1050636.054	22.218
	520	146.2804	25.924	110.2014	1.50	TERRENO	1.53	175.4413	24.308	1362588.012	1050635.775	23.019
	521	159.2344	29.529	107.1514	2.60	RIO	1.53	188.3691	28.200	1362584.343	1050629.739	22.170
	522	158.5307	26.781	106.3041	2.60	TERRENO	1.53	187.8588	25.677	1362586.807	1050630.332	23.317
E1024-E1023	E1023	0.0000	28.520	80.3540	1.50	ESTACION	1.37	231.8285	28.153	1362594.843	1050611.710	27.459
	523	5.0057	7.208	88.5246	1.50	TERRENO	1.37	56.8444	7.207	1362598.785	1050617.743	27.466
	524	329.0558	6.133	88.3518	1.50	TERRENO	1.37	20.9280	6.131	1362600.570	1050613.900	27.476
	525	273.4707	7.764	88.1600	1.50	TERRENO	1.37	325.6138	7.760	1362601.248	1050607.327	27.560
	526	26.2301	4.560	91.0436	1.50	TERRENO	1.37	78.2121	4.559	1362595.775	1050616.173	27.239
	527	229.1238	3.950	89.3359	1.50	TERRENO	1.37	281.0391	3.950	1362595.600	1050607.833	27.355
	528	214.3729	4.605	97.3914	1.50	TERRENO	1.37	266.4533	4.564	1362594.561	1050607.155	26.711
	529	196.3322	4.389	101.2407	1.50	TERRENO	1.37	248.3846	4.302	1362593.258	1050607.710	26.457
	530	23.5213	2.969	95.0931	1.50	TERRENO	1.37	75.6988	2.957	1362595.574	1050614.575	27.058
	531	57.2221	1.403	105.1915	1.50	TERRENO	1.37	109.2010	1.353	1362594.398	1050612.988	26.954
	532	61.0456	4.128	90.5953	1.50	TERRENO	1.37	112.9108	4.127	1362593.237	1050615.512	27.253
	533	140.2138	3.010	110.4500	1.50	TERRENO	1.37	192.1891	2.815	1362592.092	1050611.115	26.258
	534	99.5200	4.254	94.0929	1.50	TERRENO	1.37	151.6952	4.243	1362591.108	1050613.722	27.016
	535	146.3458	4.098	110.0554	1.50	TERRENO	1.37	198.4113	3.848	1362591.192	1050610.494	25.916
	536	105.2548	4.619	95.4401	2.60	TERRENO	1.37	157.2585	4.596	1362590.605	1050613.486	25.763
	537	63.5605	5.939	90.5108	1.50	TERRENO	1.37	115.7633	5.938	1362592.262	1050617.058	27.236
	538	82.0552	5.985	94.3256	1.50	TERRENO	1.37	133.9263	5.966	1362590.704	1050616.007	26.850
	539	58.4309	9.492	93.5205	1.50	TERRENO	1.37	110.5477	9.470	1362591.519	1050620.578	26.684
	540	73.2010	10.036	98.4306	1.50	TERRENO	1.37	125.1646	9.920	1362589.130	1050619.819	25.803
	541	72.0756	9.204	97.1254	1.50	TERRENO	1.37	123.9608	9.131	1362589.742	1050619.283	26.169
	542	58.1450	12.780	96.2824	1.50	TERRENO	1.37	110.0758	12.699	1362590.484	1050623.637	25.884
	543	71.3408	14.372	99.0658	1.50	TERRENO	1.37	123.3974	14.190	1362587.032	1050623.557	25.048



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	544	59.0212	17.722	98.5545	1.50	TERRENO	1.37	110.8652	17.507	1362588.608	1050628.069	24.574
	545	40.0203	3.552	100.4806	2.60	DESCARGA	1.37	91.8627	3.489	1362594.730	1050615.197	25.559
	546	38.5241	3.577	95.5835	2.60	DESCARGA	1.37	90.7066	3.558	1362594.799	1050615.267	25.852
	547	39.0004	3.710	107.2657	2.60	ESTRUCTURA	1.37	90.8296	3.539	1362594.792	1050615.249	25.112
	548	49.2948	3.329	110.5824	2.60	ESTRUCTURA	1.37	101.3252	3.108	1362594.233	1050614.758	25.033
	549	49.1115	3.272	113.2615	2.60	ESTRUCTURA	1.37	101.0160	3.002	1362594.270	1050614.656	24.923
	550	74.0942	2.752	122.2819	2.60	ESTRUCTURA	1.37	125.9902	2.322	1362593.479	1050613.588	24.747
	551	76.1415	2.898	124.2200	2.60	ESTRUCTURA	1.37	128.0660	2.392	1362593.368	1050613.593	24.589
	552	110.5446	3.503	121.4801	2.60	ESTRUCTURA	1.37	162.7413	2.977	1362592.000	1050612.593	24.379
	553	114.4143	3.705	123.5214	2.60	ESTRUCTURA	1.37	166.5238	3.076	1362591.852	1050612.427	24.160
	554	133.3835	4.445	120.2510	2.60	ESTRUCTURA	1.37	185.4716	3.833	1362591.028	1050611.344	23.974
	555	137.5126	4.873	120.2509	2.60	CANO	1.37	189.6858	4.202	1362590.701	1050611.003	23.757
	556	129.3806	5.280	121.4832	2.60	CANO	1.37	181.4635	4.487	1362590.358	1050611.595	23.442
	557	141.5403	4.684	120.5734	2.60	CANO	1.37	193.7294	4.017	1362590.941	1050610.756	23.815
	558	144.0623	6.929	118.4456	2.60	CANO	1.37	195.9349	6.075	1362589.002	1050610.042	22.892
	559	152.0242	8.965	110.4650	2.60	BORDE_CANO	1.37	203.8735	8.382	1362587.179	1050608.318	23.044
	560	149.2520	10.829	109.0523	2.60	BORDE_CANO	1.37	201.2508	10.233	1362585.306	1050608.001	22.683
	561	139.3812	11.734	109.3320	2.60	BORDE_CANO	1.37	191.4652	11.057	1362584.007	1050609.512	22.297
	562	137.0943	13.406	106.5642	2.60	BORDE_CANO	1.37	188.9905	12.824	1362582.177	1050609.706	22.317
	563	141.2407	15.589	104.2354	2.60	BORDE_CANO	1.37	193.2305	15.099	1362580.145	1050608.254	22.348
	564	137.3341	16.567	103.3206	2.60	CANO	1.37	189.3899	16.107	1362578.952	1050609.082	22.347
	565	134.4830	16.203	103.4426	2.60	BORDE_CANO	1.37	186.6369	15.739	1362579.210	1050609.891	22.376
	566	135.5318	14.266	105.5009	2.60	BORDE_CANO	1.37	187.7169	13.725	1362581.243	1050609.867	22.332
	567	132.1648	13.075	106.5756	2.60	BORDE_CANO	1.37	184.1085	12.506	1362582.369	1050610.814	22.409
	568	136.2929	11.766	108.1324	2.60	BORDE_CANO	1.37	188.3199	11.176	1362583.785	1050610.093	22.545
	569	143.4848	10.059	109.0448	2.60	BORDE_CANO	1.37	195.6419	9.506	1362585.689	1050609.147	22.937
	570	143.1259	7.809	113.3247	2.60	BORDE_CANO	1.37	195.0449	7.159	1362587.930	1050609.852	23.105
	571	146.1024	10.619	110.0823	2.60	CANO	1.37	198.0019	9.970	1362585.362	1050608.629	22.568
	572	135.0418	13.112	107.5453	2.60	CANO	1.37	186.9002	12.476	1362582.457	1050610.211	22.191
	573	146.5507	13.208	102.3639	1.50	TERRENO	1.37	198.7471	12.889	1362582.638	1050607.567	24.441
	574	152.1901	11.600	106.0716	1.50	TERRENO	1.37	204.1455	11.144	1362584.674	1050607.151	24.104
	575	156.1219	8.779	114.1029	1.50	TERRENO	1.37	208.0338	8.009	1362587.774	1050607.946	23.730
	576	175.1707	10.023	93.2713	1.50	TERRENO	1.37	227.1138	10.005	1362588.035	1050604.379	26.721
	577	128.3323	12.162	105.0018	1.50	TERRENO	1.37	180.3849	11.747	1362583.096	1050611.631	24.176
	578	154.5456	12.589	97.5053	1.50	TERRENO	1.37	206.7441	12.471	1362583.706	1050606.098	25.606
	579	131.2913	13.581	106.4015	1.50	TERRENO	1.37	183.3155	13.010	1362581.855	1050610.957	23.429



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	580	125.2753	9.017	105.4139	1.50	TERRENO	1.37	177.2933	8.681	1362586.172	1050612.120	24.886
	581	122.1301	7.154	109.2003	1.50	TERRENO	1.37	174.0455	6.751	1362588.129	1050612.410	24.956
	582	135.1141	4.553	113.4151	1.50	ESTRUCTURA	1.37	187.0233	4.169	1362590.706	1050611.200	25.495
	583	133.0132	4.671	113.0123	1.50	ESTRUCTURA	1.37	184.8541	4.299	1362590.560	1050611.346	25.498
	584	173.5351	7.265	102.5041	1.50	TERRENO	1.37	225.7260	7.083	1362589.899	1050606.638	25.710
	585	132.3401	7.079	117.1730	1.50	TERRENO	1.37	184.3955	6.291	1362588.571	1050611.228	24.079
	586	141.0121	8.874	114.1144	1.50	TERRENO	1.37	192.8510	8.094	1362586.952	1050609.909	23.688
	587	137.2102	10.734	110.3357	1.50	TERRENO	1.37	189.1791	10.050	1362584.922	1050610.107	23.554
	588	131.2402	12.135	107.2136	1.50	TERRENO	1.37	183.2291	11.582	1362583.279	1050611.057	23.704
	589	111.4528	10.557	101.3715	1.50	TERRENO	1.37	163.5863	10.341	1362584.924	1050614.632	25.198
	590	107.4935	8.052	95.5747	1.50	TERRENO	1.37	159.6549	8.008	1362587.334	1050614.494	26.488
	591	108.2626	6.934	96.5756	1.50	TERRENO	1.37	160.2691	6.883	1362588.365	1050614.033	26.484
	592	111.3028	6.909	102.1051	1.50	TERRENO	1.37	163.3363	6.753	1362588.373	1050613.646	25.867
	593	98.4620	6.110	95.0035	1.50	TERRENO	1.37	150.6008	6.087	1362589.541	1050614.698	26.791
	594	87.4151	6.939	95.4758	1.50	TERRENO	1.37	139.5260	6.903	1362589.592	1050616.191	26.624
	595	182.0903	8.948	92.5001	1.50	TERRENO	1.37	233.9794	8.937	1362589.588	1050604.481	26.882
	596	203.4824	6.626	98.4348	1.50	TERRENO	1.37	255.6352	6.549	1362593.218	1050605.365	26.319
	597	204.3346	8.786	90.3252	1.50	TERRENO	1.37	256.3913	8.786	1362592.776	1050603.171	27.241
	598	216.5735	8.017	93.3332	1.50	TERRENO	1.37	268.7883	8.002	1362594.674	1050603.710	26.827
	599	212.4527	9.227	90.0752	1.50	TERRENO	1.37	264.5860	9.227	1362593.973	1050602.524	27.304
	600	221.0242	7.490	94.0735	1.50	CANO	1.37	272.8735	7.471	1362595.218	1050604.249	26.786
	601	226.3736	6.848	90.0127	1.50	TERRENO	1.37	278.4552	6.848	1362595.850	1050604.936	27.322
	602	210.0315	5.888	100.0335	1.50	TERRENO	1.37	261.8827	5.797	1362594.025	1050605.970	26.296
	603	213.0113	4.994	97.4809	1.50	TERRENO	1.37	264.8488	4.948	1362594.399	1050606.782	26.647
	604	180.0142	5.343	107.4345	1.50	TERRENO	1.37	231.8569	5.089	1362591.700	1050607.707	25.698
	605	192.5148	3.385	99.2507	1.50	TERRENO	1.37	244.6919	3.339	1362593.416	1050608.691	26.771
	606	186.5036	6.503	108.4056	2.00	TERRENO	1.37	238.6719	6.160	1362591.640	1050606.448	24.742
	607	203.5513	6.092	101.5943	2.00	CANO	1.37	255.7488	5.959	1362593.376	1050605.934	25.559
	608	211.2459	6.484	101.1158	1.50	CANO	1.37	263.2449	6.361	1362594.095	1050605.393	26.065
	609	204.4120	12.386	90.4633	1.50	TERRENO	1.37	256.5174	12.385	1362591.956	1050599.666	27.157
	610	227.4004	14.622	89.0400	1.50	TERRENO	1.37	279.4963	14.620	1362597.255	1050597.290	27.563
	611	223.0313	18.273	88.5750	1.50	TERRENO	1.37	274.8821	18.270	1362596.398	1050593.506	27.655
	612	254.4816	13.817	89.0058	1.50	TERRENO	1.37	306.6330	13.815	1362603.087	1050600.624	27.562
	613	269.2602	13.445	88.0957	1.50	TERRENO	1.37	321.2624	13.438	1362605.325	1050603.301	27.755
	614	18.0639	11.150	87.5603	1.50	TERRENO	1.37	69.9394	11.143	1362598.665	1050622.176	27.727
	615	31.4621	3.334	103.4410	1.50	ESTRUCTURA	1.37	83.6010	3.239	1362595.204	1050614.928	26.533



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	616	35.4543	3.099	104.4728	1.50	TUBO	1.37	87.5905	2.996	1362594.969	1050614.703	26.534
E1025		0.0000				ESTACION		0.0000		1362619.162	1050571.016	30.468
E1026	E1025	0.0000	21.356	80.4021	1.50	ESTACION	1.39	197.9794		1362599.104	1050564.506	27.108
	641	7.4829	19.020	79.1417	1.50	TERRENO	1.39	25.7874	18.685	1362615.928	1050572.635	30.552
	642	18.5625	17.349	77.5717	1.50	TERRENO	1.39	36.9196	16.967	1362612.669	1050574.698	30.621
	643	29.4850	18.928	78.0859	1.50	TERRENO	1.39	47.7933	18.525	1362611.549	1050578.228	30.887
	644	24.0507	20.459	78.1635	1.50	TERRENO	1.39	42.0646	20.032	1362613.975	1050577.927	31.157
	645	1.5541	18.302	81.2627	1.50	TERRENO	1.39	19.9074	18.098	1362616.120	1050570.669	29.724
	646	12.3831	15.686	80.4054	1.50	TERRENO	1.39	30.6213	15.479	1362612.424	1050572.391	29.540
	647	22.3159	15.633	79.4049	1.50	TERRENO	1.39	40.5124	15.380	1362610.797	1050574.498	29.801
	648	20.0312	13.474	83.3517	1.50	TERRENO	1.39	38.0327	13.390	1362609.650	1050572.756	28.505
	649	2.2501	14.178	83.4623	1.50	TERRENO	1.39	20.3963	14.094	1362612.314	1050569.419	28.538
	650	350.5431	12.294	82.0105	1.50	TERRENO	1.39	8.8880	12.175	1362611.132	1050566.388	28.707
	651	334.4845	12.521	84.2717	1.50	TERRENO	1.39	352.7919	12.462	1362611.468	1050562.943	28.210
	652	337.5313	16.784	80.5859	1.50	TERRENO	1.39	355.8663	16.577	1362615.637	1050563.312	29.631
	653	350.3117	8.603	88.0928	1.50	TERRENO	1.39	8.5008	8.599	1362607.608	1050565.778	27.277
	654	332.3047	9.647	88.1507	1.50	TERRENO	1.39	350.4924	9.643	1362608.614	1050562.914	27.294
	655	349.4448	3.837	91.1545	1.50	TERRENO	1.39	7.7260	3.836	1362602.905	1050565.022	26.915
	656	306.3824	6.045	94.3020	1.50	TERRENO	1.39	324.6194	6.026	1362604.017	1050561.017	26.525
	657	278.4338	4.510	103.2717	1.50	TERRENO	1.39	296.7066	4.386	1362601.075	1050560.588	25.951
	658	282.3716	2.466	103.5626	1.50	TERRENO	1.39	300.6005	2.393	1362600.322	1050562.446	26.406
	659	277.1947	3.346	108.2615	1.50	TERRENO	1.39	295.3091	3.174	1362600.461	1050561.637	25.942
	660	277.1439	5.972	92.2210	1.50	TERRENO	1.39	295.2235	5.967	1362601.647	1050559.109	26.753
	661	276.3923	9.049	89.0456	1.50	TERRENO	1.39	294.6358	9.048	1362602.875	1050556.282	27.145
	662	276.3408	13.618	88.5251	1.50	TERRENO	1.39	294.5483	13.615	1362604.760	1050552.122	27.266
	663	259.2658	14.062	88.5533	1.50	TERRENO	1.39	277.4288	14.060	1362600.922	1050550.565	27.264
	664	261.0302	9.895	88.1635	1.50	TERRENO	1.39	279.0299	9.891	1362600.656	1050554.739	27.298
	665	260.1419	6.182	93.0143	1.50	TERRENO	1.39	278.2180	6.173	1362599.986	1050558.396	26.673
	666	293.3207	9.282	88.5500	1.50	TERRENO	1.39	311.5146	9.280	1362605.255	1050557.557	27.176
	667	294.2610	14.402	88.2646	1.50	TERRENO	1.39	312.4155	14.397	1362608.814	1050553.878	27.391
	668	305.5755	12.883	87.3158	1.50	TERRENO	1.39	323.9446	12.871	1362609.509	1050556.931	27.555
	669	319.1409	13.057	85.1854	1.50	TERRENO	1.39	337.2152	13.013	1362611.102	1050559.467	28.067
	670	159.3239	3.169	86.3156	1.50	TERRENO	1.39	177.5235	3.163	1362595.944	1050564.643	27.192
	671	152.5538	16.143	96.4447	1.50	TERRENO	1.39	170.9066	16.031	1362583.274	1050567.040	25.104
	672	157.1542	13.360	96.2642	1.50	TERRENO	1.39	175.2410	13.276	1362585.874	1050565.608	25.500
	673	167.5911	13.558	94.2841	1.50	TERRENO	1.39	185.9658	13.517	1362585.660	1050563.102	25.941



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	674	154.3022	11.056	95.3547	1.50	TERRENO	1.39	172.4855	11.003	1362588.195	1050565.945	25.922
	675	140.3244	9.076	91.2751	1.50	TERRENO	1.39	158.5249	9.073	1362590.661	1050567.828	26.768
	676	146.3937	6.926	92.1452	1.50	TERRENO	1.39	164.6396	6.921	1362592.430	1050566.340	26.728
	677	150.1408	4.465	86.3842	1.50	TERRENO	1.39	168.2149	4.457	1362594.740	1050565.417	27.261
	678	103.1248	5.082	87.1755	1.50	TERRENO	1.39	121.1927	5.076	1362596.475	1050568.849	27.240
	679	6.0422	3.031	87.0726	1.50	TERRENO	1.39	24.0521	3.027	1362601.868	1050565.740	27.152
	680	27.1049	8.035	86.4123	1.50	TERRENO	1.39	45.1596	8.022	1362604.760	1050570.194	27.464
	681	3.1658	10.330	85.3551	1.50	TERRENO	1.39	21.2621	10.300	1362608.702	1050568.241	27.793
	682	266.0223	4.420	107.3816	1.50	DESCARGA	1.39	284.0191	4.212	1362600.124	1050560.420	25.661
	683	265.4114	4.558	124.5635	1.50	DESCARGA	1.39	283.6666	3.736	1362599.987	1050560.876	24.389
	684	178.2933	23.614	102.1430	1.50	RIO	1.39	196.4719	23.077	1362576.974	1050557.963	21.993
	685	174.0353	22.797	99.4430	2.60	RIO	1.39	192.0441	22.468	1362577.130	1050559.818	22.043
	686	179.5329	19.529	101.4659	1.50	BORDE_CANO	1.39	197.8708	19.117	1362580.909	1050558.640	23.012
	687	175.3252	19.894	102.3208	1.50	BORDE_CANO	1.39	193.5271	19.420	1362580.223	1050559.964	22.682
	688	178.5448	16.251	103.2643	1.50	BORDE_CANO	1.39	196.8927	15.806	1362583.980	1050559.914	23.221
	689	173.1956	17.441	98.5509	2.60	BORDE_CANO	1.39	191.3116	17.230	1362582.208	1050561.127	23.196
	690	182.0636	14.423	104.4807	2.00	BORDE_CANO	1.39	200.0894	13.944	1362586.008	1050559.717	22.815
	691	178.5002	13.061	100.5911	2.60	BORDE_CANO	1.39	196.8133	12.822	1362586.830	1050560.798	23.411
	692	186.4156	11.861	109.3309	1.50	BORDE_CANO	1.39	204.6783	11.177	1362588.948	1050559.840	23.031
	693	181.2656	11.377	103.2915	2.60	BORDE_CANO	1.39	199.4283	11.063	1362588.670	1050560.827	23.247
	694	186.0727	7.566	111.3048	1.50	BORDE_CANO	1.39	204.1035	7.039	1362592.679	1050561.632	24.225
	695	173.2909	6.912	98.3906	2.60	BORDE_CANO	1.39	191.4652	6.833	1362592.407	1050563.148	24.860
	696	221.2101	6.850	111.0036	1.50	BORDE_CANO	1.39	239.3296	6.395	1362595.842	1050559.006	24.544
	697	197.0338	4.730	102.0416	2.60	BORDE_CANO	1.39	215.0399	4.625	1362595.317	1050561.851	24.911
	698	195.0839	3.711	94.5101	2.60	TERRENO	1.39	213.1235	3.698	1362596.007	1050562.486	25.586
	699	197.3817	4.532	101.3416	2.60	TERRENO	1.39	215.6174	4.440	1362595.494	1050561.921	24.991
	700	182.0758	4.956	93.4231	2.60	TERRENO	1.39	200.1121	4.946	1362594.460	1050562.806	25.579
	701	243.4141	5.993	100.2914	2.60	TERRENO	1.39	261.6741	5.893	1362598.250	1050558.676	24.809
	702	260.2011	3.662	98.3335	2.60	TERRENO	1.39	278.3158	3.621	1362599.628	1050560.923	25.355
	703	233.2029	2.971	77.5733	2.60	TERRENO	1.39	251.3208	2.906	1362598.173	1050561.754	26.520
	704	208.0804	3.195	104.5013	1.50	TERRENO	1.39	226.1138	3.088	1362596.963	1050562.281	26.182
	705	262.0105	5.016	101.5901	1.50	TERRENO	1.39	279.9974	4.907	1362599.956	1050559.674	25.959
	706	245.4430	6.860	89.4922	1.50	TERRENO	1.39	263.7210	6.860	1362598.354	1050557.688	27.021
	707	237.4231	7.050	96.3558	2.60	TERRENO	1.39	255.6880	7.003	1362597.373	1050557.721	25.090
	708	222.5206	7.488	95.2931	2.60	TERRENO	1.39	240.8477	7.454	1362595.473	1050557.997	25.183
	709	223.1651	7.646	96.0038	1.50	TERRENO	1.39	241.2602	7.604	1362595.448	1050557.839	26.199



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	710	244.1814	7.010	89.2738	1.50	TERRENO	1.39	262.2833	7.010	1362598.163	1050557.560	27.066
	711	213.0518	10.161	89.4757	1.50	TERRENO	1.39	231.0677	10.161	1362592.719	1050556.602	27.036
	712	196.0059	12.164	92.3733	1.50	TERRENO	1.39	213.9958	12.151	1362589.029	1050557.712	26.443
	713	196.3536	10.254	96.3013	1.50	TERRENO	1.39	214.5727	10.188	1362590.715	1050558.725	25.839
	714	195.3533	9.316	101.5556	1.50	TERRENO	1.39	213.5719	9.115	1362591.509	1050559.466	25.074
	715	206.5633	13.350	90.0833	1.50	TERRENO	1.39	224.9219	13.350	1362589.651	1050555.080	26.967
	716	224.0836	14.203	87.4151	1.50	TERRENO	1.39	242.1227	14.192	1362592.468	1050551.962	27.571
	717	252.4007	14.158	88.3904	1.50	TERRENO	1.39	270.6480	14.154	1362599.264	1050550.353	27.333
	718	197.2505	16.398	93.0228	1.50	TERRENO	1.39	215.3974	16.375	1362585.756	1050555.021	26.130
	719	173.3746	18.457	97.4724	1.50	TERRENO	1.39	191.6088	18.287	1362581.191	1050560.827	24.498
	720	169.2638	15.917	98.4137	1.50	TERRENO	1.39	187.4233	15.734	1362583.502	1050562.474	24.594
	721	186.3227	15.136	97.1954	1.50	TERRENO	1.39	204.5202	15.012	1362585.445	1050558.276	25.068
	722	185.4243	19.182	97.3211	1.50	TERRENO	1.39	203.6913	19.016	1362581.690	1050556.866	24.484
	723	166.1135	14.942	94.1821	1.50	TERRENO	1.39	184.1724	14.900	1362584.243	1050563.422	25.878
	724	197.2416	21.011	94.2511	1.50	TERRENO	1.39	215.3838	20.949	1362582.025	1050552.376	25.381
	725	187.2454	20.541	98.2405	1.50	TERRENO	1.39	205.3944	20.321	1362580.747	1050555.792	23.999
	726	175.0424	12.453	100.2002	1.50	TERRENO	1.39	193.0527	12.251	1362587.169	1050561.740	24.766
	727	188.1852	13.509	100.3148	1.50	TERRENO	1.39	206.2938	13.281	1362587.196	1050558.623	24.531
	728	185.0346	14.325	100.4006	1.50	TERRENO	1.39	203.0421	14.077	1362586.150	1050558.996	24.348
	729	177.5500	9.843	104.2020	1.50	TERRENO	1.39	195.8960	9.536	1362589.932	1050561.895	24.562
	730	172.0659	19.809	99.1314	1.50	TERRENO	1.39	190.0958	19.553	1362579.853	1050561.079	23.826
	731	184.1445	21.467	100.4420	1.50	TERRENO	1.39	202.2252	21.091	1362579.580	1050556.529	23.000
	732	162.3128	19.005	98.5052	1.50	TERRENO	1.39	180.5038	18.779	1362580.326	1050564.341	24.077
	733	181.0633	19.220	100.4222	1.50	TERRENO	1.39	199.0885	18.885	1362581.257	1050558.330	23.430
	734	154.4634	21.578	98.5544	2.50	RIO	1.39	172.7555	21.317	1362577.957	1050567.195	22.651
	735	186.2044	25.584	99.0155	2.50	RIO	1.39	204.3249	25.267	1362576.080	1050554.099	21.984
	736	177.3531	23.646	102.2033	2.50	RIO	1.39	195.5713	23.099	1362576.852	1050558.306	20.946
	737	16.1249	11.398	86.0402	1.50	LINDERO	1.39	34.1930	11.371	1362608.509	1050570.897	27.782
	738	152.4646	16.131	96.5145	1.50	LINDERO	1.39	170.7588	16.015	1362583.296	1050567.078	25.073
	739	300.4639	15.092	87.2716	1.50	LINDERO	1.39	318.7569	15.077	1362610.441	1050554.567	27.670
	740	266.1629	13.633	89.0414	1.50	LINDERO	1.39	284.2541	13.631	1362602.460	1050551.295	27.221
E1027		0.0000				ESTACION		0.0000		1362638.071	1050513.959	29.445
E1029	E1027	0.0000	29.710	84.4654	1.50	ESTACION	1.42	224.5402		1362616.990	1050493.214	26.717
	E1030	169.2021	39.283	89.0651	1.50	DELTA	1.42	213.8794	39.278	1362584.381	1050471.319	27.239
	751	359.4551	20.600	83.1117	1.50	BORDE_VIA	1.42	44.3044	20.455	1362631.629	1050507.501	29.075
	752	3.5435	22.432	82.3841	1.50	BORDE_VIA	1.42	48.4499	22.247	1362631.747	1050509.863	29.503



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	753	4.0343	21.882	83.3921	1.50	TERRENO	1.42	48.6021	21.748	1362631.372	1050509.528	29.050
	754	0.3927	20.970	83.0650	1.50	TERRENO	1.42	45.1977	20.819	1362631.661	1050507.986	29.146
	755	8.1312	18.553	84.3101	1.50	TERRENO	1.42	52.7602	18.468	1362628.166	1050507.917	28.404
	756	1.1603	16.894	83.3119	1.50	TERRENO	1.42	45.8077	16.786	1362628.692	1050505.250	28.538
	757	11.5114	14.825	86.1637	1.50	TERRENO	1.42	56.3941	14.794	1362625.178	1050505.535	27.594
	758	2.1754	14.160	84.3923	1.50	TERRENO	1.42	46.8385	14.098	1362626.635	1050503.498	27.950
	759	358.1325	10.829	87.0901	1.50	PARAMENTO	1.42	42.7638	10.816	1362624.931	1050500.558	27.170
	760	11.1204	14.082	86.5453	1.50	TERRENO	1.42	55.7413	14.062	1362624.906	1050504.836	27.390
	761	325.2802	10.561	85.0042	1.50	PARAMENTO	1.42	10.0074	10.521	1362627.351	1050495.042	27.550
	762	4.3034	7.095	88.5630	1.50	TERRENO	1.42	49.0496	7.094	1362621.640	1050498.572	26.763
	763	295.5901	10.637	86.2455	1.50	PARAMENTO	1.42	340.5238	10.616	1362626.999	1050489.674	27.297
	764	258.5129	8.510	89.1311	1.50	PARAMENTO	1.42	303.3983	8.509	1362621.674	1050486.110	26.748
	765	258.0413	12.615	89.0452	1.50	PARAMENTO	1.42	302.6105	12.613	1362623.788	1050482.589	26.834
	766	21.4417	4.019	94.0500	1.50	TERRENO	1.42	66.2783	4.009	1362618.603	1050496.884	26.345
	767	298.5420	6.462	87.1227	1.50	TERRENO	1.42	343.4458	6.454	1362623.177	1050491.375	26.946
	768	231.0247	16.894	89.4917	1.50	TERRENO	1.42	275.5866	16.894	1362618.635	1050476.400	26.684
	769	260.1806	5.074	87.4459	1.50	TERRENO	1.42	304.8419	5.070	1362619.887	1050489.053	26.831
	770	178.4114	3.189	86.0756	1.50	TERRENO	1.42	223.2274	3.182	1362614.672	1050491.035	26.847
	771	214.5346	21.458	89.2944	1.50	TERRENO	1.42	259.4363	21.457	1362613.057	1050472.121	26.821
	772	207.4530	10.837	88.1309	1.50	TERRENO	1.42	252.2985	10.832	1362613.697	1050482.895	26.968
	773	181.1632	10.039	88.0319	1.50	TERRENO	1.42	225.8158	10.033	1362609.998	1050486.019	26.972
	774	183.3155	3.787	89.2507	1.50	BORDE_CANO	1.42	228.0721	3.787	1362614.460	1050490.397	26.670
	775	183.3645	4.926	89.3737	1.50	BORDE_CANO	1.42	228.1527	4.926	1362613.704	1050489.545	26.664
	776	229.2331	5.134	92.2941	1.50	BORDE_CANO	1.42	273.9321	5.129	1362617.342	1050488.097	26.408
	777	220.1255	6.268	90.2235	1.50	BORDE_CANO	1.42	264.7555	6.268	1362616.418	1050486.972	26.590
	778	246.2359	8.400	90.0624	1.50	BORDE_CANO	1.42	290.9399	8.400	1362619.992	1050485.369	26.616
	779	237.3724	9.337	89.5537	1.50	BORDE_CANO	1.42	282.1635	9.337	1362618.958	1050484.087	26.644
	780	247.3755	13.475	90.2346	1.50	BORDE_CANO	1.42	292.1721	13.475	1362622.076	1050480.736	26.538
	781	242.5613	13.732	90.2346	1.50	BORDE_CANO	1.42	287.4771	13.732	1362621.114	1050480.116	26.537
	782	244.3122	13.707	91.4353	1.50	CANO	1.42	289.0630	13.701	1362621.465	1050480.265	26.218
	783	246.5128	13.487	91.4353	1.50	CANO	1.42	291.3980	13.481	1362621.909	1050480.662	26.224
	784	244.2645	8.612	93.5334	1.50	CANO	1.42	288.9860	8.592	1362619.786	1050485.089	26.047
	785	239.3935	9.122	94.1017	1.50	CANO	1.42	284.1999	9.098	1362619.222	1050484.394	25.968
	786	228.4503	5.708	98.3635	1.50	CANO	1.42	273.2910	5.644	1362617.314	1050487.580	25.777
	787	224.5309	6.157	97.3122	1.50	CANO	1.42	269.4260	6.104	1362616.929	1050487.110	25.826
	788	181.4035	4.252	104.1940	1.50	CANO	1.42	226.2166	4.120	1362614.140	1050490.240	25.579



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	789	183.0521	4.672	103.4650	1.50	CANO	1.42	227.6294	4.538	1362613.932	1050489.862	25.519
	790	144.4754	6.087	105.4849	1.50	CANO	1.42	189.3385	5.857	1362611.211	1050492.264	24.973
	791	153.4235	6.395	104.1537	1.50	CANO	1.42	198.2499	6.198	1362611.104	1050491.273	25.056
	792	143.0342	4.817	101.1646	1.50	TERRENO	1.42	187.6019	4.724	1362612.308	1050492.589	25.689
	793	145.2250	3.612	95.1448	1.50	TERRENO	1.42	189.9208	3.597	1362613.447	1050492.594	26.301
	794	120.4835	2.493	108.2545	1.50	TERRENO	1.42	165.3499	2.365	1362614.702	1050493.812	25.844
	795	38.2019	3.811	101.3256	1.50	TERRENO	1.42	82.8788	3.734	1362617.453	1050496.919	25.869
	796	26.0804	6.390	96.0720	1.50	TERRENO	1.42	70.6746	6.354	1362619.093	1050499.210	25.950
	797	352.0217	4.793	90.1919	1.50	TERRENO	1.42	36.5783	4.793	1362620.839	1050496.070	26.605
	798	117.2637	10.232	87.4637	1.50	TERRENO	1.42	161.9838	10.224	1362607.267	1050496.376	27.029
	799	133.4834	16.295	88.0354	1.50	TERRENO	1.42	178.3496	16.286	1362600.711	1050493.683	27.182
	800	141.1538	11.082	89.0132	1.50	TERRENO	1.42	185.8008	11.080	1362605.967	1050492.094	26.820
	801	118.0617	8.017	89.5425	1.50	TERRENO	1.42	162.6449	8.017	1362609.338	1050495.605	26.645
	802	118.3349	14.320	87.3244	1.50	LINDERO	1.42	163.1038	14.307	1362603.301	1050497.372	27.245
	803	103.3247	10.928	88.0119	1.50	LINDERO	1.42	148.0866	10.921	1362607.720	1050498.988	27.009
	804	72.5313	6.249	91.5032	1.50	LINDERO	1.42	117.4271	6.246	1362614.114	1050498.758	26.431
	805	73.0732	8.891	88.0457	1.50	TERRENO	1.42	117.6658	8.886	1362612.865	1050501.084	26.929
	806	43.3150	8.592	93.0644	1.50	TERRENO	1.42	88.0708	8.579	1362617.279	1050501.789	26.165
	807	47.0913	9.866	90.2030	1.50	TERRENO	1.42	91.6938	9.866	1362616.699	1050503.076	26.573
	808	72.2948	13.891	88.2535	1.50	TERRENO	1.42	117.0369	13.886	1362610.678	1050505.582	27.013
	809	60.2350	14.745	88.3050	1.50	TERRENO	1.42	104.9374	14.740	1362613.191	1050507.456	27.014
	810	103.3447	15.319	87.4940	1.50	TERRENO	1.42	148.1199	15.308	1362603.992	1050501.299	27.212
	811	38.5911	11.400	91.5236	1.50	TERRENO	1.42	83.5266	11.394	1362618.275	1050504.535	26.258
	812	119.5653	18.647	87.5501	1.50	TERRENO	1.42	164.4883	18.635	1362599.035	1050498.198	27.309
	813	27.2048	13.039	90.1343	1.50	TERRENO	1.42	71.8869	13.039	1362621.044	1050505.607	26.580
	814	30.3156	16.375	87.2355	1.50	TERRENO	1.42	75.0724	16.358	1362621.204	1050509.020	27.375
	815	42.4924	15.316	88.3859	1.50	TERRENO	1.42	87.3635	15.312	1362617.695	1050508.510	26.993
	816	39.3402	8.226	98.0333	1.80	BORDE_CANO	1.42	84.1074	8.145	1362617.827	1050501.316	25.178
	817	32.1529	8.492	98.2645	1.80	BORDE_CANO	1.42	76.7983	8.400	1362618.909	1050501.392	25.084
	818	60.1650	5.510	104.2441	1.80	BORDE_CANO	1.42	104.8208	5.337	1362615.625	1050498.373	24.960
	819	42.4852	4.737	105.1726	1.80	BORDE_CANO	1.42	87.3546	4.569	1362617.201	1050497.779	25.082
	820	125.1722	5.993	103.4425	1.80	BORDE_CANO	1.42	169.8296	5.821	1362611.260	1050494.242	24.908
	821	132.1724	4.972	107.5409	1.80	BORDE_CANO	1.42	176.8302	4.731	1362612.266	1050493.476	24.803
	822	152.1906	8.971	99.2854	1.80	BORDE_CANO	1.42	196.8585	8.848	1362608.522	1050490.648	24.854
	823	158.0954	8.013	101.0232	1.80	BORDE_CANO	1.42	202.7052	7.865	1362609.735	1050490.178	24.797
	824	157.0020	14.856	91.1435	1.80	TERRENO	1.42	201.5458	14.853	1362603.176	1050487.760	26.009



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	825	167.1109	7.065	90.0930	1.80	TERRENO	1.42	211.7260	7.065	1362610.981	1050489.499	26.312
	826	145.3520	9.293	93.1700	1.80	TERRENO	1.42	190.1291	9.278	1362607.857	1050491.582	25.799
	827	132.4335	4.553	100.5253	1.80	TERRENO	1.42	177.2666	4.471	1362612.524	1050493.427	25.472
	828	113.3236	5.893	96.2441	1.80	TERRENO	1.42	158.0835	5.856	1362611.558	1050495.400	25.674
	829	126.5216	4.285	110.2740	1.80	BORDE_CANO	1.42	171.4113	4.015	1362613.021	1050493.814	24.834
	830	119.3633	5.150	106.4313	1.80	BORDE_CANO	1.42	164.1494	4.932	1362612.246	1050494.561	24.850
	831	42.3009	4.258	99.5324	1.80	TERRENO	1.42	87.0427	4.195	1362617.207	1050497.403	25.600
	832	59.3814	5.981	96.0144	1.80	TERRENO	1.42	104.1774	5.948	1362615.534	1050498.981	25.703
	833	39.5107	8.498	93.3201	1.80	TERRENO	1.42	84.3921	8.482	1362617.819	1050501.655	25.808
	834	30.5053	8.342	95.2458	1.80	TERRENO	1.42	75.3883	8.305	1362619.085	1050501.250	25.544
	835	19.2648	12.254	96.0319	1.50	DESCARGA	1.42	63.9869	12.186	1362622.335	1050504.165	25.339
	836	19.3957	12.225	93.5123	1.50	DESCARGA	1.42	64.2060	12.197	1362622.298	1050504.196	25.809
	836	19.3442	12.171	93.4825	1.80	DESCARGA	1.42	64.1185	12.144	1362622.291	1050504.140	25.524
	835	19.2802	12.151	95.5531	1.80	DESCARGA	1.42	64.0074	12.086	1362622.287	1050504.078	25.077
	837	20.5045	13.193	94.4229	1.50	BORDE_CANO	1.42	65.3860	13.148	1362622.467	1050505.168	25.549
	838	18.3659	13.082	94.2537	1.50	BORDE_CANO	1.42	63.1566	13.043	1362622.880	1050504.852	25.622
	839	17.3053	13.354	91.5459	1.50	TERRENO	1.42	62.0549	13.347	1362623.245	1050505.004	26.185
	840	21.2947	13.626	90.5304	1.50	TERRENO	1.42	66.0366	13.624	1362622.524	1050505.664	26.421
	841	19.4404	14.386	87.2704	1.50	TERRENO	1.42	64.2746	14.372	1362623.229	1050506.161	27.271
	842	11.4804	14.090	86.5933	1.50	TERRENO	1.42	56.3413	14.071	1362624.789	1050504.926	27.371
	843	18.5922	10.008	90.3644	1.50	TERRENO	1.42	63.5296	10.007	1362621.451	1050502.172	26.525
	844	30.0845	12.147	91.5944	1.80	TERRENO	1.42	74.6860	12.140	1362620.197	1050504.923	25.909
	845	23.1635	10.662	93.5539	1.50	BORDE_CANO	1.42	67.8166	10.637	1362621.007	1050503.064	25.901
	846	185.5618	22.727	89.2734	1.50	TERRENO	1.42	230.4785	22.726	1362602.528	1050475.684	26.846
	847	197.4708	27.501	88.5045	1.50	TERRENO	1.42	242.3258	27.495	1362604.220	1050468.864	27.186
	848	181.3535	26.479	88.2242	1.50	TERRENO	1.42	226.1333	26.468	1362598.648	1050474.132	27.381
	849	213.2122	18.378	89.4143	1.50	TERRENO	1.42	257.8963	18.378	1362613.137	1050475.245	26.729
	850	214.4844	18.777	89.4143	1.50	TERRENO	1.42	259.3524	18.777	1362613.521	1050474.761	26.732
	851	194.2407	22.449	89.3601	1.50	TERRENO	1.42	238.9421	22.448	1362605.409	1050473.984	26.788
	852	194.2801	23.035	89.3244	1.50	TERRENO	1.42	239.0071	23.034	1362605.129	1050473.468	26.814
	853	186.0139	22.864	89.3633	1.50	TERRENO	1.42	230.5677	22.863	1362602.468	1050475.555	26.788
	854	186.0827	23.574	89.3516	1.50	TERRENO	1.42	230.6810	23.573	1362602.053	1050474.977	26.801
	855	182.0728	22.662	89.3515	1.50	TERRENO	1.42	226.6646	22.661	1362601.439	1050476.731	26.795
	856	182.0118	23.249	89.3906	1.50	TERRENO	1.42	226.5619	23.249	1362601.005	1050476.333	26.773
	857	161.3145	21.587	90.1844	1.50	TERRENO	1.42	206.0694	21.587	1362597.600	1050483.728	26.514
	858	161.3353	22.213	90.1412	1.50	TERRENO	1.42	206.1049	22.213	1362597.044	1050483.440	26.540



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	859	161.4630	21.986	91.2711	1.50	CANO	1.42	206.3152	21.979	1362597.289	1050483.471	26.074
	860	186.1805	23.295	90.3725	1.50	CANO	1.42	230.8416	23.294	1362602.281	1050475.152	26.378
	861	200.1139	21.863	90.3118	1.50	CANO	1.42	244.7344	21.862	1362607.659	1050473.443	26.433
	862	213.3634	18.673	90.3118	1.50	CANO	1.42	258.1496	18.672	1362613.156	1050474.940	26.462
E1030-E1029	E1029	0.0000	39.264	90.3822	1.50	ESTACION	1.43	213.8794	39.278	1362584.381	1050471.319	27.239
	863	6.2135	14.781	88.4832	1.50	TERRENO	1.43	40.2391	14.778	1362595.662	1050480.865	27.476
	864	329.4224	14.474	89.2536	1.50	TERRENO	1.43	3.5860	14.473	1362598.826	1050472.224	27.314
	865	7.1331	8.066	87.0143	1.50	TERRENO	1.43	41.1046	8.055	1362590.451	1050476.614	27.587
	866	310.5928	10.106	88.5359	1.50	TERRENO	1.43	344.8705	10.104	1362594.135	1050468.681	27.363
	867	1.2219	2.816	86.2730	1.50	TERRENO	1.43	35.2513	2.811	1362586.676	1050472.941	27.343
	868	278.0452	5.039	88.3515	1.50	TERRENO	1.43	311.9605	5.037	1362587.749	1050467.573	27.293
	869	277.1809	11.381	88.3626	1.50	TERRENO	1.43	311.1819	11.378	1362591.873	1050462.755	27.446
	870	298.3330	18.021	89.3258	1.50	LINDERO	1.43	332.4377	18.020	1362600.356	1050462.980	27.311
	871	235.3140	9.034	90.5145	1.50	TERRENO	1.43	269.4071	9.033	1362584.288	1050462.286	27.033
	872	274.4636	15.387	89.2412	1.50	LINDERO	1.43	308.6560	15.386	1362593.992	1050459.303	27.329
	873	239.2616	17.467	90.2047	1.50	LINDERO	1.43	273.3171	17.467	1362585.392	1050453.881	27.063
	874	226.5955	20.305	91.1809	1.50	LINDERO	1.43	260.8780	20.300	1362581.163	1050451.276	26.707
	875	136.5546	6.664	101.0856	1.50	LINDERO	1.43	170.8088	6.538	1362577.927	1050472.363	25.880
	876	216.2102	13.991	91.2400	1.50	TERRENO	1.43	250.2299	13.987	1362579.650	1050458.156	26.827
	877	248.5030	11.861	89.3729	1.50	TERRENO	1.43	282.7210	11.861	1362586.993	1050459.749	27.247
	878	187.0506	7.433	97.2003	1.50	TERRENO	1.43	220.9644	7.372	1362578.814	1050466.485	26.220
	879	57.5039	3.089	95.0328	1.50	TERRENO	1.43	91.7235	3.077	1362584.289	1050474.394	26.897
	880	18.5552	5.773	87.3257	1.50	TERRENO	1.43	52.8105	5.768	1362587.867	1050475.913	27.416
	881	89.5701	10.408	96.2954	1.50	TERRENO	1.43	123.8296	10.341	1362578.624	1050479.909	25.991
	882	18.3558	10.768	89.1953	1.50	TERRENO	1.43	52.4788	10.767	1362590.939	1050479.858	27.295
	883	61.0625	12.130	92.4350	1.50	TERRENO	1.43	94.9863	12.116	1362583.328	1050483.389	26.591
	884	17.3019	16.634	89.5720	1.50	TERRENO	1.43	51.3846	16.634	1362594.762	1050484.316	27.182
	885	44.1430	14.987	91.4448	1.50	TERRENO	1.43	78.1210	14.980	1362587.465	1050485.978	26.712
	886	40.2010	20.295	89.0402	1.50	TERRENO	1.43	74.2155	20.292	1362589.901	1050490.846	27.499
	887	31.2620	22.495	91.2003	1.50	TERRENO	1.43	65.3183	22.489	1362593.772	1050491.753	26.645
	888	25.4437	15.833	92.5647	2.60	TERRENO	1.43	59.6230	15.812	1362592.377	1050484.960	25.255
	889	27.2318	12.829	93.3951	2.60	TERRENO	1.43	61.2677	12.803	1362590.536	1050482.545	25.249
	890	32.4334	20.319	92.2123	2.60	TERRENO	1.43	66.6055	20.302	1362592.442	1050489.951	25.234
	891	35.5802	17.601	92.4727	2.60	TERRENO	1.43	69.8466	17.580	1362590.438	1050487.822	25.212
	892	41.2900	13.023	97.0331	2.60	TERRENO	1.43	75.3627	12.924	1362587.647	1050483.823	24.469
	893	56.3813	10.305	99.3735	2.60	TERRENO	1.43	90.5163	10.160	1362584.290	1050481.478	24.346



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	894	76.2846	6.832	105.3532	2.60	TERRENO	1.43	110.3588	6.581	1362582.092	1050477.488	24.233
	895	98.0317	8.121	105.2414	2.60	TERRENO	1.43	131.9341	7.829	1362579.149	1050477.143	23.912
	896	116.0914	9.571	104.0155	2.60	TERRENO	1.43	150.0333	9.285	1362576.337	1050475.957	23.748
	897	107.4919	12.491	100.4333	2.60	TERRENO	1.43	141.7013	12.273	1362574.750	1050478.925	23.744
	898	101.2959	14.352	100.4953	2.60	TERRENO	1.43	135.3791	14.096	1362574.348	1050481.220	23.372
	899	81.0450	12.338	92.3600	1.50	TERRENO	1.43	114.9599	12.325	1362579.180	1050482.493	26.609
	900	68.5459	15.231	91.2736	1.50	TERRENO	1.43	102.7958	15.226	1362581.009	1050486.166	26.781
	901	57.0928	21.008	89.4218	1.50	TERRENO	1.43	91.0371	21.008	1362584.001	1050492.323	27.277
	902	51.0350	21.562	89.2936	1.50	LINDERO	1.43	84.9433	21.561	1362586.282	1050492.796	27.360
	903	40.2034	23.443	88.5958	1.50	LINDERO	1.43	74.2221	23.439	1362590.754	1050493.875	27.578
	904	24.0800	20.913	95.5141	2.60	BORDE_CANO	1.43	58.0127	20.804	1362595.401	1050488.963	23.933
	905	27.2143	20.971	96.0712	2.60	BORDE_CANO	1.43	61.2413	20.851	1362594.413	1050489.598	23.833
	906	31.0315	18.853	96.2124	2.60	BORDE_CANO	1.43	64.9335	18.737	1362592.319	1050488.291	23.982
	907	32.3737	19.518	96.4158	2.60	BORDE_CANO	1.43	66.5063	19.385	1362592.109	1050489.096	23.792
	908	34.0445	13.602	103.2642	2.60	CANO	1.43	67.9585	13.229	1362589.346	1050483.581	22.906
	909	34.1218	11.294	106.1655	2.60	BORDE_CANO	1.43	68.0844	10.841	1362588.427	1050481.376	22.903
	910	37.5740	11.359	106.0555	2.60	BORDE_CANO	1.43	71.8405	10.914	1362587.782	1050481.689	22.919
	911	49.2055	6.497	112.1149	3.50	BORDE_CANO	1.43	83.2280	6.016	1362585.090	1050477.292	22.714
	912	41.2853	5.337	114.5137	3.50	BORDE_CANO	1.43	75.3608	4.842	1362585.605	1050476.004	22.925
	913	48.0430	5.723	114.4505	3.50	CANO	1.43	81.9544	5.197	1362585.108	1050476.465	22.773
	914	85.4948	6.415	114.0828	3.50	CANO	1.43	119.7094	5.854	1362581.480	1050476.403	22.545
	915	86.2554	6.065	116.0308	3.50	CANO	1.43	120.3110	5.449	1362581.631	1050476.022	22.505
	916	85.4957	6.284	114.5547	3.50	CANO	1.43	119.7119	5.698	1362581.557	1050476.268	22.520
	917	116.3049	7.958	111.0003	3.50	BORDE_CANO	1.43	150.3930	7.429	1362577.922	1050474.989	22.317
	918	118.5731	6.990	113.1936	3.50	BORDE_CANO	1.43	152.8380	6.419	1362578.670	1050474.249	22.401
	919	117.3713	7.413	112.1826	3.50	CANO	1.43	151.4996	6.858	1362578.354	1050474.591	22.355
	920	133.2838	12.986	104.1617	3.50	BORDE_CANO	1.43	167.3566	12.585	1362572.101	1050474.073	21.968
	921	129.5143	13.108	104.1617	3.50	BORDE_CANO	1.43	163.7413	12.703	1362572.186	1050474.875	21.938
	922	115.3802	14.275	103.3729	3.50	RIO	1.43	149.5133	13.873	1362572.426	1050478.357	21.806
	923	108.1436	15.149	103.0447	3.50	RIO	1.43	142.1227	14.756	1362572.734	1050480.378	21.741
	924	146.0756	12.922	105.2657	3.50	RIO	1.43	180.0116	12.455	1362571.926	1050471.316	21.727
	925	167.0408	14.180	104.1159	3.50	RIO	1.43	200.9483	13.747	1362571.543	1050466.404	21.691
	926	165.3130	10.256	102.2454	2.60	TERRENO	1.43	199.4044	10.016	1362574.934	1050467.991	23.864
	927	145.3359	9.682	101.5818	2.60	TERRENO	1.43	179.4458	9.471	1362574.910	1050471.410	24.061
	928	140.3158	7.632	102.2513	2.60	TERRENO	1.43	174.4121	7.453	1362576.963	1050472.044	24.427
	929	146.1146	7.335	95.1117	2.60	TERRENO	1.43	180.0755	7.305	1362577.076	1050471.309	25.406



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1028		0.0000				ESTACION		0.0000		1362661.679	1050462.277	29.040
E1031	E1028	0.0000	61.159	88.1446	1.50	ESTACION	1.50	203.6160		1362605.670	1050437.788	27.164
	E1033	228.0536	33.610	90.2158	1.50	DELTA	1.50	251.7094	33.609	1362595.122	1050405.877	26.952
	954	2.1307	8.433	91.2109	1.50	TERRENO	1.50	25.8346	8.431	1362613.258	1050441.462	26.968
	955	343.1403	8.662	93.3752	1.50	TERRENO	1.50	6.8502	8.645	1362614.253	1050438.819	26.619
	956	12.4816	3.777	91.5808	1.50	TERRENO	1.50	36.4205	3.775	1362608.708	1050440.029	27.037
	957	333.2938	4.656	95.1452	1.50	TERRENO	1.50	357.1099	4.636	1362610.301	1050437.555	26.741
	958	287.2255	4.608	95.0414	1.50	TERRENO	1.50	310.9980	4.590	1362608.681	1050434.324	26.760
	959	121.0037	2.918	85.4051	1.50	TERRENO	1.50	144.6263	2.910	1362603.298	1050439.473	27.387
	960	259.0411	2.234	91.2425	1.50	TERRENO	1.50	282.6858	2.233	1362606.161	1050435.609	27.112
	961	264.0038	7.830	90.4908	1.50	TERRENO	1.50	287.6266	7.829	1362608.041	1050430.327	27.055
	962	178.0125	6.931	89.2433	1.50	TERRENO	1.50	201.6396	6.931	1362599.228	1050435.233	27.239
	963	209.1808	7.329	88.5427	1.50	TERRENO	1.50	232.9183	7.328	1362601.252	1050431.942	27.307
	964	238.2418	11.702	89.3035	1.50	TERRENO	1.50	262.0210	11.702	1362604.046	1050426.200	27.267
	965	187.1917	14.391	90.2518	1.50	TERRENO	1.50	210.9374	14.391	1362593.327	1050430.390	27.061
	966	209.3502	14.989	89.3834	1.50	TERRENO	1.50	233.1999	14.989	1362596.692	1050425.786	27.261
	967	234.0301	17.727	89.3940	1.50	TERRENO	1.50	257.6663	17.727	1362601.884	1050420.471	27.272
	968	263.3810	13.578	90.3218	1.50	TERRENO	1.50	287.2521	13.577	1362609.697	1050424.822	27.040
	969	320.1807	10.853	95.3852	1.50	TERRENO	1.50	343.9180	10.800	1362616.048	1050434.796	26.099
	970	306.0544	13.489	92.2810	1.50	TERRENO	1.50	329.7116	13.476	1362617.307	1050430.991	26.586
	971	314.4852	19.574	91.3715	1.50	TERRENO	1.50	338.4305	19.566	1362623.866	1050430.595	26.614
	972	300.0514	22.261	91.1653	1.50	TERRENO	1.50	323.7033	22.255	1362623.607	1050424.614	26.669
	973	285.4337	24.646	91.3720	1.50	TERRENO	1.50	309.3430	24.636	1362621.289	1050418.736	26.469
	974	283.4747	21.240	90.5208	1.50	TERRENO	1.50	307.4124	21.238	1362618.573	1050420.920	26.845
	975	270.0913	25.498	90.3200	1.50	TERRENO	1.50	293.7696	25.497	1362615.947	1050414.454	26.930
	976	145.5711	7.482	100.1735	1.50	BORDE_VIA	1.50	169.5691	7.362	1362598.430	1050439.121	25.830
	977	141.5940	8.954	98.2458	1.50	BORDE_VIA	1.50	165.6105	8.858	1362597.091	1050439.990	25.857
	978	85.1251	4.650	102.0929	1.50	BORDE_VIA	1.50	108.8302	4.546	1362604.203	1050442.091	26.188
	979	85.3055	6.452	99.5531	1.50	BORDE_VIA	1.50	109.1313	6.355	1362603.587	1050443.793	26.055
	980	8.3146	11.247	92.0705	1.50	BORDE_VIA	1.50	32.1455	11.239	1362615.187	1050443.768	26.752
	981	14.5429	12.813	92.5231	1.50	BORDE_VIA	1.50	38.5241	12.797	1362615.682	1050445.759	26.524
	982	358.1659	17.812	91.0547	1.50	BORDE_VIA	1.50	21.8991	17.809	1362622.194	1050444.430	26.826
	983	3.5258	18.577	91.0547	1.50	BORDE_VIA	1.50	27.4988	18.574	1362622.145	1050446.364	26.812
	984	0.3643	29.512	89.3832	1.50	BORDE_VIA	1.50	24.2280	29.511	1362632.582	1050449.899	27.351
	985	356.5204	28.560	89.5039	1.50	BORDE_VIA	1.50	20.4838	28.560	1362632.424	1050447.783	27.245
	986	0.4501	42.254	88.1538	1.50	BORDE_VIA	1.50	24.3663	42.235	1362644.143	1050455.213	28.450



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	987	358.4549	42.302	88.2148	1.50	BORDE_VIA	1.50	22.3796	42.285	1362644.770	1050453.888	28.375
	988	0.3755	47.516	88.1416	1.50	EJE_VIA	1.50	24.2480	47.494	1362648.974	1050457.293	28.628
	989	8.1141	30.243	89.5705	1.50	DESCARGA	1.50	31.8108	30.243	1362631.371	1050453.730	27.193
	990	8.1428	30.207	90.4813	1.50	DESCARGA	1.50	31.8571	30.204	1362631.325	1050453.730	26.744
	991	9.0302	28.954	90.2145	1.50	TUBO	1.50	32.6666	28.953	1362630.044	1050453.416	26.984
	992	5.4424	29.946	88.5704	1.50	TERRENO	1.50	29.3560	29.941	1362631.767	1050452.466	27.715
	993	9.5114	30.356	89.1548	1.50	TERRENO	1.50	33.4699	30.353	1362630.990	1050454.528	27.557
	994	7.0943	26.887	90.3808	1.50	TERRENO	1.50	30.7780	26.885	1362628.769	1050451.546	26.869
	995	12.4052	27.263	90.5044	1.50	TERRENO	1.50	36.2971	27.260	1362627.641	1050453.926	26.765
	996	14.4739	21.161	91.3400	1.50	TERRENO	1.50	38.4102	21.153	1362622.245	1050450.930	26.589
	997	21.2125	21.733	91.2627	1.50	TERRENO	1.50	44.9730	21.726	1362621.040	1050453.144	26.621
	998	8.2247	19.061	91.4925	1.50	TERRENO	1.50	31.9958	19.051	1362621.827	1050447.883	26.561
	999	10.1237	17.931	92.1838	1.50	TERRENO	1.50	33.8263	17.916	1362620.554	1050447.762	26.444
	1100	4.2404	18.046	92.1018	1.50	BORDE_CANO	1.50	28.0171	18.033	1362621.590	1050446.259	26.483
	1101	6.1422	17.217	91.5508	1.50	BORDE_CANO	1.50	29.8555	17.207	1362620.594	1050446.354	26.591
	1102	8.2526	30.755	89.1317	1.50	TERRENO	1.50	32.0399	30.752	1362631.738	1050454.103	27.585
	1103	5.0436	30.342	88.4736	1.50	TERRENO	1.50	28.6927	30.335	1362632.281	1050452.353	27.806
	1104	8.2624	30.384	89.5928	1.50	ESTRUCTURA	1.50	32.0560	30.384	1362631.422	1050453.915	27.172
	1105	7.2959	30.215	89.5928	1.50	ESTRUCTURA	1.50	31.1158	30.215	1362631.538	1050453.402	27.172
	1106	8.0543	30.158	90.5907	1.50	CANO	1.50	31.7113	30.154	1362631.322	1050453.638	26.649
	1107	11.1108	33.397	88.4355	1.50	TERRENO	1.50	34.8016	33.389	1362633.087	1050456.845	27.906
	1108	16.5147	34.601	88.5329	1.50	TERRENO	1.50	40.4791	34.595	1362631.984	1050460.246	27.837
	1109	18.1950	30.655	90.0012	1.50	TERRENO	1.50	41.9466	30.655	1362628.470	1050458.279	27.165
	1110	21.4353	26.589	90.5055	1.50	TERRENO	1.50	45.3474	26.586	1362624.355	1050456.701	26.773
	1111	25.1708	22.754	89.2053	2.20	TERRENO	1.50	48.9016	22.753	1362620.627	1050454.934	26.726
	1112	4.4118	17.893	92.3349	2.20	BORDE_CANO	1.50	28.3044	17.875	1362621.408	1050446.264	25.667
	1113	6.2654	17.457	92.1630	2.20	BORDE_CANO	1.50	30.0644	17.443	1362620.767	1050446.527	25.774
	1114	4.3808	20.511	90.4331	2.20	TERRENO	1.50	28.2516	20.509	1362623.737	1050447.496	26.208
	1115	4.5650	25.387	90.1104	2.20	TERRENO	1.50	28.5633	25.387	1362627.967	1050449.926	26.385
	1116	6.5402	28.915	90.0025	2.20	BORDE_CANO	1.50	30.5166	28.915	1362630.580	1050452.471	26.464
	1117	9.5720	29.666	90.5433	2.20	BORDE_CANO	1.50	33.5716	29.662	1362630.385	1050454.191	25.996
	1118	7.5934	26.747	90.5622	1.50	BORDE_CANO	1.50	31.6088	26.743	1362628.446	1050451.805	26.729
	1119	11.3737	27.610	91.1312	1.50	BORDE_CANO	1.50	35.2430	27.604	1362628.215	1050453.717	26.579
	1120	4.0933	17.545	91.4119	1.50	PUENTE	1.50	27.7752	17.537	1362621.187	1050445.961	26.650
	1121	358.3445	16.963	91.3300	1.50	PUENTE	1.50	22.1952	16.957	1362621.371	1050444.194	26.708
	1122	3.3331	17.983	91.1903	1.50	PUENTE	1.50	27.1746	17.978	1362621.664	1050445.999	26.754



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1123	4.3640	17.029	91.3154	1.50	PUENTE	1.50	28.2271	17.023	1362620.669	1050445.840	26.712
	1124	358.5300	16.439	91.2531	1.50	PUENTE	1.50	22.4994	16.434	1362620.853	1050444.077	26.758
	1125	48.0900	12.790	90.2038	1.50	LINDERO	1.50	71.7660	12.790	1362609.672	1050449.936	27.090
	1126	71.1841	8.765	91.5153	1.50	LINDERO	1.50	94.9274	8.760	1362604.918	1050446.516	26.882
	1127	91.5558	7.339	92.5444	1.50	LINDERO	1.50	115.5488	7.330	1362602.509	1050444.401	26.794
	1128	130.5724	9.068	91.5407	1.50	LINDERO	1.50	154.5727	9.063	1362597.485	1050441.680	26.866
	1129	357.2017	15.019	91.4209	1.50	TERRENO	1.51	20.9541	15.012	1362619.690	1050443.157	26.721
	1130	353.3712	17.348	92.1910	1.50	TERRENO	1.51	17.2360	17.334	1362622.226	1050442.924	26.465
	1131	353.2823	17.002	94.3538	1.50	BORDE_CANO	1.51	17.0891	16.947	1362621.869	1050442.768	25.805
	1132	352.3323	15.415	95.3403	1.50	BORDE_CANO	1.51	16.1724	15.342	1362620.405	1050442.062	25.672
	1133	341.4847	14.882	94.5018	1.50	TERRENO	1.51	5.4291	14.829	1362620.433	1050439.191	25.912
	1134	346.0411	13.810	95.3619	1.50	TERRENO	1.51	9.6858	13.744	1362619.218	1050440.101	25.818
	1135	342.4959	14.642	97.2358	1.50	BORDE_CANO	1.51	6.4491	14.520	1362620.098	1050439.419	25.281
	1136	345.5036	14.441	97.2942	1.50	BORDE_CANO	1.51	9.4594	14.318	1362619.793	1050440.141	25.284
	1137	332.0423	13.387	95.0519	1.50	TERRENO	1.51	355.6891	13.334	1362618.967	1050436.786	25.980
	1138	336.2957	12.039	96.4454	1.50	TERRENO	1.51	0.1152	11.956	1362617.626	1050437.812	25.752
	1139	333.5138	13.146	98.3034	1.50	BORDE_CANO	1.51	357.4766	13.001	1362618.659	1050437.216	25.222
	1140	337.1109	12.883	98.3538	1.50	BORDE_CANO	1.51	0.8019	12.738	1362618.407	1050437.967	25.242
	1141	315.2052	9.370	98.4518	1.50	TERRENO	1.51	338.9638	9.261	1362614.314	1050434.464	25.741
	1142	321.1905	8.099	100.1021	1.50	TERRENO	1.51	344.9341	7.972	1362613.368	1050435.716	25.737
	1143	315.2313	9.115	102.4804	1.50	BORDE_CANO	1.51	339.0030	8.888	1362613.969	1050434.603	25.148
	1144	321.1322	8.544	103.4250	1.50	BORDE_CANO	1.51	344.8388	8.300	1362613.682	1050435.617	25.142
	1145	286.0900	8.312	97.3219	1.50	TERRENO	1.51	309.7660	8.240	1362610.941	1050431.454	26.077
	1146	296.3639	9.437	98.5102	1.50	TERRENO	1.51	320.2269	9.325	1362612.837	1050431.823	25.715
	1147	288.1152	8.779	103.4817	1.50	BORDE_CANO	1.51	311.8138	8.525	1362611.354	1050431.434	25.072
	1148	294.4632	9.465	102.1600	1.50	BORDE_CANO	1.51	318.3916	9.249	1362612.586	1050431.647	25.156
	1149	280.4215	13.350	96.4721	1.50	TERRENO	1.51	304.3202	13.256	1362613.144	1050426.840	25.589
	1150	273.1224	13.280	95.5747	1.50	TERRENO	1.51	296.8227	13.208	1362611.630	1050426.001	25.788
	1151	280.0203	13.352	99.3022	1.50	BORDE_CANO	1.51	303.6502	13.169	1362612.967	1050426.826	24.962
	1152	276.5716	12.699	98.1644	1.50	BORDE_CANO	1.51	300.5705	12.567	1362612.062	1050426.968	25.339
	1153	277.3536	16.074	95.2930	1.50	TERRENO	1.51	301.2094	16.000	1362613.961	1050424.104	25.629
	1154	283.5338	17.057	94.0924	1.50	TERRENO	1.51	307.5099	17.012	1362616.029	1050424.293	25.931
	1155	280.0517	16.443	97.4029	1.50	BORDE_CANO	1.51	303.7041	16.296	1362614.713	1050424.232	24.971
	1156	282.3620	17.095	98.1210	1.50	BORDE_CANO	1.51	306.2216	16.920	1362615.669	1050424.138	24.728
E1033-E1031	E1031	0.0000	33.634	89.3247	1.50	ESTACION	1.43	251.7094	33.609	1362595.122	1050405.877	26.952
	E1034	256.0249	38.840	90.4648	1.50	DELTA	1.43	327.7563	38.836	1362627.970	1050385.157	26.358



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1157	324.4142	22.967	94.1256	1.50	TERRENO	1.43	36.4044	22.905	1362613.557	1050419.471	25.198
	1158	325.5528	17.588	93.2825	1.50	TERRENO	1.43	37.6338	17.556	1362609.025	1050416.597	25.821
	1159	317.5601	18.016	93.2251	1.50	TERRENO	1.43	29.6430	17.985	1362610.753	1050414.772	25.824
	1160	318.2330	16.610	95.3557	2.00	BORDE_CANO	1.43	30.1010	16.531	1362609.424	1050414.168	24.766
	1161	320.0537	15.401	95.4411	2.30	BORDE_CANO	1.43	31.8030	15.324	1362608.146	1050413.953	24.547
	1162	312.0037	10.841	95.5107	1.50	TERRENO	1.43	23.7196	10.785	1362604.996	1050410.215	25.781
	1163	300.2352	11.257	93.0813	1.50	TERRENO	1.43	12.1071	11.240	1362606.113	1050408.235	26.270
	1164	309.2603	11.408	97.3812	2.60	BORDE_CANO	1.43	21.1435	11.307	1362605.668	1050409.955	24.270
	1165	303.3007	11.174	95.2958	2.60	BORDE_CANO	1.43	15.2113	11.123	1362605.855	1050408.795	24.716
	1166	299.3310	3.969	101.4157	1.50	TERRENO	1.43	11.2621	3.887	1362598.934	1050406.636	26.082
	1167	284.5656	6.576	105.5516	1.50	TERRENO	1.43	356.6583	6.324	1362601.435	1050405.508	25.083
	1168	297.0700	4.703	100.2418	2.60	BORDE_CANO	1.43	8.8260	4.626	1362599.693	1050406.587	24.937
	1169	285.0326	6.192	100.1715	2.60	BORDE_CANO	1.43	356.7666	6.092	1362601.205	1050405.533	24.681
	1170	194.0331	2.057	98.4342	1.50	TERRENO	1.43	265.7680	2.033	1362594.972	1050403.849	26.574
	1171	220.3630	5.676	102.0038	1.50	TERRENO	1.43	292.3177	5.552	1362597.231	1050400.741	25.705
	1172	207.4818	2.737	113.3937	2.60	BORDE_CANO	1.43	279.5144	2.507	1362595.537	1050403.405	24.688
	1173	230.2417	8.539	90.3043	1.50	TERRENO	1.43	302.1141	8.539	1362599.662	1050398.645	26.810
	1174	225.1401	17.968	91.4629	1.50	TERRENO	1.43	296.9430	17.959	1362603.260	1050389.867	26.330
	1175	240.4710	19.045	90.5102	1.50	TERRENO	1.43	312.4955	19.043	1362607.987	1050391.836	26.604
	1176	256.0612	7.902	89.0257	1.50	TERRENO	1.43	327.8127	7.901	1362601.809	1050401.668	27.018
	1177	290.3735	11.483	89.1039	1.50	TERRENO	1.43	2.3358	11.482	1362606.595	1050406.345	27.051
	1178	290.2636	18.879	89.5558	1.50	TERRENO	1.43	2.1527	18.879	1362613.988	1050406.586	26.909
	1179	300.2510	19.156	89.4614	1.50	TERRENO	1.43	12.1288	19.156	1362613.851	1050409.902	26.963
	1180	340.4522	4.489	85.4934	1.50	TERRENO	1.43	52.4655	4.477	1362597.850	1050409.427	27.213
	1181	342.1054	10.651	89.1251	1.50	TERRENO	1.43	53.8910	10.650	1362601.399	1050414.481	27.032
	1182	348.4627	16.921	88.5042	1.50	TERRENO	1.43	60.4835	16.918	1362603.457	1050420.599	27.228
	1183	3.3627	10.665	87.4845	1.50	TERRENO	1.43	75.3169	10.657	1362597.824	1050416.186	27.294
	1184	40.3942	11.588	89.2803	1.50	TERRENO	1.43	112.3710	11.587	1362590.712	1050416.592	26.994
	1185	104.5559	4.845	92.3322	1.50	TERRENO	1.43	176.6424	4.840	1362590.291	1050406.161	26.670
	1186	120.5923	8.069	94.5447	1.50	TERRENO	1.43	192.6991	8.039	1362587.280	1050404.110	26.195
	1187	94.0223	9.193	92.5845	1.50	TERRENO	1.43	165.7491	9.181	1362586.224	1050408.137	26.409
	1188	202.2234	16.543	92.0632	2.00	TERRENO	1.43	274.0855	16.532	1362596.300	1050389.387	25.778
	1189	154.3907	6.861	95.5546	1.50	TERRENO	1.43	226.3613	6.824	1362590.413	1050400.938	26.178
	1190	200.4319	13.426	89.2934	2.00	TERRENO	1.43	272.4313	13.425	1362595.692	1050392.464	26.505
	1191	197.3755	9.277	91.0309	2.00	TERRENO	1.43	269.3413	9.275	1362595.016	1050396.602	26.216
	1192	185.2107	10.489	91.3204	2.00	TERRENO	1.43	257.0613	10.485	1362592.775	1050395.658	26.106



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1193	174.1623	10.757	96.2404	2.00	TERRENO	1.43	245.9824	10.690	1362590.771	1050396.113	25.187
	1194	169.5448	12.778	102.0047	2.00	TERRENO	1.43	241.6227	12.498	1362589.182	1050394.881	23.727
	1195	179.1429	15.431	101.0446	2.00	TERRENO	1.43	250.9508	15.143	1362590.180	1050391.563	23.421
	1196	172.1307	17.604	105.3210	1.50	RIO	1.43	243.9280	16.961	1362587.668	1050390.642	22.171
	1197	178.2227	20.486	103.3548	1.50	RIO	1.43	250.0835	19.912	1362588.339	1050387.156	22.070
	1198	148.0134	13.266	103.5452	2.60	RIO	1.43	219.7355	12.877	1362585.220	1050397.646	22.596
	1199	154.0816	10.361	98.2521	2.60	TERRENO	1.43	225.8471	10.249	1362587.983	1050398.523	24.269
	1200	121.3234	10.222	99.4153	2.60	TERRENO	1.43	193.2521	10.076	1362585.315	1050403.567	24.064
	1201	163.4241	20.356	104.3629	1.50	BORDE_CANO	1.43	235.4208	19.698	1362583.943	1050389.659	21.753
	1202	165.1811	20.000	104.3628	1.50	BORDE_CANO	1.43	237.0124	19.353	1362584.585	1050389.644	21.842
	1203	152.1237	15.427	104.1001	2.60	BORDE_CANO	1.43	223.9196	14.958	1362584.348	1050395.502	22.011
	1204	156.0356	15.565	104.0639	2.60	BORDE_CANO	1.43	227.7749	15.095	1362584.978	1050394.699	21.992
	1205	159.5335	12.845	103.5332	2.60	TERRENO	1.43	231.6024	12.469	1362587.378	1050396.105	22.702
	1206	163.1004	13.201	103.3537	2.60	TERRENO	1.43	234.8771	12.831	1362587.740	1050395.382	22.684
	1207	160.2037	13.243	105.0150	2.60	BORDE_CANO	1.43	232.0530	12.790	1362587.257	1050395.791	22.352
	1208	162.0053	13.359	105.0150	2.60	BORDE_CANO	1.43	233.7241	12.902	1362587.489	1050395.476	22.322
	1209	172.4627	8.441	105.1300	2.60	BORDE_CANO	1.43	244.4835	8.145	1362591.614	1050398.526	23.571
	1210	172.2615	6.719	94.3611	2.60	TERRENO	1.43	244.1469	6.697	1362592.202	1050399.850	25.247
	1211	181.2657	6.426	107.1633	2.60	BORDE_CANO	1.43	253.1585	6.136	1362593.345	1050400.004	23.878
	1212	208.4904	5.885	113.3554	2.60	BORDE_CANO	1.43	280.5271	5.393	1362596.108	1050400.575	23.431
	1213	206.3832	5.234	118.4730	2.60	BORDE_CANO	1.43	278.3516	4.587	1362595.789	1050401.339	23.266
	1214	172.0709	9.597	106.3120	2.60	BORDE_CANO	1.43	243.8285	9.201	1362591.064	1050397.620	23.057
	1215	172.4736	9.829	101.1049	2.60	TERRENO	1.43	244.5027	9.642	1362590.972	1050397.174	23.881
	1216	181.1842	1.495	93.3453	1.50	TERRENO	1.43	253.0210	1.492	1362594.687	1050404.450	26.793
	1217	168.5346	3.318	93.5707	1.50	TERRENO	1.43	240.6055	3.310	1362593.498	1050402.993	26.658
E1034-E1033	E1033	0.0000	38.860	89.0351	1.50	ESTACION	1.44	327.7563	38.836	1362627.970	1050385.157	26.358
	E1035	128.5555	35.251	88.4339	1.50	DELTA	1.44	276.6883	35.242	1362632.074	1050350.155	27.084
	1218	241.1537	23.913	90.3348	1.50	DESCARGA	1.44	29.0166	23.912	1362648.880	1050396.756	26.066
	1219	241.1625	23.442	91.2354	1.50	DESCARGA	1.44	29.0299	23.435	1362648.461	1050396.529	25.729
	1220	241.0858	23.355	92.1653	1.50	CANO	1.44	28.9058	23.336	1362648.399	1050396.437	25.371
	1221	239.2727	25.217	91.1903	0.09	TERRENO	1.44	27.2138	25.210	1362650.389	1050396.686	27.136
	1222	241.3332	25.215	90.5602	0.09	TERRENO	1.44	29.3152	25.212	1362649.953	1050397.501	27.305
	1223	241.3649	24.609	92.0426	0.09	TERRENO	1.44	29.3699	24.593	1362649.402	1050397.218	26.825
	1224	239.5404	24.693	91.5522	0.09	TERRENO	1.44	27.6574	24.679	1362649.829	1050396.613	26.887
	1225	246.4950	21.339	91.0701	1.50	TERRENO	1.44	34.5869	21.335	1362645.534	1050397.268	25.885
	1226	238.5006	20.642	91.3003	1.50	TERRENO	1.44	26.5913	20.635	1362646.422	1050394.394	25.760



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1227	240.2855	20.786	93.1101	1.50	BORDE_CANO	1.44	28.2383	20.754	1362646.254	1050394.976	25.146
	1228	246.4309	21.939	92.0922	1.50	BORDE_CANO	1.44	34.4755	21.923	1362646.043	1050397.567	25.475
	1229	235.4859	18.215	92.3015	1.50	TERRENO	1.44	23.5727	18.198	1362644.649	1050392.434	25.505
	1230	244.0623	16.873	91.2039	1.50	TERRENO	1.44	31.8627	16.868	1362642.296	1050394.062	25.905
	1231	236.3729	17.933	93.5256	1.50	BORDE_CANO	1.44	24.3810	17.892	1362644.266	1050392.543	25.087
	1232	239.5918	16.224	94.1437	1.80	BORDE_CANO	1.44	27.7446	16.180	1362642.289	1050392.689	24.800
	1233	245.2518	7.419	99.3738	1.50	TERRENO	1.44	33.1780	7.315	1362634.092	1050389.160	25.060
	1234	229.0857	7.090	99.1636	1.50	TERRENO	1.44	16.9055	6.997	1362634.665	1050387.192	25.158
	1235	243.3626	7.623	103.3525	1.50	BORDE_CANO	1.44	31.3635	7.410	1362634.297	1050389.013	24.509
	1236	231.0340	7.104	105.1316	1.50	BORDE_CANO	1.44	18.8174	6.855	1362634.458	1050387.368	24.436
	1237	162.4847	4.763	109.3339	1.50	TERRENO	1.44	310.5694	4.488	1362630.889	1050381.748	24.706
	1238	161.2846	6.367	101.3906	1.50	TERRENO	1.44	309.2358	6.236	1362631.914	1050380.327	25.015
	1239	162.4252	5.200	112.3416	1.50	BORDE_CANO	1.44	310.4708	4.802	1362631.086	1050381.504	24.305
	1240	160.1117	6.055	108.3303	1.50	BORDE_CANO	1.44	307.9444	5.740	1362631.499	1050380.630	24.374
	1241	111.3912	7.226	101.5914	1.50	TERRENO	1.44	259.4096	7.068	1362626.671	1050378.209	24.800
	1242	104.4802	6.223	105.1745	1.50	TERRENO	1.44	252.5569	6.003	1362626.170	1050379.430	24.659
	1243	109.3958	6.630	107.3422	1.50	BORDE_CANO	1.44	257.4224	6.321	1362626.593	1050378.988	24.299
	1243	106.0319	6.667	109.5632	1.50	BORDE_CANO	1.44	253.8116	6.267	1362626.222	1050379.138	24.027
	1244	109.3553	7.152	107.4004	1.50	BORDE_CANO	1.44	257.3544	6.815	1362626.478	1050378.508	24.130
	1245	69.4846	10.148	99.3244	1.50	TERRENO	1.44	217.5691	10.007	1362620.038	1050379.055	24.618
	1246	59.5707	10.198	99.1144	1.50	TERRENO	1.44	207.7083	10.067	1362619.057	1050380.476	24.671
	1247	60.2650	9.991	101.1017	2.00	BORDE_CANO	1.44	208.2035	9.802	1362619.332	1050380.525	23.865
	1248	70.0023	10.636	103.2953	1.50	BORDE_CANO	1.44	217.7627	10.342	1362619.794	1050378.823	23.818
	1249	86.0944	13.332	91.3018	1.50	TERRENO	1.44	233.9185	13.327	1362620.121	1050374.386	25.951
	1250	71.1615	12.152	92.2753	2.00	TERRENO	1.44	219.0271	12.141	1362618.538	1050377.512	25.278
	1251	81.3137	13.061	95.3406	2.60	BORDE_CANO	1.44	229.2833	12.999	1362619.490	1050375.304	23.933
	1252	73.0916	12.116	97.2012	2.60	BORDE_CANO	1.44	220.9108	12.017	1362618.888	1050377.287	23.653
	1253	77.4649	17.599	90.5954	1.50	TERRENO	1.44	225.5366	17.596	1362615.644	1050372.599	25.994
	1254	75.3236	16.861	97.2922	1.50	BORDE_CANO	1.44	223.2996	16.717	1362615.803	1050373.692	24.103
	1255	63.0114	14.060	89.2822	1.50	TERRENO	1.44	210.7769	14.059	1362615.890	1050377.963	26.430
	1256	70.0208	15.318	95.3558	2.60	BORDE_CANO	1.44	217.7919	15.245	1362615.923	1050375.815	23.706
	1257	60.5332	23.258	92.0920	2.60	TERRENO	1.44	208.6485	23.242	1362607.573	1050374.014	24.326
	1258	54.1806	22.769	92.1614	2.60	TERRENO	1.44	202.0580	22.751	1362606.884	1050376.613	24.299
	1259	54.4502	23.186	91.3839	3.88	BORDE_CANO	1.44	202.5069	23.176	1362606.559	1050376.285	23.255
	1260	57.4848	22.628	91.1843	4.76	BORDE_CANO	1.44	205.5696	22.622	1362607.563	1050375.393	22.523
	1261	58.3039	26.644	91.2203	4.76	BORDE_CANO	1.44	206.2671	26.636	1362604.084	1050373.369	22.405



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1262	56.4458	26.154	91.2154	4.76	BORDE_CANO	1.44	204.5058	26.147	1362604.178	1050374.312	22.418
	1263	56.5104	26.100	91.4343	3.95	TERRENO	1.44	204.6074	26.088	1362604.251	1050374.294	23.068
	1264	59.4231	26.809	91.2108	3.95	TERRENO	1.44	207.4649	26.802	1362604.189	1050372.796	23.223
	1265	55.5747	29.042	92.3513	4.76	BORDE_CANO	1.44	203.7194	29.012	1362601.408	1050373.487	21.730
	1266	54.1521	28.286	92.3432	4.77	BORDE_CANO	1.44	202.0121	28.257	1362601.772	1050374.566	21.760
	1267	61.0450	23.352	92.0320	2.60	TERRENO	1.44	208.8369	23.337	1362607.527	1050373.901	24.363
	1268	74.0508	22.400	90.3140	1.50	TERRENO	1.44	221.8419	22.399	1362611.283	1050370.215	26.094
	1269	78.4659	19.541	89.1232	1.50	LINDERO	1.44	226.5394	19.539	1362614.530	1050370.975	26.570
	1270	88.1843	21.683	89.2310	1.50	TERRENO	1.44	236.0683	21.682	1362615.867	1050367.168	26.533
	1271	49.5340	21.402	89.5138	1.50	TERRENO	1.44	197.6508	21.402	1362607.575	1050378.668	26.353
	1272	101.5600	23.813	88.2506	1.50	TERRENO	1.44	249.6896	23.804	1362619.707	1050362.833	26.958
	1273	53.3034	17.162	88.5902	1.50	TERRENO	1.44	201.2658	17.159	1362611.979	1050378.933	26.605
	1274	62.4152	14.334	89.0012	1.50	TERRENO	1.44	210.4541	14.332	1362615.615	1050377.893	26.550
	1275	50.1416	22.811	90.4346	2.60	TERRENO	1.44	197.9941	22.809	1362606.276	1050378.111	24.910
	1276	53.1055	9.806	94.4324	1.50	TERRENO	1.44	200.9383	9.773	1362618.842	1050381.665	25.493
	1277	51.3003	24.657	92.2614	2.60	TERRENO	1.44	199.2571	24.635	1362604.713	1050377.032	24.152
	1278	123.3154	14.282	88.1333	1.50	TERRENO	1.44	271.2880	14.275	1362628.291	1050370.885	26.743
	1279	53.5133	23.740	92.1121	2.60	TERRENO	1.44	201.6155	23.723	1362605.915	1050376.418	24.294
	1280	72.4200	6.686	100.2740	1.50	TERRENO	1.44	220.4563	6.575	1362622.967	1050380.891	25.087
	1281	111.4014	3.948	105.2246	1.50	TERRENO	1.44	259.4269	3.807	1362627.271	1050381.415	25.254
	1282	121.5021	8.044	94.3845	1.50	TERRENO	1.44	269.5955	8.018	1362627.913	1050377.140	25.649
	1283	190.1356	2.675	104.0336	1.50	TERRENO	1.44	337.9885	2.595	1362630.375	1050384.184	25.651
	1284	173.5229	7.131	95.1114	1.50	TERRENO	1.44	321.6310	7.102	1362633.538	1050380.749	25.656
	1285	246.1310	2.591	102.1523	1.50	TERRENO	1.44	33.9758	2.532	1362630.069	1050386.572	25.751
	1286	249.0918	2.088	89.2120	1.50	TERRENO	1.44	36.9113	2.088	1362629.639	1050386.411	26.324
	1287	214.0728	7.313	95.2758	1.50	TERRENO	1.44	1.8808	7.280	1362635.246	1050385.396	25.604
	1288	264.4616	7.888	90.2335	1.50	TERRENO	1.44	52.5274	7.888	1362632.769	1050391.417	26.247
	1289	267.3811	8.106	85.5704	1.50	TERRENO	1.44	55.3927	8.086	1362632.562	1050391.812	26.873
	1290	215.3153	13.123	87.1215	1.50	TERRENO	1.44	3.2877	13.107	1362641.056	1050385.909	26.941
	1291	206.2131	17.722	86.4234	1.50	TERRENO	1.44	354.1149	17.693	1362645.569	1050383.343	27.318
	1292	251.2611	15.481	89.5700	1.50	TERRENO	1.44	39.1927	15.481	1362639.968	1050394.940	26.314
	1293	230.5636	16.217	90.4021	1.50	TERRENO	1.44	18.6996	16.216	1362643.330	1050390.356	26.110
	1294	252.5403	16.686	86.3902	1.50	TERRENO	1.44	40.6571	16.657	1362640.606	1050396.010	27.276
	1295	233.4744	20.878	88.5232	1.50	TERRENO	1.44	21.5519	20.874	1362647.384	1050392.825	26.710
	1296	246.3516	21.084	91.2555	1.50	TERRENO	1.44	34.3441	21.077	1362645.373	1050397.048	25.774
	1297	231.4814	23.021	86.4700	1.50	TERRENO	1.44	19.5602	22.985	1362649.628	1050392.852	27.592



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1298	236.2202	21.107	90.0300	1.50	TERRENO	1.44	24.1235	21.107	1362647.233	1050393.784	26.282
	1299	252.4505	22.040	88.4548	1.50	TERRENO	1.44	40.5077	22.035	1362644.723	1050399.470	26.776
	1300	242.0534	25.361	87.3348	1.50	TERRENO	1.44	29.8491	25.338	1362649.946	1050397.768	27.379
	1301	233.2854	26.761	87.4832	1.50	TERRENO	1.44	21.2380	26.741	1362652.895	1050394.844	27.324
	1302	233.4431	31.592	87.5520	1.50	TERRENO	1.44	21.4983	31.571	1362657.345	1050396.727	27.446
	1303	241.1954	29.675	87.5748	1.50	TERRENO	1.44	29.0880	29.656	1362653.886	1050399.574	27.355
	1304	233.4020	36.962	87.5054	1.50	TERRENO	1.44	21.4285	36.936	1362662.352	1050398.651	27.688
	1305	260.5446	19.659	86.1319	1.50	TERRENO	1.44	48.6691	19.616	1362640.924	1050399.887	27.596
	1306	275.2218	15.883	86.0043	1.50	TERRENO	1.44	63.1280	15.845	1362635.131	1050399.291	27.405
	1307	296.2259	11.783	89.1810	1.50	TERRENO	1.44	84.1394	11.782	1362629.173	1050396.878	26.444
	1308	89.5049	10.728	92.0600	1.50	TERRENO	1.44	237.6033	10.721	1362622.226	1050376.105	25.908
	1309	95.1542	12.927	87.5332	1.50	TERRENO	1.44	243.0180	12.918	1362622.109	1050373.645	26.776
	1310	86.3852	14.802	89.5340	1.50	TERRENO	1.44	234.4041	14.802	1362619.354	1050373.121	26.328
	1311	24.0022	9.885	87.5005	1.50	TERRENO	1.44	171.7624	9.878	1362618.194	1050386.572	26.674
	1312	41.4340	12.892	87.5524	1.50	TERRENO	1.44	189.4841	12.884	1362615.262	1050383.034	26.768
	1313	35.1857	16.087	88.3151	1.50	TERRENO	1.44	183.0721	16.082	1362611.911	1050384.295	26.713
	1314	156.5233	8.974	89.5852	1.50	TUBO	1.44	304.6321	8.974	1362633.070	1050377.773	26.304
	1315	158.5652	9.446	89.4752	1.50	TUBO	1.44	306.7041	9.446	1362633.615	1050377.584	26.334
	1316	348.2401	15.030	88.1713	1.50	TERRENO	1.44	136.1566	15.023	1362617.134	1050395.563	26.750
	1317	311.2935	10.955	92.5759	1.50	BORDE_CANO	1.44	99.2494	10.940	1362626.211	1050395.955	25.734
	1318	308.5440	10.893	92.5759	1.50	BORDE_CANO	1.44	96.6674	10.878	1362626.707	1050395.962	25.737
	1319	309.4640	7.260	95.3125	1.50	BORDE_CANO	1.44	97.5341	7.226	1362627.022	1050392.321	25.602
	1320	306.4608	7.002	95.5359	1.50	BORDE_CANO	1.44	94.5252	6.965	1362627.420	1050392.100	25.581
	1321	351.5723	4.763	99.2901	1.50	BORDE_CANO	1.44	139.7127	4.698	1362624.386	1050388.195	25.516
	1322	351.2216	4.069	101.1734	1.50	BORDE_CANO	1.44	139.1274	3.990	1362624.952	1050387.768	25.504
	1323	60.3512	8.202	101.1612	1.50	BORDE_CANO	1.44	208.3430	8.044	1362620.890	1050381.338	24.698
	1324	62.4507	7.663	96.2311	2.60	BORDE_CANO	1.44	210.5083	7.615	1362621.409	1050381.291	24.348
	1325	306.2509	11.174	90.3844	1.50	TERRENO	1.44	94.1755	11.173	1362627.156	1050396.301	26.175
	1326	301.5807	7.036	91.5138	1.50	TERRENO	1.44	89.7249	7.032	1362628.003	1050392.189	26.072
	1327	2.2736	3.237	91.2808	1.50	TERRENO	1.44	150.2163	3.236	1362625.161	1050386.764	26.218
	1328	61.2434	6.189	98.4834	1.50	TERRENO	1.44	209.1658	6.116	1362622.629	1050382.176	25.353
	1329	51.5821	7.316	97.4930	1.50	TERRENO	1.44	199.7288	7.248	1362621.147	1050382.710	25.305
	1330	29.4648	7.026	90.2529	1.50	TERRENO	1.44	177.5363	7.026	1362620.950	1050385.459	26.249
	1331	8.3005	5.441	91.2800	1.50	TERRENO	1.44	156.2577	5.439	1362622.991	1050387.347	26.161
	1332	328.2531	6.391	89.3650	1.50	TERRENO	1.44	116.1816	6.391	1362625.150	1050390.892	26.344
	1333	313.4728	10.407	90.3042	1.50	TERRENO	1.44	101.5474	10.407	1362625.887	1050395.353	26.208



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1334	288.4639	4.498	89.1606	1.50	TERRENO	1.44	76.5338	4.498	1362629.017	1050389.531	26.358
	1335	353.2627	1.902	83.1922	1.50	TERRENO	1.44	141.1971	1.889	1362626.498	1050386.341	26.522
	1336	89.4941	3.105	99.3724	1.50	TERRENO	1.44	237.5844	3.061	1362626.329	1050382.573	25.782
E1035-E1034	E1034	0.0000	35.259	91.0614	1.50	ESTACION	1.44	276.6883	35.242	1362632.074	1050350.155	27.084
	1337	271.3903	20.530	89.1653	1.50	TERRENO	1.44	8.3391	20.528	1362652.386	1050353.132	27.281
	1338	281.3358	21.270	89.2005	1.50	TERRENO	1.44	18.2544	21.269	1362652.273	1050356.817	27.270
	1339	275.3504	17.258	89.1019	1.50	TERRENO	1.44	12.2727	17.256	1362648.936	1050353.823	27.273
	1340	285.3114	17.003	89.1019	1.50	TERRENO	1.44	22.2088	17.001	1362647.814	1050356.581	27.269
	1341	271.1410	14.882	88.5232	1.50	TERRENO	1.44	7.9244	14.879	1362646.811	1050352.206	27.316
	1342	269.3458	13.632	91.0903	1.50	TERRENO	1.44	6.2710	13.629	1362645.622	1050351.643	26.750
	1343	269.2105	13.586	92.0410	1.50	BORDE_CANO	1.44	6.0396	13.577	1362645.576	1050351.583	26.533
	1344	269.0531	13.168	92.2643	1.50	BORDE_CANO	1.44	5.7802	13.156	1362645.163	1050351.479	26.462
	1345	268.4930	13.035	90.3505	1.50	TERRENO	1.44	5.5133	13.034	1362645.048	1050351.407	26.890
	1346	267.1423	11.490	87.0353	1.50	TERRENO	1.44	3.9280	11.475	1362643.522	1050350.941	27.612
	1347	283.0050	16.328	90.4051	1.50	TERRENO	1.44	19.7021	16.327	1362647.445	1050355.659	26.830
	1348	279.1552	11.673	92.5406	1.50	TERRENO	1.44	15.9527	11.658	1362643.283	1050353.359	26.433
	1349	281.3846	16.130	91.4316	1.50	BORDE_CANO	1.44	18.3344	16.123	1362647.379	1050355.226	26.539
	1350	280.5250	16.095	91.2806	1.50	BORDE_CANO	1.44	17.5688	16.090	1362647.414	1050355.011	26.611
	1351	280.0542	12.170	93.3627	1.50	BORDE_CANO	1.44	16.7833	12.146	1362643.703	1050353.662	26.258
	1352	279.5028	12.592	93.3215	1.50	BORDE_CANO	1.44	16.5294	12.568	1362644.123	1050353.730	26.247
	1353	279.5556	13.167	91.3831	1.50	TERRENO	1.44	16.6205	13.162	1362644.686	1050353.919	26.646
	1354	279.2624	16.051	89.5500	1.50	TERRENO	1.44	16.1283	16.051	1362647.494	1050354.613	27.047
	1355	285.5328	14.050	91.0533	1.50	TERRENO	1.44	22.5794	14.047	1362645.045	1050355.548	26.756
	1356	284.1334	14.039	92.1509	1.50	BORDE_CANO	1.44	20.9144	14.028	1362645.178	1050355.162	26.472
	1357	282.4704	13.903	92.2926	1.50	BORDE_CANO	1.44	19.4727	13.890	1362645.170	1050354.785	26.419
	1358	281.0541	13.805	90.3917	1.50	TERRENO	1.44	17.7830	13.804	1362645.219	1050354.370	26.866
	1359	275.4236	14.470	88.3345	1.50	TERRENO	1.44	12.3983	14.465	1362646.202	1050353.260	27.387
	1360	312.0225	13.179	91.5505	1.50	TERRENO	1.44	48.7285	13.172	1362640.763	1050360.054	26.582
	1361	265.2953	11.072	86.4811	1.50	TERRENO	1.44	2.1863	11.055	1362643.121	1050350.576	27.641
	1362	338.1816	7.099	95.5353	1.50	TERRENO	1.44	74.9927	7.061	1362633.903	1050356.975	26.294
	1363	248.3614	4.864	88.2452	1.50	TERRENO	1.44	345.2921	4.862	1362636.777	1050348.920	27.158
	1364	339.1634	12.413	89.1622	1.50	TERRENO	1.44	75.9644	12.412	1362635.085	1050362.196	27.181
	1365	194.5626	9.489	88.2834	1.50	TERRENO	1.44	291.6288	9.486	1362635.571	1050341.337	27.276
	1366	3.2843	13.801	90.5521	1.50	TERRENO	1.44	100.1669	13.799	1362629.639	1050363.737	26.801
	1367	227.1444	13.189	87.4413	1.50	TERRENO	1.44	323.9338	13.179	1362642.727	1050342.396	27.544
	1368	37.2848	12.352	89.3618	1.50	TERRENO	1.44	134.1683	12.352	1362623.468	1050359.014	27.109



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1369	164.3814	5.816	94.3815	1.50	TERRENO	1.44	261.3255	5.797	1362631.200	1050344.424	26.553
	1370	179.3137	10.534	91.3641	1.50	TERRENO	1.44	276.2152	10.530	1362633.214	1050339.687	26.727
	1371	54.1339	7.840	93.2103	1.50	TERRENO	1.44	150.9158	7.827	1362625.235	1050353.959	26.565
	1372	130.4043	2.791	104.1948	1.50	TERRENO	1.44	227.3669	2.704	1362630.243	1050348.165	26.333
	1373	72.2549	9.746	98.5930	1.50	TERRENO	1.44	169.1185	9.626	1362622.621	1050351.972	25.500
	1374	142.4831	7.296	105.0511	1.50	TERRENO	1.44	239.4969	7.045	1362628.499	1050344.085	25.125
	1375	88.5746	9.365	104.1343	1.50	TERRENO	1.44	185.6510	9.078	1362623.041	1050349.261	24.722
	1376	155.2708	9.291	101.5933	1.50	TERRENO	1.44	252.1405	9.088	1362629.287	1050341.504	25.093
	1377	76.5448	13.435	104.1338	1.50	TERRENO	1.44	173.6016	13.023	1362619.132	1050351.606	23.722
	1378	130.5118	10.825	106.5632	1.50	TERRENO	1.44	227.5433	10.355	1362625.084	1050342.515	23.869
	1379	66.3205	12.849	98.1408	1.50	TERRENO	1.44	163.2230	12.716	1362619.899	1050353.825	25.183
	1380	147.3502	11.040	104.2638	1.50	TERRENO	1.44	244.2721	10.691	1362627.433	1050340.523	24.270
	1381	122.3840	12.621	108.0526	1.50	TERRENO	1.44	219.3327	11.997	1362622.795	1050342.550	23.104
	1382	106.2438	12.169	107.1021	1.50	TERRENO	1.44	203.0988	11.627	1362621.380	1050345.593	23.431
	1383	119.2057	13.426	108.5936	2.50	CANO	1.44	216.0374	12.695	1362621.809	1050342.686	21.654
	1384	128.2640	14.086	108.0953	2.50	CANO	1.44	225.1327	13.384	1362622.632	1050340.669	21.632
	1385	83.4345	16.885	105.3519	2.50	CANO	1.44	180.4174	16.264	1362615.811	1050350.036	21.486
	1386	141.4034	16.327	105.5613	2.50	CANO	1.44	238.3644	15.699	1362623.840	1050336.788	21.540
	1387	99.2320	14.449	107.2859	2.50	CANO	1.44	196.0771	13.782	1362618.832	1050346.338	21.683
	1388	118.3748	12.124	106.0733	2.50	TERRENO	1.44	215.3183	11.647	1362622.571	1050343.421	22.656
	1389	108.0506	11.288	117.2211	0.09	TERRENO	1.44	204.7733	10.024	1362622.972	1050345.954	23.249
	1390	117.0434	12.581	110.3542	2.50	CANO	1.44	213.7644	11.777	1362622.284	1050343.609	21.598
	1391	107.4347	9.751	108.4251	2.50	CANO	1.44	204.4180	9.235	1362623.665	1050346.337	22.895
	1392	97.2612	5.291	110.4015	2.50	TERRENO	1.44	194.1249	4.950	1362627.274	1050348.946	24.156
	1393	95.1810	6.424	107.5148	2.50	TERRENO	1.44	191.9910	6.114	1362626.093	1050348.884	24.053
	1394	95.4002	6.062	116.5355	2.50	BORDE_CANO	1.44	192.3555	5.406	1362626.793	1050348.998	23.281
	1395	94.2522	6.353	116.4148	2.50	BORDE_CANO	1.44	191.1110	5.676	1362626.505	1050349.061	23.169
	1396	85.0901	6.523	101.1211	2.50	TERRENO	1.44	181.8385	6.399	1362625.679	1050349.949	24.756
	1397	69.3513	3.648	101.2211	2.50	TERRENO	1.44	166.2752	3.576	1362628.600	1050351.003	25.304
	1398	21.1116	3.245	83.3059	2.50	TERRENO	1.44	117.8760	3.224	1362630.567	1050353.005	26.390
	1399	48.2140	6.415	102.4728	2.50	TERRENO	1.44	145.0494	6.256	1362626.947	1050353.738	24.603
	1400	48.5154	6.364	113.2652	2.50	BORDE_CANO	1.44	145.5533	5.838	1362627.260	1050353.457	23.491
	1401	48.1210	5.908	112.4634	2.50	BORDE_CANO	1.44	144.8910	5.447	1362627.618	1050353.287	23.736
	1402	47.0239	5.158	104.1138	2.50	TERRENO	1.44	143.7324	5.001	1362628.043	1050353.113	24.759
	1403	44.1614	3.801	94.1727	2.50	TERRENO	1.44	140.9588	3.790	1362629.130	1050352.542	25.739
	1404	19.5732	5.276	100.0853	2.50	TERRENO	1.44	116.6471	5.193	1362629.745	1050354.796	25.094



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1405	21.0759	5.580	110.3657	2.50	BORDE_CANO	1.44	117.8213	5.223	1362629.637	1050354.773	24.059
	1406	22.3510	5.113	115.0727	2.50	BORDE_CANO	1.44	119.2744	4.629	1362629.811	1050354.193	23.853
	1407	22.2127	4.337	102.0824	2.50	TERRENO	1.44	119.0458	4.240	1362630.016	1050353.861	25.111
	1408	345.4319	5.315	99.1925	2.50	TERRENO	1.44	82.4102	5.245	1362632.767	1050355.353	25.162
	1409	343.0450	4.035	96.0412	2.50	TERRENO	1.44	79.7688	4.012	1362632.787	1050354.103	25.597
	1410	346.3440	5.145	106.1910	2.50	BORDE_CANO	1.44	83.2660	4.938	1362632.653	1050355.058	24.578
	1411	344.1344	4.590	110.3258	2.50	BORDE_CANO	1.44	80.9171	4.298	1362632.753	1050354.399	24.412
	1412	305.5803	7.460	94.3712	2.50	TERRENO	1.44	42.6558	7.436	1362637.543	1050355.193	25.423
	1413	301.3358	6.331	95.0128	2.50	TERRENO	1.44	38.2544	6.307	1362637.027	1050354.059	25.469
	1414	303.3158	6.632	96.2802	2.50	BORDE_CANO	1.44	40.2210	6.590	1362637.106	1050354.410	25.277
	1415	304.4213	7.165	96.2954	2.50	BORDE_CANO	1.44	41.3919	7.119	1362637.415	1050354.862	25.213
	1416	289.2424	11.963	90.1009	2.50	TERRENO	1.44	26.0949	11.963	1362642.818	1050355.417	25.988
	1417	284.3921	11.470	90.2120	2.50	TERRENO	1.44	21.3441	11.470	1362642.757	1050354.329	25.952
	1418	288.4006	11.954	91.2601	2.50	BORDE_CANO	1.44	25.3566	11.950	1362642.873	1050355.272	25.724
	1419	285.5743	11.628	91.3707	2.50	BORDE_CANO	1.44	22.6502	11.623	1362642.801	1050354.631	25.695
	1420	293.3242	8.878	94.2319	2.50	DESCARGA	1.44	30.2333	8.852	1362639.722	1050354.612	25.344
	1421	293.1304	8.926	95.1734	2.50	DESCARGA	1.44	29.9060	8.888	1362639.779	1050354.586	25.200
	1422	287.0327	11.163	91.2803	2.50	DESCARGA	1.44	23.7458	11.159	1362642.289	1050354.648	25.738
	1423	276.2212	8.273	87.1720	1.50	TERRENO	1.44	13.0583	8.264	1362640.124	1050352.022	27.415
	1424	352.1348	6.164	97.4012	1.50	TERRENO	1.44	88.9183	6.109	1362632.190	1050356.262	26.201
	1425	307.3849	2.717	96.1707	1.50	TERRENO	1.44	44.3352	2.701	1362634.006	1050352.042	26.726
	1426	28.2603	6.885	96.0340	1.50	TERRENO	1.44	125.1224	6.847	1362628.135	1050355.754	26.297
	1427	52.5210	7.466	94.1420	1.50	TERRENO	1.44	149.5577	7.446	1362625.655	1050353.927	26.472
	1428	51.1911	6.906	101.2356	1.50	TERRENO	1.44	148.0080	6.770	1362626.333	1050353.741	25.659
	1429	69.3158	7.807	97.5150	1.50	TERRENO	1.44	166.2210	7.734	1362624.563	1050351.996	25.955
	1430	68.3225	7.317	105.2441	1.50	TERRENO	1.44	165.2285	7.054	1362625.254	1050351.953	25.079
	1431	315.3044	15.905	88.5402	1.50	LINDERO	1.44	52.2005	15.902	1362641.821	1050362.720	27.329
	1432	354.5125	16.000	90.0201	1.50	LINDERO	1.44	91.5452	16.000	1362631.643	1050366.149	27.014
E1036		0.0000				ESTACION		0.0000		1362744.355	1050324.795	28.217
E1037	E1036	0.0000	95.165	89.1653	1.50	ESTACION	1.47	239.1633		1362695.576	1050243.086	27.036
	E1039	229.5105	40.146	90.2019	1.50	DELTA	1.47	289.0146	40.145	1362708.655	1050205.131	26.765
	1478	348.3355	2.933	89.3608	1.50	LINDERO	1.47	47.7285	2.933	1362697.549	1050245.256	27.023
	1479	19.5546	3.423	90.2724	1.50	LINDERO	1.47	79.0927	3.423	1362696.223	1050246.447	26.975
	1480	149.5333	8.538	89.2208	1.50	LINDERO	1.47	209.0558	8.537	1362688.113	1050238.940	27.096
	1481	162.5805	15.600	89.4150	1.50	LINDERO	1.47	222.1313	15.600	1362684.007	1050232.621	27.085
	1482	182.0145	40.209	90.3228	1.50	LINDERO	1.47	241.1924	40.207	1362676.201	1050207.855	26.623



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1483	227.1715	23.568	90.3720	1.50	LINDERO	1.47	286.4508	23.567	1362702.250	1050220.484	26.746
	1484	334.2219	5.150	90.1823	1.50	LINDERO	1.47	33.5352	5.150	1362699.868	1050245.931	26.975
E1039-E1037	E1037	0.0001	40.154	89.2922	1.50	ESTACION	1.41	289.0146	40.145	1362708.655	1050205.131	26.765
	1485	1.0627	24.811	89.0740	1.50	TERRENO	1.41	110.1221	24.808	1362700.121	1050228.425	27.049
	1486	30.3409	21.692	89.4615	1.50	TERRENO	1.41	139.5838	21.692	1362692.140	1050219.195	26.758
	1487	13.2507	23.173	89.0617	1.50	TERRENO	1.41	122.4333	23.170	1362696.229	1050224.687	27.033
	1488	45.2634	19.662	89.3641	1.50	TERRENO	1.41	154.4574	19.662	1362690.916	1050213.609	26.804
	1489	66.1149	17.908	89.3641	1.50	TERRENO	1.41	175.2116	17.908	1362690.810	1050206.626	26.792
	1490	16.1938	29.560	89.4656	1.50	TERRENO	1.41	125.3419	29.560	1362691.556	1050229.243	26.783
	1491	80.3143	18.741	89.2541	1.50	TERRENO	1.41	189.5433	18.740	1362690.175	1050202.024	26.858
	1492	68.0451	12.323	90.4038	1.50	TERRENO	1.41	177.0955	12.322	1362696.349	1050205.756	26.525
	1493	29.1836	31.444	89.1656	1.50	TERRENO	1.41	138.3246	31.442	1362685.171	1050226.037	27.065
	1494	49.5919	9.005	90.0652	1.50	TERRENO	1.41	159.0033	9.005	1362700.248	1050208.358	26.653
	1495	30.3450	13.097	88.5002	1.50	TERRENO	1.41	139.5952	13.094	1362698.684	1050213.619	26.938
	1496	13.1915	16.661	89.5656	1.50	TERRENO	1.41	122.3355	16.661	1362699.744	1050219.209	26.686
	1497	11.0328	17.599	89.4010	1.50	TERRENO	1.41	120.0724	17.599	1362699.837	1050220.361	26.773
	1498	5.4318	17.449	89.5237	1.50	TERRENO	1.41	114.7363	17.449	1362701.354	1050220.979	26.708
	1499	3.2534	16.276	89.5441	1.50	TERRENO	1.41	112.4408	16.276	1362702.442	1050220.175	26.696
	1500	269.1247	13.833	89.3211	1.50	TERRENO	1.41	18.2277	13.833	1362721.794	1050209.458	26.783
	1501	2.5843	14.464	90.3931	1.50	TERRENO	1.41	111.9933	14.463	1362703.239	1050218.542	26.505
	1502	291.4311	14.820	88.5615	1.50	TERRENO	1.41	40.7344	14.817	1362719.883	1050214.800	26.946
	1503	2.5700	12.659	90.1555	1.50	TERRENO	1.41	111.9646	12.659	1362703.921	1050216.871	26.612
	1504	314.3446	16.357	89.1003	1.50	TERRENO	1.41	63.5941	16.355	1362715.929	1050219.780	26.909
	1505	9.0531	8.913	93.5841	1.50	TERRENO	1.41	118.1066	8.892	1362704.467	1050212.974	26.053
	1506	338.0100	8.168	87.1456	1.50	TERRENO	1.41	87.0313	8.159	1362709.078	1050213.279	27.063
	1507	344.1733	7.429	92.5817	1.50	TERRENO	1.41	93.3071	7.419	1362708.227	1050212.538	26.286
	1508	318.3028	6.400	86.4455	1.50	TERRENO	1.41	67.5224	6.390	1362711.098	1050211.035	27.034
	1509	299.1606	3.994	85.2307	1.50	TERRENO	1.41	48.2830	3.981	1362711.305	1050208.103	26.992
	1510	326.4350	5.531	95.0748	1.50	TERRENO	1.41	75.7452	5.509	1362710.012	1050210.470	26.176
	1511	328.5554	3.287	103.5258	1.50	TERRENO	1.41	77.9463	3.191	1362709.322	1050208.252	25.882
	1512	272.1908	2.995	82.4735	1.50	TERRENO	1.41	21.3335	2.971	1362711.423	1050206.212	27.047
	1513	332.1259	5.075	99.5411	1.50	TERRENO	1.41	81.2310	4.999	1362709.418	1050210.072	25.798
	1514	284.0056	1.509	92.5430	1.50	TERRENO	1.41	33.0302	1.507	1362709.919	1050205.953	26.594
	1515	253.1001	2.987	92.1359	0.09	TERRENO	1.41	2.1816	2.985	1362711.638	1050205.245	27.970
	1516	230.5311	3.014	81.0326	0.09	TERRENO	1.41	339.9010	2.977	1362711.451	1050204.108	28.555
	1517	216.3904	2.215	84.3911	0.09	TERRENO	1.41	325.6658	2.205	1362710.477	1050203.887	28.292



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1518	193.2557	1.685	97.2234	0.09	TERRENO	1.41	302.4471	1.671	1362709.552	1050203.721	27.870
	1519	238.0118	1.566	105.4456	0.09	TERRENO	1.41	347.0363	1.507	1362710.124	1050204.793	27.661
	1520	153.0219	2.104	78.3000	1.50	TERRENO	1.41	262.0533	2.062	1362708.370	1050203.089	27.090
	1521	124.4405	2.052	87.3349	1.50	TERRENO	1.41	233.7494	2.050	1362707.443	1050203.478	26.758
	1522	124.2227	3.924	96.2438	1.50	TERRENO	1.41	233.3888	3.899	1362706.330	1050202.001	26.233
	1523	329.3720	1.939	109.4753	1.50	TERRENO	1.41	78.6369	1.824	1362709.015	1050206.920	26.014
	1524	32.0851	0.774	113.4653	1.50	TERRENO	1.41	141.1621	0.708	1362708.104	1050205.575	26.359
	1525	284.5325	1.660	91.5933	1.50	TERRENO	1.41	33.9049	1.659	1362710.032	1050206.057	26.613
	1526	13.3228	8.114	101.1301	1.50	TERRENO	1.41	122.5558	7.959	1362704.373	1050211.840	25.093
	1527	17.4618	7.744	105.5946	1.50	TERRENO	1.41	126.7863	7.444	1362704.198	1050211.093	24.537
	1528	23.1335	7.856	108.1750	1.50	TERRENO	1.41	132.2410	7.459	1362703.641	1050210.653	24.205
	1529	23.5815	8.826	105.1641	1.50	TERRENO	1.41	132.9855	8.514	1362702.850	1050211.359	24.345
	1530	18.5805	8.533	102.3641	1.50	TERRENO	1.41	127.9827	8.327	1362703.531	1050211.695	24.808
	1531	13.5819	9.182	97.1018	1.50	TERRENO	1.41	122.9866	9.110	1362703.695	1050212.773	25.525
	1532	2.2147	10.103	91.3105	1.50	TERRENO	1.41	111.3777	10.099	1362704.974	1050214.536	26.403
	1533	359.3413	10.824	89.3204	1.50	TERRENO	1.41	108.5849	10.824	1362705.206	1050215.390	26.759
	1534	342.0533	13.644	88.3258	1.50	TERRENO	1.41	91.1071	13.640	1362708.392	1050218.768	27.016
	1535	258.1242	5.181	84.1125	1.50	TERRENO	1.41	7.2263	5.154	1362713.769	1050205.779	27.195
	1536	318.4032	14.463	89.2420	1.50	TERRENO	1.41	67.6902	14.462	1362714.146	1050218.511	26.821
	1537	39.4619	7.989	99.1114	1.50	TERRENO	1.41	148.7866	7.887	1362701.911	1050209.218	25.395
	1538	33.1119	6.204	104.3118	1.50	TERRENO	1.41	142.2033	6.006	1362703.910	1050208.812	25.115
	1539	17.1137	5.681	113.2619	1.50	TERRENO	1.41	126.2083	5.212	1362705.576	1050209.337	24.411
	1540	17.2314	5.262	118.1438	1.50	TERRENO	1.41	126.4019	4.636	1362705.905	1050208.862	24.181
	1541	9.1720	5.495	120.2025	1.50	TERRENO	1.41	118.3035	4.742	1362706.407	1050209.307	23.895
	1542	32.1257	5.387	111.2349	1.50	TERRENO	1.41	141.2305	5.016	1362704.745	1050208.272	24.706
	1543	52.0843	6.607	102.1104	1.50	TERRENO	1.41	161.1599	6.458	1362702.543	1050207.217	25.277
	1544	57.1410	5.777	108.3645	1.50	TERRENO	1.41	166.2508	5.475	1362703.337	1050206.432	24.827
	1545	71.3603	7.521	104.2915	1.50	TERRENO	1.41	180.6155	7.282	1362701.374	1050205.053	24.789
	1546	64.5947	8.620	97.5828	1.50	TERRENO	1.41	174.0110	8.537	1362700.165	1050206.022	25.475
	1547	41.4117	10.224	93.5127	1.50	TERRENO	1.41	150.7027	10.201	1362699.759	1050210.123	25.983
	1548	35.2020	9.831	97.5122	1.50	TERRENO	1.41	144.3535	9.739	1362700.741	1050210.807	25.327
	1549	34.0642	11.787	94.0716	1.50	TERRENO	1.41	143.1263	11.757	1362699.251	1050212.186	25.824
	1550	27.2944	10.905	98.0150	1.50	TERRENO	1.41	136.5102	10.798	1362700.821	1050212.563	25.148
	1551	24.5417	13.245	95.4223	1.50	TERRENO	1.41	133.9194	13.179	1362699.514	1050214.624	25.354
	1552	19.4102	12.662	100.2223	1.50	TERRENO	1.41	128.6985	12.455	1362700.868	1050214.852	24.391
	1553	8.4512	16.309	95.3043	1.50	DESCARGA	1.41	117.7680	16.234	1362701.092	1050219.495	25.104



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1554	8.5033	16.446	98.1036	1.50	DESCARGA	1.41	117.8571	16.279	1362701.049	1050219.523	24.332
	1555	11.2232	15.907	98.3053	1.50	ESTRUCTURA	1.41	120.3902	15.732	1362700.697	1050218.701	24.316
	1556	8.5537	16.416	98.1238	1.50	ESTRUCTURA	1.41	117.9416	16.248	1362701.042	1050219.485	24.327
	1557	8.0728	15.593	98.3929	1.50	ESTRUCTURA	1.41	117.1391	15.415	1362701.624	1050218.849	24.324
	1558	8.0728	15.436	97.3437	2.20	ESTRUCTURA	1.41	117.1391	15.301	1362701.676	1050218.748	23.936
	1559	11.2756	15.794	97.2311	2.20	ESTRUCTURA	1.41	120.4802	15.663	1362700.711	1050218.630	23.941
	1560	10.5354	13.807	98.3756	2.20	ESTRUCTURA	1.41	119.9130	13.651	1362701.848	1050216.963	23.899
	1561	14.1433	14.045	98.2624	2.20	ESTRUCTURA	1.41	123.2571	13.893	1362701.037	1050216.749	23.910
	1562	13.0243	13.813	100.1050	2.20	ESTRUCTURA	1.41	122.0599	13.596	1362701.439	1050216.653	23.530
	1563	20.5805	11.414	103.0436	2.20	ESTRUCTURA	1.41	129.9827	11.118	1362701.511	1050213.650	23.389
	1564	17.5335	10.958	103.2852	2.22	BORDE_CANO	1.41	126.9077	10.656	1362702.256	1050213.652	23.396
	1565	21.3724	11.101	103.3101	2.22	BORDE_CANO	1.41	130.6380	10.794	1362701.626	1050213.322	23.356
	1566	24.2533	9.420	106.1543	2.22	BORDE_CANO	1.41	133.4405	9.043	1362702.437	1050211.697	23.313
	1567	28.4049	9.193	106.3727	2.22	BORDE_CANO	1.41	137.6949	8.809	1362702.141	1050211.060	23.321
	1568	26.4536	7.826	110.4431	2.22	BORDE_CANO	1.41	135.7746	7.319	1362703.411	1050210.236	23.179
	1569	30.1332	7.489	110.2530	2.22	BORDE_CANO	1.41	139.2402	7.018	1362703.340	1050209.713	23.337
	1570	7.4920	12.338	93.3819	1.50	TERRENO	1.41	116.8369	12.313	1362703.097	1050216.118	25.888
	1571	11.4338	10.670	97.2720	1.50	TERRENO	1.41	120.7419	10.580	1362703.247	1050214.224	25.286
	1572	20.4846	7.477	113.1529	2.22	BORDE_CANO	1.41	129.8274	6.869	1362704.256	1050210.407	22.999
	1573	16.5607	6.923	112.0853	2.22	BORDE_CANO	1.41	125.9499	6.412	1362704.891	1050210.322	23.341
	1574	4.5355	5.601	119.4724	2.60	BORDE_CANO	1.41	113.9133	4.861	1362706.685	1050209.575	22.788
	1575	358.1245	5.230	122.1213	2.60	BORDE_CANO	1.41	107.2271	4.425	1362707.345	1050209.358	22.784
	1576	349.2025	5.640	119.3830	2.60	BORDE_CANO	1.41	98.3549	4.902	1362707.943	1050209.981	22.782
	1577	339.3250	4.301	105.1710	2.60	TERRENO	1.41	88.5619	4.149	1362708.760	1050209.279	24.437
	1578	342.3526	6.045	101.0334	2.60	TERRENO	1.41	91.6052	5.933	1362708.489	1050211.062	24.411
	1579	348.4114	6.102	112.2113	2.60	BORDE_CANO	1.41	97.7019	5.643	1362707.899	1050210.724	23.250
	1580	10.2405	3.818	136.0845	2.60	BORDE_CANO	1.41	119.4160	2.645	1362707.356	1050207.435	22.818
	1581	29.3856	4.418	126.4551	2.60	BORDE_CANO	1.41	138.6635	3.539	1362705.998	1050207.469	22.927
	1582	5.1057	2.430	118.2802	2.60	TERRENO	1.41	114.1971	2.136	1362707.780	1050207.080	24.413
	1583	79.0735	3.485	121.1523	2.60	TERRENO	1.41	188.1410	2.979	1362705.706	1050204.709	23.763
	1584	69.5429	5.754	122.1041	2.60	BORDE_CANO	1.41	178.9227	4.870	1362703.786	1050205.223	22.507
	1585	73.1801	4.868	129.1308	2.60	BORDE_CANO	1.41	182.3149	3.771	1362704.887	1050204.979	22.493
	1586	104.0330	5.361	102.4821	2.60	TERRENO	1.41	213.0730	5.228	1362704.275	1050202.278	24.383
	1587	85.1159	7.931	112.0930	2.60	BORDE_CANO	1.41	194.2144	7.345	1362701.535	1050203.327	22.580
	1588	90.2825	6.678	120.1441	2.60	BORDE_CANO	1.41	199.4883	5.769	1362703.217	1050203.206	22.207
	1589	98.1859	7.939	100.4611	2.60	TERRENO	1.41	207.3310	7.799	1362701.727	1050201.550	24.087



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1590	85.5144	11.533	108.1158	2.60	BORDE_CANO	1.41	194.8769	10.956	1362698.067	1050202.318	21.969
	1591	89.0321	11.655	106.5921	2.60	BORDE_CANO	1.41	198.0705	11.146	1362698.059	1050201.674	22.165
	1592	82.3047	10.923	102.2420	2.60	TERRENO	1.41	191.5277	10.668	1362698.203	1050202.999	23.224
	1593	93.5245	11.469	99.2139	2.60	TERRENO	1.41	202.8938	11.316	1362698.231	1050200.729	23.706
	1594	77.3817	12.334	98.5235	2.60	TERRENO	1.41	186.6527	12.186	1362696.551	1050203.719	23.668
	1595	87.5531	15.534	105.2043	2.60	BORDE_CANO	1.41	196.9399	14.980	1362694.325	1050200.766	21.460
	1596	92.3136	15.157	105.0300	2.60	BORDE_CANO	1.41	201.5413	14.637	1362695.041	1050199.757	21.635
	1597	94.4149	14.441	98.1450	2.60	TERRENO	1.41	203.7116	14.292	1362695.570	1050199.384	23.499
	1598	81.0901	15.566	98.3940	2.60	TERRENO	1.41	190.1649	15.388	1362693.508	1050202.415	23.227
	1599	84.1426	15.204	100.5334	2.60	TERRENO	1.41	193.2552	14.930	1362694.123	1050201.708	22.698
	1600	97.2816	18.131	102.3047	2.60	BORDE_CANO	1.41	206.4858	17.700	1362692.813	1050197.237	21.643
	1601	95.0739	18.644	102.0737	2.60	BORDE_CANO	1.41	204.1421	18.228	1362692.022	1050197.676	21.654
	1602	93.4830	19.236	99.1409	2.60	TERRENO	1.41	202.8230	18.987	1362691.155	1050197.766	22.484
	1603	99.0851	17.362	99.4715	2.60	TERRENO	1.41	208.1621	17.109	1362693.572	1050197.056	22.620
	1604	93.2343	19.913	98.1430	2.60	TERRENO	1.41	202.4099	19.707	1362690.436	1050197.618	22.716
	1605	108.0144	20.168	101.4845	2.60	BORDE_CANO	1.41	217.0435	19.741	1362692.899	1050193.239	21.442
	1606	110.0649	18.971	102.1809	2.60	BORDE_CANO	1.41	219.1283	18.535	1362694.277	1050193.434	21.529
	1607	101.0428	23.246	100.1330	2.60	RIO	1.41	210.0891	22.877	1362688.861	1050193.662	21.444
	1608	119.4843	16.478	104.4304	2.60	RIO	1.41	228.8266	15.937	1362698.163	1050193.135	21.385
	1609	92.5924	28.498	98.2109	2.60	RIO	1.41	202.0046	28.196	1362682.514	1050194.567	21.431
	1610	89.1242	25.776	97.5022	1.50	TERRENO	1.41	198.2263	25.535	1362684.401	1050197.144	23.155
	1611	120.5458	11.685	103.2650	2.60	TERRENO	1.41	229.9308	11.365	1362701.340	1050196.434	22.854
	1612	89.5314	21.585	97.1417	1.50	TERRENO	1.41	198.9019	21.413	1362688.397	1050198.194	23.951
	1613	115.1711	9.217	101.0350	2.60	TERRENO	1.41	224.3010	9.046	1362702.182	1050198.813	23.802
	1614	82.1925	19.796	92.0119	1.50	TERRENO	1.41	191.3383	19.784	1362689.258	1050201.242	25.973
	1615	99.4616	13.768	99.5629	1.50	TERRENO	1.41	208.7858	13.561	1362696.770	1050198.601	24.294
	1616	77.3045	20.121	88.5706	1.50	TERRENO	1.41	186.5271	20.118	1362688.668	1050202.844	27.039
	1617	108.1940	12.375	103.3758	1.50	TERRENO	1.41	217.3424	12.026	1362699.094	1050197.836	23.754
	1618	110.5711	13.738	105.2049	1.50	TERRENO	1.41	219.9677	13.248	1362698.502	1050196.621	23.035
	1619	104.5142	14.393	104.1826	1.50	TERRENO	1.41	213.8763	13.947	1362697.076	1050197.357	23.114
	1620	105.4015	9.054	102.3037	1.50	TERRENO	1.41	214.6855	8.839	1362701.387	1050200.101	24.710
	1621	112.4135	6.734	101.0948	1.50	TERRENO	1.41	221.7077	6.607	1362703.723	1050200.736	25.367
	1622	127.2851	4.788	94.4318	1.50	TERRENO	1.41	236.4955	4.772	1362706.021	1050201.152	26.277
	1623	172.1231	3.182	79.5750	1.50	TERRENO	1.41	281.2233	3.133	1362709.265	1050202.058	27.226
	1624	66.0300	16.863	89.5949	1.50	TERRENO	1.41	175.0646	16.863	1362691.855	1050206.582	26.672
	1625	50.0040	15.740	89.5950	1.50	TERRENO	1.41	159.0258	15.740	1362693.958	1050210.765	26.672



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1038		0.0000				ESTACION		0.0000		1362794.331	1050251.483	27.965
E1040	E1038	0.0000	85.975	89.1422	1.50	ESTACION	1.50	306.3566		1362845.284	1050182.262	26.828
	1697	9.2255	27.354	89.4858	1.50	PARAMENTO	1.50	135.7385	27.354	1362825.694	1050201.354	26.914
	1698	10.2533	23.510	89.3824	1.50	PARAMENTO	1.50	136.7824	23.510	1362828.151	1050198.361	26.974
	1699	25.2735	23.587	88.4745	1.50	PARAMENTO	1.50	151.8163	23.582	1362824.498	1050193.400	27.322
	1700	358.5233	19.975	89.5630	1.50	PARAMENTO	1.50	125.2324	19.975	1362833.760	1050198.578	26.847
	1701	354.2049	19.940	89.3649	1.50	PARAMENTO	1.50	120.7035	19.940	1362835.103	1050199.407	26.961
	1702	336.0817	20.983	88.3655	1.50	PARAMENTO	1.50	102.4946	20.977	1362840.745	1050202.742	27.333
	1703	337.0024	21.784	87.3731	1.50	PARAMENTO	1.50	103.3633	21.765	1362840.253	1050203.438	27.729
	1704	320.0926	25.377	89.4809	1.50	PARAMENTO	1.50	86.5138	25.377	1362846.827	1050207.592	26.914
	1705	288.0110	19.980	89.2210	1.50	PARAMENTO	1.50	54.3760	19.979	1362856.920	1050198.502	27.046
	1706	286.4403	18.032	89.1007	1.50	PARAMENTO	1.50	53.0908	18.030	1362856.112	1050196.679	27.088
	1707	249.0754	24.692	92.4315	0.09	PARAMENTO	1.50	15.4883	24.664	1362869.052	1050188.849	27.069
	1708	240.1914	23.276	89.3214	1.50	TERRENO	1.50	6.6771	23.275	1362868.401	1050184.969	27.014
	1709	233.3247	11.466	91.0618	1.50	TERRENO	1.50	359.9030	11.464	1362856.747	1050182.243	26.605
	1710	227.1042	6.257	92.4348	1.50	TERRENO	1.50	353.5349	6.250	1362851.494	1050181.559	26.528
	1711	297.5748	4.796	92.5342	1.50	TERRENO	1.50	64.3199	4.790	1362847.359	1050186.579	26.584
	1712	312.3517	13.486	89.0723	1.50	TERRENO	1.50	78.9446	13.484	1362847.869	1050195.497	27.033
	1713	303.0437	19.041	89.2254	1.50	TERRENO	1.50	69.4335	19.040	1362851.972	1050200.089	27.032
	1714	286.0114	11.107	90.5431	1.50	TERRENO	1.50	52.3771	11.106	1362852.063	1050191.059	26.650
	1715	331.2353	13.554	89.3542	1.50	TERRENO	1.50	97.7546	13.554	1362843.455	1050195.692	26.922
	1716	6.1721	11.597	89.1954	1.50	TERRENO	1.50	132.6458	11.596	1362837.428	1050190.792	26.961
	1717	30.2706	11.685	85.3437	1.50	TERRENO	1.50	156.8083	11.650	1362834.575	1050186.850	27.727
	1718	28.1858	17.247	86.4542	1.50	TERRENO	1.50	154.6727	17.219	1362829.719	1050189.629	27.800
	1719	34.2956	16.226	88.2507	1.50	TERRENO	1.50	160.8555	16.220	1362829.961	1050187.582	27.274
	1720	35.4038	11.539	88.0656	1.50	TERRENO	1.50	162.0338	11.533	1362834.313	1050185.820	27.206
	1721	38.4828	7.708	88.1508	1.50	TERRENO	1.50	165.1644	7.704	1362837.836	1050184.235	27.061
	1722	27.2455	7.234	87.1541	1.50	TERRENO	1.50	153.7719	7.226	1362838.802	1050185.456	27.172
	1723	29.2925	5.689	92.0355	1.50	TERRENO	1.50	155.8469	5.685	1362840.096	1050184.589	26.621
	1724	12.5945	5.510	85.4643	1.50	TERRENO	1.50	139.3524	5.495	1362841.114	1050185.842	27.232
	1725	1.3431	3.715	87.2939	1.50	TERRENO	1.50	127.9319	3.711	1362843.002	1050185.190	26.989
	1726	36.0820	2.992	89.4500	1.50	TERRENO	1.50	162.4955	2.992	1362842.430	1050183.162	26.839
	1727	76.5338	4.483	99.5113	1.50	TERRENO	1.50	203.2505	4.417	1362841.225	1050180.519	26.059
	1728	85.3714	2.179	108.3020	1.50	TERRENO	1.50	211.9771	2.066	1362843.531	1050181.168	26.135
	1729	148.2528	2.559	103.4656	1.50	TERRENO	1.50	274.7810	2.485	1362845.491	1050179.786	26.217
	1730	177.4747	4.813	95.2512	1.50	TERRENO	1.50	304.1530	4.791	1362847.974	1050178.297	26.372



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1731	175.3152	8.297	93.5312	1.50	TERRENO	1.50	301.8877	8.278	1362849.656	1050175.234	26.264
	1732	177.1400	11.298	94.4849	1.50	TERRENO	1.50	303.5899	11.258	1362851.512	1050172.884	25.878
	1733	180.1119	14.255	93.0446	1.50	TERRENO	1.50	306.5452	14.234	1362853.760	1050170.827	26.060
	1734	184.4616	17.885	92.3227	1.50	TERRENO	1.50	311.1277	17.867	1362857.036	1050168.804	26.033
	1735	193.1310	17.734	90.5907	1.50	TERRENO	1.50	319.5760	17.731	1362858.782	1050170.765	26.521
	1736	194.0621	14.490	89.5309	1.50	TERRENO	1.50	320.4624	14.490	1362856.458	1050173.038	26.855
	1737	195.3903	10.415	89.0730	1.50	TERRENO	1.50	322.0074	10.414	1362853.491	1050175.852	26.985
	1738	199.0521	7.042	92.1718	1.50	TERRENO	1.50	325.4458	7.036	1362851.079	1050178.271	26.545
	1739	202.2507	9.601	91.4852	1.50	TERRENO	1.50	328.7752	9.596	1362853.490	1050177.288	26.522
	1740	205.3137	11.155	91.4852	1.50	TERRENO	1.50	331.8835	11.149	1362855.117	1050177.008	26.473
	1741	216.5309	11.711	91.4810	1.50	TERRENO	1.50	343.2424	11.705	1362856.492	1050178.888	26.458
	1742	237.0150	5.820	93.0453	1.50	TERRENO	1.50	3.3871	5.812	1362851.085	1050182.606	26.513
	1743	309.1922	4.790	93.2533	1.50	TERRENO	1.50	75.6794	4.781	1362846.466	1050186.895	26.540
	1744	348.0734	9.421	90.5518	1.50	TERRENO	1.50	114.4827	9.420	1362841.380	1050190.835	26.675
	1745	119.1748	11.887	114.5959	1.50	ESTRUCTURA	1.50	245.6533	10.773	1362840.842	1050172.447	21.803
	1746	125.5804	12.123	114.3108	1.50	ESTRUCTURA	1.50	252.3244	11.030	1362841.935	1050171.753	21.795
	1747	119.0410	11.197	116.1608	1.50	ESTRUCTURA	1.50	245.4260	10.041	1362841.108	1050173.131	21.871
	1748	127.3428	10.735	116.5618	1.50	ESTRUCTURA	1.50	253.9310	9.570	1362842.635	1050173.066	21.963
	1749	116.4416	10.882	117.1450	1.50	ESTRUCTURA	1.50	243.0944	9.675	1362840.906	1050173.635	21.844
	1750	117.0822	10.496	117.5819	1.50	ESTRUCTURA	1.50	243.4960	9.270	1362841.147	1050173.967	21.903
	1751	116.2614	10.005	119.0049	1.50	ESTRUCTURA	1.50	242.7938	8.749	1362841.283	1050174.481	21.974
	1752	122.1549	12.213	115.3004	2.00	DESCARGA	1.50	248.6202	11.023	1362841.265	1050171.998	21.068
	1753	122.1547	11.898	113.1510	2.00	DESCARGA	1.50	248.6196	10.932	1362841.298	1050172.083	21.629
	1754	122.3027	12.431	115.0858	2.00	RIO	1.50	248.8641	11.253	1362841.226	1050171.767	21.043
	1755	139.5537	13.102	111.5228	2.00	RIO	1.50	266.2835	12.159	1362844.495	1050170.129	21.445
	1756	161.1857	15.411	109.0715	2.00	RIO	1.50	287.6724	14.561	1362849.704	1050168.389	21.278
	1757	101.3347	10.869	116.2545	2.00	RIO	1.50	227.9196	9.733	1362838.761	1050175.039	21.488
	1758	112.0510	10.851	116.4444	2.00	RIO	1.50	238.4427	9.690	1362840.212	1050174.005	21.443
	1759	161.5205	13.053	110.5725	1.50	TERRENO	1.50	288.2246	12.190	1362849.096	1050170.684	22.158
	1760	113.3536	8.792	118.5418	1.50	TERRENO	1.50	239.9499	7.697	1362841.429	1050175.600	22.576
	1761	160.3807	10.646	112.2901	1.50	TERRENO	1.50	286.9919	9.837	1362848.158	1050172.855	22.755
	1762	113.0346	6.501	119.0738	1.50	TERRENO	1.50	239.4194	5.679	1362842.394	1050177.373	23.662
	1763	146.2915	6.595	118.0805	1.50	TERRENO	1.50	272.8441	5.816	1362845.572	1050176.454	23.716
	1764	133.5913	5.153	118.5629	1.50	TERRENO	1.50	260.3435	4.509	1362844.527	1050177.817	24.333
	1765	98.3741	7.686	116.4130	1.50	TERRENO	1.50	224.9846	6.867	1362840.427	1050177.408	23.374
	1766	134.3602	7.317	118.4248	1.50	TERRENO	1.50	260.9571	6.417	1362844.275	1050175.925	23.311



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1767	92.1855	4.995	109.3025	1.50	TERRENO	1.50	218.6719	4.708	1362841.608	1050179.320	25.158
	1768	127.3722	9.954	116.0157	1.50	TERRENO	1.50	253.9794	8.944	1362842.815	1050173.666	22.458
	1769	71.4354	3.913	98.2723	1.50	TERRENO	1.50	198.0883	3.870	1362841.604	1050181.061	26.251
	1770	139.4050	10.829	114.1555	1.50	TERRENO	1.50	266.0371	9.872	1362844.601	1050172.414	22.376
	1771	50.1318	6.355	96.3821	1.50	TERRENO	1.50	176.5783	6.312	1362838.982	1050182.639	26.091
	1772	70.1440	5.986	101.2342	1.50	TERRENO	1.50	196.6010	5.868	1362839.660	1050180.586	25.644
	1773	167.3542	4.282	101.4437	2.60	TERRENO	1.50	293.9516	4.192	1362846.986	1050178.431	24.855
	1774	172.0634	6.714	104.3840	2.60	TERRENO	1.50	298.4660	6.496	1362848.380	1050176.552	24.029
	1775	173.3653	10.135	101.2231	2.60	TERRENO	1.50	299.9713	9.936	1362850.247	1050173.655	23.727
	1776	145.3308	3.905	120.0145	1.50	TERRENO	1.50	271.9088	3.381	1362845.396	1050178.883	24.872
	1777	196.2340	1.928	93.0438	1.50	TERRENO	1.50	322.7510	1.925	1362846.816	1050181.097	26.723
E1041		0.0000				ESTACION		0.0000		1362944.023	1050337.075	29.137
E1042	E1041	0.0000	151.769	90.1716	1.50	ESTACION	1.39	31.1421		1363073.931	1050415.572	29.992
	1891	16.2539	17.728	89.4125	1.50	PUENTE	1.39	227.5696	17.728	1363061.971	1050402.487	29.976
	1892	21.3902	18.328	89.4851	1.50	PUENTE	1.39	232.7927	18.328	1363062.849	1050400.974	29.940
	1893	16.0025	24.675	90.1338	1.50	PUENTE	1.39	227.1491	24.675	1363057.150	1050397.482	29.782
	1894	12.0619	24.252	90.1842	1.50	PUENTE	1.39	223.2474	24.252	1363056.266	1050398.956	29.748
	1895	11.2902	24.188	90.2024	1.50	ANDEN	1.39	222.6260	24.188	1363056.134	1050399.192	29.737
	1896	6.2028	22.507	90.4618	1.50	BORDE_VIA	1.39	217.4833	22.505	1363056.073	1050401.877	29.577
	1896	6.2029	22.454	90.4617	1.50	ANDEN	1.39	217.4835	22.452	1363056.115	1050401.909	29.578
	1897	5.5200	25.184	90.5319	1.50	ANDEN	1.39	217.0088	25.181	1363053.823	1050400.414	29.490
	1898	10.2342	26.729	90.2155	1.50	ANDEN	1.39	221.5371	26.728	1363053.924	1050397.848	29.710
	1899	9.5329	28.175	90.2412	1.50	ANDEN	1.39	221.0335	28.174	1363052.679	1050397.075	29.682
	1900	17.0730	24.845	90.1349	1.50	ANDEN	1.39	228.2671	24.845	1363057.393	1050397.031	29.780
	1901	12.1307	24.052	90.1522	1.70	ESTRUCTURA	1.39	223.3608	24.052	1363056.445	1050399.058	29.573
	1902	12.0555	24.224	90.1930	1.70	ESTRUCTURA	1.39	223.2408	24.224	1363056.285	1050398.977	29.543
	1903	11.2552	24.139	90.1559	1.70	ESTRUCTURA	1.39	222.5733	24.139	1363056.155	1050399.241	29.568
	1904	11.3627	23.919	90.1929	1.70	ESTRUCTURA	1.39	222.7496	23.919	1363056.367	1050399.336	29.545
	1905	6.4605	22.339	90.1930	1.70	ESTRUCTURA	1.39	217.9102	22.339	1363056.307	1050401.846	29.554
	1906	7.0750	21.490	90.0811	1.70	ESTRUCTURA	1.39	218.2727	21.490	1363057.060	1050402.261	29.629
	1907	6.4753	21.417	90.1000	1.70	ESTRUCTURA	1.39	217.9402	21.417	1363057.041	1050402.404	29.618
	1908	6.2145	22.381	90.1742	1.70	ESTRUCTURA	1.39	217.5046	22.381	1363056.177	1050401.946	29.565
	1909	12.1055	20.517	91.1619	1.70	ESTRUCTURA	1.39	223.3241	20.512	1363059.009	1050401.498	29.225
	1910	12.0147	20.414	91.1619	1.70	ESTRUCTURA	1.39	223.1719	20.409	1363059.047	1050401.608	29.227
	1911	7.1028	21.983	93.4605	2.60	DESCARGA	1.39	218.3166	21.935	1363056.721	1050401.972	27.336
	1912	7.0914	21.954	91.5356	2.60	DESCARGA	1.39	218.2960	21.942	1363056.711	1050401.974	28.053



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1913	7.4335	21.951	90.1448	4.02	CANO	1.39	218.8685	21.951	1363056.841	1050401.797	27.266
	1914	6.5907	22.322	90.0037	4.02	CANO	1.39	218.1274	22.322	1363056.372	1050401.790	27.356
	1915	7.2042	21.481	90.0026	4.02	CANO	1.39	218.4871	21.481	1363057.117	1050402.203	27.358
	1916	9.5511	22.319	89.5950	4.02	CANO	1.39	221.0619	22.319	1363057.103	1050400.911	27.361
	1917	9.0137	22.966	90.0238	4.02	CANO	1.39	220.1691	22.966	1363056.382	1050400.758	27.343
	1918	10.2005	21.029	89.1843	4.02	CANO	1.39	221.4769	21.027	1363058.177	1050401.645	27.613
	1919	13.0921	21.296	89.1846	4.02	CANO	1.39	224.2980	21.294	1363058.691	1050400.700	27.616
	1920	13.2608	20.917	91.5155	2.60	TERRENO	1.39	224.5777	20.906	1363059.040	1050400.898	28.099
	1921	13.5725	20.420	90.2312	2.60	TERRENO	1.39	225.0991	20.420	1363059.518	1050401.108	28.642
	1922	14.0949	20.076	88.4019	2.60	TERRENO	1.39	225.3058	20.071	1363059.815	1050401.304	29.246
	1923	14.1657	19.459	87.2858	2.60	TERRENO	1.39	225.4246	19.440	1363060.287	1050401.724	29.635
	1924	15.4011	17.790	86.1830	2.60	TERRENO	1.39	226.8119	17.753	1363061.781	1050402.628	29.926
	1925	11.4855	18.651	86.4257	2.60	TERRENO	1.39	222.9574	18.620	1363060.304	1050402.883	29.849
	1926	11.0928	19.930	87.0639	2.60	TERRENO	1.39	222.2999	19.905	1363059.209	1050402.176	29.785
	1927	22.2728	18.566	89.5222	1.50	TERRENO	1.39	233.5999	18.566	1363062.914	1050400.628	29.921
	1928	20.5505	19.915	90.1650	1.50	TERRENO	1.39	232.0602	19.915	1363061.687	1050399.866	29.783
	1929	20.1931	20.575	88.1957	2.60	TERRENO	1.39	231.4674	20.566	1363061.119	1050399.484	29.379
	1930	19.4357	21.075	89.2915	2.60	TERRENO	1.39	230.8746	21.074	1363060.633	1050399.223	28.969
	1931	19.1158	21.755	90.5921	2.60	TERRENO	1.39	230.3416	21.752	1363060.049	1050398.826	28.405
	1932	18.5022	22.194	89.0524	4.02	CANO	1.39	229.9816	22.191	1363059.662	1050398.577	27.713
	1933	17.2810	23.142	89.2533	4.02	CANO	1.39	228.6116	23.141	1363058.632	1050398.210	27.592
	1934	16.4949	24.191	89.0942	4.02	CANO	1.39	227.9724	24.188	1363057.738	1050397.604	27.714
	1935	17.1800	24.682	88.0822	2.60	ESTRUCTURA	1.39	228.4421	24.669	1363057.567	1050397.112	29.582
	1936	17.1053	24.331	88.4317	4.02	ESTRUCTURA	1.39	228.3235	24.325	1363057.757	1050397.403	27.903
	1937	21.5457	24.981	89.0734	4.02	CANO	1.39	233.0580	24.978	1363058.919	1050395.608	27.741
	1938	21.5230	24.278	92.5529	2.60	CANO	1.39	233.0171	24.246	1363059.345	1050396.203	27.541
	1939	22.3012	23.704	92.4733	2.60	CANO	1.39	233.6455	23.676	1363059.897	1050396.504	27.625
	1940	23.0832	23.240	92.0412	2.60	TERRENO	1.39	234.2844	23.225	1363060.374	1050396.715	27.941
	1941	23.3900	22.622	90.4209	2.60	TERRENO	1.39	234.7921	22.620	1363060.890	1050397.089	28.503
	1942	25.5439	20.896	87.2637	2.60	TERRENO	1.39	237.0530	20.875	1363062.578	1050398.054	29.712
	1943	27.3604	19.300	89.3907	1.50	TERRENO	1.39	238.7433	19.300	1363063.917	1050399.073	29.997
	1944	37.0417	21.651	89.5843	1.50	TERRENO	1.39	248.2135	21.651	1363065.896	1050395.467	29.888
	1945	34.4955	22.993	90.2600	1.50	TERRENO	1.39	245.9741	22.992	1363064.570	1050394.571	29.706
	1946	32.1926	25.026	90.4911	2.60	TERRENO	1.39	243.4660	25.023	1363062.753	1050393.184	28.422
	1947	31.2638	26.205	92.0734	2.92	CANO	1.39	242.5860	26.187	1363061.874	1050392.325	27.488
	1948	31.1427	27.044	90.5433	3.52	CANO	1.39	242.3830	27.041	1363061.396	1050391.612	27.431



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1949	30.5321	27.069	91.0906	2.92	TERRENO	1.39	242.0313	27.064	1363061.239	1050391.669	27.916
	1950	30.3252	27.356	90.4329	2.92	TERRENO	1.39	241.6899	27.354	1363060.959	1050391.490	28.114
	1951	31.4057	27.842	90.3008	1.50	ESTRUCTURA	1.39	242.8246	27.841	1363061.216	1050390.804	29.636
	1952	348.1225	25.181	90.1838	1.50	PUENTE	1.39	199.3491	25.181	1363050.173	1050407.229	29.744
	1953	351.5856	24.844	90.2622	1.50	PUENTE	1.39	203.1244	24.843	1363051.084	1050405.815	29.690
	1954	348.4040	19.005	90.1205	1.50	PUENTE	1.39	199.8199	19.005	1363056.052	1050409.128	29.813
	1955	344.1200	19.557	89.5135	1.50	PUENTE	1.39	195.3421	19.557	1363055.071	1050410.397	29.928
	1956	343.4355	19.552	90.2843	1.50	ESTRUCTURA	1.39	194.8741	19.551	1363055.035	1050410.553	29.717
	1957	343.2431	19.565	90.2843	1.50	ESTRUCTURA	1.39	194.5508	19.564	1363054.995	1050410.656	29.717
	1958	344.2156	20.384	90.3319	1.50	ESTRUCTURA	1.39	195.5077	20.383	1363054.290	1050410.122	29.683
	1959	344.1202	20.396	90.3319	1.50	ESTRUCTURA	1.39	195.3427	20.395	1363054.263	1050410.175	29.683
	1960	347.2017	24.414	90.4558	1.50	ESTRUCTURA	1.39	198.4802	24.412	1363050.778	1050407.834	29.554
	1961	347.0140	24.441	90.4558	1.50	ESTRUCTURA	1.39	198.1699	24.439	1363050.711	1050407.951	29.553
	1962	347.5320	25.307	90.4839	1.50	ESTRUCTURA	1.39	199.0310	25.304	1363050.010	1050407.320	29.522
	1963	347.3859	25.338	90.4840	1.50	ESTRUCTURA	1.39	198.7919	25.335	1363049.946	1050407.410	29.522
	1964	351.3440	33.242	90.5544	1.50	TERRENO	1.41	202.7199	33.238	1363043.273	1050402.734	29.341
	1965	347.5547	25.378	90.1951	1.50	TERRENO	1.41	199.0719	25.378	1363049.947	1050407.279	29.734
	1966	347.1548	25.162	90.0421	2.60	TERRENO	1.41	198.4055	25.162	1363050.057	1050407.627	28.748
	1967	346.4002	24.335	91.5610	2.60	TERRENO	1.41	197.8094	24.321	1363050.776	1050408.133	27.958
	1968	346.2720	23.311	89.4241	4.02	CANO	1.41	197.5977	23.311	1363051.712	1050408.524	27.483
	1969	345.4148	22.324	90.0500	4.02	CANO	1.41	196.8388	22.324	1363052.565	1050409.105	27.333
	1970	345.1548	21.738	89.5348	4.02	CANO	1.41	196.4055	21.738	1363053.078	1050409.432	27.404
	1971	343.2810	20.184	90.2608	2.60	TERRENO	1.41	194.6116	20.183	1363054.401	1050410.480	28.627
	1972	343.0127	19.595	90.1950	2.60	TERRENO	1.41	194.1663	19.595	1363054.933	1050410.776	28.667
	1973	341.0830	17.623	89.2332	2.60	TERRENO	1.41	192.2838	17.622	1363056.713	1050411.823	28.967
	1974	339.0959	28.510	89.5446	2.60	TERRENO	1.41	190.3085	28.510	1363045.882	1050410.470	28.824
	1975	337.5117	25.658	90.2221	2.00	TERRENO	1.41	188.9969	25.657	1363048.590	1050411.559	29.213
	1976	335.0458	23.010	89.2940	4.02	CANO	1.41	186.2249	23.009	1363051.058	1050413.077	27.568
	1977	336.0413	24.353	92.3329	2.00	BORDE_CANO	1.41	187.2124	24.329	1363049.795	1050412.517	28.293
	1978	334.4710	22.197	92.4121	2.00	BORDE_CANO	1.41	185.9283	22.173	1363051.877	1050413.282	28.339
	1979	332.0652	19.753	90.0323	2.00	TERRENO	1.41	183.2566	19.753	1363054.210	1050414.450	29.361
	1980	331.0836	18.903	87.5757	2.00	ANDEN	1.41	182.2855	18.891	1363055.055	1050414.818	30.051
	1981	312.2128	24.449	88.2724	2.00	ANDEN	1.41	163.4999	24.440	1363050.498	1050422.513	30.039
	1982	312.2215	24.463	90.3215	2.00	TERRENO	1.41	163.5130	24.462	1363050.475	1050422.514	29.151
	1983	315.2050	26.516	90.4325	2.00	TERRENO	1.41	166.4894	26.514	1363048.151	1050421.766	29.045
	1984	316.5457	27.569	90.2330	2.60	BORDE_CANO	1.41	168.0580	27.568	1363046.960	1050421.276	28.592



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1985	318.0629	27.847	89.2047	4.02	CANO	1.41	169.2502	27.845	1363046.575	1050420.765	27.683
	1986	320.4341	28.932	91.5133	2.00	BORDE_CANO	1.41	171.8702	28.917	1363045.305	1050419.661	28.442
	1987	322.5048	31.941	90.1121	2.00	TERRENO	1.41	173.9888	31.941	1363042.166	1050418.917	29.275
	1988	301.4713	47.250	90.0647	2.00	TERRENO	1.41	152.9291	47.250	1363031.858	1050437.075	29.287
	1989	299.1408	45.704	90.3002	2.00	TERRENO	1.41	150.3777	45.702	1363034.202	1050438.161	28.981
	1990	298.0614	45.242	91.2043	2.00	BORDE_CANO	1.41	149.2460	45.230	1363035.062	1050438.700	28.318
	1991	297.3757	45.027	90.1225	3.42	CANO	1.41	148.7746	45.027	1363035.427	1050438.914	27.803
	1992	296.2306	44.345	91.1725	2.00	BORDE_CANO	1.41	147.5271	44.334	1363036.529	1050439.374	28.382
	1993	294.1109	43.585	90.0352	2.00	TERRENO	1.41	145.3280	43.585	1363038.086	1050440.366	29.331
	1994	292.0317	42.940	89.1442	2.00	ANDEN	1.41	143.1969	42.936	1363039.552	1050441.293	29.946
	1995	292.0458	42.955	89.0432	2.00	ANDEN	1.41	143.2249	42.949	1363039.529	1050441.284	30.073
	1996	286.3450	55.412	89.1824	2.00	ANDEN	1.41	137.7227	55.408	1363032.935	1050452.846	30.051
	1997	286.3727	55.384	89.2137	2.00	TERRENO	1.41	137.7663	55.381	1363032.927	1050452.796	29.999
	1998	289.0206	56.526	90.2608	2.00	TERRENO	1.41	140.1771	56.524	1363030.519	1050451.771	28.951
	1999	289.5116	57.197	90.2420	2.60	BORDE_CANO	1.41	140.9966	57.196	1363029.484	1050451.569	28.375
	2000	290.3402	57.235	89.4112	4.02	CANO	1.41	141.7094	57.234	1363029.010	1050451.037	27.678
	2001	291.5525	57.312	90.1030	2.60	BORDE_CANO	1.41	143.0658	57.312	1363028.121	1050450.010	28.605
	2002	295.2256	58.544	89.1722	2.60	TERRENO	1.41	146.5244	58.539	1363025.102	1050447.861	29.506
	2003	298.1835	60.556	89.2119	2.60	TERRENO	1.41	149.4519	60.552	1363021.784	1050446.348	29.462
	2004	293.3353	68.163	89.1921	2.60	TERRENO	1.41	144.7069	68.158	1363018.300	1050454.951	29.586
	2005	291.0559	65.299	89.1612	2.60	TERRENO	1.41	142.2419	65.294	1363022.310	1050455.553	29.612
	2006	290.0548	64.022	90.3440	2.60	BORDE_CANO	1.41	141.2388	64.019	1363024.012	1050455.652	28.135
	2007	289.3919	63.502	90.0956	3.42	CANO	1.41	140.7974	63.502	1363024.723	1050455.709	27.782
	2008	289.2253	62.386	90.0108	3.42	BORDE_CANO	1.41	140.5235	62.386	1363025.777	1050455.234	27.945
	2009	289.0246	62.048	90.2941	2.00	TERRENO	1.41	140.1883	62.046	1363026.271	1050455.298	28.844
	2010	287.0317	61.048	90.0645	2.00	TERRENO	1.41	138.1969	61.048	1363028.424	1050456.265	29.260
	2011	285.1329	60.106	89.3800	2.00	TERRENO	1.41	136.3669	60.105	1363030.429	1050457.046	29.765
	2012	285.0811	60.065	89.2209	2.00	ANDEN	1.41	136.2785	60.061	1363030.525	1050457.083	30.042
	2013	284.1507	61.869	89.2437	2.00	ANDEN	1.41	135.3941	61.866	1363029.886	1050459.015	30.017
	2014	284.1343	61.876	89.4719	2.00	ANDEN	1.41	135.3708	61.876	1363029.897	1050459.040	29.609
	2015	285.1816	63.435	90.3154	2.00	TERRENO	1.41	136.4466	63.432	1363027.960	1050459.278	28.792
	2016	285.5122	64.261	90.3044	2.60	BORDE_CANO	1.41	136.9983	64.258	1363026.937	1050459.397	28.206
	2017	286.0856	65.496	90.2603	2.92	CANO	1.41	137.2910	65.494	1363025.806	1050459.995	27.969
	2018	286.2528	66.429	90.2305	2.60	BORDE_CANO	1.41	137.5666	66.428	1363024.904	1050460.393	28.334
	2019	287.5301	67.904	90.0714	1.50	TERRENO	1.41	139.0258	67.904	1363022.664	1050460.098	29.737
	2020	289.5438	70.636	90.1045	1.50	TERRENO	1.41	141.0527	70.636	1363018.996	1050459.974	29.659



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2021	290.3839	73.648	90.0713	1.50	TERRENO	1.41	141.7863	73.648	1363016.066	1050461.130	29.726
	2022	284.2413	64.694	90.4516	1.50	ESTRUCTURA	1.41	135.5458	64.688	1363027.756	1050460.876	29.028
	2023	284.1704	64.507	90.4517	1.50	ESTRUCTURA	1.41	135.4266	64.501	1363027.984	1050460.840	29.031
	2024	283.3515	64.962	90.3713	1.50	ESTRUCTURA	1.41	134.7296	64.958	1363028.216	1050461.720	29.177
	2025	283.4446	65.216	90.3714	1.50	ESTRUCTURA	1.41	134.8883	65.212	1363027.909	1050461.774	29.174
	2026	284.5640	60.762	89.5031	1.50	ANDEN	1.41	136.0866	60.762	1363030.159	1050457.714	30.048
	2027	283.4553	62.806	89.5135	1.50	ESTRUCTURA	1.41	134.9069	62.806	1363029.593	1050460.054	30.034
	2028	283.4023	62.765	89.5136	1.50	ESTRUCTURA	1.41	134.8152	62.765	1363029.693	1050460.096	30.034
	2029	283.3312	63.791	89.5136	1.50	PUENTE	1.41	134.6955	63.791	1363029.065	1050460.918	30.036
	2030	282.1604	69.845	89.5137	1.50	ESTRUCTURA	1.41	133.4099	69.845	1363025.933	1050466.311	30.051
	2031	282.1852	69.227	89.5137	1.50	PUENTE	1.41	133.4566	69.227	1363026.317	1050465.823	30.049
	2032	282.1219	69.884	89.5137	1.50	ESTRUCTURA	1.41	133.3474	69.884	1363025.962	1050466.392	30.051
	2033	282.1341	69.881	89.5137	1.50	ESTRUCTURA	1.41	133.3702	69.881	1363025.944	1050466.370	30.051
	2034	281.5736	74.607	89.5137	1.50	ANDEN	1.41	133.1021	74.607	1363022.953	1050470.045	30.062
	2035	278.1729	73.591	89.5634	1.50	BORDE_VIA	1.41	129.4335	73.591	1363027.188	1050472.411	29.954
	2036	283.4248	69.782	90.4022	1.50	ESTRUCTURA	1.41	134.8555	69.777	1363024.716	1050465.036	29.061
	2037	274.0138	72.306	89.5707	1.50	MANHOL	1.41	125.1694	72.306	1363032.283	1050474.678	29.941
	2038	272.3404	99.102	89.5310	1.50	MANHOL	1.41	123.7099	99.102	1363018.931	1050498.010	30.077
	2039	275.0159	90.070	89.5743	1.50	MANHOL	1.41	126.1752	90.070	1363020.767	1050488.278	29.940
	2040	266.2519	58.479	90.0353	1.50	MANHOL	1.41	117.5641	58.479	1363046.871	1050467.413	29.814
	2041	266.0410	59.479	90.0754	1.50	VALVULA	1.41	117.2116	59.479	1363046.733	1050468.468	29.744
	2042	265.4909	61.009	89.5333	1.50	ANDEN	1.41	116.9613	61.009	1363046.271	1050469.950	29.995
	2043	267.2827	68.408	89.5332	1.50	ANDEN	1.41	118.6163	68.408	1363041.168	1050475.623	30.009
	2044	266.0705	66.412	89.4933	1.50	ANDEN	1.41	117.2602	66.412	1363043.513	1050474.607	30.082
	2045	265.3905	67.557	89.4933	1.50	ANDEN	1.41	116.7935	67.557	1363043.478	1050475.875	30.086
	2046	265.5809	66.510	89.4932	1.50	ESTRUCTURA	1.41	117.1113	66.510	1363043.622	1050474.773	30.083
	2047	265.4039	60.982	89.4932	1.50	ESTRUCTURA	1.41	116.8196	60.982	1363046.417	1050469.994	30.066
	2048	263.0247	68.183	89.4413	1.50	TERRENO	1.41	114.1885	68.182	1363045.994	1050477.768	30.193
	2049	263.5903	59.470	90.1933	1.50	ESTRUCTURA	1.41	115.1263	59.469	1363048.680	1050469.413	29.542
	2050	263.5117	59.599	90.1932	1.50	ESTRUCTURA	1.41	114.9969	59.598	1363048.747	1050469.587	29.542
	2051	262.4414	65.700	89.4655	1.50	TERRENO	1.41	113.8794	65.700	1363047.335	1050475.647	30.130
	2052	265.4544	60.881	89.5450	1.50	TERRENO	1.41	116.9044	60.881	1363046.383	1050469.863	29.972
	2052	265.4524	60.877	89.5450	1.50	ESTRUCTURA	1.41	116.8988	60.877	1363046.390	1050469.862	29.972
	2053	265.4015	61.070	90.0747	1.50	ESTRUCTURA	1.41	116.8130	61.070	1363046.384	1050470.076	29.742
	2054	265.5505	65.382	89.5021	1.50	TERRENO	1.41	117.0602	65.382	1363044.188	1050473.796	30.064
	2055	265.4052	60.976	89.5021	1.50	PUENTE	1.41	116.8233	60.976	1363046.417	1050469.987	30.051



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2056	265.5301	65.351	89.2902	2.60	TERRENO	1.41	117.0258	65.348	1363044.238	1050473.784	29.369
	2057	265.4014	61.191	90.3015	2.60	BORDE_CANO	1.41	116.8127	61.189	1363046.331	1050470.182	28.242
	2058	265.4900	64.245	89.2932	2.60	ESTRUCTURA	1.41	116.9588	64.242	1363044.807	1050472.833	29.350
	2059	265.4710	64.538	89.2932	2.60	ESTRUCTURA	1.41	116.9283	64.535	1363044.705	1050473.110	29.352
	2060	265.1521	64.801	89.4930	2.60	ESTRUCTURA	1.41	116.3980	64.801	1363045.121	1050473.615	28.978
	2061	265.4804	64.222	90.1852	2.60	BORDE_CANO	1.41	116.9433	64.221	1363044.832	1050472.822	28.428
	2062	265.3734	62.051	90.3458	2.60	CANO	1.41	116.7683	62.048	1363045.986	1050470.970	28.149
	2063	265.4353	63.133	90.3321	2.60	CANO	1.41	116.8735	63.130	1363045.395	1050471.884	28.168
	2064	263.4312	59.316	89.2741	2.60	TERRENO	1.41	114.8621	59.313	1363048.994	1050469.388	29.338
	2065	264.0335	65.416	89.3224	2.60	TERRENO	1.41	115.2019	65.414	1363046.078	1050474.759	29.305
	2066	263.3028	57.379	89.4814	2.00	TERRENO	1.41	114.6499	57.379	1363050.000	1050467.722	29.577
	2067	264.2145	63.828	90.5042	2.00	BORDE_CANO	1.41	115.5046	63.821	1363046.451	1050473.173	28.439
	2068	264.0340	60.491	90.5936	2.00	BORDE_CANO	1.41	115.2033	60.482	1363048.176	1050470.296	28.332
	2069	264.1802	62.837	91.0530	2.00	CANO	1.41	115.4427	62.826	1363046.941	1050472.304	28.183
	2070	262.0503	61.042	90.3525	2.00	TERRENO	1.41	113.2263	61.039	1363049.860	1050471.664	28.751
	2071	261.5722	63.816	90.3153	2.00	TERRENO	1.41	113.0983	63.813	1363048.897	1050474.269	28.788
	2072	262.0252	61.673	91.0003	2.00	BORDE_CANO	1.41	113.1899	61.664	1363049.649	1050472.253	28.303
	2073	262.0623	62.991	90.5533	2.00	BORDE_CANO	1.41	113.2485	62.983	1363049.071	1050473.440	28.362
	2074	262.1810	62.516	91.0336	2.00	CANO	1.41	113.4449	62.505	1363049.063	1050472.917	28.224
	2075	262.1206	57.197	89.4736	2.00	TERRENO	1.41	113.3438	57.197	1363051.267	1050468.086	29.587
	2076	262.4805	65.290	89.5247	2.00	TERRENO	1.41	113.9435	65.290	1363047.434	1050475.243	29.517
	2077	261.1400	65.316	89.4909	2.00	TERRENO	1.41	112.3755	65.316	1363049.067	1050475.970	29.586
	2078	261.0907	58.436	89.4908	2.00	TERRENO	1.41	112.2941	58.436	1363051.763	1050469.639	29.565
	2079	261.3210	63.985	90.2645	2.00	TERRENO	1.41	112.6783	63.983	1363049.262	1050474.608	28.882
	2080	261.2742	62.809	90.4613	2.00	TERRENO	1.41	112.6038	62.803	1363049.793	1050473.551	28.536
	2081	261.2904	62.246	91.1030	2.00	BORDE_CANO	1.41	112.6266	62.233	1363049.989	1050473.015	28.104
	2082	261.2911	62.000	91.0509	2.00	BORDE_CANO	1.41	112.6285	61.989	1363050.081	1050472.789	28.205
	2083	261.2618	61.512	90.4147	2.00	TERRENO	1.41	112.5805	61.507	1363050.314	1050472.364	28.633
	2084	261.1946	60.543	90.0449	2.00	TERRENO	1.41	112.4716	60.543	1363050.790	1050471.518	29.295
	2085	265.0519	55.145	90.0215	1.50	BORDE_VIA	1.41	116.2308	55.145	1363049.558	1050465.038	29.844
	2086	263.0116	55.400	89.5848	1.50	BORDE_VIA	1.41	114.1633	55.400	1363051.254	1050466.118	29.900
	2087	266.4421	54.241	90.0707	1.50	BORDE_VIA	1.41	117.8813	54.241	1363048.566	1050463.516	29.768
	2088	267.1003	52.637	90.0447	1.50	BORDE_VIA	1.41	118.3096	52.637	1363048.969	1050461.913	29.807
	2089	257.3652	56.215	89.3003	2.30	PARAMENTO	1.41	108.7566	56.213	1363055.856	1050468.799	29.570
	2091	103.4704	12.663	89.4642	1.50	VALVULA	1.41	314.9266	12.663	1363082.874	1050406.606	29.929
	2092	56.0507	31.095	89.4642	1.50	PARAMENTO	1.41	267.2274	31.095	1363072.427	1050384.513	30.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2093	67.4658	47.151	89.5011	1.50	PARAMENTO	1.41	278.9249	47.151	1363081.246	1050368.992	30.015
	2094	75.2151	49.153	90.0024	1.50	BORDE_VIA	1.41	286.5063	49.153	1363087.897	1050368.444	29.875
	2095	86.1802	77.794	89.5845	1.50	SEPARADOR	1.41	297.4427	77.794	1363109.784	1050346.532	29.909
	2096	86.3752	77.792	90.0057	1.50	SEPARADOR	1.41	297.7733	77.792	1363110.180	1050346.741	29.859
E1047		0.0000				ESTACION		0.0000		1363303.871	1050021.368	29.198
E1048	E1047	0.0000	126.705	89.4539	1.70	ESTACION	1.44	300.5785		1363368.328	1049912.285	28.921
	2269	0.0004	72.262	89.3853	1.70	LINEAMIENT	1.44	120.5796	72.261	1363331.566	1049974.496	29.100
	2270	358.5151	36.939	89.3405	1.70	BORDE_VIA	1.44	119.4427	36.938	1363350.171	1049944.453	28.934
	2271	355.5435	35.241	89.3655	1.70	BORDE_VIA	1.44	116.4883	35.240	1363352.610	1049943.826	28.893
	2272	346.5812	34.973	90.1808	1.70	SUMIDERO	1.44	107.5485	34.973	1363357.783	1049945.630	28.471
	2273	345.2744	34.767	90.1523	1.70	SUMIDERO	1.44	106.0408	34.767	1363358.721	1049945.698	28.500
	2274	5.4508	47.063	89.3330	1.70	POSTE	1.44	126.3308	47.062	1363340.446	1049950.199	29.019
	2275	338.2937	37.867	90.1300	1.70	BORDE_VIA	1.44	99.0721	37.867	1363362.357	1049949.678	28.513
	2276	354.5303	28.494	89.4655	1.70	BORDE_VIA	1.44	115.4627	28.494	1363356.077	1049938.012	28.764
	2277	357.3924	27.717	89.2733	1.70	BORDE_VIA	1.44	118.2352	27.716	1363355.216	1049936.703	28.918
	2278	358.5846	25.457	89.2432	1.70	BORDE_VIA	1.44	119.5580	25.456	1363355.770	1049934.428	28.919
	2279	339.3506	30.745	89.5830	1.70	POSTE	1.44	100.1635	30.745	1363362.902	1049942.548	28.669
	2280	17.5439	43.828	89.3449	1.70	BORDE_VIA	1.44	138.4894	43.827	1363335.509	1049941.332	28.977
	2281	20.5121	41.651	89.2634	1.70	BORDE_VIA	1.44	141.4344	41.649	1363335.762	1049938.250	29.061
	2282	25.4952	41.424	89.2349	1.70	BORDE_VIA	1.44	146.4096	41.422	1363333.823	1049935.202	29.092
	2283	30.4857	43.574	89.2347	1.70	BORDE_VIA	1.44	151.3944	43.572	1363330.075	1049933.147	29.115
	2284	31.5739	38.110	89.2950	1.70	BORDE_VIA	1.44	152.5394	38.109	1363334.513	1049929.859	28.990
	2285	28.2241	36.721	89.2700	1.70	BORDE_VIA	1.44	148.9566	36.719	1363336.867	1049931.221	29.008
	2286	25.3825	33.651	89.1832	1.70	BORDE_VIA	1.44	146.2188	33.649	1363340.360	1049930.995	29.062
	2287	27.0013	29.981	89.1832	1.70	BORDE_VIA	1.44	147.5821	29.979	1363343.021	1049928.357	29.018
	2288	25.1240	41.174	89.2134	1.70	VALVULA	1.44	145.7896	41.171	1363334.280	1049935.433	29.116
	2289	22.4702	41.183	89.2133	1.70	VALVULA	1.44	143.3624	41.180	1363335.283	1049936.860	29.117
	2290	23.4306	42.370	89.2133	1.70	VALVULA	1.44	144.2969	42.367	1363333.923	1049937.010	29.130
	2291	28.5848	34.658	89.1752	1.70	HIDRANTE	1.44	149.5585	34.655	1363338.450	1049929.844	29.081
	2292	11.3157	24.259	88.4018	1.70	SEPARADOR	1.44	132.1110	24.252	1363352.065	1049930.277	29.218
	2293	12.1930	24.327	88.3908	1.70	SEPARADOR	1.44	132.9035	24.320	1363351.771	1049930.100	29.228
	2294	64.1514	15.405	88.3940	1.70	BORDE_VIA	1.44	184.8324	15.401	1363352.982	1049910.988	29.016
	2295	77.0959	16.379	88.4831	1.70	BORDE_VIA	1.44	197.7449	16.375	1363352.731	1049907.295	28.996
	2296	81.3700	19.658	89.0809	1.70	BORDE_VIA	1.44	202.1952	19.656	1363350.128	1049904.860	28.952
	2297	82.5059	22.784	89.4216	1.70	BORDE_VIA	1.44	203.4283	22.784	1363347.422	1049903.227	28.773
	2298	95.5320	19.721	89.2042	1.70	BORDE_VIA	1.44	216.4674	19.720	1363352.469	1049900.565	28.881



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	2299	100.4442	16.314	88.4700	1.70	BORDE_VIA	1.44	221.3235	16.310	1363356.079	1049901.516	29.002
	2300	114.5039	15.302	88.4659	1.70	BORDE_VIA	1.44	235.4227	15.299	1363359.645	1049899.689	28.981
	2301	72.4625	13.806	89.1535	1.70	SUMIDERO	1.44	193.3521	13.805	1363354.896	1049909.097	28.834
	2302	69.3618	14.470	89.1933	1.70	SUMIDERO	1.44	190.1835	14.469	1363354.087	1049909.727	28.826
	2303	334.4457	31.139	89.4156	1.70	PARAMENTO	1.44	95.3277	31.139	1363365.436	1049943.289	28.820
	2304	340.1325	15.572	88.5416	1.70	MANHOL	1.44	100.8021	15.569	1363365.410	1049927.579	28.954
	2305	174.4936	5.857	87.3619	1.70	EJE_TUBO	1.44	295.4052	5.852	1363370.838	1049906.999	28.901
	2306	206.3442	3.132	83.5545	1.70	MANHOL	1.44	327.1569	3.114	1363370.944	1049910.596	28.987
	2307	234.3400	1.682	84.5942	1.70	VALVULA	1.44	355.1452	1.676	1363369.997	1049912.144	28.803
	2308	196.4339	7.115	88.3035	1.70	BORDE_VIA	1.44	317.3060	7.113	1363373.555	1049907.463	28.841
	2309	184.2322	7.825	88.0045	1.70	BORDE_VIA	1.44	304.9680	7.820	1363372.810	1049905.877	28.927
	2310	181.1255	8.802	88.1427	1.70	BORDE_VIA	1.44	301.7938	8.798	1363372.963	1049904.808	28.926
	2311	354.0432	3.199	85.1019	1.70	BORDE_VIA	1.44	114.6541	3.188	1363366.998	1049915.183	28.925
	2312	289.1218	2.239	85.5708	1.70	BORDE_VIA	1.44	49.7835	2.233	1363369.770	1049913.991	28.814
	2313	271.5429	11.175	90.3525	1.70	BORDE_VIA	1.44	32.4866	11.174	1363377.753	1049918.287	28.541
	2314	266.5152	11.227	90.5008	1.70	ANDEN	1.44	27.4430	11.226	1363378.290	1049917.459	28.492
	2315	268.2912	25.757	90.3702	1.70	ANDEN	1.44	29.0652	25.756	1363390.840	1049924.798	28.378
	2316	255.0806	27.068	90.2040	1.70	BORDE_VIA	1.44	15.7135	27.068	1363394.384	1049919.616	28.493



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E13003		0.0000				ESTACION		0.0000		1363644.156	1049411.330	27.656
EAUX	E13003	0.0000	101.867	89.4903	1.70	ESTACION	1.59	304.5469		1363701.895	1049327.466	27.444
	E1085	145.0041	60.024	89.4944	1.70	DELTA	1.59	269.5583	60.024	1363701.432	1049267.444	27.513
	1	100.4201	18.383	88.4751	1.70	PARAMENTO	1.59	225.2471	18.379	1363688.955	1049314.414	27.719
	2	77.5250	16.884	88.4116	1.70	PARAMENTO	1.59	202.4274	16.880	1363686.292	1049321.026	27.720
	3	12.3606	39.051	89.3755	1.70	PARAMENTO	1.59	137.1485	39.050	1363673.266	1049354.024	27.584
	4	5.3508	28.531	89.3447	1.70	BORDE_VIA	1.59	130.1324	28.530	1363683.506	1049349.279	27.543
	5	15.3017	30.933	89.3820	1.70	BORDE_VIA	1.59	140.0516	30.932	1363678.181	1049347.328	27.529
	6	126.0025	17.848	89.1502	1.70	BORDE_VIA	1.59	250.5538	17.846	1363695.953	1049310.638	27.567
	7	99.2519	11.740	89.1819	1.70	BORDE_VIA	1.59	223.9688	11.739	1363693.446	1049319.316	27.476
	8	355.3905	14.079	89.0305	1.70	BORDE_VIA	1.59	120.1983	14.077	1363694.814	1049339.633	27.567
	9	19.4148	4.788	87.3134	1.70	BORDE_VIA	1.59	144.2435	4.784	1363698.013	1049330.261	27.540
E1085-EAUX	EAUX	359.5959	60.020	89.5852	1.70	ESTACION	1.60	269.5583	60.024	1363701.432	1049267.444	27.513
	E1086	107.2237	103.454	89.5340	1.70	DELTA	1.60	196.9352	103.454	1363602.465	1049237.309	27.599
	10	8.1458	8.850	89.1511	1.70	PARAMENTO	1.60	97.8077	8.849	1363700.230	1049276.211	27.524
	11	283.5417	6.123	88.3543	1.70	BORDE_VIA	1.60	13.4630	6.121	1363707.385	1049268.869	27.559
	12	183.3534	7.173	87.3426	1.70	PARAMENTO	1.60	273.1510	7.167	1363701.826	1049260.288	27.712
	13	129.4910	17.961	89.1802	1.70	PARAMENTO	1.60	219.3777	17.960	1363687.550	1049256.050	27.628
	14	125.2321	17.434	89.1956	1.70	PARAMENTO	1.60	214.9474	17.433	1363687.143	1049257.458	27.612
	15	101.2807	70.719	89.5715	1.70	PARAMENTO	1.60	191.0269	70.719	1363632.019	1049253.918	27.465
	16	101.4845	73.685	89.5538	1.70	PARAMENTO	1.60	191.3708	73.685	1363629.193	1049252.917	27.502
	17	190.0754	15.447	89.1342	1.70	PARAMENTO	1.60	279.6899	15.446	1363704.032	1049252.219	27.617
E1086-E1085	E1085	0.0000	103.454	89.5931	1.70	ESTACION	1.55	196.9352	103.454	1363602.465	1049237.309	27.599
	18	105.1843	6.360	88.3541	1.70	PARAMENTO	1.55	122.2471	6.358	1363599.072	1049242.686	27.600
	19	102.3521	5.913	88.3127	1.70	POSTE	1.55	119.5244	5.911	1363599.552	1049242.453	27.597
	20	250.3957	4.461	88.5805	1.70	POSTE	1.55	267.6010	4.460	1363602.278	1049232.853	27.525
	21	326.0909	10.855	89.1021	1.70	POSTE	1.55	343.0877	10.854	1363612.849	1049234.152	27.601
	22	264.4859	20.042	89.3513	1.70	PARAMENTO	1.55	281.7516	20.041	1363606.546	1049217.688	27.589
	23	317.5735	11.950	89.3024	1.70	PARAMENTO	1.55	334.8949	11.950	1363613.285	1049232.239	27.547
	24	299.1046	17.857	89.3341	1.70	PARAMENTO	1.55	316.1146	17.856	1363615.334	1049224.931	27.581
	25	264.1019	17.176	89.3947	1.70	PARAMENTO	1.55	281.1071	17.176	1363605.773	1049220.455	27.545
E1086-E1085	E1085	0.0000	103.456	89.5530	1.70	ESTACION	1.49	196.9352	103.454	1363602.465	1049237.309	27.599
	E1087	7.2842	30.609	89.4928	1.70	DELTA	1.49	24.4135	30.609	1363630.337	1049249.960	27.483
E1087-E1086	E1086	0.0000	30.607	89.2803	1.70	ESTACION	1.56	24.4135	30.609	1363630.337	1049249.960	27.483
	E1088	258.5149	39.204	89.4717	1.70	DELTA	1.56	103.2771	39.204	1363621.333	1049288.116	27.483
	26	234.3236	5.588	87.4621	1.70	BOXCOULVER	1.56	78.9569	5.584	1363631.406	1049255.441	27.555



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	27	242.0204	7.321	88.2521	1.70	BOXCOULVER	1.56	86.4480	7.318	1363630.790	1049257.264	27.540
	28	264.0953	6.854	88.2151	1.70	BOXCOULVER	1.56	108.5783	6.851	1363628.154	1049256.454	27.534
	29	264.2328	5.000	87.4301	1.70	BOXCOULVER	1.56	108.8046	4.996	1363628.726	1049254.690	27.537
	30	207.2147	5.709	89.1732	1.70	CERRAMIENT	1.56	51.7766	5.709	1363633.869	1049254.445	27.409
	31	246.1609	15.720	88.5512	1.70	PARAMENTO	1.56	90.6827	15.717	1363630.149	1049265.676	27.634
	32	252.1724	23.681	89.2745	1.70	PARAMENTO	1.56	96.7035	23.680	1363627.572	1049273.478	27.560
	33	252.0519	24.108	89.2438	1.70	CERRAMIENT	1.56	96.5021	24.107	1363627.607	1049273.912	27.586
	34	254.0058	39.054	89.4444	1.70	CERRAMIENT	1.56	98.4296	39.054	1363624.612	1049288.592	27.512
	35	254.4506	42.673	89.4113	1.70	CERCA	1.56	99.1652	42.672	1363623.540	1049292.088	27.571
	36	274.1820	39.293	89.5226	1.70	CERCA	1.56	118.7191	39.293	1363611.456	1049284.420	27.425
	37	334.0126	8.496	89.2606	1.70	CERCA	1.56	178.4374	8.496	1363621.844	1049250.192	27.422
	38	270.1404	19.329	89.1846	1.70	ESTRUCTURA	1.56	114.6480	19.328	1363622.276	1049267.527	27.570
	39	284.1833	20.729	89.2904	1.70	ESTRUCTURA	1.56	128.7227	20.728	1363617.370	1049266.132	27.525
	40	275.2937	35.943	89.5337	1.70	ESTRUCTURA	1.56	119.9071	35.943	1363612.416	1049281.117	27.405
	41	225.5357	5.914	80.3902	2.60	BORDE_CANO	1.56	70.3127	5.835	1363632.302	1049255.455	27.399
	42	229.3640	6.265	87.0048	2.60	BORDE_CANO	1.56	74.0246	6.256	1363632.059	1049255.975	26.765
	43	233.3349	6.690	89.3439	2.60	CANO	1.56	77.9771	6.690	1363631.730	1049256.503	26.488
	44	236.2433	7.137	87.5216	2.60	BORDE_CANO	1.56	80.8227	7.132	1363631.474	1049257.001	26.703
	45	239.4647	7.929	82.5947	2.60	BORDE_CANO	1.56	84.1933	7.870	1363631.133	1049257.790	27.405
	46	271.3419	4.860	80.4341	2.60	BORDE_CANO	1.56	115.9855	4.797	1363628.235	1049254.272	27.221
	47	271.3335	5.225	86.5415	2.60	BORDE_CANO	1.56	115.9733	5.217	1363628.052	1049254.651	26.720
	48	271.4325	5.600	89.3528	2.60	CANO	1.56	116.1371	5.600	1363627.870	1049254.987	26.478
	49	270.3810	6.359	87.0855	2.60	BORDE_CANO	1.56	115.0496	6.351	1363627.648	1049255.714	26.755
	50	270.0120	7.272	82.0821	2.60	BORDE_CANO	1.56	114.4358	7.204	1363627.357	1049256.519	27.433
E1088-E1087	E1087	0.0000	39.202	89.4742	1.70	ESTACION	1.50	103.2771	39.204	1363621.333	1049288.116	27.483
	E1089	256.0922	39.009	88.4304	1.70	DELTA	1.50	179.4333	38.999	1363582.336	1049288.502	28.153
	51	99.0452	14.104	88.4435	1.70	CERRAMIENT	1.50	22.3583	14.101	1363634.374	1049293.480	27.590
	52	105.4533	14.108	88.3049	1.70	CERRAMIENT	1.50	29.0363	14.103	1363633.664	1049294.961	27.646
	53	106.1902	14.043	88.2830	1.70	PARAMENTO	1.50	29.5944	14.038	1363633.540	1049295.049	27.654
	54	112.4305	3.947	86.1245	1.70	PARAMENTO	1.50	35.9952	3.938	1363624.519	1049290.431	27.541
	55	184.4232	25.369	89.5520	1.70	PARAMENTO	1.50	107.9860	25.369	1363613.499	1049312.245	27.315
	56	185.1355	25.330	89.5648	1.70	CERCA	1.50	108.5091	25.330	1363613.292	1049312.136	27.304
	57	225.1553	22.817	89.4054	1.70	CERCA	1.50	148.5419	22.817	1363601.870	1049300.024	27.407
	58	296.1829	21.503	89.4232	1.70	PARAMENTO	1.50	219.5852	21.503	1363604.761	1049274.414	27.389
	59	293.3131	25.698	89.4538	1.70	PARAMENTO	1.50	216.8024	25.698	1363600.757	1049272.722	27.388
	60	308.4237	23.657	89.4539	1.70	PARAMENTO	1.50	231.9874	23.657	1363606.764	1049269.477	27.379



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1089-E1088	E1088	0.0001	39.007	90.4522	1.70	ESTACION	1.54	179.4333	38.999	1363582.336	1049288.502	28.153
	61	338.3436	7.205	88.4247	1.70	ESTRUCTURA	1.54	338.0099	7.203	1363589.015	1049285.805	28.153
	62	339.4720	7.114	91.4809	2.60	ESTRUCTURA	1.54	339.2221	7.110	1363588.984	1049285.979	26.867
	63	7.4131	17.964	89.2422	1.70	ESTRUCTURA	1.54	7.1252	17.963	1363600.160	1049290.730	28.177
	64	8.0846	17.782	86.2043	4.00	ESTRUCTURA	1.54	7.5794	17.746	1363599.926	1049290.843	26.825
	65	100.2848	20.634	89.3030	1.70	ESTRUCTURA	1.54	99.9133	20.633	1363578.784	1049308.827	28.168
	66	73.5347	26.621	89.5006	1.70	ESTRUCTURA	1.54	73.3296	26.621	1363589.972	1049314.004	28.068
	67	73.5417	26.300	90.0558	4.00	ESTRUCTURA	1.54	73.3380	26.300	1363589.877	1049313.698	25.645
	68	99.4802	20.658	91.2347	3.50	ESTRUCTURA	1.54	99.2338	20.652	1363579.022	1049308.886	25.688
	69	44.1736	23.129	92.2502	1.70	CERCA	1.54	43.7266	23.108	1363599.035	1049304.475	27.016
	70	129.5220	21.944	92.0441	0.09	ESTRUCTURA	1.54	129.3055	21.930	1363568.444	1049305.471	28.810
	71	130.3218	21.826	92.0803	0.09	ESTRUCTURA	1.54	129.9716	21.811	1363568.324	1049305.217	28.793
	72	213.0850	23.293	90.1726	2.60	POSTE	1.54	212.5805	23.293	1363562.708	1049275.959	26.973
E1086-E1087	E1087	0.0000	30.605	89.5833	1.70	ESTACION	1.55	204.4135	103.454	1363602.465	1049237.309	27.599
	E1092	273.2453	4.233	88.0414	1.70	DELTA	1.55	297.8283	4.231	1363604.440	1049233.568	27.593
E1092-E1086	E1086	0.0000	4.232	88.3335	1.70	ESTACION	1.57	297.8283	4.231	1363604.440	1049233.568	27.593
	95	61.4443	39.082	91.3643	2.90	CERCA	1.57	179.5735	39.067	1363565.374	1049233.858	25.161
	96	63.5936	40.669	94.0324	1.70	BORDE_RIO	1.57	181.8216	40.567	1363563.893	1049232.278	24.583
	97	61.0726	42.382	92.4553	2.90	BORDE_RIO	1.57	178.9521	42.333	1363562.114	1049234.342	24.216
	98	79.4245	36.786	91.5949	1.70	PARAMENTO	1.57	197.5408	36.764	1363569.385	1049222.488	26.178
	99	78.5216	23.922	92.1138	1.70	PARAMENTO	1.57	196.6994	23.904	1363581.543	1049226.699	26.544
	100	356.2841	14.028	89.4448	2.90	CANO	1.57	114.3063	14.028	1363598.665	1049246.352	26.322
	101	317.1615	14.768	88.4851	2.90	CANO	1.57	75.0991	14.765	1363608.236	1049247.836	26.566
	102	305.0113	18.948	89.3105	2.90	CANO	1.57	62.8485	18.947	1363613.086	1049250.427	26.419
	103	291.5417	25.405	89.3617	2.90	CANO	1.57	49.7330	25.404	1363620.860	1049252.952	26.435
E13005		0.0000				ESTACION		0.0000		1363571.472	1049356.513	27.448
E13006	E13005	0.0000	30.131	86.3432	1.70	ESTACION	1.56	188.0219		1363541.737	1049352.322	25.565
	E1090	220.5315	23.884	90.1525	1.70	DELTA	1.56	228.9094	23.884	1363526.039	1049334.322	25.321
E1090-E13006	E13006	0.0000	23.874	89.2404	1.70	ESTACION	1.48	228.9094	23.884	1363526.039	1049334.322	25.321
	E1091	239.3037	50.439	90.0117	1.70	DELTA	1.48	288.4196	50.439	1363541.977	1049286.467	25.077
	73	215.3718	9.949	87.5843	2.50	BORDE_RIO	1.48	264.5310	9.943	1363525.092	1049324.424	24.647
	74	225.4913	13.495	89.1151	2.50	BORDE_RIO	1.48	274.7296	13.494	1363527.152	1049320.874	24.485
	75	230.2152	19.786	89.3416	2.50	BORDE_RIO	1.48	279.2738	19.785	1363529.228	1049314.795	24.444
	76	233.1010	27.812	91.3643	1.70	BORDE_RIO	1.48	282.0788	27.801	1363531.857	1049307.136	24.314
	77	231.5628	34.497	92.5842	1.70	BORDE_RIO	1.48	280.8505	34.450	1363532.524	1049300.487	23.303
	78	236.4456	45.847	92.2918	1.70	BORDE_RIO	1.48	285.6583	45.804	1363538.402	1049290.218	23.105



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	79	233.4706	42.785	92.4315	1.70	BORDE_RIO	1.48	282.6944	42.737	1363535.431	1049292.630	23.065
	80	256.1309	33.247	89.0338	1.70	LINDERO	1.48	305.1285	33.243	1363545.167	1049307.134	25.641
	81	249.4122	32.693	89.1050	1.70	CERCA	1.48	298.5988	32.690	1363541.687	1049305.621	25.563
E1091-E1090	E1090	0.0000	50.445	89.3430	1.70	ESTACION	1.54	288.4196	50.439	1363541.977	1049286.467	25.077
	82	199.0233	12.260	84.3348	1.70	CERCA	1.54	307.4621	12.205	1363549.400	1049276.779	26.079
	83	186.1443	12.901	85.4758	1.70	BORDE_RIO	1.54	294.6649	12.866	1363547.346	1049274.774	25.862
	84	185.3619	10.041	85.1516	1.70	BORDE_RIO	1.54	294.0249	10.007	1363546.051	1049277.327	25.748
	85	178.0505	6.927	91.3520	1.70	BORDE_RIO	1.54	286.5044	6.924	1363543.944	1049279.828	24.725
	86	151.4241	3.394	92.2203	1.70	BORDE_RIO	1.54	260.1310	3.391	1363541.395	1049283.126	24.777
	87	35.4714	1.633	91.5615	1.70	BORDE_RIO	1.54	144.2069	1.632	1363540.653	1049287.421	24.862
	88	7.0552	17.222	92.2920	1.70	BORDE_RIO	1.54	115.5174	17.206	1363534.565	1049301.994	24.169
	89	17.5527	4.235	96.0404	1.70	BORDE_RIO	1.54	126.3438	4.211	1363539.481	1049289.859	24.469
	90	8.3925	13.006	92.4515	1.70	BORDE_RIO	1.54	117.0766	12.991	1363536.063	1049298.034	24.292
	91	26.3709	9.052	100.2056	1.70	BORDE_RIO	1.54	135.0388	8.905	1363535.676	1049292.759	23.291
	92	32.2312	8.231	103.5622	1.70	BORDE_RIO	1.54	140.8063	7.989	1363535.785	1049291.515	22.934
	93	46.4646	7.562	108.5823	1.70	BORDE_RIO	1.54	155.1991	7.151	1363535.485	1049289.467	22.458
	94	49.4237	5.916	116.1327	1.70	BORDE_RIO	1.54	158.1299	5.307	1363537.051	1049288.444	22.303
E13003		0.0000				ESTACION		0.0000		1363644.156	1049411.330	27.656
EAUX	E13003	0.0001	101.863	89.5050	1.70	ESTACION	1.61	304.5469		1363701.895	1049327.466	27.444
	E1093	80.5536	57.573	89.4804	1.70	DELTA	1.61	205.4735	57.573	1363649.919	1049302.704	27.555
	104	104.1415	24.463	89.5519	1.70	PARAMENTO	1.61	228.7844	24.463	1363685.776	1049309.064	27.389
	105	116.1856	29.193	90.0426	1.70	PARAMENTO	1.61	240.8624	29.193	1363687.681	1049301.967	27.318
	106	96.2055	31.549	89.5801	1.70	PARAMENTO	1.61	220.8955	31.549	1363678.047	1049306.812	27.374
E1093-EAUX	EAUX	359.5959	57.570	89.5658	1.70	ESTACION	1.51	205.4735	57.573	1363649.919	1049302.704	27.555
	107	355.2329	19.839	89.4125	1.70	PARAMENTO	1.51	20.8649	19.839	1363668.457	1049309.770	27.476
	108	319.2137	23.254	90.0944	1.70	PARAMENTO	1.51	344.8338	23.254	1363672.363	1049296.621	27.303
	109	353.2227	36.753	88.2554	2.90	PARAMENTO	1.51	18.8477	36.739	1363684.689	1049314.573	27.174
	110	187.0317	13.038	88.3712	1.70	CERRAMIENT	1.51	212.5283	13.034	1363638.930	1049295.696	27.682
	111	209.5211	10.164	84.2132	2.30	PARAMENTO	1.51	235.3433	10.115	1363644.167	1049294.384	27.767
	112	200.3615	13.885	88.3000	1.70	PARAMENTO	1.51	226.0777	13.880	1363640.291	1049292.707	27.732
	113	251.0728	28.797	84.2559	4.40	PARAMENTO	1.51	276.5980	28.661	1363653.212	1049274.233	27.462
	114	136.5537	16.966	88.4745	1.70	PARAMENTO	1.51	162.4005	16.962	1363633.751	1049307.833	27.725
	115	123.3325	22.831	89.0154	1.70	PARAMENTO	1.51	149.0305	22.828	1363630.346	1049314.451	27.754
	116	120.2058	29.134	88.1607	2.90	LINDERO	1.51	145.8230	29.121	1363625.828	1049319.063	27.049
	117	118.1529	30.681	88.1127	2.90	LINDERO	1.51	143.7316	30.666	1363625.195	1049320.845	27.137
	118	97.4617	40.089	89.3819	1.70	LINDERO	1.51	123.2449	40.088	1363627.942	1049336.232	27.621



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12025CM		0.0000				ESTACION		0.0000		1364561.802	1048286.097	24.465
EAUX28CM	E12025CM	0.0000	71.956	90.0251	1.70	ESTACION	1.54	126.1939		1364519.313	1048344.164	24.683
	E10061JM	58.4634	18.556	89.5410	1.70	DELTA	1.54	4.9700	18.556	1364537.799	1048345.771	24.554
	1	54.1538	2.789	85.3010	1.70	MANHOLE	1.54	0.4545	2.780	1364522.093	1048344.186	24.741
	2	162.2632	1.480	83.1541	1.70	POSTE	1.54	108.6361	1.470	1364518.843	1048345.557	24.696
	3	145.3446	9.210	88.5855	1.70	POSTE	1.54	91.7734	9.209	1364519.028	1048353.368	24.686
	4	14.2416	21.501	89.3148	1.70	POSTE	1.54	320.5984	21.500	1364535.926	1048330.516	24.699
	5	352.3151	18.453	88.2525	1.70	PARAMENTO	1.54	298.7248	18.446	1364528.178	1048327.988	25.030
	6	351.3714	14.927	88.4423	1.70	PARAMENTO	1.54	297.8145	14.923	1364526.276	1048330.965	24.851
	7	3.5034	70.514	89.5650	1.70	PARAMENTO	1.54	310.0367	70.514	1364564.673	1048290.176	24.588
	8	345.2128	8.006	87.3000	1.70	PARAMENTO	1.54	291.5517	7.998	1364522.251	1048336.725	24.872
	9	308.3047	11.575	89.0540	1.70	PARAMENTO	1.54	254.7070	11.574	1364516.260	1048333.000	24.706
	10	4.3242	63.665	89.5559	1.70	PARAMENTO	1.54	310.7389	63.665	1364560.861	1048295.925	24.597
	11	5.0749	60.782	89.5845	1.70	PARAMENTO	1.54	311.3242	60.782	1364559.448	1048298.517	24.545
	12	5.0752	55.355	89.4553	1.70	PARAMENTO	1.54	311.3250	55.355	1364555.865	1048302.594	24.750
	13	277.5612	15.520	89.4739	1.70	PARAMENTO	1.54	224.1306	15.520	1364508.173	1048333.357	24.578
	14	274.4634	23.596	89.5606	1.70	PARAMENTO	1.54	220.9700	23.596	1364501.497	1048328.693	24.549
	15	8.2508	40.968	89.3017	1.70	PARAMENTO	1.54	314.6128	40.966	1364548.084	1048315.001	24.877
	16	261.3126	17.337	89.5036	1.70	PARAMENTO	1.54	207.7178	17.337	1364503.965	1048336.100	24.570
	17	196.5446	2.357	82.4921	1.70	PARAMENTO	1.54	143.1067	2.339	1364517.443	1048345.568	24.817
	18	182.3358	12.548	88.2505	1.70	PARAMENTO	1.54	128.7600	12.543	1364511.460	1048353.945	24.869
	19	182.1832	14.115	88.5018	1.70	PARAMENTO	1.54	128.5028	14.112	1364510.527	1048355.208	24.809
	20	181.1618	21.979	89.3636	1.70	PARAMENTO	1.54	127.4656	21.978	1364505.944	1048361.609	24.672
	21	22.4255	7.626	89.0600	1.70	TERRENO	1.54	328.9092	7.625	1364525.843	1048340.226	24.642
	22	38.5136	9.004	88.5923	1.70	TERRENO	1.54	345.0539	9.003	1364528.011	1048341.842	24.681
	23	5.4736	22.738	89.4251	1.70	TERRENO	1.54	311.9873	22.738	1364534.524	1048327.263	24.636
	24	11.0108	23.430	89.4139	1.70	TERRENO	1.54	317.2128	23.430	1364536.507	1048328.249	24.648
	25	1.1617	41.920	89.5341	1.70	TERRENO	1.54	307.4653	41.920	1364544.812	1048310.891	24.600
	26	5.2957	42.060	89.5555	1.70	TERRENO	1.54	311.6931	42.060	1364547.289	1048312.757	24.573
	27	0.2639	57.395	90.0124	1.70	TERRENO	1.54	306.6381	57.395	1364553.564	1048298.109	24.499
	28	4.0158	57.285	90.0013	1.70	TERRENO	1.54	310.2267	57.285	1364556.308	1048300.427	24.519
	29	0.0615	75.743	90.0328	1.70	LINDERO	1.54	306.2981	75.743	1364564.152	1048283.119	24.446
	30	1.3243	76.157	89.5754	1.70	LINDERO	1.54	307.7392	76.157	1364565.926	1048283.939	24.569
	31	8.5130	39.646	89.5051	1.70	PARAMENTO	1.54	315.0523	39.646	1364547.372	1048316.156	24.628
	32	10.5052	39.953	90.0534	1.70	PARAMENTO	1.54	317.0417	39.953	1364548.552	1048316.937	24.458
	33	263.1208	8.249	89.2428	1.70	TERRENO	1.54	209.3961	8.249	1364512.126	1048340.115	24.608



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	34	283.5753	8.802	89.3505	1.70	TERRENO	1.54	230.1586	8.802	1364513.674	1048337.406	24.586
	35	263.3213	22.515	90.0030	1.70	TERRENO	1.54	209.7309	22.515	1364499.762	1048332.998	24.519
	36	271.0313	22.838	90.0355	1.70	TERRENO	1.54	217.2475	22.838	1364501.133	1048330.341	24.497
	37	266.4623	38.782	89.4618	1.70	PARAMENTO	1.54	212.9670	38.782	1364486.776	1048323.061	24.677
	38	271.4159	37.863	90.0012	1.70	PARAMENTO	1.54	217.8936	37.863	1364489.433	1048320.908	24.520
	39	269.1514	32.166	89.5814	1.70	NADA	1.54	215.4478	32.166	1364493.109	1048325.509	24.539
	40	270.0518	32.140	90.0131	1.70	MANHOLE	1.54	216.2823	32.140	1364493.404	1048325.145	24.508
	41	271.4415	31.654	90.0131	1.70	PARAMENTO	1.54	217.9314	31.654	1364494.346	1048324.706	24.509
	42	271.5734	25.695	89.5954	1.70	PARAMENTO	1.54	218.1534	25.695	1364499.107	1048328.290	24.523
	43	274.3320	25.574	89.5500	1.70	PARAMENTO	1.54	220.7495	25.574	1364499.939	1048327.470	24.560
	44	270.5806	28.791	90.0054	1.70	POSTE	1.54	217.1623	28.791	1364496.368	1048326.772	24.515
	45	293.3423	16.778	90.2842	1.50	PARAMENTO	1.54	239.7670	16.777	1364510.865	1048329.668	24.583
	46	139.3712	6.790	88.0636	1.70	TERRENO	1.54	85.8139	6.786	1364519.808	1048350.932	24.747
	47	168.3723	5.576	87.5950	1.70	TERRENO	1.54	114.8170	5.573	1364516.974	1048349.222	24.718
	48	177.1921	21.576	89.3334	1.70	TERRENO	1.54	123.5164	21.575	1364507.399	1048362.152	24.689
	49	168.5414	22.121	89.2906	1.70	TERRENO	1.54	115.0978	22.120	1364509.930	1048364.195	24.721
	50	179.1452	35.571	89.3616	1.70	TERRENO	1.54	125.4417	35.570	1364498.687	1048373.143	24.768
	51	173.2317	36.715	89.3531	1.70	TERRENO	1.54	119.5820	36.714	1364501.188	1048376.092	24.784
	52	180.2534	45.392	89.4230	1.70	TERRENO	1.54	126.6200	45.391	1364492.237	1048380.595	24.754
	53	176.5331	45.887	89.3150	1.70	TERRENO	1.54	123.0859	45.885	1364494.264	1048382.609	24.899
	54	171.1331	35.383	89.3348	1.70	PARAMENTO	1.54	117.4192	35.382	1364503.020	1048375.571	24.792
	55	170.0507	33.011	89.3034	1.70	PARAMENTO	1.54	116.2792	33.010	1364504.698	1048373.762	24.805
	56	151.1348	24.689	89.3952	1.70	PARAMENTO	1.54	97.4239	24.689	1364516.123	1048368.645	24.667
	57	122.1310	15.200	92.1123	1.70	ARBOL	1.54	68.4134	15.189	1364524.901	1048358.287	23.942
	58	146.3701	16.111	89.2727	1.70	ARBOL	1.54	92.8109	16.110	1364518.523	1048360.255	24.675
	59	62.2816	10.642	88.2354	1.70	ARBOL	1.54	8.6650	10.638	1364529.829	1048345.767	24.820
	60	42.4355	15.452	89.3116	1.70	ARBOL	1.54	348.9259	15.451	1364534.477	1048341.196	24.652
	61	78.1102	9.188	88.0449	1.70	ARBOL	1.54	24.3778	9.183	1364527.677	1048347.954	24.830
	62	43.4711	12.687	89.1227	1.70	ARBOL	1.54	349.9803	12.686	1364531.805	1048341.957	24.698
E10061JM-EAUX28CM	EAUX28CM	0.0000	18.561	88.4124	1.70	ESTACION	1.40	4.9700	18.556	1364537.799	1048345.771	24.554
	E10062JM	135.2017	30.288	90.3348	1.70	DELTA	1.40	320.3081	30.287	1364561.104	1048326.429	23.959
	E10063JM	149.0943	21.618	91.3959	1.70	DELTA	1.40	334.1320	21.609	1364557.243	1048336.343	23.628
	63	337.0550	6.563	85.0813	1.70	TERRENO	1.40	162.0673	6.539	1364531.577	1048347.785	24.813
	64	318.5742	13.010	87.1846	1.70	TERRENO	1.40	143.9317	12.996	1364527.294	1048353.423	24.867
	65	298.3937	4.661	88.2919	1.70	TERRENO	1.40	123.6303	4.659	1364535.219	1048349.651	24.380
	66	303.1341	12.432	92.4035	1.70	TERRENO	1.40	128.1981	12.418	1364530.120	1048355.531	23.677



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	67	256.2848	6.610	99.2547	1.70	TERRENO	1.40	81.4500	6.521	1364538.768	1048352.220	23.174
	68	285.3739	13.407	96.4211	1.70	TERRENO	1.40	110.5975	13.315	1364533.115	1048358.236	22.692
	69	239.1433	10.579	104.3307	1.70	TERRENO	1.40	64.2125	10.240	1364542.254	1048354.991	21.599
	70	239.3111	10.953	105.4523	1.70	TERRENO	1.40	64.4898	10.541	1364542.339	1048355.285	21.283
	71	271.4214	15.714	96.3218	2.90	TERRENO	1.40	96.6739	15.612	1364535.985	1048361.277	21.268
	72	231.5935	13.341	106.0024	1.70	TERRENO	1.40	56.9631	12.824	1364544.790	1048356.522	20.578
	73	266.3711	17.950	95.3848	3.90	TERRENO	1.40	91.5898	17.863	1364537.303	1048363.627	20.291
	74	263.3515	20.730	100.3105	2.90	TERRENO	1.40	88.5575	20.382	1364538.312	1048366.147	19.273
	75	90.3005	7.007	87.1153	1.70	TERRENO	1.40	275.4714	6.999	1364538.466	1048338.805	24.600
	76	101.0608	14.794	88.3048	1.70	TERRENO	1.40	286.0723	14.789	1364541.893	1048331.560	24.641
	77	125.0918	5.900	91.2242	1.70	TERRENO	1.40	310.1250	5.898	1364541.600	1048341.261	24.115
	78	124.2013	13.999	89.2913	1.70	TERRENO	1.40	309.3070	13.998	1364546.667	1048334.940	24.382
	79	173.3007	8.670	94.2334	1.70	TERRENO	1.40	358.4720	8.645	1364546.441	1048345.541	23.593
	80	153.5823	15.826	91.5057	1.70	TERRENO	1.40	338.9431	15.818	1364552.561	1048340.088	23.746
	81	179.1526	11.199	99.3534	1.70	TERRENO	1.40	4.2273	11.042	1364548.811	1048346.585	22.391
	82	184.1558	13.196	102.5837	2.00	TERRENO	1.40	9.2361	12.859	1364550.491	1048347.835	20.994
	83	158.0203	16.813	93.3406	1.70	TERRENO	1.40	343.0042	16.780	1364553.847	1048340.866	23.211
	84	113.2827	20.991	89.5211	1.70	TERRENO	1.40	298.4442	20.991	1364547.797	1048327.314	24.305
	85	114.3203	28.232	89.5744	1.70	TERRENO	1.40	299.5042	28.232	1364551.703	1048321.201	24.276
	86	127.3131	20.920	91.0946	1.70	TERRENO	1.40	312.4953	20.916	1364551.928	1048330.350	23.833
	87	127.1711	27.982	90.2007	1.70	TERRENO	1.40	312.2564	27.982	1364556.615	1048325.061	24.093
	88	142.0531	20.755	91.3818	1.70	TERRENO	1.40	327.0620	20.747	1364555.211	1048334.491	23.664
	89	138.2948	30.640	90.5656	1.70	TERRENO	1.40	323.4667	30.636	1364562.415	1048327.534	23.750
	90	155.0354	21.124	93.3146	1.70	TERRENO	1.40	340.0350	21.084	1364557.616	1048338.572	22.957
	91	142.1037	30.173	91.5810	1.70	TERRENO	1.40	327.1470	30.155	1364563.131	1048329.413	23.220
	92	133.1751	31.096	88.1309	2.90	PARAMENTO	1.40	318.2675	31.081	1364560.994	1048325.082	24.023
E10063JM-E10061JM	E10061JM	0.0001	21.633	87.1609	1.70	ESTACION	1.58	334.1320	21.609	1364557.243	1048336.343	23.628
	E10064JM	248.1323	31.076	93.2733	1.70	DELTA	1.58	42.3550	31.019	1364580.166	1048357.242	21.635
	93	249.5733	27.647	94.5338	1.70	TERRENO	1.58	44.0911	27.546	1364577.027	1048355.510	21.152
	94	249.5733	27.080	97.3545	1.70	TERRENO	1.58	44.0911	26.842	1364576.522	1048355.020	19.931
	95	249.5733	25.296	101.2548	1.70	TERRENO	1.58	44.0911	24.794	1364575.051	1048353.595	18.498
	96	249.5732	22.862	105.4935	1.70	TERRENO	1.58	44.0909	21.995	1364573.041	1048351.648	17.275
	97	249.5733	22.785	106.0629	1.70	AGUA_MIN	1.58	44.0911	21.890	1364572.965	1048351.575	17.189
	98	249.4459	22.736	108.1701	1.70	FONDO_RIO	1.58	43.8817	21.588	1364572.803	1048351.308	16.378
	99	249.4459	23.016	110.2612	0.00	RIO	1.58	43.8817	21.567	1364572.788	1048351.293	17.174
	100	265.4710	24.249	101.5153	2.90	BORDE_RIO	1.58	59.9181	23.731	1364569.138	1048356.878	17.325



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	101	282.0231	27.916	98.0315	4.00	BORDE_RIO	1.58	76.1739	27.641	1364563.848	1048363.183	17.299
	102	285.0405	29.386	102.0533	1.70	BORDE_RIO	1.58	79.2000	28.734	1364562.627	1048364.568	17.354
	103	283.3103	31.315	101.1223	1.70	BORDE_RIO	1.58	77.6495	30.718	1364563.813	1048366.351	17.425
	104	283.2207	33.072	100.0005	1.70	BORDE_RIO	1.58	77.5006	32.569	1364564.292	1048368.141	17.767
	105	289.0944	35.552	101.5356	0.09	BORDE_RIO	1.58	83.2942	34.788	1364561.305	1048370.894	17.795
	106	293.5355	38.245	101.2053	0.09	BORDE_RIO	1.58	88.0306	37.497	1364558.531	1048373.819	17.600
	107	290.2720	38.536	98.0319	1.70	TERRENO	1.58	84.5875	38.156	1364560.842	1048374.329	18.110
	108	285.5806	35.459	98.3022	1.70	TERRENO	1.58	80.1003	35.069	1364563.272	1048370.890	18.266
	109	280.4506	33.352	99.1652	1.70	TERRENO	1.58	74.8836	32.915	1364565.826	1048368.120	18.132
	110	275.2847	32.255	99.0815	1.70	TERRENO	1.58	69.6117	31.846	1364568.337	1048366.194	18.388
	111	267.2802	28.984	98.0623	1.70	TERRENO	1.58	61.5992	28.694	1364570.891	1048361.584	19.423
	112	259.4621	27.535	97.0545	1.70	TERRENO	1.58	53.9045	27.324	1364573.340	1048358.422	20.109
	113	248.3611	34.195	91.3153	1.70	TERRENO	1.58	42.7350	34.183	1364582.350	1048359.540	22.597
E10062JM-E10061JM	E10061JM	0.0000	30.296	88.3524	1.70	ESTACION	1.54	320.3081	30.287	1364561.104	1048326.429	23.959
	E10065JM	182.1606	32.826	91.3337	1.70	DELTA	1.54	322.5764	32.814	1364587.164	1048306.488	22.907
	114	162.4252	5.720	88.1816	1.70	TERRENO	1.54	303.0225	5.717	1364564.220	1048321.635	23.970
	115	195.3108	6.927	98.0153	1.70	TERRENO	1.54	335.8270	6.859	1364567.362	1048323.620	22.833
	116	164.2338	11.223	86.5124	1.70	TERRENO	1.54	304.7020	11.206	1364567.484	1048317.216	24.416
	117	177.5514	10.283	90.3332	1.70	TERRENO	1.54	318.2286	10.283	1364568.773	1048319.579	23.700
	118	189.4735	10.996	95.5954	1.70	TERRENO	1.54	330.1011	10.936	1364570.585	1048320.977	22.651
E10065JM-E10062JM	E10062JM	359.5959	32.837	87.5231	1.70	ESTACION	1.53	322.5764	32.814	1364587.164	1048306.488	22.907
	E10066JM	257.3723	31.005	92.1348	1.70	DELTA	1.53	40.1995	30.982	1364610.828	1048326.485	21.531
	119	256.5903	28.851	93.2051	1.70	TERRENO	1.53	39.5606	28.802	1364609.369	1048324.831	21.053
	120	256.5905	1.413	91.0450	1.70	TERRENO	1.53	39.5611	1.413	1364588.253	1048307.387	22.711
	121	257.3726	26.191	100.0846	1.70	TERRENO	1.53	40.2003	25.781	1364606.855	1048323.129	18.124
	122	257.2523	25.503	101.2237	1.70	TERRENO	1.53	39.9995	25.002	1364606.317	1048322.558	17.707
	123	258.0247	24.813	106.5637	0.09	AGUA_MIN	1.53	40.6228	23.736	1364605.180	1048321.942	17.121
	124	253.2006	3.551	117.4512	1.70	TERRENO	1.53	35.9114	3.142	1364589.709	1048308.331	21.084
	125	250.2852	5.171	111.0303	2.60	TERRENO	1.53	33.0575	4.826	1364591.209	1048309.120	19.980
	126	246.4955	25.457	103.0133	1.70	BORDE_RIO	1.53	29.4084	24.802	1364608.770	1048318.666	17.000
	127	238.1826	26.383	102.1018	1.70	BORDE_RIO	1.53	20.8836	25.790	1364611.259	1048315.681	17.175
	128	258.5716	33.967	91.2845	1.70	TERRENO	1.53	41.5309	33.956	1364612.583	1048329.001	21.861
	129	21.3705	11.945	86.3056	1.70	TERRENO	1.53	164.1945	11.923	1364575.692	1048309.735	23.464
	130	348.1528	8.474	85.2252	1.70	TERRENO	1.53	130.8342	8.446	1364581.641	1048312.878	23.420
	131	347.1931	9.420	84.3245	1.70	ARBOL	1.53	129.9017	9.377	1364581.148	1048313.681	23.633
	132	260.1528	39.337	87.2608	1.70	TERRENO	1.53	42.8342	39.298	1364615.982	1048333.205	24.498



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	133	259.5343	45.118	87.4903	1.70	TERRENO	1.53	42.4717	45.085	1364620.419	1048336.930	24.456
	134	339.5438	5.438	82.5430	1.70	ARBOL	1.53	122.4870	5.396	1364584.265	1048311.040	23.409
	135	283.1927	2.775	96.2909	1.70	ARBOL	1.53	65.9006	2.757	1364588.290	1048309.005	22.424
	136	315.0051	3.799	91.2415	1.70	TERRENO	1.53	97.5906	3.798	1364586.662	1048310.252	22.644
	137	63.3553	10.201	86.4105	1.70	TERRENO	1.53	206.1745	10.184	1364578.024	1048301.995	23.327
	138	103.0657	10.806	86.5938	1.70	TERRENO	1.53	245.6923	10.791	1364582.722	1048296.653	23.304
	139	177.1544	4.121	95.0151	1.70	TERRENO	1.53	319.8386	4.105	1364590.301	1048303.840	22.376
	140	39.2214	16.906	86.2918	1.50	PARAMENTO	1.53	181.9470	16.874	1364570.299	1048305.914	23.973
	141	55.1950	15.554	82.5818	2.40	PARAMENTO	1.53	197.9070	15.437	1364572.475	1048301.741	23.941
	142	75.5307	15.069	83.0703	1.70	PARAMENTO	1.53	218.4617	14.960	1364575.449	1048297.182	24.543
	143	26.5458	19.740	84.3231	1.70	PARAMENTO	1.53	169.4925	19.651	1364567.843	1048310.071	24.615
	144	23.3526	18.778	83.5345	2.10	PARAMENTO	1.53	166.1670	18.672	1364569.034	1048310.952	24.334
E10064JM-E10063JM	E10063JM	0.0000	31.109	86.0225	1.70	ESTACION	1.53	42.3550	31.019	1364580.166	1048357.242	21.635
	1	177.3814	10.098	70.0158	1.70	TERRENO	1.53	39.9923	9.491	1364587.437	1048363.342	24.918
	2	190.4741	11.375	75.0154	1.50	TERRENO	1.53	53.1498	10.989	1364586.756	1048366.035	24.607
	3	200.1614	12.522	77.0325	1.50	TERRENO	1.53	62.6256	12.204	1364585.777	1048368.079	24.474
	4	169.1731	8.253	71.0458	1.50	TERRENO	1.53	31.6470	7.807	1364586.812	1048361.338	24.345
	5	176.1059	8.973	72.1925	1.50	TERRENO	1.53	38.5381	8.549	1364586.853	1048362.568	24.394
	6	191.0511	10.335	76.3426	1.50	TERRENO	1.53	53.4414	10.053	1364586.153	1048365.317	24.069
	7	301.5938	40.579	95.5812	1.70	RIO	1.53	164.3489	40.359	1364541.303	1048368.130	17.249
	8	308.4739	33.978	96.4249	1.70	RIO	1.53	171.1492	33.745	1364546.822	1048362.434	17.497
	9	317.5855	30.770	97.4348	1.70	RIO	1.53	180.3370	30.490	1364549.676	1048357.063	17.331
	10	332.1633	26.037	99.3812	1.70	RIO	1.53	194.6309	25.670	1364555.328	1048350.758	17.111
	11	350.4641	23.067	99.4712	1.70	RIO	1.53	213.1331	22.731	1364561.130	1048344.817	17.549
	12	8.5110	21.944	100.2956	1.70	RIO	1.53	231.2078	21.577	1364566.648	1048340.425	17.471
	13	8.3624	23.190	97.0606	1.70	TERRENO	1.53	230.9617	23.012	1364565.672	1048339.368	18.602
	14	352.3640	24.061	96.5624	1.70	TERRENO	1.53	214.9661	23.885	1364560.592	1048343.554	18.562
	15	338.2922	26.890	96.3802	1.70	TERRENO	1.53	200.8445	26.710	1364555.204	1048347.738	18.363
	16	330.3206	28.049	96.4830	1.70	TERRENO	1.53	192.8900	27.851	1364553.016	1048351.029	18.144
	17	314.2947	34.113	95.2923	1.70	TERRENO	1.53	176.8514	33.957	1364546.260	1048359.107	18.206
	18	304.3533	41.032	94.2732	1.70	TERRENO	1.53	166.9475	40.908	1364540.315	1048366.481	18.279
	19	301.4957	45.318	94.2039	1.70	TERRENO	1.53	164.1875	45.188	1364536.688	1048369.555	18.037
	20	0.0000	27.261	88.5535	1.70	TERRENO	1.53	222.3550	27.256	1364560.024	1048338.879	21.980
	21	0.0000	24.624	94.4405	1.70	TERRENO	1.53	222.3550	24.540	1364562.031	1048340.709	19.437
	22	0.0000	23.410	98.0744	1.70	TERRENO	1.53	222.3550	23.175	1364563.040	1048341.629	18.159
	23	0.0000	22.376	100.5432	1.70	TERRENO	1.53	222.3550	21.972	1364563.929	1048342.439	17.235



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	24	0.0000	21.997	102.0539	1.70	RIO	1.53	222.3550	21.509	1364564.271	1048342.751	16.861
	25	0.0000	21.921	100.5538	1.70	RIO	1.53	222.3550	21.524	1364564.260	1048342.741	17.314
	26	0.0000	10.598	114.0826	2.50	RIO	1.53	222.3550	9.671	1364573.019	1048350.726	16.335
	27	0.0000	9.712	110.1417	2.50	RIO	1.53	222.3550	9.112	1364573.432	1048351.103	17.310
	28	0.0000	8.676	111.0159	2.50	TERRENO	1.53	222.3550	8.098	1364574.181	1048351.786	17.556
	29	0.0000	7.169	110.4935	2.50	TERRENO	1.53	222.3550	6.701	1364575.214	1048352.728	18.121
	30	0.0000	5.456	108.2214	2.50	TERRENO	1.53	222.3550	5.178	1364576.339	1048353.753	18.950
	31	0.0000	3.766	96.0727	1.70	TERRENO	1.53	222.3550	3.745	1364577.398	1048354.719	21.068
	32	52.0634	4.655	91.2758	1.70	TERRENO	1.53	274.4645	4.653	1364580.528	1048352.603	21.350
	33	26.1258	4.163	94.4916	1.70	TERRENO	1.53	248.5711	4.148	1364578.650	1048353.380	21.120
	34	342.4300	3.426	94.3525	1.70	TERRENO	1.53	205.0717	3.415	1364577.072	1048355.795	21.195
	35	309.5708	4.154	88.0206	1.70	TERRENO	1.53	172.3073	4.152	1364576.051	1048357.798	21.612
	36	290.2507	4.868	90.2503	1.70	TERRENO	1.53	152.7736	4.868	1364575.837	1048359.469	21.434
	37	265.4804	4.456	77.2805	1.70	TERRENO	1.53	128.1561	4.350	1364577.478	1048360.662	22.436
	38	262.0555	2.690	72.3745	1.70	TERRENO	1.53	124.4536	2.567	1364578.713	1048359.359	22.273
	39	259.4229	1.733	80.4045	1.70	TERRENO	1.53	122.0631	1.710	1364579.258	1048358.691	21.750
	40	96.0743	1.806	80.1924	1.70	TERRENO	1.53	318.4836	1.780	1364581.499	1048356.062	21.773
	41	134.1219	2.406	75.0947	1.70	TERRENO	1.53	356.5603	2.326	1364582.487	1048357.102	22.086
	42	189.3938	1.979	68.3218	1.70	TERRENO	1.53	52.0156	1.842	1364581.299	1048358.694	22.194
	43	244.4227	2.796	71.4920	1.70	TERRENO	1.53	107.0625	2.656	1364579.386	1048359.781	22.342
	44	246.2954	4.669	76.1409	1.70	TERRENO	1.53	108.8534	4.535	1364578.700	1048361.534	22.580
	45	244.4353	5.182	76.5253	1.70	TERRENO	1.53	107.0864	5.047	1364578.683	1048362.066	22.646
	46	0.0000	11.436	112.3638	2.50	RIO	1.53	222.3550	10.557	1364572.364	1048350.129	16.273
	47	0.0000	11.765	112.0414	1.50	RIO	1.53	222.3550	10.903	1364572.109	1048349.896	17.249
	48	0.0000	13.410	109.1156	2.50	RIO	1.53	222.3550	12.664	1364570.807	1048348.710	16.260
	49	0.0000	13.491	108.5406	1.50	RIO	1.53	222.3550	12.764	1364570.734	1048348.643	17.299
	50	0.0000	16.839	108.3600	1.50	RIO	1.53	222.3550	15.959	1364568.372	1048346.490	16.298
	51	0.0000	16.664	105.1717	1.50	RIO	1.53	222.3550	16.074	1364568.287	1048346.412	17.276
	52	0.0000	20.734	104.5826	1.50	RIO	1.53	222.3550	20.030	1364565.364	1048343.747	16.312
	53	0.0000	20.640	102.2258	1.50	RIO	1.53	222.3550	20.160	1364565.268	1048343.660	17.243
	54	354.4815	3.614	98.5828	1.50	AGUA_MAX	1.53	217.1592	3.570	1364577.321	1048355.086	21.106
	55	343.1333	28.344	93.1609	1.70	AGUA_MAX	1.53	205.5809	28.298	1364554.642	1048345.023	19.853
	56	359.0648	24.920	94.3459	1.70	AGUA_MAX	1.53	221.4684	24.840	1364561.552	1048340.793	19.478
	57	319.5803	4.599	99.3611	1.70	AGUA_MAX	1.53	182.3225	4.535	1364575.635	1048357.058	20.702
	58	312.2456	5.254	100.5654	1.50	AGUA_MAX	1.53	174.7706	5.158	1364575.029	1048357.712	20.672
	59	4.3658	24.588	94.2344	1.70	AGUA_MAX	1.53	226.9711	24.516	1364563.437	1048339.321	19.585



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	60	201.1054	1.958	78.2536	1.50	TERRENO	1.53	63.5367	1.918	1364581.020	1048358.959	22.062
	61	158.4844	1.909	76.5356	1.50	TERRENO	1.53	21.1673	1.859	1364581.899	1048357.913	22.102
	62	135.4517	2.523	80.3421	1.50	TERRENO	1.53	358.1098	2.489	1364582.653	1048357.160	22.083
	63	139.5305	3.674	72.4257	1.50	TERRENO	1.53	2.2398	3.508	1364583.671	1048357.379	22.761
	64	171.2147	3.569	68.1425	1.50	TERRENO	1.53	33.7181	3.315	1364582.923	1048359.082	22.993
	65	198.2335	4.354	73.3739	1.50	TERRENO	1.53	60.7481	4.177	1364582.207	1048360.887	22.897
	66	338.0005	28.393	94.1403	1.70	AGUA_MAX	1.53	200.3564	28.316	1364553.618	1048347.392	19.373
	67	324.1004	30.684	93.3725	1.70	AGUA_MAX	1.53	186.5228	30.623	1364549.741	1048353.763	19.530
	68	314.5736	35.964	93.1006	1.70	AGUA_MAX	1.53	177.3150	35.909	1364544.296	1048358.924	19.482
	69	308.5457	43.498	91.4002	1.70	AGUA_MAX	1.53	171.2709	43.480	1364537.190	1048363.841	20.204
E11008		0.0000				ESTACION		0.0000		1364538.777	1048612.230	24.766
E11010	E11008	0.0000	41.165	89.4603	1.70	ESTACION	1.53	350.8459		1364579.363	1048605.690	24.766
	E13012	133.0243	108.985	90.0530	1.70	DELTA	1.53	303.8911	108.985	1364640.135	1048515.221	24.423
E13012-E11010	E11010	0.0000	108.978	89.4314	1.70	ESTACION	1.45	303.8911	108.985	1364640.135	1048515.221	24.423
	E13013	180.5250	92.329	89.5020	1.70	DELTA	1.45	304.7717	92.329	1364692.791	1048439.380	24.433
E13013-E13012	E13012	0.0000	92.309	89.5155	1.70	ESTACION	1.49	304.7717	92.329	1364692.791	1048439.380	24.433
	E13014	84.4401	35.967	89.2414	1.70	DELTA	1.49	209.5053	35.965	1364661.490	1048421.667	24.593
	1	15.5356	6.828	88.5536	1.70	BORDE_VIA	1.49	140.6706	6.827	1364687.510	1048443.706	24.347
	2	334.0746	6.921	89.1746	1.70	BORDE_VIA	1.49	98.9011	6.920	1364691.720	1048446.217	24.304
	3	95.5010	26.581	89.1952	1.70	BORDE_VIA	1.49	220.6078	26.579	1364672.612	1048422.080	24.529
	4	86.2103	26.627	89.4456	1.70	BORDE_VIA	1.49	211.1225	26.627	1364669.996	1048425.617	24.336
	5	204.1319	6.624	89.3511	1.70	BORDE_VIA	1.49	328.9936	6.624	1364698.468	1048435.968	24.267
	6	167.5349	6.242	88.5528	1.70	BORDE_VIA	1.49	292.6686	6.241	1364695.196	1048433.621	24.336
	7	81.4116	9.652	89.1840	1.70	BORDE_VIA	1.49	206.4595	9.651	1364684.150	1048435.079	24.335
	8	104.0549	9.318	89.5758	1.70	BORDE_VIA	1.49	228.8686	9.318	1364686.661	1048432.361	24.225
	9	101.2740	25.142	89.3056	1.70	PARAMENTO	1.49	226.2328	25.141	1364675.400	1048421.224	24.432
	10	102.4018	22.736	89.2738	1.70	PARAMENTO	1.49	227.4434	22.735	1364677.415	1048422.633	24.433
	11	110.2703	17.207	89.2642	1.70	PARAMENTO	1.49	235.2225	17.206	1364682.976	1048425.247	24.386
	12	105.1223	22.921	89.3733	1.70	PARAMENTO	1.49	229.9781	22.921	1364678.051	1048421.827	24.369
	13	122.0323	14.903	89.0343	1.70	PARAMENTO	1.49	246.8281	14.901	1364686.927	1048425.681	24.463
	14	116.3303	17.911	88.0540	2.00	PARAMENTO	1.49	241.3225	17.901	1364684.200	1048423.675	24.515
	15	133.3637	17.361	89.2003	1.70	PARAMENTO	1.49	258.3820	17.360	1364689.295	1048422.376	24.421
	16	137.4952	18.680	88.4237	1.70	PARAMENTO	1.49	262.6028	18.675	1364690.386	1048420.860	24.640
	17	145.0507	21.777	89.1918	1.70	PARAMENTO	1.49	269.8570	21.775	1364692.736	1048417.604	24.477
	18	73.4324	14.989	88.2825	1.70	PARAMENTO	1.49	198.4950	14.984	1364678.581	1048434.627	24.618
	19	59.2124	16.799	87.3615	1.70	PARAMENTO	1.49	184.1284	16.784	1364676.050	1048438.171	24.921



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	20	57.0912	15.478	87.2309	1.70	PARAMENTO	1.49	181.9250	15.462	1364677.337	1048438.860	24.925
	21	81.0622	26.213	88.2839	2.00	PARAMENTO	1.49	205.8778	26.204	1364669.214	1048427.943	24.616
	22	56.0902	15.455	88.0530	2.00	PARAMENTO	1.49	180.9222	15.446	1364677.346	1048439.131	24.434
	23	47.3411	17.558	88.3955	1.70	PARAMENTO	1.49	172.3414	17.553	1364675.394	1048441.719	24.628
	24	33.4037	23.503	89.0140	1.70	PARAMENTO	1.49	158.4486	23.500	1364670.934	1048448.012	24.618
	25	74.2732	9.714	87.1958	1.70	ANDEN	1.49	199.2306	9.703	1364683.629	1048436.184	24.671
	26	72.1312	11.486	87.4342	1.70	ANDEN	1.49	196.9917	11.477	1364681.815	1048436.026	24.674
	27	38.3534	15.185	88.3226	1.70	ANDEN	1.49	163.3645	15.180	1364678.246	1048443.726	24.606
	28	85.0712	28.305	88.5506	1.70	ANDEN	1.49	209.8917	28.300	1364668.255	1048425.276	24.753
	29	43.5846	15.919	88.3536	1.70	ANDEN	1.49	168.7511	15.914	1364677.182	1048442.484	24.610
	30	82.5309	27.297	88.4843	1.70	ANDEN	1.49	207.6575	27.291	1364668.618	1048426.712	24.785
	31	98.1432	24.884	89.3206	1.70	ANDEN	1.49	223.0139	24.883	1364674.596	1048422.405	24.421
	32	113.5957	12.254	89.0021	1.70	ANDEN	1.49	238.7709	12.252	1364686.438	1048428.903	24.432
	33	101.0328	25.111	89.3001	1.70	ANDEN	1.49	225.8295	25.110	1364675.294	1048421.369	24.438
	34	111.5416	9.457	88.4352	1.70	ANDEN	1.49	236.6761	9.455	1364687.597	1048431.480	24.429
	35	124.4458	10.558	89.1602	1.70	ANDEN	1.49	249.5211	10.557	1364689.097	1048429.490	24.354
	36	123.1010	10.966	88.4904	1.70	ANDEN	1.49	247.9411	10.964	1364688.673	1048429.219	24.445
	37	117.5844	12.683	89.0425	1.70	ANDEN	1.49	242.7506	12.681	1364686.984	1048428.106	24.424
	38	84.1151	31.027	89.0033	1.70	MANHOLE	1.49	208.9692	31.022	1364665.650	1048424.354	24.756
	39	306.4828	13.336	89.1107	1.70	PARAMENTO	1.49	71.5795	13.335	1364697.004	1048452.031	24.409
	40	338.1542	27.822	89.5525	1.70	PARAMENTO	1.49	103.0334	27.822	1364686.516	1048466.485	24.256
	41	45.1102	16.313	88.3453	1.70	POSTE	1.49	169.9556	16.308	1364676.733	1048442.224	24.623
E13013GP		0.0000				ESTACION		0.0000		1364692.791	1048439.380	24.433
E13014GP	E13013GP	359.5959	35.990	90.0425	1.70	ESTACION	1.57	209.5053		1364661.490	1048421.667	24.593
	E10067JM	186.5030	69.536	89.5148	1.70	DELTA	1.57	216.3470	69.536	1364605.483	1048380.455	24.624
	145	45.3445	12.813	88.1701	1.70	PARAMENTO	1.57	75.0845	12.807	1364664.786	1048434.043	24.842
	146	318.4026	16.319	89.3732	1.70	PARAMENTO	1.57	348.1792	16.319	1364677.462	1048418.324	24.565
	147	101.3425	9.918	88.0841	1.70	PARAMENTO	1.57	131.0789	9.913	1364654.976	1048429.139	24.779
	148	100.0211	14.075	88.4114	1.70	PARAMENTO	1.57	129.5417	14.071	1364652.532	1048432.518	24.781
	149	96.3712	7.805	87.5324	1.70	POSTE	1.57	126.1253	7.800	1364656.892	1048427.967	24.746
	150	166.3040	28.679	89.1039	1.70	PARAMENTO	1.57	196.0164	28.676	1364633.927	1048413.755	24.870
	151	182.5152	37.967	89.2119	1.70	PARAMENTO	1.57	212.3697	37.965	1364629.425	1048401.341	24.886
	152	176.2341	38.456	89.2118	1.70	PARAMENTO	1.57	205.9000	38.454	1364626.899	1048404.870	24.891
	153	182.4306	36.881	89.2106	1.70	POSTE	1.57	212.2236	36.879	1364630.292	1048402.002	24.876
	154	181.1149	35.205	89.3152	1.70	MANHOLE	1.57	210.7022	35.204	1364631.220	1048403.693	24.746
	155	186.3716	38.047	89.5501	1.70	MANHOLE	1.57	216.1264	38.047	1364630.759	1048399.236	24.513



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	156	261.1907	8.369	90.1332	1.70	POSTE	1.57	290.8239	8.369	1364664.465	1048413.845	24.425
	157	189.3104	35.197	89.5501	1.70	ARBOL	1.57	219.0231	35.197	1364634.146	1048399.506	24.509
	158	55.4122	4.608	89.1332	1.70	TERRENO	1.57	85.1947	4.608	1364661.876	1048426.258	24.521
E10067JM-E13014GP	E13014GP	359.5959	69.543	89.5556	1.70	ESTACION	1.58	216.3470	69.536	1364605.483	1048380.455	24.624
	159	3.0237	48.524	90.0008	1.70	TERRENO	1.58	39.3906	48.524	1364642.984	1048411.248	24.505
	160	345.0622	50.565	90.1405	1.70	TERRENO	1.58	21.4531	50.565	1364652.544	1048398.948	24.300
	161	3.1728	26.494	90.0447	1.70	TERRENO	1.58	39.6381	26.494	1364625.885	1048397.356	24.470
	162	341.3040	29.736	90.0803	1.70	TERRENO	1.58	17.8581	29.736	1364633.786	1048389.574	24.438
	163	14.5136	7.028	89.1612	1.70	TERRENO	1.58	51.2070	7.027	1364609.886	1048385.932	24.597
	164	9.4344	4.371	88.2631	1.70	MANHOLE	1.58	46.0759	4.369	1364608.514	1048383.602	24.626
	165	266.5208	10.284	90.0025	1.70	TERRENO	1.58	303.2159	10.284	1364611.116	1048371.851	24.506
	166	266.4352	20.425	90.1644	1.70	TERRENO	1.58	303.0781	20.425	1364616.630	1048363.340	24.408
	167	28.5719	6.300	87.5803	1.70	PARAMENTO	1.58	65.3022	6.296	1364608.113	1048386.175	24.731
	168	48.4322	8.463	87.2406	1.70	PARAMENTO	1.58	85.0697	8.454	1364606.209	1048388.878	24.891
	169	347.3952	3.862	88.3832	1.70	POSTE	1.58	24.0114	3.861	1364609.010	1048382.026	24.599
	170	88.2347	8.072	88.5352	1.70	TERRENO	1.58	124.7434	8.071	1364600.883	1048387.086	24.662
	171	90.0834	19.144	89.0850	1.70	TERRENO	1.58	126.4897	19.142	1364594.099	1048395.844	24.792
	172	150.3305	15.236	89.1204	1.70	TERRENO	1.58	186.8984	15.235	1364590.359	1048378.625	24.720
	173	126.4932	21.575	89.4133	1.70	TERRENO	1.58	163.1725	21.575	1364584.832	1048386.700	24.623
E13012GP		0.0000				ESTACION		0.0000		1364640.135	1048515.221	24.423
E13013GP	E13012GP	0.0000	92.310	89.5554	1.70	ESTACION	1.58	304.7717		1364692.791	1048439.380	24.433
	E11013XC	185.1839	28.949	90.0458	1.70	DELTA	1.58	310.0825	28.949	1364711.431	1048417.230	24.271
	E10068JM	184.5312	115.615	90.0405	1.70	DELTA	1.58	309.6584	115.615	1364766.577	1048350.372	24.176
E10068JM-E13013GP	E13013GP	0.0000	115.622	89.4723	1.70	ESTACION	1.51	309.6584	115.615	1364766.577	1048350.372	24.176
	E10069JM	167.3745	57.497	89.4857	1.70	DELTA	1.51	297.2875	57.497	1364792.937	1048299.274	24.173
	174	359.0629	7.630	88.3756	1.70	TERRENO	1.51	128.7664	7.628	1364761.801	1048356.319	24.170
	175	44.4423	11.523	89.1106	1.70	TERRENO	1.51	174.3981	11.522	1364755.110	1048351.497	24.152
	176	61.3018	18.355	89.2554	1.70	TERRENO	1.51	191.1634	18.354	1364748.570	1048346.819	24.170
	177	106.4217	18.589	89.1922	1.70	TERRENO	1.51	236.3631	18.588	1364756.281	1048334.897	24.207
	178	122.2927	11.862	89.1125	1.70	TERRENO	1.51	252.1492	11.861	1364762.941	1048339.082	24.155
	179	187.5528	5.500	89.1807	1.70	TERRENO	1.51	317.5828	5.500	1364770.637	1048346.662	24.055
	180	186.1417	13.402	89.4859	1.70	LINDERO	1.51	315.8964	13.402	1364776.201	1048341.045	24.031
	181	210.1712	14.580	90.4411	1.70	LINDERO	1.51	339.9450	14.579	1364780.272	1048345.373	23.800
	182	181.2122	26.281	88.4341	1.70	LINDERO	1.51	311.0145	26.275	1364783.820	1048330.547	24.571
	183	160.0632	28.664	89.4313	1.70	TERRENO	1.51	289.7672	28.664	1364776.271	1048323.397	24.128
	184	141.4938	30.922	89.2818	1.70	TERRENO	1.51	271.4856	30.921	1364767.379	1048319.462	24.273



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	185	166.5816	49.872	89.4716	1.70	TERRENO	1.51	296.6295	49.872	1364788.930	1048305.791	24.173
	186	155.0904	45.510	89.0813	2.20	TERRENO	1.51	284.8095	45.505	1364778.208	1048306.379	24.173
	187	175.1107	47.507	88.5312	2.45	TERRENO	1.51	304.8436	47.498	1364793.715	1048311.390	24.161
E10069JM-E10068JM	E10068JM	0.0000	57.500	89.4955	1.70	ESTACION	1.54	297.2875	57.497	1364792.937	1048299.274	24.173
	E10070JM	116.0631	42.322	89.4623	1.70	DELTA	1.54	233.3961	42.322	1364767.701	1048265.299	24.182
	188	333.5940	2.664	84.3430	1.70	LINDERO	1.54	91.2820	2.652	1364792.877	1048301.925	24.266
	189	20.1608	2.099	85.0608	1.70	LINDERO	1.54	137.5564	2.091	1364791.393	1048300.685	24.194
	190	177.0646	6.899	89.2710	1.70	TERRENO	1.54	294.4003	6.899	1364795.787	1048292.991	24.080
	191	182.5244	16.037	89.4228	1.70	TERRENO	1.54	300.1664	16.037	1364800.995	1048285.409	24.096
	192	130.3347	5.641	89.0157	1.70	TERRENO	1.54	247.8506	5.640	1364790.810	1048294.050	24.110
	193	110.0611	13.762	90.1246	1.70	TERRENO	1.54	227.3906	13.762	1364783.620	1048289.145	23.963
	194	127.2222	14.235	89.3702	1.70	TERRENO	1.54	244.6603	14.235	1364786.845	1048286.409	24.110
	195	112.1018	24.407	90.0404	1.70	TERRENO	1.54	229.4592	24.407	1364777.072	1048280.726	23.986
	196	127.1937	23.691	89.4257	1.70	TERRENO	1.54	244.6145	23.691	1364782.780	1048277.871	24.132
	197	115.2419	37.280	89.4546	1.70	TERRENO	1.54	232.6928	37.280	1364770.342	1048269.622	24.169
	198	111.0728	42.531	89.4242	1.70	TERRENO	1.54	228.4120	42.530	1364764.706	1048267.464	24.229
	199	127.3137	40.772	89.5054	1.70	TERRENO	1.54	244.8145	40.772	1364775.586	1048262.378	24.123
	200	181.0117	22.231	89.4626	1.70	TERRENO	1.54	298.3089	22.231	1364803.479	1048279.702	24.102
	201	188.2842	21.865	89.3613	1.70	TERRENO	1.54	305.7659	21.864	1364805.716	1048281.533	24.166
	202	184.0801	32.181	89.5555	1.70	TERRENO	1.54	301.4211	32.181	1364809.713	1048271.812	24.053
	203	188.0309	31.935	89.3603	1.70	TERRENO	1.54	305.3400	31.934	1364811.408	1048273.224	24.237
	204	187.3339	52.174	88.4829	2.90	TERRENO	1.54	304.8484	52.163	1364822.743	1048256.466	23.900
	205	184.2526	51.990	88.5332	2.90	TERRENO	1.54	301.7114	51.980	1364820.260	1048255.054	23.820
	206	184.4429	41.948	87.5924	2.90	TERRENO	1.54	302.0289	41.922	1364815.170	1048263.733	24.286
	207	173.3642	37.751	90.0523	1.70	TERRENO	1.54	290.8992	37.751	1364806.403	1048264.006	23.955
E10070JM-E10069JM	E10069JM	0.0000	42.328	89.5524	1.70	ESTACION	1.43	233.3961	42.322	1364767.701	1048265.299	24.182
	E10071JM	188.0150	55.972	89.3221	1.70	DELTA	1.43	241.4267	55.970	1364740.932	1048216.146	24.358
	208	303.0824	10.767	90.0907	1.70	TERRENO	1.43	356.5361	10.767	1364778.449	1048264.648	23.880
	209	287.0014	12.828	90.1046	1.70	TERRENO	1.43	340.4000	12.828	1364779.786	1048260.996	23.868
	210	287.4233	26.024	90.1326	1.70	TERRENO	1.43	341.1053	26.024	1364792.323	1048256.872	23.807
	211	302.3434	31.547	90.1427	1.70	TERRENO	1.43	355.9722	31.547	1364799.170	1048263.083	23.776
	212	229.4934	4.304	108.4550	1.70	TERRENO	1.43	283.2222	4.075	1364768.633	1048261.332	22.524
	213	276.3859	26.418	90.5408	1.70	TERRENO	1.43	330.0459	26.415	1364790.588	1048252.110	23.492
	214	156.4217	5.127	105.5330	1.70	TERRENO	1.43	210.1009	4.931	1364763.435	1048262.826	22.504
	215	275.4053	34.434	89.5348	1.70	TERRENO	1.43	329.0775	34.434	1364797.241	1048247.604	23.970
	216	126.4945	14.066	95.4544	1.70	TERRENO	1.43	180.2253	13.995	1364753.706	1048265.244	22.496



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	217	120.2336	10.805	90.3846	1.70	TERRENO	1.43	173.7895	10.804	1364756.960	1048266.468	23.786
	218	78.3911	10.493	97.2812	1.70	TERRENO	1.43	132.0492	10.404	1364760.733	1048273.025	22.544
	219	77.5151	8.391	89.4041	1.70	TERRENO	1.43	131.2603	8.391	1364762.168	1048271.606	23.955
	220	232.4557	35.088	89.5605	1.70	TERRENO	1.43	286.1620	35.088	1364777.468	1048231.598	23.948
	221	25.5203	15.476	88.4900	1.70	TERRENO	1.43	79.2636	15.473	1364770.584	1048280.501	24.228
	222	31.5021	17.154	94.1853	1.70	TERRENO	1.43	85.2353	17.105	1364769.122	1048282.345	22.618
	223	215.5948	38.972	90.0233	1.70	TERRENO	1.43	269.3928	38.972	1364767.288	1048226.329	23.879
	224	144.2009	20.953	92.3841	2.20	TERRENO	1.43	197.7320	20.931	1364747.765	1048258.924	22.441
	225	187.4913	35.258	90.0501	1.70	TERRENO	1.43	241.2164	35.258	1364750.724	1048234.397	23.857
	226	153.0944	28.776	91.5000	2.30	TERRENO	1.43	206.5584	28.761	1364741.975	1048252.439	22.388
	227	155.5406	26.314	89.5825	1.70	TERRENO	1.43	209.2978	26.314	1364744.753	1048252.422	23.920
	228	146.5800	18.449	89.4832	1.70	TERRENO	1.43	200.3628	18.449	1364750.405	1048258.879	23.970
	229	183.0206	11.213	88.5017	1.70	TERRENO	1.43	236.4311	11.211	1364761.502	1048255.958	24.136
	230	134.5917	13.418	90.4529	1.70	TERRENO	1.43	188.3842	13.417	1364754.428	1048263.343	23.731
	231	206.0432	5.319	90.0328	1.70	TERRENO	1.43	259.4717	5.319	1364766.729	1048260.069	23.903
	232	146.0453	8.845	90.3340	1.70	TERRENO	1.43	199.4775	8.845	1364759.363	1048262.350	23.822
	233	252.0940	10.007	88.4304	1.70	TERRENO	1.43	305.5572	10.004	1364773.519	1048257.160	24.132
	234	220.3214	1.862	90.5244	1.70	TERRENO	1.43	273.9334	1.862	1364767.829	1048263.441	23.880
	235	271.4906	21.877	90.1012	1.70	TERRENO	1.43	325.2145	21.877	1364785.669	1048252.818	23.843
	236	283.2159	21.437	90.2520	1.70	TERRENO	1.43	336.7625	21.436	1364787.399	1048256.841	23.750
	237	278.1520	21.647	93.1413	1.70	TERRENO	1.43	331.6517	21.612	1364786.722	1048255.037	22.686
	238	216.4446	13.067	89.2027	1.70	TERRENO	1.43	270.1422	13.066	1364767.734	1048252.233	24.059
E10071JM-E10070JM	E10070JM	0.0000	55.978	89.5730	1.70	ESTACION	1.46	241.4267	55.970	1364740.932	1048216.146	24.358
	E10072JM	164.3239	43.295	89.4538	1.70	DELTA	1.46	225.9709	43.295	1364710.841	1048185.017	24.302
	239	250.1822	6.827	92.0402	1.70	TERRENO	1.46	311.7328	6.823	1364745.473	1048211.054	23.875
	240	248.2510	6.046	98.3558	1.70	TERRENO	1.46	309.8461	5.978	1364744.762	1048211.556	23.217
	241	204.3427	2.948	94.0123	1.70	TERRENO	1.46	266.0009	2.941	1364740.727	1048213.212	23.915
	242	231.0408	1.522	92.0727	1.70	TERRENO	1.46	292.4956	1.521	1364741.514	1048214.740	24.065
	243	215.1958	2.457	113.0415	1.70	TERRENO	1.46	276.7595	2.260	1364741.198	1048213.901	23.159
	244	101.0914	6.830	98.5045	1.70	TERRENO	1.46	162.5806	6.749	1364734.492	1048218.166	23.071
	245	109.1947	7.195	88.5745	1.70	TERRENO	1.46	170.7564	7.194	1364733.831	1048217.301	24.252
	246	91.5241	6.697	88.3032	1.70	TERRENO	1.46	153.3047	6.695	1364734.951	1048219.153	24.296
	247	95.5750	20.234	89.1337	1.70	TERRENO	1.46	157.3906	20.232	1364722.254	1048223.924	24.394
	248	92.4835	20.390	91.5213	2.40	TERRENO	1.46	154.2364	20.379	1364722.578	1048225.003	22.756
	249	87.0951	20.713	88.4546	1.70	TERRENO	1.46	148.5909	20.708	1364723.258	1048226.937	24.569
	250	68.5733	21.114	90.4433	1.70	TERRENO	1.46	130.3859	21.112	1364727.252	1048232.227	23.848



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	251	68.5117	23.092	91.4906	2.90	TERRENO	1.46	130.2814	23.080	1364726.009	1048233.753	22.189
	252	92.4116	23.859	91.5436	2.90	TERRENO	1.46	154.1145	23.846	1364719.478	1048226.556	22.126
	253	116.4610	27.730	89.5002	1.90	TERRENO	1.46	178.1961	27.730	1364713.215	1048217.018	24.002
	254	116.5803	30.063	89.5037	4.00	TERRENO	1.46	178.3942	30.063	1364710.881	1048216.988	21.903
	255	116.4830	15.045	89.1702	1.70	TERRENO	1.46	178.2350	15.044	1364725.895	1048216.609	24.309
	256	231.4801	13.372	89.4745	1.70	TERRENO	1.46	293.2270	13.372	1364746.205	1048203.857	24.169
	257	151.1734	10.317	90.1300	1.70	TERRENO	1.46	212.7195	10.317	1364732.252	1048210.569	24.082
	258	234.5337	29.229	88.5539	2.40	TERRENO	1.46	296.3203	29.224	1364753.889	1048189.951	23.969
	259	195.3002	19.499	90.4538	1.70	TERRENO	1.46	256.9272	19.497	1364736.522	1048197.154	23.863
	260	200.3452	20.464	90.2526	1.70	TERRENO	1.46	262.0078	20.463	1364738.086	1048195.881	23.970
	261	194.3335	21.282	92.2959	1.70	TERRENO	1.46	255.9864	21.262	1364735.783	1048195.517	23.193
	262	194.3005	23.142	89.2302	1.90	TERRENO	1.46	255.9281	23.141	1364735.305	1048193.699	24.170
	263	162.5548	18.356	90.0820	1.70	TERRENO	1.46	224.3567	18.356	1364727.807	1048203.312	24.077
	264	163.5827	20.148	93.4552	1.70	TERRENO	1.46	225.4009	20.105	1364726.815	1048201.830	22.799
	265	164.4200	22.194	89.4917	1.70	TERRENO	1.46	226.1267	22.194	1364725.550	1048200.147	24.191
	266	129.3144	25.634	89.4010	1.70	TERRENO	1.46	190.9556	25.634	1364715.765	1048211.274	24.269
	267	130.5419	29.352	91.4859	2.50	TERRENO	1.46	192.3320	29.337	1364712.271	1048209.880	22.391
	268	136.3343	30.589	89.3544	1.70	TERRENO	1.46	197.9886	30.588	1364711.839	1048206.699	24.337
	269	136.3129	32.644	89.2352	1.70	TERRENO	1.46	197.9514	32.642	1364709.879	1048206.085	24.465
E10072JM-E10071JM	E10071JM	0.0000	43.298	89.3906	1.70	ESTACION	1.49	225.9709	43.295	1364710.841	1048185.017	24.302
	E10073JM	201.1627	52.148	90.3337	1.70	DELTA	1.49	247.2450	52.146	1364690.671	1048136.930	23.580
	270	354.2512	18.545	89.1617	1.70	TERRENO	1.49	40.3909	18.544	1364724.964	1048197.033	24.326
	271	329.3305	22.615	89.1617	1.70	TERRENO	1.49	15.5222	22.613	1364732.629	1048191.069	24.378
	272	355.0407	9.388	89.1254	1.70	TERRENO	1.49	41.0395	9.387	1364717.921	1048191.181	24.219
	273	311.3623	15.398	89.2832	1.70	TERRENO	1.49	357.5772	15.397	1364726.224	1048184.366	24.231
	274	283.0629	13.064	89.3518	1.70	TERRENO	1.49	329.0789	13.064	1364722.048	1048178.304	24.184
	275	53.2650	13.918	88.3513	1.70	TERRENO	1.49	99.4181	13.914	1364708.564	1048198.743	24.434
	276	42.4721	17.199	88.4507	1.70	TERRENO	1.49	88.7600	17.195	1364711.213	1048202.208	24.465
	277	272.5451	26.565	89.0559	2.40	TERRENO	1.49	318.8850	26.562	1364730.852	1048167.551	23.808
	278	258.2638	27.914	88.5651	2.40	TERRENO	1.49	304.4147	27.909	1364726.615	1048161.993	23.903
	279	248.0203	32.178	88.4439	2.40	TERRENO	1.49	294.0050	32.170	1364723.928	1048155.629	24.096
	280	249.4906	37.781	88.3227	2.40	TERRENO	1.49	295.7892	37.769	1364727.273	1048151.010	24.352
	281	256.5230	37.249	88.3858	2.40	TERRENO	1.49	302.8459	37.239	1364731.038	1048153.732	24.268
	282	294.3132	33.925	90.1332	1.70	TERRENO	1.49	340.4964	33.925	1364742.819	1048173.691	23.957
	283	47.2831	21.992	89.1456	1.70	TERRENO	1.49	93.4461	21.990	1364709.519	1048206.968	24.379
	284	50.3730	22.839	90.1718	1.70	TERRENO	1.49	96.5959	22.839	1364708.217	1048207.705	23.975



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	285	50.0634	22.247	90.5923	2.90	TERRENO	1.49	96.0803	22.244	1364708.485	1048207.136	22.506
	286	58.4233	12.947	88.5258	1.70	TERRENO	1.49	104.6800	12.945	1364707.560	1048197.539	24.343
	287	45.4137	19.340	90.0343	4.00	TERRENO	1.49	91.6645	19.340	1364710.279	1048204.349	21.769
	288	129.3346	8.645	89.2515	1.70	TERRENO	1.49	175.5336	8.645	1364702.223	1048185.690	24.178
	289	49.3737	15.498	88.3716	2.90	TERRENO	1.49	95.5978	15.494	1364709.330	1048200.437	23.263
	290	174.1531	16.992	90.3127	1.70	TERRENO	1.49	220.2295	16.991	1364697.869	1048174.043	23.935
	291	56.3229	14.031	93.3022	4.00	TERRENO	1.49	102.5122	14.005	1364707.807	1048198.689	20.932
	292	199.2706	16.250	89.2529	1.70	TERRENO	1.49	245.4225	16.249	1364704.082	1048170.240	24.253
	293	219.1802	22.307	89.1823	1.70	TERRENO	1.49	265.2714	22.305	1364709.002	1048162.788	24.360
	294	37.3306	6.069	89.0628	1.70	TERRENO	1.49	83.5225	6.068	1364711.525	1048191.047	24.185
	295	218.3037	31.977	89.5505	1.70	TERRENO	1.49	264.4811	31.977	1364707.765	1048153.189	24.136
	296	194.5156	7.885	89.1400	1.70	TERRENO	1.49	240.8364	7.884	1364706.999	1048178.132	24.196
	297	194.5636	22.231	89.4710	1.70	TERRENO	1.49	240.9142	22.231	1364700.034	1048165.590	24.173
	298	202.1038	32.411	89.3223	1.70	TERRENO	1.49	248.1481	32.410	1364698.778	1048154.936	24.351
	299	192.4041	36.936	89.5635	1.70	TERRENO	1.49	238.6489	36.936	1364691.624	1048153.474	24.127
	300	195.0131	43.010	90.1703	1.70	TERRENO	1.49	240.9961	43.009	1364689.987	1048147.402	23.877
	301	201.2806	43.866	90.2120	1.70	TERRENO	1.49	247.4392	43.865	1364694.011	1048144.509	23.818
E10073JM-E10072JM	E10072JM	0.0001	52.153	89.0136	1.70	ESTACION	1.53	247.2450	52.146	1364690.671	1048136.930	23.580
	E11029XC	199.3800	16.034	91.1859	1.70	DELTA	1.53	266.8784	16.030	1364689.798	1048120.924	23.038
	302	54.3719	3.054	79.3744	1.70	MANHOLE	1.53	121.8670	3.004	1364689.085	1048139.482	23.956
	303	21.1754	4.163	82.2537	1.70	MANHOLE	1.53	88.5434	4.127	1364690.776	1048141.056	23.955
	304	64.2717	1.597	70.0319	1.70	ESTRUCTURA	1.53	131.6997	1.501	1364689.673	1048138.051	23.951
	305	21.5723	4.944	83.3836	1.70	ESTRUCTURA	1.53	89.2014	4.914	1364690.740	1048141.844	23.954
	306	64.5411	3.538	81.0319	1.70	ESTRUCTURA	1.53	132.1481	3.495	1364688.326	1048139.522	23.957
	307	0.5158	3.812	81.4806	1.70	ESTRUCTURA	1.53	68.1111	3.773	1364692.078	1048140.431	23.950
	308	253.2815	20.617	89.0805	1.70	TERRENO	1.53	320.7159	20.615	1364706.627	1048123.878	23.718
	309	153.4346	24.074	95.3701	1.70	TERRENO	1.53	220.9745	23.958	1364672.583	1048121.220	21.050
	310	245.4803	8.141	87.1253	1.70	TERRENO	1.53	313.0459	8.131	1364696.222	1048130.988	23.802
	311	152.1916	9.708	91.5824	1.70	TERRENO	1.53	219.5661	9.702	1364683.192	1048130.750	23.072
	312	287.2729	29.830	89.2512	1.70	TERRENO	1.53	354.7031	29.828	1364720.373	1048134.177	23.708
E11029XC-E10073JM	E10073JM	0.0001	16.040	87.2509	1.70	ESTACION	1.52	266.8784	16.030	1364689.798	1048120.924	23.038
	313	173.3139	4.856	90.1341	1.70	ESTRUCTURA	1.52	260.4059	4.856	1364688.989	1048116.136	22.835
	314	153.3608	5.503	90.2306	1.70	ESTRUCTURA	1.52	240.4806	5.503	1364687.087	1048116.136	22.817
	315	171.3712	5.167	90.2827	1.70	ESTRUCTURA	1.52	258.4984	5.167	1364688.768	1048115.861	22.811
	316	156.4640	5.673	90.4443	1.70	ESTRUCTURA	1.52	243.6561	5.673	1364687.281	1048115.841	22.780
	317	153.1448	5.569	100.0542	1.70	TERRENO	1.52	240.1250	5.483	1364687.067	1048116.170	21.878



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	318	173.3459	4.847	95.2346	1.70	TERRENO	1.52	260.4614	4.826	1364688.999	1048116.166	22.398
	319	173.5055	5.103	90.2250	1.70	ESTRUCTURA	1.52	260.7270	5.103	1364688.976	1048115.888	22.820
	320	154.4035	5.683	90.2423	1.70	ESTRUCTURA	1.52	241.5547	5.683	1364687.092	1048115.928	22.814
	321	164.2031	5.402	94.2801	2.90	CLAVE	1.52	251.2203	5.386	1364688.065	1048115.826	21.233
	322	164.1239	5.605	103.1348	2.90	BATEA	1.52	251.0892	5.456	1364688.030	1048115.763	20.371
	323	156.5645	5.829	102.1658	6.50	ESTRUCTURA	1.52	243.8242	5.696	1364687.286	1048115.813	16.814
	324	171.5006	5.387	103.2034	6.50	ESTRUCTURA	1.52	258.7134	5.242	1364688.773	1048115.784	16.811
	325	173.3650	17.264	103.1156	2.90	ESTRUCTURA	1.52	260.4922	16.808	1364687.022	1048104.347	17.712
	326	174.1521	17.247	103.1515	2.90	ESTRUCTURA	1.52	261.1342	16.788	1364687.211	1048104.337	17.700
	327	179.2738	16.912	102.2738	3.20	ESTRUCTURA	1.52	266.3389	16.514	1364688.744	1048104.444	17.705
	328	179.4953	16.968	103.0944	3.00	ESTRUCTURA	1.52	266.7097	16.522	1364688.850	1048104.429	17.690
	329	174.3347	17.383	105.2620	2.45	ESTRUCTURA	1.52	261.4414	16.756	1364687.305	1048104.355	17.477
	330	179.1533	16.917	103.3920	3.20	ESTRUCTURA	1.52	266.1375	16.439	1364688.691	1048104.523	17.360
	331	271.0936	5.749	85.3307	1.70	TERRENO	1.52	358.0384	5.732	1364695.527	1048120.728	23.300
	332	224.1613	4.609	91.2352	1.70	TERRENO	1.52	311.1486	4.608	1364692.830	1048117.455	22.742
	333	66.3219	6.340	92.2704	1.70	TERRENO	1.52	153.4170	6.334	1364684.134	1048123.759	22.583
	334	118.3106	8.413	94.1617	1.70	TERRENO	1.52	205.3967	8.390	1364682.220	1048117.326	22.227
	335	150.2918	8.980	95.0019	1.70	TERRENO	1.52	237.3667	8.946	1364684.974	1048113.391	22.071
	336	162.1847	8.075	99.2537	1.70	TERRENO	1.52	249.1914	7.966	1364686.969	1048113.478	21.531
	337	275.2526	13.212	85.2208	1.70	TERRENO	1.52	2.3022	13.169	1364702.957	1048121.453	23.921
	338	57.0207	15.213	93.1126	1.70	TERRENO	1.52	143.9136	15.189	1364677.523	1048129.871	22.007
	339	78.1808	13.392	92.2247	1.70	TERRENO	1.52	165.1806	13.380	1364676.863	1048124.347	22.298
	340	84.3156	17.323	95.2737	1.70	TERRENO	1.52	171.4106	17.244	1364672.748	1048123.500	21.206
	341	203.5810	6.245	96.4004	1.70	TERRENO	1.52	290.8478	6.203	1364692.006	1048115.128	22.129
E11029XC-E10073JM	E10073JM	0.0000	16.033	86.5236	1.70	ESTACION	1.37	266.8784	16.030	1364689.798	1048120.924	23.038
	E11002	165.3534	28.948	94.2624	1.50	DELTA	1.37	252.4711	28.861	1364681.106	1048093.403	20.663
E11002-E11029XC	E11029XC	0.0001	28.983	84.3641	1.70	ESTACION	1.34	252.4711	28.861	1364681.106	1048093.403	20.663
	172	206.5906	12.280	94.0408	5.00	BORDE_CANO	1.34	279.4561	12.249	1364683.118	1048081.321	16.132
	173	206.1252	13.666	92.5132	5.00	BORDE_CANO	1.34	278.6856	13.649	1364683.167	1048079.911	16.321
	174	204.0910	13.737	92.0002	5.00	BORDE_CANO	1.34	276.6239	13.729	1364682.690	1048079.766	16.523
	175	201.4057	14.052	92.0301	5.00	BORDE_CANO	1.34	274.1536	14.043	1364682.123	1048079.397	16.500
	176	196.3159	12.836	100.1245	2.90	RIO	1.34	269.0042	12.633	1364680.886	1048080.773	16.827
	177	187.5533	11.058	101.5032	2.90	RIO	1.34	260.3970	10.823	1364679.300	1048082.732	16.834
	178	156.4417	8.147	112.5103	1.70	RIO	1.34	229.2092	7.508	1364676.201	1048087.719	17.139
	179	135.4716	7.296	114.3154	1.70	RIO	1.34	208.2589	6.637	1364675.260	1048090.261	17.274
	180	198.3240	13.737	94.5107	5.00	RIO	1.34	271.0156	13.688	1364681.349	1048079.718	15.841



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	181	199.3233	13.882	100.3434	2.90	RIO	1.34	272.0136	13.646	1364681.585	1048079.766	16.555
	182	173.5203	20.127	101.3650	1.70	RIO	1.34	246.3386	19.715	1364673.194	1048075.346	16.251
	183	173.5203	20.116	100.3846	1.70	RIO	1.34	246.3386	19.770	1364673.172	1048075.296	16.587
	184	175.1950	19.391	100.4509	2.90	RIO	1.34	247.8017	19.051	1364673.908	1048075.765	15.485
	185	175.1951	19.642	100.5711	1.70	RIO	1.34	247.8020	19.284	1364673.820	1048075.549	16.571
	186	174.2811	21.198	99.4812	1.70	RIO	1.34	246.9409	20.888	1364672.924	1048074.184	16.694
	187	166.2153	19.318	100.2211	1.70	RIO	1.34	238.8359	19.002	1364671.272	1048077.143	16.826
	188	160.2725	19.240	100.0944	1.70	RIO	1.34	232.9281	18.938	1364669.690	1048078.293	16.908
	189	147.4637	18.183	100.5458	1.70	RIO	1.34	220.2481	17.854	1364667.479	1048081.868	16.860
	190	135.3852	18.999	99.5616	1.70	RIO	1.34	208.1189	18.714	1364664.601	1048084.584	17.024
	191	127.1244	18.858	100.1723	1.70	RIO	1.34	199.6834	18.555	1364663.635	1048087.154	16.935
	192	136.2447	22.393	92.3656	1.70	AGUA_MAX	1.34	208.8842	22.370	1364661.519	1048082.598	19.281
	193	156.4358	22.570	93.4123	1.70	AGUA_MAX	1.34	229.2039	22.523	1364666.390	1048076.352	18.851
	194	196.0535	7.333	100.1057	1.50	AGUA_MAX	1.34	268.5642	7.218	1364680.925	1048086.188	19.207
	195	191.1147	4.990	101.4526	1.50	AGUA_MAX	1.34	263.6675	4.885	1364680.567	1048088.548	19.486
	196	92.0521	4.391	105.3853	1.50	AGUA_MAX	1.34	164.5603	4.228	1364677.030	1048094.529	19.319
	197	188.4216	15.818	104.5031	2.90	RIO	1.34	261.1756	15.290	1364678.760	1048078.294	15.051
	198	189.5523	15.643	103.4423	1.70	RIO	1.34	262.3942	15.195	1364679.095	1048078.342	16.588
	199	193.3751	14.936	103.5541	2.90	RIO	1.34	266.1020	14.497	1364680.120	1048078.940	15.508
	200	193.3752	15.045	104.1432	1.70	RIO	1.34	266.1022	14.583	1364680.115	1048078.855	16.602
EAUX28		0.0000				ESTACION		0.0000		1364519.313	1048344.164	24.683
E10061	EAUX28	0.0000	18.554	88.4045	1.70	ESTACION	1.40	4.9700		1364537.799	1048345.771	24.554
	E10074	316.5840	29.685	88.5505	1.70	DELTA	1.40	141.9478	29.680	1364514.428	1048364.065	24.814
	342	316.2756	22.002	94.1250	0.09	TERRENO	1.40	141.4356	21.943	1364520.642	1048359.450	24.251
	343	303.5030	21.213	96.1748	0.09	TERRENO	1.40	128.8117	21.085	1364524.584	1048362.201	23.542
	344	287.3558	21.339	98.5027	0.09	TERRENO	1.40	112.5695	21.085	1364529.706	1048365.242	22.589
E10074-E10061	E10061	0.0000	29.653	90.0009	1.70	ESTACION	1.44	141.9478	29.680	1364514.428	1048364.065	24.814
	E11000	32.5802	22.585	99.1138	1.70	DELTA	1.44	354.9150	22.295	1364536.635	1048362.089	20.945
E11000-E10074	E10074	0.0000	22.705	79.0956	1.70	ESTACION	1.39	354.9150	22.295	1364536.635	1048362.089	20.945
	E11001	231.3120	32.371	88.3337	1.50	DELTA	1.39	46.4373	32.361	1364558.936	1048385.539	21.651
	94	234.1917	30.422	90.4348	1.50	TERRENO	1.39	49.2364	30.420	1364556.497	1048385.129	20.451
	95	241.3924	30.777	90.5958	1.50	TERRENO	1.39	56.5717	30.772	1364553.587	1048387.771	20.301
	96	229.2818	30.188	89.3238	1.70	TERRENO	1.39	44.3867	30.187	1364558.208	1048383.205	20.878
	97	223.5502	28.578	91.4625	1.70	TERRENO	1.39	38.8323	28.564	1364558.886	1048380.000	19.754
	98	235.0732	27.122	93.2243	1.70	TERRENO	1.39	50.0406	27.075	1364554.024	1048382.842	19.040
	99	242.0940	27.574	93.0336	2.40	TERRENO	1.39	57.0761	27.535	1364551.601	1048385.202	18.466



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	100	242.1611	25.898	97.2839	1.70	RIO	1.39	57.1848	25.678	1364550.550	1048383.669	17.268
	101	230.5733	24.157	97.4931	1.70	RIO	1.39	45.8742	23.932	1364553.297	1048379.268	17.349
	102	223.2829	23.927	97.5221	1.70	RIO	1.39	38.3898	23.701	1364555.212	1048376.808	17.361
	103	228.4917	26.496	95.0402	1.70	TERRENO	1.39	43.7364	26.392	1364555.704	1048380.336	18.298
	104	233.5435	26.548	94.4827	1.70	TERRENO	1.39	48.8248	26.455	1364554.052	1048382.002	18.413
	105	233.5649	32.424	89.3019	1.70	AGUA_MAX	1.39	48.8620	32.423	1364557.965	1048386.508	20.918
	106	230.2806	32.466	88.2409	1.70	AGUA_MAX	1.39	45.3834	32.453	1364559.429	1048385.190	21.543
	107	241.4916	31.548	90.1700	1.70	AGUA_MAX	1.39	56.7361	31.548	1364553.939	1048388.468	20.482
	108	246.0134	28.392	88.3710	1.70	TERRENO	1.39	60.9411	28.384	1364550.421	1048386.900	21.322
	109	244.0808	30.171	88.3509	1.70	TERRENO	1.39	59.0506	30.162	1364552.147	1048387.957	21.383
	110	246.2718	28.037	92.0712	0.09	TERRENO	1.39	61.3700	28.018	1364550.060	1048386.681	21.216
	111	244.0811	28.442	89.0811	1.70	TERRENO	1.39	59.0514	28.439	1364551.260	1048386.479	21.067
	112	252.2933	32.135	87.3905	1.60	TERRENO	1.39	67.4075	32.108	1364548.970	1048391.733	22.055
	113	257.0413	33.013	88.5804	1.70	TERRENO	1.39	71.9853	33.008	1364546.843	1048393.479	21.233
	114	260.5950	36.598	88.4252	1.70	TERRENO	1.39	75.9123	36.589	1364545.541	1048397.578	21.459
	115	261.4920	34.617	88.0840	2.00	TERRENO	1.39	76.7373	34.599	1364544.572	1048395.765	21.459
	116	267.1603	35.270	90.3550	1.70	TERRENO	1.39	82.1825	35.268	1364541.432	1048397.030	20.270
	117	262.2219	33.448	90.4904	1.70	TERRENO	1.39	77.2870	33.445	1364543.995	1048394.714	20.161
	118	258.4616	32.304	91.0425	1.70	TERRENO	1.39	73.6861	32.298	1364545.707	1048393.087	20.033
	119	261.0908	30.591	92.3107	1.70	TERRENO	1.39	76.0673	30.561	1364543.994	1048391.752	19.294
	120	265.1627	31.026	94.3531	1.70	TERRENO	1.39	80.1892	30.926	1364541.905	1048392.563	18.154
	121	262.1733	29.850	95.2344	1.50	TERRENO	1.39	77.2075	29.718	1364543.215	1048391.069	18.031
	122	255.5952	27.523	95.4240	1.50	TERRENO	1.39	70.9128	27.386	1364545.590	1048387.970	18.099
	123	252.2608	26.993	95.3519	1.50	TERRENO	1.39	67.3506	26.865	1364546.980	1048386.882	18.209
	124	249.4710	26.503	98.0344	0.09	TERRENO	1.39	64.7011	26.241	1364547.849	1048385.814	18.536
	125	251.1838	26.160	97.5252	1.50	RIO	1.39	66.2256	25.913	1364547.081	1048385.803	17.251
	126	259.3233	26.623	97.4928	1.50	RIO	1.39	74.4575	26.375	1364543.702	1048387.500	17.214
	127	267.2237	28.660	97.2115	1.50	RIO	1.39	82.2920	28.424	1364540.447	1048390.257	17.170
	128	277.3139	31.946	98.5035	0.09	RIO	1.39	92.4425	31.566	1364535.290	1048393.627	17.342
	129	286.2829	12.233	105.1240	1.70	RIO	1.39	101.3898	11.804	1364534.304	1048373.661	17.428
	130	279.1407	10.800	107.5734	1.70	RIO	1.39	94.1503	10.274	1364535.891	1048372.336	17.308
	131	265.4848	10.081	109.4531	1.70	RIO	1.39	80.7284	9.487	1364538.163	1048371.453	17.230
	132	250.0650	9.261	111.4454	1.70	RIO	1.39	65.0289	8.602	1364540.266	1048369.887	17.207
	133	231.5508	8.581	112.5536	1.70	RIO	1.39	46.8339	7.903	1364542.042	1048367.854	17.295
	134	205.2053	9.675	109.4912	1.70	RIO	1.39	20.2631	9.102	1364545.173	1048365.242	17.358
	135	191.3439	10.633	107.1638	2.00	RIO	1.39	6.4925	10.153	1364546.723	1048363.237	17.180



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	136	174.3237	11.404	90.0750	5.00	RIO	1.39	349.4586	11.404	1364547.846	1048360.003	17.312
	137	178.2622	5.175	83.5219	1.70	TERRENO	1.39	353.3545	5.145	1364541.746	1048361.494	21.191
	138	185.0019	3.967	83.5328	1.70	TERRENO	1.39	359.9203	3.944	1364540.579	1048362.084	21.060
	139	193.2654	3.612	90.1203	1.70	TERRENO	1.39	8.3634	3.612	1364540.208	1048362.615	20.625
	140	211.4133	3.066	94.5532	1.70	TERRENO	1.39	26.6075	3.055	1364539.366	1048363.457	20.375
	141	243.5949	3.151	104.1828	1.70	TERRENO	1.39	58.9120	3.053	1364538.211	1048364.704	19.859
	142	269.4659	3.661	104.4356	1.70	TERRENO	1.39	84.6981	3.541	1364536.962	1048365.615	19.707
	143	297.4623	4.060	90.5143	1.70	TERRENO	1.39	112.6881	4.060	1364535.069	1048365.835	20.577
	144	336.0642	7.767	75.3644	1.70	TERRENO	1.39	151.0267	7.523	1364530.053	1048365.734	22.568
	145	340.0327	5.640	75.3537	1.70	TERRENO	1.39	154.9725	5.463	1364531.685	1048364.400	22.041
	146	341.0629	2.927	71.2903	1.70	TERRENO	1.39	156.0231	2.775	1364534.099	1048363.217	21.568
	147	153.3358	2.022	77.0808	1.70	TERRENO	1.39	328.4811	1.971	1364538.315	1048361.059	21.088
	148	144.0838	5.894	81.3827	1.70	TERRENO	1.39	319.0589	5.831	1364541.040	1048358.268	21.495
	149	107.5910	6.469	75.2216	1.70	TERRENO	1.39	282.9011	6.259	1364538.032	1048355.988	22.272
	150	33.0930	4.483	65.3508	1.70	TERRENO	1.39	208.0734	4.082	1364533.033	1048360.168	22.491
	151	354.2121	11.097	76.4546	1.70	TERRENO	1.39	169.2709	10.802	1364526.022	1048364.100	23.179
	152	3.1407	12.096	76.0122	1.70	TERRENO	1.39	178.1503	11.738	1364524.903	1048362.468	23.560
	153	35.5332	11.738	72.2314	1.70	TERRENO	1.39	210.8073	11.188	1364527.026	1048356.359	24.190
	154	36.0100	8.818	71.2432	1.70	TERRENO	1.39	210.9317	8.358	1364529.466	1048357.793	23.449
	155	55.3536	8.278	71.0031	1.70	TERRENO	1.39	230.5084	7.827	1364531.657	1048356.049	23.332
	156	107.3016	8.685	76.1258	1.70	TERRENO	1.39	282.4195	8.435	1364538.449	1048353.852	22.707
	157	103.4031	11.249	73.2353	1.70	TERRENO	1.39	278.5903	10.780	1364538.245	1048351.430	23.852
	158	231.3120	29.115	89.2651	1.70	TERRENO	1.39	46.4373	29.114	1364556.699	1048383.186	20.919
	159	231.3120	26.906	93.5200	1.70	TERRENO	1.39	46.4373	26.845	1364555.135	1048381.542	18.824
	160	231.3120	25.049	96.4444	1.70	TERRENO	1.39	46.4373	24.876	1364553.778	1048380.115	17.696
	161	231.3120	24.176	97.5618	1.70	RIO	1.39	46.4373	23.944	1364553.136	1048379.440	17.299
	162	231.3121	23.361	100.0246	1.70	RIO	1.39	46.4375	23.003	1364552.487	1048378.758	16.563
	163	231.3120	23.238	98.0816	1.70	RIO	1.39	46.4373	23.004	1364552.488	1048378.758	17.349
	164	231.3122	9.135	112.1925	1.70	RIO	1.39	46.4378	8.450	1364542.458	1048368.213	17.168
	165	231.3120	9.102	111.0642	1.70	RIO	1.39	46.4373	8.491	1364542.486	1048368.242	17.360
	166	231.3120	12.368	108.1241	1.70	RIO	1.39	46.4373	11.748	1364544.731	1048370.603	16.773
	167	231.3120	12.166	105.5003	1.70	RIO	1.39	46.4373	11.704	1364544.701	1048370.571	17.319
	168	231.3120	14.804	105.5500	1.70	RIO	1.39	46.4373	14.236	1364546.446	1048372.405	16.578
	169	231.3120	14.616	103.0237	1.70	RIO	1.39	46.4373	14.239	1364546.448	1048372.407	17.339
	170	231.3120	20.110	102.0303	1.70	RIO	1.39	46.4373	19.667	1364550.188	1048376.340	16.440
	171	231.3120	19.947	99.4150	1.70	RIO	1.39	46.4373	19.662	1364550.185	1048376.337	17.278



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E10001		0.0000				ESTACION		0.0000		1363043.703	1050072.465	24.109
E10000	E10001	0.0001	18.285	89.1339	1.70	ESTACION	1.49	221.2106		1363029.948	1050060.418	25.851
	E10002	198.5601	37.900	89.3335	1.70	DELTA	1.49	240.1442	37.899	1363011.081	1050027.549	25.931
	1	198.5601	20.137	88.5447	1.70	LINEAMIENT	1.49	240.1442	20.133	1363019.925	1050042.957	26.022
	2	67.5246	4.642	85.1313	1.70	POSTE	1.49	109.0900	4.626	1363028.435	1050064.789	26.027
	3	358.1806	15.168	90.0023	1.70	BORDE_VIA	1.49	39.5123	15.168	1363041.650	1050070.068	25.638
	4	351.3655	9.679	89.3349	1.70	BORDE_VIA	1.49	32.8259	9.679	1363038.081	1050065.665	25.714
	5	350.2411	4.966	88.3548	1.70	BORDE_VIA	1.49	31.6137	4.965	1363034.175	1050063.020	25.762
	6	13.2539	6.167	88.3548	1.70	BORDE_VIA	1.49	54.6381	6.165	1363033.516	1050065.446	25.791
	7	187.5419	10.983	87.5650	1.70	BORDE_VIA	1.49	229.1159	10.976	1363022.763	1050052.120	26.033
	8	200.4656	10.684	88.0452	1.70	BORDE_VIA	1.49	241.9928	10.678	1363024.933	1050050.990	25.998
	9	195.2149	26.437	89.1724	1.70	BORDE_VIA	1.49	236.5742	26.435	1363015.386	1050038.355	25.968
	10	200.5329	26.638	89.2906	1.70	BORDE_VIA	1.49	242.1020	26.637	1363017.484	1050036.877	25.879
	11	171.4721	17.791	88.4531	1.70	PARAMENTO	1.49	212.9998	17.787	1363015.030	1050050.731	26.025
	12	97.0029	14.502	88.3605	1.70	PARAMENTO	1.49	138.2187	14.498	1363019.137	1050070.078	25.994
	13	41.5754	6.741	84.0649	1.70	PARAMENTO	1.49	83.1756	6.705	1363030.744	1050067.076	26.331
	14	33.5255	9.688	85.4342	1.70	PARAMENTO	1.49	75.0925	9.661	1363032.433	1050069.754	26.362
	15	66.5400	9.499	85.4341	1.70	PARAMENTO	1.49	108.1106	9.473	1363027.003	1050069.421	26.348
	16	28.4410	9.352	85.3023	1.70	ESTRUCTURA	1.49	69.9467	9.323	1363033.144	1050069.176	26.373
	17	32.3210	6.422	83.4509	1.70	ESTRUCTURA	1.49	73.7467	6.384	1363031.734	1050066.547	26.339
E10002-E10000	E10000	0.0001	37.896	89.4923	1.70	ESTACION	1.50	240.1442	37.899	1363011.081	1050027.549	25.931
	E10003	155.3555	41.057	89.2748	1.70	DELTA	1.50	215.7428	41.055	1362977.758	1050003.567	26.115
	18	183.0349	4.374	86.5318	1.70	BORDE_VIA	1.50	243.2078	4.368	1363009.112	1050023.650	25.968
	19	123.2054	5.956	87.3128	1.70	BORDE_VIA	1.50	183.4925	5.950	1363005.141	1050027.186	25.987
	20	158.3039	27.638	89.1146	1.70	BORDE_VIA	1.50	218.6550	27.635	1362989.500	1050010.287	26.118
	21	150.3453	27.799	89.1528	1.70	BORDE_VIA	1.50	210.7256	27.797	1362987.186	1050013.347	26.090
	22	209.3137	6.082	84.5432	1.70	PARAMENTO	1.50	269.6712	6.058	1363011.046	1050021.491	26.270
	23	178.1224	10.468	87.1745	1.70	PARAMENTO	1.50	238.3509	10.456	1363005.594	1050018.648	26.224
	24	105.3526	8.506	86.1332	1.70	PARAMENTO	1.50	165.7348	8.488	1363002.855	1050029.640	26.290
	25	223.4419	8.612	85.5118	1.70	PARAMENTO	1.50	283.8828	8.589	1363013.142	1050019.210	26.353
	26	237.2025	9.781	87.0429	1.70	PARAMENTO	1.50	297.4845	9.768	1363015.589	1050018.883	26.229
	27	265.5515	10.904	86.5203	1.70	PARAMENTO	1.50	326.0650	10.888	1363020.114	1050021.471	26.326
	28	269.0812	10.089	87.0555	1.70	PARAMENTO	1.50	329.2809	10.076	1363019.743	1050022.402	26.241
	29	33.5723	12.628	89.1240	1.70	PARAMENTO	1.50	94.1006	12.627	1363010.178	1050040.143	25.904
	30	289.3212	14.071	94.2240	0.09	PARAMENTO	1.50	349.6809	14.030	1363024.884	1050025.036	26.271
	31	325.1101	8.701	89.2030	1.70	BORDE_VIA	1.50	25.3278	8.700	1363018.945	1050031.271	25.830



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	32	295.3420	8.351	89.0413	1.70	BORDE_VIA	1.50	355.7164	8.350	1363019.407	1050026.925	25.866
	33	308.2016	18.741	89.5304	1.70	BORDE_VIA	1.50	8.4820	18.741	1363029.617	1050030.313	25.768
	34	297.4320	17.855	90.0638	1.70	BORDE_VIA	1.50	357.8664	17.855	1363028.923	1050026.884	25.696
	35	167.2014	21.734	89.1136	1.70	PARAMENTO	1.50	227.4814	21.732	1362996.394	1050011.531	26.036
	36	165.0249	16.608	88.5031	1.70	POSTE	1.50	225.1912	16.605	1362999.379	1050015.769	26.066
	37	137.4959	13.706	88.4331	1.70	POSTE	1.50	197.9773	13.703	1362998.047	1050023.320	26.035
	38	338.0306	10.049	89.1814	1.70	POSTE	1.50	38.1959	10.048	1363018.978	1050033.762	25.852
E10003-E10002	E10002	0.0000	41.056	90.0035	1.70	ESTACION	1.51	215.7428	41.055	1362977.758	1050003.567	26.115
	E10004	236.3509	23.072	89.1547	1.70	DELTA	1.51	272.3287	23.070	1362978.696	1049980.516	26.226
	39	20.4439	14.227	90.0256	1.70	PARAMENTO	1.51	56.4870	14.227	1362985.614	1050015.429	25.917
	40	338.4046	13.573	87.3640	1.70	PARAMENTO	1.51	14.4223	13.561	1362990.892	1050006.944	26.495
	41	33.5330	15.905	89.2451	1.70	PARAMENTO	1.51	69.6345	15.904	1362983.293	1050018.477	26.091
	42	354.0242	10.133	88.4550	1.70	BORDE_VIA	1.51	29.7878	10.131	1362986.551	1050008.599	26.147
	43	310.4826	4.221	86.4009	1.70	BORDE_VIA	1.51	346.5500	4.214	1362981.857	1050002.586	26.174
	44	47.5820	22.900	88.3428	1.70	PARAMENTO	1.51	83.7150	22.893	1362980.265	1050026.322	26.498
	45	288.0403	8.721	84.5134	1.70	PARAMENTO	1.51	323.8103	8.686	1362984.769	1049998.438	26.710
	46	53.1905	29.236	88.5312	1.70	PARAMENTO	1.51	89.0609	29.230	1362978.238	1050032.793	26.497
	47	56.3519	29.295	89.2928	1.70	BORDE_VIA	1.51	92.3314	29.294	1362976.567	1050032.836	26.189
	48	247.5518	9.648	88.5159	1.70	BORDE_VIA	1.51	283.6645	9.646	1362980.037	1049994.194	26.120
	49	67.1637	28.881	89.3036	1.70	BORDE_VIA	1.51	103.0198	28.880	1362971.252	1050031.704	26.176
	50	69.3546	30.736	89.0711	1.70	PARAMENTO	1.51	105.3389	30.732	1362969.629	1050033.204	26.401
	51	221.3224	9.365	88.5057	1.70	BORDE_VIA	1.51	257.2828	9.363	1362975.697	1049994.433	26.117
	52	185.0347	5.764	88.0026	1.70	PARAMENTO	1.51	220.8059	5.761	1362973.398	1049999.802	26.129
	53	160.2402	10.315	89.2123	1.70	PARAMENTO	1.51	196.1434	10.314	1362967.851	1050000.699	26.045
	54	70.0900	26.229	89.3313	1.70	PARAMENTO	1.51	105.8928	26.228	1362970.576	1050028.792	26.133
	55	73.3543	21.143	89.1532	1.70	PARAMENTO	1.51	109.3381	21.141	1362970.758	1050023.515	26.202
	56	70.5458	19.252	89.3042	1.70	BORDE_VIA	1.51	106.6589	19.251	1362972.240	1050022.010	26.093
	57	196.4741	2.118	84.5923	1.70	BORDE_VIA	1.51	232.5375	2.110	1362976.475	1050001.892	26.114
	58	24.1710	12.054	89.2155	1.70	BORDE_VIA	1.51	60.0289	12.053	1362983.780	1050014.008	26.062
	59	71.0544	6.474	88.3456	1.70	BORDE_VIA	1.51	106.8384	6.472	1362975.884	1050009.761	26.089
	60	110.3649	10.224	88.3106	1.70	PARAMENTO	1.51	146.3564	10.221	1362969.250	1050009.229	26.193
	61	117.1621	13.407	89.3817	1.70	PARAMENTO	1.51	153.0153	13.407	1362965.811	1050009.650	26.013
	62	217.0801	3.788	87.1018	1.70	POSTE	1.51	252.8764	3.783	1362976.645	1049999.951	26.116
	63	208.4505	12.746	88.4836	1.70	PARAMENTO	1.51	244.4942	12.743	1362972.271	1049992.065	26.193
E10004-E10003	E10003	0.0000	23.053	89.4959	1.70	ESTACION	1.51	272.3287	23.070	1362978.696	1049980.516	26.226
	E10005	197.3322	99.240	89.4259	1.70	DELTA	1.51	289.8848	99.239	1363012.450	1049887.194	26.527



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	65	221.5524	4.792	86.4627	1.70	MANHOLE	1.51	314.2520	4.784	1362982.034	1049977.089	26.305
	66	148.4935	4.976	84.3553	1.70	POSTE	1.51	241.1550	4.954	1362976.306	1049976.176	26.504
	67	223.0636	8.890	88.2320	1.70	POSTE	1.51	315.4387	8.886	1362985.027	1049974.280	26.285
	68	22.2805	3.113	88.2446	1.70	SUMIDERO	1.51	114.7967	3.112	1362977.391	1049983.340	26.122
	69	39.0523	3.469	87.2332	1.70	SUMIDERO	1.51	131.4184	3.465	1362976.403	1049983.114	26.193
	70	27.4854	6.773	88.1741	1.70	ESTRUCTURA	1.51	120.1437	6.770	1362975.296	1049986.370	26.237
	71	337.4726	7.547	88.5759	1.70	ESTRUCTURA	1.51	70.1192	7.546	1362981.262	1049987.612	26.172
	72	35.3057	4.831	87.3739	1.70	ESTRUCTURA	1.51	127.8445	4.827	1362975.734	1049984.327	26.236
	73	326.5035	5.927	88.0325	1.70	ESTRUCTURA	1.51	59.1717	5.924	1362981.732	1049985.602	26.236
	74	26.4930	7.673	86.4609	1.70	ESTRUCTURA	1.51	119.1537	7.661	1362974.964	1049987.206	26.468
	75	28.0700	7.674	86.4126	1.70	ESTRUCTURA	1.51	120.4453	7.661	1362974.814	1049987.120	26.479
	76	338.3053	7.849	87.0358	1.70	ESTRUCTURA	1.51	70.8434	7.839	1362981.268	1049987.920	26.437
	77	332.4725	8.295	87.2304	1.70	ESTRUCTURA	1.51	65.1189	8.286	1362982.182	1049988.033	26.414
	78	336.1937	7.727	87.0031	1.70	ESTRUCTURA	1.51	68.6556	7.716	1362981.504	1049987.703	26.439
	79	35.1540	8.540	90.3330	1.70	ESTRUCTURA	1.51	127.5898	8.540	1362973.487	1049987.282	25.952
	80	35.5647	8.506	90.4033	1.70	ESTRUCTURA	1.51	128.2750	8.505	1362973.427	1049987.193	25.935
	81	326.2530	6.192	85.5850	1.70	ESTRUCTURA	1.51	58.7537	6.177	1362981.900	1049985.796	26.470
	82	326.0419	5.945	85.4634	1.70	ESTRUCTURA	1.51	58.4006	5.929	1362981.802	1049985.565	26.473
	83	28.3311	6.794	86.3203	1.70	ESTRUCTURA	1.51	120.8817	6.782	1362975.215	1049986.336	26.446
	84	30.0002	6.779	86.3203	1.70	ESTRUCTURA	1.51	122.3292	6.767	1362975.077	1049986.233	26.445
	85	36.1046	4.896	85.0137	1.70	ESTRUCTURA	1.51	128.5081	4.878	1362975.659	1049984.332	26.460
	86	37.4021	5.002	85.1801	1.70	ESTRUCTURA	1.51	130.0012	4.985	1362975.491	1049984.334	26.445
	87	320.0311	6.586	88.0440	1.70	ESTRUCTURA	1.51	52.3817	6.582	1362982.714	1049985.729	26.256
	88	318.5037	6.557	88.0044	1.70	ESTRUCTURA	1.51	51.1723	6.553	1362982.805	1049985.621	26.263
	89	60.0444	4.805	90.3226	1.70	ESTRUCTURA	1.51	152.4075	4.805	1362974.438	1049982.741	25.990
	90	60.3107	4.646	89.3720	1.70	ESTRUCTURA	1.51	152.8473	4.646	1362974.562	1049982.636	26.066
	91	65.1712	6.401	90.5944	1.70	ESTRUCTURA	1.51	157.6153	6.400	1362972.778	1049982.953	25.924
	92	66.4107	6.349	90.3213	1.70	ESTRUCTURA	1.51	159.0139	6.349	1362972.768	1049982.789	25.976
	93	84.5305	3.102	84.4003	1.70	TERRENO	1.51	177.2134	3.089	1362975.611	1049980.666	26.324
	94	53.2231	3.568	85.2901	1.70	TERRENO	1.51	145.7039	3.557	1362975.757	1049982.520	26.316
	95	85.2751	5.246	87.3849	1.70	TERRENO	1.51	177.7928	5.242	1362973.458	1049980.717	26.251
	96	66.3947	5.772	89.5249	1.70	TERRENO	1.51	158.9917	5.772	1362973.308	1049982.585	26.048
	97	37.1634	5.058	93.5446	2.60	BORDE_CANO	1.51	129.6048	5.046	1362975.479	1049984.403	24.790
	98	61.1808	5.759	91.4435	2.60	BORDE_CANO	1.51	153.6309	5.756	1362973.538	1049983.072	24.960
	99	33.4037	5.881	94.0233	2.60	CANO	1.51	126.0056	5.866	1362975.247	1049985.261	24.721
	100	30.4047	6.756	92.2144	2.60	BORDE_CANO	1.51	123.0084	6.750	1362975.019	1049986.176	24.857



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	101	83.4021	8.781	89.2325	1.70	TERRENO	1.51	176.0012	8.781	1362969.937	1049981.128	26.129
	102	69.3127	8.869	91.3015	1.70	TERRENO	1.51	161.8528	8.866	1362970.271	1049983.277	25.803
	103	57.5133	7.236	91.5755	2.60	BORDE_CANO	1.51	150.1878	7.232	1362972.421	1049984.111	24.887
	104	53.0909	7.502	93.1915	2.60	CANO	1.51	145.4812	7.489	1362972.525	1049984.760	24.701
	105	49.2913	7.848	92.1109	2.60	BORDE_CANO	1.51	141.8156	7.842	1362972.532	1049985.364	24.836
	106	42.0736	8.266	90.0054	2.60	TERRENO	1.51	134.4553	8.266	1362972.907	1049986.416	25.133
	107	82.3619	11.565	89.1218	1.70	TERRENO	1.51	174.9339	11.564	1362967.177	1049981.537	26.196
	108	70.2440	11.161	90.5915	1.70	TERRENO	1.51	162.7398	11.159	1362968.039	1049983.827	25.843
	109	61.2508	9.611	96.0101	1.70	TERRENO	1.51	153.7475	9.558	1362970.124	1049984.743	25.028
	110	58.4626	9.816	96.5526	1.70	BORDE_CANO	1.51	151.1025	9.744	1362970.165	1049985.224	24.852
	111	55.4802	10.008	97.1743	1.70	CANO	1.51	148.1292	9.927	1362970.265	1049985.757	24.765
	112	52.2107	10.233	97.0719	1.70	BORDE_CANO	1.51	144.6806	10.154	1362970.411	1049986.386	24.767
	113	46.5615	10.579	95.0355	1.70	TERRENO	1.51	139.2662	10.538	1362970.711	1049987.392	25.102
	114	82.4503	14.109	88.4408	1.70	TERRENO	1.51	175.0795	14.106	1362964.642	1049981.725	26.347
	115	71.1151	14.090	90.3819	1.70	TERRENO	1.51	163.5262	14.089	1362965.185	1049984.511	25.878
	116	63.4604	14.314	93.0141	1.70	TERRENO	1.51	156.0964	14.294	1362965.628	1049986.307	25.279
	117	60.4528	14.714	94.5812	1.70	BORDE_CANO	1.51	153.0864	14.659	1362965.625	1049987.151	24.761
	118	57.4621	14.972	95.2053	1.70	CANO	1.51	150.1012	14.907	1362965.773	1049987.946	24.640
	119	55.0141	15.346	94.3457	1.70	BORDE_CANO	1.51	147.3567	15.297	1362965.815	1049988.767	24.809
	120	53.5029	15.418	94.0450	1.70	TERRENO	1.51	146.1700	15.379	1362965.921	1049989.077	24.938
	121	79.1503	20.894	89.0830	1.70	TERRENO	1.51	171.5795	20.892	1362958.029	1049983.575	26.349
	122	73.2327	20.644	89.5018	1.70	TERRENO	1.51	165.7195	20.644	1362958.690	1049985.608	26.094
	123	70.1538	20.533	91.0236	1.70	TERRENO	1.51	162.5892	20.530	1362959.107	1049986.658	25.662
	124	69.0804	20.501	92.1310	1.70	BORDE_CANO	1.51	161.4631	20.486	1362959.273	1049987.028	25.242
	125	66.3917	20.402	90.5833	2.60	CANO	1.51	158.9834	20.399	1362959.654	1049987.831	24.788
	126	65.3004	20.682	91.1341	2.60	BORDE_CANO	1.51	157.8298	20.677	1362959.547	1049988.318	24.692
	127	60.4625	21.351	92.1421	1.70	TERRENO	1.51	153.1023	21.335	1362959.669	1049990.167	25.201
	128	88.5219	2.924	84.0906	1.70	PARAMENTO	1.51	181.2006	2.909	1362975.788	1049980.455	26.333
	129	135.5610	4.626	84.4058	1.70	PARAMENTO	1.51	228.2648	4.606	1362975.630	1049977.078	26.464
	130	110.2913	8.038	82.0619	1.70	PARAMENTO	1.51	202.8156	7.962	1362971.357	1049977.428	27.140
	131	87.4948	7.712	81.3713	1.70	PARAMENTO	1.51	180.1587	7.630	1362971.066	1049980.494	27.159
	132	176.3251	4.362	86.5831	1.70	BORDE_VIA	1.51	268.8762	4.356	1362978.610	1049976.160	26.266
	133	195.0242	17.996	88.5701	1.70	BORDE_VIA	1.51	287.3737	17.993	1362984.069	1049963.343	26.365
	134	187.0130	13.234	86.4733	1.70	PARAMENTO	1.51	279.3537	13.213	1362980.843	1049967.478	26.776
	135	179.1651	15.900	87.4327	1.70	PARAMENTO	1.51	271.6095	15.887	1362979.142	1049964.634	26.667
	136	208.1738	14.383	88.5224	1.70	BORDE_VIA	1.51	300.6225	14.380	1362986.021	1049968.141	26.318



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	137	283.4229	4.101	86.2535	1.70	BORDE_VIA	1.51	16.0367	4.093	1362982.630	1049981.646	26.291
	138	283.5105	8.949	88.3217	1.70	PARAMENTO	1.51	16.1800	8.946	1362987.288	1049983.008	26.264
	139	285.0807	13.994	90.1656	1.70	PARAMENTO	1.51	17.4639	13.994	1362992.045	1049984.715	25.967
	140	214.3308	13.732	88.3913	1.70	PARAMENTO	1.51	306.8809	13.728	1362986.935	1049969.535	26.358
	141	245.1502	12.576	87.4001	1.70	PARAMENTO	1.51	337.5792	12.566	1362990.312	1049975.723	26.547
	142	220.3817	9.508	88.3321	1.70	PARAMENTO	1.51	312.9667	9.505	1362985.174	1049973.560	26.275
	143	336.2435	9.231	88.2438	1.70	TERRENO	1.51	68.7384	9.227	1362982.042	1049989.115	26.292
	144	312.3716	7.297	86.5841	1.70	ESTRUCTURA	1.51	44.9498	7.287	1362983.853	1049985.664	26.420
	145	314.4117	7.176	86.5654	1.70	ESTRUCTURA	1.51	47.0167	7.166	1362983.581	1049985.758	26.418
	146	331.1124	8.410	99.4856	1.70	BORDE_CANO	1.51	63.5187	8.287	1362982.391	1049987.933	24.602
	147	315.3719	7.198	97.2919	2.20	BORDE_CANO	1.51	47.9506	7.137	1362983.476	1049985.815	24.597
	148	331.3519	7.079	99.4849	2.00	CANO	1.51	63.9173	6.975	1362981.763	1049986.781	24.529
	149	303.4459	14.023	88.3644	1.70	ESTRUCTURA	1.51	36.0784	14.019	1362990.026	1049988.771	26.375
	150	302.5121	14.007	88.3644	1.70	ESTRUCTURA	1.51	35.1845	14.003	1362990.140	1049988.584	26.375
	151	304.0302	13.893	89.1211	3.90	BORDE_CANO	1.51	36.3792	13.892	1362989.880	1049988.755	24.029
	152	312.5754	15.048	87.0735	3.90	BORDE_CANO	1.51	45.2937	15.029	1362989.268	1049991.197	24.590
	153	327.5144	12.455	87.3725	1.70	TERRENO	1.51	60.1909	12.444	1362984.882	1049991.313	26.552
	154	313.5029	14.949	88.2746	1.70	ESTRUCTURA	1.51	46.1700	14.944	1362989.045	1049991.296	26.437
E10005-E10004	E10004	0.0000	99.217	90.0502	1.70	ESTACION	1.53	289.8848	99.239	1363012.450	1049887.194	26.527
	E10006	149.1020	25.058	89.3959	1.70	DELTA	1.53	259.0570	25.058	1363007.693	1049862.592	26.498
	155	1.1403	103.459	89.5315	2.60	DESCARGA	1.53	111.1189	103.459	1362975.173	1049983.703	25.655
	156	0.0002	30.481	89.2918	1.70	LINEAMIENT	1.53	109.8853	30.480	1363002.083	1049915.856	26.624
	157	0.0000	68.416	89.5326	1.70	LINEAMIENT	1.53	109.8848	68.416	1362989.180	1049951.530	26.482
	158	355.0739	52.793	89.4748	1.70	BORDE_VIA	1.53	105.0123	52.793	1362998.775	1049938.184	26.539
	159	1.2853	52.533	89.4317	1.70	BORDE_VIA	1.53	111.3662	52.532	1362993.311	1049936.115	26.607
	160	353.5416	31.373	89.2535	1.70	BORDE_VIA	1.53	103.7892	31.371	1363004.973	1049917.661	26.666
	161	1.3849	31.055	89.3224	1.70	BORDE_VIA	1.53	111.5317	31.054	1363001.053	1049916.080	26.601
	162	338.3851	10.255	89.2954	1.70	PARAMENTO	1.53	88.5323	10.255	1363012.713	1049897.445	26.442
	163	16.1334	10.981	89.0906	1.70	PARAMENTO	1.53	126.1109	10.980	1363005.979	1049896.064	26.514
	164	323.1446	4.853	86.3852	1.70	PARAMENTO	1.53	73.1309	4.845	1363013.856	1049891.830	26.636
	165	57.3232	4.013	87.3752	1.70	PARAMENTO	1.53	167.4270	4.010	1363008.536	1049888.066	26.518
	166	180.2539	4.005	87.0005	1.70	BORDE_VIA	1.53	290.3123	4.000	1363013.838	1049883.443	26.561
	167	130.4026	3.867	87.0806	1.70	BORDE_VIA	1.53	240.5587	3.862	1363010.552	1049883.830	26.545
	168	173.1455	11.223	89.2255	1.70	PARAMENTO	1.53	283.1334	11.222	1363015.000	1049876.265	26.473
	169	146.3847	12.884	89.0729	1.70	BORDE_VIA	1.53	256.5312	12.882	1363009.449	1049874.665	26.549
	170	161.1020	18.298	89.2752	1.70	PARAMENTO	1.53	271.0570	18.297	1363012.787	1049868.899	26.523



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	171	157.0622	23.078	89.3545	1.70	PARAMENTO	1.53	266.9909	23.077	1363011.238	1049864.148	26.515
	172	148.0405	14.729	89.1058	1.70	BORDE_VIA	1.53	257.9528	14.728	1363009.376	1049872.790	26.562
	173	147.4242	31.941	89.5019	1.70	PARAMENTO	1.53	257.5964	31.941	1363005.589	1049855.998	26.442
	174	149.1138	18.926	89.2234	1.70	LINEAMIENT	1.53	259.0787	18.925	1363008.864	1049868.611	26.558
	175	149.1139	9.156	88.3149	1.70	LINEAMIENT	1.53	259.0789	9.153	1363010.716	1049878.206	26.587
E10006-E10005	E10005	0.0000	25.056	89.2532	1.70	ESTACION	1.47	259.0570	25.058	1363007.693	1049862.592	26.498
	E10007	137.4137	44.334	89.4719	1.70	DELTA	1.47	216.7506	44.334	1362972.171	1049836.065	26.426
	176	15.3157	7.477	87.4930	1.70	BORDE_VIA	1.47	94.5895	7.472	1363007.095	1049870.039	26.546
	177	42.4702	6.514	87.3906	1.70	PARAMENTO	1.47	121.8409	6.509	1363004.260	1049868.121	26.530
	178	110.3402	8.901	89.0409	1.70	BORDE_VIA	1.47	189.6242	8.900	1362998.919	1049861.104	26.407
	179	116.3430	14.128	88.3546	1.70	PARAMENTO	1.47	195.6320	14.124	1362994.092	1049858.786	26.609
	180	107.3931	9.626	88.5237	1.70	PARAMENTO	1.47	186.7156	9.624	1362998.135	1049861.466	26.451
	181	119.2705	13.826	89.3419	1.70	BORDE_VIA	1.47	198.5084	13.826	1362994.583	1049858.203	26.366
	182	131.3318	26.034	89.3600	1.70	BORDE_VIA	1.47	210.6120	26.033	1362985.288	1049849.335	26.444
	183	129.4035	26.202	89.3000	1.70	PARAMENTO	1.47	208.7334	26.201	1362984.718	1049849.996	26.491
	184	146.2330	24.437	89.4657	1.70	BORDE_VIA	1.47	225.4487	24.437	1362990.550	1049845.177	26.355
	185	134.3016	37.258	89.5602	1.70	BORDE_VIA	1.47	213.5614	37.258	1362976.646	1049841.994	26.306
	186	141.1928	20.545	89.3734	1.70	MANHOLE	1.47	220.3814	20.545	1362992.043	1049849.281	26.397
	187	151.0804	12.858	89.1345	1.70	BORDE_VIA	1.47	230.1914	12.857	1362999.462	1049852.715	26.436
	188	166.0226	6.553	88.2916	1.70	BORDE_VIA	1.47	245.0975	6.551	1363004.935	1049856.650	26.436
	189	320.5303	3.353	87.0958	1.70	BORDE_VIA	1.47	39.9412	3.349	1363010.261	1049864.742	26.428
E10007-E10006	E10006	0.0000	44.327	89.3726	1.70	ESTACION	1.47	216.7506	44.334	1362972.171	1049836.065	26.426
	E10008	275.1929	64.708	90.0419	1.70	DELTA	1.47	312.0753	64.708	1363015.532	1049788.035	26.116
	190	4.3718	24.849	89.3535	1.70	LINEAMIENT	1.47	41.3723	24.848	1362990.818	1049852.489	26.374
	191	275.1930	33.803	89.5601	1.70	LINEAMIENT	1.47	312.0756	33.803	1362994.823	1049810.975	26.236
	192	259.4339	6.405	85.0530	1.70	PARAMENTO	1.47	296.4781	6.382	1362975.016	1049830.353	26.745
	193	318.3927	10.315	89.1303	1.70	PARAMENTO	1.47	355.4081	10.314	1362982.452	1049835.240	26.338
	194	221.3852	9.850	86.4531	1.70	PARAMENTO	1.47	258.3984	9.834	1362970.193	1049826.432	26.754
	195	50.0511	4.039	89.5200	1.70	PARAMENTO	1.47	86.8370	4.039	1362972.394	1049840.098	26.207
	196	132.5344	2.586	82.1735	1.70	POSTE	1.47	169.6462	2.563	1362969.650	1049836.526	26.544
	197	199.5000	26.000	89.0703	1.70	PARAMENTO	1.47	236.5839	25.997	1362957.854	1049814.366	26.598
E10008-E10007	E10007	0.0000	64.699	89.3303	1.70	ESTACION	1.49	312.0753	64.708	1363015.532	1049788.035	26.116
	E10009	273.2939	32.651	88.4917	1.70	DELTA	1.49	45.5695	32.644	1363038.384	1049811.346	26.578
	199	220.4348	2.804	78.0937	1.70	MANHOLE	1.49	352.8053	2.744	1363018.255	1049787.691	26.481
	200	301.2205	6.434	86.4320	1.70	PARAMENTO	1.49	73.4434	6.423	1363017.363	1049794.192	26.274
	201	39.2807	3.468	80.4733	1.70	PARAMENTO	1.49	171.5439	3.423	1363012.146	1049788.538	26.461



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	202	83.4148	8.056	87.4008	1.70	PARAMENTO	1.49	215.7720	8.049	1363009.001	1049783.330	26.234
	203	78.1250	8.170	86.1043	1.70	PARAMENTO	1.49	210.2892	8.152	1363008.493	1049783.923	26.450
	204	123.0809	12.985	88.4951	1.70	PARAMENTO	1.49	255.2112	12.982	1363012.218	1049775.483	26.171
	205	95.0522	27.616	89.1030	1.70	PARAMENTO	1.49	227.1648	27.613	1362996.758	1049767.786	26.304
	206	113.1500	29.022	89.1534	1.70	PARAMENTO	1.49	245.3253	29.020	1363003.417	1049761.665	26.281
	207	188.4317	4.427	86.1552	1.70	POSTE	1.49	320.7967	4.418	1363018.955	1049785.243	26.194
	208	279.3903	14.914	89.4502	1.70	POSTE	1.49	51.7262	14.914	1363024.770	1049799.743	25.971
E10009-E10008	E10008	359.5959	32.650	89.1816	1.70	ESTACION	1.50	45.5695	32.644	1363038.384	1049811.346	26.578
	E10010	77.4551	63.761	90.0338	1.70	DELTA	1.50	303.3337	63.761	1363073.422	1049758.075	26.306
	209	53.3447	6.422	87.1351	1.70	PARAMENTO	1.50	279.1492	6.415	1363039.404	1049805.013	26.684
	210	71.4036	21.528	89.1850	1.70	PARAMENTO	1.50	297.2462	21.526	1363048.240	1049792.208	26.631
	211	183.3742	2.916	76.4350	1.70	PARAMENTO	1.50	49.1978	2.838	1363040.239	1049813.494	27.043
	212	201.1718	1.884	84.3625	1.70	POSTE	1.50	66.8578	1.876	1363039.122	1049813.071	26.551
	213	73.2757	21.623	89.3909	1.70	POSTE	1.50	299.0353	21.623	1363048.879	1049792.441	26.505
	214	307.2003	3.409	85.4809	1.70	PARAMENTO	1.50	172.9037	3.400	1363035.011	1049811.766	26.623
	215	93.0405	13.757	88.3944	1.70	PARAMENTO	1.50	318.6375	13.753	1363048.707	1049802.258	26.695
	216	250.5148	14.211	87.2434	1.70	PARAMENTO	1.50	116.4328	14.196	1363032.065	1049824.058	27.016
	217	227.2714	4.924	86.3317	1.70	PARAMENTO	1.50	93.0234	4.915	1363038.125	1049816.254	26.669
	218	220.1314	4.918	86.3317	1.70	PARAMENTO	1.50	85.7900	4.909	1363038.745	1049816.242	26.669
	219	261.4034	32.573	89.3851	1.70	PARAMENTO	1.50	127.2456	32.572	1363018.671	1049837.275	26.574
	220	269.3710	30.148	89.3616	1.70	PARAMENTO	1.50	135.1889	30.147	1363016.997	1049832.593	26.582
	221	269.4836	30.086	89.3815	1.70	PARAMENTO	1.50	135.3795	30.085	1363016.970	1049832.478	26.564
	222	273.1618	30.172	89.0754	1.70	PARAMENTO	1.50	138.8412	30.169	1363015.671	1049831.201	26.831
	223	266.2053	22.350	89.3716	1.70	MANHOLE	1.50	131.9175	22.350	1363023.454	1049827.976	26.521
	224	245.4530	2.043	85.0005	1.70	SUMIDERO	1.50	111.3278	2.035	1363037.644	1049813.242	26.552
	225	277.2551	2.437	85.5655	1.70	SUMIDERO	1.50	143.0003	2.431	1363036.443	1049812.809	26.546
	226	77.4553	31.154	89.5106	1.70	LINEAMIENT	1.50	303.3342	31.154	1363055.504	1049785.318	26.454
E10010-E10009	E10009	0.0000	63.765	89.3611	1.70	ESTACION	1.51	303.3337	63.761	1363073.422	1049758.075	26.306
	E10011	168.5307	62.993	90.1812	1.70	DELTA	1.51	292.2189	62.992	1363097.242	1049699.760	25.787
	227	179.4136	22.952	88.1625	1.70	PARAMENTO	1.51	303.0270	22.942	1363085.926	1049738.840	26.812
	228	220.0708	4.127	87.3826	1.70	PARAMENTO	1.51	343.4525	4.124	1363077.375	1049756.900	26.290
	229	192.1857	24.733	87.1936	1.70	PARAMENTO	1.51	315.6495	24.706	1363091.089	1049740.804	27.274
	230	305.2903	4.309	86.3044	1.70	PARAMENTO	1.51	68.8178	4.301	1363074.976	1049762.085	26.382
	231	314.4005	3.282	87.2937	1.70	POSTE	1.51	78.0017	3.279	1363074.104	1049761.282	26.264
	232	162.3101	20.294	90.2202	1.70	MANHOLE	1.51	285.8506	20.294	1363078.965	1049738.553	25.990
	233	26.5208	9.147	88.3643	1.70	POSTE	1.51	150.2025	9.144	1363065.487	1049762.619	26.342



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	234	345.0000	12.722	88.4348	1.70	POSTE	1.51	108.3337	12.719	1363069.421	1049770.148	26.402
	235	176.1546	31.643	88.4536	1.70	PARAMENTO	1.51	299.5964	31.636	1363089.046	1049730.567	26.805
	236	349.4512	22.695	89.0755	1.70	PARAMENTO	1.51	113.0870	22.692	1363064.524	1049778.950	26.464
	237	171.1538	31.504	89.1837	1.70	PARAMENTO	1.51	294.5942	31.502	1363086.533	1049729.431	26.499
	238	154.3409	25.724	89.3052	1.70	PARAMENTO	1.51	277.9028	25.723	1363076.959	1049732.596	26.338
	239	23.3714	12.058	88.2914	1.70	PARAMENTO	1.51	146.9542	12.054	1363063.318	1049764.648	26.439
	240	5.3017	25.137	88.4930	1.70	PARAMENTO	1.51	128.8384	25.132	1363057.661	1049777.650	26.636
	241	349.2222	31.076	88.5314	1.70	PARAMENTO	1.51	112.7064	31.070	1363061.429	1049786.737	26.724
	242	349.1116	27.397	88.5002	1.70	CANCHA	1.51	112.5214	27.391	1363062.930	1049783.377	26.678
	243	332.4330	7.873	86.0525	1.70	CANCHA	1.51	96.0587	7.855	1363072.593	1049765.886	26.657
	244	331.1017	31.548	88.5905	1.70	CANCHA	1.51	94.5050	31.543	1363070.944	1049789.520	26.679
	245	330.5251	19.252	88.2434	1.70	CANCHA	1.51	94.2145	19.245	1363072.008	1049777.267	26.655
	246	169.3939	35.954	90.0254	1.70	POSTE	1.51	292.9945	35.954	1363087.467	1049724.978	26.090
	247	168.5308	35.650	89.5912	1.70	LINEAMIENT	1.51	292.2192	35.650	1363086.903	1049725.072	26.128
E10011-E10010	E10010	0.0000	62.988	89.3022	1.70	ESTACION	1.49	292.2189	62.992	1363097.242	1049699.760	25.787
	E10012	109.1731	60.923	87.4304	1.70	DELTA	1.49	221.5109	60.875	1363051.657	1049659.415	27.998
	E10013	280.2154	56.854	90.0049	1.70	DELTA	1.49	32.5839	56.854	1363145.148	1049730.378	25.558
	248	294.1349	28.096	89.2127	1.70	PARAMENTO	1.49	46.4492	28.094	1363116.599	1049720.122	25.887
	249	272.2713	26.128	89.5515	1.70	PARAMENTO	1.49	24.6725	26.128	1363120.985	1049710.667	25.608
	250	160.2104	2.576	80.1722	1.70	MANHOLE	1.49	272.5700	2.539	1363097.356	1049697.223	26.006
	251	151.4202	4.641	83.5230	1.70	MANHOLE	1.49	263.9195	4.615	1363096.753	1049695.171	26.067
	252	194.4437	4.685	83.5838	1.70	POSTE	1.49	306.9625	4.659	1363100.044	1049696.037	26.063
	253	72.3431	5.672	83.3444	1.70	PARAMENTO	1.49	184.7942	5.636	1363091.626	1049699.289	26.206
	254	335.0210	4.551	82.5224	1.70	PARAMENTO	1.49	87.2550	4.516	1363097.458	1049704.271	26.136
	255	137.2437	6.373	84.5415	1.70	BORDE_VIA	1.49	249.6292	6.348	1363095.033	1049693.809	26.138
	256	98.4141	5.992	86.1042	1.70	BORDE_VIA	1.49	210.9137	5.979	1363092.113	1049696.688	25.971
	257	120.0211	16.677	86.1433	1.70	BORDE_VIA	1.49	232.2553	16.641	1363087.055	1049686.601	26.665
	258	109.2739	16.478	86.3200	1.70	BORDE_VIA	1.49	221.6798	16.448	1363084.958	1049688.823	26.568
	259	113.4954	33.942	86.5441	1.70	BORDE_VIA	1.49	226.0506	33.893	1363073.720	1049675.359	27.401
	260	108.2344	33.672	86.5143	1.70	BORDE_VIA	1.49	220.6145	33.622	1363071.720	1049677.874	27.415
E10012-E10011	E10011	0.0000	60.923	91.5428	1.70	ESTACION	1.50	221.5109	60.875	1363051.657	1049659.415	27.998
	E10014	275.4331	97.192	89.5225	1.70	DELTA	1.50	317.2362	97.192	1363123.012	1049593.423	28.016
	261	325.4053	11.605	87.4239	1.70	PARAMENTO	1.50	7.1923	11.596	1363063.162	1049660.866	28.265
	262	42.2607	7.655	90.1207	1.70	PARAMENTO	1.50	83.9462	7.655	1363052.465	1049667.027	27.775
	263	313.2431	11.473	87.4413	1.70	PARAMENTO	1.50	354.9195	11.464	1363063.076	1049658.399	28.255
	264	319.3321	8.477	88.2401	1.70	POSTE	1.50	1.0667	8.474	1363060.130	1049659.572	28.038



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	265	60.5419	10.631	88.5602	1.70	PARAMENTO	1.50	102.4162	10.629	1363049.372	1049669.795	28.000
	266	314.3221	7.919	88.3750	1.70	ANDEN	1.50	356.0500	7.917	1363059.555	1049658.869	27.991
	267	305.1610	7.061	88.3108	1.70	ANDEN	1.50	346.7803	7.059	1363058.529	1049657.800	27.984
	268	291.4027	6.822	88.2157	1.70	BORDE_VIA	1.50	333.1850	6.819	1363057.743	1049656.338	27.996
	269	282.0711	7.397	88.2801	1.70	BORDE_VIA	1.50	323.6306	7.394	1363057.611	1049655.030	28.000
	270	277.3227	8.945	88.4656	1.70	SUMIDERO	1.50	319.0517	8.943	1363058.412	1049653.554	27.992
	271	279.4906	9.752	89.3314	1.70	SUMIDERO	1.50	321.3292	9.752	1363059.271	1049653.321	27.878
	272	278.3849	14.017	89.2339	1.70	BORDE_VIA	1.50	320.1578	14.016	1363062.419	1049650.435	27.950
	273	88.3936	6.305	89.2339	1.70	SUMIDERO	1.50	130.1709	6.305	1363047.590	1049664.232	27.868
	274	92.3131	5.425	88.0052	1.70	SUMIDERO	1.50	134.0362	5.422	1363047.889	1049663.312	27.990
	275	86.5133	4.970	88.3833	1.70	BORDE_VIA	1.50	128.3700	4.969	1363048.573	1049663.310	27.920
	276	246.0812	2.630	85.0950	1.70	MANHOLE	1.50	287.6475	2.621	1363052.452	1049656.917	28.023
	277	141.1116	10.776	88.5617	1.70	MANHOLE	1.50	182.6987	10.774	1363040.895	1049658.907	28.001
	278	93.1117	16.256	89.2459	1.70	BORDE_VIA	1.50	134.6989	16.255	1363040.224	1049670.969	27.967
	279	126.3548	14.079	89.3026	1.70	BORDE_VIA	1.50	168.1075	14.078	1363037.881	1049662.316	27.923
	280	143.2058	9.873	89.0258	1.70	BORDE_VIA	1.50	184.8603	9.872	1363041.821	1049658.578	27.966
	281	150.0908	10.062	89.0724	1.70	BORDE_VIA	1.50	191.6631	10.061	1363041.804	1049657.381	27.956
	282	158.3601	12.295	90.0045	1.70	BORDE_VIA	1.50	200.1112	12.295	1363040.112	1049655.187	27.799
	283	226.4512	9.691	89.2129	1.70	BORDE_VIA	1.50	268.2642	9.690	1363051.364	1049649.729	27.910
	284	217.4421	9.379	89.0237	1.70	BORDE_VIA	1.50	259.2500	9.378	1363049.908	1049650.201	27.958
	285	212.3132	10.016	89.1912	1.70	BORDE_VIA	1.50	254.0364	10.015	1363048.903	1049649.786	27.921
	286	164.5305	18.220	90.1757	1.70	BORDE_VIA	1.50	206.3956	18.220	1363035.337	1049651.315	27.707
	287	163.4826	20.317	88.5830	1.70	PARAMENTO	1.50	205.3181	20.314	1363033.295	1049650.728	28.165
	288	157.3752	14.542	88.3143	1.70	PARAMENTO	1.50	199.1420	14.537	1363037.924	1049654.648	28.175
	289	146.2942	16.494	88.4755	1.70	PARAMENTO	1.50	188.0059	16.490	1363035.328	1049657.118	28.148
	290	207.0419	13.957	89.3456	1.70	PARAMENTO	1.50	248.5828	13.957	1363046.561	1049646.422	27.904
	291	217.4528	14.915	88.5949	1.70	PARAMENTO	1.50	259.2687	14.913	1363048.881	1049644.763	28.063
	292	204.4428	12.794	90.2845	1.70	SUMIDERO	1.50	246.2520	12.794	1363046.505	1049647.704	27.695
	293	207.1851	11.984	90.2641	1.70	SUMIDERO	1.50	248.8250	11.984	1363047.329	1049648.240	27.709
	294	201.3008	14.542	89.5709	1.70	BORDE_VIA	1.50	243.0131	14.542	1363045.058	1049646.456	27.814
	295	200.5545	17.486	89.4037	1.70	PARAMENTO	1.50	242.4400	17.486	1363043.567	1049643.913	27.900
	296	162.1255	14.017	90.5102	1.70	SUMIDERO	1.50	203.7262	14.015	1363038.827	1049653.775	27.594
	297	163.3116	14.905	90.4627	1.70	SUMIDERO	1.50	205.0320	14.904	1363038.154	1049653.108	27.600
	298	231.3500	10.379	89.2452	1.70	SUMIDERO	1.50	273.0942	10.378	1363052.218	1049649.051	27.908
	299	229.5250	9.486	88.4350	1.70	SUMIDERO	1.50	271.3914	9.484	1363051.888	1049649.934	28.012
	300	237.2856	11.762	89.2737	1.70	BORDE_VIA	1.50	278.9931	11.761	1363053.496	1049647.798	27.913



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	301	37.4628	5.434	88.0630	1.70	SUMIDERO	1.50	79.2853	5.431	1363052.667	1049664.751	27.981
	302	43.3650	6.296	88.4054	1.70	SUMIDERO	1.50	85.1248	6.294	1363052.192	1049665.686	27.947
	303	359.5959	32.007	91.0323	1.70	LINEAMIENT	1.50	41.5106	32.002	1363075.621	1049680.624	27.212
	304	359.5959	45.299	91.3152	1.70	LINEAMIENT	1.50	41.5106	45.283	1363085.567	1049689.426	26.591
	305	359.5959	7.423	89.1826	1.70	LINEAMIENT	1.50	41.5106	7.422	1363057.216	1049664.334	27.892
E10014-E10012	E10012	0.0000	97.199	89.5453	1.70	ESTACION	1.52	317.2362	97.192	1363123.012	1049593.423	28.016
	E10015	180.2214	145.212	90.4109	0.09	DELTA	1.52	317.6067	145.202	1363230.248	1049495.526	27.715
	306	0.0002	64.896	89.4347	1.70	LINEAMIENT	1.52	137.2367	64.895	1363075.368	1049637.486	28.144
	307	180.2214	90.081	90.0744	1.70	LINEAMIENT	1.52	317.6067	90.081	1363189.539	1049532.690	27.636
	308	180.2214	47.499	90.0011	1.70	LINEAMIENT	1.52	317.6067	47.499	1363158.091	1049561.399	27.836
	309	189.0334	4.224	89.0226	1.70	BORDE_VIA	1.52	326.2956	4.223	1363126.525	1049591.080	27.909
	310	358.2508	26.710	89.3530	1.70	BORDE_VIA	1.52	135.6550	26.709	1363103.911	1049612.093	28.029
	311	357.0129	26.129	89.5904	1.70	SUMIDERO	1.52	134.2609	26.129	1363104.775	1049612.136	27.845
	312	357.5555	25.257	89.5335	1.70	SUMIDERO	1.52	135.1681	25.257	1363105.100	1049611.230	27.885
	313	358.0120	21.285	89.4136	1.70	BORDE_VIA	1.52	135.2584	21.285	1363107.893	1049608.406	27.952
	314	352.2413	28.505	89.3533	1.70	BORDE_VIA	1.52	129.6398	28.504	1363104.827	1049615.374	28.041
	315	13.3616	30.888	89.4304	1.70	BORDE_VIA	1.52	150.8406	30.888	1363096.038	1049608.473	27.990
	316	15.0405	30.460	89.5605	1.70	SUMIDERO	1.52	152.3042	30.460	1363096.041	1049607.581	27.873
	317	14.3149	29.536	89.5314	1.70	SUMIDERO	1.52	151.7664	29.536	1363096.990	1049607.396	27.896
	318	17.3045	24.208	89.4421	1.70	BORDE_VIA	1.52	154.7487	24.208	1363101.117	1049603.750	27.948
	319	22.5552	33.175	89.2247	1.70	PARAMENTO	1.52	160.1673	33.173	1363091.806	1049604.678	28.197
	320	13.4237	42.520	89.3854	1.70	BORDE_VIA	1.52	150.9464	42.519	1363085.843	1049614.072	28.099
	321	10.4759	42.160	89.3854	1.70	BORDE_VIA	1.52	148.0359	42.159	1363087.245	1049615.742	28.097
	322	9.4943	42.693	89.4317	1.70	BORDE_VIA	1.52	147.0648	42.692	1363087.180	1049616.635	28.046
	323	16.5739	46.665	89.3329	1.70	PARAMENTO	1.52	154.1970	46.664	1363081.001	1049613.735	28.198
	324	20.0011	45.569	89.3103	1.70	PARAMENTO	1.52	157.2392	45.567	1363080.993	1049611.053	28.222
	325	9.0416	45.978	89.4624	1.70	SUMIDERO	1.52	146.3073	45.978	1363084.757	1049618.929	28.020
	326	8.3731	45.100	89.3756	1.70	SUMIDERO	1.52	145.8614	45.099	1363085.684	1049618.733	28.128
	327	359.3532	42.063	89.3742	1.70	SUMIDERO	1.52	136.8284	42.062	1363092.335	1049622.202	28.111
	328	358.5853	41.234	89.5046	1.70	SUMIDERO	1.52	136.2175	41.234	1363093.242	1049621.954	27.949
	329	358.5640	39.763	89.4512	1.70	BORDE_VIA	1.52	136.1806	39.763	1363094.322	1049620.955	28.009
	330	357.4742	39.017	89.4738	1.70	BORDE_VIA	1.52	135.0312	39.017	1363095.408	1049620.997	27.979
	331	355.3204	38.713	89.5135	1.70	BORDE_VIA	1.52	132.7706	38.713	1363096.723	1049621.842	27.933
	332	353.0824	38.874	89.5701	1.70	BORDE_VIA	1.52	130.3762	38.874	1363097.829	1049623.038	27.872
	333	355.2057	37.706	89.5855	1.70	SUMIDERO	1.52	132.5853	37.706	1363097.496	1049621.185	27.850
	334	354.5933	36.726	89.5814	1.70	SUMIDERO	1.52	132.2287	36.726	1363098.328	1049620.618	27.857



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	335	350.4527	41.140	89.3314	1.70	PARAMENTO	1.52	127.9937	41.139	1363097.688	1049625.844	28.158
	336	357.5241	27.562	89.3316	1.70	MANHOLE	1.52	135.1142	27.561	1363103.484	1049612.873	28.052
	337	3.1119	33.392	89.3204	1.70	MANHOLE	1.52	140.4248	33.391	1363097.274	1049614.697	28.109
	338	182.1503	20.561	89.3708	1.70	MANHOLE	1.52	319.4870	20.561	1363138.643	1049580.067	27.975
	339	176.0256	19.552	89.3635	1.70	MANHOLE	1.52	313.2850	19.552	1363136.417	1049579.191	27.971
	340	146.1424	19.209	89.5141	1.70	MANHOLE	1.52	283.4762	19.209	1363127.488	1049574.743	27.885
	341	182.5422	16.879	90.1255	1.70	SUMIDERO	1.52	320.1423	16.879	1363135.968	1049582.606	27.775
	342	184.1520	17.726	90.1112	1.70	SUMIDERO	1.52	321.4917	17.726	1363136.882	1049582.387	27.780
	343	154.5436	18.695	90.2009	1.70	SUMIDERO	1.52	292.1462	18.695	1363130.059	1049576.108	27.729
	344	155.1125	17.755	90.1617	1.70	SUMIDERO	1.52	292.4264	17.755	1363129.785	1049577.011	27.754
	345	191.2655	24.369	90.3750	1.70	SUMIDERO	1.52	328.6848	24.368	1363143.829	1049580.759	27.570
	346	191.5734	25.274	90.3320	1.70	SUMIDERO	1.52	329.1956	25.273	1363144.719	1049580.481	27.593
	347	139.2318	20.526	89.1715	1.70	PARAMENTO	1.52	276.6245	20.524	1363125.379	1049573.036	28.093
	348	215.2434	10.999	90.0536	1.70	PARAMENTO	1.52	352.6456	10.999	1363133.920	1049592.016	27.820
E10015-E10014	E10014	359.5959	145.228	89.4930	1.70	ESTACION	1.55	317.6067	145.202	1363230.248	1049495.526	27.715
	E10016	154.0408	16.472	89.3303	1.70	DELTA	1.55	291.6756	16.471	1363236.332	1049480.219	27.692
	349	9.1855	62.505	89.5436	1.70	SUMIDERO	1.55	146.9220	62.505	1363177.873	1049529.640	27.661
	350	8.2350	62.266	89.5603	1.70	SUMIDERO	1.55	146.0039	62.266	1363178.625	1049530.341	27.635
	351	11.2540	46.878	90.0653	1.70	SUMIDERO	1.55	149.0345	46.878	1363190.051	1049519.646	27.469
	352	12.1715	47.477	90.0740	1.70	SUMIDERO	1.55	149.8942	47.477	1363189.176	1049519.341	27.457
	353	359.1141	51.961	90.0013	1.70	SUMIDERO	1.55	136.8014	51.961	1363192.369	1049531.095	27.560
	354	359.4718	51.143	89.5722	1.70	SUMIDERO	1.55	137.3950	51.143	1363192.605	1049530.147	27.602
	355	9.0333	50.209	89.4635	1.70	MANHOLE	1.55	146.6659	50.209	1363188.300	1049523.117	27.759
	356	2.2159	49.759	89.4634	1.70	MANHOLE	1.55	139.9731	49.759	1363192.146	1049527.528	27.757
	357	4.5433	50.696	89.4244	1.70	MANHOLE	1.55	142.5159	50.695	1363190.020	1049526.377	27.818
	358	12.3309	44.799	89.4243	1.70	PARAMENTO	1.55	150.1592	44.798	1363191.389	1049517.818	27.788
	359	12.2303	70.584	89.4638	1.70	PARAMENTO	1.55	149.9909	70.583	1363169.126	1049530.828	27.837
	360	10.2639	43.563	90.0403	1.70	BORDE_VIA	1.55	148.0509	43.563	1363193.284	1049518.578	27.512
	361	6.2936	69.846	89.5325	1.70	BORDE_VIA	1.55	144.1000	69.846	1363173.670	1049536.482	27.697
	362	7.1002	63.433	89.5614	1.70	BORDE_VIA	1.55	144.7739	63.433	1363178.431	1049532.115	27.633
	363	8.0240	63.014	89.5547	1.70	BORDE_VIA	1.55	145.6512	63.014	1363178.223	1049531.081	27.640
	364	9.3457	62.643	89.5619	1.70	BORDE_VIA	1.55	147.1892	62.643	1363177.599	1049529.470	27.630
	365	11.5243	58.789	89.5122	1.70	BORDE_VIA	1.55	149.4853	58.789	1363179.601	1049525.377	27.711
	366	12.2255	50.377	89.5654	1.70	BORDE_VIA	1.55	149.9887	50.377	1363186.625	1049520.723	27.608
	367	352.5736	28.370	89.2321	1.70	PARAMENTO	1.55	130.5667	28.368	1363211.799	1049517.076	27.865
	368	359.2212	38.113	89.5051	1.70	BORDE_VIA	1.55	136.9767	38.113	1363202.385	1049521.531	27.664



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	369	346.1845	25.144	89.1852	1.70	PARAMENTO	1.55	123.9192	25.142	1363216.218	1049516.390	27.864
	370	355.1428	19.898	89.5627	1.70	BORDE_VIA	1.55	132.8478	19.898	1363216.716	1049510.115	27.584
	371	352.3515	13.279	90.0301	1.70	BORDE_VIA	1.55	130.1942	13.279	1363221.678	1049505.670	27.551
	372	353.1351	12.034	89.4055	1.70	SUMIDERO	1.55	130.8375	12.034	1363222.379	1049504.631	27.630
	373	351.5330	12.905	90.1627	1.70	SUMIDERO	1.55	129.4984	12.905	1363222.040	1049505.484	27.501
	374	322.2443	13.966	89.5706	1.70	SUMIDERO	1.55	100.0187	13.966	1363227.818	1049509.279	27.575
	375	324.4539	13.063	89.5958	1.70	SUMIDERO	1.55	102.3675	13.063	1363227.450	1049508.286	27.563
	376	334.3002	7.175	88.2926	1.70	MANHOLE	1.55	112.1073	7.173	1363227.549	1049502.171	27.752
	377	34.2225	4.551	87.5728	1.70	MANHOLE	1.55	171.9803	4.548	1363225.744	1049496.161	27.725
	378	48.4124	6.957	88.4558	1.70	MANHOLE	1.55	186.2967	6.955	1363223.335	1049494.763	27.713
	379	122.1434	5.374	88.3203	1.70	MANHOLE	1.55	259.8495	5.372	1363229.301	1049490.238	27.700
	380	141.1926	18.621	87.3412	1.70	MANHOLE	1.55	278.9306	18.604	1363233.136	1049477.148	28.353
	381	59.5112	7.400	89.2928	1.70	BORDE_VIA	1.55	197.4600	7.400	1363223.189	1049493.306	27.629
	382	63.1952	8.297	87.4458	1.70	PARAMENTO	1.55	200.9378	8.291	1363222.505	1049492.564	27.889
	383	125.2516	16.094	90.2730	1.70	SUMIDERO	1.55	263.0278	16.093	1363228.294	1049479.552	27.434
	384	126.0736	15.085	90.3519	1.70	SUMIDERO	1.55	263.7334	15.084	1363228.601	1049480.532	27.408
	385	104.3943	8.718	89.4653	1.70	BORDE_VIA	1.55	242.2687	8.718	1363226.191	1049487.810	27.596
	386	102.0355	9.510	89.0845	1.70	PARAMENTO	1.55	239.6720	9.509	1363225.446	1049487.319	27.705
	387	125.3138	14.822	90.2421	1.70	BORDE_VIA	1.55	263.1339	14.822	1363228.476	1049480.811	27.458
	388	119.0616	11.653	90.0116	1.70	BORDE_VIA	1.55	256.7112	11.653	1363227.569	1049484.185	27.559
	389	134.3303	24.949	89.4812	1.70	SUMIDERO	1.55	272.1575	24.949	1363231.187	1049470.595	27.649
	390	132.2046	25.021	90.0730	1.70	SUMIDERO	1.55	269.9528	25.021	1363230.227	1049470.505	27.508
	391	133.0642	26.386	89.3322	1.70	PARAMENTO	1.55	270.7184	26.385	1363230.579	1049469.143	27.767
	392	128.0028	25.312	89.3107	1.70	PARAMENTO	1.55	265.6145	25.311	1363228.312	1049470.289	27.776
	393	123.0454	26.232	89.3244	1.70	PARAMENTO	1.55	260.6884	26.231	1363226.004	1049469.641	27.771
	394	123.4403	25.182	89.5630	1.70	BORDE_VIA	1.55	261.3409	25.182	1363226.457	1049470.631	27.589
	395	135.0008	26.008	89.5918	1.70	BORDE_VIA	1.55	272.6089	26.008	1363231.432	1049469.545	27.568
	396	134.3430	29.282	89.3635	1.70	PARAMENTO	1.55	272.1817	29.281	1363231.363	1049466.266	27.762
	397	136.2440	28.967	90.0005	1.70	BORDE_VIA	1.55	274.0178	28.967	1363232.278	1049466.630	27.562
	398	153.0512	24.374	90.1922	1.70	SUMIDERO	1.55	290.6934	24.374	1363238.861	1049472.725	27.426
	399	153.5236	23.472	90.0122	1.70	SUMIDERO	1.55	291.4834	23.472	1363238.844	1049473.685	27.554
	400	152.4908	24.694	90.1319	1.70	BORDE_VIA	1.55	290.4256	24.694	1363238.866	1049472.385	27.467
	401	152.2236	27.223	90.0530	1.70	BORDE_VIA	1.55	289.9834	27.223	1363239.551	1049469.942	27.519
	402	155.1142	27.522	89.2454	1.70	PARAMENTO	1.55	292.8017	27.521	1363240.913	1049470.156	27.844
	403	155.4623	25.649	89.2154	1.70	PARAMENTO	1.55	293.3798	25.647	1363240.425	1049471.985	27.847
	404	155.2124	13.568	89.3605	1.70	BORDE_VIA	1.55	292.9634	13.568	1363235.541	1049483.034	27.657



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	405	158.0759	9.691	89.2632	1.70	BORDE_VIA	1.55	295.7398	9.691	1363234.456	1049486.797	27.657
	406	159.4759	12.857	88.3749	1.70	PARAMENTO	1.55	297.4064	12.853	1363236.164	1049484.116	27.870
	407	120.5919	14.802	89.5930	1.70	PARAMENTO	1.55	258.5953	14.802	1363227.321	1049481.017	27.565
	408	251.4659	0.977	92.0021	1.70	SUMIDERO	1.55	29.3898	0.976	1363231.099	1049496.005	27.529
	409	276.1653	1.726	91.0314	1.70	SUMIDERO	1.55	53.8881	1.726	1363231.265	1049496.920	27.531
	410	317.2218	8.467	89.1710	1.70	BORDE_VIA	1.55	94.9784	8.466	1363229.513	1049503.961	27.669
	411	310.0511	8.575	88.1114	1.70	PARAMENTO	1.55	87.6931	8.571	1363230.593	1049504.090	27.834
	412	345.2545	4.915	88.4203	1.70	BORDE_VIA	1.55	123.0359	4.914	1363227.569	1049499.646	27.674
	413	166.2553	3.107	87.5220	1.70	BORDE_VIA	1.55	304.0381	3.105	1363231.986	1049492.953	27.678
	414	329.5416	0.993	87.1020	1.70	BORDE_VIA	1.55	107.5112	0.992	1363229.950	1049496.472	27.612
	415	352.2930	15.939	89.2751	1.70	POSTE	1.55	130.0984	15.938	1363219.982	1049507.718	27.712
E10016-E10015	E10015	0.0000	16.470	89.3350	1.70	ESTACION	1.56	291.6756	16.471	1363236.332	1049480.219	27.692
	E10017	264.1643	64.729	89.3321	1.70	DELTA	1.56	15.9542	64.727	1363298.566	1049498.011	28.050
	416	297.0001	3.095	93.1223	1.70	SUMIDERO	1.56	48.6759	3.090	1363238.372	1049482.540	27.375
	417	294.3912	2.130	94.3937	1.70	SUMIDERO	1.56	46.3289	2.123	1363237.798	1049481.755	27.375
	418	297.0520	6.052	89.5346	1.70	PARAMENTO	1.56	48.7645	6.052	1363240.321	1049484.771	27.559
	419	223.4301	11.274	88.2537	1.70	PARAMENTO	1.56	335.3925	11.270	1363246.578	1049475.527	27.858
	420	287.4951	5.493	91.1731	1.70	BORDE_VIA	1.56	39.5064	5.492	1363240.569	1049483.713	27.424
	421	235.2726	13.217	89.0040	1.70	BORDE_VIA	1.56	347.1328	13.215	1363249.215	1049477.277	27.776
	422	284.0734	5.863	90.4714	1.70	POSTE	1.56	35.8017	5.862	1363241.086	1049483.649	27.468
	423	228.3610	10.572	88.4826	1.70	POSTE	1.56	340.2784	10.570	1363246.281	1049476.653	27.768
	424	72.5146	16.272	90.0448	1.70	PARAMENTO	1.56	184.5384	16.272	1363220.111	1049478.932	27.525
	425	77.0435	15.907	90.1433	1.70	BORDE_VIA	1.56	188.7520	15.907	1363220.610	1049477.799	27.481
E10017-E10016	E10016	0.0000	64.731	89.3001	1.70	ESTACION	1.54	15.9542	64.727	1363298.566	1049498.011	28.050
	E10018	184.3246	91.842	91.0505	1.70	DELTA	1.54	20.5003	91.826	1363384.576	1049530.169	26.148
	E10019	90.5916	88.415	89.4457	1.70	DELTA	1.54	286.9420	88.414	1363324.330	1049413.434	28.274
	426	184.4935	54.289	91.3703	1.70	SUMIDERO	1.54	20.7806	54.267	1363349.303	1049517.264	26.355
	427	185.3523	53.830	91.3343	1.70	SUMIDERO	1.54	21.5439	53.810	1363348.616	1049517.771	26.420
	428	185.4144	52.508	91.3805	1.70	SUMIDERO	1.54	21.6498	52.487	1363347.350	1049517.375	26.389
	429	186.3020	52.025	91.3735	1.70	SUMIDERO	1.54	22.4598	52.004	1363346.625	1049517.878	26.410
	430	185.1402	54.617	91.3030	1.70	BORDE_VIA	1.54	21.1881	54.598	1363349.473	1049517.744	26.449
	431	182.1506	53.574	91.2947	1.70	BORDE_VIA	1.54	18.2059	53.556	1363349.440	1049514.743	26.488
	432	186.3654	51.935	91.2849	1.70	ANDEN	1.54	22.5692	51.918	1363346.507	1049517.937	26.545
	433	185.4158	51.436	91.3029	1.70	BORDE_VIA	1.54	21.6537	51.418	1363346.355	1049516.984	26.533
	434	187.5939	49.956	91.2850	1.70	PARAMENTO	1.54	23.9484	49.939	1363344.206	1049518.282	26.596
	435	180.5132	54.546	91.2720	1.70	ANDEN	1.54	16.8131	54.528	1363350.763	1049513.783	26.501



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	436	178.2424	54.292	91.1904	1.70	PARAMENTO	1.54	14.3609	54.278	1363351.147	1049511.473	26.638
	437	122.2240	8.402	85.0731	1.70	PARAMENTO	1.54	318.3320	8.372	1363304.819	1049492.445	28.601
	438	135.5404	10.169	85.5856	1.70	PARAMENTO	1.54	331.8553	10.144	1363307.510	1049493.226	28.599
	439	142.3721	3.203	89.3942	1.70	BORDE_VIA	1.54	338.5767	3.203	1363301.547	1049496.841	27.906
	440	127.3350	4.317	89.2909	1.70	ANDEN	1.54	323.5181	4.317	1363302.037	1049495.444	27.926
	441	102.3945	3.097	85.1942	1.70	BORDE_VIA	1.54	298.6167	3.087	1363300.044	1049495.301	28.139
	442	113.5044	4.490	88.1047	1.70	ANDEN	1.54	309.7998	4.488	1363301.438	1049494.563	28.030
	443	111.3556	9.388	85.3310	1.70	PARAMENTO	1.54	307.5531	9.360	1363304.270	1049490.591	28.615
	444	209.5927	2.133	89.0124	1.70	BORDE_VIA	1.54	45.9450	2.133	1363300.049	1049499.544	27.923
	445	245.5740	3.016	86.1336	1.70	ANDEN	1.54	81.9153	3.009	1363298.989	1049500.990	28.085
	446	288.5151	1.713	80.5649	1.70	POSTE	1.54	124.8184	1.692	1363297.600	1049499.400	28.156
	447	298.2629	6.788	69.5303	3.45	PARAMENTO	1.54	134.3956	6.374	1363294.106	1049502.565	28.471
	448	103.3039	8.279	87.3207	1.70	BORDE_VIA	1.54	299.4650	8.271	1363302.634	1049490.809	28.243
	449	70.0107	2.171	76.1226	1.70	MANHOLE	1.54	265.9728	2.108	1363298.418	1049495.908	28.405
	450	64.4337	8.986	87.4643	1.70	BORDE_VIA	1.54	260.6812	8.979	1363297.112	1049489.150	28.235
	451	53.2135	9.091	84.2749	1.70	PARAMENTO	1.54	249.3139	9.049	1363295.369	1049489.546	28.764
	452	64.1853	12.601	85.5957	1.70	PARAMENTO	1.54	260.2689	12.570	1363296.441	1049485.622	28.766
	453	71.1903	11.741	88.0638	1.70	BORDE_VIA	1.54	267.2717	11.735	1363298.007	1049486.290	28.274
	454	34.0501	12.946	86.0426	1.70	PARAMENTO	1.54	230.0378	12.916	1363290.270	1049488.112	28.773
	455	352.2934	15.044	86.5117	1.70	MANHOLE	1.54	188.4470	15.021	1363283.707	1049495.804	28.712
	456	24.4634	11.632	87.0048	1.70	BORDE_VIA	1.54	220.7303	11.616	1363289.763	1049490.431	28.493
	457	337.4007	14.619	86.4631	1.70	PARAMENTO	1.54	173.6228	14.596	1363284.060	1049499.632	28.709
	458	338.2919	13.470	87.3019	1.70	BORDE_VIA	1.54	174.4428	13.457	1363285.172	1049499.314	28.473
	459	326.3721	16.190	87.1453	1.70	PARAMENTO	1.54	162.5767	16.171	1363283.136	1049502.853	28.664
	460	325.2139	15.192	87.0830	1.70	BORDE_VIA	1.54	161.3150	15.173	1363284.192	1049502.872	28.644
	461	345.0854	15.041	87.3552	1.70	BORDE_VIA	1.54	181.1025	15.028	1363283.541	1049497.722	28.517
	462	345.1802	21.788	87.5307	1.70	PARAMENTO	1.54	181.2548	21.773	1363276.798	1049497.534	28.691
	463	350.0711	22.174	88.0356	1.70	BORDE_VIA	1.54	186.0739	22.161	1363276.529	1049495.666	28.635
	464	343.0541	2.565	83.2845	1.70	BORDE_VIA	1.54	179.0489	2.548	1363296.018	1049498.053	28.178
	465	355.4444	43.938	88.5740	1.70	PARAMENTO	1.54	191.6998	43.931	1363255.548	1049489.103	28.684
	466	0.0001	37.552	89.0712	1.70	LINEAMIENT	1.54	195.9545	37.548	1363262.464	1049487.690	28.464
	467	0.0001	5.073	85.1303	1.70	LINEAMIENT	1.54	195.9545	5.055	1363293.705	1049496.621	28.310
E10019-E10017	E10017	0.0001	88.416	90.0526	1.70	ESTACION	1.60	286.9420	88.414	1363324.330	1049413.434	28.274
	E10020	271.3515	43.651	92.3018	1.70	DELTA	1.60	18.5295	43.609	1363365.678	1049427.293	26.265
	468	201.3447	7.132	86.1612	1.70	PARAMENTO	1.60	308.5217	7.117	1363328.762	1049407.866	28.637
	469	187.5423	6.822	89.2139	1.70	BORDE_VIA	1.60	294.8484	6.822	1363327.196	1049407.244	28.249



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	470	194.1813	11.248	87.4418	1.70	PARAMENTO	1.60	301.2456	11.239	1363330.160	1049403.825	28.617
	471	185.0652	11.281	89.3656	1.70	BORDE_VIA	1.60	292.0564	11.281	1363328.566	1049402.979	28.249
	472	334.0557	6.589	86.3609	1.70	PARAMENTO	1.60	81.0412	6.577	1363325.354	1049419.931	28.563
	473	297.3327	6.576	85.4049	1.70	PARAMENTO	1.60	44.4995	6.557	1363329.007	1049418.030	28.668
	474	305.5148	3.428	88.0354	1.70	BORDE_VIA	1.60	52.8053	3.426	1363326.401	1049416.163	28.289
	475	330.4331	3.804	89.0817	1.70	BORDE_VIA	1.60	77.6673	3.804	1363325.142	1049417.150	28.230
	476	60.1214	5.814	87.3057	1.70	PARAMENTO	1.60	167.1459	5.809	1363318.667	1049414.726	28.425
	477	59.2430	4.690	88.5128	1.70	BORDE_VIA	1.60	166.3503	4.689	1363319.773	1049414.540	28.266
	478	78.2747	5.905	89.0256	1.70	BORDE_VIA	1.60	185.4050	5.904	1363318.452	1049412.878	28.271
	479	73.0801	5.650	89.2004	1.70	SUMIDERO	1.60	180.0756	5.650	1363318.680	1049413.426	28.239
	480	72.3251	4.684	89.0223	1.70	SUMIDERO	1.60	179.4895	4.683	1363319.647	1049413.476	28.251
	481	318.5925	3.293	89.5933	1.70	SUMIDERO	1.60	65.9323	3.293	1363325.673	1049416.441	28.173
	482	335.1740	3.293	88.4454	1.70	SUMIDERO	1.60	82.2364	3.292	1363324.774	1049416.696	28.245
	483	49.5334	4.825	88.5050	1.70	HIDRANTE	1.60	156.8348	4.824	1363319.895	1049415.332	28.270
	484	190.5945	5.429	89.1952	1.70	SUMIDERO	1.60	297.9378	5.429	1363326.873	1049408.638	28.236
	485	192.4831	6.281	89.4052	1.70	SUMIDERO	1.60	299.7506	6.281	1363327.446	1049407.981	28.208
	486	151.3335	5.792	88.4736	1.70	MANHOLE	1.60	258.5017	5.791	1363323.175	1049407.759	28.295
	487	177.4244	18.298	91.1632	1.70	MANHOLE	1.60	284.6542	18.293	1363328.958	1049395.736	27.766
	488	136.3724	10.542	90.0834	1.70	SUMIDERO	1.60	243.5653	10.542	1363319.637	1049403.994	28.147
	489	141.5002	10.286	89.3045	1.70	SUMIDERO	1.60	248.7759	10.286	1363320.606	1049403.846	28.261
	490	148.3232	12.338	89.5511	1.70	BORDE_VIA	1.60	255.4842	12.338	1363321.237	1049401.490	28.190
	491	139.4832	10.812	90.2730	1.70	BORDE_VIA	1.60	246.7509	10.812	1363320.062	1049403.500	28.087
	492	128.3723	10.848	90.1913	1.70	BORDE_VIA	1.60	235.5650	10.848	1363318.196	1049404.487	28.112
	493	121.1437	12.201	90.1426	1.70	BORDE_VIA	1.60	228.1856	12.201	1363316.195	1049404.341	28.122
	494	110.3238	18.284	90.0356	1.70	BORDE_VIA	1.60	217.4859	18.284	1363309.821	1049402.307	28.152
	495	112.1215	20.459	90.0356	1.70	BORDE_VIA	1.60	219.1462	20.459	1363308.463	1049400.518	28.150
	496	157.5524	16.901	89.5639	1.70	BORDE_VIA	1.60	264.8653	16.901	1363322.817	1049396.601	28.189
	497	168.1106	30.009	90.0312	1.70	BORDE_VIA	1.60	275.1270	30.009	1363327.011	1049383.545	28.145
	498	323.3614	2.302	87.1915	1.70	POSTE	1.60	70.5459	2.299	1363325.096	1049415.602	28.281
	499	291.4441	4.225	87.1014	1.70	POSTE	1.60	38.6867	4.220	1363327.624	1049416.072	28.382
	500	84.0818	3.158	87.5639	1.70	MANHOLE	1.60	191.0803	3.156	1363321.233	1049412.827	28.286
	501	0.0000	38.126	89.2730	1.70	LINEAMIENT	1.60	106.9420	38.124	1363313.220	1049449.904	28.533
E10019-E10017	E10017	0.0001	88.437	90.0607	1.70	ESTACION	1.60	286.9420	88.414	1363324.330	1049413.434	28.274
	502	0.0000	66.276	89.4826	1.70	LINEAMIENT	1.60	106.9420	66.276	1363305.017	1049476.833	28.396
E10020-E10019	E10019	0.0000	43.666	87.0614	1.70	ESTACION	1.48	18.5295	43.609	1363365.678	1049427.293	26.265
	E10021	95.5426	81.929	88.4201	1.70	DELTA	1.48	294.4367	81.908	1363399.563	1049352.722	27.908



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E10022	180.2759	72.554	90.1149	1.70	DELTA	1.48	18.9959	72.554	1363434.281	1049450.909	25.800
	503	182.0911	25.101	89.5548	1.70	PARAMENTO	1.48	20.6825	25.101	1363389.162	1049436.158	26.080
	504	162.3103	19.912	89.0134	1.70	BORDE_VIA	1.48	1.0470	19.909	1363385.584	1049427.656	26.388
	505	111.2607	8.619	85.1747	1.70	PARAMENTO	1.48	309.9648	8.590	1363371.196	1049420.709	26.756
	506	148.4855	15.031	87.1253	1.70	PARAMENTO	1.48	347.3448	15.013	1363380.327	1049424.003	26.780
	507	109.2740	6.864	88.5001	1.70	BORDE_VIA	1.48	307.9906	6.863	1363369.902	1049421.884	26.189
	508	106.1453	6.783	89.0813	1.70	POSTE	1.48	304.7775	6.782	1363369.547	1049421.722	26.151
	509	203.3940	3.103	87.5912	1.70	PARAMENTO	1.48	42.1906	3.101	1363367.976	1049429.375	26.158
	510	343.1924	8.769	87.2306	1.70	PARAMENTO	1.48	181.8528	8.760	1363356.923	1049427.009	26.449
	511	251.5523	11.673	89.4038	1.70	PARAMENTO	1.48	90.4525	11.673	1363365.586	1049438.965	26.115
	512	320.4441	10.713	87.0601	1.70	PARAMENTO	1.48	159.2742	10.699	1363355.671	1049431.079	26.591
	513	353.4028	7.937	87.4536	1.70	BORDE_VIA	1.48	192.2039	7.931	1363357.927	1049425.616	26.359
	514	27.5707	14.773	88.2016	0.09	PARAMENTO	1.48	226.4814	14.767	1363355.510	1049416.584	28.093
	515	64.0248	12.975	94.0548	0.09	PARAMENTO	1.48	262.5762	12.942	1363364.006	1049414.459	26.737
	516	219.5632	2.138	86.0532	1.70	POSTE	1.48	58.4717	2.133	1363366.794	1049429.111	26.195
	517	158.4644	14.540	90.3717	1.70	SUMIDERO	1.48	357.3084	14.539	1363380.201	1049426.610	25.891
	518	158.0431	15.462	90.3124	1.70	SUMIDERO	1.48	356.6048	15.461	1363381.113	1049426.377	25.908
E10020-E10019	E10019	0.0001	43.633	87.2138	1.50	ESTACION	1.49	18.5295	43.609	1363365.678	1049427.293	26.265
	519	0.0000	34.783	86.2800	1.50	LINEAMIENT	1.49	198.5295	34.717	1363332.761	1049416.260	28.400
	520	0.0002	22.952	87.0347	1.50	LINEAMIENT	1.49	198.5300	22.922	1363343.945	1049420.008	27.432
	521	0.0002	8.299	88.2252	1.50	LINEAMIENT	1.49	198.5300	8.296	1363357.813	1049424.656	26.491
	522	95.5428	49.201	88.2744	1.50	LINEAMIENT	1.49	294.4373	49.183	1363386.025	1049382.515	27.577
	523	95.5428	31.241	88.3657	1.50	LINEAMIENT	1.49	294.4373	31.232	1363378.599	1049398.859	27.011
	524	95.5428	12.804	89.2811	1.50	LINEAMIENT	1.49	294.4373	12.803	1363370.975	1049415.636	26.375
E10021-E10020	E10020	0.0000	81.924	91.1133	1.50	ESTACION	1.54	294.4367	81.908	1363399.563	1049352.722	27.908
	E10023	271.5316	57.176	91.2131	1.50	DELTA	1.54	26.3245	57.160	1363450.795	1049378.070	26.593
	E10024	177.4117	83.890	90.0430	1.50	DELTA	1.54	292.1248	83.890	1363431.158	1049275.009	27.839
	525	177.4118	39.507	90.0055	1.50	LINEAMIENT	1.54	292.1250	39.507	1363414.442	1049316.124	27.938
	526	222.4319	2.334	91.2920	1.50	BORDE_VIA	1.54	337.1587	2.333	1363401.713	1049351.816	27.888
	527	342.1252	5.905	90.2535	1.50	BORDE_VIA	1.54	96.6512	5.905	1363398.879	1049358.587	27.905
	528	297.1132	12.182	90.3046	1.50	BORDE_VIA	1.54	51.6289	12.182	1363407.124	1049362.273	27.839
	529	188.5529	8.540	90.2418	1.50	BORDE_VIA	1.54	303.3614	8.540	1363404.259	1049345.590	27.888
	530	261.2244	10.588	89.5351	1.50	BORDE_VIA	1.54	15.8156	10.588	1363409.750	1049355.608	27.967
	531	124.5812	6.787	90.4407	1.50	BORDE_VIA	1.54	239.4067	6.786	1363396.109	1049346.880	27.861
	532	145.2806	10.248	90.0036	1.50	BORDE_VIA	1.54	259.9050	10.248	1363397.766	1049342.633	27.947
	533	265.2115	17.958	89.5316	1.50	BORDE_VIA	1.54	19.7909	17.958	1363416.460	1049358.802	27.984



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	534	267.0814	17.992	90.0325	1.50	BORDE_VIA	1.54	21.5739	17.992	1363416.294	1049359.338	27.931
	535	268.5836	25.360	90.4323	1.50	BORDE_VIA	1.54	23.4134	25.358	1363422.833	1049362.798	27.628
	536	268.4519	28.461	90.4955	1.50	BORDE_VIA	1.54	23.1920	28.458	1363425.721	1049363.929	27.535
	537	105.5555	7.195	90.4321	1.50	BORDE_VIA	1.54	220.3687	7.194	1363394.081	1049348.062	27.858
	538	98.1224	12.812	90.2302	1.50	BORDE_VIA	1.54	212.6434	12.812	1363388.775	1049345.811	27.863
	539	350.5928	9.615	91.0856	1.50	BORDE_VIA	1.54	105.4278	9.613	1363397.005	1049361.989	27.756
	540	55.5226	9.994	90.2942	1.50	BORDE_VIA	1.54	170.3106	9.994	1363389.712	1049354.404	27.862
	541	32.1931	14.695	90.2942	1.50	BORDE_VIA	1.54	146.7620	14.694	1363387.272	1049360.776	27.822
	542	66.3200	14.069	90.2238	1.50	BORDE_VIA	1.54	180.9700	14.069	1363385.496	1049352.484	27.856
	543	31.3506	5.581	90.4253	1.50	MANHOLE	1.54	146.0217	5.581	1363394.935	1049355.841	27.879
	544	48.5017	3.694	90.2715	1.50	MANHOLE	1.54	163.2748	3.694	1363396.025	1049353.785	27.919
	545	153.0843	9.562	90.1929	1.50	MANHOLE	1.54	267.5820	9.562	1363399.159	1049343.169	27.894
	546	117.1342	6.570	90.5609	1.50	SUMIDERO	1.54	231.6650	6.569	1363395.488	1049347.569	27.841
	547	112.0350	7.282	90.3423	1.50	SUMIDERO	1.54	226.5006	7.282	1363394.550	1049347.440	27.876
	548	345.2653	5.775	90.3255	1.50	POSTE	1.54	99.8848	5.775	1363398.571	1049358.411	27.893
	549	279.3047	31.487	91.1400	1.50	TERRENO	1.54	33.9498	31.480	1363425.676	1049370.302	27.271
	550	278.5527	32.606	91.1400	1.50	POSTE	1.54	33.3609	32.598	1363426.790	1049370.648	27.247
	551	263.4303	8.868	90.0635	1.50	POSTE	1.54	18.1542	8.868	1363407.989	1049355.485	27.932
	552	263.1044	8.193	90.1925	1.50	POSTE	1.54	17.6156	8.193	1363407.371	1049355.202	27.902
	553	284.5430	19.722	90.3951	1.50	TERRENO	1.54	39.3450	19.721	1363414.813	1049365.225	27.720
	554	299.1129	11.020	90.3650	1.50	TERRENO	1.54	53.6281	11.019	1363406.097	1049361.595	27.830
	555	197.0413	4.881	90.3646	1.50	POSTE	1.54	311.5070	4.881	1363402.797	1049349.067	27.896
E10024-E10021	E10021	0.0000	83.890	89.5831	1.50	ESTACION	1.52	292.1248	83.890	1363431.158	1049275.009	27.839
	E10025	270.1619	69.402	91.2319	1.50	DELTA	1.52	22.3967	69.382	1363495.306	1049301.445	26.174
	E10026	179.4008	106.484	90.1214	1.50	DELTA	1.52	291.7937	106.483	1363470.691	1049176.137	27.477
	556	339.4943	3.623	89.5131	1.50	BORDE_VIA	1.52	91.9534	3.623	1363431.034	1049278.630	27.865
	557	352.2612	9.418	90.4823	1.50	BORDE_VIA	1.52	104.5614	9.417	1363428.790	1049284.124	27.723
	558	193.0954	5.234	90.5423	1.50	BORDE_VIA	1.52	305.2898	5.233	1363434.181	1049270.738	27.773
	559	186.3528	9.980	90.4551	1.50	BORDE_VIA	1.52	298.7159	9.979	1363435.952	1049266.258	27.723
	560	227.3633	5.004	90.4550	1.50	BORDE_VIA	1.52	339.7339	5.004	1363435.851	1049273.276	27.789
	561	295.0317	7.971	89.3827	1.50	BORDE_VIA	1.52	47.1795	7.971	1363436.575	1049280.856	27.906
	562	250.1555	9.781	91.1639	1.50	BORDE_VIA	1.52	2.3900	9.779	1363440.928	1049275.417	27.638
	563	251.4152	10.008	91.1303	1.50	POSTE	1.52	3.8225	10.006	1363441.141	1049275.676	27.643
	564	267.3451	38.061	91.2411	1.50	MANHOLE	1.52	19.7056	38.050	1363466.979	1049287.839	26.924
	565	275.4802	38.394	91.1604	1.50	POSTE	1.52	27.9253	38.385	1363465.073	1049292.986	27.006
	566	204.5755	3.669	91.3341	1.50	POSTE	1.52	317.0900	3.668	1363433.844	1049272.512	27.756



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	567	126.1901	7.210	90.3859	1.50	BORDE_VIA	1.52	238.4417	7.210	1363427.384	1049268.866	27.774
	568	60.0319	6.681	91.0601	1.50	BORDE_VIA	1.52	172.1800	6.680	1363424.540	1049275.918	27.727
	569	148.2017	11.126	90.3412	1.50	BORDE_VIA	1.52	260.4628	11.125	1363429.314	1049264.038	27.745
	570	27.4954	12.358	90.3125	1.50	BORDE_VIA	1.52	139.9564	12.357	1363421.697	1049282.960	27.743
	571	120.3133	7.375	90.3124	1.50	BORDE_VIA	1.52	232.6506	7.375	1363426.684	1049269.147	27.788
	572	75.0325	12.998	90.3920	1.50	BORDE_VIA	1.52	187.1817	12.997	1363418.262	1049273.385	27.707
	573	106.0042	13.398	90.3204	1.50	BORDE_VIA	1.52	218.1364	13.397	1363420.620	1049266.736	27.731
	574	29.5353	9.621	90.3204	1.50	MANHOLE	1.52	142.0228	9.621	1363423.574	1049280.929	27.766
	575	45.0147	2.877	91.1159	1.50	MANHOLE	1.52	157.1545	2.876	1363428.507	1049276.126	27.795
	576	349.0357	3.539	92.2343	1.50	SUMIDERO	1.52	101.1906	3.536	1363430.471	1049278.478	27.708
	577	344.5430	4.439	92.0318	1.50	SUMIDERO	1.52	97.0331	4.436	1363430.615	1049279.412	27.697
	578	55.4419	8.023	91.1731	1.50	SUMIDERO	1.52	167.8634	8.021	1363423.316	1049276.696	27.675
	579	61.1014	7.304	91.3104	1.50	SUMIDERO	1.52	173.2953	7.301	1363423.906	1049275.862	27.662
	580	89.5351	59.927	90.1758	1.50	MANHOLE	1.52	202.0223	59.926	1363375.604	1049252.539	27.543
	581	4.0933	31.816	89.5708	1.50	MANHOLE	1.52	116.2839	31.816	1363417.069	1049303.536	27.882
	582	267.5122	48.980	91.4231	1.50	TERRENO	1.52	19.9809	48.958	1363477.169	1049291.739	26.395
	583	267.5856	62.098	91.2823	1.50	TERRENO	1.52	20.1070	62.077	1363489.452	1049296.350	26.259
E10026-E10024	E10024	0.0000	106.472	89.4953	1.50	ESTACION	1.53	291.7937	106.483	1363470.691	1049176.137	27.477
	E10027	269.1214	60.226	91.3926	1.50	DELTA	1.53	20.9975	60.201	1363526.894	1049197.708	25.766
	E10028	180.2041	97.535	89.5902	1.50	DELTA	1.53	292.1384	97.535	1363507.447	1049085.792	27.535
	584	268.1219	46.338	92.2653	1.50	MANHOLE	1.53	19.9989	46.296	1363514.195	1049191.970	25.529
	585	268.2944	56.090	91.5831	1.50	TERRENO	1.53	20.2892	56.057	1363523.270	1049195.575	25.574
	586	269.0435	33.168	92.3047	1.50	TERRENO	1.53	20.8700	33.136	1363501.653	1049187.941	26.053
	587	269.4210	26.111	91.5659	1.50	TERRENO	1.53	21.4964	26.096	1363494.972	1049185.699	26.619
	588	270.3142	19.845	90.3812	1.50	TERRENO	1.53	22.3220	19.844	1363489.048	1049183.674	27.287
	589	280.4044	7.124	89.5139	1.50	TERRENO	1.53	32.4725	7.124	1363476.701	1049179.962	27.525
	590	346.1908	6.117	91.2311	1.50	BORDE_VIA	1.53	98.1125	6.115	1363469.828	1049182.191	27.360
	591	322.5734	5.793	89.2137	1.50	BORDE_VIA	1.53	74.7531	5.793	1363472.215	1049181.725	27.572
	592	354.0219	12.459	90.1404	1.50	BORDE_VIA	1.53	105.8323	12.459	1363467.292	1049188.123	27.457
	593	289.1814	12.130	89.3342	1.50	BORDE_VIA	1.53	41.0975	12.130	1363479.832	1049184.110	27.601
	594	34.2342	10.307	90.1107	1.50	BORDE_VIA	1.53	146.1887	10.307	1363462.127	1049181.872	27.474
	595	20.5944	16.234	90.1107	1.50	BORDE_VIA	1.53	132.7892	16.234	1363459.663	1049188.050	27.455
	596	202.4108	3.314	89.5534	1.50	BORDE_VIA	1.53	314.4792	3.314	1363473.013	1049173.772	27.512
	597	249.4206	9.759	89.1946	1.50	BORDE_VIA	1.53	1.4953	9.758	1363480.446	1049176.391	27.622
	598	186.3152	10.559	90.1852	1.50	BORDE_VIA	1.53	298.3248	10.559	1363475.701	1049166.842	27.450
	599	56.3011	10.571	90.1852	1.50	BORDE_VIA	1.53	168.2967	10.571	1363460.340	1049178.281	27.450



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	600	123.1949	7.055	90.0807	1.50	BORDE_VIA	1.53	235.1239	7.055	1363466.657	1049170.349	27.491
	601	67.4902	17.190	90.1701	1.50	BORDE_VIA	1.53	179.6109	17.190	1363453.502	1049176.253	27.423
	602	155.4838	14.302	90.1701	1.50	BORDE_VIA	1.53	267.6042	14.302	1363470.093	1049161.847	27.437
	603	91.3006	16.451	90.1219	1.50	BORDE_VIA	1.53	203.2953	16.451	1363455.581	1049169.631	27.449
	604	98.3314	8.317	90.0628	1.50	BORDE_VIA	1.53	210.3475	8.317	1363463.514	1049171.935	27.492
	605	67.0948	4.653	89.3626	1.50	MANHOLE	1.53	178.9570	4.653	1363466.039	1049176.221	27.540
	606	55.3802	2.985	89.4130	1.50	MANHOLE	1.53	167.4275	2.985	1363467.778	1049176.786	27.524
	607	44.2433	10.434	90.2152	1.50	SUMIDERO	1.53	156.2028	10.434	1363461.145	1049180.347	27.441
	608	49.2523	10.012	90.1750	1.50	SUMIDERO	1.53	161.2167	10.012	1363461.213	1049179.360	27.456
	609	345.1449	5.083	90.5134	1.50	SUMIDERO	1.53	97.0406	5.082	1363470.068	1049181.181	27.432
	610	342.5443	5.995	90.3856	1.50	SUMIDERO	1.53	94.7056	5.995	1363470.199	1049182.111	27.440
	611	112.4749	7.582	90.1445	1.50	SUMIDERO	1.53	224.5906	7.582	1363465.292	1049170.814	27.475
	612	115.5803	6.795	90.1445	1.50	SUMIDERO	1.53	227.7612	6.795	1363466.123	1049171.106	27.479
	613	197.3948	2.245	91.1755	1.50	SUMIDERO	1.53	309.4570	2.244	1363472.118	1049174.404	27.457
	614	201.5521	3.186	91.1755	1.50	SUMIDERO	1.53	313.7162	3.185	1363472.892	1049173.835	27.436
	615	230.0631	4.066	88.2016	1.50	POSTE	1.53	341.9023	4.064	1363474.554	1049174.874	27.626
E10028-E10026	E10026	0.0000	97.530	90.0414	1.50	ESTACION	1.56	292.1384	97.535	1363507.447	1049085.792	27.535
	E10029	261.2017	45.785	89.3448	1.50	DELTA	1.56	13.4764	45.784	1363551.970	1049096.462	27.929
	E10030	178.3251	97.849	90.1906	1.50	DELTA	1.56	290.6859	97.847	1363542.011	1048994.253	27.050
	616	0.0000	57.758	90.1425	1.50	LINEAMIENT	1.56	112.1384	57.757	1363485.681	1049139.292	27.351
	617	359.0332	43.599	90.2533	1.50	SUMIDERO	1.56	111.1973	43.598	1363491.683	1049126.440	27.269
	618	359.4113	42.713	90.2627	1.50	SUMIDERO	1.56	111.8253	42.712	1363491.567	1049125.443	27.265
	619	4.0802	41.015	89.5035	1.50	MANHOLE	1.56	116.2723	41.015	1363489.292	1049122.570	27.706
	620	5.4203	43.612	89.4319	1.50	MANHOLE	1.56	117.8392	43.611	1363487.081	1049124.356	27.805
	621	73.4158	5.521	89.1648	1.50	MANHOLE	1.56	185.8378	5.521	1363501.955	1049085.231	27.663
	622	124.0517	4.190	88.1744	1.50	MANHOLE	1.56	236.2264	4.188	1363505.119	1049082.311	27.718
	623	89.5855	11.178	89.3207	1.50	MANHOLE	1.56	202.1203	11.178	1363497.092	1049081.583	27.684
	624	8.0821	44.312	89.4609	1.50	SUMIDERO	1.56	120.2775	44.312	1363485.105	1049124.060	27.772
	625	7.3811	43.390	89.4543	1.50	SUMIDERO	1.56	119.7748	43.390	1363485.900	1049123.454	27.773
	626	81.4754	12.008	89.5542	1.50	MANHOLE	1.56	193.9367	12.008	1363495.792	1049082.900	27.608
	627	71.4737	8.674	92.2735	1.50	HIDRANTE	1.56	183.9320	8.666	1363498.801	1049085.198	27.221
	628	74.0401	11.574	92.2159	1.50	SUMIDERO	1.56	186.2053	11.564	1363495.950	1049084.542	27.115
	629	75.5203	10.713	92.2736	1.50	SUMIDERO	1.56	188.0059	10.703	1363496.848	1049084.302	27.133
	630	99.2936	12.559	90.0043	1.50	SUMIDERO	1.56	211.6317	12.559	1363496.754	1049079.206	27.591
	631	98.3201	11.589	90.0838	1.50	SUMIDERO	1.56	210.6720	11.589	1363497.479	1049079.881	27.564
	632	210.5818	7.715	88.1904	1.50	SUMIDERO	1.56	323.1100	7.712	1363513.614	1049081.163	27.820



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	633	212.3519	8.685	88.3326	1.50	SUMIDERO	1.56	324.7270	8.682	1363514.535	1049080.779	27.812
	634	170.5324	21.660	89.4520	1.50	MANHOLE	1.56	283.0284	21.660	1363512.330	1049064.690	27.686
	635	171.3308	37.467	90.1501	1.50	MANHOLE	1.56	283.6906	37.467	1363516.314	1049049.390	27.430
	636	182.4120	21.051	89.4337	1.50	CAMA_TELEF	1.56	294.8273	21.051	1363516.286	1049066.687	27.694
	637	151.2017	22.148	89.4337	1.50	VALVULA	1.56	263.4764	22.148	1363504.931	1049063.788	27.699
	638	101.1815	10.841	89.3956	1.50	BORDE_VIA	1.56	213.4425	10.841	1363498.401	1049079.818	27.656
	639	96.1832	8.187	90.1353	1.50	BORDE_VIA	1.56	208.4473	8.187	1363500.248	1049081.893	27.560
	640	80.1630	6.713	91.0115	1.50	BORDE_VIA	1.56	192.4134	6.712	1363500.892	1049084.350	27.474
	641	31.3721	12.448	90.4650	1.50	BORDE_VIA	1.56	143.7609	12.447	1363497.408	1049093.150	27.424
	642	4.4734	9.722	91.0214	1.50	VALVULA	1.56	116.9312	9.720	1363503.044	1049094.459	27.417
	643	357.1352	9.476	90.5353	1.50	BORDE_VIA	1.56	109.3695	9.475	1363504.304	1049094.731	27.445
	644	355.4348	4.927	91.2159	1.50	POSTE	1.56	107.8684	4.926	1363505.935	1049090.480	27.476
	645	311.1730	1.970	94.0134	1.50	BORDE_VIA	1.56	63.4300	1.965	1363508.326	1049087.550	27.455
	646	343.0125	2.441	92.5300	1.50	BORDE_VIA	1.56	95.1620	2.438	1363507.227	1049088.220	27.470
	647	272.5903	8.865	90.3553	1.50	BORDE_VIA	1.56	25.1225	8.865	1363515.473	1049089.556	27.501
	648	232.2746	1.446	92.5908	1.50	BORDE_VIA	1.56	344.6012	1.444	1363508.839	1049085.409	27.518
	649	267.2150	26.850	90.1316	1.50	BORDE_VIA	1.56	19.5023	26.850	1363532.756	1049094.756	27.490
	650	210.3113	3.859	89.5505	1.50	BORDE_VIA	1.56	322.6587	3.859	1363510.515	1049083.452	27.599
	651	206.3835	3.840	89.3013	1.50	BORDE_VIA	1.56	318.7814	3.840	1363510.335	1049083.262	27.626
	652	205.3443	6.022	88.3126	1.50	BORDE_VIA	1.56	317.7170	6.020	1363511.901	1049081.742	27.748
	653	209.0417	7.151	88.1609	1.50	BORDE_VIA	1.56	321.2098	7.148	1363513.018	1049081.315	27.809
	654	223.5035	10.211	88.1416	1.50	BORDE_VIA	1.56	335.9814	10.206	1363516.769	1049081.638	27.907
	655	238.4916	20.512	88.0359	1.50	BORDE_VIA	1.56	350.9595	20.500	1363527.692	1049082.571	28.285
	656	272.4341	45.520	90.1920	1.50	PARAMENTO	1.56	24.8664	45.519	1363548.746	1049104.933	27.337
	657	272.2135	16.124	89.5618	1.50	POSTE	1.56	24.4981	16.124	1363522.119	1049092.478	27.611
	658	278.4255	16.842	90.1022	1.50	POSTE	1.56	30.8537	16.842	1363521.905	1049094.430	27.542
	659	145.3539	11.952	88.5202	1.50	SEPARADOR	1.56	257.7325	11.950	1363504.908	1049074.116	27.829
	660	149.5944	14.544	89.2210	1.50	SEPARADOR	1.56	262.1339	14.543	1363505.456	1049071.386	27.753
	661	118.2811	17.996	89.2040	1.50	SEPARADOR	1.56	230.6081	17.995	1363496.027	1049071.886	27.799
	662	125.3941	19.860	89.2500	1.50	SEPARADOR	1.56	237.7998	19.859	1363496.864	1049068.988	27.795
	663	158.3329	20.641	89.3413	1.50	BORDE_VIA	1.56	270.6964	20.640	1363507.698	1049065.153	27.748
	664	160.1849	21.018	89.4526	1.50	BORDE_VIA	1.56	272.4520	21.018	1363508.346	1049064.794	27.682
	665	180.0452	24.356	89.5858	1.50	BORDE_VIA	1.56	292.2195	24.356	1363516.657	1049063.245	27.601
	666	165.1508	28.032	90.0912	1.50	BORDE_VIA	1.56	277.3906	28.032	1363511.053	1049057.993	27.518
	667	183.0322	22.699	89.4504	1.50	BORDE_VIA	1.56	295.1945	22.699	1363517.109	1049065.253	27.692
	668	138.2034	24.918	89.3817	1.50	BORDE_VIA	1.56	250.4812	24.918	1363499.121	1049062.307	27.751



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	669	187.3845	22.540	89.4028	1.50	BORDE_VIA	1.56	299.7842	22.540	1363518.643	1049066.230	27.721
	670	199.2649	24.337	89.2600	1.50	BORDE_VIA	1.56	311.5853	24.336	1363523.599	1049067.590	27.834
E10030-E10028	E10028	0.0001	97.848	89.4555	1.50	ESTACION	1.56	290.6859	97.847	1363542.011	1048994.253	27.050
	E10031	178.0916	14.641	90.3123	1.50	DELTA	1.56	288.8403	14.640	1363546.739	1048980.397	26.973
	E10032	174.2843	56.154	90.0029	1.50	DELTA	1.56	285.1645	56.154	1363556.700	1048940.054	27.099
	671	0.0001	92.843	89.3904	1.50	LINEAMIENT	1.56	110.6862	92.841	1363509.215	1049081.109	27.672
	672	0.0000	78.165	89.3258	1.50	LINEAMIENT	1.56	110.6859	78.163	1363514.400	1049067.377	27.721
	673	0.0000	27.491	89.4017	1.50	LINEAMIENT	1.56	110.6859	27.491	1363532.300	1049019.971	27.264
	674	149.5402	19.094	90.1951	1.50	BORDE_VIA	1.56	260.5864	19.094	1363538.888	1048975.416	26.996
	675	163.0757	20.792	90.2226	1.50	BORDE_VIA	1.56	273.8184	20.792	1363543.395	1048973.508	26.971
	676	185.0051	10.099	90.4923	1.50	BORDE_VIA	1.56	295.7000	10.098	1363546.390	1048985.154	26.961
	677	168.2258	28.715	90.1539	1.50	BORDE_VIA	1.56	279.0687	28.715	1363546.537	1048965.897	26.976
	678	189.0139	5.232	91.1702	1.50	BORDE_VIA	1.56	299.7134	5.231	1363544.603	1048989.710	26.989
	679	135.0110	23.595	90.1947	1.50	BORDE_VIA	1.56	245.7053	23.595	1363532.303	1048972.748	26.971
	680	185.2608	10.253	90.4518	1.50	SUMIDERO	1.56	296.1214	10.252	1363546.525	1048985.048	26.971
	681	189.0707	10.265	90.4420	1.50	SUMIDERO	1.56	299.8045	10.264	1363547.113	1048985.347	26.974
	682	133.5901	13.719	90.2900	1.50	BORDE_VIA	1.56	244.6695	13.719	1363536.141	1048981.853	26.991
	683	188.3503	11.352	90.4252	1.50	BORDE_VIA	1.56	299.2700	11.351	1363547.561	1048984.351	26.965
	684	133.3601	8.679	90.4252	1.50	BORDE_VIA	1.56	244.2862	8.678	1363538.245	1048986.434	26.998
	685	193.4939	13.246	90.4121	1.50	BORDE_VIA	1.56	304.5134	13.245	1363549.515	1048983.339	26.947
	686	194.5914	13.532	90.3959	1.50	BORDE_VIA	1.56	305.6731	13.531	1363549.902	1048983.261	26.949
	687	210.0456	15.325	90.3616	1.50	BORDE_VIA	1.56	320.7681	15.324	1363553.881	1048984.561	26.945
	688	56.3316	7.577	90.2543	1.50	BORDE_VIA	1.56	167.2403	7.577	1363534.621	1048995.926	27.050
	689	353.2244	6.278	90.0847	1.50	BORDE_VIA	1.56	104.0648	6.278	1363540.485	1049000.343	27.091
	690	183.2625	18.578	90.2755	1.50	BORDE_VIA	1.56	294.1262	18.577	1363549.604	1048977.298	26.956
	691	186.3350	17.810	90.3139	1.50	BORDE_VIA	1.56	297.2498	17.809	1363550.165	1048978.420	26.943
	692	190.5005	17.790	90.4318	1.50	SUMIDERO	1.56	301.5206	17.789	1363551.311	1048979.089	26.882
	693	195.4610	17.175	90.3811	1.50	BORDE_VIA	1.56	306.4553	17.174	1363552.215	1048980.440	26.916
	694	201.0700	17.808	90.3357	1.50	BORDE_VIA	1.56	311.8025	17.807	1363553.880	1048980.979	26.931
	695	129.5332	14.912	90.2823	1.50	BORDE_VIA	1.56	240.5781	14.911	1363534.686	1048981.265	26.983
	696	182.4022	23.465	90.2457	1.50	BORDE_VIA	1.56	293.3587	23.464	1363551.314	1048972.712	26.936
	697	136.5027	12.824	90.4034	1.50	SUMIDERO	1.56	247.5267	12.823	1363537.109	1048982.404	26.955
	698	134.2954	13.601	90.3517	1.50	SUMIDERO	1.56	245.1842	13.600	1363536.303	1048981.909	26.967
	699	157.2605	19.311	90.3210	1.50	SUMIDERO	1.56	268.1206	19.310	1363541.378	1048974.953	26.926
	700	159.1235	20.076	90.2214	1.50	SUMIDERO	1.56	269.8956	20.076	1363541.974	1048974.177	26.977
	701	183.4738	18.810	90.3711	1.50	POSTE	1.56	294.4798	18.809	1363549.805	1048977.135	26.903



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	702	184.5519	10.442	90.5502	1.50	SUMIDERO	1.56	295.6078	10.441	1363546.523	1048984.838	26.939
	703	187.2701	11.283	90.4821	1.50	SUMIDERO	1.56	298.1362	11.282	1363547.331	1048984.304	26.948
	704	160.4118	10.841	90.4032	1.50	MANHOLE	1.56	271.3742	10.840	1363542.271	1048983.416	26.979
	705	169.3356	13.313	90.2928	1.50	MANHOLE	1.56	280.2514	13.313	1363544.380	1048981.153	26.992
	706	161.4510	13.910	90.2711	1.50	MANHOLE	1.56	272.4387	13.910	1363542.603	1048980.356	26.997
	707	187.3927	13.557	90.4035	1.50	CAMA_TELEF	1.56	298.3434	13.556	1363548.447	1048982.322	26.947
	708	191.5132	11.078	89.4247	1.50	HIDRANTE	1.56	302.5448	11.078	1363547.970	1048984.915	27.162
E10032-E10030	E10030	0.0000	56.151	90.0444	1.50	ESTACION	1.52	285.1645	56.154	1363556.700	1048940.054	27.099
	E10033	279.4646	55.052	90.0939	1.50	DELTA	1.52	24.9439	55.052	1363606.617	1048963.271	26.962
	709	303.4558	7.070	90.1136	1.50	LINEAMIENT	1.52	48.9306	7.070	1363561.345	1048945.384	27.093
	711	6.1454	5.469	90.3043	1.50	BORDE_VIA	1.52	111.4128	5.469	1363554.704	1048945.146	27.068
	712	264.0539	7.781	90.0754	1.50	BORDE_VIA	1.52	9.2587	7.781	1363564.380	1048941.306	27.099
	713	304.1144	11.476	90.0754	1.50	BORDE_VIA	1.52	49.3600	11.476	1363564.175	1048948.762	27.090
	714	218.5132	13.636	90.4004	1.50	BORDE_VIA	1.52	324.0234	13.635	1363567.734	1048932.044	26.958
	715	291.5238	19.505	90.1125	1.50	BORDE_VIA	1.52	37.0417	19.505	1363572.269	1048951.804	27.052
	716	270.4439	18.780	90.1125	1.50	BORDE_VIA	1.52	15.9087	18.780	1363574.761	1048945.202	27.054
	717	312.1702	3.871	89.3903	1.50	MANHOLE	1.52	57.4484	3.871	1363558.783	1048943.317	27.140
	718	305.5157	9.084	90.1805	1.50	CAMA_TELEF	1.52	51.0303	9.084	1363562.413	1048947.117	27.069
	719	178.0851	16.605	89.3322	1.50	HIDRANTE	1.52	283.3120	16.605	1363560.523	1048923.896	27.245
	720	143.5638	4.233	90.1848	1.50	BORDE_VIA	1.52	249.1084	4.233	1363555.191	1048936.100	27.094
	721	156.1817	2.266	89.5746	1.50	BORDE_VIA	1.52	261.4692	2.266	1363556.364	1048937.813	27.118
	722	186.5504	2.771	90.3614	1.50	BORDE_VIA	1.52	292.0823	2.771	1363557.742	1048937.487	27.087
	723	185.3240	8.239	89.5718	1.50	BORDE_VIA	1.52	290.7089	8.239	1363559.614	1048932.348	27.123
	724	178.1603	9.269	90.0838	1.50	BORDE_VIA	1.52	283.4320	9.269	1363558.853	1048931.039	27.093
	725	179.0025	14.112	90.1145	1.50	BORDE_VIA	1.52	284.1714	14.112	1363560.155	1048926.372	27.068
	726	170.0554	6.390	88.3556	1.50	POSTE	1.52	275.2628	6.388	1363557.286	1048933.693	27.273
	727	185.0516	15.044	90.2054	1.50	BORDE_VIA	1.52	290.2523	15.044	1363561.908	1048925.941	27.025
	728	185.1755	16.198	90.2054	1.50	BORDE_VIA	1.52	290.4631	16.198	1363562.363	1048924.879	27.018
	729	183.1857	16.919	90.2734	1.50	BORDE_VIA	1.52	288.4803	16.918	1363562.063	1048924.008	26.981
	730	177.0242	17.079	90.0006	1.50	BORDE_VIA	1.52	282.2095	17.079	1363560.312	1048923.362	27.116
	731	175.0635	14.432	95.0316	0.09	BORDE_VIA	1.52	280.2742	14.376	1363559.264	1048925.909	27.260
	732	183.5350	23.104	90.2854	1.50	BORDE_VIA	1.52	289.0617	23.103	1363564.245	1048918.218	26.922
	733	273.0814	17.720	90.1240	1.50	MANHOLE	1.52	18.3017	17.720	1363573.524	1048945.619	27.051
	734	9.4814	18.023	90.0616	1.50	MANHOLE	1.52	114.9684	18.023	1363549.092	1048956.393	27.084
	735	327.1752	11.173	90.1336	1.50	BORDE_VIA	1.52	72.4623	11.173	1363560.067	1048950.708	27.072
	736	343.3543	18.189	90.1558	1.50	BORDE_VIA	1.52	88.7598	18.189	1363557.094	1048958.239	27.032



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	737	143.0343	6.089	90.1557	1.50	SUMIDERO	1.52	248.2264	6.089	1363554.442	1048934.400	27.088
	738	52.5101	4.999	90.4155	1.50	SUMIDERO	1.52	158.0148	4.999	1363552.065	1048941.926	27.056
	739	152.1555	6.639	90.2059	1.50	SUMIDERO	1.52	257.4298	6.639	1363555.255	1048933.575	27.076
	740	162.1758	10.382	90.2058	1.50	SUMIDERO	1.52	267.4639	10.382	1363556.241	1048929.683	27.053
E10033-E10032	E10032	0.0000	55.037	89.5318	1.50	ESTACION	1.52	24.9439	55.052	1363606.617	1048963.271	26.962
	E10034	85.0139	172.913	90.1326	1.50	DELTA	1.52	289.9714	172.912	1363665.675	1048800.758	26.305
	E10035	87.4327	67.017	90.1732	1.50	DELTA	1.52	292.6681	67.016	1363632.444	1048901.432	26.639
	741	152.2711	3.728	90.1441	1.50	LINEAMIENT	1.52	357.3970	3.728	1363610.341	1048963.102	26.965
	742	173.1958	3.176	90.3825	1.50	SUMIDERO	1.52	18.2767	3.176	1363609.632	1048964.267	26.946
	743	186.4626	3.703	91.0306	1.50	SUMIDERO	1.52	31.7178	3.702	1363609.766	1048965.218	26.913
	744	205.3108	4.367	88.2904	1.50	SUMIDERO	1.52	50.4628	4.365	1363609.396	1048966.638	27.097
	745	223.3625	2.535	86.5156	1.50	SUMIDERO	1.52	68.5509	2.531	1363607.542	1048965.627	27.120
	746	192.5212	4.078	90.4452	1.50	BORDE_VIA	1.52	37.8139	4.078	1363609.838	1048965.771	26.928
	747	182.3208	3.989	90.5812	1.50	BORDE_VIA	1.52	27.4795	3.988	1363610.155	1048965.112	26.914
	748	181.1450	4.753	90.4729	1.50	BORDE_VIA	1.52	26.1912	4.753	1363610.881	1048965.369	26.915
	749	50.5631	8.175	90.2614	1.50	SUMIDERO	1.52	255.8859	8.175	1363604.623	1048955.343	26.919
	750	57.1317	7.729	90.3434	1.50	SUMIDERO	1.52	262.1653	7.729	1363605.563	1048955.615	26.903
	751	59.3803	8.076	90.4000	1.50	BORDE_VIA	1.52	264.5781	8.075	1363605.854	1048955.232	26.887
	752	43.0514	7.918	90.3243	1.50	BORDE_VIA	1.52	248.0312	7.918	1363603.655	1048955.929	26.906
	753	114.3739	9.348	90.2457	1.50	BORDE_VIA	1.52	319.5714	9.348	1363613.732	1048957.209	26.913
	754	43.5017	8.261	89.3234	1.50	POSTE	1.52	248.7820	8.261	1363603.627	1048955.571	27.047
	755	70.4756	13.302	90.2745	1.50	BORDE_VIA	1.52	275.7428	13.302	1363607.948	1048950.037	26.874
	756	54.4625	5.397	90.5503	1.50	MANHOLE	1.52	259.7175	5.396	1363605.654	1048957.962	26.895
	757	68.0606	3.106	90.1712	1.50	MANHOLE	1.52	273.0456	3.106	1363606.782	1048960.170	26.966
	758	356.2200	2.100	90.0554	1.50	CAMA_TELEF	1.52	201.3106	2.100	1363604.660	1048962.508	26.978
	759	85.1526	68.581	90.1720	1.50	MANHOLE	1.52	290.2012	68.580	1363630.299	1048898.910	26.635
	760	83.3213	68.600	89.5408	2.00	MANHOLE	1.52	288.4809	68.600	1363628.362	1048898.209	26.598
	761	89.1558	72.230	89.5547	2.00	SUMIDERO	1.52	294.2100	72.230	1363636.237	1048897.394	26.570
	762	89.3012	73.045	90.0317	2.00	SUMIDERO	1.52	294.4473	73.045	1363636.847	1048896.775	26.411
	763	82.5016	71.822	89.5617	2.00	SUMIDERO	1.52	287.7817	71.822	1363628.551	1048894.881	26.559
	764	82.0940	72.441	90.0007	2.00	SUMIDERO	1.52	287.1050	72.441	1363627.923	1048894.035	26.479
	765	82.2252	64.622	89.5410	2.00	SUMIDERO	1.52	287.3250	64.622	1363625.861	1048901.581	26.591
	766	82.5603	63.796	89.5250	2.00	SUMIDERO	1.52	287.8781	63.796	1363626.202	1048902.556	26.614
	767	84.3624	71.346	89.5342	2.00	CAMA_TELEF	1.52	289.5506	71.346	1363630.492	1048896.039	26.612
E10034-E10033	E10033	0.0000	172.913	89.4701	1.50	ESTACION	1.49	289.9714	172.912	1363665.675	1048800.758	26.305
	E10036	217.3232	135.708	89.5916	1.50	DELTA	1.49	327.5137	135.708	1363780.147	1048727.870	26.319



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	768	356.3632	81.435	89.4917	1.50	LINEAMIENT	1.49	106.5803	81.435	1363642.437	1048878.807	26.544
	769	359.2245	58.155	89.5038	1.50	MANHOLE	1.49	109.3506	58.155	1363646.406	1048855.628	26.449
	770	1.0655	59.673	89.5308	1.50	MANHOLE	1.49	111.0867	59.673	1363644.206	1048856.435	26.410
	771	0.2723	55.631	89.4938	1.50	CAMA_TELEF	1.49	110.4278	55.631	1363646.258	1048852.890	26.458
	772	1.2610	62.398	89.5246	1.50	SUMIDERO	1.49	111.4075	62.398	1363642.900	1048858.851	26.422
	773	1.5439	61.594	89.5937	1.50	SUMIDERO	1.49	111.8823	61.594	1363642.719	1048857.914	26.297
	774	3.4042	54.756	89.5511	1.50	SUMIDERO	1.49	113.6498	54.756	1363643.710	1048850.915	26.367
	775	2.5135	54.267	90.0056	1.50	SUMIDERO	1.49	112.8312	54.267	1363644.619	1048850.773	26.276
	776	353.5958	57.960	89.5944	1.50	SUMIDERO	1.49	103.9709	57.960	1363651.682	1048857.004	26.295
	777	354.2502	57.060	89.5315	1.50	SUMIDERO	1.49	104.3887	57.060	1363651.496	1048856.028	26.402
	778	206.2317	5.996	89.3741	1.50	MANHOLE	1.49	316.3595	5.996	1363670.014	1048796.620	26.329
	779	189.0302	4.208	89.1948	1.50	MANHOLE	1.49	299.0220	4.208	1363667.716	1048797.079	26.340
	780	269.0040	2.073	89.1854	1.50	CAMA_TELEF	1.49	18.9825	2.073	1363667.635	1048801.432	26.315
	781	357.0237	3.049	89.4243	1.50	CAMA_TELEF	1.49	107.0150	3.049	1363664.783	1048803.674	26.306
	782	98.2741	4.446	89.1509	1.50	CAMA_TELEF	1.49	208.4328	4.446	1363661.766	1048798.641	26.348
	783	73.5000	2.986	90.4424	1.50	SUMIDERO	1.49	183.8048	2.986	1363662.696	1048800.560	26.252
	784	73.0658	3.675	92.4032	1.50	SUMIDERO	1.49	183.0875	3.671	1363662.009	1048800.560	26.119
	785	172.5431	8.840	89.3755	1.50	SUMIDERO	1.49	282.8800	8.840	1363667.646	1048792.141	26.347
	786	171.2023	8.075	89.4101	1.50	SUMIDERO	1.49	281.3112	8.075	1363667.259	1048792.840	26.335
	787	229.0152	15.368	90.1016	1.50	SUMIDERO	1.49	339.0025	15.368	1363680.022	1048795.251	26.245
	788	230.5350	14.761	90.1314	1.50	SUMIDERO	1.49	340.8687	14.761	1363679.621	1048795.920	26.234
	789	217.3553	9.613	89.5550	1.50	LINEAMIENT	1.49	327.5695	9.613	1363673.789	1048795.603	26.302
	790	291.0604	6.866	91.2705	1.50	SUMIDERO	1.49	41.0725	6.864	1363670.850	1048805.268	26.117
	791	285.1252	6.167	90.1252	1.50	SUMIDERO	1.49	35.1859	6.167	1363670.715	1048804.312	26.267
	792	196.1742	17.188	90.0232	1.50	MANHOLE	1.49	306.2664	17.188	1363675.842	1048786.900	26.278
	793	269.2704	7.077	89.5656	1.50	BORDE_VIA	1.49	19.4225	7.077	1363672.349	1048803.111	26.297
	794	269.4037	10.778	89.5453	1.50	BORDE_VIA	1.49	19.6484	10.778	1363675.825	1048804.382	26.306
	795	283.5435	6.619	91.1345	1.50	BORDE_VIA	1.49	33.8812	6.617	1363671.169	1048804.447	26.148
	796	322.5100	10.364	90.3539	1.50	BORDE_VIA	1.49	72.8214	10.363	1363668.736	1048810.659	26.183
	797	11.5808	8.249	90.5013	1.50	BORDE_VIA	1.49	121.9403	8.248	1363661.312	1048807.757	26.170
	798	37.3712	2.752	92.5444	1.50	BORDE_VIA	1.49	147.5914	2.748	1363663.355	1048802.231	26.151
	799	73.3311	3.742	92.0939	1.50	BORDE_VIA	1.49	183.5245	3.739	1363661.943	1048800.528	26.149
	800	92.5310	3.447	89.1005	1.50	BORDE_VIA	1.49	202.8575	3.447	1363662.499	1048799.419	26.341
	801	147.4950	8.489	89.3652	1.50	BORDE_VIA	1.49	257.8020	8.489	1363663.881	1048792.461	26.348
	802	91.3958	8.675	89.5855	1.50	BORDE_VIA	1.49	201.6375	8.675	1363657.611	1048797.559	26.293
	803	122.2043	13.571	90.1305	1.50	BORDE_VIA	1.49	232.3167	13.571	1363657.379	1048790.018	26.239



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	804	183.5900	12.022	89.4622	1.50	BORDE_VIA	1.49	293.9548	12.022	1363670.556	1048789.772	26.338
	805	221.3856	17.188	89.5838	1.50	BORDE_VIA	1.49	331.6203	17.188	1363680.797	1048792.588	26.297
	806	182.3227	22.753	90.2424	1.50	BORDE_VIA	1.49	292.5123	22.752	1363674.387	1048779.739	26.129
	807	221.1332	23.880	90.0052	1.50	BORDE_VIA	1.49	331.1970	23.880	1363686.601	1048789.253	26.284
	808	201.3305	24.511	90.0559	1.50	BORDE_VIA	1.49	311.5228	24.511	1363681.924	1048782.407	26.248
	809	240.0018	15.915	90.0738	1.50	BORDE_VIA	1.49	349.9764	15.915	1363681.347	1048797.988	26.255
	810	195.4538	26.053	90.2803	1.50	BORDE_VIA	1.49	305.7320	26.052	1363680.889	1048779.610	26.078
	811	248.5343	21.954	89.5757	1.50	BORDE_VIA	1.49	358.8667	21.954	1363687.625	1048800.324	26.304
	812	192.2333	33.396	90.2941	1.50	BORDE_VIA	1.49	302.3639	33.395	1363683.551	1048772.551	26.002
	813	233.5320	18.429	89.1838	1.50	POSTE	1.49	343.8603	18.428	1363683.376	1048795.636	26.512
	814	205.4600	26.519	90.0059	1.50	BORDE_VIA	1.49	315.7381	26.519	1363684.667	1048782.249	26.283
	815	274.1123	6.693	90.1203	1.50	POSTE	1.49	24.1612	6.693	1363671.782	1048803.498	26.267
	816	209.2655	35.218	90.0232	1.50	BORDE_VIA	1.49	319.4200	35.218	1363692.423	1048777.848	26.265
	817	263.2500	10.918	89.5435	1.50	BORDE_VIA	1.49	13.3881	10.918	1363676.296	1048803.286	26.308
	818	265.5105	17.253	89.5434	1.50	BORDE_VIA	1.49	15.8228	17.253	1363682.274	1048805.462	26.318
	819	215.3939	80.381	90.0726	1.50	BORDE_VIA	1.49	325.6323	80.381	1363732.024	1048755.383	26.117
	820	214.1521	82.209	90.0702	1.50	BORDE_VIA	1.49	324.2273	82.209	1363732.375	1048752.701	26.122
	821	212.5747	82.718	90.0957	1.50	BORDE_VIA	1.49	322.9345	82.718	1363731.679	1048750.902	26.051
	822	210.5406	83.148	90.1059	1.50	BORDE_VIA	1.49	320.8731	83.148	1363730.177	1048748.289	26.025
	823	222.0702	51.801	89.5058	1.50	HIDRANTE	1.49	332.0887	51.801	1363711.450	1048776.510	26.427
	824	216.0739	53.499	90.0323	1.50	VALVULA	1.49	326.0989	53.499	1363710.079	1048770.918	26.238
	825	237.3643	17.241	89.3240	1.50	VALVULA	1.49	347.5834	17.240	1363682.512	1048797.051	26.428
	826	265.4214	68.554	89.4536	1.50	MANHOLE	1.49	15.6753	68.553	1363731.679	1048819.280	26.578
	827	219.4903	110.619	90.0254	1.50	LINEAMIENT	1.49	329.7889	110.619	1363761.269	1048745.096	26.197
	828	218.0127	86.288	90.0439	1.50	MANHOLE	1.49	327.9956	86.288	1363738.848	1048755.027	26.174
	829	220.5114	86.988	90.0640	1.50	SUMIDERO	1.49	330.8253	86.988	1363741.627	1048758.354	26.122
	830	221.0329	87.546	90.0532	1.50	SUMIDERO	1.49	331.0295	87.546	1363742.266	1048758.354	26.150
	831	215.2610	81.473	90.0834	1.50	SUMIDERO	1.49	325.4075	81.473	1363732.744	1048754.503	26.087
	832	215.4443	80.571	90.0755	1.50	SUMIDERO	1.49	325.7167	80.571	1363732.248	1048755.374	26.105
	833	216.1957	93.765	90.0525	1.50	SUMIDERO	1.49	326.3039	93.765	1363743.687	1048748.739	26.143
	834	216.0710	94.391	90.0538	1.50	SUMIDERO	1.49	326.0909	94.391	1363744.012	1048748.100	26.136
	835	220.2024	84.349	90.0145	1.50	CAMA_TELEF	1.49	330.3114	84.349	1363738.952	1048758.981	26.248
E10036-E10034	E10034	0.0000	135.709	90.0132	1.50	ESTACION	1.52	327.5137	135.708	1363780.147	1048727.870	26.319
	E10037	185.4336	144.920	90.2531	1.50	DELTA	1.52	333.2403	144.916	1363909.543	1048662.621	25.265
	836	184.3630	38.708	90.2125	1.50	MANHOLE	1.52	332.1220	38.707	1363814.362	1048709.770	26.099
	837	186.2705	62.805	90.3016	1.50	LINEAMIENT	1.52	333.9650	62.803	1363836.577	1048700.304	25.787



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	838	185.2357	95.096	90.2859	1.50	LINEAMIENT	1.52	332.9128	95.093	1363864.810	1048684.569	25.539
	839	183.1606	69.844	90.4755	1.50	MANHOLE	1.52	330.7820	69.837	1363841.099	1048693.780	25.367
	840	186.5745	65.727	90.2546	1.50	CAMA_TELEF	1.52	334.4762	65.725	1363839.458	1048699.549	25.848
	841	187.5204	60.527	90.3211	1.50	SUMIDERO	1.52	335.3814	60.524	1363835.170	1048702.657	25.774
	842	188.0944	61.146	90.3226	1.50	SUMIDERO	1.52	335.6759	61.143	1363835.863	1048702.685	25.764
	843	180.2159	62.958	90.3040	1.50	SUMIDERO	1.52	327.8800	62.955	1363833.467	1048694.396	25.779
	844	180.4600	62.347	90.3019	1.50	SUMIDERO	1.52	328.2803	62.345	1363833.180	1048695.091	25.791
	845	192.2127	33.070	90.2219	1.50	BORDE_VIA	1.52	339.8712	33.069	1363811.197	1048716.489	26.126
	846	180.1147	31.835	90.2432	1.50	BORDE_VIA	1.52	327.7100	31.834	1363807.059	1048710.864	26.113
	847	2.2947	45.180	90.1515	1.50	BORDE_VIA	1.52	150.0100	45.180	1363741.017	1048750.452	26.140
	848	6.4256	47.649	90.1834	1.50	BORDE_VIA	1.52	154.2292	47.648	1363737.238	1048748.586	26.083
	849	353.5204	45.573	90.1333	1.50	BORDE_VIA	1.52	141.3814	45.573	1363744.541	1048756.313	26.161
E10037-E10036	E10036	0.0000	144.916	89.3613	1.50	ESTACION	1.55	333.2403	144.916	1363909.543	1048662.621	25.265
	E10038	265.3744	42.856	89.1342	1.50	DELTA	1.55	58.8692	42.852	1363931.698	1048699.302	25.889
	850	9.2809	33.269	89.5322	1.50	SUMIDERO	1.55	162.7095	33.269	1363877.778	1048672.509	25.376
	851	9.3303	32.478	89.5452	1.50	SUMIDERO	1.55	162.7912	32.478	1363878.519	1048672.230	25.360
	852	74.0319	5.617	90.3420	1.50	SUMIDERO	1.55	227.2956	5.617	1363905.734	1048658.494	25.256
	853	67.2709	6.294	90.2252	1.50	SUMIDERO	1.55	220.6928	6.294	1363904.771	1048658.518	25.270
	854	0.3756	22.363	89.4817	1.50	LINEAMIENT	1.55	153.8725	22.363	1363889.466	1048672.469	25.388
	855	143.2452	15.299	90.4557	1.50	SUMIDERO	1.55	296.6548	15.298	1363916.406	1048648.949	25.107
	856	142.4708	15.979	90.4643	1.50	SUMIDERO	1.55	296.0259	15.978	1363916.554	1048648.264	25.095
	857	171.1505	15.018	90.3223	1.50	SUMIDERO	1.55	324.4917	15.017	1363921.768	1048653.899	25.170
	858	172.1751	15.695	90.2721	1.50	SUMIDERO	1.55	325.5378	15.695	1363922.483	1048653.740	25.187
	859	167.1135	25.597	90.0710	1.50	BORDE_VIA	1.55	320.4334	25.597	1363929.276	1048646.317	25.258
	860	150.4119	24.119	90.1207	1.50	BORDE_VIA	1.55	303.9289	24.119	1363923.006	1048642.609	25.227
	861	359.4829	51.563	89.4517	1.50	BORDE_VIA	1.55	153.0484	51.563	1363863.581	1048685.991	25.532
	862	7.2724	52.118	89.4757	1.50	BORDE_VIA	1.55	160.6970	52.118	1363860.355	1048679.849	25.494
	863	123.5330	8.179	90.2545	1.50	BORDE_VIA	1.55	277.1320	8.179	1363910.559	1048654.506	25.250
	864	43.3714	7.295	89.5752	1.50	BORDE_VIA	1.55	196.8609	7.295	1363902.562	1048660.505	25.316
	865	343.5838	7.252	89.5752	1.50	BORDE_VIA	1.55	137.2175	7.252	1363904.221	1048667.547	25.316
	866	181.5456	4.930	90.3455	1.50	BORDE_VIA	1.55	335.1559	4.930	1363914.017	1048660.550	25.262
	867	210.5438	6.422	88.5905	1.50	PARAMENTO	1.55	4.1509	6.421	1363915.947	1048663.086	25.426
	868	310.0555	4.756	88.2726	1.50	PARAMENTO	1.55	103.3389	4.754	1363908.446	1048667.247	25.440
	869	62.1324	3.316	90.0207	1.50	MANHOLE	1.55	215.4637	3.316	1363906.842	1048660.697	25.310
E10038-E10037	E10037	359.5959	42.843	90.5329	1.50	ESTACION	1.55	58.8692	42.852	1363931.698	1048699.302	25.889
	E12014	75.3431	102.365	90.0805	1.50	DELTA	1.55	314.4445	102.365	1364003.375	1048626.221	25.693



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	870	271.2654	38.689	90.2057	1.50	SUMIDERO	1.55	150.3175	38.688	1363898.086	1048718.460	25.698
	871	279.1653	39.192	90.2322	1.50	SUMIDERO	1.55	158.1506	39.191	1363895.322	1048713.888	25.668
	872	270.5123	39.526	90.2419	1.50	SUMIDERO	1.55	149.7256	39.525	1363897.563	1048719.228	25.654
	873	280.0347	38.447	90.2259	1.50	SUMIDERO	1.55	158.9323	38.446	1363895.821	1048713.122	25.677
	874	271.5344	40.057	90.1842	1.50	BORDE_VIA	1.55	150.7648	40.056	1363896.743	1048718.866	25.716
	875	279.1113	39.955	90.2311	1.50	BORDE_VIA	1.55	158.0562	39.954	1363894.638	1048714.233	25.664
	876	263.0616	14.334	90.2311	1.50	BORDE_VIA	1.55	141.9737	14.334	1363920.407	1048708.132	25.837
	877	282.3919	14.534	90.2523	1.50	BORDE_VIA	1.55	161.5245	14.534	1363917.913	1048703.908	25.827
	878	248.3915	4.355	91.2818	1.50	BORDE_VIA	1.55	127.5234	4.354	1363929.046	1048702.755	25.822
	879	306.5903	5.650	90.2721	1.50	BORDE_VIA	1.55	185.8534	5.650	1363926.077	1048698.726	25.889
	880	70.4129	8.890	91.5721	1.50	MANHOLE	1.55	309.5606	8.885	1363937.356	1048692.452	25.631
	881	85.2613	9.279	90.4653	1.50	BORDE_VIA	1.55	324.3062	9.278	1363939.233	1048693.889	25.807
	882	54.1201	10.005	90.5432	1.50	BORDE_VIA	1.55	293.0695	10.004	1363935.618	1048690.098	25.775
	883	302.4458	7.512	89.1801	1.50	PARAMENTO	1.55	181.6187	7.511	1363924.189	1048699.090	26.026
	884	59.4023	16.466	90.0920	1.50	PARAMENTO	1.55	298.5423	16.466	1363939.565	1048684.837	25.889
	885	359.5959	40.910	90.5439	1.50	LINEAMIENT	1.55	238.8689	40.905	1363910.550	1048664.288	25.284
	886	359.5959	21.430	91.0752	1.50	LINEAMIENT	1.55	238.8689	21.426	1363920.620	1048680.962	25.511
	887	359.5959	8.647	90.5210	1.50	LINEAMIENT	1.55	238.8689	8.646	1363927.228	1048691.901	25.803
E12014-E10038	E10038	0.0000	102.353	89.5532	1.50	ESTACION	1.55	314.4445	102.365	1364003.375	1048626.221	25.693
	E12015	179.5155	105.377	90.1753	1.50	DELTA	1.55	314.3098	105.376	1364076.984	1048550.817	25.190
	888	0.0001	60.813	89.5820	1.50	LINEAMIENT	1.55	134.4448	60.813	1363960.793	1048669.637	25.768
	889	179.5154	59.385	90.1451	1.50	LINEAMIENT	1.55	314.3095	59.384	1364044.857	1048583.727	25.482
	890	181.3020	49.368	90.1348	1.50	MANHOLE	1.55	315.9500	49.368	1364038.857	1048591.896	25.540
	891	2.4918	18.261	90.1628	1.50	MANHOLE	1.55	137.2662	18.261	1363989.962	1048638.613	25.651
	892	8.5330	26.525	90.2502	1.50	SUMIDERO	1.55	143.3362	26.524	1363982.099	1048642.059	25.545
	893	8.0230	25.540	90.2555	1.50	SUMIDERO	1.55	142.4862	25.539	1363983.117	1048641.773	25.546
	894	30.5622	8.253	91.4248	1.50	SUMIDERO	1.55	165.3839	8.249	1363995.393	1048628.303	25.491
	895	30.4611	9.119	91.3145	1.50	SUMIDERO	1.55	165.2142	9.116	1363994.561	1048628.547	25.495
	896	354.4823	26.711	90.2457	1.50	SUMIDERO	1.55	129.2509	26.710	1363986.475	1048646.905	25.544
	897	355.3922	25.754	90.2642	1.50	SUMIDERO	1.55	130.1006	25.753	1363986.787	1048645.920	25.538
	898	348.4650	15.295	90.4308	1.50	SUMIDERO	1.55	123.2250	15.294	1363994.995	1048639.015	25.546
	899	347.0355	16.155	90.3734	1.50	SUMIDERO	1.55	121.5098	16.154	1363994.932	1048639.993	25.562
	900	353.4246	24.673	90.2532	1.50	BORDE_VIA	1.55	128.1573	24.672	1363988.132	1048645.621	25.555
	901	346.0223	16.336	90.2623	1.50	BORDE_VIA	1.55	120.4842	16.336	1363995.088	1048640.298	25.613
	902	357.0543	31.181	90.1844	1.50	BORDE_VIA	1.55	131.5398	31.181	1363982.698	1048649.559	25.568
	903	339.3541	17.369	90.1934	1.50	BORDE_VIA	1.55	114.0392	17.369	1363996.300	1048642.083	25.639



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	904	6.1353	30.887	90.2234	1.50	BORDE_VIA	1.55	140.6759	30.886	1363979.482	1048645.794	25.535
	905	351.1716	14.594	90.2749	1.50	BORDE_VIA	1.55	125.7323	14.594	1363994.853	1048638.067	25.620
	906	9.2352	24.307	90.1749	1.50	BORDE_VIA	1.55	143.8423	24.307	1363983.750	1048640.562	25.612
	907	333.4126	4.866	91.1058	1.50	BORDE_VIA	1.55	108.1350	4.865	1364001.861	1048630.844	25.638
	908	12.5841	22.840	90.2658	1.50	BORDE_VIA	1.55	147.4225	22.839	1363984.129	1048638.519	25.559
	909	24.3135	17.458	90.3410	1.50	BORDE_VIA	1.55	158.9709	17.457	1363987.081	1048632.485	25.565
	910	26.1720	24.940	90.2609	1.50	BORDE_VIA	1.55	160.7334	24.939	1363979.833	1048634.450	25.549
	911	34.2544	19.775	90.3003	1.50	BORDE_VIA	1.55	168.8734	19.774	1363983.973	1048630.037	25.565
	912	349.1947	23.099	90.1251	1.50	BORDE_VIA	1.55	123.7742	23.099	1363990.534	1048645.422	25.652
	913	21.1341	14.971	90.3621	1.50	BORDE_VIA	1.55	155.6725	14.970	1363989.734	1048632.388	25.580
	914	340.5424	24.090	90.1154	1.50	BORDE_VIA	1.55	115.3512	24.090	1363993.061	1048647.991	25.655
	915	19.2739	11.985	90.4716	1.50	BORDE_VIA	1.55	153.9053	11.984	1363992.613	1048631.492	25.573
	916	44.1655	5.618	91.0948	1.50	BORDE_VIA	1.55	178.7264	5.617	1363997.760	1048626.346	25.624
E12015-E12014	E12014	0.0000	105.366	89.4438	1.50	ESTACION	1.54	314.3098	105.376	1364076.984	1048550.817	25.190
	E12016	105.1805	51.660	89.4022	1.50	DELTA	1.54	239.6112	51.659	1364050.851	1048506.255	25.520
	E10039	99.3633	48.599	89.3730	1.50	DELTA	1.54	233.9189	48.598	1364048.363	1048511.541	25.543
	917	318.2128	7.603	90.3457	1.50	BORDE_VIA	1.54	92.6675	7.603	1364076.630	1048558.411	25.148
	918	343.4101	8.439	90.4000	1.50	BORDE_VIA	1.54	117.9934	8.438	1364073.023	1048558.268	25.127
	919	299.5354	11.919	90.2101	1.50	BORDE_VIA	1.54	74.2081	11.919	1364080.228	1048562.286	25.152
	920	269.5034	10.355	90.0731	1.50	BORDE_VIA	1.54	44.1525	10.355	1364084.414	1048558.030	25.202
	921	29.5306	7.572	91.0224	1.50	BORDE_VIA	1.54	164.1948	7.571	1364069.699	1048552.879	25.088
	922	62.4120	7.797	90.1031	1.50	BORDE_VIA	1.54	196.9987	7.797	1364069.528	1048548.538	25.201
	923	81.3640	13.769	89.5129	1.50	BORDE_VIA	1.54	215.9209	13.769	1364065.833	1048542.739	25.259
	924	105.0847	12.697	90.1540	1.50	BORDE_VIA	1.54	239.4562	12.697	1364070.531	1048539.882	25.167
E10039-E12015	E12015	0.0001	48.583	90.2759	1.50	ESTACION	1.53	233.9189	48.598	1364048.363	1048511.541	25.543
	E10040	76.2643	135.421	90.0338	1.50	DELTA	1.53	130.3642	135.421	1363960.659	1048614.724	25.425
	925	249.2904	9.031	90.5525	1.50	BORDE_VIA	1.53	303.4034	9.030	1364053.334	1048504.003	25.423
	926	247.2426	18.399	90.2113	1.50	BORDE_VIA	1.53	301.3262	18.399	1364057.929	1048495.824	25.455
	927	65.5233	10.670	90.4648	1.50	BORDE_VIA	1.53	119.7948	10.669	1364043.062	1048520.800	25.423
	928	67.2727	30.253	89.0908	2.00	BORDE_VIA	1.53	121.3764	30.250	1364032.613	1048537.367	25.516
	929	82.3720	30.428	89.1151	2.00	BORDE_VIA	1.53	136.5412	30.425	1364026.279	1048532.468	25.494
	930	12.4434	8.815	91.3608	1.50	BORDE_VIA	1.53	66.6617	8.812	1364051.854	1048519.631	25.322
	931	32.3929	7.052	91.5504	1.50	BORDE_VIA	1.53	86.5770	7.048	1364048.784	1048518.576	25.332
	932	64.2015	8.563	91.1552	1.50	BORDE_VIA	1.53	118.2564	8.561	1364044.310	1048519.082	25.379
	933	171.1841	7.644	91.0816	1.50	BORDE_VIA	1.53	225.2303	7.642	1364042.981	1048506.115	25.416
E10040-E10039	E10039	0.0000	135.405	89.5840	1.50	ESTACION	1.54	130.3642	135.421	1363960.659	1048614.724	25.425



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E10041	275.1559	222.559	90.1527	1.50	DELTA	1.54	225.6306	222.557	1363805.029	1048455.630	24.467
	934	5.4901	7.882	90.3601	1.50	BORDE_VIA	1.54	316.1812	7.882	1363966.345	1048609.267	25.384
	935	5.5659	19.968	90.1703	1.50	BORDE_VIA	1.54	316.3139	19.968	1363975.098	1048600.932	25.368
	936	346.4435	21.308	90.1309	1.50	BORDE_VIA	1.54	297.1073	21.308	1363970.368	1048595.757	25.385
	937	325.1832	10.772	90.1846	1.50	BORDE_VIA	1.54	275.6731	10.772	1363961.723	1048604.005	25.408
	938	313.0133	10.386	90.3753	1.50	BORDE_VIA	1.54	263.3900	10.385	1363959.463	1048604.408	25.353
	939	280.3612	55.306	90.4716	1.50	BORDE_VIA	1.54	230.9675	55.301	1363925.832	1048571.767	24.707
	940	271.1835	11.577	90.5221	1.50	BORDE_VIA	1.54	221.6739	11.576	1363952.012	1048607.027	25.291
	941	236.1645	9.133	90.5056	1.50	BORDE_VIA	1.54	186.6434	9.132	1363951.588	1048613.667	25.332
	942	272.3725	23.043	90.5056	1.50	BORDE_VIA	1.54	222.9878	23.040	1363943.805	1048599.014	25.126
	943	184.5820	5.232	91.1341	1.50	BORDE_VIA	1.54	135.3364	5.231	1363956.938	1048618.401	25.355
	944	304.1334	4.156	90.5100	1.50	MANHOLE	1.54	254.5903	4.156	1363959.554	1048610.718	25.405
	945	262.4745	9.090	91.0300	1.50	VALVULA	1.54	213.1600	9.088	1363953.050	1048609.753	25.300
E10041-E10040	E10040	0.0000	222.549	89.4655	1.50	ESTACION	1.53	225.6306	222.557	1363805.029	1048455.630	24.467
	E10042	66.1426	364.912	89.4341	1.50	DELTA	1.53	111.8712	364.908	1363669.093	1048794.273	26.233
	946	349.3145	6.090	91.0947	1.50	BORDE_VIA	1.53	35.1598	6.089	1363810.007	1048459.136	24.377
	947	278.2121	1.019	91.5436	1.50	BORDE_VIA	1.53	323.9864	1.018	1363805.853	1048455.031	24.467
	948	350.5740	7.260	91.0345	1.50	BORDE_VIA	1.53	36.5917	7.259	1363810.857	1048459.957	24.366
	949	319.2655	9.288	91.3107	1.50	BORDE_VIA	1.53	5.0792	9.285	1363814.277	1048456.452	24.255
	950	335.2207	11.736	90.2718	1.50	MANHOLE	1.53	20.9992	11.736	1363815.985	1048459.836	24.408
	951	336.1431	14.289	91.0325	1.50	BORDE_VIA	1.53	21.8725	14.287	1363818.287	1048460.952	24.237
	952	354.2807	13.441	90.3544	1.50	BORDE_VIA	1.53	40.0992	13.440	1363815.310	1048464.287	24.361
	953	24.0735	13.913	90.2718	1.50	BORDE_VIA	1.53	69.7570	13.913	1363809.843	1048468.683	24.390
	954	48.1128	13.440	90.3142	1.50	BORDE_VIA	1.53	93.8217	13.439	1363804.133	1048469.040	24.377
	955	67.4919	26.986	90.0437	1.50	BORDE_VIA	1.53	113.4525	26.986	1363794.289	1048480.387	24.465
	956	11.4805	10.851	90.2201	1.50	MANHOLE	1.53	57.4320	10.851	1363810.870	1048464.775	24.431
	957	66.5057	44.590	89.5715	1.50	BORDE_VIA	1.53	112.4798	44.590	1363787.979	1048496.832	24.536
	958	87.1635	6.748	90.5843	1.50	BORDE_VIA	1.53	132.9070	6.747	1363800.435	1048460.572	24.386
	959	74.3712	45.050	89.4255	1.70	BORDE_VIA	1.53	120.2506	45.049	1363782.334	1048494.545	24.525
	960	91.4409	10.791	84.3841	2.60	BORDE_VIA	1.53	137.3664	10.744	1363797.124	1048462.907	24.408
	961	88.3312	17.978	86.4545	2.60	BORDE_VIA	1.53	134.1839	17.949	1363792.519	1048468.502	24.416
E10042-E10041	E10041	0.0000	364.882	90.1755	1.50	ESTACION	1.53	111.8712	364.908	1363669.093	1048794.273	26.233
	E10036	37.1520	129.384	90.0052	1.50	DELTA	1.53	329.1267	129.384	1363780.144	1048727.881	26.228
	E10034	185.5558	7.340	90.2008	1.50	DELTA	1.53	117.8039	7.340	1363665.669	1048800.766	26.218
	E10043	254.4352	53.077	90.1922	1.50	DELTA	1.53	186.6023	53.076	1363616.369	1048788.171	25.962
E10043-E10042	E10042	0.0000	53.059	89.4452	1.50	ESTACION	1.53	186.6023	53.076	1363616.369	1048788.171	25.962



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E10044	102.0647	109.599	89.3716	1.50	DELTA	1.53	108.7153	109.597	1363581.203	1048891.972	26.717
	962	265.2938	3.879	92.0919	1.50	BORDE_VIA	1.53	272.0962	3.876	1363616.511	1048784.297	25.846
	963	355.0106	7.155	90.3840	1.50	BORDE_VIA	1.53	1.6206	7.155	1363623.521	1048788.373	25.911
	964	70.0245	11.970	89.5908	1.50	BORDE_VIA	1.53	76.6481	11.970	1363619.133	1048799.817	25.995
	965	111.1543	9.810	90.0625	1.50	BORDE_VIA	1.53	117.8642	9.810	1363611.784	1048796.843	25.973
	966	299.3422	11.312	90.2043	1.50	MANHOLE	1.53	306.1750	11.312	1363623.046	1048779.040	25.924
	967	314.1231	14.951	90.1907	1.50	BORDE_VIA	1.53	320.8109	14.951	1363627.957	1048778.724	25.909
	968	341.2831	10.720	90.2408	1.50	BORDE_VIA	1.53	348.0775	10.720	1363626.857	1048785.956	25.916
E10044-E10043	E10043	0.0000	109.600	90.2510	1.50	ESTACION	1.54	108.7153	109.597	1363581.203	1048891.972	26.717
	E10045	273.0607	82.701	90.1810	1.50	DELTA	1.54	201.8173	82.700	1363504.427	1048861.237	26.314
	E10032	188.1824	53.971	89.4445	1.50	DELTA	1.54	117.0220	53.970	1363556.682	1048940.051	26.991
	969	11.3212	5.708	91.4458	1.50	BORDE_VIA	1.54	300.2520	5.705	1363584.077	1048887.044	26.577
	970	14.2910	7.088	91.0847	1.50	BORDE_VIA	1.54	303.2014	7.087	1363585.084	1048886.043	26.610
	971	279.1531	22.084	90.2658	1.50	BORDE_VIA	1.54	207.9739	22.083	1363561.700	1048881.614	26.578
	972	11.4221	14.132	90.3524	1.50	BORDE_VIA	1.54	300.4212	14.131	1363588.358	1048879.787	26.606
	973	294.2437	7.706	90.4241	1.50	BORDE_VIA	1.54	223.1256	7.705	1363575.579	1048886.705	26.656
	974	6.1153	15.539	90.4009	1.50	BORDE_VIA	1.54	294.9134	15.538	1363587.748	1048877.880	26.570
	975	343.1335	11.346	90.2737	1.50	MANHOLE	1.54	271.9417	11.346	1363581.587	1048880.633	26.660
	976	241.4024	8.229	90.3641	1.50	BORDE_VIA	1.54	170.3887	8.229	1363573.090	1048893.346	26.664
	977	266.5303	3.398	89.3628	1.50	MANHOLE	1.54	195.5995	3.398	1363577.930	1048891.059	26.775
	978	257.4058	16.877	90.3357	1.50	BORDE_VIA	1.54	186.3981	16.876	1363564.432	1048890.092	26.585
	979	271.5632	41.956	90.1909	1.50	MANHOLE	1.54	200.6575	41.955	1363541.945	1048877.171	26.518
	980	243.3831	10.142	89.3100	1.50	HIDRANTE	1.54	172.3573	10.142	1363571.151	1048893.321	26.837
E10045-E10044	E10044	0.0000	82.706	89.4338	1.50	ESTACION	1.51	201.8173	82.700	1363504.427	1048861.237	26.314
	E10046	89.1251	120.292	89.5641	1.50	DELTA	1.51	111.0314	120.292	1363461.256	1048973.516	26.436
	981	85.3712	20.595	90.0516	1.50	BORDE_VIA	1.51	107.4373	20.595	1363498.255	1048880.886	26.288
	982	85.2139	7.873	90.1006	1.50	BORDE_VIA	1.51	107.1781	7.873	1363502.101	1048868.759	26.296
	983	67.2743	6.521	89.5750	1.50	BORDE_VIA	1.51	89.2792	6.521	1363504.509	1048867.758	26.324
	984	113.0040	16.211	90.0829	1.50	BORDE_VIA	1.51	134.8284	16.211	1363492.998	1048872.734	26.279
	985	108.2532	22.721	90.0959	1.50	BORDE_VIA	1.51	130.2428	22.721	1363489.748	1048878.580	26.253
	986	103.5121	23.678	90.0440	1.50	BORDE_VIA	1.51	125.6731	23.678	1363490.619	1048880.472	26.287
	987	324.4547	1.653	90.5254	1.50	BORDE_VIA	1.51	346.5803	1.653	1363506.034	1048860.854	26.294
	988	265.1929	2.775	91.2328	1.50	BORDE_VIA	1.51	287.1420	2.774	1363505.244	1048858.586	26.252
	989	265.2611	9.273	91.0048	1.50	BORDE_VIA	1.51	287.2537	9.272	1363507.177	1048852.383	26.155
	990	229.2832	12.768	90.5447	1.50	BORDE_VIA	1.51	251.2928	12.766	1363500.332	1048849.145	26.116
	991	152.5358	3.333	89.4405	1.50	MANHOLE	1.51	174.7167	3.333	1363501.108	1048861.544	26.335



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	992	92.2909	25.041	89.5327	1.50	MANHOLE	1.51	114.3031	25.041	1363494.121	1048884.059	26.367
E10046-E10045	E10045	0.0001	120.291	90.0520	1.50	ESTACION	1.55	111.0314	120.292	1363461.256	1048973.516	26.436
	E10047	169.5246	73.807	89.3037	1.50	DELTA	1.55	100.9109	73.804	1363447.286	1049045.986	27.111
	993	166.2428	1.517	92.5122	1.50	BORDE_VIA	1.55	97.4392	1.515	1363461.060	1048975.018	26.405
	994	281.5930	2.906	90.0422	1.50	BORDE_VIA	1.55	213.0231	2.906	1363458.820	1048971.932	26.477
	995	271.2925	10.233	90.0424	1.50	BORDE_VIA	1.55	202.5217	10.233	1363451.804	1048969.596	26.467
	996	306.0644	12.267	90.0424	1.50	BORDE_VIA	1.55	237.1437	12.267	1363454.601	1048963.211	26.465
	997	340.1845	8.145	90.0638	1.50	BORDE_VIA	1.55	271.3439	8.145	1363461.447	1048965.373	26.465
	998	357.3708	9.947	90.0637	1.50	BORDE_VIA	1.55	288.6503	9.947	1363464.437	1048964.091	26.461
	999	8.0857	24.418	89.5231	1.50	MANHOLE	1.55	299.1806	24.418	1363473.162	1048952.197	26.534
	1000	23.4336	16.739	90.0445	1.50	BORDE_VIA	1.55	314.7581	16.739	1363473.042	1048961.630	26.457
	1001	29.0443	22.996	90.0200	1.50	BORDE_VIA	1.55	320.1100	22.996	1363478.901	1048958.768	26.467
	1002	19.0939	28.840	90.0014	1.50	BORDE_VIA	1.55	310.1923	28.840	1363479.868	1048951.485	26.479
	1003	10.4424	30.895	89.5805	1.50	BORDE_VIA	1.55	301.7714	30.895	1363477.523	1048947.250	26.498
	1004	42.2402	6.612	90.0217	1.50	MANHOLE	1.55	333.4320	6.612	1363467.170	1048970.558	26.476
E10047-E10046	E10046	0.0000	73.794	90.3228	1.50	ESTACION	1.51	100.9109	73.804	1363447.286	1049045.986	27.111
	E10048	190.2445	122.566	89.5757	1.50	DELTA	1.51	111.3234	122.566	1363402.718	1049160.161	27.198
	1005	286.4626	7.600	90.3527	1.50	BORDE_VIA	1.51	207.6848	7.600	1363440.557	1049042.455	27.047
	1006	262.2646	12.425	89.2203	1.50	BORDE_VIA	1.51	183.3570	12.424	1363434.884	1049045.258	27.263
	1007	267.0455	20.883	89.2936	1.50	BORDE_VIA	1.51	187.9928	20.882	1363426.607	1049043.082	27.310
	1008	271.1420	4.240	90.2515	1.50	MANHOLE	1.51	192.1498	4.240	1363443.142	1049045.094	27.094
	1009	118.0825	6.086	87.3453	1.50	BORDE_VIA	1.51	39.0512	6.081	1363452.009	1049049.817	27.382
	1010	6.3927	2.063	91.4008	1.50	BORDE_VIA	1.51	287.5684	2.062	1363447.909	1049044.020	27.065
	1011	159.0757	10.456	88.0357	1.50	BORDE_VIA	1.51	80.0434	10.450	1363449.093	1049056.279	27.478
	1012	170.1451	11.395	88.0826	1.50	BORDE_VIA	1.51	91.1584	11.389	1363447.056	1049057.373	27.495
	1013	164.5810	13.200	88.2446	1.50	BORDE_VIA	1.51	85.8803	13.195	1363448.234	1049059.147	27.491
	1014	197.3631	23.580	88.0954	1.50	MANHOLE	1.51	118.5195	23.568	1363436.034	1049066.694	27.880
	1015	195.2449	22.051	88.0037	1.50	MANHOLE	1.51	116.3245	22.038	1363437.514	1049065.738	27.891
	1016	191.1746	23.571	90.0127	1.50	VALVULA	1.51	112.2070	23.571	1363438.378	1049067.808	27.115
	1017	169.1048	20.275	89.1348	1.50	BORDE_VIA	1.51	90.0909	20.273	1363447.254	1049066.259	27.398
	1018	187.1533	23.424	90.0433	1.50	BORDE_VIA	1.51	108.1700	23.424	1363439.982	1049068.242	27.094
	1019	183.0409	20.798	89.3751	1.50	BORDE_VIA	1.51	103.9800	20.798	1363442.262	1049066.167	27.259
	1020	203.3152	24.984	90.0222	1.50	BORDE_VIA	1.51	124.4420	24.984	1363433.156	1049066.590	27.108
	1021	218.0316	23.687	89.4056	1.50	BORDE_VIA	1.51	138.9653	23.687	1363429.419	1049061.537	27.257
	1022	227.0048	26.809	89.4057	1.50	BORDE_VIA	1.51	147.9242	26.809	1363424.570	1049060.222	27.274
	1023	241.2937	22.971	89.0916	1.50	BORDE_VIA	1.51	162.4045	22.968	1363425.393	1049052.929	27.464



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1024	247.4958	21.484	88.5825	1.50	BORDE_VIA	1.51	168.7437	21.481	1363426.219	1049050.179	27.510
	1025	228.1320	17.233	88.4705	1.50	BORDE_VIA	1.51	149.1331	17.229	1363432.498	1049054.825	27.491
	1026	235.4746	15.490	88.5534	1.50	BORDE_VIA	1.51	156.7070	15.487	1363433.061	1049052.110	27.416
	1027	229.3432	15.688	88.4115	1.50	BORDE_VIA	1.51	150.4864	15.684	1363433.638	1049053.712	27.485
E10048-E10047	E10047	0.0000	122.546	90.0309	1.50	ESTACION	1.52	111.3234	122.566	1363402.718	1049160.161	27.198
	E10049	172.3604	94.537	89.5517	1.50	DELTA	1.52	103.9245	94.537	1363379.968	1049251.920	27.349
	E10026	81.5606	69.758	89.5553	1.50	DELTA	1.52	13.2584	69.758	1363470.616	1049176.160	27.303
	1028	109.3646	7.643	90.2903	1.50	BORDE_VIA	1.52	40.9362	7.643	1363408.491	1049165.169	27.155
	1029	91.3806	9.254	90.2505	1.50	BORDE_VIA	1.52	22.9584	9.254	1363411.238	1049163.771	27.152
	1030	52.0246	10.953	90.1059	1.50	BORDE_VIA	1.52	343.3695	10.953	1363413.212	1049157.027	27.184
	1031	38.2242	10.699	90.1814	1.50	BORDE_VIA	1.52	329.7017	10.699	1363411.955	1049154.764	27.163
	1032	357.3334	7.960	90.1859	1.50	BORDE_VIA	1.52	288.8828	7.960	1363405.294	1049152.630	27.176
	1033	345.3623	6.428	90.2359	1.50	BORDE_VIA	1.52	276.9298	6.428	1363403.493	1049153.780	27.175
	1034	307.4751	9.293	90.1121	1.50	BORDE_VIA	1.52	239.1209	9.293	1363397.948	1049152.186	27.189
	1035	259.2447	7.148	90.0834	1.50	BORDE_VIA	1.52	190.7364	7.148	1363395.695	1049158.830	27.202
	1036	250.5348	2.739	90.4027	1.50	BORDE_VIA	1.52	182.2200	2.739	1363399.981	1049160.055	27.187
	1037	175.4525	3.344	90.2930	1.50	BORDE_VIA	1.52	107.0803	3.344	1363401.735	1049163.358	27.191
	1038	53.4352	4.711	90.1428	1.50	MANHOLE	1.52	345.0545	4.711	1363407.269	1049158.946	27.200
	1039	0.3206	54.512	89.1117	1.50	MANHOLE	1.52	291.8584	54.507	1363423.011	1049109.573	27.992
E10049-E10048	E10048	0.0001	94.522	90.0807	1.50	ESTACION	1.54	103.9245	94.537	1363379.968	1049251.920	27.349
	E10050	187.3108	170.665	89.4439	1.50	DELTA	1.54	111.4434	170.663	1363317.577	1049410.770	28.149
	E10024	100.2505	56.080	89.4405	1.50	DELTA	1.54	24.3425	56.079	1363431.062	1049275.036	27.647
	1040	171.3156	5.862	90.3817	1.50	BORDE_VIA	1.54	95.4567	5.862	1363379.411	1049257.755	27.322
	1041	188.5458	7.336	90.0251	1.50	BORDE_VIA	1.54	112.8406	7.336	1363377.120	1049258.681	27.381
	1042	186.3958	16.856	89.5907	1.50	BORDE_VIA	1.54	110.5906	16.856	1363374.040	1049267.699	27.391
	1043	203.4750	22.906	90.0039	1.50	BORDE_VIA	1.54	127.7217	22.906	1363365.953	1049270.039	27.383
	1044	354.4305	2.840	90.4545	1.50	BORDE_VIA	1.54	278.6425	2.840	1363380.395	1049249.113	27.349
	1045	40.0222	1.529	92.3719	1.50	BORDE_VIA	1.54	323.9639	1.527	1363381.203	1049251.022	27.317
	1046	228.2834	10.886	90.0954	1.50	BORDE_VIA	1.54	152.4006	10.886	1363370.321	1049256.963	27.356
	1047	297.1602	8.132	90.1541	1.50	BORDE_VIA	1.54	221.1917	8.132	1363373.849	1049246.565	27.350
	1048	251.3432	12.228	90.0931	1.50	BORDE_VIA	1.54	175.5000	12.228	1363367.778	1049252.880	27.353
	1049	287.1902	9.731	90.1113	1.50	BORDE_VIA	1.54	211.2417	9.731	1363371.648	1049246.873	27.355
	1050	263.5056	23.082	89.5901	1.50	BORDE_VIA	1.54	187.7734	23.082	1363357.098	1049248.798	27.394
	1051	284.3333	13.518	90.0624	1.50	BORDE_VIA	1.54	208.4837	13.518	1363368.086	1049245.473	27.362
	1052	247.2627	4.456	90.1806	1.50	MANHOLE	1.54	171.3653	4.456	1363375.563	1049252.589	27.364
	1053	287.5853	4.536	90.5253	1.50	MANHOLE	1.54	211.9059	4.535	1363376.118	1049249.523	27.317



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E10050-E10049	E10049	0.0000	170.663	90.1552	1.50	ESTACION	1.50	111.4434	170.663	1363317.577	1049410.770	28.149
	E10019	90.3135	7.150	90.2601	1.50	DELTA	1.50	21.9698	7.150	1363324.207	1049413.445	28.094
	E10020	87.3437	50.790	92.2000	1.50	DELTA	1.50	19.0203	50.748	1363365.554	1049427.309	26.080
	E10051	266.4556	142.857	90.0642	1.50	DELTA	1.50	198.2089	142.857	1363181.874	1049366.130	27.870
E10051-E10050	E10050	0.0000	142.853	89.4721	1.50	ESTACION	1.47	198.2089	142.857	1363181.874	1049366.130	27.870
	E10052	87.5710	147.857	89.4818	1.50	DELTA	1.47	106.1617	147.856	1363140.718	1049508.143	28.345
	1054	345.2833	3.709	90.2924	1.50	BORDE_VIA	1.50	3.6848	3.709	1363185.575	1049366.368	27.810
	1055	302.2050	2.626	91.0010	1.50	BORDE_VIA	1.50	320.5562	2.626	1363183.901	1049364.462	27.796
	1056	276.1553	7.733	90.3228	1.50	BORDE_VIA	1.50	294.4737	7.733	1363185.077	1049359.092	27.769
	1057	57.1612	7.093	90.1919	1.50	BORDE_VIA	1.50	75.4789	7.093	1363183.652	1049372.996	27.802
	1058	229.5241	9.541	90.2730	1.50	BORDE_VIA	1.50	248.0870	9.541	1363178.313	1049357.278	27.765
	1059	197.5001	5.891	90.2552	1.50	BORDE_VIA	1.50	216.0425	5.891	1363177.110	1049362.664	27.797
	1060	182.3231	7.312	90.1650	1.50	BORDE_VIA	1.50	200.7509	7.312	1363175.036	1049363.539	27.806
	1061	180.2354	13.404	90.1501	1.50	BORDE_VIA	1.50	198.6073	13.404	1363169.170	1049361.853	27.783
	1062	72.5600	9.126	90.2650	1.50	BORDE_VIA	1.50	91.1423	9.126	1363181.692	1049375.254	27.771
	1063	152.2904	14.950	90.1019	1.50	BORDE_VIA	1.50	170.6934	14.950	1363167.121	1049368.547	27.797
	1064	77.3312	13.507	89.4218	1.50	BORDE_VIA	1.50	95.7623	13.507	1363180.518	1049379.568	27.911
	1065	136.4745	9.769	90.1031	1.50	BORDE_VIA	1.50	155.0048	9.769	1363173.020	1049370.258	27.812
	1066	104.1159	16.736	89.3537	1.50	BORDE_VIA	1.50	122.4087	16.736	1363172.904	1049380.259	27.960
	1067	120.2736	9.582	90.0531	1.50	BORDE_VIA	1.50	138.6689	9.582	1363174.679	1049372.458	27.826
	1068	160.2339	2.277	92.5745	2.10	MANHOLE	1.50	178.6031	2.274	1363179.600	1049366.185	27.124
	1069	106.5434	2.294	90.0348	1.50	MANHOLE	1.50	125.1184	2.294	1363180.554	1049368.006	27.839
	1070	351.3329	7.670	90.1222	1.50	BORDE_VIA	1.50	9.7670	7.670	1363189.432	1049367.431	27.814
E10052-E10051	E10051	0.0000	147.855	90.0412	1.70	ESTACION	1.56	106.1617	147.856	1363140.718	1049508.143	28.345
	E10053	97.2713	47.634	89.3644	1.70	DELTA	1.56	23.6153	47.633	1363184.362	1049527.224	28.529
	1071	11.5553	12.202	90.2909	1.50	BORDE_VIA	1.54	298.0931	12.202	1363146.464	1049497.379	28.304
	1072	45.3213	3.542	91.1137	1.50	BORDE_VIA	1.54	331.6987	3.541	1363143.836	1049506.464	28.333
	1073	59.2625	3.666	90.4141	1.50	BORDE_VIA	1.54	345.6020	3.666	1363144.269	1049507.231	28.363
	1074	292.3304	7.383	90.0809	1.50	BORDE_VIA	1.54	218.7128	7.383	1363134.957	1049503.525	28.389
	1075	322.0534	11.351	89.5613	1.50	BORDE_VIA	1.54	248.2545	11.351	1363136.513	1049497.599	28.419
	1076	283.4848	8.078	89.4824	1.50	BORDE_VIA	1.54	209.9750	8.078	1363133.721	1049504.107	28.434
	1077	278.5418	12.820	89.5547	1.50	BORDE_VIA	1.54	205.0667	12.820	1363129.106	1049502.711	28.423
	1078	240.1512	15.058	90.1347	1.50	BORDE_VIA	1.54	166.4150	15.058	1363126.081	1049511.680	28.347
	1079	226.2620	4.840	91.5114	2.50	MANHOLE	1.54	152.6006	4.837	1363136.423	1049510.369	27.250
E10053-E10052	E10052	0.0000	47.637	90.0604	1.70	ESTACION	1.57	23.6153	47.633	1363184.362	1049527.224	28.529
	E10015	121.4105	55.669	89.5605	1.70	DELTA	1.57	325.3000	55.669	1363230.130	1049495.533	28.460



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1080	352.2005	12.595	90.4130	1.50	BORDE_VIA	1.54	195.9500	12.594	1363172.253	1049523.763	28.444
E10015-E10053	E10053	0.0000	55.671	89.5517	1.50	ESTACION	1.49	325.3000	55.669	1363230.130	1049495.533	28.460
	E10016	146.2219	16.473	90.0039	1.50	DELTA	1.49	291.6720	16.473	1363236.213	1049480.224	28.442
E10012-E10011	E10011	0.0000	60.933	92.0207	1.50	ESTACION	1.43	221.5109	60.875	1363051.657	1049659.415	27.998
	E10054	96.3957	103.221	89.4025	1.50	DELTA	1.43	138.1767	103.219	1362974.738	1049728.245	28.514
E10054-E10012	E10012	0.0001	103.241	90.1612	1.50	ESTACION	1.45	138.1767	103.219	1362974.738	1049728.245	28.514
	E10008	97.3010	72.428	91.3017	1.50	DELTA	1.45	55.6795	72.403	1363015.560	1049788.042	26.562
	E10055	193.3253	106.785	89.4728	1.50	DELTA	1.45	151.7248	106.784	1362880.695	1049778.829	28.853
	1081	25.5823	3.992	91.1718	1.50	BORDE_VIA	1.45	344.1498	3.991	1362978.577	1049727.155	28.374
	1082	12.2604	11.843	90.2858	1.50	BORDE_VIA	1.45	330.6112	11.843	1362985.056	1049722.433	28.364
	1083	6.0512	21.872	90.2222	1.50	BORDE_VIA	1.45	324.2634	21.872	1362992.491	1049715.471	28.321
	1084	5.4545	29.757	90.1939	1.50	MANHOLE	1.45	323.9392	29.757	1362998.793	1049710.729	28.294
	1085	358.5247	24.798	90.0040	1.50	MANHOLE	1.45	317.0564	24.798	1362992.891	1049711.351	28.459
	1086	359.2531	41.325	90.0515	1.50	MANHOLE	1.45	317.6020	41.325	1363005.255	1049700.380	28.401
	1087	349.4813	33.353	90.2144	1.50	BORDE_VIA	1.45	307.9803	33.352	1362995.263	1049701.956	28.253
	1088	343.2258	19.363	90.2221	1.50	BORDE_VIA	1.45	301.5595	19.363	1362984.872	1049711.746	28.338
	1089	286.3112	7.181	90.3207	1.50	BORDE_VIA	1.45	244.6967	7.181	1362971.669	1049721.753	28.397
	1090	286.3031	7.176	90.3518	1.50	BORDE_VIA	1.45	244.6853	7.176	1362971.670	1049721.758	28.390
	1091	229.3245	12.140	90.0905	1.50	BORDE_VIA	1.45	187.7225	12.140	1362962.708	1049726.614	28.432
	1092	271.0201	2.221	88.4538	1.50	MANHOLE	1.45	229.2103	2.220	1362973.287	1049726.564	28.512
	1093	175.1159	3.364	89.5549	1.50	MANHOLE	1.45	133.3764	3.364	1362972.428	1049730.690	28.468
	1094	179.5848	3.915	90.3152	1.50	BORDE_VIA	1.45	138.1567	3.915	1362971.821	1049730.856	28.427
	1095	189.0939	11.726	90.1615	1.50	BORDE_VIA	1.45	147.3375	11.726	1362964.866	1049734.573	28.408
	1096	131.4127	2.875	96.4732	1.50	BORDE_VIA	1.45	89.8675	2.855	1362974.744	1049731.100	28.124
	1097	114.2833	5.957	96.2422	1.50	BORDE_VIA	1.45	72.6525	5.920	1362976.503	1049733.895	27.799
	1098	62.4051	3.676	99.4807	1.50	BORDE_VIA	1.45	20.8575	3.622	1362978.123	1049729.535	27.838
	1099	81.3157	7.837	95.1921	1.50	BORDE_VIA	1.45	39.7092	7.803	1362980.741	1049733.230	27.737
	1100	267.4805	9.385	89.4347	1.50	MANHOLE	1.45	225.9781	9.385	1362968.216	1049721.496	28.508
E10055-E10054	E10054	359.5959	106.796	90.0952	1.50	ESTACION	1.44	151.7248	106.784	1362880.695	1049778.829	28.853
	E10056	145.2836	40.074	89.5025	1.50	DELTA	1.44	117.2014	40.074	1362862.376	1049814.471	28.906
	1101	162.2432	35.324	90.0750	1.50	BORDE_VIA	1.44	134.1337	35.324	1362856.098	1049804.182	28.714
	1102	162.1359	40.373	90.0819	1.50	BORDE_VIA	1.44	133.9578	40.373	1362852.671	1049807.892	28.696
	1103	148.3717	33.012	90.0227	1.50	BORDE_VIA	1.44	120.3462	33.012	1362864.016	1049807.318	28.771
	1104	21.1614	9.960	90.3412	1.50	BORDE_VIA	1.44	352.9953	9.960	1362890.580	1049777.615	28.695
	1105	332.2356	10.284	90.5338	1.50	BORDE_VIA	1.44	304.1237	10.283	1362886.463	1049770.317	28.634
	1106	2.3522	27.866	90.1206	1.50	BORDE_VIA	1.44	334.3142	27.866	1362905.807	1049766.751	28.696



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1107	341.4126	22.090	90.1443	1.50	BORDE_VIA	1.44	313.4153	22.090	1362895.877	1049762.784	28.700
	1108	0.5120	38.865	90.0826	1.50	MANHOLE	1.44	332.5803	38.865	1362915.194	1049760.932	28.699
	1109	345.3811	29.960	90.0342	1.50	MANHOLE	1.44	317.3612	29.960	1362902.735	1049758.535	28.762
	1110	356.1943	19.329	90.0249	1.50	MANHOLE	1.44	328.0534	19.329	1362897.096	1049768.602	28.778
	1111	352.4251	18.579	89.5737	1.50	MANHOLE	1.44	324.4389	18.579	1362895.809	1049768.024	28.807
	1112	352.5635	16.623	89.5600	1.50	MANHOLE	1.44	324.6678	16.623	1362894.256	1049769.216	28.813
E10056-E10055	E10055	0.0000	40.079	89.5925	1.50	ESTACION	1.43	117.2014	40.074	1362862.376	1049814.471	28.906
	E10057	107.1752	80.958	90.2615	1.50	DELTA	1.43	44.4992	80.956	1362920.119	1049871.213	28.213
	1113	103.2324	6.180	89.1126	1.50	BORDE_VIA	1.43	40.5914	6.179	1362867.069	1049818.492	28.918
	1114	155.1255	7.065	89.0651	1.50	BORDE_VIA	1.43	92.4167	7.064	1362862.078	1049821.529	28.940
	1115	221.2642	7.654	89.5727	1.50	BORDE_VIA	1.43	158.6464	7.654	1362855.248	1049817.258	28.836
	1116	227.0132	22.957	89.5617	1.50	BORDE_VIA	1.43	164.2270	22.957	1362840.284	1049820.712	28.856
	1117	247.4643	19.931	90.1356	1.50	BORDE_VIA	1.43	184.9800	19.931	1362842.521	1049812.741	28.750
	1118	271.1408	17.034	90.3150	1.50	BORDE_VIA	1.43	208.4370	17.033	1362847.398	1049806.360	28.673
	1119	257.2603	17.381	90.5531	1.70	MANHOLE	1.43	194.6356	17.379	1362845.561	1049810.080	28.350
	1120	229.5730	3.251	88.2705	1.50	MANHOLE	1.43	167.1598	3.250	1362859.208	1049815.194	28.919
	1121	244.3243	12.309	89.4617	1.50	MANHOLE	1.43	181.7467	12.309	1362850.073	1049814.096	28.880
	1122	300.1601	12.673	90.0159	1.50	MANHOLE	1.43	237.4684	12.673	1362855.561	1049803.787	28.823
	1123	212.0728	18.720	89.1908	1.50	MANHOLE	1.43	149.3259	18.719	1362846.277	1049824.021	29.053
	1124	110.5359	31.108	90.5511	1.50	MANHOLE	1.43	48.1012	31.104	1362883.148	1049837.623	28.331
E10057-E10056	E10056	0.0000	80.970	89.2612	1.50	ESTACION	1.40	44.4992	80.956	1362920.119	1049871.213	28.213
	E10058	181.3204	102.436	90.3830	1.50	DELTA	1.40	46.0337	102.430	1362991.229	1049944.937	26.961
	1125	181.4339	53.025	91.0903	1.50	MANHOLE	1.40	46.2267	53.014	1362956.794	1049909.494	27.044
	1126	354.5659	15.126	90.5720	1.50	MANHOLE	1.40	219.4489	15.124	1362908.440	1049861.603	27.856
	1127	353.0751	11.847	88.1848	1.50	BORDE_VIA	1.40	217.6300	11.842	1362910.740	1049863.983	28.457
	1128	10.2241	12.289	88.3038	1.50	BORDE_VIA	1.40	234.8773	12.285	1362913.051	1049861.165	28.428
	1129	352.0136	17.788	88.3446	1.50	BORDE_VIA	1.40	216.5259	17.783	1362905.829	1049860.629	28.550
	1130	7.5438	17.836	88.4527	1.50	BORDE_VIA	1.40	232.4098	17.832	1362909.241	1049857.083	28.495
	1131	182.2838	48.308	90.3903	1.50	BORDE_VIA	1.40	46.9764	48.305	1362953.077	1049906.527	27.560
	1132	182.2956	57.930	90.4048	1.50	BORDE_VIA	1.40	46.9981	57.926	1362959.626	1049913.576	27.421
	1133	178.5415	57.064	90.4123	1.50	BORDE_VIA	1.40	43.4034	57.060	1362961.575	1049910.421	27.422
E10058-E10057	E10057	0.0000	102.450	89.1447	1.50	ESTACION	1.40	46.0337	102.430	1362991.229	1049944.937	26.961
	E10004	243.2353	37.701	90.1943	1.50	DELTA	1.40	109.4317	37.700	1362978.687	1049980.489	26.643
E10004-E10058	E10058	0.0001	37.711	89.2114	1.50	ESTACION	1.39	109.4317	37.700	1362978.687	1049980.489	26.643
	E10005	0.2825	99.227	89.4523	1.50	DELTA	1.39	289.9053	99.226	1363012.470	1049887.191	26.957



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
EAUX25		0.0000				ESTACION		0.0000		1363709.514	1048950.774	25.477
EAUX26	EAUX25	359.5959	27.135	86.0537	1.50	ESTACION	1.44	200.5372		1363684.156	1048941.274	23.676
	1141	244.0534	26.411	103.0606	1.50	RIO	1.44	264.6300	25.724	1363681.749	1048915.664	17.626
	1142	238.4746	23.658	104.5358	1.50	RIO	1.44	259.3334	22.863	1363679.924	1048918.807	17.529
	1143	221.0720	21.532	106.3031	1.50	RIO	1.44	241.6595	20.644	1363674.356	1048923.104	17.494
	1144	214.4642	21.663	106.3235	1.50	RIO	1.44	235.3156	20.766	1363672.339	1048924.198	17.444
	1145	210.3011	22.199	106.0050	1.50	RIO	1.44	231.0403	21.338	1363670.740	1048924.682	17.488
	1146	254.4612	31.258	101.1433	1.50	RIO	1.44	275.3072	30.658	1363686.992	1048910.747	17.518
	1147	258.0506	32.995	100.2937	1.50	RIO	1.44	278.6222	32.443	1363689.020	1048909.198	17.603
	1148	267.3248	41.897	96.2605	1.50	DESCARGA	1.44	288.0839	41.633	1363697.079	1048901.698	18.917
	1149	243.3718	44.122	87.4617	1.50	TERRENO	1.44	264.1589	44.089	1363679.669	1048897.415	25.328



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION B
INGENIERA XIMENA CRUZ



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E11000		0.0000				ESTACION		0.0000		1364065.689	1048836.192	26.159
E11001	E11000	0.0000	52.607	89.3850	1.50	ESTACION	1.46	340.1036		1364115.213	1048818.268	25.879
	E11002	243.3328	95.566	89.1731	2.60	DELTA	1.46	43.6614	95.559	1364184.344	1048884.241	25.915
	1	3.0313	41.153	89.2947	1.50	PARAMENTO	1.46	163.1572	41.151	1364075.827	1048830.191	26.195
	2	3.3939	36.917	89.2328	1.50	PARAMENTO	1.46	163.7645	36.915	1364079.771	1048828.589	26.226
	3	5.5228	36.848	89.2027	1.50	PARAMENTO	1.46	165.9781	36.846	1364079.466	1048827.195	26.258
	4	349.0202	62.376	89.2607	1.70	PARAMENTO	1.46	149.1375	62.373	1364061.672	1048850.264	26.248
	5	349.3117	60.469	89.2607	1.70	ANT_JARDIN	1.46	149.6250	60.466	1364063.047	1048848.843	26.230
	6	350.3053	57.631	89.3011	1.70	BORDE_VIA	1.46	150.6184	57.629	1364064.997	1048846.542	26.134
	7	1.1945	61.923	89.4452	1.50	BORDE_VIA	1.46	161.4328	61.922	1364056.514	1048837.985	26.106
	8	2.5243	57.383	89.4829	1.50	BORDE_VIA	1.46	162.9822	57.383	1364060.343	1048835.062	26.026
	9	359.4552	43.627	89.3908	1.50	BORDE_VIA	1.46	159.8681	43.626	1364074.253	1048833.283	26.098
	10	352.4813	39.824	89.1604	1.70	BORDE_VIA	1.46	152.9072	39.821	1364079.762	1048836.403	26.143
	11	3.3551	20.790	89.1604	1.50	BORDE_VIA	1.46	163.7011	20.788	1364095.260	1048824.102	26.099
	12	5.2117	20.868	89.0754	1.50	POSTE	1.46	165.4584	20.866	1364095.016	1048823.507	26.150
	13	348.4031	30.830	88.5957	1.70	PARAMENTO	1.46	148.7789	30.825	1364088.852	1048834.246	26.172
	14	348.5402	27.819	88.3515	1.70	PARAMENTO	1.46	149.0042	27.811	1364091.374	1048832.590	26.319
	14	348.4032	27.818	88.3515	1.70	PARAMENTO	1.46	148.7792	27.810	1364091.431	1048832.683	26.319
	15	37.3142	6.960	88.5822	1.50	PARAMENTO	1.46	197.6320	6.959	1364108.581	1048816.160	25.958
	16	341.1523	8.699	86.1101	1.70	PARAMENTO	1.46	141.3600	8.680	1364108.434	1048823.688	26.213
	17	350.5449	27.827	88.3910	1.70	ANDEN	1.46	151.0172	27.819	1364090.878	1048831.748	26.288
	18	350.5318	23.513	88.2626	1.70	ANDEN	1.46	150.9920	23.504	1364094.658	1048829.666	26.274
	19	348.4304	23.493	88.3233	1.70	ANDEN	1.46	148.8214	23.485	1364095.120	1048830.426	26.231
	20	351.4845	22.639	88.5046	1.70	BORDE_VIA	1.46	151.9161	22.634	1364095.244	1048828.923	26.090
	21	348.4402	10.466	88.2738	1.70	BORDE_VIA	1.46	148.8375	10.462	1364106.261	1048823.682	25.915
	22	332.2225	5.202	87.1008	1.70	BORDE_VIA	1.46	132.4772	5.196	1364111.705	1048822.100	25.891
	23	295.0630	5.103	86.5443	1.70	BORDE_VIA	1.46	95.2120	5.096	1364114.750	1048823.342	25.909
	24	343.2630	8.593	86.1642	1.70	ANDEN	1.46	143.5453	8.575	1364108.316	1048823.363	26.191
	25	328.2018	5.619	86.4442	1.70	ANDEN	1.46	128.4420	5.610	1364111.726	1048822.662	25.953
	26	311.3244	6.003	87.0559	1.70	ANDEN	1.46	111.6492	5.995	1364113.002	1048823.840	25.937
	27	301.3343	6.678	87.1307	1.70	ANDEN	1.46	101.6656	6.670	1364113.865	1048824.800	25.958
	28	282.3016	9.259	88.2449	1.70	ANDEN	1.46	82.6081	9.255	1364116.404	1048827.446	25.890
	29	333.5011	8.766	87.1842	1.70	PARAMENTO	1.46	133.9400	8.756	1364109.137	1048824.573	26.045
	30	326.3653	7.834	87.0835	1.70	PARAMENTO	1.46	126.7184	7.824	1364110.535	1048824.540	26.024
	31	265.0341	3.101	84.2707	1.70	MANHOLE	1.46	65.1650	3.086	1364116.510	1048821.069	25.933
	32	40.2808	3.678	86.0950	1.70	VALVULA	1.46	200.5725	3.670	1364111.778	1048816.978	25.880



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	33	74.1520	4.243	83.3408	1.50	PARAMENTO	1.46	234.3592	4.216	1364112.756	1048814.841	26.309
	34	88.4305	11.858	88.4513	1.50	PARAMENTO	1.46	248.8217	11.855	1364110.930	1048807.213	26.092
	35	120.0539	4.227	84.3022	1.50	PARAMENTO	1.46	280.1978	4.208	1364115.958	1048814.127	26.238
	36	123.5026	7.013	87.2204	1.50	PARAMENTO	1.46	283.9442	7.006	1364116.902	1048811.469	26.156
	37	20.0515	7.213	89.1809	1.50	BORDE_VIA	1.46	180.1911	7.212	1364108.001	1048818.244	25.921
	38	40.5211	1.962	88.3526	1.50	BORDE_VIA	1.46	200.9734	1.961	1364113.382	1048817.566	25.882
	39	222.0811	5.059	89.4550	1.50	BORDE_VIA	1.46	22.2400	5.059	1364119.896	1048820.183	25.855
	40	223.5418	8.705	89.2121	1.50	POSTE	1.46	24.0086	8.704	1364123.165	1048821.809	25.932
	41	230.1600	22.136	89.3235	1.50	PARAMENTO	1.46	30.3703	22.135	1364134.311	1048829.459	26.010
	42	236.3238	21.656	89.4411	1.50	ANTE_JARDI	1.46	36.6475	21.656	1364132.588	1048831.194	25.933
	43	242.2516	21.225	89.4147	1.50	BORDE_VIA	1.46	42.5247	21.225	1364130.856	1048832.614	25.946
	44	261.5143	22.249	89.0625	1.70	ANTE_JARDI	1.46	61.9656	22.246	1364125.669	1048837.904	25.980
	45	266.3548	22.864	88.5955	1.70	PARAMENTO	1.46	66.7003	22.861	1364124.256	1048839.264	26.033
	46	243.3105	39.566	89.4509	1.50	BORDE_VIA	1.46	43.6217	39.566	1364143.855	1048845.564	26.005
	47	257.2005	22.109	89.0212	1.70	BORDE_VIA	1.46	57.4384	22.106	1364127.111	1048836.899	26.005
	48	262.0442	29.390	89.1057	1.70	PARAMENTO	1.46	62.1820	29.387	1364128.927	1048844.259	26.053
	49	264.1728	29.769	89.1059	1.70	PARAMENTO	1.46	64.3947	29.766	1364128.077	1048845.111	26.058
	50	272.2346	15.772	88.2321	1.70	POSTE	1.46	72.4997	15.766	1364119.954	1048833.304	26.077
	50	271.4027	15.771	88.2324	1.70	POSTE	1.46	71.7778	15.765	1364120.143	1048833.242	26.077
	51	352.3444	61.089	89.2711	1.70	POSTE	1.46	152.6825	61.086	1364060.940	1048846.302	26.217
	52	348.4434	51.604	89.4127	1.50	BORDE_VIA	1.46	148.8464	51.603	1364071.052	1048844.964	26.112
	53	359.5823	32.264	89.2439	1.50	LINEAMIENT	1.46	160.0767	32.262	1364084.882	1048829.262	26.165
	54	359.5823	8.810	89.0602	1.50	LINEAMIENT	1.46	160.0767	8.809	1364106.932	1048821.270	25.972
E11002-E11001	E11001	0.0000	95.569	89.5128	1.70	ESTACION	1.42	43.6614	95.559	1364184.344	1048884.241	25.915
	E11003	61.3819	120.442	90.0501	1.50	DELTA	1.42	285.3000	120.442	1364216.125	1048768.068	25.657
	55	61.5530	114.647	90.0805	1.50	SUMIDERO	1.42	285.5864	114.647	1364215.148	1048773.810	25.563
	56	61.4241	113.872	90.0527	1.50	SUMIDERO	1.42	285.3728	113.872	1364214.531	1048774.443	25.652
	57	57.4553	114.761	90.1042	1.50	SUMIDERO	1.42	281.4261	114.760	1364207.078	1048771.755	25.475
	58	58.0008	113.925	90.0604	1.50	SUMIDERO	1.42	281.6636	113.925	1364207.375	1048772.669	25.632
	59	58.0431	113.891	90.0415	1.50	BORDE_VIA	1.42	281.7367	113.891	1364207.511	1048772.731	25.692
	60	61.3852	113.866	90.0446	1.50	BORDE_VIA	1.42	285.3092	113.866	1364214.407	1048774.416	25.675
	61	57.0927	108.363	90.0235	1.50	POSTE	1.42	280.8189	108.363	1364204.684	1048777.804	25.751
	62	56.1834	78.956	90.0132	1.50	POSTE	1.42	279.9709	78.956	1364198.015	1048806.478	25.797
	63	56.3044	78.959	90.0132	1.50	BORDE_VIA	1.42	280.1736	78.959	1364198.290	1048806.524	25.797
	63	56.3045	78.967	90.0131	1.50	BORDE_VIA	1.42	280.1739	78.967	1364198.292	1048806.516	25.798
	64	54.3338	78.357	89.5657	1.50	PARAMENTO	1.42	278.2220	78.357	1364195.549	1048806.690	25.902



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	64	54.3338	78.358	89.5657	1.50	PARAMENTO	1.42	278.2220	78.358	1364195.549	1048806.689	25.902
	64	54.2954	78.358	89.5657	1.50	PARAMENTO	1.42	278.1597	78.358	1364195.465	1048806.676	25.902
	65	61.3706	71.242	90.0135	1.50	BORDE_VIA	1.42	285.2797	71.242	1364203.118	1048815.517	25.800
	66	62.2330	71.283	89.5853	1.50	POSTE	1.42	286.0531	71.283	1364204.055	1048815.738	25.856
	67	54.2008	64.735	90.0101	1.50	POSTE	1.42	277.9970	64.735	1364193.350	1048820.136	25.813
	68	54.5733	65.536	90.0830	1.50	SUMIDERO	1.42	278.6206	65.536	1364194.167	1048819.446	25.671
	69	55.1852	64.637	90.0152	1.50	SUMIDERO	1.42	278.9759	64.637	1364194.428	1048820.396	25.798
	70	55.1353	63.760	90.0425	1.50	BORDE_VIA	1.42	278.8928	63.760	1364194.200	1048821.248	25.751
	71	51.1954	65.296	90.0425	1.50	BORDE_VIA	1.42	274.9931	65.296	1364190.027	1048819.193	25.749
	72	51.0125	57.958	90.0847	1.50	BORDE_VIA	1.42	274.6850	57.958	1364189.077	1048826.477	25.685
	73	54.0954	53.988	90.0233	1.50	BORDE_VIA	1.42	277.8264	53.988	1364191.695	1048830.756	25.793
	74	52.5921	50.802	90.0923	1.50	SUMIDERO	1.42	276.6506	50.802	1364190.227	1048833.781	25.694
	75	53.2345	49.925	90.0115	1.50	SUMIDERO	1.42	277.0572	49.925	1364190.477	1048834.694	25.814
	76	51.5613	49.379	89.5335	1.50	POSTE	1.42	275.5984	49.379	1364189.161	1048835.098	25.925
	77	57.5033	55.430	89.5852	1.50	MANHOLE	1.42	281.5039	55.430	1364195.398	1048829.925	25.851
	78	62.0649	53.678	89.5852	1.50	MANHOLE	1.42	285.7750	53.678	1364198.937	1048832.585	25.850
	79	62.1606	50.724	90.1038	1.50	SUMIDERO	1.42	285.9297	50.724	1364198.265	1048835.465	25.676
	80	61.4812	49.946	90.0133	1.50	SUMIDERO	1.42	285.4647	49.946	1364197.661	1048836.103	25.810
	81	64.5234	52.055	89.4648	1.50	CERRAMIENT	1.42	288.5375	52.055	1364200.893	1048834.887	26.033
	82	50.5613	53.067	89.5442	1.50	PARAMENTO	1.42	274.5984	53.067	1364188.598	1048831.345	25.914
	83	47.2455	40.180	89.5724	1.50	PARAMENTO	1.42	271.0767	40.180	1364185.099	1048844.068	25.863
	84	51.2605	39.544	89.5725	1.50	BORDE_VIA	1.42	275.0961	39.544	1364187.856	1048844.853	25.862
	85	32.2839	17.757	89.3436	1.50	POSTE	1.42	256.1389	17.757	1364180.090	1048867.002	25.964
	86	35.5639	17.618	90.2606	1.50	SUMIDERO	1.42	259.6056	17.617	1364181.165	1048866.913	25.699
	87	36.1030	16.715	90.0239	1.50	SUMIDERO	1.42	259.8364	16.715	1364181.394	1048867.788	25.820
	88	29.5941	14.334	89.5330	1.50	BORDE_VIA	1.42	253.6561	14.334	1364180.310	1048870.486	25.860
	89	21.2228	13.177	89.3005	1.50	BORDE_VIA	1.42	245.0359	13.177	1364178.782	1048872.296	25.947
	90	6.0441	14.334	89.4609	1.50	BORDE_VIA	1.42	229.7395	14.334	1364175.080	1048873.303	25.890
	91	19.0311	14.427	89.2247	1.50	PARAMENTO	1.42	242.7145	14.426	1364177.730	1048871.420	25.989
	92	9.3528	15.213	89.3015	1.50	PARAMENTO	1.42	233.2525	15.212	1364175.242	1048872.052	25.964
	93	317.1119	15.673	89.0531	1.50	POSTE	1.42	180.8500	15.671	1364168.674	1048884.009	26.081
	94	290.1038	13.099	89.1235	1.50	PARAMENTO	1.42	153.8386	13.098	1364172.588	1048890.016	26.013
	95	286.0244	11.483	89.1235	1.50	POSTE	1.42	149.7070	11.482	1364174.429	1048890.033	25.991
	96	279.0938	12.628	90.3240	1.50	SUMIDERO	1.42	142.8220	12.627	1364174.283	1048891.872	25.713
	97	279.1612	11.675	89.5319	1.50	SUMIDERO	1.42	142.9314	11.675	1364175.028	1048891.278	25.855
	98	333.0530	9.015	89.0537	1.50	MANHOLE	1.42	196.7531	9.014	1364175.712	1048881.643	25.975



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	99	297.4959	4.055	88.2314	1.50	MANHOLE	1.42	161.4945	4.053	1364180.500	1048885.528	25.947
	100	223.5419	3.657	89.0730	1.50	MANHOLE	1.42	87.5667	3.657	1364184.499	1048887.894	25.888
	101	241.1723	11.674	89.3831	1.50	BORDE_VIA	1.42	104.9511	11.674	1364181.332	1048895.520	25.906
	102	240.4008	11.969	89.5401	1.50	SUMIDERO	1.42	104.3303	11.969	1364181.381	1048895.838	25.853
	103	237.5754	11.246	90.2841	1.50	SUMIDERO	1.42	101.6264	11.246	1364182.077	1048895.256	25.739
	104	238.5247	12.076	89.1951	1.50	CORDON	1.42	102.5411	12.075	1364181.722	1048896.028	25.974
	105	237.5107	12.077	89.2617	1.50	CORDON	1.42	101.5134	12.076	1364181.933	1048896.075	25.951
	106	237.2356	11.200	89.2622	1.50	CORDON	1.42	101.0603	11.199	1364182.195	1048895.233	25.942
	107	238.4118	11.128	89.4122	1.50	CORDON	1.42	102.3497	11.128	1364181.964	1048895.111	25.893
	108	227.1054	11.621	89.1625	1.50	CERRAMIENT	1.42	90.8431	11.620	1364184.173	1048895.860	25.980
	109	276.2356	14.092	89.2446	1.50	POSTE	1.42	140.0603	14.091	1364173.540	1048893.287	25.977
	110	284.1933	10.343	89.4750	1.50	BORDE_VIA	1.42	147.9872	10.343	1364175.573	1048889.724	25.869
	111	309.3347	10.555	89.3310	1.50	BORDE_VIA	1.42	173.2245	10.555	1364173.863	1048885.486	25.915
	112	251.3302	44.355	89.5404	1.50	POSTE	1.42	115.2120	44.355	1364165.450	1048924.371	25.909
	113	250.4217	48.013	89.5811	1.50	SUMIDERO	1.42	114.3661	48.013	1364164.535	1048927.977	25.858
	114	250.2009	47.161	89.5416	1.50	SUMIDERO	1.42	113.9972	47.161	1364165.164	1048927.326	25.911
	115	249.4004	50.014	89.5004	1.50	BORDE_VIA	1.42	113.3292	50.014	1364164.537	1048930.166	25.977
	116	252.4554	53.646	89.4525	1.50	BORDE_VIA	1.42	116.4264	53.646	1364160.469	1048932.281	26.060
	117	252.5017	50.660	89.3606	1.50	PARAMENTO	1.42	116.4995	50.659	1364161.740	1048929.578	26.185
	118	244.5243	61.391	89.4449	1.50	MANHOLE	1.42	108.5400	61.390	1364164.823	1048942.445	26.104
	119	251.5240	67.501	89.2535	1.50	POSTE	1.42	115.5392	67.498	1364155.243	1048945.144	26.508
	120	248.3129	71.627	89.3833	1.50	POSTE	1.42	112.1861	71.626	1364157.297	1048950.564	26.280
	120	248.2129	71.629	89.3834	1.50	POSTE	1.42	112.0195	71.628	1364157.489	1048950.644	26.279
	121	249.4320	69.755	89.3050	1.50	PARAMENTO	1.42	113.3836	69.752	1364156.660	1048948.265	26.424
	122	247.2500	69.469	89.4637	1.50	BORDE_VIA	1.42	111.0781	69.468	1364159.360	1048949.062	26.103
	123	251.0613	64.030	89.3937	1.50	BORDE_VIA	1.42	114.7650	64.029	1364157.522	1048942.381	26.212
	124	247.3953	71.668	89.4854	1.50	SUMIDERO	1.42	111.3261	71.668	1364158.280	1048951.001	26.064
	125	247.2451	70.815	89.4603	1.50	SUMIDERO	1.42	111.0756	70.814	1364158.879	1048950.319	26.120
	126	241.2638	70.653	89.4957	1.50	SUMIDERO	1.42	105.1053	70.653	1364165.932	1048952.453	26.039
	127	241.0027	69.884	89.5233	1.50	SUMIDERO	1.42	104.6689	69.884	1364166.647	1048951.847	25.984
	128	241.3752	70.125	89.4604	1.50	BORDE_VIA	1.42	105.2925	70.124	1364165.848	1048951.883	26.117
	129	239.2257	69.973	89.3408	1.50	PARAMENTO	1.42	103.0439	69.971	1364168.551	1048952.407	26.359
	130	241.0847	70.788	89.4309	1.50	CORDON	1.42	104.8078	70.787	1364166.252	1048952.677	26.180
	131	278.2130	12.616	89.2613	1.50	CORDON	1.42	142.0197	12.615	1364174.400	1048892.004	25.957
	132	279.0408	12.699	89.3132	1.50	CORDON	1.42	142.7303	12.699	1364174.238	1048891.931	25.938
	133	281.2903	11.980	89.3132	1.50	CORDON	1.42	145.1456	11.980	1364174.513	1048891.087	25.932



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	134	280.5915	11.849	89.2648	1.50	CORDON	1.42	144.6489	11.848	1364174.680	1048891.096	25.947
E11003-E11002	E11002	359.5959	120.436	89.4617	1.70	ESTACION	1.47	285.3000	120.442	1364216.125	1048768.068	25.657
	E11004	179.0514	102.293	90.1004	1.50	DELTA	1.47	284.3872	102.293	1364241.542	1048668.983	25.326
	135	12.0440	66.029	89.4412	1.70	POSTE	1.47	117.3778	66.028	1364185.761	1048826.701	25.729
	136	358.3257	5.727	88.0348	1.70	SUMIDERO	1.47	103.8492	5.724	1364214.755	1048773.625	25.619
	137	354.2421	6.539	88.3818	1.70	SUMIDERO	1.47	99.7059	6.537	1364215.023	1048774.512	25.581
	138	356.0237	7.932	88.1045	1.70	CORDON	1.47	101.3436	7.928	1364214.566	1048775.841	25.678
	139	353.5449	5.528	86.5817	1.70	CORDON	1.47	99.2136	5.520	1364215.241	1048773.517	25.718
	140	359.4007	5.530	87.3113	1.70	BORDE_VIA	1.47	104.9686	5.525	1364214.698	1048773.405	25.665
	141	39.4125	11.020	88.3726	1.70	BORDE_VIA	1.47	144.9903	11.017	1364207.102	1048774.389	25.691
	142	48.0921	10.203	88.1504	1.70	CORDON	1.47	153.4559	10.198	1364207.002	1048772.625	25.737
	143	48.5729	10.382	88.1504	1.70	CORDON	1.47	154.2581	10.377	1364206.778	1048772.575	25.743
	144	53.0248	9.768	88.0255	1.70	CORDON	1.47	158.3467	9.762	1364207.052	1048771.670	25.758
	145	51.3215	9.445	88.2146	1.70	CORDON	1.47	156.8375	9.441	1364207.445	1048771.782	25.696
	146	68.1117	7.976	87.4805	1.70	CORDON	1.47	173.4881	7.970	1364208.206	1048768.972	25.732
	147	82.3651	20.737	88.4934	1.70	CORDON	1.47	187.9142	20.733	1364195.590	1048765.213	25.851
	148	71.0728	11.634	88.1222	1.70	POSTE	1.47	176.4245	11.628	1364204.519	1048768.793	25.790
	149	62.0907	10.912	87.5811	1.70	PARAMENTO	1.47	167.4520	10.905	1364205.480	1048770.437	25.812
	150	48.5745	10.220	89.4159	1.70	SUMIDERO	1.47	154.2625	10.220	1364206.919	1048772.506	25.479
	151	51.0814	9.293	88.5114	1.70	SUMIDERO	1.47	156.4372	9.291	1364207.609	1048771.782	25.612
	152	34.0911	14.975	88.4233	1.70	POSTE	1.47	139.4531	14.971	1364204.749	1048777.800	25.763
	153	184.5101	2.123	84.0807	1.70	MANHOLE	1.47	290.1503	2.112	1364216.852	1048766.085	25.643
	154	125.5730	4.661	86.0717	1.70	MANHOLE	1.47	231.2584	4.650	1364213.215	1048764.441	25.741
	155	83.5002	35.550	91.5931	0.09	POSTE	1.47	189.1339	35.529	1364181.047	1048762.428	25.805
	156	82.3647	38.193	89.1424	1.70	PARAMENTO	1.47	187.9131	38.190	1364178.299	1048762.810	25.932
	157	100.3241	42.568	88.3119	2.37	PARAMENTO	1.47	205.8447	42.554	1364177.827	1048749.517	25.854
	158	104.4544	25.039	89.0740	1.70	POSTE	1.47	210.0622	25.036	1364194.457	1048755.526	25.807
	159	129.1514	12.439	87.5711	1.70	PARAMENTO	1.47	234.5539	12.431	1364208.916	1048757.941	25.870
	160	133.0129	9.615	88.3223	1.70	BORDE_VIA	1.47	238.3247	9.612	1364211.078	1048759.888	25.671
	161	132.1140	10.220	88.0153	1.70	ANDEN	1.47	237.4945	10.214	1364210.636	1048759.454	25.777
	162	145.2035	13.298	88.5047	1.70	ANDEN	1.47	250.6431	13.295	1364211.718	1048755.524	25.694
	163	143.3854	13.578	88.5047	1.70	ANDEN	1.47	248.9484	13.575	1364211.249	1048755.399	25.699
	164	140.5939	12.808	88.4447	1.70	ANDEN	1.47	246.2942	12.805	1364210.977	1048756.344	25.706
	165	142.4228	12.479	88.4447	1.70	ANDEN	1.47	248.0078	12.476	1364211.453	1048756.500	25.699
	166	141.3243	12.821	89.3640	1.70	SUMIDERO	1.47	246.8453	12.821	1364211.084	1048756.280	25.513
	167	145.1256	13.161	89.3642	1.70	SUMIDERO	1.47	250.5156	13.161	1364211.735	1048755.661	25.515



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	168	144.4549	14.664	88.3352	1.70	POSTE	1.47	250.0636	14.659	1364211.126	1048754.287	25.793
	169	170.0415	56.740	89.5637	1.50	PARAMENTO	1.47	275.3709	56.740	1364221.436	1048711.577	25.682
	170	172.0715	55.240	89.5637	1.50	ANDEN	1.47	277.4209	55.240	1364223.260	1048713.291	25.680
	171	172.2525	53.488	90.0220	1.50	BORDE_VIA	1.47	277.7236	53.488	1364223.313	1048715.065	25.590
	172	167.3519	54.570	89.5955	1.50	BORDE_VIA	1.47	272.8886	54.570	1364218.875	1048713.567	25.627
	173	167.3821	47.893	89.5955	1.50	BORDE_VIA	1.47	272.9392	47.893	1364218.581	1048720.238	25.627
	174	171.1951	46.408	90.0155	1.50	BORDE_VIA	1.47	276.6309	46.408	1364221.484	1048721.970	25.600
	175	169.2613	43.915	89.4529	1.50	POSTE	1.47	274.7370	43.915	1364219.752	1048724.303	25.811
	176	169.4940	42.849	90.0605	1.50	SUMIDERO	1.47	275.1278	42.849	1364219.955	1048725.391	25.550
	177	170.1549	41.974	90.0427	1.50	SUMIDERO	1.47	275.5636	41.974	1364220.194	1048726.292	25.572
	178	169.3735	42.033	89.5805	1.50	CORDON	1.47	274.9264	42.033	1364219.735	1048726.190	25.649
	179	169.2659	42.076	89.5805	1.50	CORDON	1.47	274.7497	42.076	1364219.609	1048726.137	25.649
	180	169.3907	42.938	89.5805	1.50	CORDON	1.47	274.9520	42.938	1364219.831	1048725.290	25.650
	181	169.5102	42.971	89.5805	1.50	CORDON	1.47	275.1506	42.971	1364219.983	1048725.271	25.650
	182	167.3048	45.149	89.4407	1.50	PARAMENTO	1.47	272.8134	45.149	1364218.341	1048722.974	25.834
	183	180.4421	41.604	89.4205	1.70	CORDON	1.47	286.0392	41.603	1364227.620	1048728.084	25.643
	184	181.0530	41.644	89.4050	1.70	CORDON	1.47	286.3917	41.643	1364227.877	1048728.117	25.658
	185	181.0522	42.077	89.4323	1.70	CORDON	1.47	286.3895	42.077	1364227.998	1048727.701	25.629
	186	180.1650	42.518	89.5200	1.70	SUMIDERO	1.47	285.5806	42.518	1364227.545	1048727.112	25.525
	187	180.5929	41.699	89.5658	1.70	SUMIDERO	1.47	286.2914	41.699	1364227.823	1048728.043	25.463
	188	184.0257	41.573	89.4113	1.70	CERRAMIENT	1.47	289.3492	41.572	1364229.899	1048728.844	25.653
	189	182.2928	42.142	89.4529	1.70	ARBOL	1.47	287.7911	42.142	1364229.001	1048727.942	25.604
	190	179.3302	49.759	90.0405	1.50	MANHOLE	1.47	284.8506	49.759	1364228.878	1048719.971	25.567
	191	176.0732	50.926	90.3803	1.50	MANHOLE	1.47	281.4256	50.923	1364226.213	1048718.154	25.062
	192	180.0350	43.907	89.5240	1.70	BORDE_VIA	1.47	285.3639	43.907	1364227.758	1048725.730	25.520
	193	180.0615	53.225	90.0517	1.50	BORDE_VIA	1.47	285.4042	53.225	1364230.263	1048716.755	25.544
	194	183.5110	45.954	89.4828	1.70	BORDE_VIA	1.47	289.1528	45.954	1364231.202	1048724.658	25.580
	195	183.4619	52.739	90.0043	1.50	BORDE_VIA	1.47	289.0720	52.739	1364233.358	1048718.224	25.615
	196	0.0022	83.223	89.4951	1.50	LINEAMIENT	1.47	105.3061	83.223	1364194.156	1048848.339	25.872
	197	0.0023	43.799	89.4731	1.50	LINEAMIENT	1.47	105.3064	43.799	1364204.563	1048810.313	25.785
E11004-E11003	E11003	0.0000	102.309	89.4231	1.70	ESTACION	1.51	284.3872	102.293	1364241.542	1048668.983	25.326
	E11005	180.5335	129.673	90.0820	1.70	DELTA	1.51	285.2803	129.673	1364275.716	1048543.895	24.822
	198	354.2122	46.955	89.0502	1.70	CERRAMIENT	1.51	98.7434	46.949	1364234.405	1048715.387	25.887
	199	353.1523	38.734	88.5529	1.70	PARAMENTO	1.51	97.6436	38.727	1364236.391	1048707.367	25.863
	199	353.0929	38.737	88.5529	1.70	PARAMENTO	1.51	97.5453	38.730	1364236.456	1048707.378	25.863
	200	357.4024	38.450	89.2816	1.70	CORDON	1.51	102.0606	38.448	1364233.508	1048706.583	25.491



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	201	8.4416	44.781	89.3315	1.70	SUMIDERO	1.51	113.1250	44.780	1364223.955	1048710.165	25.485
	202	8.1322	43.936	89.2906	1.70	SUMIDERO	1.51	112.6100	43.934	1364224.651	1048709.541	25.531
	203	8.4232	43.768	89.2008	1.70	CORDON	1.51	113.0961	43.765	1364224.374	1048709.241	25.644
	204	8.5811	43.814	89.1836	1.70	CORDON	1.51	113.3570	43.811	1364224.173	1048709.204	25.664
	205	8.4651	44.952	89.1946	1.70	CORDON	1.51	113.1681	44.949	1364223.858	1048710.307	25.662
	206	8.3001	44.954	89.1946	1.70	CORDON	1.51	112.8875	44.951	1364224.060	1048710.395	25.662
	207	355.3454	31.399	89.0422	1.70	POSTE	1.51	99.9689	31.395	1364236.107	1048699.904	25.644
	207	355.1351	31.416	89.0423	1.70	POSTE	1.51	99.6181	31.412	1364236.294	1048699.954	25.645
	208	14.2219	29.287	89.1034	1.70	POSTE	1.51	118.7592	29.284	1364227.453	1048694.655	25.557
	209	13.1223	25.226	89.1646	1.70	BORDE_VIA	1.51	117.5936	25.224	1364229.858	1048691.338	25.454
	210	348.4158	24.931	89.0110	1.70	PARAMENTO	1.51	93.0867	24.927	1364240.200	1048693.875	25.563
	211	357.0019	24.513	89.2047	1.70	BORDE_VIA	1.51	101.3925	24.511	1364236.700	1048693.012	25.416
	212	27.2536	13.863	89.1303	1.70	SUMIDERO	1.51	131.8139	13.862	1364232.300	1048679.315	25.326
	213	27.1918	12.830	89.0915	1.70	SUMIDERO	1.51	131.7089	12.829	1364233.007	1048678.560	25.326
	214	28.2923	12.867	88.3346	1.70	CORDON	1.51	132.8770	12.863	1364232.790	1048678.410	25.459
	215	29.4626	13.051	88.3921	1.70	CORDON	1.51	134.1611	13.047	1364232.452	1048678.343	25.442
E11004-E11003	E11003	0.0000	102.331	89.4234	1.70	ESTACION	1.51	284.3872	102.293	1364241.542	1048668.983	25.326
	E11005	180.5319	129.665	90.0831	1.70	DELTA	1.51	285.2759	129.665	1364275.704	1048543.900	24.815
	216	28.0101	13.889	88.4206	1.70	CORDON	1.51	132.4042	13.885	1364232.178	1048679.237	25.451
	217	26.1718	13.748	88.3645	1.70	CORDON	1.51	130.6756	13.744	1364232.584	1048679.407	25.469
	218	39.3729	13.005	88.2129	1.70	PARAMENTO	1.51	144.0120	13.000	1364231.024	1048676.622	25.509
	219	56.5107	18.294	88.1802	1.70	PARAMENTO	1.51	161.2392	18.286	1364224.228	1048674.865	25.679
	220	64.1951	17.101	88.4245	1.70	PARAMENTO	1.51	168.7181	17.097	1364224.776	1048672.328	25.521
	221	76.1154	30.158	89.1242	1.70	POSTE	1.51	180.5856	30.155	1364211.388	1048668.675	25.551
	222	78.1028	26.449	89.0802	1.70	BORDE_VIA	1.51	182.5617	26.446	1364215.123	1048667.801	25.536
	223	86.2837	25.475	88.5728	1.70	BORDE_VIA	1.51	190.8642	25.471	1364216.528	1048664.183	25.600
	224	88.4326	15.141	88.0726	1.70	PARAMENTO	1.51	193.1111	15.133	1364226.804	1048665.551	25.632
	225	97.2520	15.121	88.2316	1.70	PARAMENTO	1.51	201.8095	15.115	1364227.509	1048663.368	25.562
	226	102.1001	8.235	87.2252	1.70	PARAMENTO	1.51	206.5542	8.226	1364234.183	1048665.306	25.513
	226	102.4822	8.236	87.2252	1.70	PARAMENTO	1.51	207.1934	8.227	1364234.224	1048665.224	25.513
	227	94.3720	9.832	87.4928	1.70	POSTE	1.51	199.0095	9.825	1364232.253	1048665.783	25.510
	228	107.1037	7.138	87.0507	1.70	POSTE	1.51	211.5642	7.129	1364235.468	1048665.252	25.499
E11004-E11003	E11003	0.0000	102.305	89.4223	1.70	ESTACION	1.51	284.3872	102.293	1364241.542	1048668.983	25.326
	E11005	180.5345	129.670	90.0813	1.70	DELTA	1.51	285.2831	129.670	1364275.721	1048543.900	24.826
	229	340.0904	18.616	88.0442	1.70	PARAMENTO	1.51	84.5384	18.606	1364243.313	1048687.505	25.761
	230	350.5307	12.508	88.3756	1.70	CORDON	1.51	95.2725	12.504	1364240.393	1048681.435	25.435



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	231	350.1240	12.499	88.3756	1.70	CORDON	1.51	94.5984	12.495	1364240.540	1048681.439	25.435
	232	349.4101	11.807	88.3756	1.70	CORDON	1.51	94.0709	11.804	1364240.704	1048680.757	25.418
	233	353.3336	17.530	88.5952	1.70	CORDON	1.51	97.9472	17.527	1364239.119	1048686.342	25.443
	234	353.1355	12.311	89.0447	1.70	SUMIDERO	1.51	97.6192	12.309	1364239.910	1048681.184	25.334
	235	350.3338	11.652	89.3223	1.70	SUMIDERO	1.51	94.9478	11.652	1364240.537	1048680.592	25.230
	236	328.5003	12.225	86.2804	1.70	PARAMENTO	1.51	73.2214	12.202	1364245.064	1048680.666	25.890
	237	324.5848	9.574	87.3657	1.70	BORDE_VIA	1.51	69.3672	9.566	1364244.913	1048677.936	25.535
	238	304.4851	6.587	86.5238	1.70	BORDE_VIA	1.51	49.2014	6.577	1364245.840	1048673.963	25.495
	239	331.5148	3.381	86.5238	1.70	BORDE_VIA	1.51	76.2506	3.376	1364242.344	1048672.263	25.321
	240	350.0242	9.281	88.5530	1.70	BORDE_VIA	1.51	94.4322	9.279	1364240.825	1048678.235	25.310
	241	26.3859	5.377	92.5641	1.70	MANHOLE	1.51	131.0370	5.370	1364238.016	1048673.034	24.860
	242	1.1125	6.861	92.1159	1.70	MANHOLE	1.51	105.5775	6.856	1364239.701	1048675.588	24.873
	243	308.2831	2.290	86.0601	1.70	EJE_COLECT	1.51	52.8625	2.285	1364242.921	1048670.805	25.292
	244	277.5311	6.445	84.0418	1.70	PARAMENTO	1.51	22.2736	6.411	1364247.474	1048671.413	25.802
	245	195.5442	14.854	87.5358	1.70	POSTE	1.51	300.2989	14.844	1364249.031	1048656.167	25.681
	246	125.5503	7.562	89.3009	1.70	SUMIDERO	1.51	230.3047	7.562	1364236.712	1048663.165	25.202
	247	122.2947	6.745	88.5423	1.70	SUMIDERO	1.51	226.8836	6.744	1364236.933	1048664.061	25.265
	248	120.3929	6.813	87.3729	1.70	CORDON	1.51	225.0453	6.807	1364236.732	1048664.166	25.419
	249	119.2107	7.174	87.4904	1.70	CORDON	1.51	223.7392	7.169	1364236.363	1048664.027	25.409
	250	126.0309	7.658	87.5634	1.70	CORDON	1.51	230.4397	7.653	1364236.668	1048663.083	25.411
	251	127.5731	7.329	87.5635	1.70	CORDON	1.51	232.3459	7.324	1364237.068	1048663.185	25.399
	252	183.3612	35.060	90.0244	1.70	BORDE_VIA	1.51	287.9906	35.060	1364252.371	1048635.638	25.108
	252-1	183.3746	35.424	90.0202	1.70	SUMIDERO	1.51	288.0167	35.424	1364252.498	1048635.296	25.115
	253	184.4002	32.933	90.1323	1.70	SUMIDERO	1.51	289.0545	32.933	1364252.294	1048637.855	25.008
	254	184.1835	37.673	89.5707	1.70	CORDON	1.51	288.6970	37.673	1364253.619	1048633.299	25.168
	255	184.5935	38.409	90.0957	1.70	SUMIDERO	1.51	289.3803	38.409	1364254.288	1048632.751	25.025
	256	186.1121	38.097	90.1149	1.70	SUMIDERO	1.51	290.5764	38.097	1364254.931	1048633.317	25.005
	257	171.0948	36.878	90.1018	1.70	SUMIDERO	1.51	275.5506	36.878	1364245.109	1048632.279	25.026
	258	171.4501	36.016	90.0558	1.70	SUMIDERO	1.51	276.1375	36.016	1364245.393	1048633.174	25.074
	259	171.2726	35.966	89.5020	1.70	CORDON	1.51	275.8445	35.966	1364245.204	1048633.205	25.237
	260	170.4924	36.032	89.5253	1.70	CORDON	1.51	275.2106	36.032	1364244.814	1048633.100	25.211
	261	171.0233	36.964	89.5253	1.70	CORDON	1.51	275.4297	36.964	1364245.040	1048632.185	25.213
	262	171.4106	36.899	89.5149	1.70	CORDON	1.51	276.0722	36.899	1364245.445	1048632.292	25.224
	263	172.2514	39.961	89.5245	1.70	CORDON	1.51	276.8078	39.961	1364246.279	1048629.304	25.221
	264	171.1743	39.375	89.4644	1.70	POSTE	1.51	275.6825	39.375	1364245.441	1048629.802	25.288
	265	171.3912	39.911	89.2920	1.70	CAJA_TELEF	1.51	276.0406	39.909	1364245.742	1048629.296	25.492



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	266	170.2329	40.390	89.2747	1.70	CAJA_TELEF	1.51	274.7786	40.388	1364244.907	1048628.736	25.515
	267	170.5459	39.611	89.2747	1.70	CAJA_TELEF	1.51	275.3036	39.609	1364245.203	1048629.544	25.508
	268	168.4817	38.478	89.2247	1.70	PARAMENTO	1.51	273.1920	38.476	1364243.684	1048630.567	25.553
	269	173.3725	42.471	89.5900	1.70	BORDE_VIA	1.51	278.0109	42.471	1364247.461	1048626.927	25.149
	270	174.2410	47.320	90.0204	1.70	BORDE_VIA	1.51	278.7900	47.320	1364248.773	1048622.219	25.108
	271	168.5245	48.074	89.5728	1.70	BORDE_VIA	1.51	273.2664	48.074	1364244.281	1048620.988	25.172
	272	168.5510	43.332	89.5313	1.70	BORDE_VIA	1.51	273.3067	43.332	1364244.041	1048625.724	25.222
	273	171.3354	50.190	89.3150	1.70	PARAMENTO	1.51	275.9522	50.188	1364246.747	1048619.066	25.548
	274	173.5347	51.117	89.5955	1.70	SUMIDERO	1.51	278.2836	51.117	1364248.907	1048618.400	25.138
	275	174.2737	51.835	90.0618	1.70	SUMIDERO	1.51	278.8475	51.835	1364249.515	1048617.765	25.041
	276	174.2344	51.969	89.5728	1.70	CORDON	1.51	278.7828	51.969	1364249.477	1048617.624	25.175
	277	173.5259	52.023	89.5803	1.70	CORDON	1.51	278.2703	52.023	1364249.025	1048617.502	25.166
	278	173.4508	51.053	89.5840	1.70	CORDON	1.51	278.1395	51.053	1364248.770	1048618.445	25.156
	279	174.1611	50.973	89.5840	1.70	CORDON	1.51	278.6570	50.973	1364249.214	1048618.591	25.156
	280	173.5039	47.977	89.5929	1.70	CORDON	1.51	278.2314	47.977	1364248.411	1048621.501	25.144
	281	178.2419	41.865	90.3714	1.70	MANHOLE	1.51	282.7925	41.863	1364250.811	1048628.160	24.683
	282	181.2948	39.488	90.5324	1.70	MANHOLE	1.51	285.8839	39.483	1364252.348	1048631.008	24.523
	283	184.2352	46.052	90.4324	1.70	CAMA_TELEF	1.51	288.7850	46.048	1364256.370	1048625.388	24.555
	284	186.0313	48.876	89.2601	1.70	CAJ_CONT_T	1.51	290.4409	48.874	1364258.611	1048623.187	25.619
	285	188.5434	48.003	89.3901	1.70	CAJA_TELEF	1.51	293.2967	48.002	1364260.527	1048624.895	25.429
	286	188.5500	47.389	89.3638	1.70	CAJA_TELEF	1.51	293.3039	47.388	1364260.289	1048625.462	25.458
	287	189.5225	47.461	89.3734	1.70	CAJA_TELEF	1.51	294.2609	47.460	1364261.043	1048625.715	25.446
	288	190.3226	35.673	88.5411	1.70	PARAMENTO	1.51	294.9278	35.666	1364256.575	1048636.640	25.819
	289	185.3947	55.149	90.3014	1.70	MANHOLE	1.51	290.0503	55.147	1364260.449	1048617.179	24.651
	290	175.0030	68.163	89.5804	1.70	POSTE	1.51	279.3956	68.163	1364252.670	1048601.735	25.175
	291	182.5626	47.846	90.0722	1.70	BORDE_VIA	1.51	287.3278	47.846	1364255.792	1048623.309	25.034
	292	183.3102	37.946	90.0434	1.70	BORDE_VIA	1.51	287.9045	37.946	1364253.208	1048632.875	25.086
	293	190.0125	39.383	90.0004	1.70	BORDE_VIA	1.51	294.4109	39.383	1364257.818	1048633.121	25.136
	294	189.5311	45.925	90.0144	1.70	BORDE_VIA	1.51	294.2736	45.925	1364260.422	1048627.119	25.113
	295	183.3555	49.481	90.0144	1.70	CORDON	1.51	287.9859	49.481	1364256.821	1048621.920	25.111
E11005-E11004	E11004	0.0000	129.673	89.4153	1.70	ESTACION	1.51	285.2803	129.673	1364275.716	1048543.895	24.822
	E11006	270.0934	115.832	89.4304	1.70	DELTA	1.51	15.4397	115.831	1364387.367	1048574.732	25.198
	296	7.1118	42.368	89.4406	1.70	BORDE_VIA	1.51	112.4686	42.368	1364259.524	1048583.046	24.823
	297	7.4335	39.301	89.4012	1.70	BORDE_VIA	1.51	113.0067	39.300	1364260.356	1048580.069	24.853
	298	10.3236	43.921	89.4247	1.50	BORDE_VIA	1.51	115.8236	43.920	1364256.584	1048583.430	25.047
	298	10.3320	43.941	89.4247	1.50	PARAMENTO	1.51	115.8359	43.940	1364256.567	1048583.443	25.047



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	299	10.1243	43.300	89.4318	1.50	POSTE	1.51	115.4922	43.299	1364257.081	1048582.979	25.037
	300	13.3840	42.802	90.0038	1.50	BORDE_VIA	1.51	118.9247	42.802	1364255.015	1048581.358	24.819
	301	13.3212	39.807	90.0039	1.50	BORDE_VIA	1.51	118.8170	39.807	1364256.529	1048578.773	24.819
	302	13.4328	37.020	89.2733	1.50	PARAMENTO	1.51	119.0047	37.018	1364257.767	1048576.271	25.176
	303	12.3233	32.369	89.4708	1.50	POSTE	1.51	117.8228	32.369	1364260.608	1048572.522	24.948
	304	17.3828	28.990	89.1157	1.70	PARAMENTO	1.51	122.9214	28.987	1364259.962	1048568.227	25.032
	305	31.0505	32.312	88.4959	1.70	PARAMENTO	1.51	136.3650	32.305	1364252.335	1048566.188	25.285
	305	31.0921	32.313	88.4959	1.70	PARAMENTO	1.51	136.4361	32.306	1364252.307	1048566.159	25.285
	306	33.1920	30.294	89.2649	1.70	MURO_ESQ_P	1.51	138.6025	30.293	1364252.992	1048563.927	24.919
	307	17.2931	20.107	89.5721	1.70	SUMIDERO	1.51	122.7722	20.107	1364264.832	1048560.802	24.642
	308	16.3027	19.222	89.3515	1.70	SUMIDERO	1.51	121.7878	19.222	1364265.591	1048560.233	24.765
	309	22.2746	18.818	89.2304	1.70	POSTE	1.51	127.7431	18.817	1364264.198	1048558.775	24.829
	310	19.5135	14.389	91.5305	1.70	MANHOLE	1.51	125.1400	14.381	1364267.439	1048555.655	24.154
	311	18.0149	18.993	89.2509	1.70	CORDON	1.51	123.3106	18.992	1364265.286	1048559.767	24.820
	312	18.1645	19.345	89.2510	1.70	CORDON	1.51	123.5595	19.344	1364265.023	1048560.015	24.823
	313	19.0702	19.459	89.2208	1.70	CORDON	1.51	124.3975	19.458	1364264.724	1048559.950	24.841
	314	18.1035	20.449	89.2405	1.70	CORDON	1.51	123.4567	20.448	1364264.443	1048560.955	24.841
	315	16.5229	20.374	89.2405	1.70	CORDON	1.51	122.1550	20.373	1364264.873	1048561.143	24.840
	316	57.4636	16.850	88.5625	1.70	CORDON	1.51	163.0570	16.847	1364259.600	1048548.805	24.939
	317	60.0624	17.841	88.3910	1.70	CORDON	1.51	165.3870	17.836	1364258.457	1048548.395	25.046
	318	60.5412	17.605	88.3912	1.70	CORDON	1.51	166.1836	17.600	1364258.625	1048548.098	25.041
	319	60.2435	17.497	89.0648	1.70	SUMIDERO	1.51	165.6900	17.495	1364258.764	1048548.219	24.898
	320	60.0856	16.530	88.5126	1.70	SUMIDERO	1.51	165.4292	16.527	1364259.721	1048548.053	24.957
	321	51.3827	19.046	89.0552	1.70	POSTE	1.51	156.9211	19.044	1364258.197	1048551.360	24.927
	322	60.1006	16.386	88.4714	1.70	BORDE_VIA	1.51	165.4486	16.382	1364259.859	1048548.011	24.974
	323	16.5458	18.444	89.3424	1.70	BORDE_VIA	1.51	122.1964	18.443	1364265.889	1048559.502	24.764
	324	50.3642	24.732	89.0545	1.70	PARAMENTO	1.51	155.8920	24.729	1364253.144	1048553.996	25.017
	325	47.5409	34.100	89.2742	1.70	PARAMENTO	1.51	153.1828	34.098	1364245.285	1048559.278	24.947
	326	70.2047	28.113	89.1950	1.70	PARAMENTO	1.51	175.6267	28.111	1364247.687	1048546.039	24.955
	327	63.2932	35.866	89.2132	1.70	PARAMENTO	1.51	168.7725	35.864	1364240.539	1048550.878	25.028
	328	88.0634	15.177	88.4704	1.70	SUMIDERO	1.51	193.3897	15.174	1364260.955	1048540.381	24.949
	329	87.4556	14.448	88.4704	1.70	SUMIDERO	1.51	193.0459	14.445	1364261.644	1048540.634	24.933
	330	89.4308	15.426	88.1857	1.70	CORDON	1.51	194.9992	15.419	1364260.822	1048539.904	25.080
	331	89.0122	14.112	88.1857	1.70	CORDON	1.51	194.3031	14.106	1364262.047	1048540.410	25.042
	332	87.4454	11.717	88.0813	1.70	CORDON	1.51	193.0286	11.711	1364264.307	1048541.255	25.008
	333	89.4502	13.311	88.1547	1.70	CAJA_TELEF	1.51	195.0309	13.305	1364262.866	1048540.445	25.030



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	334	92.0859	12.619	88.1547	1.70	CAJA_TELEF	1.51	197.4300	12.613	1364263.682	1048540.117	25.009
	335	94.4727	13.224	88.1547	1.70	CAJA_TELEF	1.51	200.0711	13.218	1364263.301	1048539.359	25.028
	336	92.1637	13.771	88.1548	1.70	CAJA_TELEF	1.51	197.5572	13.765	1364262.593	1048539.743	25.044
	337	104.2700	14.079	88.1004	1.70	CAMA_TELEF	1.51	209.7303	14.072	1364263.497	1048536.917	25.077
E11005-E11004	E11004	0.0000	129.684	89.4153	1.70	ESTACION	1.51	285.2803	129.673	1364275.716	1048543.895	24.822
	E11006	270.0927	115.830	89.4308	1.70	DELTA	1.51	15.4378	115.829	1364387.366	1048574.728	25.195
	E11007	2.1515	132.437	89.4110	1.70	DELTA_AUXI	1.51	107.5345	132.435	1364235.816	1048670.177	25.353
	337	359.3634	202.357	89.4355	1.70	LINEAMIENT	1.51	104.8897	202.355	1364223.719	1048739.455	25.574
	338	359.3634	161.032	89.4240	1.70	LINEAMIENT	1.51	104.8897	161.030	1364234.338	1048699.518	25.439
	339	359.3634	82.848	89.4152	1.70	LINEAMIENT	1.51	104.8897	82.847	1364254.428	1048623.960	25.064
	340	359.3634	27.561	89.4005	1.70	LINEAMIENT	1.51	104.8897	27.561	1364268.634	1048570.530	24.787
	341	348.4032	47.987	89.0716	1.70	PARAMENTO	1.51	93.9559	47.981	1364272.406	1048591.762	25.363
	342	349.4351	45.830	88.3051	2.40	POSTE	1.51	95.0111	45.815	1364271.714	1048589.535	25.115
	343	347.5231	44.788	88.3347	2.40	BORDE_VIA	1.51	93.1556	44.774	1364273.251	1048588.601	25.050
	344	347.2512	42.530	88.3033	2.40	BORDE_VIA	1.51	92.7003	42.516	1364273.713	1048586.363	25.033
	345	346.1302	40.161	89.1519	1.50	PARAMENTO	1.51	91.4975	40.158	1364274.667	1048584.039	25.349
	346	352.2707	38.084	90.3719	1.50	MANHOLE	1.51	97.7322	38.082	1364270.592	1048581.631	24.414
	347	357.3726	40.826	89.4734	1.70	BORDE_VIA	1.51	102.9042	40.826	1364266.599	1048583.690	24.775
	348	357.4654	44.167	89.4734	1.70	BORDE_VIA	1.51	103.0620	44.167	1364265.734	1048586.919	24.787
	349	352.3123	44.795	89.5332	1.70	MANHOLE	1.51	97.8034	44.795	1364269.634	1048588.275	24.711
	350	354.1012	18.128	89.4448	1.70	SUMIDERO	1.51	99.4503	18.128	1364272.740	1048561.777	24.707
	351	352.3154	17.352	90.1058	1.70	SUMIDERO	1.51	97.8120	17.352	1364273.358	1048561.086	24.572
	352	352.4639	18.497	89.3809	1.70	CORDON	1.51	98.0578	18.497	1364273.123	1048562.209	24.745
	353	352.0752	18.440	89.4706	1.70	CORDON	1.51	97.4114	18.440	1364273.338	1048562.181	24.696
	354	351.2932	17.354	89.3722	1.70	CORDON	1.51	96.7725	17.354	1364273.670	1048561.128	24.741
	355	352.2316	17.177	89.4333	1.70	CORDON	1.51	97.6681	17.177	1364273.424	1048560.918	24.709
	356	336.1325	18.415	89.0631	1.50	POSTE	1.51	81.5039	18.413	1364278.436	1048562.106	25.113
	357	341.5846	5.163	88.4029	1.70	BORDE_VIA	1.51	87.2597	5.162	1364275.963	1048549.051	24.746
	358	329.5252	5.939	89.4121	1.70	SUMIDERO	1.51	75.1614	5.939	1364277.237	1048549.636	24.659
	359	322.2416	5.977	89.3526	1.70	SUMIDERO	1.51	67.6847	5.977	1364277.986	1048549.424	24.670
	360	261.1416	5.916	93.5952	1.70	MANHOLE	1.51	6.5181	5.902	1364281.580	1048544.565	24.215
	361	224.5725	2.518	86.2209	1.70	SUMIDERO	1.51	330.2372	2.513	1364277.898	1048542.648	24.786
	362	220.0323	2.816	86.1017	1.70	SUMIDERO	1.51	325.3367	2.810	1364278.027	1048542.297	24.815
	363	175.5520	6.213	93.5949	1.70	MANHOLE	1.51	281.2025	6.198	1364276.920	1048537.815	24.194
	364	117.2252	6.061	88.0950	1.70	SUMIDERO	1.51	222.6614	6.058	1364271.261	1048539.790	24.821
	365	113.5207	5.928	88.2925	1.70	SUMIDERO	1.51	219.1489	5.926	1364271.121	1048540.154	24.783



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	366	56.0237	2.338	95.5154	1.70	MANHOLE	1.51	161.3239	2.326	1364273.513	1048544.640	24.388
	367	113.5407	20.197	89.4502	1.70	PARAMENTO	1.51	219.1822	20.197	1364260.061	1048531.135	24.715
	368	69.1702	35.694	89.2058	1.70	PARAMENTO	1.51	174.5642	35.692	1364240.185	1048547.276	25.032
	369	101.4143	39.774	89.4030	1.70	PARAMENTO	1.51	206.9756	39.773	1364240.270	1048525.853	24.853
	370	101.3032	40.780	89.4946	1.70	BORDE_VIA	1.51	206.7892	40.780	1364239.313	1048525.515	24.748
	371	76.2834	38.080	90.1532	1.70	MANHOLE	1.51	181.7564	38.080	1364237.654	1048542.728	24.455
	372	70.4132	28.133	89.1956	1.70	ANDEN	1.51	175.9725	28.131	1364247.655	1048545.871	24.955
	373	73.5812	27.834	89.0849	1.70	ANDEN	1.51	179.2503	27.831	1364247.888	1048544.259	25.041
	374	76.4654	33.943	89.1947	1.70	ANDEN	1.51	182.0620	33.941	1364241.797	1048542.674	25.024
	375	72.0707	34.870	89.2823	1.70	ANTE_JARDI	1.51	177.3989	34.869	1364240.884	1048545.477	24.948
	376	75.1116	40.674	89.3011	1.70	ANTE_JARDI	1.51	180.4681	40.672	1364235.045	1048543.563	24.980
	377	79.0246	39.710	89.2517	1.70	ANDEN	1.51	184.3264	39.708	1364236.121	1048540.900	25.028
	378	75.2458	39.731	89.3231	1.70	SUMIDERO	1.51	180.6964	39.730	1364235.989	1048543.412	24.945
	379	74.2901	39.051	89.3232	1.70	SUMIDERO	1.51	179.7639	39.050	1364236.667	1048544.056	24.939
	380	76.3502	45.378	89.1559	1.70	POSTE	1.51	181.8642	45.374	1364230.366	1048542.419	25.208
	381	99.3249	45.476	89.3327	1.70	PARAMENTO	1.51	204.8272	45.475	1364234.444	1048524.801	24.978
	382	100.3632	43.548	89.4940	1.70	BORDE_VIA	1.51	205.8892	43.548	1364236.539	1048524.881	24.758
	383	93.5805	42.238	89.3438	1.70	POSTE	1.51	199.2484	42.237	1364235.840	1048529.971	24.939
	384	94.3426	45.920	89.3131	1.70	BORDE_VIA	1.51	199.8542	45.918	1364232.527	1048528.300	25.007
	385	97.3227	45.774	89.3846	1.70	BORDE_VIA	1.51	202.8211	45.773	1364233.526	1048526.142	24.910
	386	86.3655	62.457	88.3130	1.70	BORDE_VIA	1.51	191.8956	62.436	1364214.621	1048531.025	26.235
	387	93.1556	60.983	88.3744	1.50	BORDE_VIA	1.51	198.5459	60.966	1364217.917	1048524.504	26.286
	388	86.0912	62.636	88.2610	1.70	CORDON	1.51	191.4336	62.613	1364214.346	1048531.483	26.336
	388	93.3158	47.459	88.3317	1.70	CORDON	1.51	198.8131	47.444	1364230.807	1048528.595	25.824
	389	88.1206	72.205	88.2954	1.70	BORDE_VIA	1.51	193.4820	72.180	1364205.525	1048527.067	26.519
	390	87.4530	72.346	88.2729	1.70	CORDON	1.51	193.0386	72.320	1364205.261	1048527.579	26.574
	391	85.0442	11.533	88.3732	1.70	BORDE_VIA	1.51	190.3586	11.530	1364264.374	1048541.822	24.904
	392	89.1708	82.172	88.3019	1.70	CORDON	1.51	194.5659	82.144	1364196.212	1048523.236	26.770
	393	89.4205	82.010	88.3315	1.70	BORDE_VIA	1.51	194.9817	81.984	1364196.519	1048522.701	26.696
	394	113.3304	5.959	88.3318	1.70	BORDE_VIA	1.51	218.8314	5.957	1364271.076	1048540.160	24.777
	395	149.5229	37.603	90.1709	1.70	PARAMENTO	1.51	255.1550	37.603	1364266.082	1048507.548	24.439
	396	159.4145	34.764	90.0357	1.70	PARAMENTO	1.51	264.9761	34.764	1364272.672	1048509.265	24.587
	397	166.4612	52.990	90.2138	1.70	PARAMENTO	1.51	272.0503	52.989	1364277.612	1048490.940	24.294
	398	171.5748	49.205	90.2806	1.70	POSTE	1.51	277.2436	49.203	1364281.920	1048495.084	24.225
	399	183.0000	56.665	90.3807	1.70	MANHOLE	1.51	288.2803	56.662	1364293.489	1048490.093	23.999
	400	182.5749	55.526	90.3021	1.70	TUBO_ALCAN	1.51	288.2439	55.524	1364293.099	1048491.162	24.137



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	401	183.1734	55.533	90.3021	1.70	TUBO_ALCAN	1.51	288.5731	55.531	1364293.403	1048491.256	24.137
	402	181.5420	56.638	90.3021	1.70	TUBO_ALCAN	1.51	287.1859	56.636	1364292.450	1048489.788	24.127
	403	181.5237	56.947	90.3021	1.70	TUBO_ALCAN	1.51	287.1572	56.945	1364292.515	1048489.484	24.124
	404	187.3644	46.711	90.5203	1.70	POSTE	1.51	292.8925	46.706	1364293.885	1048500.868	23.920
	405	187.4005	37.251	90.5203	1.70	PARAMENTO	1.51	292.9484	37.247	1364290.239	1048509.596	24.063
	406	185.3958	22.401	91.0134	1.70	POSTE	1.51	290.9464	22.397	1364283.723	1048522.978	24.226
	407	189.2114	14.506	88.4848	1.70	PARAMENTO	1.51	294.6342	14.503	1364281.761	1048530.712	24.927
	407	189.3024	14.507	88.4848	1.70	PARAMENTO	1.51	294.7870	14.504	1364281.797	1048530.727	24.927
	408	192.4134	7.319	87.5304	1.70	PARAMENTO	1.51	297.9731	7.314	1364279.147	1048537.436	24.897
	409	236.5455	11.532	89.2357	1.70	PARAMENTO	1.51	342.1956	11.531	1364286.695	1048540.369	24.748
	410	215.5908	18.599	89.3400	1.70	PARAMENTO	1.51	321.2659	18.598	1364290.224	1048532.258	24.768
	411	303.3012	11.976	87.3727	1.70	PARAMENTO	1.51	48.7836	11.966	1364283.600	1048552.896	25.123
	412	285.2207	19.032	89.2133	1.70	POSTE	1.51	30.6489	19.031	1364292.088	1048553.596	24.840
	413	279.1706	30.243	89.2804	1.70	BORDE_VIA	1.51	24.5653	30.242	1364303.221	1048556.467	24.908
	414	283.2612	31.039	89.1543	1.70	PARAMENTO	1.51	28.7170	31.036	1364302.935	1048558.808	25.027
	415	275.1356	82.677	89.3914	1.70	POSTE	1.51	20.5125	82.675	1364353.150	1048572.866	25.126
	416	274.5432	81.704	89.3643	1.70	SUMIDERO	1.51	20.1892	81.702	1364352.398	1048572.092	25.180
	417	274.3348	80.820	89.3353	1.70	SUMIDERO	1.51	19.8436	80.818	1364351.735	1048571.329	25.241
	418	274.3147	78.904	89.3242	1.70	BORDE_VIA	1.51	19.8100	78.902	1364349.948	1048570.635	25.254
	419	273.2940	78.489	89.5905	1.70	MANHOLE	1.51	18.7747	78.489	1364350.029	1048569.157	24.648
	420	274.2953	73.760	89.3049	1.70	BORDE_VIA	1.51	19.7784	73.757	1364345.122	1048568.853	25.253
	421	270.1425	73.414	89.3050	1.70	BORDE_VIA	1.51	15.5206	73.411	1364346.451	1048563.539	25.250
	422	278.2052	47.953	88.1445	2.60	POSTE	1.51	23.6281	47.931	1364319.628	1048563.106	25.195
E11006-E11005	E11005	0.0000	115.863	90.0342	1.70	ESTACION	1.47	15.4397	115.831	1364387.367	1048574.732	25.198
	E11008	178.2812	155.985	90.0426	1.70	DELTA	1.47	13.9097	155.985	1364538.777	1048612.230	24.766
	E11009	269.3858	83.374	89.4525	1.70	DELTA	1.47	105.0892	83.373	1364365.663	1048655.231	25.321
	423	178.3458	141.005	90.0521	1.70	SUMIDERO	1.47	14.0225	141.005	1364524.169	1048608.898	24.748
	424	178.2303	140.181	90.0607	1.70	SUMIDERO	1.47	13.8239	140.181	1364523.487	1048608.227	24.718
	425	177.1308	139.686	90.0036	1.70	POSTE	1.47	12.6586	139.686	1364523.657	1048605.343	24.943
	426	178.5425	137.419	90.0157	1.70	BORDE_VIA	1.47	14.3467	137.419	1364520.500	1048608.783	24.890
	427	178.5324	130.797	90.0149	1.70	BORDE_VIA	1.47	14.3297	130.797	1364514.094	1048607.105	24.898
	428	178.5528	129.339	90.0251	1.70	SUMIDERO	1.47	14.3642	129.339	1364512.662	1048606.819	24.860
	429	178.4201	128.516	90.0402	1.70	SUMIDERO	1.47	14.1400	128.516	1364511.989	1048606.127	24.817
	430	174.4907	129.978	89.4726	1.70	PARAMENTO	1.47	10.2584	129.977	1364515.266	1048597.879	25.443
	431	174.2229	112.073	89.4325	1.70	PARAMENTO	1.47	9.8145	112.072	1364497.798	1048593.836	25.508
	432	349.3721	87.129	89.5151	1.70	PARAMENTO	1.47	185.0622	87.129	1364300.578	1048567.044	25.174



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	433	182.3226	134.526	90.1013	1.70	MANHOLE	1.47	17.9803	134.525	1364515.322	1048616.259	24.568
	434	181.2505	136.734	89.5805	1.70	BORDE_VIA	1.47	16.8578	136.734	1364518.225	1048614.385	25.044
	435	181.3424	131.476	89.5805	1.70	BORDE_VIA	1.47	17.0131	131.476	1364513.089	1048613.201	25.041
	436	182.1311	129.601	90.0054	1.70	SUMIDERO	1.47	17.6595	129.601	1364510.860	1048614.048	24.934
	437	181.5813	128.879	90.0051	1.70	SUMIDERO	1.47	17.4100	128.879	1364510.341	1048613.294	24.936
	438	340.2649	49.064	89.1811	1.70	PARAMENTO	1.47	175.8867	49.060	1364338.433	1048578.251	25.564
	439	326.3718	40.298	89.0154	1.70	PARAMENTO	1.47	162.0614	40.292	1364349.033	1048587.142	25.649
	440	321.3143	35.275	89.2612	1.70	PARAMENTO	1.47	156.9684	35.273	1364354.905	1048588.532	25.314
	441	314.4104	30.804	87.4318	2.70	PARAMENTO	1.47	150.1242	30.780	1364360.677	1048590.064	25.192
	442	182.0540	128.252	89.5941	1.70	POSTE	1.47	17.5342	128.252	1364509.660	1048613.371	24.979
	443	279.4205	21.892	88.2151	1.70	PARAMENTO	1.47	115.1411	21.883	1364378.070	1048594.542	25.592
	444	277.5947	20.642	88.5413	1.70	POSTE	1.47	113.4361	20.638	1364379.158	1048593.668	25.363
	445	182.5309	99.661	89.5533	1.70	POSTE	1.47	18.3256	99.661	1364481.973	1048606.067	25.097
	446	275.3458	20.535	88.4637	1.70	BORDE_VIA	1.47	111.0225	20.530	1364380.002	1048593.896	25.406
	447	268.2220	20.469	88.4637	1.70	BORDE_VIA	1.47	103.8120	20.464	1364382.481	1048594.605	25.404
	448	184.1508	63.969	89.5307	1.70	BORDE_VIA	1.47	19.6920	63.969	1364447.594	1048596.287	25.096
	449	185.1546	64.149	89.5017	1.70	POSTE	1.47	20.7025	64.149	1364447.373	1048597.410	25.149
	450	178.5343	67.261	89.5140	1.70	BORDE_VIA	1.47	14.3350	67.261	1364452.533	1048591.385	25.131
	451	178.5217	71.706	89.5040	1.70	BORDE_VIA	1.47	14.3111	71.706	1364456.847	1048592.457	25.162
	452	266.0143	20.440	88.5004	1.70	POSTE	1.47	101.4684	20.436	1364383.303	1048594.760	25.383
	453	263.3854	22.310	88.4130	1.70	PARAMENTO	1.47	99.0881	22.304	1364383.844	1048596.756	25.477
	454	173.3010	73.508	90.0123	1.70	POSTE	1.47	8.9425	73.508	1364459.981	1048586.158	24.938
	455	248.3051	23.004	89.0610	1.70	PARAMENTO	1.47	83.9539	23.001	1364389.789	1048597.605	25.328
	456	235.5250	25.704	88.3245	1.70	PARAMENTO	1.47	71.3203	25.696	1364395.596	1048599.074	25.620
	457	226.0540	29.416	88.4908	1.70	PARAMENTO	1.47	61.5342	29.410	1364401.384	1048600.586	25.574
	457	226.0554	29.423	88.4908	1.70	PARAMENTO	1.47	61.5381	29.417	1364401.386	1048600.593	25.574
	458	169.5316	49.225	89.5441	1.70	CERRAMIENT	1.47	5.3275	49.225	1364436.379	1048579.303	25.044
	459	168.0203	49.270	89.5440	1.70	PARAMENTO	1.47	3.4739	49.270	1364436.546	1048577.717	25.044
	460	165.1124	39.464	89.4807	1.70	PARAMENTO	1.47	0.6297	39.464	1364426.828	1048575.166	25.104
	461	169.1431	39.143	89.4648	1.70	POSTE	1.47	4.6817	39.143	1364426.379	1048577.927	25.118
	462	218.4136	33.806	89.4000	1.70	PARAMENTO	1.47	54.1331	33.805	1364407.173	1048602.127	25.164
	463	187.1922	46.953	89.5543	1.70	SUMIDERO	1.47	22.7625	46.953	1364430.663	1048592.899	25.026
	464	186.4906	46.116	89.5544	1.70	SUMIDERO	1.47	22.2581	46.116	1364430.046	1048592.200	25.025
	465	186.4150	43.356	89.5423	1.70	BORDE_VIA	1.47	22.1370	43.356	1364427.527	1048591.069	25.038
	466	213.0100	38.542	89.4722	1.50	PARAMENTO	1.47	48.4564	38.542	1364412.927	1048603.579	25.309
	467	210.4316	38.850	90.0141	1.50	POSTE	1.47	46.1609	38.850	1364414.275	1048602.754	25.149



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	468	202.2557	39.356	89.5514	1.50	VALVULA	1.47	37.8722	39.356	1364418.433	1048598.893	25.222
	469	194.0208	38.625	89.5948	1.70	MANHOLE	1.47	29.4753	38.625	1364420.992	1048593.737	24.970
	470	272.4537	15.780	88.2902	1.70	MANHOLE	1.47	108.2000	15.774	1364382.440	1048589.717	25.385
	471	278.5640	11.598	89.2901	1.70	MANHOLE	1.47	114.3842	11.598	1364382.578	1048585.295	25.072
	472	269.0033	6.504	91.5940	1.70	MANHOLE	1.47	104.4489	6.500	1364385.745	1048581.026	24.741
	473	240.2154	7.224	88.5359	1.70	SUMIDERO	1.47	75.8047	7.223	1364389.138	1048581.734	25.106
	474	196.3612	46.551	89.3638	1.70	POSTE	1.47	32.0431	46.550	1364426.825	1048599.429	25.284
	474	196.5236	46.546	89.3637	1.70	POSTE	1.47	32.3164	46.545	1364426.702	1048599.615	25.284
	475	197.4539	48.119	89.2514	1.70	PARAMENTO	1.47	33.2006	48.117	1364427.628	1048601.079	25.454
	476	186.3721	43.324	89.5404	1.70	BORDE_VIA	1.47	22.0622	43.324	1364427.518	1048591.005	25.042
	477	328.4651	40.545	89.1046	1.70	POSTE	1.47	164.2206	40.541	1364348.353	1048585.756	25.548
	478	188.0403	36.605	89.5044	1.70	BORDE_VIA	1.47	23.5072	36.605	1364420.934	1048589.332	25.066
	479	186.3437	34.700	90.4205	1.70	MANHOLE	1.47	22.0167	34.697	1364419.534	1048587.739	24.543
	480	247.2812	7.342	89.1042	1.70	SUMIDERO	1.47	82.9097	7.341	1364388.273	1048582.017	25.073
	481	191.4830	32.437	89.4457	1.70	POSTE	1.47	27.2481	32.437	1364416.204	1048589.583	25.110
	482	192.4739	30.068	89.5411	1.70	SUMIDERO	1.47	28.2339	30.068	1364413.857	1048588.956	25.018
	483	192.1122	29.159	89.5209	1.70	SUMIDERO	1.47	27.6292	29.159	1364413.200	1048588.254	25.034
	484	178.4719	20.150	89.3613	1.70	BORDE_VIA	1.47	14.2284	20.150	1364406.898	1048579.685	25.107
	485	358.0858	14.741	88.4548	1.70	BORDE_VIA	1.47	193.5892	14.738	1364373.042	1048571.269	25.286
	486	359.5931	82.976	89.5952	1.70	LINEAMIENT	1.47	195.4317	82.976	1364307.382	1048552.653	24.971
	487	359.5930	43.234	89.3645	1.70	LINEAMIENT	1.47	195.4314	43.233	1364345.692	1048563.228	25.260
	488	176.2930	34.493	90.0329	1.70	SUMIDERO	1.47	11.9314	34.493	1364421.114	1048581.863	24.933
	489	177.1704	33.707	90.0328	1.70	SUMIDERO	1.47	12.7242	33.707	1364420.246	1048582.156	24.934
E11008-E11006	E11006	0.0000	155.992	89.4605	1.70	ESTACION	1.49	13.9097	155.985	1364538.777	1048612.230	24.766
	E11010	156.5610	41.110	89.4219	1.70	DELTA	1.49	350.8459	41.109	1364579.363	1048605.690	24.766
	490	166.3541	32.344	89.3845	1.70	POSTE	1.49	0.5045	32.343	1364571.119	1048612.514	24.754
	491	163.1906	31.585	89.2645	1.70	BORDE_VIA	1.49	357.2281	31.584	1364570.324	1048610.702	24.860
	492	154.1620	30.094	89.5431	1.70	BORDE_VIA	1.49	348.1820	30.094	1364568.233	1048606.066	24.602
	493	156.1229	24.179	89.5431	1.70	BORDE_VIA	1.49	350.1178	24.179	1364562.597	1048608.080	24.593
	494	155.1638	23.265	89.5959	1.70	SUMIDERO	1.49	349.1870	23.265	1364561.629	1048607.865	24.554
	495	156.1319	24.158	89.5550	1.70	SUMIDERO	1.49	350.1317	24.158	1364562.578	1048608.089	24.584
	496	158.3152	18.090	89.3810	1.70	BORDE_VIA	1.49	352.4409	18.090	1364556.710	1048609.850	24.669
	497	163.1225	9.747	88.5926	1.70	BORDE_VIA	1.49	357.1167	9.745	1364548.510	1048611.739	24.726
	498	171.4204	21.407	89.0727	1.70	BORDE_VIA	1.49	5.6109	21.404	1364560.079	1048614.322	24.882
	499	161.3204	2.763	86.3409	1.70	BORDE_VIA	1.49	355.4442	2.758	1364541.527	1048612.011	24.720
	500	184.2608	13.077	88.1743	1.70	BORDE_VIA	1.49	18.3453	13.071	1364551.184	1048616.344	24.943



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	501	229.2420	5.404	85.4644	1.70	BORDE_VIA	1.49	63.3153	5.389	1364541.197	1048617.045	24.952
	502	236.0945	7.214	85.5753	1.70	POSTE	1.49	70.0722	7.196	1364541.230	1048618.995	25.062
	503	281.1021	5.415	85.3346	1.70	BORDE_VIA	1.49	115.0822	5.399	1364536.489	1048617.119	24.973
	504	352.4434	5.521	87.2810	1.70	BORDE_VIA	1.49	186.6525	5.516	1364533.299	1048611.591	24.798
	505	313.0828	7.953	86.5123	1.70	BORDE_VIA	1.49	147.0509	7.941	1364532.113	1048616.549	24.991
	506	18.4311	26.242	88.5127	1.70	POSTE	1.49	212.6295	26.237	1364516.681	1048598.083	25.078
	507	37.4023	33.160	87.4250	2.70	PARAMENTO	1.49	231.5828	33.134	1364518.189	1048586.269	24.877
	508	17.2918	27.499	88.0917	1.70	PARAMENTO	1.49	211.3981	27.485	1364515.317	1048597.911	25.440
	509	334.0134	33.829	89.3006	1.70	MANHOLE	1.49	167.9359	33.828	1364505.697	1048619.300	24.849
	510	329.1400	30.935	89.1452	1.70	POSTE	1.49	163.1431	30.932	1364509.174	1048621.200	24.961
	511	327.4851	31.271	88.4800	1.70	PARAMENTO	1.49	161.7239	31.264	1364509.090	1048622.034	25.209
	512	331.2549	27.143	89.2242	1.70	BORDE_VIA	1.49	165.3400	27.141	1364512.519	1048619.099	24.849
	513	328.4811	23.249	89.1342	1.70	BORDE_VIA	1.49	162.7128	23.247	1364516.580	1048619.138	24.867
	514	357.3726	24.225	89.0854	1.70	MANHOLE	1.49	191.5336	24.222	1364515.044	1048607.387	24.914
	515	23.1001	24.589	88.4713	1.70	BORDE_VIA	1.49	217.0767	24.583	1364519.164	1048597.409	25.075
	516	25.0436	19.432	88.3840	1.70	BORDE_VIA	1.49	218.9864	19.427	1364523.677	1048600.008	25.014
	517	4.5912	82.625	89.4551	1.70	CERRAMIENT	1.49	198.8964	82.624	1364460.606	1048585.471	24.894
	518	0.0015	93.888	89.3925	1.70	LINEAMIENT	1.49	193.9139	93.886	1364447.646	1048589.653	25.117
	519	0.0015	36.710	89.1456	1.70	LINEAMIENT	1.49	193.9139	36.707	1364503.147	1048603.403	25.036
	520	312.0732	19.659	89.1617	1.70	LINDERO	1.49	146.0353	19.657	1364522.474	1048623.212	24.804
	521	314.4026	23.100	89.4059	1.70	POSTE	1.49	148.5836	23.100	1364519.064	1048624.270	24.682
	522	264.3141	9.541	90.1013	1.70	LINDERO	1.49	98.4378	9.541	1364537.377	1048621.667	24.526
E11010-E11008	E11008	359.5959	41.118	89.4016	1.70	ESTACION	1.46	350.8459	41.109	1364579.363	1048605.690	24.766
	E11011	134.0731	111.067	90.0312	1.70	DELTA	1.46	304.9711	111.067	1364643.023	1048514.677	24.420
	E11012	282.5436	103.263	89.5217	1.70	DELTA	1.46	93.7559	103.263	1364572.599	1048708.731	24.756
	523	131.5053	107.898	90.0720	1.70	SUMIDERO	1.46	302.6939	107.898	1364637.644	1048514.886	24.294
	524	131.3405	107.117	90.0826	1.70	SUMIDERO	1.46	302.4139	107.117	1364636.781	1048515.262	24.261
	525	132.2753	111.255	90.0346	1.70	MANHOLE	1.46	303.3106	111.255	1364640.462	1048512.713	24.402
	526	132.2219	108.591	90.0500	1.70	BORDE_VIA	1.46	303.2178	108.591	1364638.852	1048514.843	24.366
	527	132.2120	114.574	90.0329	1.70	BORDE_VIA	1.46	303.2014	114.574	1364642.102	1048509.820	24.408
	528	322.3322	18.086	90.2813	1.70	LINDERO	1.46	133.4020	18.085	1364566.936	1048618.830	24.375
	529	133.0538	78.405	89.5400	1.70	MANHOLE	1.46	303.9397	78.405	1364623.138	1048540.643	24.661
	530	265.4022	10.463	92.3655	1.70	LINDERO	1.46	76.5186	10.452	1364581.800	1048615.854	24.046
	531	133.3249	49.963	89.5502	1.70	MANHOLE	1.46	304.3928	49.963	1364607.585	1048564.461	24.596
	532	258.2713	14.842	90.5740	1.70	LINDERO	1.46	69.2995	14.840	1364584.609	1048619.571	24.275
	533	132.2715	43.207	90.0355	1.70	BORDE_VIA	1.46	303.3000	43.207	1364603.085	1048569.577	24.475



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	534	268.5802	22.367	91.0006	1.70	LINDERO	1.46	79.8131	22.364	1364583.318	1048627.701	24.133
	535	134.0124	31.990	89.5326	1.70	BORDE_VIA	1.46	304.8692	31.990	1364597.652	1048579.443	24.585
	536	140.3701	35.667	89.5642	1.70	MANHOLE	1.46	311.4628	35.667	1364602.979	1048578.961	24.558
	537	136.0222	48.782	89.5415	1.70	EJE_COLECT	1.46	306.8853	48.782	1364608.643	1048566.672	24.605
	538	249.0915	26.716	90.2819	1.70	BORDE_VIA	1.46	60.0000	26.715	1364592.721	1048628.826	24.304
	539	135.1840	57.780	89.5506	1.70	BORDE_VIA	1.46	306.1570	57.780	1364613.453	1048559.038	24.606
	540	241.5426	29.623	90.2403	1.70	BORDE_VIA	1.46	52.7531	29.622	1364597.292	1048629.270	24.317
	541	140.3102	57.631	89.5110	1.70	PARAMENTO	1.46	311.3631	57.631	1364617.447	1048562.436	24.672
	542	229.0349	27.163	90.1331	1.70	POSTE	1.46	39.9095	27.163	1364600.199	1048623.117	24.417
	543	139.3232	57.301	89.5355	1.70	POSTE	1.46	310.3881	57.301	1364616.492	1048562.045	24.625
	544	139.1818	46.582	89.5732	1.70	BORDE_VIA	1.46	310.1509	46.582	1364609.399	1048570.085	24.557
	545	257.2210	44.071	90.0929	1.70	PARAMENTO	1.46	68.2153	44.071	1364595.719	1048646.613	24.402
	546	147.0638	47.241	89.3257	1.70	PARAMENTO	1.46	317.9564	47.240	1364614.445	1048574.053	24.896
	547	262.3802	47.951	90.0647	1.70	POSTE	1.46	73.4797	47.951	1364592.998	1048651.661	24.429
	548	229.5313	23.865	90.1643	1.70	BORDE_VIA	1.46	40.7328	23.865	1364597.447	1048621.262	24.408
	549	234.3113	21.366	90.3448	1.70	BORDE_VIA	1.46	45.3661	21.365	1364594.374	1048620.893	24.308
	550	156.1426	45.301	89.5151	1.70	PARAMENTO	1.46	327.0864	45.301	1364617.393	1048581.074	24.631
	551	151.2636	41.116	89.5512	1.70	POSTE	1.46	322.2892	41.116	1364611.890	1048580.540	24.581
	552	144.3159	39.881	90.0038	1.70	BORDE_VIA	1.46	315.3789	39.881	1364607.749	1048577.677	24.517
	553	153.3401	37.794	90.1249	1.70	BORDE_VIA	1.46	324.4128	37.794	1364610.098	1048583.696	24.383
	554	210.0706	18.850	90.2849	1.70	BORDE_VIA	1.46	20.9642	18.849	1364596.965	1048612.434	24.366
	555	163.5516	52.344	89.5210	1.70	PARAMENTO	1.46	334.7670	52.344	1364626.712	1048583.375	24.643
	556	167.1846	49.957	90.1653	1.70	BORDE_VIA	1.46	338.1586	49.956	1364625.734	1048587.104	24.279
	557	212.5612	15.257	91.0726	1.70	BORDE_VIA	1.46	23.7825	15.254	1364593.322	1048611.841	24.225
	558	134.4545	25.337	89.5404	1.70	MANHOLE	1.46	305.6084	25.337	1364594.115	1048585.090	24.568
	559	199.5132	12.110	91.1109	1.70	BORDE_VIA	1.46	10.7047	12.107	1364591.260	1048607.938	24.273
	560	134.2840	19.519	90.0055	1.70	BORDE_VIA	1.46	305.3236	19.519	1364590.649	1048589.764	24.519
	561	188.2451	7.220	90.5438	1.70	BORDE_VIA	1.46	359.2600	7.219	1364586.582	1048605.596	24.409
	562	104.3812	7.203	90.0258	1.70	BORDE_VIA	1.46	275.4825	7.203	1364580.051	1048598.520	24.518
	563	162.1718	3.747	88.0244	1.70	BORDE_VIA	1.46	333.1342	3.745	1364582.704	1048603.997	24.652
	564	173.3454	26.585	90.1926	1.70	VALVULA	1.46	344.4275	26.585	1364604.972	1048598.553	24.374
	565	185.5720	18.202	90.3221	1.70	BORDE_VIA	1.46	356.8014	18.201	1364597.536	1048604.674	24.353
	566	168.1422	21.529	90.2045	1.70	BORDE_VIA	1.46	339.0853	21.529	1364599.473	1048598.004	24.394
	567	163.0022	25.583	90.1856	1.70	BORDE_VIA	1.46	333.8520	25.583	1364602.328	1048594.416	24.383
	568	163.3624	29.241	90.2318	1.70	BORDE_VIA	1.46	334.4525	29.240	1364605.745	1048593.079	24.326
	569	170.2300	35.635	90.2736	1.70	BORDE_VIA	1.46	341.2292	35.634	1364613.102	1048594.223	24.238



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	570	175.0615	28.063	90.2849	1.70	POSTE	1.46	345.9500	28.062	1364606.586	1048598.877	24.289
	571	177.5650	28.813	90.1519	1.70	PARAMENTO	1.46	348.7931	28.813	1364607.626	1048600.090	24.395
	572	163.3805	28.146	89.4046	1.70	ANDEN	1.46	334.4806	28.146	1364604.763	1048593.564	24.681
	573	163.3448	28.684	89.3906	1.70	ANDEN	1.46	334.4259	28.683	1364605.236	1048593.308	24.698
	574	164.5446	29.583	89.3906	1.70	ANDEN	1.46	335.7586	29.582	1364606.337	1048593.544	24.704
	575	167.0715	28.713	89.3906	1.70	ANDEN	1.46	337.9667	28.712	1364605.979	1048594.918	24.698
	576	173.0715	33.633	89.4342	1.70	ANDEN	1.46	343.9667	33.633	1364611.687	1048596.400	24.683
	577	171.3103	34.205	89.4151	1.70	ANDEN	1.46	342.3634	34.205	1364611.960	1048595.326	24.704
	578	171.1555	34.500	89.4349	1.70	ANDEN	1.46	342.1111	34.500	1364612.195	1048595.092	24.686
	579	171.2215	34.759	89.4350	1.70	ANDEN	1.46	342.2167	34.759	1364612.461	1048595.074	24.687
	580	173.4235	37.269	89.4601	1.70	ANDEN	1.46	344.5556	37.269	1364615.286	1048595.765	24.675
	581	174.0452	37.405	89.4601	1.70	ANDEN	1.46	344.9270	37.405	1364615.481	1048595.962	24.676
	582	218.3411	22.091	89.3952	1.70	ANDEN	1.46	29.4156	22.091	1364598.606	1048616.539	24.653
	583	215.4704	26.426	88.4247	2.00	PARAMENTO	1.46	26.6303	26.419	1364602.980	1048617.532	24.817
	584	173.3643	34.163	89.4452	1.70	ANDEN	1.46	344.4578	34.163	1364612.277	1048596.536	24.674
	585	232.2840	10.253	89.4448	1.70	MANHOLE	1.46	43.3236	10.253	1364586.822	1048612.724	24.569
	586	168.3655	25.294	90.3244	1.70	SUMIDERO	1.46	339.4611	25.293	1364603.048	1048596.816	24.283
	587	170.4535	25.227	90.3628	1.70	SUMIDERO	1.46	341.6056	25.226	1364603.300	1048597.729	24.256
	588	169.5005	27.797	89.3542	1.70	ANDEN	1.46	340.6806	27.796	1364605.594	1048596.494	24.720
	589	217.2356	23.668	89.3911	1.70	ANDEN	1.46	28.2447	23.668	1364600.213	1048616.890	24.667
	590	136.0315	28.786	89.5401	1.70	LINEAMIENT	1.46	306.9000	28.786	1364596.647	1048582.670	24.574
E11011-E11010	E11010	0.0000	111.078	89.4247	1.70	ESTACION	1.49	304.9711	111.067	1364643.023	1048514.677	24.420
	E11013	180.0529	118.936	89.5828	1.70	DELTA	1.49	305.0625	118.936	1364711.348	1048417.325	24.263
	591	15.0138	67.541	89.1338	1.70	PARAMENTO	1.49	139.9984	67.535	1364591.289	1048558.089	25.120
	592	12.5712	67.265	89.1436	1.70	ANDEN	1.49	137.9245	67.259	1364593.099	1048559.748	25.098
	593	177.4156	93.296	89.5343	1.70	BORDE_VIA	1.49	302.6700	93.296	1364693.384	1048436.141	24.380
	594	177.1215	87.825	89.5343	1.70	BORDE_VIA	1.49	302.1753	87.825	1364689.790	1048440.340	24.370
	595	20.1529	41.513	88.5958	1.70	ANDEN	1.49	145.2292	41.507	1364608.927	1048538.348	24.934
	596	187.0528	64.833	89.5057	1.70	PARAMENTO	1.49	312.0622	64.833	1364686.457	1048466.544	24.380
	597	186.0726	64.668	89.5526	1.70	LINDERO	1.49	311.0950	64.668	1364685.530	1048465.942	24.295
	598	22.5457	37.106	88.5146	1.70	ANDEN	1.49	147.8870	37.099	1364611.600	1048534.398	24.946
	599	163.4117	50.660	89.3850	1.70	POSTE	1.49	288.6592	50.659	1364659.230	1048466.680	24.521
	600	37.2816	23.419	88.1658	1.70	ANDEN	1.49	162.4422	23.408	1364620.705	1048521.738	24.911
	601	174.0940	44.905	89.5337	1.70	BORDE_VIA	1.49	299.1322	44.905	1364664.884	1048475.452	24.293
	602	180.5456	44.727	89.5513	1.70	BORDE_VIA	1.49	305.8867	44.727	1364669.241	1048478.440	24.272
	603	41.4538	25.036	88.1722	1.70	PARAMENTO	1.49	166.7317	25.025	1364618.666	1048520.420	24.957



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	604	193.1002	26.973	89.2303	1.70	LINDERO	1.49	318.1384	26.971	1364663.110	1048496.678	24.499
	605	43.1610	25.509	88.1659	1.70	PARAMENTO	1.49	168.2406	25.498	1364618.060	1048519.873	24.974
	606	207.3808	33.491	89.4637	1.70	PARAMENTO	1.49	332.6067	33.491	1364672.758	1048499.268	24.340
	607	46.1609	23.923	88.2355	1.70	LINDERO	1.49	171.2403	23.914	1364619.388	1048518.319	24.878
	608	207.1701	33.635	90.2842	1.70	LINDERO	1.49	332.2547	33.634	1364672.789	1048499.019	23.929
	609	52.1317	27.156	88.1851	1.70	PARAMENTO	1.49	177.1925	27.144	1364615.911	1048516.006	25.008
	610	230.5113	26.259	88.3340	1.70	PARAMENTO	1.49	355.8247	26.251	1364669.204	1048512.766	24.869
	611	232.5346	25.361	88.3217	1.70	POSTE	1.49	357.8672	25.353	1364668.358	1048513.733	24.856
	612	239.5156	23.780	89.2650	1.70	BORDE_VIA	1.49	4.8367	23.779	1364666.717	1048516.682	24.439
	613	250.5604	22.162	89.2112	1.70	BORDE_VIA	1.49	15.9056	22.161	1364664.335	1048520.750	24.460
	614	254.1706	19.967	89.1810	1.70	MANHOLE	1.49	19.2561	19.966	1364661.871	1048521.261	24.452
	615	253.0719	17.308	89.1721	1.70	BORDE_VIA	1.49	18.0931	17.307	1364659.474	1048520.052	24.424
	616	16.4607	43.873	89.0658	1.70	POSTE	1.49	141.7397	43.868	1364608.577	1048541.841	24.886
	617	259.4625	25.405	88.4843	1.70	PARAMENTO	1.49	24.7447	25.400	1364666.090	1048525.308	24.736
	618	257.2636	24.342	88.4843	1.70	POSTE	1.49	22.4145	24.337	1364665.521	1048523.956	24.714
	619	6.2039	67.004	89.2500	1.70	CORDON	1.49	131.3153	67.001	1364598.789	1048565.000	24.892
	620	8.1200	51.103	89.1808	1.70	CORDON	1.49	133.1711	51.099	1364608.062	1048551.944	24.832
	621	13.3613	51.822	89.1503	1.70	CORDON	1.49	138.5747	51.818	1364604.169	1048548.961	24.887
	622	14.3723	50.677	89.0948	1.70	POSTE	1.49	139.5942	50.672	1364604.438	1048547.522	24.949
	623	16.4458	43.840	89.0702	1.70	POSTE	1.49	141.7206	43.835	1364608.612	1048541.832	24.885
	624	20.3230	35.195	88.5859	1.70	POSTE	1.49	145.5128	35.189	1364614.018	1048534.602	24.834
	625	23.2122	29.703	88.5511	1.70	CORDON	1.49	148.3272	29.698	1364617.748	1048530.270	24.769
	626	14.5526	28.254	88.5712	1.70	CORDON	1.49	139.8950	28.249	1364621.416	1048532.875	24.726
	627	266.1738	15.962	87.5903	1.70	PARAMENTO	1.49	31.2650	15.952	1364656.658	1048522.956	24.771
	628	276.0240	7.043	87.5006	1.70	POSTE	1.49	41.0156	7.038	1364648.333	1048519.296	24.476
	629	288.2411	7.545	85.5014	1.70	PARAMENTO	1.49	53.3742	7.525	1364647.512	1048520.716	24.757
	630	258.2906	17.547	89.0740	1.70	BORDE_VIA	1.49	23.4561	17.545	1364659.118	1048521.660	24.477
	631	257.5723	21.786	89.2149	1.70	BORDE_VIA	1.49	22.9275	21.785	1364663.086	1048523.163	24.451
	632	33.0412	22.390	88.2321	1.70	POSTE	1.49	158.0411	22.381	1364622.265	1048523.046	24.839
	633	212.1458	12.204	88.4849	1.70	POSTE	1.49	337.2206	12.201	1364654.272	1048509.953	24.462
	634	53.2536	18.368	88.3510	1.70	POSTE	1.49	178.3978	18.362	1364624.667	1048515.190	24.663
	635	194.1924	7.193	88.0929	1.70	MANHOLE	1.49	319.2945	7.189	1364648.473	1048509.988	24.441
	636	39.2250	10.337	87.5018	1.70	ANDEN	1.49	164.3517	10.330	1364633.076	1048517.463	24.599
	637	328.5115	5.289	89.2759	1.70	SUMIDERO	1.49	93.8253	5.289	1364642.670	1048519.954	24.259
	638	328.4232	4.284	89.2759	1.70	SUMIDERO	1.49	93.6800	4.284	1364642.748	1048518.952	24.249
	639	48.2456	9.822	87.5645	1.70	ANDEN	1.49	173.3867	9.816	1364633.272	1048515.807	24.562



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	640	345.2736	5.085	88.5015	1.70	BORDE_VIA	1.49	110.4311	5.084	1364641.248	1048519.441	24.313
	641	299.3157	3.043	87.2636	1.70	BORDE_VIA	1.49	64.5036	3.040	1364644.331	1048517.421	24.345
	642	259.2608	5.986	88.4524	1.70	BORDE_VIA	1.49	24.4067	5.985	1364648.472	1048517.150	24.339
	643	55.2245	18.858	88.2956	1.70	ANDEN	1.49	180.3503	18.852	1364624.171	1048514.561	24.703
	644	57.2159	21.234	88.3632	1.70	ANDEN	1.49	182.3375	21.228	1364621.813	1048513.811	24.725
	645	223.0749	9.003	88.3632	1.70	BORDE_VIA	1.49	348.1014	9.000	1364651.830	1048512.821	24.428
	646	188.3829	9.203	88.5820	1.70	BORDE_VIA	1.49	313.6125	9.202	1364649.370	1048508.015	24.375
	647	45.2445	23.837	88.1510	1.70	ANDEN	1.49	170.3836	23.826	1364619.532	1048518.657	24.936
	648	182.0723	15.425	89.3102	1.70	BORDE_VIA	1.49	307.0942	15.424	1364652.326	1048502.374	24.339
	649	65.4645	34.026	88.5246	1.70	ANDEN	1.49	190.7503	34.019	1364609.600	1048508.331	24.875
	650	65.4516	34.718	89.0134	1.70	ANDEN	1.49	190.7256	34.713	1364608.916	1048508.216	24.800
	651	65.0101	35.251	89.0341	1.70	ANDEN	1.49	189.9881	35.246	1364608.311	1048508.564	24.787
	652	161.0530	10.872	89.3226	1.70	BORDE_VIA	1.49	286.0628	10.872	1364646.031	1048504.230	24.297
	653	136.4032	6.912	89.2023	1.70	BORDE_VIA	1.49	261.6467	6.912	1364642.019	1048507.839	24.289
	654	105.0758	8.733	89.0306	1.70	BORDE_VIA	1.49	230.1039	8.732	1364637.422	1048507.978	24.354
	655	69.3635	13.151	88.4548	1.70	BORDE_VIA	1.49	194.5809	13.148	1364630.298	1048511.367	24.493
	656	48.4508	9.029	89.0629	1.70	BORDE_VIA	1.49	173.7234	9.028	1364634.049	1048515.664	24.350
	657	18.2758	12.107	89.1151	1.70	BORDE_VIA	1.49	143.4372	12.106	1364633.299	1048521.888	24.379
	658	63.1842	34.417	88.5416	1.70	ANDEN	1.49	188.2828	34.411	1364608.971	1048509.720	24.868
	659	100.5833	16.416	88.2235	1.70	PARAMENTO	1.49	225.9470	16.409	1364631.613	1048502.883	24.675
	660	58.1150	35.063	87.5405	2.20	PARAMENTO	1.49	183.1684	35.039	1364608.037	1048512.740	24.993
	661	154.1201	28.458	89.1304	1.70	ANDEN	1.49	279.1714	28.455	1364647.558	1048486.585	24.598
	662	151.5117	29.109	89.1016	1.70	ANDEN	1.49	276.8259	29.106	1364646.482	1048485.777	24.631
	663	66.0956	34.725	89.0650	1.70	BORDE_VIA	1.49	191.1367	34.721	1364608.956	1048507.970	24.746
	664	103.4410	13.000	88.1338	1.70	ANDEN	1.49	228.7072	12.994	1364634.448	1048504.914	24.612
	665	68.2156	32.431	89.0647	1.70	BORDE_VIA	1.49	193.3367	32.427	1364611.470	1048507.197	24.711
	666	96.2327	13.503	88.2337	1.70	ANDEN	1.49	221.3620	13.498	1364632.892	1048505.757	24.588
	667	61.3113	43.392	87.4655	2.90	BORDE_VIA	1.49	186.4914	43.359	1364599.941	1048509.775	24.689
	668	91.3712	15.380	88.1436	1.70	ANDEN	1.49	216.5911	15.373	1364630.680	1048505.513	24.681
	669	96.3249	15.735	88.1658	1.70	ANDEN	1.49	221.5181	15.728	1364631.246	1048504.251	24.681
	670	63.4323	42.555	89.2030	1.70	BORDE_VIA	1.49	188.6942	42.552	1364600.959	1048508.245	24.698
	671	99.5926	14.804	88.1925	1.70	ANDEN	1.49	224.9617	14.798	1364632.552	1048504.220	24.643
	672	65.4816	42.775	89.1804	1.70	BORDE_VIA	1.49	190.7756	42.772	1364601.005	1048506.680	24.731
	673	103.1840	14.460	88.1957	1.70	ANDEN	1.49	228.2822	14.454	1364633.404	1048503.888	24.630
	674	84.0251	17.074	88.4640	1.70	BORDE_VIA	1.49	209.0186	17.070	1364628.095	1048506.396	24.574
	675	68.1133	43.934	89.1459	1.70	BORDE_VIA	1.49	193.1636	43.930	1364600.247	1048504.672	24.785



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	676	78.1936	28.603	89.0545	1.70	BORDE_VIA	1.49	203.2978	28.599	1364616.755	1048503.365	24.661
	677	81.2113	31.326	89.0634	1.70	BORDE_VIA	1.49	206.3247	31.322	1364614.949	1048500.787	24.696
	678	74.3813	43.750	89.1619	1.70	BORDE_VIA	1.49	199.6081	43.746	1364601.813	1048499.996	24.765
	679	76.2929	38.511	89.0755	1.70	BORDE_VIA	1.49	201.4625	38.507	1364607.186	1048500.587	24.793
	680	86.1140	32.632	88.5825	1.70	BORDE_VIA	1.49	211.1656	32.627	1364615.105	1048497.792	24.794
	681	82.5143	36.326	89.0015	1.70	BORDE_VIA	1.49	207.8331	36.321	1364610.904	1048497.719	24.841
	682	87.1911	31.775	89.0016	1.70	ANDEN	1.49	212.2909	31.770	1364616.166	1048497.705	24.762
	683	84.3759	31.234	89.0016	1.70	ANDEN	1.49	209.6042	31.229	1364615.870	1048499.249	24.752
	684	82.3508	29.541	88.5636	1.70	ANDEN	1.49	207.5567	29.536	1364616.837	1048501.013	24.754
	685	96.2210	29.464	89.0002	1.70	PARAMENTO	1.49	221.3406	29.460	1364620.905	1048495.218	24.723
	686	358.2920	34.112	89.1855	1.70	LINEAMIENT	1.49	123.4600	34.110	1364624.216	1048543.133	24.617
E11013-E11011	E11011	0.0001	118.936	89.4926	1.70	ESTACION	1.47	305.0625	118.936	1364711.348	1048417.325	24.263
	E11014	180.1324	134.761	89.5540	1.70	DELTA	1.47	305.2859	134.761	1364789.193	1048307.322	24.204
	687	347.2300	37.678	89.3802	1.70	PARAMENTO	1.47	112.4459	37.677	1364696.962	1048452.147	24.275
	688	349.1137	37.545	89.3503	1.70	LINDERO	1.47	114.2561	37.544	1364695.924	1048451.554	24.307
	689	358.1434	36.992	89.3953	1.70	BORDE_VIA	1.47	123.3053	36.991	1364691.036	1048448.240	24.251
	690	7.0350	36.462	89.3300	1.70	BORDE_VIA	1.47	132.1264	36.461	1364686.891	1048444.366	24.321
	691	20.3633	33.601	88.5529	1.70	ANDEN	1.47	145.6717	33.595	1364683.604	1048436.270	24.665
	692	23.0157	34.165	88.5529	1.70	ANDEN	1.47	148.0950	34.159	1364682.349	1048435.378	24.676
	693	24.5135	36.715	88.3924	1.70	PARAMENTO	1.47	149.9222	36.705	1364679.585	1048435.720	24.895
	694	19.1706	42.598	89.1253	1.70	POSTE	1.47	144.3475	42.594	1364676.737	1048442.151	24.618
	695	24.5432	26.952	89.0920	1.70	POSTE	1.47	149.9714	26.949	1364688.016	1048430.811	24.432
	696	29.4902	27.586	89.1113	1.70	ANDEN	1.47	154.8797	27.583	1364686.373	1048429.034	24.426
	697	25.1635	27.991	89.1204	1.70	ANDEN	1.47	150.3389	27.988	1364687.027	1048431.175	24.425
	698	35.5551	25.869	89.0257	1.70	PARAMENTO	1.47	160.9934	25.865	1364686.893	1048425.748	24.464
	699	173.4450	111.907	89.5402	1.70	ANDEN	1.47	298.8097	111.907	1364765.276	1048319.269	24.229
	700	174.3039	111.730	89.5401	1.70	ANDEN	1.47	299.5734	111.730	1364766.491	1048320.150	24.229
	701	106.2132	11.465	87.5815	1.70	POSTE	1.47	231.4214	11.458	1364704.203	1048408.367	24.440
	702	174.0434	102.247	89.5325	1.70	POSTE	1.47	299.1386	102.247	1364761.134	1048328.018	24.230
	703	165.2141	42.574	89.2752	1.70	POSTE	1.47	290.4239	42.572	1364726.204	1048377.429	24.432
	704	171.2230	94.510	89.4930	1.70	PARAMENTO	1.47	296.4375	94.510	1364753.426	1048332.699	24.323
	705	172.5726	86.546	89.5313	1.70	POSTE	1.47	298.0197	86.546	1364752.005	1048340.923	24.205
	706	175.5259	79.194	89.5649	1.70	BORDE_VIA	1.47	300.9456	79.194	1364752.071	1048349.403	24.108
	707	178.5617	78.609	89.5706	1.70	BORDE_VIA	1.47	304.0006	78.609	1364755.306	1048352.155	24.101
	708	178.5542	73.626	90.0002	1.70	BORDE_VIA	1.47	303.9909	73.626	1364752.509	1048356.279	24.034
	709	186.0214	83.973	89.5849	1.70	LINDERO	1.47	311.0997	83.973	1364766.549	1048354.045	24.063



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	710	187.0759	69.462	89.5702	1.70	LINDERO	1.47	312.1956	69.462	1364758.003	1048365.863	24.094
	711	198.2248	70.564	89.5318	1.70	POSTE	1.47	323.4425	70.564	1364768.029	1048375.295	24.172
	712	199.2414	74.915	89.5203	1.70	PARAMENTO	1.47	324.4664	74.915	1364772.312	1048373.786	24.208
	713	197.3744	87.411	90.0029	1.50	PARAMENTO	1.47	322.6914	87.411	1364780.873	1048364.344	24.222
	714	203.2214	76.166	89.5135	1.70	PARAMENTO	1.47	328.4331	76.166	1364776.243	1048377.452	24.221
	715	203.3942	74.840	89.5213	1.70	PARAMENTO	1.47	328.7242	74.840	1364775.312	1048378.471	24.204
	716	207.1517	76.483	89.5213	1.70	PARAMENTO	1.47	332.3172	76.483	1364779.076	1048381.793	24.208
	717	209.2704	78.822	89.5859	1.70	PARAMENTO	1.47	334.5136	78.822	1364782.499	1048383.408	24.058
	718	162.2912	41.962	89.2717	1.70	ANDEN	1.47	287.5492	41.960	1364724.000	1048377.317	24.434
	719	170.1208	62.620	89.4959	1.70	POSTE	1.47	295.2647	62.620	1364738.074	1048360.695	24.217
	720	165.0039	42.967	89.2914	1.70	ANDEN	1.47	290.0734	42.965	1364726.094	1048376.969	24.419
	721	167.3001	66.409	89.0515	2.50	PARAMENTO	1.47	292.5628	66.401	1364736.825	1048356.006	24.292
	722	160.4220	43.979	89.0512	2.00	ANDEN	1.47	285.7681	43.973	1364723.297	1048375.006	24.436
	723	159.5632	42.616	89.0216	2.00	ANDEN	1.47	285.0047	42.610	1364722.379	1048376.167	24.450
	724	164.3530	67.211	89.2459	2.10	PARAMENTO	1.47	289.6542	67.208	1364733.953	1048354.033	24.319
	725	164.0914	65.384	89.2412	2.10	PARAMENTO	1.47	289.2164	65.380	1364732.867	1048355.587	24.315
	726	160.3719	66.675	89.2211	2.10	PARAMENTO	1.47	285.6845	66.671	1364729.372	1048353.136	24.368
	727	160.1742	65.745	89.2211	2.10	PARAMENTO	1.47	285.3575	65.741	1364728.759	1048353.931	24.358
	728	160.2532	64.058	89.2242	2.10	ANDEN	1.47	285.4881	64.054	1364728.453	1048355.596	24.330
	729	160.5825	65.448	89.2315	2.10	ANDEN	1.47	286.0361	65.444	1364729.426	1048354.427	24.334
	730	163.5131	62.764	89.1953	2.10	ANDEN	1.47	288.9211	62.760	1364731.699	1048357.956	24.367
	731	164.4418	62.473	89.1836	2.10	ANDEN	1.47	289.8009	62.468	1364732.509	1048358.550	24.387
	732	167.2613	61.764	89.1638	2.10	ANDEN	1.47	292.4995	61.759	1364734.981	1048360.266	24.414
	733	167.4616	63.153	89.1732	2.10	ANDEN	1.47	292.8336	63.148	1364735.853	1048359.125	24.415
	734	168.3108	62.987	89.2811	2.10	ANDEN	1.47	293.5814	62.984	1364736.545	1048359.600	24.217
	735	168.1611	61.531	89.2811	2.10	ANDEN	1.47	293.3322	61.528	1364735.717	1048360.828	24.204
	736	169.3600	61.243	89.2707	2.10	ANDEN	1.47	294.6625	61.240	1364736.902	1048361.671	24.220
	737	158.2206	39.680	88.2650	2.40	PARAMENTO	1.47	283.4309	39.665	1364720.561	1048378.744	24.410
	738	171.0903	29.084	89.4350	1.70	BORDE_VIA	1.47	296.2134	29.084	1364724.195	1048391.232	24.171
	739	178.4248	28.513	89.5135	1.70	BORDE_VIA	1.47	303.7759	28.513	1364727.199	1048393.624	24.104
	740	344.0109	32.194	89.3730	1.70	POSTE	1.47	109.0817	32.193	1364700.823	1048447.749	24.245
	741	0.0006	87.138	89.4752	1.70	LINEAMIENT	1.47	125.0642	87.137	1364661.288	1048488.647	24.342
	742	0.0006	32.087	89.2639	1.70	LINEAMIENT	1.47	125.0642	32.085	1364692.915	1048443.587	24.346
	743	332.4400	41.712	85.2239	5.00	PARAMENTO	1.47	97.7959	41.576	1364705.708	1048458.517	24.096
E11014-E11013	E11013	0.0000	134.773	89.5248	1.70	ESTACION	1.47	305.2859	134.761	1364789.193	1048307.322	24.204
	E11015	358.5025	201.646	89.5423	1.70	DELTA	1.47	124.1261	201.646	1364676.067	1048474.245	24.303



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E11016	169.4606	69.482	90.0801	1.70	DELTA	1.47	295.0542	69.482	1364818.617	1048244.378	23.811
	744	83.1051	10.979	89.0724	1.70	POSTE	1.47	208.4667	10.978	1364779.543	1048302.089	24.141
	745	263.5414	9.100	90.1522	1.70	LINDERO	1.47	29.1897	9.100	1364797.138	1048311.760	23.933
	746	190.2804	2.041	86.1140	1.70	MANHOLE	1.47	315.7536	2.036	1364790.652	1048305.901	24.109
	747	167.3735	6.332	88.3754	1.70	LINDERO	1.47	292.9122	6.330	1364791.658	1048301.491	24.125
	748	155.3209	6.905	88.4403	1.70	LINDERO	1.47	280.8217	6.903	1364790.489	1048300.541	24.126
	749	32.5733	48.879	89.3327	1.70	PARAMENTO	1.47	158.2450	48.878	1364743.797	1048325.438	24.351
	750	0.0013	111.407	89.5424	1.70	LINEAMIENT	1.47	125.2895	111.407	1364724.833	1048398.257	24.155
	751	0.0012	55.475	89.4923	1.70	LINEAMIENT	1.47	125.2892	55.475	1364757.145	1048352.603	24.145
	752	0.0011	17.983	89.4200	1.70	LINEAMIENT	1.47	125.2889	17.983	1364778.805	1048322.000	24.068
E11015-E11014	E11014	0.0000	201.657	89.5716	1.70	ESTACION	1.43	124.1261	201.646	1364676.067	1048474.245	24.303
	E11017	161.2636	129.884	89.5247	1.70	DELTA	1.43	105.5695	129.884	1364641.205	1048599.363	24.305
	E11011	185.0934	52.219	89.3642	1.70	DELTA	1.43	129.2856	52.218	1364643.003	1048514.662	24.387
E11017-E11015	E11015	0.0000	129.890	89.5329	1.70	ESTACION	1.46	105.5695	129.884	1364641.205	1048599.363	24.305
	E11018	177.4147	122.895	89.4944	1.70	DELTA	1.46	103.2659	122.894	1364613.004	1048718.978	24.436
	753	204.3518	10.092	87.4400	1.70	PARAMENTO	1.46	130.1578	10.084	1364634.702	1048607.070	24.468
	754	199.1424	8.474	88.3245	1.70	POSTE	1.46	124.8095	8.471	1364636.369	1048606.318	24.284
	755	338.5740	12.591	88.0840	1.70	PARAMENTO	1.46	264.5306	12.584	1364640.006	1048586.836	24.476
	756	340.5702	11.380	89.0038	1.70	POSTE	1.46	266.5200	11.378	1364640.514	1048588.006	24.265
	757	191.1922	8.490	88.3054	1.70	BORDE_VIA	1.46	116.8922	8.487	1364637.366	1048606.932	24.289
	758	350.0754	11.845	89.2410	1.70	BORDE_VIA	1.46	275.7011	11.844	1364642.382	1048587.577	24.192
	759	342.1355	8.862	89.1955	1.70	BORDE_VIA	1.46	267.8014	8.861	1364640.865	1048590.508	24.172
	760	326.4534	9.234	89.1359	1.70	BORDE_VIA	1.46	252.3289	9.233	1364638.402	1048590.565	24.192
	761	159.4544	9.617	88.3705	1.70	BORDE_VIA	1.46	85.3317	9.614	1364641.988	1048608.945	24.300
	762	8.5846	11.463	89.4355	1.70	BORDE_VIA	1.46	294.5489	11.463	1364645.968	1048588.936	24.122
	763	17.4218	9.304	88.5355	1.70	BORDE_VIA	1.46	303.2745	9.302	1364646.309	1048591.586	24.247
	764	30.2531	9.514	89.2315	1.70	BORDE_VIA	1.46	315.9947	9.513	1364648.048	1048592.754	24.170
	765	22.1209	11.844	89.4120	1.70	POSTE	1.46	307.7720	11.844	1364648.460	1048590.001	24.133
	766	43.2212	16.517	89.2929	1.70	PARAMENTO	1.46	328.9395	16.516	1364655.353	1048590.841	24.215
	767	147.0134	10.708	88.0439	1.70	PARAMENTO	1.46	72.5956	10.702	1364644.406	1048609.575	24.428
	768	61.0112	15.333	89.3050	1.70	BORDE_VIA	1.46	346.5895	15.332	1364656.119	1048595.807	24.199
	769	94.1912	10.906	88.4721	1.70	BORDE_VIA	1.46	19.8895	10.904	1364651.458	1048603.072	24.299
	770	270.2339	11.235	88.4548	1.70	BORDE_VIA	1.46	195.9636	11.232	1364630.406	1048596.274	24.311
	771	11.0836	26.447	89.2907	1.70	PARAMENTO	1.46	296.7128	26.446	1364653.093	1048575.740	24.306
	772	23.1222	28.242	89.2907	1.70	PARAMENTO	1.46	308.7756	28.241	1364658.891	1048577.346	24.322
E11018-E11017	E11017	0.0001	122.891	89.5713	1.70	ESTACION	1.45	103.2659	122.894	1364613.004	1048718.978	24.436



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E11012	270.5518	41.741	89.1752	1.70	DELTA	1.45	194.1875	41.738	1364572.540	1048708.748	24.696
	773	225.3750	8.198	88.3351	1.70	BORDE_VIA	1.45	148.8964	8.195	1364605.987	1048723.212	24.390
	774	179.1410	5.757	87.5711	1.70	BORDE_VIA	1.45	102.5020	5.753	1364611.759	1048724.595	24.390
	775	260.0531	48.520	88.5907	1.70	PARAMENTO	1.45	183.3578	48.512	1364564.575	1048716.137	25.044
	776	183.2644	12.187	88.2409	1.70	BORDE_VIA	1.45	106.7114	12.182	1364609.501	1048730.646	24.524
	777	199.0628	13.228	89.1148	1.70	BORDE_VIA	1.45	122.3736	13.227	1364605.922	1048730.149	24.370
	778	263.5952	44.790	89.1822	1.70	BORDE_VIA	1.45	187.2636	44.787	1364568.577	1048713.315	24.727
	779	262.3336	37.531	89.2036	1.70	BORDE_VIA	1.45	185.8259	37.529	1364575.670	1048715.169	24.615
	780	271.5234	42.345	89.2237	1.70	BORDE_VIA	1.45	195.1420	42.342	1364572.132	1048707.918	24.645
	781	272.0017	37.595	89.2041	1.70	BORDE_VIA	1.45	195.2706	37.593	1364576.739	1048709.077	24.614
	782	162.5256	9.899	87.1227	1.70	PARAMENTO	1.45	86.1481	9.887	1364613.669	1048728.843	24.667
	783	299.2841	7.763	87.1228	1.70	PARAMENTO	1.45	222.7439	7.754	1364607.310	1048713.715	24.563
	784	293.1928	5.899	87.3314	1.70	POSTE	1.45	216.5903	5.894	1364608.272	1048715.465	24.436
	785	40.1918	4.672	85.5430	1.70	PARAMENTO	1.45	323.5875	4.660	1364616.755	1048716.212	24.518
	786	87.1711	4.186	87.4406	1.70	BORDE_VIA	1.45	10.5522	4.183	1364617.116	1048719.744	24.350
	787	81.3858	1.833	85.3057	1.70	BORDE_VIA	1.45	4.9153	1.827	1364614.825	1048719.135	24.328
	788	146.0615	7.585	88.4926	1.70	BORDE_VIA	1.45	69.3700	7.583	1364615.676	1048726.075	24.340
	789	11.5726	4.839	87.5041	1.70	BORDE_VIA	1.45	295.2231	4.836	1364615.065	1048714.604	24.366
	790	318.5151	6.166	88.0211	1.70	BORDE_VIA	1.45	242.1300	6.162	1364610.124	1048713.530	24.396
	791	276.4213	4.693	86.5436	1.70	BORDE_VIA	1.45	199.9695	4.686	1364608.600	1048717.378	24.437
	792	321.1829	1.756	83.3604	1.70	MANHOLE	1.45	244.5739	1.745	1364612.255	1048717.402	24.380
	793	247.3647	4.339	85.1603	1.70	MANHOLE	1.45	170.8789	4.324	1364608.735	1048719.664	24.542
	794	199.4006	4.415	86.2439	1.70	MANHOLE	1.45	122.9342	4.406	1364610.609	1048722.676	24.461
E11012-E11018	E11018	359.5959	41.740	90.0533	1.70	ESTACION	1.50	194.1875	41.738	1364572.540	1048708.748	24.696
	E11019	180.3118	122.169	89.5227	1.70	DELTA	1.50	194.7092	122.169	1364454.375	1048677.728	24.762
	E11010	259.3446	103.269	89.5308	1.70	DELTA	1.50	273.7670	103.269	1364579.324	1048605.703	24.700
	795	330.2520	7.807	88.0951	1.70	PARAMENTO	1.50	344.6097	7.803	1364580.063	1048706.677	24.744
	796	333.0235	5.975	87.5423	1.70	POSTE	1.50	347.2306	5.971	1364578.363	1048707.428	24.712
	797	311.3056	6.899	88.5047	1.70	BORDE_VIA	1.50	325.7031	6.898	1364578.238	1048704.862	24.633
	798	264.1145	8.464	88.5620	1.70	BORDE_VIA	1.50	278.3834	8.463	1364573.773	1048700.376	24.651
	799	247.0631	3.838	87.3805	1.70	BORDE_VIA	1.50	261.2961	3.835	1364571.959	1048704.958	24.652
	800	208.0809	2.812	86.5238	1.70	BORDE_VIA	1.50	222.3234	2.808	1364570.464	1048706.858	24.647
	801	209.3541	5.388	86.3012	1.70	POSTE	1.50	223.7822	5.378	1364568.657	1048705.027	24.823
	802	186.2137	7.122	88.1131	1.70	BORDE_VIA	1.50	200.5478	7.118	1364565.874	1048706.250	24.719
	803	139.3042	8.669	88.2329	1.70	BORDE_VIA	1.50	153.6992	8.666	1364564.771	1048712.588	24.737
	804	94.4704	12.362	88.4650	1.70	BORDE_VIA	1.50	108.9720	12.359	1364568.522	1048720.436	24.757



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	805	69.2155	13.515	89.1845	1.70	BORDE_VIA	1.50	83.5528	13.514	1364574.057	1048722.177	24.656
	806	81.2407	3.972	86.5158	1.70	MANHOLE	1.50	95.5895	3.966	1364572.153	1048712.695	24.711
	807	105.2824	2.219	82.5001	1.70	MANHOLE	1.50	119.6609	2.202	1364571.450	1048710.661	24.771
	808	172.1132	41.041	89.3544	1.70	BORDE_VIA	1.50	186.3797	41.040	1364531.754	1048704.188	24.784
	809	171.1200	36.643	89.3546	1.70	BORDE_VIA	1.50	185.3875	36.642	1364536.059	1048705.308	24.752
	810	165.1240	35.112	89.2004	1.70	PARAMENTO	1.50	179.3986	35.110	1364537.432	1048709.117	24.902
	811	168.2211	44.117	89.2117	1.70	PARAMENTO	1.50	182.5572	44.114	1364528.469	1048706.780	24.991
	812	165.5124	41.727	89.3514	1.70	BORDE_VIA	1.50	180.0442	41.726	1364530.814	1048708.716	24.795
	813	165.2109	37.818	89.3110	1.70	BORDE_VIA	1.50	179.5400	37.817	1364534.724	1048709.052	24.811
	814	181.1021	37.232	89.3251	1.70	BORDE_VIA	1.50	195.3600	37.231	1364536.639	1048698.886	24.788
	815	250.0439	16.547	88.4319	1.70	LINDERO	1.50	264.2650	16.543	1364570.887	1048692.288	24.863
	816	200.2857	10.994	88.4947	1.70	LINDERO	1.50	214.6700	10.992	1364563.500	1048702.496	24.719
E11019-E11012	E11012	359.5959	122.177	89.5735	1.70	ESTACION	1.53	194.7092	122.169	1364454.375	1048677.728	24.762
	E11009	179.3121	91.600	89.3611	1.70	DELTA	1.53	194.2317	91.598	1364365.588	1048655.209	25.230
	817	179.4540	57.512	89.3425	1.70	BORDE_VIA	1.53	194.4703	57.510	1364398.689	1048663.357	25.023
	818	179.5531	46.952	89.3438	1.70	BORDE_VIA	1.53	194.6345	46.951	1364408.947	1048665.866	24.942
	819	179.5641	50.114	89.3350	1.70	BORDE_VIA	1.53	194.6539	50.113	1364405.892	1048665.051	24.977
	820	180.0749	53.631	89.2924	1.70	BORDE_VIA	1.53	194.8395	53.629	1364402.535	1048663.993	25.073
	821	183.4025	54.096	89.2924	1.70	BORDE_VIA	1.53	198.3828	54.094	1364403.041	1048660.669	25.077
	822	183.4932	50.375	89.3553	1.70	BORDE_VIA	1.53	198.5347	50.374	1364406.614	1048661.715	24.949
	823	184.0120	45.190	88.5742	1.70	PARAMENTO	1.53	198.7314	45.183	1364411.585	1048663.218	25.414
	824	10.1238	52.903	89.1643	1.70	PARAMENTO	1.53	24.9197	52.899	1364502.349	1048700.017	25.261
	825	172.3017	45.844	89.3049	1.70	BORDE_VIA	1.53	187.2139	45.842	1364408.895	1048671.971	24.985
	826	173.1428	50.622	89.2953	1.70	BORDE_VIA	1.53	187.9503	50.620	1364404.241	1048670.727	25.039
	827	173.4407	55.658	89.3340	1.70	BORDE_VIA	1.53	188.4445	55.656	1364399.322	1048669.555	25.022
	828	174.1738	60.306	89.3455	1.70	BORDE_VIA	1.53	189.0031	60.304	1364394.813	1048668.291	25.035
	829	169.5735	55.958	89.3240	1.70	BORDE_VIA	1.53	184.6689	55.956	1364398.604	1048673.173	25.040
	830	169.5346	51.700	89.2732	1.70	BORDE_VIA	1.53	184.6053	51.698	1364402.844	1048673.577	25.084
	831	9.1423	47.998	89.3923	1.70	BORDE_VIA	1.53	23.9489	47.997	1364498.240	1048697.211	24.883
	832	7.5554	44.304	89.3923	1.70	BORDE_VIA	1.53	22.6409	44.303	1364495.264	1048694.783	24.861
	833	11.0811	42.919	89.3407	1.70	BORDE_VIA	1.53	25.8456	42.918	1364493.000	1048696.438	24.919
	834	11.2838	28.536	89.3201	1.70	BORDE_VIA	1.53	26.1864	28.535	1364479.981	1048690.320	24.828
	835	359.3521	39.190	89.3201	1.70	BORDE_VIA	1.53	14.2984	39.189	1364492.350	1048687.406	24.914
	836	354.4945	39.190	88.5140	1.70	PARAMENTO	1.53	9.5384	39.182	1364493.015	1048684.221	25.374
	837	358.5544	40.734	89.3248	1.70	BORDE_VIA	1.53	13.6381	40.733	1364493.959	1048687.332	24.918
	838	359.0059	48.513	89.4307	1.70	BORDE_VIA	1.53	13.7256	48.512	1364501.502	1048689.239	24.834



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	839	171.1554	65.355	89.2013	1.70	PARAMENTO	1.53	185.9742	65.351	1364389.379	1048670.926	25.352
	840	347.0731	15.415	87.0942	1.70	PARAMENTO	1.53	1.8345	15.396	1364469.763	1048678.221	25.359
	841	296.5613	19.591	88.2436	1.70	PARAMENTO	1.53	311.6461	19.583	1364467.389	1048663.094	25.139
	842	219.1418	27.089	87.1017	2.40	PARAMENTO	1.53	233.9475	27.056	1364438.452	1048655.854	25.232
	843	188.5800	21.299	88.5329	1.70	PARAMENTO	1.53	203.6759	21.295	1364434.872	1048669.177	25.007
	844	180.4713	20.799	89.1522	1.70	BORDE_VIA	1.53	195.4961	20.797	1364434.334	1048672.172	24.865
	845	129.3334	3.966	89.5842	1.70	MANHOLE	1.53	144.2686	3.966	1364451.155	1048680.044	24.597
	846	346.2217	9.205	87.3047	1.70	POSTE	1.53	1.0806	9.196	1364463.569	1048677.901	24.995
	847	50.3206	10.661	88.3720	1.70	POSTE	1.53	65.2442	10.658	1364458.838	1048687.406	24.852
	848	187.5501	15.203	88.5321	1.70	POSTE	1.53	202.6261	15.200	1364440.345	1048671.880	24.890
	849	226.1814	21.883	88.3347	1.70	ESQ_PARQUE	1.53	241.0131	21.876	1364443.773	1048658.592	25.144
E11009-E11019	E11019	0.0000	91.599	90.0928	1.70	ESTACION	1.49	194.2317	91.598	1364365.588	1048655.209	25.230
	E11020	91.2341	95.011	89.4335	1.70	DELTA	1.49	105.6264	95.010	1364339.996	1048746.707	25.469
	E11006	270.5239	83.379	89.5611	1.70	DELTA	1.49	285.1092	83.379	1364387.322	1048574.713	25.108
	850	72.4316	9.571	87.4011	1.70	PARAMENTO	1.49	86.9528	9.563	1364366.097	1048664.759	25.404
	851	79.5553	9.536	90.0733	1.70	BORDE_VIA	1.49	94.1631	9.536	1364364.896	1048664.720	24.994
	852	100.4020	9.926	90.0213	1.70	BORDE_VIA	1.49	114.9039	9.926	1364361.408	1048664.212	25.009
	853	111.3639	6.027	88.4851	1.70	BORDE_VIA	1.49	125.8425	6.026	1364362.060	1048660.094	25.140
	854	138.1104	8.270	88.3743	1.70	BORDE_VIA	1.49	152.4161	8.268	1364358.260	1048659.038	25.213
	855	71.1110	5.802	90.2218	1.70	BORDE_VIA	1.49	85.4178	5.802	1364366.052	1048660.993	24.977
	856	340.3801	1.681	84.0159	1.70	BORDE_VIA	1.49	354.8653	1.672	1364367.253	1048655.060	25.190
	857	283.5623	5.385	87.3955	1.70	BORDE_VIA	1.49	298.1714	5.381	1364368.128	1048650.466	25.234
	858	253.5226	5.282	87.3348	1.70	BORDE_VIA	1.49	268.1056	5.277	1364365.414	1048649.935	25.240
	859	201.4926	1.950	85.4109	1.70	BORDE_VIA	1.49	216.0556	1.944	1364364.016	1048654.065	25.162
	860	300.2204	5.648	85.1517	1.70	PARAMENTO	1.49	314.5995	5.629	1364369.540	1048651.202	25.482
	861	185.4352	4.788	88.1337	1.70	BORDE_VIA	1.49	199.9628	4.786	1364361.090	1048653.575	25.163
	862	306.4632	3.246	82.5049	1.70	POSTE	1.49	321.0072	3.221	1364368.091	1048653.183	25.419
	863	234.0503	3.416	85.3926	1.70	POSTE	1.49	248.3159	3.406	1364364.330	1048652.044	25.274
	864	101.2802	16.631	88.4900	1.70	PARAMENTO	1.49	115.6989	16.627	1364358.378	1048670.192	25.358
	865	101.1344	2.759	88.1424	1.70	MANHOLE	1.49	115.4606	2.758	1364364.403	1048657.699	25.100
	866	32.4621	2.879	88.5153	1.70	MANHOLE	1.49	47.0042	2.878	1364367.551	1048657.315	25.072
E11020-E11009	E11009	359.5959	95.011	90.0003	1.70	ESTACION	1.46	105.6264	95.010	1364339.996	1048746.707	25.469
	E11021	267.4734	55.315	89.4756	1.70	DELTA	1.46	193.4192	55.315	1364286.191	1048733.870	25.421
	867	267.5215	44.880	89.4857	1.70	BORDE_VIA	1.46	193.4972	44.880	1364296.356	1048736.233	25.371
	868	268.0559	40.717	89.4857	1.70	BORDE_VIA	1.46	193.7261	40.717	1364300.442	1048737.046	25.358
	869	268.1108	35.014	89.5127	1.70	BORDE_VIA	1.46	193.8120	35.014	1364305.994	1048738.348	25.314



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	870	267.5138	31.383	90.0000	1.70	BORDE_VIA	1.46	193.4870	31.383	1364309.478	1048739.388	25.227
	871	275.0739	35.258	89.4810	1.70	BORDE_VIA	1.46	200.7539	35.258	1364307.026	1048734.214	25.348
	872	275.0927	39.972	89.4609	1.70	BORDE_VIA	1.46	200.7839	39.972	1364302.625	1048732.524	25.388
	873	275.2801	31.419	89.2635	1.70	PARAMENTO	1.46	201.0934	31.418	1364310.684	1048735.401	25.532
	874	250.3105	32.935	89.2635	1.70	PARAMENTO	1.46	176.1445	32.933	1364307.137	1048748.922	25.547
	875	250.4917	33.408	89.4605	1.70	CERRAMIENT	1.46	176.4478	33.408	1364306.652	1048748.777	25.362
	876	240.3655	21.628	89.1237	1.70	PARAMENTO	1.46	166.2417	21.626	1364318.990	1048751.851	25.525
	877	229.2957	16.214	89.0504	1.70	ENTR_URBAN	1.46	155.1256	16.212	1364325.288	1048753.527	25.486
	878	211.0151	12.230	88.2604	1.70	ENTR_URBAN	1.46	136.6572	12.225	1364331.105	1048755.099	25.561
	879	178.4700	10.463	88.2045	1.70	PARAMENTO	1.46	104.4097	10.459	1364337.393	1048756.837	25.529
	880	129.1947	16.143	88.5509	1.70	PARAMENTO	1.46	54.9561	16.140	1364349.264	1048759.922	25.531
	881	167.2146	6.210	89.5732	1.70	BORDE_VIA	1.46	92.9892	6.210	1364339.672	1048752.909	25.231
	882	226.2352	9.103	89.4251	1.70	BORDE_VIA	1.46	152.0242	9.103	1364331.957	1048750.978	25.272
	883	215.1327	12.172	89.4250	1.70	BORDE_VIA	1.46	140.8506	12.172	1364330.557	1048754.392	25.287
	884	228.0556	15.245	89.3238	1.70	BORDE_VIA	1.46	153.7253	15.245	1364326.326	1048753.456	25.348
	885	241.4529	13.310	89.2333	1.70	BORDE_VIA	1.46	167.3845	13.309	1364327.008	1048749.614	25.368
	886	249.2428	17.901	89.2333	1.70	BORDE_VIA	1.46	175.0342	17.900	1364322.163	1048748.257	25.416
	887	340.3936	3.726	85.1548	1.70	PARAMENTO	1.46	266.2864	3.713	1364339.755	1048743.002	25.534
	888	347.2005	2.634	82.0640	1.70	POSTE	1.46	272.9611	2.609	1364340.131	1048744.102	25.588
	889	54.5651	4.603	86.2944	1.70	POSTE	1.46	340.5739	4.594	1364344.329	1048745.179	25.508
	890	34.3704	1.599	89.5157	2.00	MANHOLE	1.46	320.2442	1.599	1364341.225	1048745.685	24.930
	891	17.0214	18.474	88.4708	1.70	PARAMENTO	1.46	302.6636	18.470	1364349.964	1048731.159	25.618
	892	30.3126	20.598	87.1834	1.70	PARAMENTO	1.46	316.1503	20.575	1364354.834	1048732.454	26.194
	893	70.5043	11.653	88.0945	1.70	PARAMENTO	1.46	356.4717	11.647	1364351.621	1048745.991	25.600
	894	82.5514	35.054	88.4629	2.00	PARAMENTO	1.46	8.5470	35.046	1364374.653	1048751.916	25.676
	895	258.5203	4.719	88.1512	1.70	BORDE_VIA	1.46	184.4939	4.717	1364335.294	1048746.338	25.371
	896	191.4536	0.611	92.5313	1.50	BORDE_VIA	1.46	117.3864	0.610	1364339.715	1048747.249	25.396
	897	92.1339	22.883	90.4856	1.50	BORDE_VIA	1.46	17.8539	22.881	1364361.775	1048753.723	25.101
E11021-E11020	E11020	359.5959	55.306	89.4251	1.70	ESTACION	1.46	193.4192	55.315	1364286.191	1048733.870	25.421
	E11003	140.4004	78.042	89.4307	1.70	DELTA	1.46	154.0870	78.041	1364215.997	1048767.975	25.562
	888	340.3449	13.471	88.0226	1.70	PARAMENTO	1.46	353.9995	13.463	1364299.581	1048732.463	25.639
	889	345.4449	13.575	89.0339	1.70	POSTE	1.46	359.1661	13.573	1364299.763	1048733.673	25.401
	890	237.1103	5.742	87.0328	1.70	PARAMENTO	1.46	250.6034	5.734	1364284.287	1048728.461	25.474
E11003-E11021	E11021	0.0000	78.024	89.5643	1.70	ESTACION	1.49	154.0870	78.041	1364215.997	1048767.975	25.562
	E11004	310.2010	102.306	90.0335	1.70	DELTA	1.49	284.4231	102.306	1364241.479	1048668.893	25.242
E11002-E11001	E11001	0.0001	95.566	89.5343	1.70	ESTACION	1.50	43.6614	95.559	1364184.344	1048884.241	25.915



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E11022	241.3555	68.075	89.4131	1.70	DELTA	1.50	105.2600	68.074	1364166.427	1048949.915	26.076
E11022-E11002	E11002	0.0000	68.057	89.5724	1.70	ESTACION	1.48	105.2600	68.074	1364166.427	1048949.915	26.076
	E11000	303.1252	151.924	89.5322	1.70	DELTA	1.48	228.4745	151.924	1364065.708	1048836.176	26.151
	891	249.5747	8.826	87.2545	1.70	POSTE	1.48	175.2231	8.817	1364157.640	1048950.649	26.254
	892	277.4153	12.066	87.0443	1.70	POSTE	1.48	202.9581	12.050	1364155.331	1048945.215	26.473
	893	332.1915	7.638	88.1915	1.70	MANHOLE	1.48	257.5809	7.635	1364164.785	1048942.459	26.081
E11000-E11022	E11022	359.5959	151.950	89.5636	1.70	ESTACION	1.46	228.4745	151.924	1364065.708	1048836.176	26.151
	E11001	291.3646	52.599	90.0237	1.70	DELTA	1.46	340.0872	52.599	1364115.162	1048818.261	25.873
	E11023	204.1039	34.918	94.4834	1.70	DELTA	1.46	252.6520	34.795	1364055.333	1048802.963	22.985
	894	148.4630	10.604	88.5626	1.70	MANHOLE	1.46	197.2495	10.602	1364055.583	1048833.032	26.109
	895	162.4100	11.276	87.4637	1.70	PARAMENTO	1.46	211.1578	11.268	1364056.066	1048830.346	26.350
	896	162.4652	11.197	90.5703	1.70	LINDERO	1.46	211.2556	11.195	1364056.138	1048830.367	25.727
	897	196.1025	5.819	91.5943	1.70	LINDERO	1.46	244.6481	5.815	1364063.218	1048830.920	25.710
	898	130.3330	14.718	89.1915	1.70	BORDE_VIA	1.46	179.0328	14.717	1364050.993	1048836.424	26.087
	899	119.4211	14.935	88.3336	1.70	PARAMENTO	1.46	168.1775	14.930	1364051.095	1048839.235	26.288
	900	134.4502	28.764	89.2801	1.70	BORDE_VIA	1.46	183.2250	28.763	1364036.991	1048834.558	26.180
	901	143.4921	28.693	89.2657	1.70	BORDE_VIA	1.46	192.2970	28.692	1364037.675	1048830.065	26.189
	902	143.4450	33.508	89.2829	1.70	POSTE	1.46	192.2217	33.507	1364032.961	1048829.082	26.220
	903	144.3241	39.756	89.1603	1.70	PARAMENTO	1.46	193.0192	39.753	1364026.977	1048827.220	26.421
	904	143.4242	39.895	89.0513	1.70	PARAMENTO	1.46	192.1861	39.890	1364026.717	1048827.755	26.549
	905	142.0859	49.007	89.1731	1.70	PARAMENTO	1.46	190.6242	49.003	1364017.545	1048827.141	26.518
	906	135.0531	46.084	89.2605	1.70	BORDE_VIA	1.46	183.5664	46.082	1364019.716	1048833.309	26.367
	907	140.3038	46.296	89.2724	1.70	BORDE_VIA	1.46	188.9850	46.294	1364019.982	1048828.946	26.352
	908	1.0519	21.891	89.2603	1.70	POSTE	1.46	49.5631	21.890	1364079.906	1048852.837	26.129
	909	2.5432	51.916	89.4205	1.70	MANHOLE	1.46	51.3834	51.915	1364098.109	1048876.739	26.183
	910	348.4555	14.810	86.2143	2.30	PARAMENTO	1.46	37.2397	14.780	1364077.475	1048845.120	26.253
	911	5.3831	57.120	89.4927	1.70	SUMIDERO	1.46	54.1164	57.120	1364099.188	1048882.455	26.088
	912	6.0207	58.008	89.5302	1.70	SUMIDERO	1.46	54.5097	58.008	1364099.385	1048883.406	26.030
	913	357.4700	22.472	90.0113	1.70	SUMIDERO	1.46	46.2578	22.472	1364081.246	1048852.411	25.905
	914	358.4041	22.850	89.5924	1.70	SUMIDERO	1.46	47.1525	22.850	1364081.247	1048852.929	25.917
	915	358.5459	63.547	89.4531	1.70	SUMIDERO	1.46	47.3909	63.546	1364108.729	1048882.945	26.181
	916	359.2357	63.016	89.4754	1.70	SUMIDERO	1.46	47.8736	63.016	1364107.977	1048882.912	26.135
	917	359.2948	50.555	89.5049	1.70	SUMIDERO	1.46	47.9711	50.555	1364099.555	1048873.728	26.048
	918	358.5930	49.962	89.4908	1.70	SUMIDERO	1.46	47.4661	49.962	1364099.484	1048872.991	26.071
	919	190.0820	17.183	95.4345	1.70	PARAMENTO	1.46	238.6134	17.097	1364056.804	1048821.580	24.197
	920	206.4442	22.189	96.0343	1.70	LINDERO	1.46	255.2195	22.065	1364060.079	1048814.841	23.570



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	921	250.1146	16.795	89.1740	1.70	PARAMENTO	1.46	298.6706	16.794	1364073.765	1048821.441	26.120
	922	241.5222	22.543	94.2244	1.70	DESCA_DOMI	1.46	290.3472	22.477	1364073.524	1048815.101	24.192
	923	153.5808	9.299	91.5203	1.70	SUMIDERO	1.46	202.4434	9.294	1364057.118	1048832.627	25.610
E11023-E11000	E11000	359.5959	34.987	84.1947	1.70	ESTACION	1.46	252.6520	34.795	1364055.333	1048802.963	22.985
	924	38.1011	5.863	81.4403	1.70	LINDERO	1.46	110.8217	5.802	1364053.271	1048808.387	23.590
	925	59.4333	10.709	82.3040	1.70	LINDERO	1.46	132.3778	10.618	1364048.177	1048810.807	24.143
	926	49.0127	20.729	85.1258	1.70	LINDERO	1.46	121.6761	20.657	1364044.486	1048820.543	24.476
	927	337.2626	12.814	92.4411	2.60	DESCARGA	1.46	50.0925	12.799	1364063.545	1048812.782	21.235
	928	335.1604	14.214	92.5353	2.60	DESCARGA	1.46	47.9197	14.196	1364064.847	1048813.500	21.129
	929	340.1230	13.771	89.3836	2.00	DESCARGA	1.46	52.8603	13.771	1364063.647	1048813.941	22.533
	930	276.0652	15.968	107.3056	1.70	CANO	1.46	348.7664	15.228	1364070.269	1048799.997	17.941
	931	275.3708	15.605	107.3554	1.70	CANO	1.46	348.2709	14.875	1364069.897	1048799.940	18.029
	932	276.0208	15.838	107.3430	1.70	CANO	1.46	348.6875	15.099	1364070.138	1048800.002	17.965
E11023-E11000	E11000	0.0001	34.984	84.1806	1.70	ESTACION	1.39	252.6520	34.795	1364055.333	1048802.963	22.985
	E11024	131.0945	43.621	88.4804	1.70	DELTA	1.39	203.8145	43.611	1364015.435	1048785.354	23.590
	933	261.0636	13.803	108.1511	1.70	RIO	1.39	333.7620	13.108	1364067.091	1048797.168	18.354
	934	271.4930	15.326	107.1802	1.70	RIO	1.39	344.4770	14.633	1364069.432	1048799.047	18.119
	935	288.0207	19.281	103.2527	1.70	RIO	1.39	0.6872	18.754	1364074.086	1048803.188	18.201
	936	290.1915	21.176	102.4235	1.70	RIO	1.39	2.9728	20.657	1364075.962	1048804.035	18.018
	937	169.4333	26.644	97.2004	2.90	CANO	1.39	242.3778	26.426	1364043.081	1048779.549	18.076
	938	159.0050	28.046	96.4909	2.90	CANO	1.39	231.6659	27.848	1364038.061	1048781.120	18.147
	939	157.2957	29.238	96.4603	2.90	CANO	1.39	230.1511	29.034	1364036.729	1048780.673	18.032
	940	156.5730	30.122	96.2327	2.90	CANO	1.39	229.6103	29.935	1364035.936	1048780.163	18.124
	941	154.0424	35.809	93.5442	4.00	RIO	1.39	226.7253	35.726	1364030.843	1048776.952	17.934
	942	170.4611	21.537	102.3449	1.70	RIO	1.39	243.4217	21.020	1364045.928	1048784.165	17.986
E11024-E11023	E11023	0.0000	43.630	90.2502	1.70	ESTACION	1.43	203.8145	43.611	1364015.435	1048785.354	23.590
	943	103.5833	6.491	82.3538	1.70	ESTRUCTURA	1.43	127.7903	6.437	1364011.490	1048790.441	24.159
	944	102.5024	6.602	82.5009	1.70	ESTRUCTURA	1.43	126.6545	6.550	1364011.524	1048790.609	24.145
	945	95.0353	8.036	83.1221	1.70	ESTRUCTURA	1.43	118.8792	7.980	1364011.581	1048792.341	24.273
	946	95.5229	7.903	83.1435	1.70	ESTRUCTURA	1.43	119.6892	7.848	1364011.548	1048792.172	24.252
	947	111.3252	7.647	78.3435	1.70	ESTRUCTURA	1.43	135.3622	7.496	1364010.101	1048790.621	24.836
	948	109.4841	7.766	78.5206	1.70	ESTRUCTURA	1.43	133.6259	7.620	1364010.177	1048790.870	24.821
	949	112.3028	7.891	78.5206	1.70	ESTRUCTURA	1.43	136.3222	7.743	1364009.835	1048790.701	24.845
	950	102.1853	8.701	79.5512	1.70	ESTRUCTURA	1.43	126.1292	8.567	1364010.384	1048792.273	24.845
	951	101.3104	8.889	80.0013	1.70	ESTRUCTURA	1.43	125.3322	8.754	1364010.372	1048792.496	24.865
	952	102.3804	9.065	80.1337	1.70	ESTRUCTURA	1.43	126.4489	8.933	1364010.127	1048792.540	24.861



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	953	105.3033	8.225	80.0448	2.90	COTA_CLAVE	1.43	129.3236	8.102	1364010.301	1048791.622	23.539
	954	104.5431	8.019	86.0526	2.90	COTA_ABAJO	1.43	128.7231	8.000	1364010.430	1048791.596	22.669
	955	21.3457	8.294	111.1446	2.45	ESTRUCTURA	1.43	45.3970	7.730	1364020.863	1048790.858	19.566
	956	21.2209	8.151	111.3014	2.45	ESTRUCTURA	1.43	45.1836	7.584	1364020.780	1048790.734	19.584
	957	22.1000	8.087	111.3250	2.65	CANO	1.43	45.9811	7.522	1364020.662	1048790.763	19.402
	958	22.0304	7.621	112.4500	2.70	CANO	1.43	45.8656	7.028	1364020.329	1048790.398	19.375
	959	32.0803	8.827	116.0511	0.09	DES_DOMICI	1.43	55.9486	7.928	1364019.874	1048791.923	21.055
	960	36.1928	9.088	112.4448	0.09	DES_DOMICI	1.43	60.1389	8.381	1364019.608	1048792.623	21.423
E11024-E11023	E11023	0.0000	43.626	90.2749	1.70	ESTACION	1.44	203.8145	43.611	1364015.435	1048785.354	23.590
	961	114.3156	7.701	83.1051	1.70	LINDERO	1.44	138.3467	7.647	1364009.721	1048790.436	24.246
	962	148.5345	15.221	87.1849	1.70	LINDERO	1.44	172.7103	15.204	1364000.353	1048787.283	24.045
	963	147.2900	15.727	84.4412	1.70	PARAMENTO	1.44	171.2978	15.661	1363999.954	1048787.724	24.775
	964	117.1630	37.429	87.1351	1.70	PARAMENTO	1.44	141.0895	37.385	1363986.344	1048808.836	25.140
	965	111.4445	46.374	86.3804	1.70	PARAMENTO	1.44	135.5603	46.294	1363982.381	1048817.767	26.054
	966	104.2548	44.415	86.3112	1.70	CERRAMIENT	1.44	128.2445	44.333	1363987.992	1048820.172	26.028
	967	97.4028	43.306	86.2304	1.70	CERRAMIENT	1.44	121.4889	43.220	1363992.860	1048822.209	26.063
	968	59.5525	33.562	87.2744	0.09	PARAMENTO	1.44	83.7381	33.529	1364019.092	1048818.683	26.433
	969	58.2132	30.729	87.3554	1.70	LINDERO	1.44	82.1734	30.702	1364019.616	1048815.770	24.620
	970	47.2109	20.131	86.5615	2.30	LINDERO	1.44	71.1670	20.102	1364021.924	1048804.380	23.807
	971	29.0751	12.061	88.5404	2.30	LINDERO	1.44	52.9453	12.059	1364022.701	1048794.978	22.963
	972	14.5856	6.573	101.3225	4.00	CANAL	1.44	38.7967	6.440	1364020.454	1048789.389	19.717
	973	13.4837	6.201	101.3226	4.00	CANAL	1.44	37.6247	6.076	1364020.247	1048789.063	19.791
	974	15.0746	6.429	105.0131	4.00	CANAL	1.44	38.9439	6.209	1364020.264	1048789.257	19.365
	975	354.3603	11.365	93.1423	5.00	CANAL	1.44	18.4153	11.347	1364026.201	1048788.939	19.390
	976	352.4009	12.402	93.0645	5.00	CANAL	1.44	16.4836	12.384	1364027.310	1048788.868	19.358
	977	348.4633	13.345	93.0645	5.00	CANAL	1.44	12.5903	13.325	1364028.440	1048788.259	19.307
	978	352.0311	14.345	92.5316	5.00	CANAL	1.44	15.8675	14.327	1364029.216	1048789.271	19.309
	979	355.2622	13.241	92.4815	5.00	CANAL	1.44	19.2539	13.225	1364027.920	1048789.715	19.384
	980	359.1648	12.122	92.5009	5.00	CANAL	1.44	23.0945	12.107	1364026.572	1048790.103	19.432
	981	273.3447	11.740	104.2131	4.00	RIO	1.44	297.3942	11.373	1364020.668	1048775.256	18.120
	982	233.5630	11.918	104.0916	4.00	RIO	1.44	257.7561	11.556	1364012.984	1048774.061	18.117
	983	204.2315	20.787	95.2405	5.00	RIO	1.44	228.2020	20.695	1364001.642	1048769.926	18.075
	984	178.4716	14.246	91.1828	1.70	DES_DOMICI	1.44	202.6022	14.242	1364002.286	1048779.880	23.007
	985	177.4725	14.361	89.1914	1.70	DES_DOMICI	1.44	201.6047	14.360	1364002.084	1048780.067	23.502
	986	160.5343	16.607	88.3841	1.70	DES_DOMICI	1.44	184.7097	16.602	1363998.889	1048783.991	23.725
	987	104.5634	53.995	87.0408	1.70	MANHOLE	1.44	128.7572	53.924	1363981.677	1048827.405	26.093



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	988	94.5156	46.780	86.3115	1.70	BORDE_VIA	1.44	118.6800	46.694	1363993.026	1048826.319	26.171
	989	108.3537	64.174	87.4014	1.70	BORDE_VIA	1.44	132.4081	64.121	1363972.191	1048832.698	25.940
	990	95.3129	53.301	87.0142	1.70	BORDE_VIA	1.44	119.3392	53.229	1363989.354	1048831.756	26.095
	991	108.4059	51.847	87.0722	1.70	BORDE_VIA	1.44	132.4975	51.782	1363980.453	1048823.533	25.934
	992	103.5043	66.255	87.4753	1.70	BORDE_VIA	1.44	127.6597	66.206	1363974.985	1048837.766	25.877
	993	111.1927	56.867	87.3110	1.70	BORDE_VIA	1.44	135.1386	56.814	1363975.164	1048825.430	25.793
E11005-E11004	E11004	0.0000	129.668	89.4110	1.70	ESTACION	1.47	285.2803	129.673	1364275.716	1048543.895	24.822
	E11025	178.5450	72.556	91.1814	1.70	DELTA	1.47	284.1942	72.537	1364293.503	1048473.572	22.941
E11025-E11005	E11005	0.0001	72.575	88.1334	1.70	ESTACION	1.33	284.1942	72.537	1364293.503	1048473.572	22.941
	E11026	294.1112	19.842	87.4922	1.70	DELTA	1.33	38.3809	19.828	1364309.046	1048485.883	23.325
	994	48.1158	22.829	85.5103	1.70	BORDE_VIA	1.33	152.3936	22.769	1364273.326	1048484.123	24.223
	995	56.4802	28.731	86.3247	1.70	POSTE	1.33	160.9947	28.679	1364266.387	1048482.912	24.302
	996	59.4029	26.628	86.2221	1.70	BORDE_VIA	1.33	163.8689	26.575	1364267.975	1048480.956	24.256
	997	57.5047	34.312	86.4250	2.00	PARAMENTO	1.33	162.0406	34.256	1364260.916	1048484.135	24.238
	998	63.2242	23.707	85.1046	2.00	BORDE_VIA	1.33	167.5725	23.623	1364270.433	1048478.656	24.263
	999	53.4621	19.485	84.2045	2.00	BORDE_VIA	1.33	157.9667	19.390	1364275.529	1048480.847	24.191
	1000	153.4150	16.973	101.0035	4.00	RIO	1.33	257.8914	16.661	1364290.008	1048457.282	17.030
	1001	150.0455	9.401	104.2927	1.70	BORDE_RIO	1.33	254.2761	9.102	1364291.036	1048464.811	20.219
	1002	162.4156	15.284	102.1129	4.00	RIO	1.33	266.8931	14.939	1364292.693	1048458.655	17.043
	1003	158.2526	4.370	110.5948	1.70	BORDE_RIO	1.33	262.6181	4.080	1364292.979	1048469.526	21.005
	1004	175.3021	13.165	109.2704	2.90	RIO	1.33	279.7000	12.414	1364295.594	1048461.336	16.987
	1005	177.4409	4.494	118.5021	1.70	ESTRUCTURA	1.33	281.9300	3.937	1364294.317	1048469.721	20.403
	1006	190.1430	4.526	119.2157	1.70	ESTRUCTURA	1.33	294.4359	3.944	1364295.135	1048469.981	20.351
	1007	189.4529	4.821	117.5246	2.50	COTA_ABJ	1.33	293.9522	4.261	1364295.233	1048469.678	19.517
	1008	172.4313	9.336	118.5640	2.90	RIO	1.33	276.9145	8.170	1364294.486	1048465.462	16.853
	1009	177.0104	6.689	115.4918	4.00	CAIDA_DESC	1.33	281.2120	6.021	1364294.674	1048467.666	17.357
	1010	222.1337	14.526	100.2013	4.60	BORDE_RIO	1.33	326.4211	14.290	1364305.408	1048465.669	17.064
E11026-E11025	E11025	0.0000	19.828	90.5403	1.70	ESTACION	1.46	38.3809	19.828	1364309.046	1048485.883	23.325
	1011	82.5338	10.081	89.0944	2.50	DES_DOMICI	1.46	301.2747	10.080	1364314.279	1048477.268	22.430
	1012	113.0038	6.297	88.4602	1.70	DES_DOMICI	1.46	331.3914	6.296	1364314.573	1048482.869	23.218
	1013	291.3451	12.666	85.4229	2.15	PARAMENTO	1.46	149.9617	12.630	1364298.112	1048492.206	23.581
	1014	32.3010	14.217	91.0527	2.50	DES_DOMICI	1.46	250.8836	14.214	1364304.391	1048472.453	22.012
	1015	33.2927	9.596	87.4833	1.70	DES_DOMICI	1.46	251.8717	9.589	1364306.062	1048476.770	23.450
	1016	41.3406	8.552	87.5819	1.70	LINDERO	1.46	259.9492	8.547	1364307.554	1048477.468	23.385
	1017	44.4217	8.678	88.3425	1.70	TERRENO	1.46	263.0856	8.675	1364308.001	1048477.271	23.299
	1018	121.1333	11.004	92.5917	1.70	TERRENO	1.46	339.6067	10.989	1364319.346	1048482.054	22.509



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1019	79.2112	9.383	90.1002	1.70	TERRENO	1.46	297.7342	9.383	1364313.412	1048477.578	23.055
	1020	275.2957	6.694	85.5854	1.70	LINDERO	1.46	133.8800	6.678	1364304.417	1048490.696	23.552
	1021	205.1239	11.582	88.0421	1.70	PARAMENTO	1.46	63.5917	11.575	1364314.194	1048496.251	23.472
	1022	35.0144	12.490	91.2701	1.70	TERRENO	1.46	253.4097	12.486	1364305.481	1048473.917	22.767
	1023	143.4733	20.464	91.2947	1.70	CANAL_COCH	1.46	2.1734	20.457	1364329.488	1048486.659	22.548
	1024	158.0426	17.358	89.4232	1.70	CANAL_COCH	1.46	16.4547	17.358	1364325.693	1048490.800	23.171
E11016-E11014	E11014	0.0000	69.506	89.2758	1.70	ESTACION	1.44	295.0542	69.482	1364818.617	1048244.378	23.811
	E11027	109.5040	124.333	89.4522	1.70	DELTA	1.44	224.8986	124.332	1364730.546	1048156.618	24.083
	1025	286.5239	11.817	90.1521	1.50	CABLE_BANA	1.44	41.9317	11.817	1364827.408	1048252.274	23.701
	1026	293.0129	11.748	90.1800	1.50	CABLE_BANA	1.44	48.0789	11.748	1364826.466	1048253.119	23.692
	1027	289.5149	11.761	86.1808	2.30	CABLE_BANA	1.44	44.9178	11.737	1364826.928	1048252.665	23.712
	1028	299.1128	4.054	90.0738	1.50	CABLE_BANA	1.44	54.2453	4.054	1364820.986	1048247.668	23.744
	1029	281.4013	4.095	90.2243	1.50	CABLE_BANA	1.44	36.7245	4.095	1364821.899	1048246.826	23.726
	1030	290.1728	4.162	79.0644	2.30	CABLE_BANA	1.44	45.3453	4.087	1364821.490	1048247.285	23.739
	1031	109.5006	4.229	78.4840	2.30	CABLE_BANA	1.44	224.8892	4.149	1364815.678	1048241.450	23.774
	1032	101.1301	4.273	88.5326	1.50	CABLE_BANA	1.44	216.2711	4.272	1364815.173	1048241.850	23.836
	1033	117.4827	4.170	88.1436	1.50	CABLE_BANA	1.44	232.8617	4.168	1364816.101	1048241.055	23.881
	1034	109.1043	60.808	89.3232	1.70	CABLE_BANA	1.44	224.2328	60.806	1364775.049	1048201.961	24.039
	1035	110.2519	60.738	89.3052	1.70	CABLE_BANA	1.44	225.4761	60.736	1364776.029	1048201.076	24.068
E11027-E11016	E11016	359.5959	124.350	90.0047	1.70	ESTACION	1.47	224.8986	124.332	1364730.546	1048156.618	24.083
	E11028	197.4719	41.145	89.3952	1.70	DELTA	1.47	242.6872	41.144	1364711.667	1048120.060	24.092
	1036	2.0334	17.761	90.2754	1.70	CABLE_BANA	1.47	46.9581	17.760	1364742.668	1048169.598	23.706
	1037	358.1147	17.726	90.1625	1.70	CABLE_BANA	1.47	43.0950	17.726	1364743.490	1048168.728	23.766
	1038	0.0250	17.726	87.2723	2.60	CABLE_BANA	1.47	44.9459	17.709	1364743.079	1048169.128	23.737
	1039	0.3713	6.438	82.4545	2.50	CABLE_BANA	1.47	45.5189	6.387	1364735.021	1048161.174	23.862
	1040	5.4608	6.428	89.5345	1.70	CABLE_BANA	1.47	50.6675	6.428	1364734.620	1048161.590	23.862
	1041	355.1906	6.493	88.3617	1.70	CABLE_BANA	1.47	40.2170	6.491	1364735.502	1048160.809	24.009
	1042	178.0723	1.526	79.1110	1.70	CABL_FIN_C	1.47	223.0217	1.499	1364729.450	1048155.595	24.137
	1043	175.2623	1.652	64.4432	2.15	CABL_FIN_C	1.47	220.3384	1.494	1364729.407	1048155.650	24.105
E11028-E11027	E11027	359.5959	41.147	89.3908	1.70	ESTACION	1.45	242.6872	41.144	1364711.667	1048120.060	24.092
	E11029	114.1029	21.890	91.3546	1.70	DELTA	1.45	176.8620	21.882	1364689.818	1048121.258	23.230
	1044	160.2334	22.983	91.2834	2.50	LINDERO	1.45	223.0800	22.975	1364694.886	1048104.368	22.448
	1045	180.2558	41.050	91.4316	2.00	LINDERO	1.45	243.1200	41.031	1364693.116	1048083.462	22.307
	1046	148.0408	17.272	91.3440	2.50	LINDERO	1.45	210.7561	17.265	1364696.830	1048111.231	22.564
	1047	351.2531	19.530	89.0450	1.70	LINDERO	1.45	54.1125	19.527	1364723.114	1048135.881	24.153
	1048	339.1211	18.736	92.2017	1.70	LINDERO	1.45	41.8903	18.720	1364725.603	1048132.560	23.075



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1049	325.1250	20.978	92.1734	1.70	LINDERO	1.45	27.9011	20.961	1364730.191	1048129.869	23.000
	1050	319.2622	22.933	92.0742	1.70	LINDERO	1.45	22.1267	22.917	1364732.896	1048128.692	22.988
	1051	3.4941	19.567	89.0520	1.70	LINDERO	1.45	66.5153	19.565	1364719.463	1048138.004	24.151
	1052	22.2011	22.465	89.5522	1.70	LINDERO	1.45	85.0236	22.465	1364713.616	1048142.441	23.870
	1053	27.1101	23.419	90.1005	1.70	LINDERO	1.45	89.8709	23.419	1364711.720	1048143.479	23.771
E11029-E11028	E11028	0.0000	21.899	87.4100	1.70	ESTACION	1.48	176.8620	21.882	1364689.818	1048121.258	23.230
	1054	242.5026	5.491	90.0205	1.70	ESTRUCTURA	1.48	239.7025	5.491	1364687.048	1048116.517	23.011
	1055	245.2647	5.614	90.0206	1.70	ESTRUCTURA	1.48	242.3084	5.614	1364687.209	1048116.287	23.010
	1056	247.0039	5.660	90.1449	1.70	ESTRUCTURA	1.48	243.8728	5.660	1364687.326	1048116.176	22.989
	1057	251.2454	7.552	96.5544	1.70	ESTRUCTURA	1.48	248.2770	7.497	1364687.043	1048114.294	22.103
	1058	253.0630	7.538	96.5544	1.70	ESTRUCTURA	1.48	249.9703	7.483	1364687.255	1048114.228	22.104
	1059	263.3935	4.834	89.4158	1.70	ESTRUCTURA	1.48	260.5217	4.834	1364689.022	1048116.490	23.039
	1060	262.1309	5.154	90.0910	1.70	ESTRUCTURA	1.48	259.0811	5.154	1364688.842	1048116.197	23.000
	1061	266.2004	7.019	97.0229	1.70	ESTRUCTURA	1.48	263.1964	6.966	1364688.993	1048114.341	22.153
	1062	264.4033	7.146	96.5715	1.70	ESTRUCTURA	1.48	261.5378	7.093	1364688.774	1048114.242	22.149
	1063	269.0910	16.616	99.4042	4.00	ESTRUCTURA	1.48	266.0147	16.380	1364688.680	1048104.918	17.920
	1064	268.4442	16.724	99.3719	4.00	ESTRUCTURA	1.48	265.6070	16.489	1364688.555	1048104.818	17.918
	1065	269.0109	16.598	100.5004	4.00	BORDE_CANO	1.48	265.8811	16.302	1364688.647	1048104.998	17.594
	1066	266.4954	16.663	100.3725	4.00	CENTRO_CAN	1.48	263.6936	16.377	1364688.019	1048104.980	17.642
	1067	264.3019	17.086	100.2349	4.00	BORDE_CANO	1.48	261.3672	16.805	1364687.296	1048104.643	17.630
	1068	264.2000	17.163	101.1033	3.50	ESTRUCTURA	1.48	261.1953	16.838	1364687.241	1048104.619	17.887
	1069	263.4256	17.218	101.1033	3.50	ESTRUCTURA	1.48	260.5775	16.891	1364687.053	1048104.595	17.877
	1070	264.4359	18.479	101.3628	3.50	BORDE_CANO	1.48	261.5950	18.101	1364687.172	1048103.351	17.496
	1071	269.0628	18.444	101.4333	3.50	BORDE_CANO	1.48	265.9697	18.059	1364688.549	1048103.244	17.465
	1072	267.0217	18.299	101.1324	3.50	BORDE_CANO	1.48	263.9000	17.949	1364687.911	1048103.411	17.652
	1073	261.4846	42.303	96.5913	3.60	SALIDA_RIO	1.48	258.6747	41.989	1364681.572	1048080.087	15.968
	1074	263.1104	44.074	96.1226	3.60	SALIDA_RIO	1.48	260.0464	43.816	1364682.245	1048078.102	16.348
	1075	264.0614	44.227	96.1822	3.60	SALIDA_RIO	1.48	260.9659	43.959	1364682.915	1048077.844	16.256
	1076	263.3236	4.842	96.5956	1.50	TERRENO	1.48	260.4053	4.806	1364689.017	1048116.519	22.624
	1077	243.5154	5.552	102.0409	1.50	TERRENO	1.48	240.7270	5.429	1364687.163	1048116.522	22.053
	1078	253.2305	5.108	99.2847	1.50	TERRENO	1.48	250.2467	5.038	1364688.115	1048116.516	22.373
	1079	253.4408	5.364	94.0725	2.90	COTA_CLAVE	1.48	250.5975	5.350	1364688.041	1048116.212	21.428
	1080	253.2408	5.541	102.5439	2.90	COTA_BATEA	1.48	250.2642	5.401	1364687.994	1048116.174	20.576
	1081	93.3428	17.112	86.5014	1.50	CAJA_MANHO	1.48	90.4364	17.086	1364689.688	1048138.344	24.158
	1082	97.4410	18.631	87.0622	1.50	CAJA_MANHO	1.48	94.5981	18.607	1364688.326	1048139.805	24.154
	1083	86.2500	19.587	87.1448	1.50	CAJA_MANHO	1.48	83.2786	19.564	1364692.108	1048140.688	24.155



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1084	90.3644	20.940	87.2730	1.50	CAJA_MANHO	1.48	87.4742	20.919	1364690.740	1048142.157	24.142
	1085	90.2254	20.162	87.1233	1.50	MANHOLE	1.48	87.2436	20.138	1364690.787	1048141.373	24.196
	1086	95.1701	18.534	87.0420	1.50	MANHOLE	1.48	92.1456	18.510	1364689.125	1048139.755	24.161
E11014-E11016	E11016	359.5959	69.499	90.0620	1.70	ESTACION	1.46	115.0542	134.761	1364789.193	1048307.322	24.204
	E11030	200.1919	19.159	89.2455	1.70	DELTA	1.46	135.3761	19.158	1364775.558	1048320.779	24.156
E11030-E11014	E11014	0.0000	19.167	89.0723	1.70	ESTACION	1.46	135.3761	19.158	1364775.558	1048320.779	24.156
	1087	281.4515	102.571	89.2729	1.70	MANHOLE	1.46	237.1303	102.566	1364719.892	1048234.633	24.882
	1088	283.4017	90.786	89.3603	1.70	LINDERO	1.46	239.0475	90.784	1364728.865	1048242.924	24.544
	1089	293.5428	49.214	89.5150	1.70	LINDERO	1.46	249.2839	49.214	1364758.149	1048274.748	24.029



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1085		0.0000				ESTACION		0.00		1363701.432	1049267.444	27.513
E1086	E1085	0.0000	103.439	89.5542	1.70	ESTACION	1.45	196.94		1363602.465	1049237.309	27.599
	E11000	268.1346	53.047	89.3939	1.70	DELTA	1.45	285.16	53.0461	1363616.341	1049186.110	27.663
	1	359.5810	90.594	89.5558	1.70	BORDE_VIA	1.45	16.90	90.5939	1363689.144	1049263.652	27.456
	2	2.2615	90.192	89.5821	1.70	BORDE_VIA	1.45	19.37	90.1920	1363687.550	1049267.227	27.393
	3	358.1945	81.794	89.5647	1.70	POSTE	1.45	15.26	81.7940	1363681.373	1049258.843	27.426
	4	356.0526	52.854	89.5306	1.70	POSTE	1.45	13.03	52.8539	1363653.959	1049249.222	27.455
	5	5.5949	60.014	90.0204	1.70	SUMIDERO	1.45	22.93	60.0140	1363657.736	1049260.693	27.313
	6	5.3025	59.200	90.0328	1.70	SUMIDERO	1.45	22.44	59.2000	1363657.181	1049259.909	27.290
	7	7.3500	59.143	89.5855	1.70	CERRAMIENT	1.45	24.52	59.1430	1363656.275	1049261.853	27.368
	8	358.0916	42.547	89.5318	1.70	BORDE_VIA	1.45	15.09	42.5469	1363643.545	1049248.385	27.432
	9	4.5230	42.264	89.5921	1.70	BORDE_VIA	1.45	21.81	42.2640	1363641.703	1049253.012	27.357
	10	15.3236	25.323	89.4650	1.70	CERRAMIENT	1.45	32.48	25.3228	1363623.827	1049250.907	27.446
	11	346.0153	30.508	89.4601	1.70	PARAMENTO	1.45	2.97	30.5077	1363632.931	1049238.888	27.474
	12	105.1501	6.370	87.3856	1.70	CERRAMIENT	1.45	122.19	6.3646	1363599.074	1049242.696	27.611
	13	251.3108	4.367	87.2702	1.70	CERRAMIENT	1.45	268.45	4.3627	1363602.347	1049232.948	27.544
	14	355.5142	20.839	89.3323	1.70	BORDE_VIA	1.45	12.80	20.8384	1363622.785	1049241.925	27.511
	15	11.5523	18.690	89.2521	1.70	BORDE_VIA	1.45	28.86	18.6891	1363618.833	1049246.329	27.538
	16	330.5329	9.009	88.2137	1.70	BORDE_VIA	1.45	347.83	9.0053	1363611.267	1049235.410	27.607
	17	16.4740	9.711	88.2517	1.70	BORDE_VIA	1.45	33.73	9.7073	1363610.538	1049242.699	27.617
	18	11.2455	5.521	87.2833	1.70	BORDE_VIA	1.45	28.35	5.5156	1363607.319	1049239.928	27.593
	19	337.4049	3.291	85.4655	1.70	BORDE_VIA	1.45	354.62	3.2821	1363605.732	1049237.001	27.591
	20	308.4123	10.005	88.3918	1.70	BORDE_VIA	1.45	325.62	10.0022	1363610.720	1049231.662	27.584
	21	272.0755	5.509	87.3119	1.70	BORDE_VIA	1.45	289.07	5.5038	1363604.263	1049232.107	27.588
	22	317.5845	11.994	89.0712	1.70	PARAMENTO	1.45	334.91	11.9926	1363613.326	1049232.225	27.534
	23	326.0158	10.892	88.4800	1.70	POSTE	1.45	342.97	10.8896	1363612.877	1049234.119	27.578
	24	102.2122	5.973	87.2835	1.70	POSTE	1.45	119.29	5.9672	1363599.545	1049242.513	27.612
	25	283.1803	20.465	89.1159	1.70	BORDE_VIA	1.45	300.24	20.4630	1363612.769	1049219.630	27.635
	26	265.2801	16.267	89.1317	1.70	BORDE_VIA	1.45	282.40	16.2655	1363605.958	1049221.423	27.570
	27	266.4552	17.189	89.0838	1.70	BORDE_VIA	1.45	283.70	17.1871	1363606.535	1049220.611	27.606
	28	265.5204	19.899	89.1434	1.70	BORDE_VIA	1.45	282.80	19.8973	1363606.874	1049217.906	27.612
	29	258.3008	17.519	89.2418	1.70	BORDE_VIA	1.45	275.44	17.5181	1363604.125	1049219.870	27.531
	30	259.2524	19.794	89.3211	1.70	BORDE_VIA	1.45	276.36	19.7934	1363604.657	1049217.637	27.510
	31	258.1733	16.666	88.5459	1.70	PARAMENTO	1.45	275.23	16.6630	1363603.983	1049220.715	27.665
	32	264.3725	21.322	89.2130	1.70	POSTE	1.45	281.56	21.3207	1363606.737	1049216.421	27.588
	33	265.5444	34.487	89.2559	1.70	POSTE	1.45	282.85	34.4853	1363610.133	1049203.687	27.691



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E11000-E1086	E1086	0.0000	53.047	89.4825	1.70	ESTACION	1.45	285.16	53.0461	1363616.341	1049186.110	27.663
	E11001	180.0025	60.665	89.4735	1.70	DELTA	1.45	285.17	60.6646	1363632.218	1049127.560	27.630
	34	0.0000	46.752	89.4826	1.70	LINEAMIENT	1.45	105.16	46.7517	1363604.111	1049231.234	27.568
	35	0.0000	40.226	89.4255	1.70	LINEAMIENT	1.45	105.16	40.2255	1363605.818	1049224.935	27.610
	36	0.0000	29.770	89.3816	1.70	LINEAMIENT	1.45	105.16	29.7694	1363608.554	1049214.843	27.599
	37	0.0000	21.459	89.1345	1.70	LINEAMIENT	1.45	105.16	21.4571	1363610.728	1049206.820	27.699
	38	359.5614	14.038	88.5023	1.70	LINEAMIENT	1.45	105.10	14.0351	1363612.684	1049199.661	27.695
	39	359.5959	6.449	87.5721	1.70	LINEAMIENT	1.45	105.16	6.4449	1363614.655	1049192.331	27.640
	40	4.4534	32.212	89.1655	1.70	PARAMENTO	1.45	109.92	32.2095	1363605.365	1049216.392	27.814
	41	311.4033	12.981	89.0857	1.70	PARAMENTO	1.45	56.84	12.9796	1363623.441	1049196.976	27.603
	42	295.0636	13.922	89.1652	1.70	PARAMENTO	1.45	40.27	13.9209	1363626.962	1049195.109	27.585
	43	284.3849	22.683	89.2116	1.70	PARAMENTO	1.45	29.81	22.6816	1363636.021	1049197.386	27.666
	44	239.3641	9.934	88.1655	1.70	CERRAMIENT	1.45	344.78	9.9295	1363625.922	1049183.503	27.708
	45	254.1954	18.252	88.5059	1.70	CERRAMIENT	1.45	359.50	18.2483	1363634.589	1049185.950	27.777
	46	250.2541	18.844	88.5525	1.70	PARAMENTO	1.45	355.59	18.8407	1363635.126	1049184.662	27.764
	47	258.1633	30.374	89.2506	1.70	PARAMENTO	1.45	3.44	30.3724	1363646.659	1049187.933	27.719
	48	277.2823	22.457	89.3935	1.70	BORDE_VIA	1.45	22.64	22.4566	1363637.068	1049194.754	27.544
	49	263.5137	22.102	89.3102	1.70	BORDE_VIA	1.45	9.02	22.1012	1363638.169	1049189.577	27.597
	50	255.4501	18.516	88.2128	1.70	POSTE	1.45	0.91	18.5084	1363634.847	1049186.406	27.941
	51	255.2002	10.669	88.3430	1.70	BORDE_VIA	1.45	0.50	10.6657	1363627.006	1049186.203	27.676
	52	292.1714	10.559	88.4130	1.70	BORDE_VIA	1.45	37.45	10.5562	1363624.721	1049192.529	27.652
	53	225.2855	8.044	88.4551	1.70	BORDE_VIA	1.45	330.65	8.0421	1363623.351	1049182.168	27.584
	54	174.4859	5.858	88.1222	1.70	BORDE_VIA	1.45	279.98	5.8551	1363617.356	1049180.344	27.594
	55	199.5748	17.002	89.2031	1.70	BORDE_VIA	1.45	305.13	17.0009	1363626.124	1049172.206	27.606
	56	177.1844	15.790	89.2926	1.70	BORDE_VIA	1.45	282.48	15.7894	1363619.752	1049170.694	27.551
	57	174.0932	13.583	89.2324	1.70	POSTE	1.45	279.32	13.5822	1363618.542	1049172.707	27.555
	58	192.1154	31.097	89.4946	1.70	BORDE_VIA	1.45	297.36	31.0969	1363630.634	1049158.493	27.503
	59	178.4818	30.329	89.5614	1.70	BORDE_VIA	1.45	283.97	30.3290	1363623.663	1049156.678	27.444
	60	185.5723	46.254	90.0304	1.70	BORDE_VIA	1.45	291.12	46.2540	1363633.008	1049142.963	27.369
	61	178.0147	39.476	89.5819	1.70	POSTE	1.45	283.19	39.4760	1363625.352	1049147.676	27.430
	62	178.4824	58.920	89.4839	1.70	POSTE	1.45	283.97	58.9197	1363630.566	1049128.933	27.605
	63	56.5111	2.861	86.0835	1.70	PARAMENTO	1.45	162.02	2.8545	1363613.626	1049186.991	27.603
E11001-E11000	E11000	0.0000	60.664	89.4630	1.70	ESTACION	1.48	285.17	60.6646	1363632.218	1049127.560	27.630
	E11002	170.1910	26.440	86.4340	1.70	DELTA	1.48	275.49	26.3969	1363634.744	1049101.284	28.919
	64	0.0000	52.221	89.5211	1.70	LINEAMIENT	1.48	105.17	52.2209	1363618.551	1049177.961	27.528
	65	0.0000	41.106	89.5136	1.70	LINEAMIENT	1.48	105.17	41.1059	1363621.460	1049167.233	27.510



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	66	0.0000	29.663	89.5447	1.70	LINEAMIENT	1.48	105.17	29.6630	1363624.455	1049156.189	27.455
	67	0.0000	15.733	89.4656	1.70	LINEAMIENT	1.48	105.17	15.7329	1363628.100	1049142.744	27.469
	68	0.0000	4.664	88.5827	1.70	LINEAMIENT	1.48	105.17	4.6633	1363630.997	1049132.061	27.493
	69	341.0310	29.660	89.4235	1.70	CERRAMIENT	1.48	86.22	29.6596	1363634.171	1049157.155	27.560
	70	337.5327	30.399	88.0810	2.50	CERRAMIENT	1.48	83.06	30.3829	1363635.888	1049157.720	27.598
	71	257.1714	19.517	90.1200	1.70	PARAMENTO	1.48	2.46	19.5169	1363651.717	1049128.397	27.341
	72	275.4847	18.199	90.1520	1.70	PARAMENTO	1.48	20.98	18.1988	1363649.210	1049134.077	27.328
	73	275.5524	19.248	90.5047	1.70	PARAMENTO	1.48	21.09	19.2459	1363650.174	1049134.487	27.125
	74	138.2834	3.788	82.4844	1.70	PARAMENTO	1.48	243.65	3.7582	1363630.549	1049124.192	27.883
	75	110.3512	8.293	86.3951	1.70	PARAMENTO	1.48	215.76	8.2789	1363625.499	1049122.722	27.892
	76	201.5034	14.409	84.3756	1.70	BORDE_VIA	1.48	307.01	14.3458	1363640.854	1049116.105	28.757
	77	174.0435	12.571	84.4549	1.70	BORDE_VIA	1.48	279.25	12.5185	1363634.230	1049115.204	28.557
	78	224.0250	20.426	85.1642	1.70	BORDE_VIA	1.48	329.22	20.3567	1363649.707	1049117.142	29.091
	79	163.5322	15.720	83.4558	1.70	BORDE_VIA	1.48	269.06	15.6270	1363631.962	1049111.935	29.117
	80	147.2906	13.046	83.0712	1.70	POSTE	1.48	252.66	12.9521	1363628.357	1049115.197	28.972
	81	142.0745	11.162	83.2436	1.70	POSTE	1.48	247.30	11.0883	1363627.939	1049117.331	28.691
E11002-E11001	E11001	0.0000	26.422	92.2451	1.70	ESTACION	1.51	275.49	26.3969	1363634.744	1049101.284	28.919
	E11003	190.5301	13.549	99.3734	1.70	DELTA	1.51	286.37	13.3582	1363638.510	1049088.468	26.460
	82	0.0000	21.008	92.1406	1.70	LINEAMIENT	1.51	95.49	20.9920	1363632.735	1049122.180	27.906
	83	0.0000	16.895	91.3320	1.70	LINEAMIENT	1.51	95.49	16.8888	1363633.128	1049118.095	28.267
	84	0.0000	13.517	90.3039	1.70	LINEAMIENT	1.51	95.49	13.5165	1363633.450	1049114.739	28.605
	85	359.5959	12.196	88.5717	1.70	LINEAMIENT	1.51	95.49	12.1940	1363633.577	1049113.422	28.948
	86	0.0000	10.716	87.4846	1.70	LINEAMIENT	1.51	95.49	10.7082	1363633.719	1049111.943	29.135
	87	0.0000	2.383	80.0420	1.70	LINEAMIENT	1.51	95.49	2.3473	1363634.519	1049103.621	29.137
	88	295.0443	8.612	87.1822	1.70	BORDE_VIA	1.51	30.57	8.6025	1363642.150	1049105.659	29.130
	89	83.1917	8.101	86.4214	1.70	ANDEN	1.51	178.81	8.0876	1363626.658	1049101.452	29.192
	90	81.1200	9.161	86.5928	1.70	ANDEN	1.51	176.69	9.1484	1363625.610	1049101.812	29.207
	91	89.0257	16.552	88.0053	1.70	ANDEN	1.51	184.54	16.5421	1363618.253	1049099.975	29.299
	92	93.2240	8.050	86.3541	1.70	ANDEN	1.51	188.87	8.0358	1363626.804	1049100.045	29.204
	93	88.2453	9.529	86.5253	1.70	ANDEN	1.51	183.91	9.5149	1363625.251	1049100.636	29.244
	94	91.5034	13.308	87.1443	1.70	ANDEN	1.51	187.33	13.2926	1363621.560	1049099.587	29.365
	95	93.4539	13.314	87.3437	1.70	VALVULA	1.51	189.25	13.3021	1363621.615	1049099.145	29.289
	96	98.3712	13.087	88.5236	1.70	POSTE	1.51	194.11	13.0845	1363622.054	1049098.094	28.982
	97	302.1138	5.916	85.5312	1.70	ANDEN	1.51	37.68	5.9008	1363639.413	1049104.891	29.150
	98	290.3428	5.408	85.4317	1.70	ANDEN	1.51	26.07	5.3929	1363639.588	1049103.654	29.129
	99	285.0615	6.332	86.2257	1.70	POSTE	1.51	20.60	6.3194	1363640.659	1049103.507	29.125



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	100	257.5809	1.834	89.4518	1.70	ARBOL	1.51	353.46	1.8340	1363636.566	1049101.075	28.734
	101	113.1801	1.969	81.5718	1.70	ARBOL	1.51	208.79	1.9496	1363633.035	1049100.345	29.001
	102	267.1538	6.040	91.2533	1.70	TERRENO	1.51	2.75	6.0381	1363640.775	1049101.574	28.575
	103	244.4837	2.877	90.2612	1.70	TERRENO	1.51	340.30	2.8769	1363637.452	1049100.314	28.704
	104	221.4648	2.853	95.1418	1.70	TERRENO	1.51	317.27	2.8411	1363636.831	1049099.356	28.465
	105	154.3615	3.233	90.2406	1.70	TERRENO	1.51	250.10	3.2329	1363633.643	1049098.244	28.703
	106	124.3332	6.323	88.1257	1.70	TERRENO	1.51	220.05	6.3199	1363629.906	1049097.218	28.923
	107	159.4130	8.824	91.5429	1.70	TERRENO	1.51	255.18	8.8191	1363632.488	1049092.758	28.432
	108	136.0626	7.309	91.0227	1.70	TERRENO	1.51	231.60	7.3078	1363630.204	1049095.557	28.593
	109	165.3123	10.701	93.5918	1.70	TERRENO	1.51	261.01	10.6751	1363633.076	1049090.740	27.981
	110	148.5033	13.420	93.4356	1.70	TERRENO	1.51	244.33	13.3915	1363628.943	1049089.214	27.852
E11003-E11002	E11002	0.0000	13.630	78.3111	1.70	ESTACION	1.44	286.37	13.3582	1363638.510	1049088.468	26.460
	E11004	179.3209	47.027	89.0811	1.70	DELTA	1.44	285.91	47.0217	1363651.400	1049043.247	26.904
	111	0.0000	12.463	77.5629	1.70	LINEAMIENT	1.44	106.37	12.1880	1363635.074	1049100.161	28.799
	112	0.0000	10.702	79.2853	1.70	LINEAMIENT	1.44	106.37	10.5222	1363635.543	1049098.563	28.149
	113	0.0000	8.660	81.5257	1.70	LINEAMIENT	1.44	106.37	8.5732	1363636.093	1049096.693	27.418
	114	0.0000	5.884	80.2806	1.70	LINEAMIENT	1.44	106.37	5.8028	1363636.874	1049094.035	27.169
	115	0.0000	2.408	76.1427	1.70	LINEAMIENT	1.44	106.37	2.3389	1363637.850	1049090.712	26.768
	116	24.5021	10.203	81.0507	1.70	TERRENO	1.44	131.21	10.0797	1363631.868	1049096.050	27.776
	117	348.1357	9.226	81.0230	1.70	TERRENO	1.44	94.61	9.1135	1363637.778	1049097.552	27.632
	118	325.0339	10.661	83.5838	1.70	TERRENO	1.44	71.44	10.6022	1363641.885	1049098.518	27.314
	119	302.1208	17.040	86.2236	1.70	TERRENO	1.44	48.58	17.0059	1363649.761	1049101.220	27.272
	120	293.2559	24.906	86.3142	1.70	TERRENO	1.44	39.81	24.8603	1363657.607	1049104.384	27.703
	121	278.5226	24.258	88.1658	1.70	TERRENO	1.44	25.25	24.2471	1363660.440	1049098.810	26.922
	122	281.4557	11.008	87.3534	1.70	TERRENO	1.44	28.14	10.9983	1363648.208	1049093.655	26.657
	123	275.4239	7.145	88.2919	1.70	TERRENO	1.44	22.09	7.1425	1363645.128	1049091.153	26.384
	124	260.1032	6.025	89.2504	1.70	TERRENO	1.44	6.55	6.0247	1363644.495	1049089.155	26.256
	125	280.3400	16.942	90.1851	1.70	TERRENO	1.44	26.94	16.9417	1363653.613	1049096.144	26.102
	126	239.4414	3.220	89.4844	1.70	TERRENO	1.44	346.11	3.2200	1363641.635	1049087.695	26.206
	127	275.2338	10.983	90.3141	1.70	TERRENO	1.44	21.77	10.9825	1363648.709	1049092.541	26.094
	128	231.1842	3.655	95.0154	1.70	TERRENO	1.44	337.69	3.6409	1363641.878	1049087.085	25.875
	129	258.5926	6.694	92.0925	1.70	TERRENO	1.44	5.37	6.6893	1363645.169	1049089.093	25.943
	130	169.4121	2.400	97.4750	1.70	TERRENO	1.44	276.06	2.3778	1363638.761	1049086.103	25.869
	131	148.3248	1.551	87.3806	1.70	TERRENO	1.44	254.92	1.5497	1363638.106	1049086.971	26.259
	132	105.2400	9.715	92.1512	1.70	TERRENO	1.44	211.77	9.7075	1363630.257	1049083.356	25.813
	133	109.3711	5.244	90.1545	1.70	TERRENO	1.44	215.99	5.2439	1363634.267	1049085.386	26.171



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	134	99.1217	9.436	89.3423	1.70	TERRENO	1.44	205.58	9.4357	1363629.999	1049084.394	26.265
	135	97.3055	16.910	90.4832	1.70	TERRENO	1.44	203.89	16.9083	1363623.050	1049081.620	25.956
	136	94.5924	16.471	89.1534	1.70	TERRENO	1.44	201.36	16.4696	1363623.172	1049082.468	26.408
	137	274.3805	18.972	88.4530	1.70	TERRENO	1.44	21.01	18.9675	1363656.216	1049095.268	26.606
	138	278.0243	18.628	90.0700	1.70	TERRENO	1.44	24.42	18.6280	1363655.471	1049096.169	26.157
	139	255.2810	10.372	88.4524	1.70	TERRENO	1.44	1.84	10.3696	1363648.874	1049088.801	26.420
	140	260.0008	9.821	91.4913	1.70	TERRENO	1.44	6.38	9.8160	1363648.265	1049089.558	25.883
	141	220.3214	6.606	92.1521	1.70	TERRENO	1.44	326.91	6.6009	1363644.040	1049084.864	25.935
	142	224.1221	6.024	93.3607	1.70	TERRENO	1.44	330.58	6.0121	1363643.746	1049085.515	25.817
	143	138.1942	7.832	90.0257	1.70	TERRENO	1.44	244.70	7.8320	1363635.163	1049081.387	26.188
	144	131.3555	6.984	93.2717	1.70	TERRENO	1.44	237.97	6.9713	1363634.813	1049082.557	25.774
	145	108.3747	16.906	90.0942	1.70	TERRENO	1.44	215.00	16.9059	1363624.662	1049078.770	26.147
	146	105.5007	16.741	91.3220	1.70	TERRENO	1.44	212.21	16.7350	1363624.350	1049079.548	25.746
	147	108.4406	23.427	91.1557	1.70	TERRENO	1.44	215.11	23.4213	1363619.350	1049074.997	25.678
	148	126.0928	22.792	90.2537	1.70	TERRENO	1.44	232.53	22.7914	1363624.645	1049070.378	26.025
	149	137.3541	22.268	90.1857	1.70	TERRENO	1.44	243.97	22.2677	1363628.737	1049068.459	26.072
	150	154.4750	29.042	89.1300	1.70	TERRENO	1.44	261.17	29.0393	1363634.053	1049059.772	26.592
	151	164.2738	30.477	89.1050	1.70	TERRENO	1.44	270.84	30.4739	1363638.954	1049057.997	26.631
	152	165.5449	31.073	89.1050	1.70	ESTRUCTURA	1.44	272.29	31.0698	1363639.750	1049057.423	26.639
	153	165.5405	31.163	87.5242	1.70	ESTRUCTURA	1.44	272.28	31.1416	1363639.746	1049057.351	27.349
	154	170.1301	37.248	88.1433	1.70	ESTRUCTURA	1.44	276.59	37.2305	1363642.783	1049051.483	27.337
	155	170.1535	37.499	88.5855	1.70	ESTRUCTURA	1.44	276.63	37.4931	1363642.841	1049051.226	26.861
	156	166.0012	31.483	87.5440	1.70	ESTRUCTURA	1.44	272.38	31.4621	1363639.815	1049057.033	27.343
	157	170.1026	37.432	88.1414	1.70	ESTRUCTURA	1.44	276.55	37.4143	1363642.776	1049051.298	27.347
	158	166.1542	31.460	89.1608	1.70	ESTRUCTURA	1.44	272.64	31.4574	1363639.956	1049057.044	26.597
	159	181.0324	30.834	88.2704	1.70	CERRAMIENT	1.44	287.43	30.8227	1363647.743	1049059.060	27.029
	160	182.5637	16.457	88.4157	1.70	CERRAMIENT	1.44	289.32	16.4528	1363643.952	1049072.941	26.569
	161	185.4810	15.719	88.4629	1.70	CERRAMIENT	1.44	292.18	15.7154	1363644.442	1049073.915	26.531
	162	237.1613	28.711	88.3035	1.70	CERRAMIENT	1.44	343.64	28.7013	1363666.049	1049080.386	26.942
	163	238.1648	28.640	88.2555	1.70	POSTE	1.44	344.65	28.6293	1363666.118	1049080.891	26.979
	164	241.5557	32.859	88.3913	1.70	CERRAMIENT	1.44	348.31	32.8499	1363670.678	1049081.810	26.967
	165	239.0903	29.186	88.0201	1.70	BORDE_VIA	1.44	345.53	29.1688	1363666.752	1049081.177	27.197
	166	268.0028	24.443	87.3728	1.70	BORDE_VIA	1.44	14.38	24.4220	1363662.166	1049094.534	27.208
	167	297.3538	27.281	84.1611	1.70	BORDE_VIA	1.44	43.97	27.1447	1363658.046	1049107.313	28.919
	168	267.4721	30.483	88.0919	1.70	BORDE_VIA	1.44	14.16	30.4672	1363668.051	1049095.923	27.176
	169	292.3832	33.954	85.1331	1.70	BORDE_VIA	1.44	39.02	33.8362	1363664.799	1049109.769	29.021



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	170	264.2251	23.367	88.5340	1.70	ARBOL	1.44	10.76	23.3627	1363661.462	1049092.828	26.646
	171	175.1608	11.868	89.2802	1.70	ARBOL	1.44	281.64	11.8675	1363640.905	1049076.844	26.305
	172	183.4206	15.012	88.5119	1.70	ARBOL	1.44	290.08	15.0090	1363643.662	1049074.371	26.495
	173	213.2203	14.510	88.5120	1.70	ARBOL	1.44	319.74	14.5071	1363649.581	1049079.093	26.485
	174	78.2500	2.986	81.5127	1.70	ARBOL	1.44	184.79	2.9559	1363635.564	1049088.221	26.618
E11004-E11003	E11003	0.0000	47.028	90.1714	1.70	ESTACION	1.48	285.91	47.0217	1363651.400	1049043.247	26.904
	E11005	187.0136	66.242	89.4953	1.70	DELTA	1.44	292.94	66.2417	1363677.216	1048982.243	26.882
	175	0.0000	44.979	90.5035	1.70	LINEAMIENT	1.48	105.91	44.9741	1363639.071	1049086.499	26.025
	176	0.0001	42.329	91.0756	1.70	LINEAMIENT	1.48	105.91	42.3207	1363639.798	1049083.947	25.850
	177	0.0000	40.784	90.4223	1.70	LINEAMIENT	1.48	105.91	40.7809	1363640.220	1049082.466	26.184
	178	0.0000	36.236	90.4335	1.70	LINEAMIENT	1.48	105.91	36.2331	1363641.467	1049078.092	26.228
	179	0.0000	30.130	90.1202	1.70	LINEAMIENT	1.48	105.91	30.1298	1363643.140	1049072.223	26.581
	180	0.0000	23.525	89.2123	1.70	LINEAMIENT	1.48	105.91	23.5235	1363644.951	1049065.870	26.951
	181	0.0000	17.843	89.0026	1.70	LINEAMIENT	1.48	105.91	17.8403	1363646.509	1049060.404	26.996
	182	0.0000	12.700	88.1440	1.70	LINEAMIENT	1.48	105.91	12.6940	1363647.920	1049055.455	27.076
	183	0.0000	7.357	87.2003	1.70	LINEAMIENT	1.48	105.91	7.3490	1363649.385	1049050.315	27.029
	184	0.0000	1.869	85.1027	1.70	LINEAMIENT	1.48	105.91	1.8624	1363650.889	1049045.038	26.844
	185	1.3136	10.093	87.0443	1.70	ESTRUCTURA	1.48	107.44	10.0799	1363648.379	1049052.864	27.201
	186	2.5715	10.389	87.1754	1.70	ESTRUCTURA	1.48	108.86	10.3775	1363648.044	1049053.067	27.177
	187	0.3801	16.741	88.2505	1.70	ESTRUCTURA	1.48	106.54	16.7346	1363646.635	1049059.289	27.149
	188	1.3803	16.509	88.2153	1.70	ESTRUCTURA	1.48	107.54	16.5023	1363646.425	1049058.982	27.158
	189	359.3721	16.945	89.5948	1.70	DES_DOMICI	1.48	105.53	16.9450	1363646.862	1049059.574	26.688
	190	12.5725	18.086	90.3226	1.70	DES_DOMICI	1.48	118.87	18.0852	1363642.669	1049059.085	26.516
	191	9.5023	7.837	93.4044	1.70	DES_DOMICI	1.48	115.75	7.8209	1363648.002	1049050.292	26.184
	192	12.1923	7.937	93.3737	1.70	DES_DOMICI	1.48	118.23	7.9211	1363647.653	1049050.226	26.185
	193	19.2209	6.738	91.2208	1.50	ESTRUCTURA	1.48	125.28	6.7361	1363647.509	1049048.746	26.726
	194	346.4445	3.233	80.4411	1.70	PARAMENTO	1.48	92.66	3.1908	1363651.252	1049046.435	27.207
	195	355.4304	13.391	88.5644	1.70	PARAMENTO	1.48	101.63	13.3887	1363648.701	1049056.361	26.933
	196	285.0551	11.710	87.2448	1.70	PARAMENTO	1.48	31.01	11.6981	1363661.426	1049049.274	27.215
	197	282.4643	12.743	88.2757	1.70	PARAMENTO	1.48	28.69	12.7384	1363662.574	1049049.363	27.028
	198	209.3409	24.223	89.0825	1.70	PARAMENTO	1.48	315.48	24.2203	1363668.669	1049026.265	27.050
	199	87.5617	6.572	88.1010	1.70	TERRENO	1.48	193.85	6.5686	1363645.022	1049041.675	26.897
	200	107.4058	7.913	89.3811	1.70	TERRENO	1.48	213.59	7.9128	1363644.809	1049038.869	26.737
E11005-E11004	E11004	0.0000	66.242	89.4231	1.70	ESTACION	1.40	292.94	66.2417	1363677.216	1048982.243	26.882
	E11006	192.3951	30.807	89.5817	1.70	DELTA	1.40	305.60	30.8070	1363695.150	1048957.194	26.601
	201	237.2641	34.502	90.2427	1.70	BORDE_VIA	1.40	350.38	34.5011	1363711.232	1048976.479	26.340



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	202	227.0640	37.184	90.0230	1.70	BORDE_VIA	1.40	340.05	37.1840	1363712.168	1048969.555	26.559
	203	241.1104	33.584	90.2249	1.70	BORDE_VIA	1.40	354.12	33.5833	1363710.622	1048978.804	26.363
	204	221.5648	28.359	90.0315	1.70	BORDE_VIA	1.40	334.88	28.3590	1363702.893	1048970.206	26.559
	205	236.3135	31.404	90.3039	1.70	BORDE_VIA	1.40	349.46	31.4028	1363708.089	1048976.501	26.306
	206	238.2027	31.252	90.3201	1.70	BV	1.40	351.28	31.2506	1363708.105	1048977.504	26.295
	207	238.0813	30.301	90.3038	1.70	BV	1.40	351.07	30.2998	1363707.148	1048977.542	26.316
	208	236.2003	30.352	90.3138	1.70	BV	1.40	349.27	30.3507	1363707.036	1048976.593	26.307
	209	238.0751	31.164	90.3748	1.70	SUMIDERO	1.40	351.07	31.1621	1363708.000	1048977.405	26.243
	210	237.0141	30.461	90.3500	1.70	SUMIDERO	1.40	349.97	30.4594	1363707.209	1048976.936	26.276
	211	235.4649	27.083	90.2723	1.70	BORDE_VIA	1.40	348.72	27.0821	1363703.774	1048976.945	26.370
	212	221.3332	27.533	90.0323	1.70	BORDE_VIA	1.40	334.50	27.5330	1363702.066	1048970.388	26.559
	213	238.2005	20.980	90.2607	1.70	BORDE_VIA	1.40	351.27	20.9794	1363697.952	1048979.060	26.426
	214	219.4303	19.407	89.5839	1.70	BORDE_VIA	1.40	332.65	19.4070	1363694.454	1048973.329	26.593
	215	244.1334	18.573	90.2546	1.70	BORDE_VIA	1.40	357.16	18.5725	1363695.765	1048981.324	26.447
	216	227.3430	13.230	89.5955	1.70	BORDE_VIA	1.40	340.51	13.2300	1363689.688	1048977.830	26.586
	217	256.2401	16.741	90.2201	1.70	BORDE_VIA	1.40	9.34	16.7407	1363693.734	1048984.959	26.479
	218	280.1006	10.149	90.1502	1.70	BORDE_VIA	1.40	33.11	10.1489	1363685.717	1048987.786	26.541
	219	269.2047	16.809	90.1502	1.70	BORDE_VIA	1.40	22.28	16.8088	1363692.769	1048988.617	26.512
	220	304.2039	9.448	90.1101	1.70	BORDE_VIA	1.40	57.28	9.4480	1363682.322	1048990.192	26.556
	221	284.2627	18.625	90.1947	1.70	BORDE_VIA	1.40	37.38	18.6247	1363692.016	1048993.550	26.479
	222	323.2520	8.686	90.1046	1.70	BORDE_VIA	1.40	76.36	8.6860	1363679.264	1048990.684	26.559
	223	281.1600	21.431	89.5916	1.70	BORDE_VIA	1.40	34.20	21.4310	1363694.940	1048994.290	26.590
	224	350.1343	7.820	90.1905	1.70	BORDE_VIA	1.40	103.17	7.8199	1363675.434	1048989.858	26.542
	225	314.5811	33.251	90.2300	1.70	BORDE_VIA	1.40	67.91	33.2503	1363689.721	1049013.052	26.363
	226	351.4810	19.899	90.0909	1.70	BORDE_VIA	1.40	104.74	19.8989	1363672.153	1049001.487	26.533
	227	339.2118	20.586	90.1039	1.70	BORDE_VIA	1.40	92.29	20.5859	1363676.392	1049002.813	26.522
	228	332.0104	22.382	90.1613	1.70	BORDE_VIA	1.40	84.95	22.3818	1363679.184	1049004.538	26.480
	229	327.2421	26.743	90.2546	1.70	BORDE_VIA	1.40	80.34	26.7422	1363681.702	1049008.607	26.385
	230	328.0559	29.635	90.2854	1.70	BORDE_VIA	1.40	81.04	29.6340	1363681.833	1049011.515	26.337
	231	329.1016	31.107	90.3330	1.70	BORDE_VIA	1.40	82.11	31.1055	1363681.486	1049013.054	26.283
	232	328.0719	49.012	90.4257	1.70	BORDE_VIA	1.40	81.06	49.0082	1363684.832	1049030.656	25.974
	233	332.1049	35.458	90.4517	1.70	BORDE_VIA	1.40	85.12	35.4549	1363680.233	1049017.570	26.119
	234	328.2552	42.520	90.5407	1.70	MANHOLE	1.40	81.37	42.5147	1363683.596	1049024.276	25.917
	235	324.2636	44.321	89.0722	1.70	MANHOLE	1.40	77.38	44.3158	1363686.898	1049025.488	27.264
	236	324.5500	43.714	90.5448	1.70	SUMIDERO	1.40	77.85	43.7084	1363686.412	1049024.973	25.889
	237	325.0734	44.014	90.5428	1.70	SUMIDERO	1.40	78.06	44.0085	1363686.318	1049025.300	25.889



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	238	327.5758	43.030	90.5428	1.70	SUMIDERO	1.40	80.90	43.0246	1363684.018	1049024.727	25.904
	239	327.4306	42.643	90.5503	1.70	SUMIDERO	1.40	80.66	42.6375	1363684.139	1049024.315	25.903
	240	329.0920	42.532	90.5538	1.70	SUMIDERO	1.40	82.09	42.5264	1363683.066	1049024.365	25.898
	241	331.0126	42.019	90.5441	1.70	SUMIDERO	1.40	83.96	42.0137	1363681.636	1049024.024	25.917
	242	330.4957	41.637	90.5406	1.70	SUMIDERO	1.40	83.77	41.6318	1363681.734	1049023.629	25.931
	243	342.0620	23.018	88.2925	1.70	CERRAMIENT	1.40	95.04	23.0100	1363675.193	1049005.164	27.192
	244	330.3010	24.404	88.3400	1.70	CERRAMIENT	1.40	83.44	24.3964	1363680.003	1049006.480	27.196
	245	329.1453	29.787	89.0100	1.70	CERRAMIENT	1.40	82.19	29.7826	1363681.265	1049011.749	27.097
	246	331.1308	32.527	89.0301	1.70	CERRAMIENT	1.40	84.16	32.5225	1363680.527	1049014.597	27.125
	247	346.5609	43.927	89.3057	1.70	CERRAMIENT	1.40	99.87	43.9254	1363669.684	1049025.518	26.957
	248	323.0700	44.187	89.0617	1.70	PARAMENTO	1.40	76.05	44.1816	1363687.864	1049025.122	27.276
	249	313.0539	34.133	89.1130	1.70	PARAMENTO	1.40	66.03	34.1296	1363691.080	1049013.430	27.067
	250	284.1048	23.331	89.2122	1.70	PARAMENTO	1.40	37.12	23.3295	1363695.819	1048996.321	26.848
	251	281.3716	26.299	89.2702	1.70	PARAMENTO	1.40	34.56	26.2978	1363698.873	1048997.161	26.838
	252	281.0648	18.697	89.2114	1.70	PARAMENTO	1.40	34.05	18.6958	1363692.706	1048992.711	26.797
	253	269.2844	17.776	89.3205	1.70	PARAMENTO	1.40	22.42	17.7754	1363693.648	1048989.022	26.730
	254	269.1639	17.023	89.3609	1.70	PARAMENTO	1.40	22.21	17.0226	1363692.975	1048988.679	26.704
	255	252.3514	17.353	89.5017	1.70	PARAMENTO	1.40	5.52	17.3529	1363694.488	1048983.914	26.635
	256	245.5254	23.283	89.1806	1.70	TANQUE	1.40	358.82	23.2813	1363700.492	1048981.763	26.870
	257	210.5454	22.841	88.5556	1.70	PARAMENTO	1.40	323.85	22.8370	1363695.656	1048968.772	27.011
	258	197.1230	25.036	89.3831	1.70	PARAMENTO	1.40	310.15	25.0355	1363693.357	1048963.106	26.742
	259	214.1444	30.262	89.1044	1.70	PARAMENTO	1.40	327.18	30.2589	1363702.645	1048965.844	27.020
	260	220.1627	32.920	90.0448	1.70	MANHOLE	1.40	333.21	32.9200	1363706.602	1048967.406	26.540
	261	218.0233	21.331	89.4150	1.70	MANHOLE	1.40	330.98	21.3307	1363695.868	1048971.895	26.699
	262	8.0948	31.257	89.0137	1.70	ARBOL	1.40	121.10	31.2525	1363661.072	1049009.004	27.117
	263	349.0407	32.390	91.3420	0.09	ARBOL	1.40	102.01	32.3778	1363670.481	1049013.913	27.312
	264	36.3640	24.135	89.5634	1.70	TERRENO	1.40	149.55	24.1350	1363656.410	1048994.475	26.610
	265	72.4513	17.529	90.2627	1.70	TERRENO	1.40	185.69	17.5285	1363659.774	1048980.505	26.451
	266	54.2045	18.326	89.5620	1.70	TERRENO	1.40	167.28	18.3260	1363659.339	1048986.277	26.605
	267	138.0226	19.839	91.1037	1.70	TERRENO	1.40	250.98	19.8348	1363670.751	1048963.492	26.178
	268	168.5350	28.038	90.3435	1.70	TERRENO	1.40	281.83	28.0366	1363682.965	1048954.803	26.304
	269	187.3045	10.749	89.1151	1.70	ARBOL	1.40	300.45	10.7479	1363682.662	1048972.978	26.736
E11006-E11005	E11005	0.0000	30.809	88.5831	1.70	ESTACION	1.42	305.60	30.8070	1363695.150	1048957.194	26.601
	E11007	253.2821	59.325	89.3544	1.70	DELTA	1.42	19.07	59.3235	1363751.216	1048976.581	26.737
	270	0.0000	19.728	88.4243	1.70	LINEAMIENT	1.42	125.60	19.7230	1363683.668	1048973.231	26.762
	271	0.0000	13.185	88.0439	1.70	LINEAMIENT	1.42	125.60	13.1776	1363687.478	1048967.909	26.761



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	272	265.1340	6.006	87.2529	1.70	PARAMENTO	1.42	30.83	5.9999	1363700.302	1048960.269	26.588
	273	88.2616	3.696	90.0628	1.70	TERRENO	1.42	214.04	3.6960	1363692.087	1048955.126	26.311
	274	171.0053	3.396	85.4633	1.70	TERRENO	1.42	296.62	3.3868	1363696.667	1048954.167	26.568
	275	87.2009	6.104	97.3958	1.70	TERRENO	1.42	212.94	6.0494	1363690.073	1048953.905	25.504
	276	119.4425	6.596	98.0917	1.70	TERRENO	1.42	245.34	6.5293	1363692.426	1048951.261	25.383
	277	120.0953	19.284	95.2948	1.70	TERRENO	1.42	245.77	19.1953	1363687.271	1048939.691	24.471
	278	108.4545	19.091	94.2233	1.70	TERRENO	1.42	234.36	19.0354	1363684.059	1048941.724	24.862
	279	216.0042	14.637	88.3933	1.70	MANHOLE	1.42	341.61	14.6330	1363709.036	1048952.579	26.661
	280	260.3536	31.060	89.3734	1.70	MANHOLE	1.42	26.19	31.0593	1363723.019	1048970.905	26.521
E11007-E11006	E11006	0.0000	59.325	89.5603	1.70	ESTACION	1.46	19.07	59.3235	1363751.216	1048976.581	26.737
	E11008	179.2959	45.860	89.5326	1.70	DELTA	1.46	18.57	45.8599	1363794.688	1048991.188	26.584
	281	0.0000	48.806	89.5531	1.70	LINEAMIENT	1.46	199.07	48.8060	1363705.090	1048960.631	26.560
	282	0.0000	30.309	89.3911	1.70	LINEAMIENT	1.46	199.07	30.3084	1363722.572	1048966.676	26.680
	283	0.0000	10.838	89.2340	1.70	LINEAMIENT	1.46	199.07	10.8374	1363740.974	1048973.039	26.611
	284	160.0405	6.671	88.5854	1.70	BORDE_VIA	1.46	359.14	6.6699	1363757.885	1048976.481	26.615
	285	170.2351	17.913	89.4630	1.70	BORDE_VIA	1.46	9.47	17.9129	1363768.885	1048979.528	26.566
	286	186.1602	21.114	89.3626	1.70	BORDE_VIA	1.46	25.34	21.1135	1363770.298	1048985.617	26.641
	287	188.5706	21.325	89.3417	1.70	BORDE_VIA	1.46	28.03	21.3244	1363770.040	1048986.600	26.656
	288	208.3803	19.923	89.4512	1.70	BORDE_VIA	1.46	47.71	19.9228	1363764.622	1048991.318	26.582
	289	257.4037	10.552	89.3529	1.70	BORDE_VIA	1.46	96.75	10.5517	1363749.976	1048987.059	26.571
	290	278.2404	3.384	86.4133	1.70	BORDE_VIA	1.46	117.47	3.3784	1363749.658	1048979.578	26.691
	291	166.4711	14.580	89.3742	1.70	MANHOLE	1.46	5.86	14.5797	1363765.720	1048978.069	26.591
	292	219.2545	7.136	88.5232	1.70	MANHOLE	1.46	58.50	7.1346	1363754.944	1048982.664	26.636
E11008-E11007	E11007	0.0000	45.860	89.3720	1.70	ESTACION	1.53	18.57	45.8599	1363794.688	1048991.188	26.584
	E11009	102.3535	14.338	89.0920	1.70	DELTA	1.53	301.17	14.3364	1363802.107	1048978.921	26.626
	293	343.3639	7.270	87.3955	1.70	POSTE	1.53	182.18	7.2640	1363787.429	1048990.911	26.711
	294	235.2849	3.070	87.0723	1.70	MANHOLE	1.53	74.05	3.0661	1363795.530	1048994.136	26.569
E11009-E11008	E11008	0.0000	14.337	89.2257	1.70	ESTACION	1.49	301.17	14.3364	1363802.107	1048978.921	26.626
	E12027	166.2022	93.832	89.5437	1.70	DELTA	1.49	287.51	93.8319	1363830.332	1048889.435	26.563
E12027-E11009	E11009	0.0000	93.832	89.5025	1.70	ESTACION	1.49	287.51	93.8319	1363830.332	1048889.435	26.563
	E12026	117.5742	56.216	89.3801	1.70	DELTA	1.49	225.47	56.2149	1363790.908	1048849.362	26.712



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1077		0.0000				ESTACION		0.0000		1363477.466	1049626.296	28.204
E1079	E1077	0.0000	36.043	89.4627	1.70	ESTACION	1.50	25.9133		1363509.893	1049642.051	28.335
	E11000	92.0531	65.295	89.4754	1.70	DELTA	1.50	298.0052	65.295	1363540.552	1049584.402	28.360
	1	23.4815	6.798	84.4022	1.70	PARAMENTO	1.50	229.7174	6.769	1363505.517	1049636.888	28.762
	2	12.4852	14.981	87.3101	1.70	PARAMENTO	1.50	218.7277	14.967	1363498.217	1049632.688	28.779
	3	63.1612	12.339	87.3102	1.70	PARAMENTO	1.50	269.1833	12.327	1363509.717	1049629.725	28.665
	4	344.4055	25.392	88.5152	1.70	PARAMENTO	1.50	190.5952	25.387	1363484.939	1049637.384	28.634
	5	310.3225	10.608	85.4512	1.70	PARAMENTO	1.50	156.4535	10.579	1363500.195	1049646.278	28.916
	6	297.3337	15.726	87.4155	1.70	PARAMENTO	1.50	143.4735	15.713	1363497.266	1049651.404	28.762
	7	306.5438	8.116	87.4204	1.70	BORDE_VIA	1.50	152.8238	8.109	1363502.679	1049645.755	28.456
	8	5.4047	4.070	85.0624	1.70	BORDE_VIA	1.50	211.5930	4.055	1363506.439	1049639.927	28.478
	9	91.3833	7.536	88.1340	1.70	BORDE_VIA	1.50	297.5558	7.532	1363513.378	1049635.373	28.363
	10	291.4551	8.314	88.4428	1.70	BORDE_VIA	1.50	137.6774	8.312	1363503.747	1049647.648	28.313
	11	277.3228	11.835	84.1138	2.60	BORDE_VIA	1.50	123.4544	11.774	1363503.402	1049651.875	28.428
	12	269.1619	8.103	88.2248	1.70	BORDE_VIA	1.50	115.1852	8.100	1363506.446	1049649.381	28.359
	13	285.4609	2.630	84.4759	1.70	MANHOLE	1.50	131.6824	2.619	1363508.151	1049644.008	28.369
	14	197.2425	7.815	86.4201	1.70	BORDE_VIA	1.50	43.3202	7.802	1363515.569	1049647.404	28.580
	15	80.4607	27.818	89.1752	1.70	CERRAMIENT	1.50	286.6819	27.816	1363517.878	1049615.406	28.471
	16	85.5020	27.107	89.1547	1.70	CERRAMIENT	1.50	291.7521	27.105	1363519.938	1049616.877	28.479
	17	91.0907	30.092	89.1821	1.70	POSTE	1.50	297.0652	30.090	1363523.584	1049615.257	28.495
E11000-E1079	E1079	0.0000	65.296	89.5230	1.70	ESTACION	1.47	298.0052	65.295	1363540.552	1049584.402	28.360
	E13000	181.2348	39.863	89.4848	1.70	DELTA	1.47	299.4019	39.863	1363560.122	1049549.674	28.258
	18	4.4231	27.026	89.2922	1.70	CERRAMIENT	1.47	122.7138	27.025	1363525.947	1049607.141	28.369
	19	10.3945	26.589	89.2706	1.70	CERRAMIENT	1.47	128.6677	26.588	1363523.940	1049605.162	28.383
	20	12.3228	21.935	89.1531	1.70	CERRAMIENT	1.47	130.5463	21.933	1363526.294	1049601.069	28.412
	21	40.0855	6.248	87.2956	1.70	CERRAMIENT	1.47	158.1538	6.242	1363534.758	1049586.725	28.401
	22	99.0700	3.894	86.2124	1.70	CERRAMIENT	1.47	217.1219	3.886	1363537.454	1049582.057	28.376
	23	49.1249	23.179	89.1526	1.70	PARAMENTO	1.47	167.2188	23.177	1363517.949	1049589.530	28.429
	24	33.4523	13.200	88.3950	1.70	PARAMENTO	1.47	151.7616	13.196	1363528.926	1049590.646	28.436
	25	114.2628	13.200	86.1932	1.70	PARAMENTO	1.47	232.4463	13.173	1363532.523	1049573.959	28.974
	26	103.3429	17.816	89.1304	1.70	PARAMENTO	1.47	221.5799	17.814	1363527.226	1049572.580	28.371
	27	56.3900	20.271	85.5534	2.90	PARAMENTO	1.47	174.6552	20.220	1363520.420	1049586.286	28.368
	28	91.1844	17.939	88.3148	1.70	PARAMENTO	1.47	209.3174	17.933	1363524.916	1049575.622	28.588
	29	66.5337	18.293	84.5119	2.90	PARAMENTO	1.47	184.8988	18.219	1363522.399	1049582.847	28.569
	30	68.4029	19.515	85.0628	2.90	PARAMENTO	1.47	186.6799	19.444	1363521.240	1049582.141	28.593
	31	77.3929	18.582	84.5039	2.90	PARAMENTO	1.47	195.6633	18.507	1363522.733	1049579.406	28.598



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	32	78.2309	17.785	84.3948	2.90	PARAMENTO	1.47	196.3910	17.708	1363523.564	1049579.405	28.582
	33	78.4535	17.702	85.1711	2.90	PARAMENTO	1.47	196.7649	17.642	1363523.660	1049579.314	28.383
	34	89.4007	17.231	89.0840	1.70	PARAMENTO	1.47	207.6738	17.229	1363525.294	1049576.401	28.386
	35	338.3750	7.692	89.4538	1.70	BORDE_VIA	1.47	96.6358	7.692	1363539.663	1049592.043	28.160
	36	235.4811	2.559	86.4458	1.70	BORDE_VIA	1.47	353.8083	2.555	1363543.092	1049584.127	28.273
	37	309.4415	12.569	88.5508	1.70	BORDE_VIA	1.47	67.7427	12.567	1363545.312	1049596.033	28.365
	38	194.5211	9.160	89.1745	1.70	BORDE_VIA	1.47	312.8749	9.159	1363546.784	1049577.690	28.241
	39	186.3909	9.950	88.4830	1.70	POSTE	1.47	304.6577	9.948	1363546.209	1049576.220	28.335
	40	173.4754	10.127	88.4146	1.70	ANDEN	1.47	291.8035	10.124	1363544.313	1049575.002	28.359
	41	91.4332	1.504	80.5603	1.70	ANDEN	1.47	209.7308	1.485	1363539.262	1049583.666	28.365
	42	93.0039	3.660	86.0717	1.70	ANDEN	1.47	211.0160	3.652	1363537.423	1049582.521	28.376
	43	2.0320	5.033	87.1717	1.70	ANDEN	1.47	120.0608	5.027	1363538.034	1049588.754	28.366
	44	2.2445	9.029	88.2940	1.70	ANDEN	1.47	120.4177	9.026	1363535.982	1049592.186	28.365
	45	205.1003	25.425	89.4112	1.70	BORDE_VIA	1.47	323.1727	25.425	1363560.903	1049569.163	28.267
	46	190.2313	23.461	89.5845	1.70	BORDE_VIA	1.47	308.3921	23.461	1363555.122	1049566.014	28.137
	47	240.1503	2.352	85.5438	1.70	ANDEN	1.47	358.2560	2.346	1363542.897	1049584.331	28.296
	48	344.4446	6.746	89.3132	1.70	ANDEN	1.47	102.7513	6.746	1363539.063	1049590.982	28.184
	49	1.4045	8.391	88.2955	1.70	ANDEN	1.47	119.6844	8.388	1363536.398	1049591.690	28.348
	50	154.0429	8.195	80.4545	2.90	CERRAMIENT	1.47	272.0799	8.089	1363540.846	1049576.319	28.244
E13000-E11000	E11000	0.0000	39.863	89.3210	1.70	ESTACION	1.47	299.4019	39.863	1363560.122	1049549.674	28.258
	E11001	73.4111	37.440	90.1828	1.70	DELTA	1.47	193.0883	37.439	1363523.655	1049541.196	27.823
	E13001	181.1958	73.631	90.0043	1.70	DELTA	1.47	300.7346	73.631	1363597.752	1049486.385	28.009
	51	64.4958	3.568	85.4755	1.70	CERRAMIENT	1.47	184.2346	3.558	1363556.573	1049549.411	28.286
	52	124.1827	3.868	86.3007	1.70	CERRAMIENT	1.47	243.7094	3.861	1363558.412	1049546.213	28.260
	53	153.3703	7.110	88.1144	1.70	CERRAMIENT	1.47	273.0194	7.106	1363560.496	1049542.577	28.248
	54	202.1220	6.250	90.4928	1.70	SUMIDERO	1.47	321.6074	6.249	1363565.020	1049545.793	27.934
	55	199.0649	5.497	90.5343	1.70	SUMIDERO	1.47	318.5155	5.496	1363564.240	1049546.033	27.938
	56	201.5221	6.566	88.2919	1.70	ANDEN	1.47	321.2744	6.564	1363565.243	1049545.568	28.197
	57	181.3648	9.328	88.1530	1.70	CAMA_TELEF	1.47	301.0152	9.324	1363564.926	1049541.683	28.308
	58	171.4735	6.681	87.5845	1.70	ANDEN	1.47	291.1949	6.677	1363562.536	1049543.449	28.260
	59	174.0043	10.123	89.4614	1.50	ANDEN	1.47	293.4138	10.123	1363564.145	1049540.385	28.265
	60	12.4658	4.345	86.3712	1.70	ANDEN	1.47	132.1846	4.337	1363557.209	1049552.888	28.280
	61	330.0738	4.683	87.1739	1.70	ANDEN	1.47	89.5291	4.678	1363560.161	1049554.352	28.245
	62	212.0015	6.812	89.4924	1.70	BORDE_VIA	1.47	331.4060	6.812	1363566.103	1049546.414	28.045
	63	242.3445	12.195	89.1410	1.70	BORDE_VIA	1.47	1.9810	12.194	1363572.309	1049550.096	28.187
	64	304.5519	12.641	89.0505	1.70	BORDE_VIA	1.47	64.3238	12.639	1363565.599	1049561.065	28.226



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	65	26.4120	36.601	89.2226	1.70	PARAMENTO	1.47	146.0908	36.599	1363529.748	1049570.092	28.424
	66	31.5932	38.530	89.2445	1.70	PARAMENTO	1.47	151.3941	38.528	1363526.297	1049568.121	28.419
	67	115.1322	15.730	90.2959	1.70	CERRAMIENT	1.47	234.6246	15.729	1363551.016	1049536.849	27.887
	68	126.5957	7.717	90.2319	1.70	ARBOL	1.47	246.4010	7.717	1363557.033	1049542.603	27.972
	69	112.0458	11.287	89.1448	1.70	ARBOL	1.47	231.4846	11.286	1363553.094	1049540.843	28.172
E11001-E13000	E13000	0.0000	37.444	88.5558	1.70	ESTACION	1.43	193.0883	37.439	1363523.655	1049541.196	27.823
	E11002	190.2041	29.242	89.2543	1.70	DELTA	1.43	203.4330	29.241	1363496.826	1049529.568	27.846
	70	73.2103	28.461	87.1739	1.70	PARAMENTO	1.43	86.4391	28.429	1363525.421	1049569.570	28.898
	71	160.3418	14.587	87.5223	1.70	PARAMENTO	1.43	173.6599	14.577	1363509.167	1049542.806	28.095
	72	179.1703	28.482	88.4411	1.70	PARAMENTO	1.43	192.3724	28.475	1363495.841	1049535.095	28.182
	73	183.1447	36.790	89.2724	1.70	CERRAMIENT	1.43	196.3346	36.788	1363488.352	1049530.849	27.903
	74	41.4458	3.153	85.2520	1.70	ARBOL	1.43	54.8377	3.143	1363525.465	1049543.765	27.806
	75	47.0058	12.466	86.2821	1.70	ARBOL	1.43	60.1044	12.442	1363529.857	1049551.983	28.321
	76	35.0957	21.735	88.3140	1.70	ARBOL	1.43	48.2541	21.728	1363538.122	1049557.407	28.112
	77	23.5910	25.909	89.0522	1.70	C_VIVA	1.43	37.0744	25.906	1363544.324	1049556.813	27.966
	78	2.4832	19.077	88.3710	1.70	C_VIVA	1.43	15.8971	19.071	1363541.997	1049546.420	28.014
	79	358.4922	17.728	88.4840	1.70	C_VIVA	1.43	11.9110	17.724	1363540.998	1049544.854	27.922
	80	323.5953	17.465	86.0227	2.60	ARBOL	1.43	337.0863	17.423	1363539.704	1049534.412	27.860
	81	316.5730	15.690	85.2023	2.60	ARBOL	1.43	330.0466	15.638	1363537.205	1049533.388	27.929
	82	203.1710	20.656	89.4930	1.70	C_VIVA	1.43	216.3744	20.656	1363507.024	1049528.946	27.617
E11002-E11001	E11001	0.0000	29.237	89.3632	1.70	ESTACION	1.46	203.4330	29.241	1363496.826	1049529.568	27.846
	E11003	126.3435	15.302	89.0715	1.70	DELTA	1.46	150.0094	15.300	1363483.575	1049537.216	27.838
	83	216.4325	7.848	86.4744	1.70	PARAMENTO	1.46	240.1566	7.836	1363492.927	1049522.771	28.042
	84	227.1337	13.960	88.4739	1.70	PARAMENTO	1.46	250.6599	13.957	1363492.204	1049516.398	27.897
	85	220.5700	16.203	88.2309	1.70	PARAMENTO	1.46	244.3830	16.197	1363489.824	1049514.963	28.060
	86	231.4204	20.632	89.4556	1.70	ARBOL	1.46	255.1341	20.632	1363491.533	1049509.626	27.688
	87	253.1703	22.192	89.5436	1.70	CERRAMIENT	1.46	276.7171	22.192	1363499.422	1049507.528	27.638
	88	222.3515	34.724	89.3543	1.70	CERRAMIENT	1.46	246.0205	34.723	1363482.714	1049497.841	27.849
	89	281.5055	12.663	89.4115	1.70	ARBOL	1.46	305.2816	12.663	1363504.140	1049519.231	27.673
	90	151.4112	2.472	81.2031	1.70	ARBOL	1.46	175.1196	2.444	1363494.391	1049529.776	27.976
	91	91.1806	20.417	89.0648	1.70	PARAMENTO	1.46	114.7346	20.415	1363488.284	1049548.109	27.920
	92	106.2629	19.056	89.1102	1.70	ESCALERA	1.46	129.8744	19.054	1363484.611	1049544.191	27.875
	93	106.2451	19.067	88.5306	1.70	ESCALERA	1.46	129.8471	19.063	1363484.612	1049544.204	27.975
	94	106.1718	19.345	88.5306	1.70	ESCALERA	1.46	129.7213	19.341	1363484.466	1049544.444	27.980
	95	106.1517	19.379	88.2802	1.70	ESCALERA	1.46	129.6877	19.372	1363484.455	1049544.475	28.122
	96	106.0656	19.652	88.2855	1.70	ESCALERA	1.46	129.5485	19.645	1363484.318	1049544.716	28.124



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	97	106.0349	19.689	88.0250	1.70	ESCALERA	1.46	129.4966	19.678	1363484.311	1049544.752	28.275
	98	106.0037	19.950	88.0429	1.70	ESCALERA	1.46	129.4433	19.939	1363484.159	1049544.965	28.274
	99	105.5720	19.982	87.4012	1.70	ESCALERA	1.46	129.3885	19.965	1363484.157	1049544.998	28.416
	100	105.4917	20.251	87.4012	1.70	ESCALERA	1.46	129.2544	20.234	1363484.023	1049545.236	28.427
	101	105.4946	20.281	87.1642	1.70	ESCALERA	1.46	129.2624	20.258	1363484.005	1049545.253	28.567
	102	105.4802	20.534	87.1642	1.70	ESCALERA	1.46	129.2335	20.511	1363483.854	1049545.455	28.579
	103	110.4835	19.431	89.2546	1.70	ESCALERA	1.46	134.2427	19.430	1363483.270	1049543.487	27.797
	104	110.4737	19.451	88.5408	1.70	ESCALERA	1.46	134.2266	19.447	1363483.262	1049543.503	27.976
	105	110.3701	19.681	88.5408	1.70	ESCALERA	1.46	134.0499	19.677	1363483.145	1049543.710	27.981
	106	110.3322	19.748	88.3031	1.70	ESCALERA	1.46	133.9891	19.741	1363483.116	1049543.771	28.118
	107	110.2211	19.989	88.3109	1.70	ESCALERA	1.46	133.8027	19.982	1363482.995	1049543.989	28.120
	108	110.2103	20.033	88.0555	1.70	ESCALERA	1.46	133.7838	20.022	1363482.972	1049544.023	28.268
	109	110.1244	20.269	88.0555	1.70	ESCALERA	1.46	133.6452	20.258	1363482.844	1049544.227	28.276
	110	110.1518	20.324	87.4235	1.70	ESCALERA	1.46	133.6880	20.308	1363482.799	1049544.252	28.416
	111	109.5302	20.564	87.4235	1.70	ESCALERA	1.46	133.3169	20.548	1363482.730	1049544.517	28.425
	112	109.4542	20.853	87.1941	1.70	ESCALERA	1.46	133.1946	20.830	1363482.568	1049544.754	28.576
	113	110.2359	19.992	89.2001	1.70	ESCALERA	1.46	133.8327	19.991	1363482.982	1049543.988	27.836
	114	110.2206	20.280	89.2001	1.70	ESCALERA	1.46	133.8013	20.279	1363482.790	1049544.204	27.839
	115	110.1605	20.307	88.5158	1.70	ESCALERA	1.46	133.7010	20.303	1363482.799	1049544.246	28.005
	116	110.0436	20.586	88.5304	1.70	ESCALERA	1.46	133.5096	20.582	1363482.656	1049544.495	28.004
	117	110.0405	20.603	88.2311	1.70	ESCALERA	1.46	133.5010	20.595	1363482.649	1049544.506	28.184
	118	109.4932	20.868	88.2417	1.70	ESCALERA	1.46	133.2585	20.860	1363482.531	1049544.759	28.185
	119	112.0509	21.154	87.5821	1.70	PARAMENTO	1.46	135.5188	21.141	1363481.743	1049544.380	28.352
	120	129.0059	12.599	88.2822	1.70	PARAMENTO	1.46	152.4494	12.595	1363485.660	1049535.393	27.939
	121	129.0736	23.979	88.1459	1.70	PARAMENTO	1.46	152.5596	23.968	1363475.555	1049540.613	28.336
E11003-E11002	E11002	0.0000	15.303	89.0934	1.70	ESTACION	1.47	150.0094	15.300	1363483.575	1049537.216	27.838
	E11004	235.3100	24.138	90.0149	1.70	DELTA	1.47	205.5260	24.138	1363461.793	1049526.814	27.598
	122	189.5447	7.980	88.4709	1.70	ESCALERA	1.47	159.9224	7.978	1363476.081	1049539.954	27.779
	123	188.4016	8.176	88.4900	1.70	ESCALERA	1.47	158.6805	8.174	1363475.960	1049540.187	27.779
	124	188.4131	8.215	87.3416	1.70	ESCALERA	1.47	158.7013	8.208	1363475.928	1049540.197	27.959
	125	187.3630	8.413	87.3732	1.70	ESCALERA	1.47	157.6177	8.406	1363475.802	1049540.416	27.959
	126	187.2457	8.465	86.2410	1.70	ESCALERA	1.47	157.4252	8.448	1363475.774	1049540.459	28.142
	127	186.1214	8.645	86.2803	1.70	ESCALERA	1.47	156.2133	8.629	1363475.679	1049540.696	28.143
	128	186.0346	8.691	85.1429	1.70	ESCALERA	1.47	156.0721	8.661	1363475.658	1049540.728	28.331
	129	148.3154	22.087	88.0906	1.70	PARAMENTO	1.47	118.5410	22.076	1363473.027	1049556.608	28.323
	130	163.3054	22.621	88.1009	1.70	PARAMENTO	1.47	133.5244	22.609	1363468.004	1049553.609	28.333



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	131	247.5433	18.997	88.5604	1.70	PARAMENTO	1.47	217.9185	18.994	1363468.591	1049525.543	27.964
	132	222.5052	7.097	88.5953	1.70	ARBOL	1.47	192.8571	7.096	1363476.657	1049535.637	27.734
	133	246.2247	18.865	88.5718	1.70	CAMINO	1.47	216.3891	18.862	1363468.391	1049526.025	27.954
	134	247.2107	16.534	88.4841	1.70	CAMINO	1.47	217.3613	16.530	1363470.436	1049527.184	27.953
	135	232.4312	16.575	89.2654	1.50	CAMINO	1.47	202.7294	16.574	1363468.288	1049530.812	27.970
	136	230.4611	13.528	89.3226	1.50	CAMINO	1.47	200.7791	13.528	1363470.927	1049532.416	27.919
	137	246.4023	13.374	88.4014	1.70	CAMINO	1.47	216.6824	13.370	1363472.852	1049529.228	27.921
	138	263.3507	3.874	84.4248	1.70	CAMINO	1.47	233.5946	3.858	1363481.285	1049534.111	27.967
	139	270.2507	4.114	85.1141	1.70	CAMINO	1.47	240.4280	4.100	1363481.551	1049533.650	27.955
E11004-E11003	E11003	0.0000	24.149	88.5050	1.70	ESTACION	1.44	205.5260	24.138	1363461.793	1049526.814	27.598
	E11005	185.5159	24.430	89.0343	1.70	DELTA	1.44	211.3924	24.427	1363440.942	1049514.090	27.737
	140	290.3341	18.687	87.5144	1.70	PARAMENTO	1.44	316.0874	18.674	1363475.245	1049513.862	28.034
	141	279.2404	18.184	89.3127	1.50	PARAMENTO	1.44	304.9271	18.183	1363472.203	1049511.906	27.688
	142	278.2408	23.636	89.5203	1.60	PARAMENTO	1.44	303.9283	23.636	1363474.985	1049507.202	27.491
	143	293.0126	7.768	80.4423	2.60	TANQUE	1.44	318.5499	7.667	1363467.539	1049521.739	27.687
	144	320.5021	6.387	78.1834	2.60	TANQUE	1.44	346.3652	6.255	1363467.871	1049525.340	27.731
	145	303.5436	5.121	75.4001	2.60	TANQUE	1.44	329.4360	4.962	1363466.065	1049524.291	27.704
	146	231.1229	2.892	85.5128	1.70	ARBOL	1.44	256.7341	2.884	1363461.131	1049524.006	27.546
	147	36.4919	8.171	87.5409	1.70	ARBOL	1.44	62.3480	8.166	1363465.582	1049534.047	27.636
	148	23.1319	9.647	86.3155	1.70	CAMINO	1.44	48.7480	9.629	1363468.142	1049534.053	27.920
	149	23.1511	11.362	86.5704	1.70	CAMINO	1.44	48.7791	11.346	1363469.269	1049535.348	27.941
	150	289.5200	25.442	81.5915	5.00	PARAMENTO	1.44	315.3927	25.194	1363479.729	1049509.122	27.583
	151	286.1056	31.653	83.3647	5.00	PARAMENTO	1.44	311.7083	31.457	1363482.722	1049503.330	27.558
	152	113.5904	25.222	89.0102	1.70	PARAMENTO	1.44	139.5105	25.218	1363442.614	1049543.188	27.769
E11005-E11004	E11004	0.0000	24.427	89.4306	1.70	ESTACION	1.43	211.3924	24.427	1363440.942	1049514.090	27.737
	E11006	93.2009	38.569	92.0147	1.70	DELTA	1.43	124.7283	38.545	1363418.983	1049545.769	26.104
	E11007	236.4514	27.202	96.0247	1.70	DELTA	1.43	268.1463	27.051	1363440.067	1049487.054	24.604
	153	348.2132	5.420	106.1421	0.09	PARAMENTO	1.43	19.7513	5.204	1363445.839	1049515.849	27.569
	154	350.4802	7.411	101.4031	0.09	PARAMENTO	1.43	22.1930	7.258	1363447.662	1049516.832	27.585
	155	327.1210	5.887	90.4618	1.50	PARAMENTO	1.43	358.5952	5.886	1363446.826	1049513.946	27.590
	156	253.5714	4.210	93.2018	1.50	ARBOL	1.43	285.3463	4.203	1363442.054	1049510.037	27.424
	157	82.3935	12.711	90.0619	1.70	TERRENO	1.43	114.0521	12.711	1363435.761	1049525.698	27.446
	158	91.5348	9.906	91.2856	1.70	TERRENO	1.43	123.2891	9.903	1363435.506	1049522.368	27.213
	159	80.2816	9.361	88.5134	1.70	TERRENO	1.43	111.8635	9.359	1363437.456	1049522.776	27.656
	160	111.1257	5.863	94.1143	1.70	TERRENO	1.43	142.6083	5.847	1363436.296	1049517.641	27.041
	161	89.4822	4.852	91.0923	1.70	TERRENO	1.43	121.1985	4.851	1363438.429	1049518.240	27.372



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	162	184.0103	2.010	99.4748	1.70	TERRENO	1.43	215.4099	1.981	1363439.327	1049512.943	27.128
	163	259.5615	3.984	90.3117	1.70	TERRENO	1.43	291.3299	3.984	1363442.391	1049510.379	27.433
	164	261.4236	5.937	89.2402	1.70	TERRENO	1.43	293.1024	5.937	1363443.271	1049508.630	27.532
	165	261.2041	7.606	91.5735	1.70	TERRENO	1.43	292.7371	7.602	1363443.880	1049507.079	27.209
	166	106.5334	29.125	93.0717	1.70	TERRENO	1.43	138.2852	29.082	1363419.233	1049533.442	25.884
	167	114.0950	26.605	94.0619	1.70	TERRENO	1.43	145.5563	26.537	1363419.057	1049529.099	25.565
	168	130.5531	20.623	95.2954	1.70	TERRENO	1.43	162.3177	20.528	1363421.383	1049520.325	25.494
	169	118.2038	23.033	94.0317	1.70	ARBOL	1.43	149.7363	22.975	1363421.097	1049525.669	25.841
	170	163.3223	17.462	98.1152	1.70	TERRENO	1.43	194.9321	17.284	1363424.242	1049509.637	24.980
	171	183.3748	16.961	98.2623	1.70	TERRENO	1.43	215.0224	16.777	1363427.202	1049504.462	24.980
	172	207.4153	19.726	97.3107	1.70	TERRENO	1.43	239.0905	19.556	1363430.896	1049497.311	24.888
	173	196.0810	15.809	98.1432	1.70	TERRENO	1.43	227.5285	15.646	1363430.377	1049502.550	25.203
	174	177.1732	4.903	114.0137	1.70	TERRENO	1.43	208.6846	4.478	1363437.013	1049511.941	25.473
	175	106.0224	8.333	101.2141	1.70	TERRENO	1.43	137.4324	8.170	1363434.925	1049519.617	25.828
	176	139.0448	5.635	108.5222	1.70	TERRENO	1.43	170.4724	5.332	1363435.683	1049514.973	25.647
	177	63.3336	8.614	89.0246	1.70	ARBOL	1.43	94.9524	8.613	1363440.198	1049522.671	27.613
E11007-E11005	E11005	0.0000	27.269	82.5226	1.70	ESTACION	1.43	268.1463	27.051	1363440.067	1049487.054	24.604
	178	189.0254	17.533	104.2000	1.70	RIO	1.43	277.1946	16.987	1363442.194	1049470.200	19.998
	179	161.1104	12.912	109.1903	1.70	RIO	1.43	249.3308	12.185	1363435.766	1049475.653	20.067
	180	133.5712	10.350	114.2654	1.70	RIO	1.43	222.0996	9.422	1363433.076	1049480.737	20.055
	181	94.3227	11.707	110.4044	1.70	RIO	1.43	182.6871	10.953	1363429.126	1049486.540	20.204
	182	91.4834	9.233	110.1815	1.70	TERRENO	1.43	179.9558	8.659	1363431.407	1049487.060	21.134
	183	122.5916	7.540	114.0901	1.70	TERRENO	1.43	211.1341	6.880	1363434.178	1049483.496	21.253
	184	93.0227	6.775	106.5349	1.70	TERRENO	1.43	181.1871	6.483	1363433.585	1049486.919	22.369
	185	129.2046	5.045	117.0951	1.70	TERRENO	1.43	217.4924	4.489	1363436.505	1049484.322	22.035
	186	92.3610	5.059	105.1133	1.70	TERRENO	1.43	180.7491	4.882	1363435.185	1049486.990	23.013
	187	127.3958	3.981	119.1516	1.70	TERRENO	1.43	215.8124	3.473	1363437.250	1049485.021	22.393
	188	92.1448	4.506	97.1346	1.70	TERRENO	1.43	180.3930	4.470	1363435.597	1049487.023	23.771
	189	134.0119	2.025	111.4141	1.70	TERRENO	1.43	222.1683	1.882	1363438.672	1049485.791	23.590
	190	66.1549	5.455	89.1247	1.70	TERRENO	1.43	154.4099	5.454	1363435.147	1049489.410	24.413
	191	66.3259	3.021	104.5956	1.70	TERRENO	1.43	154.6960	2.918	1363437.429	1049488.301	23.556
	192	213.3503	4.089	91.4614	1.70	TERRENO	1.43	301.7305	4.087	1363442.216	1049483.577	24.212
	193	219.4701	7.934	90.4138	1.70	TERRENO	1.43	307.9299	7.933	1363444.943	1049480.796	24.242
	194	229.3545	13.666	87.5420	1.70	TERRENO	1.43	317.7421	13.657	1363450.174	1049477.870	24.838
	195	255.1359	15.227	86.0104	1.70	TERRENO	1.43	343.3794	15.190	1363454.622	1049482.709	25.396
	196	285.4248	14.277	80.4017	1.70	TERRENO	1.43	13.8596	14.088	1363453.745	1049490.428	26.653



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	197	285.3914	11.268	84.1255	1.70	TERRENO	1.43	13.8002	11.211	1363450.954	1049489.728	25.474
	198	311.0035	10.885	84.1503	1.70	TERRENO	1.43	39.1560	10.830	1363448.465	1049493.892	25.429
	199	259.3838	18.699	82.0245	1.70	LINDERO	1.43	347.7902	18.519	1363458.167	1049483.137	26.926
	200	329.5454	3.180	78.5231	1.70	ARBOL	1.43	58.0613	3.120	1363441.717	1049489.702	24.952
E11006-E11005	E11005	0.0000	38.591	87.1039	1.70	ESTACION	1.42	124.7283	38.545	1363418.983	1049545.769	26.104
	E11008	149.5251	25.747	89.2311	1.70	DELTA	1.42	94.6091	25.746	1363416.914	1049571.431	26.101
	201	43.3404	19.081	84.3008	1.70	PARAMENTO	1.42	348.2960	18.993	1363437.582	1049541.916	27.654
	202	62.2146	22.714	82.5613	2.60	PARAMENTO	1.42	7.0910	22.542	1363441.352	1049548.551	27.719
	203	39.5512	14.934	82.2319	1.70	TERRENO	1.42	344.6483	14.802	1363433.257	1049541.850	27.804
	204	40.2137	13.810	83.4030	1.70	TERRENO	1.42	345.0885	13.726	1363432.247	1049542.237	27.347
	205	56.4613	13.553	84.0051	1.70	TERRENO	1.42	1.4985	13.479	1363432.458	1049546.121	27.239
	206	59.3304	13.030	84.0558	1.70	ARBOL	1.42	4.2794	12.961	1363431.908	1049546.736	27.165
	207	55.3203	12.852	86.4301	1.70	TERRENO	1.42	0.2624	12.831	1363431.814	1049545.827	26.562
	208	55.2518	11.725	88.3145	1.70	TERRENO	1.42	0.1499	11.721	1363430.704	1049545.799	26.127
	209	87.1116	11.942	88.0229	1.70	TERRENO	1.42	31.9160	11.935	1363429.114	1049552.078	26.234
	210	89.4346	16.416	83.2055	1.70	TERRENO	1.42	34.4577	16.306	1363432.428	1049554.994	27.727
	211	303.0108	10.230	96.1846	1.70	TERRENO	1.42	247.7471	10.168	1363415.133	1049536.358	24.701
	212	303.5834	11.793	98.2213	1.70	TERRENO	1.42	248.7044	11.667	1363414.746	1049534.898	24.109
	213	267.3759	7.902	102.5556	1.70	TERRENO	1.42	212.3613	7.702	1363412.478	1049541.646	24.057
	214	270.5053	4.778	95.4321	1.70	TERRENO	1.42	215.5763	4.754	1363415.116	1049543.003	25.349
	215	202.1753	5.329	88.3907	1.70	TERRENO	1.42	147.0263	5.328	1363414.514	1049548.668	25.951
	216	201.3423	4.678	87.4919	1.70	LINDERO	1.42	146.3013	4.675	1363415.094	1049548.362	26.003
	217	349.0115	8.797	88.1823	1.70	LINDERO	1.42	293.7491	8.793	1363422.525	1049537.720	26.086
	218	244.5047	2.016	86.0843	1.70	ARBOL	1.42	189.5746	2.011	1363417.000	1049545.434	25.961
	219	172.2217	12.358	88.3634	1.70	TERRENO	1.42	117.0996	12.354	1363413.355	1049556.767	26.125
	220	165.1348	15.509	89.0828	1.70	TERRENO	1.42	109.9583	15.507	1363413.690	1049560.345	26.058
	221	114.3727	15.676	88.4859	1.70	TERRENO	1.42	59.3524	15.673	1363426.972	1049559.252	26.149
	222	111.3229	22.056	84.5222	1.70	TERRENO	1.42	56.2696	21.968	1363431.182	1049564.038	27.797
E11008-E11006	E11006	0.0000	25.743	89.2343	1.70	ESTACION	1.41	94.6091	25.746	1363416.914	1049571.431	26.101
	E11009	136.3507	20.189	84.0035	1.70	DELTA	1.41	51.1944	20.079	1363429.497	1049587.078	27.921
	223	294.4404	3.774	84.4330	1.70	LINDERO	1.41	209.3435	3.758	1363413.639	1049569.589	26.161
	224	212.3709	5.036	87.1841	1.70	LINDERO	1.41	127.2283	5.030	1363413.871	1049575.436	26.051
	225	185.5651	16.300	89.0151	1.70	MURO	1.41	100.5566	16.298	1363413.929	1049587.453	26.090
	226	171.2437	15.609	88.1304	1.70	TERRENO	1.41	86.0194	15.601	1363417.997	1049586.995	26.300
	227	133.4740	7.575	84.1231	1.70	TERRENO	1.41	48.4035	7.536	1363421.918	1049577.067	26.579
	228	157.1215	15.719	88.4335	0.09	TERRENO	1.41	71.8133	15.715	1363421.819	1049586.361	27.779



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	229	96.1509	8.306	79.0326	1.70	TERRENO	1.41	10.8616	8.155	1363424.923	1049572.968	27.391
	230	142.5414	12.844	83.2959	1.70	TERRENO	1.41	57.5130	12.761	1363423.769	1049582.195	27.268
	231	71.3244	8.911	79.0754	1.70	TERRENO	1.41	346.1546	8.751	1363425.411	1049569.337	27.494
	232	116.1615	6.845	84.2119	1.70	ARBOL	1.41	30.8799	6.812	1363422.761	1049574.927	26.488
	233	62.0206	6.513	86.2543	1.70	TERRENO	1.41	336.6441	6.500	1363422.882	1049568.854	26.220
E11009-E11008	E11008	0.0000	20.141	94.2917	1.70	ESTACION	1.45	51.1944	20.079	1363429.497	1049587.078	27.921
	E11010	102.3912	32.882	89.5029	1.70	DELTA	1.45	333.8477	32.882	1363459.013	1049572.585	27.760
	234	273.3148	9.049	86.5640	1.70	MURO	1.45	144.7244	9.036	1363422.120	1049592.296	28.152
	235	174.4838	28.536	88.5731	1.70	MURO	1.45	46.0049	28.531	1363449.315	1049607.603	28.188
	236	169.3330	27.966	89.2215	1.70	PARAMENTO	1.45	40.7527	27.964	1363450.681	1049605.333	27.976
	237	281.0751	9.670	87.1831	1.70	TERRENO	1.45	152.3252	9.659	1363420.943	1049591.564	28.123
E11010-E11009	E11009	0.0000	32.882	89.2347	1.70	ESTACION	1.50	333.8477	32.882	1363459.013	1049572.585	27.760
	E11011	243.2221	45.138	89.1442	1.70	DELTA	1.50	37.2202	45.134	1363494.954	1049599.886	28.152
	238	162.5636	15.407	89.0405	1.70	PARAMENTO	1.50	316.7910	15.405	1363470.241	1049562.038	27.808
	239	187.5651	19.730	87.5134	1.70	PARAMENTO	1.50	341.7952	19.716	1363477.742	1049566.425	28.294
	240	213.3129	14.217	88.3707	1.70	PARAMENTO	1.50	7.3724	14.213	1363473.108	1049574.409	27.900
	241	225.1901	28.914	89.0556	1.70	PARAMENTO	1.50	19.1646	28.910	1363486.321	1049582.076	28.012
	242	252.1841	29.304	89.1207	1.70	CERRAMIENT	1.50	46.1591	29.301	1363479.309	1049593.719	27.965
	243	220.5132	20.617	88.1639	1.70	ANDEN	1.50	14.7066	20.608	1363478.946	1049577.817	28.177
	244	222.1523	22.509	88.2433	1.70	ANDEN	1.50	16.1041	22.500	1363480.630	1049578.826	28.182
	245	290.0720	15.591	87.3017	1.70	PARAMENTO	1.50	83.9699	15.576	1363460.649	1049588.075	28.236
	246	266.1802	22.636	88.2703	1.70	ANDEN	1.50	60.1483	22.628	1363470.276	1049592.210	28.169
	247	264.0251	24.336	88.3325	1.70	ANDEN	1.50	57.8952	24.328	1363471.943	1049593.193	28.170
	248	264.2715	21.912	88.2549	1.70	ANDEN	1.50	58.3019	21.904	1363470.522	1049591.221	28.157
	249	270.4759	18.322	88.0652	1.70	ANDEN	1.50	64.6474	18.312	1363466.854	1049589.133	28.160
	250	266.4333	22.453	88.2802	1.70	ANDEN	1.50	60.5735	22.445	1363470.040	1049592.134	28.158
	251	270.4818	18.294	87.2248	1.70	ANDEN	1.50	64.6527	18.275	1363466.837	1049589.100	28.393
	252	277.5514	17.112	87.4432	1.70	ANDEN	1.50	71.7683	17.099	1363464.363	1049588.825	28.231
	253	280.3452	17.927	87.2000	1.70	ANDEN	1.50	74.4288	17.908	1363463.820	1049589.835	28.391
	254	275.0740	13.485	88.2907	1.70	ARBOL	1.50	68.9755	13.480	1363463.849	1049585.168	27.914
	255	261.4045	19.467	88.3407	1.70	ARBOL	1.50	55.5269	19.461	1363470.028	1049588.628	28.044
	256	255.4328	25.163	89.0235	1.70	ARBOL	1.50	49.5721	25.159	1363475.329	1049591.737	27.977
	257	286.0910	10.922	87.1858	1.70	ARBOL	1.50	80.0005	10.910	1363460.907	1049583.329	28.069
	258	302.0222	8.929	87.4503	1.70	ARBOL	1.50	95.8871	8.922	1363458.098	1049581.460	27.908
	259	347.2114	8.526	88.3546	1.70	ARBOL	1.50	141.2016	8.523	1363452.370	1049577.926	27.766
	260	56.5034	15.521	89.2634	1.70	ARBOL	1.50	210.6905	15.520	1363445.667	1049564.663	27.708



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	261	131.1032	7.320	88.2301	1.70	ARBOL	1.50	285.0233	7.317	1363460.910	1049565.518	27.764
	262	71.2559	19.716	87.0058	2.50	ARBOL	1.50	225.2808	19.689	1363445.159	1049558.594	27.784
	263	60.0924	9.112	89.1056	1.70	POSTE	1.50	214.0044	9.111	1363451.460	1049567.489	27.687
	264	72.1056	14.505	87.5304	2.00	CAJA_ENERG	1.50	226.0299	14.495	1363448.949	1049562.153	27.793
	265	70.4608	15.073	87.5652	2.00	CAJA_ENERG	1.50	224.6166	15.063	1363448.291	1049562.005	27.797
	266	72.5052	15.492	87.1420	2.20	CAJA_ENERG	1.50	226.6955	15.474	1363448.400	1049561.324	27.804
	267	74.3139	14.971	87.1232	2.20	CAJA_ENERG	1.50	228.3752	14.953	1363449.080	1049561.407	27.786
	268	219.2807	12.843	88.1939	1.70	CAJA	1.50	13.3163	12.838	1363471.505	1049575.542	27.932
	269	216.3434	12.008	88.1716	1.70	CAJA	1.50	10.4238	12.003	1363470.818	1049574.757	27.916
	270	220.3306	11.395	88.0838	1.70	CAJA	1.50	14.3994	11.389	1363470.044	1049575.417	27.926
	271	223.2456	12.248	88.1421	1.70	CAJA	1.50	17.2633	12.242	1363470.704	1049576.218	27.934
	272	316.1804	11.504	88.2148	1.70	CAMINO	1.50	110.1488	11.499	1363455.052	1049583.380	27.886
	273	322.0004	12.883	88.3032	1.70	CAMINO	1.50	115.8488	12.879	1363453.398	1049584.175	27.892
	274	290.0624	13.810	88.2812	1.70	CAMINO	1.50	83.9544	13.805	1363460.467	1049586.313	27.926
	275	293.5757	15.133	88.4307	1.70	CAMINO	1.50	87.8135	15.129	1363459.590	1049587.703	27.896
	276	140.3931	20.623	88.4754	1.70	CAMINO	1.50	294.5063	20.618	1363467.565	1049553.824	27.990
	277	140.2208	19.450	88.4416	1.70	CAMINO	1.50	294.2166	19.445	1363466.989	1049554.851	27.986
	278	130.4233	19.994	93.3203	0.09	CAMINO	1.50	284.5569	19.956	1363464.029	1049553.270	27.940
E11011-E11010	E11010	0.0000	45.139	90.1421	1.70	ESTACION	1.49	37.2202	45.134	1363494.954	1049599.886	28.152
	E11012	191.4408	32.695	89.0907	1.70	DELTA	1.49	48.9558	32.691	1363516.421	1049624.542	28.422
	279	333.2521	17.385	89.1615	1.70	CERRAMIENT	1.49	190.6427	17.384	1363477.869	1049596.675	28.159
	280	343.1805	28.915	89.3334	1.70	CAJ_DOMI	1.49	200.5216	28.914	1363467.875	1049589.749	28.160
	281	343.3456	29.569	89.3434	1.70	CAJ_DOMI	1.49	200.8024	29.568	1363467.313	1049589.385	28.157
	282	292.2542	7.959	88.1510	1.70	PARAMENTO	1.49	149.6485	7.955	1363488.089	1049603.905	28.181
	283	314.2941	3.341	86.1828	1.70	CERRAMIENT	1.49	171.7149	3.334	1363491.655	1049600.366	28.153
	284	51.0200	30.806	89.3707	1.70	PARAMENTO	1.49	268.2535	30.805	1363494.015	1049569.095	28.143
	285	106.0111	28.458	89.5340	1.70	PARAMENTO	1.49	323.2399	28.458	1363517.753	1049582.855	27.990
	286	111.4301	23.428	92.5454	0.09	PARAMENTO	1.49	328.9371	23.398	1363514.997	1049587.813	28.362
	287	111.1634	22.870	93.0036	0.09	CAMINO	1.49	328.4963	22.838	1363514.426	1049587.951	28.352
	288	112.2726	21.972	93.0806	0.09	CAMINO	1.49	329.6774	21.939	1363513.892	1049588.809	28.351
	289	116.4309	19.588	93.3425	0.09	PARAMENTO	1.49	333.9394	19.550	1363512.516	1049591.297	28.332
	290	41.5027	24.199	89.2313	1.70	CAMINO	1.49	259.0610	24.198	1363490.362	1049576.128	28.197
	291	43.2644	25.010	89.2313	1.70	CAMINO	1.49	260.6658	25.009	1363490.898	1049575.208	28.206
	292	72.5740	19.978	89.1415	1.70	CAMINO	1.49	290.1813	19.976	1363501.846	1049581.136	28.204
	293	69.5228	20.147	89.1416	1.70	CAMINO	1.49	287.0946	20.145	1363500.876	1049580.630	28.206
	294	75.0601	25.998	89.2911	1.70	CAMINO	1.49	292.3205	25.997	1363504.827	1049575.837	28.171



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	295	72.5256	26.151	89.2915	1.70	CAMINO	1.49	290.1024	26.150	1363503.942	1049575.329	28.172
	296	61.0156	17.292	88.4937	1.70	ARBOL	1.49	278.2524	17.288	1363497.435	1049582.776	28.292
	297	48.0554	19.584	89.3918	1.70	ARBOL	1.49	265.3185	19.584	1363493.356	1049580.367	28.056
	298	96.4229	16.912	89.1801	1.70	ARBOL	1.49	313.9283	16.911	1363506.686	1049587.706	28.145
	299	272.3353	3.434	83.2936	1.70	ARBOL	1.49	129.7849	3.412	1363492.771	1049602.507	28.327
	300	202.1637	7.029	87.5346	1.70	ARBOL	1.49	59.4971	7.024	1363498.519	1049605.938	28.196
	301	170.1838	29.188	89.2540	1.70	POSTE	1.49	27.5308	29.187	1363520.836	1049613.376	28.230
	302	170.3611	28.660	89.0740	1.70	CAJA_ENERG	1.49	27.8233	28.657	1363520.298	1049613.261	28.374
	303	170.2417	27.861	89.0614	1.70	CAJA_ENERG	1.49	27.6249	27.858	1363519.636	1049612.803	28.374
	304	172.2415	27.841	89.0614	1.70	CAJA_ENERG	1.49	29.6244	27.838	1363519.153	1049613.646	28.373
	305	181.2011	27.963	89.0613	1.70	CANCHA	1.49	38.5566	27.960	1363516.818	1049617.312	28.375
	306	206.1552	33.173	89.0500	1.70	CANCHA	1.49	63.4846	33.169	1363509.762	1049629.566	28.469
	307	138.3822	29.947	89.1719	1.70	PARAMENTO	1.49	355.8596	29.945	1363524.821	1049597.724	28.310
	308	141.3917	32.429	89.1511	1.70	PARAMENTO	1.49	358.8749	32.426	1363527.374	1049599.249	28.361
E11012-E11011	E11011	0.0000	32.692	90.1139	1.70	ESTACION	1.52	48.9558	32.691	1363516.421	1049624.542	28.422
	E11013	257.2522	16.842	89.0909	1.70	DELTA	1.52	126.3785	16.840	1363506.432	1049638.100	28.492
	309	335.2023	35.053	89.4923	1.70	PARAMENTO	1.52	204.2955	35.053	1363484.472	1049610.119	28.351
	310	327.5010	35.726	89.5821	1.70	PARAMENTO	1.52	196.7919	35.726	1363482.218	1049614.220	28.260
	311	327.3858	34.383	89.4748	1.70	CANCHA	1.52	196.6052	34.383	1363483.472	1049614.716	28.365
	312	327.3051	34.434	89.5030	1.70	CERRAMIENT	1.52	196.4699	34.434	1363483.400	1049614.779	28.338
E11013-E11012	E11012	0.0000	16.843	89.3743	1.70	ESTACION	1.51	126.3785	16.840	1363506.432	1049638.100	28.492
	E1079	102.2350	5.241	91.2459	1.70	DELTA	1.51	48.7758	5.239	1363509.885	1049642.041	28.167
	E1077	255.4943	31.283	90.2145	1.70	DELTA	1.51	202.2071	31.282	1363477.470	1049626.276	28.099
E1077-E11013	E11013	0.0000	31.289	88.4857	1.70	ESTACION	1.44	202.2071	31.282	1363477.470	1049626.276	28.099
	E1079	3.4340	36.049	89.2820	1.70	DELTA	1.44	25.9349	36.047	1363509.888	1049642.042	28.168



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E10066		0.0000				ESTACION		0.0000		1364610.828	1048326.485	21.531
E10065	E10066	0.0000	31.002	92.0352	1.70	ESTACION	1.42	220.1995		1364587.164	1048306.488	22.907
	70	0.0000	29.146	93.0341	1.70	TERRENO	1.42	40.1995	29.104	1364609.394	1048325.273	21.072
	71	0.0000	28.321	94.2746	1.70	TERRENO	1.42	40.1995	28.235	1364608.730	1048324.712	20.425
	72	0.0000	26.835	98.4241	1.70	TERRENO	1.42	40.1995	26.525	1364607.424	1048323.608	18.564
	73	0.0000	25.672	100.4917	1.70	TERRENO	1.42	40.1995	25.215	1364606.423	1048322.763	17.809
	74	0.0000	24.766	102.5537	1.70	TERRENO	1.42	40.1995	24.138	1364605.601	1048322.068	17.088
	75	0.0000	24.083	103.421	1.70	RIO	1.42	40.1995	23.398	1364605.035	1048321.590	16.924
	76	0.0000	24.072	103.0615	1.70	RIO	1.42	40.1995	23.445	1364605.071	1048321.620	17.171
	77	0.0000	20.106	107.3533	1.70	RIO	1.42	40.1995	19.166	1364601.803	1048318.858	16.552
	78	0.0000	19.909	105.5021	1.70	RIO	1.42	40.1995	19.153	1364601.793	1048318.850	17.195
	79	0.0000	16.319	112.2104	1.70	RIO	1.42	40.1995	15.093	1364598.692	1048316.229	16.423
	80	0.0000	16.128	109.4741	1.70	RIO	1.42	40.1995	15.175	1364598.755	1048316.282	17.167
	81	0.0000	12.570	119.5856	1.70	RIO	1.42	40.1995	10.888	1364595.480	1048313.515	16.347
	82	0.0000	12.156	116.4044	1.70	RIO	1.42	40.1995	10.862	1364595.460	1048313.498	17.171
	83	0.0000	9.447	120.2618	2.90	RIO	1.42	40.1995	8.145	1364593.385	1048311.745	16.643
	84	0.0000	9.488	117.4145	2.90	RIO	1.42	40.1995	8.401	1364593.580	1048311.910	17.019
	85	1.4758	30.935	92.2015	1.70	AGUA_MAX	1.42	41.9989	30.909	1364610.134	1048327.170	21.367
	86	352.4023	31.751	92.1115	1.70	AGUA_MAX	1.42	32.8725	31.728	1364613.811	1048323.709	21.417
	87	0.0000	8.798	119.4716	2.50	TERRENO	1.42	40.1995	7.636	1364592.996	1048311.416	17.458
	88	0.0000	6.475	116.0735	2.50	TERRENO	1.42	40.1995	5.813	1364591.604	1048310.240	18.977
	89	0.0000	3.677	104.2423	2.50	TERRENO	1.42	40.1995	3.561	1364589.884	1048308.786	20.914
	90	9.1620	29.467	93.0711	1.70	AGUA_MAX	1.42	49.4717	29.423	1364606.284	1048328.852	21.025
	91	70.2759	4.582	86.4508	1.50	AGUA_MAX	1.42	110.6659	4.575	1364585.549	1048310.768	23.088
	92	268.3633	4.366	93.511	1.50	AGUA_MAX	1.42	308.8086	4.356	1364589.894	1048303.093	22.535
	93	274.2429	7.938	91.2953	1.50	AGUA_MAX	1.42	314.6075	7.935	1364592.736	1048300.838	22.621



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E10000		0.0000				ESTACION		0.0000		1363029.948	1050060.418	25.851
E10001	E10000	0.0000	18.247	89.1347	1.70	ESTACION	1.41	41.2106		1363043.703	1050072.465	25.870
	1	115.0315	12.228	91.5156	1.70	BORDE_VIA	1.41	336.2648	12.222	1363054.891	1050067.545	25.181
	2	122.0223	16.415	91.3656	1.70	BORDE_VIA	1.41	343.2503	16.408	1363059.416	1050067.736	25.116
	3	131.4127	15.304	91.3408	1.70	BORDE_VIA	1.41	352.9014	15.298	1363058.884	1050070.574	25.160
	4	127.1644	9.168	91.4926	1.70	BORDE_VIA	1.41	348.4895	9.163	1363052.682	1050070.636	25.287
	5	334.3852	5.145	85.5311	2.90	ESTRUCTURA	1.41	195.8584	5.132	1363038.767	1050071.062	24.748
	6	323.5558	5.809	98.5920	1.70	ESTRUCTURA	1.41	185.1434	5.738	1363037.989	1050071.950	24.671
	7	326.4140	5.641	95.0858	1.70	DES_DOMICI	1.41	187.9050	5.618	1363038.138	1050071.692	25.073
	8	326.0047	5.686	89.0941	1.70	DES_DOMICI	1.41	187.2237	5.685	1363038.063	1050071.750	25.662
	9	328.1036	5.666	96.0641	1.70	ESTRUCTURA	1.41	189.3873	5.634	1363038.145	1050071.546	24.976
	10	315.4504	5.337	90.5127	1.70	DES_DOMICI	1.41	176.9617	5.336	1363038.374	1050072.747	25.499
	11	295.3601	4.293	102.2114	2.00	ESTRUCTURA	1.41	156.8109	4.194	1363039.849	1050074.116	24.361
	12	288.1404	6.482	93.0810	1.70	TERRENO	1.41	149.4450	6.472	1363038.130	1050075.755	25.224
	13	308.4756	2.889	100.3822	2.30	ESTRUCTURA	1.41	170.0095	2.839	1363040.907	1050072.957	24.446
	14	299.1709	11.987	90.4519	1.70	TERRENO	1.41	160.4964	11.986	1363032.405	1050076.466	25.421
	15	305.2233	9.357	91.2916	1.70	TERRENO	1.41	166.5864	9.354	1363034.605	1050074.634	25.336
	16	253.2724	5.904	110.4823	1.70	TERRENO	1.41	114.6673	5.519	1363041.400	1050077.480	23.482
	17	339.2434	4.865	90.5404	1.50	TERRENO	1.41	200.6200	4.864	1363039.151	1050070.752	25.702
	18	328.4231	2.425	95.0015	1.70	TERRENO	1.41	189.9192	2.416	1363041.324	1050072.048	25.367
	19	246.0646	2.591	111.3648	2.40	ESTRUCTURA	1.41	107.3234	2.409	1363042.986	1050074.764	23.925
	20	202.3528	9.026	121.5138	2.40	BORDE_CANO	1.41	63.8017	7.666	1363047.088	1050079.343	20.115
	21	224.2101	9.511	120.0307	2.40	BORDE_CANO	1.41	85.5609	8.232	1363044.340	1050080.672	20.116
	22	216.2138	9.304	120.3426	2.40	BORDE_CANO	1.41	77.5712	8.011	1363045.427	1050080.287	20.147
	23	259.0530	12.744	111.5330	2.40	RIO	1.41	120.3023	11.825	1363037.737	1050082.674	20.127
	24	259.1624	4.319	121.1301	2.40	ESTRUCTURA	1.41	120.4839	3.694	1363041.830	1050075.648	22.641
	25	259.4844	4.432	123.3010	2.40	ESTRUCTURA	1.41	121.0228	3.696	1363041.799	1050075.632	22.433
	26	254.1133	3.015	124.2934	2.90	ESTRUCTURA	1.41	115.4031	2.485	1363042.637	1050074.709	22.672
	27	250.1311	3.108	126.0736	2.90	ESTRUCTURA	1.41	111.4303	2.510	1363042.786	1050074.801	22.547
	28	272.3914	3.988	116.1520	2.90	ESTRUCTURA	1.41	133.8645	3.577	1363041.225	1050075.043	22.615
	29	273.0843	3.899	112.4530	2.90	ESTRUCTURA	1.41	134.3559	3.595	1363041.190	1050075.035	22.871
	30	277.1458	2.993	123.3524	2.90	ESTRUCTURA	1.41	138.4600	2.493	1363041.837	1050074.118	22.723
	31	282.5937	3.065	120.2526	2.90	ESTRUCTURA	1.41	144.2042	2.643	1363041.560	1050074.010	22.827
	32	295.4155	4.019	110.4733	2.90	ESTRUCTURA	1.41	156.9092	3.757	1363040.247	1050073.938	22.952
	33	305.0826	3.244	117.1304	2.90	ESTRUCTURA	1.41	166.3512	2.885	1363040.900	1050073.145	22.895
	34	306.5119	3.120	113.4046	2.90	ESTRUCTURA	1.41	168.0659	2.857	1363040.908	1050073.055	23.126



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	35	298.2211	4.050	108.5725	2.90	ESTRUCTURA	1.41	159.5803	3.830	1363040.114	1050073.801	23.063
	36	321.3755	4.046	106.4937	2.90	ESTRUCTURA	1.41	182.8425	3.873	1363039.835	1050072.273	23.208
	37	310.4529	4.760	104.2514	2.90	ESTRUCTURA	1.41	171.9687	4.610	1363039.138	1050073.109	23.194
	38	321.4402	4.075	108.0551	2.90	ESTRUCTURA	1.41	182.9445	3.873	1363039.835	1050072.266	23.113
	39	312.2016	4.749	105.4904	2.90	ESTRUCTURA	1.41	173.5484	4.569	1363039.163	1050072.978	23.085
	40	327.1901	5.640	97.5256	2.90	DESCARGA	1.41	188.5275	5.587	1363038.178	1050071.636	23.606
	41	327.2055	5.666	101.3046	2.90	DESCARGA	1.41	188.5592	5.552	1363038.213	1050071.638	23.248
	42	327.1540	5.675	102.0239	2.90	DESCARGA	1.41	188.4717	5.550	1363038.214	1050071.647	23.195
	43	323.2043	6.033	101.0754	2.90	ESTRUCTURA	1.41	184.5559	5.919	1363037.803	1050071.994	23.214
	44	332.3112	5.285	101.2223	2.90	ESTRUCTURA	1.41	193.7306	5.181	1363038.670	1050071.235	23.337
	45	254.0828	3.614	118.3044	2.90	DESCARGA	1.41	115.3517	3.176	1363042.344	1050075.334	22.654
E10002		0.0000				ESTACION		0.0000		1363011.081	1050027.549	25.931
E10003	E10002	0.0000	41.012	89.5800	1.70	ESTACION	1.48	215.7428		1362977.758	1050003.567	26.115
	46	0.4716	34.981	89.5314	1.70	MANHOLE	1.48	36.5306	34.981	1363005.867	1050024.389	25.962
	47	3.1809	11.576	89.1117	1.70	MANHOLE	1.48	39.0453	11.575	1362986.748	1050010.858	26.057
	48	17.3154	13.831	89.5010	1.70	SUMIDERO	1.48	53.2745	13.831	1362986.029	1050014.652	25.932
	49	19.4105	13.295	89.5110	1.70	SUMIDERO	1.48	55.4275	13.295	1362985.303	1050014.514	25.927
	50	50.2943	6.635	88.1719	1.70	MANHOLE	1.48	86.2381	6.632	1362978.194	1050010.184	26.091
	51	27.5401	2.161	84.3436	1.70	MANHOLE	1.48	63.6431	2.151	1362978.714	1050005.494	26.097
	52	243.2330	26.754	89.0510	1.70	MANHOLE	1.48	279.1345	26.751	1362982.005	1049977.155	26.320
	53	215.5518	3.559	86.4623	1.70	POSTE	1.48	251.6645	3.553	1362976.641	1050000.194	26.093
E10011		0.0000				ESTACION		0.0000		1363097.242	1049699.760	25.787
E10013	E10011	0.0000	56.806	89.3210	1.70	ESTACION	1.45	32.5839		1363145.148	1049730.378	25.558
	E11031	152.0057	10.269	90.1550	1.70	DELTA	1.45	4.5998	10.269	1363155.383	1049731.201	25.259
E11031-E10013	E10013	0.0000	10.290	86.3324	1.70	ESTACION	1.36	4.5998	10.269	1363155.383	1049731.201	25.259
	53	14.5250	28.248	88.5942	1.70	MANHOLE	1.36	199.4803	28.244	1363128.757	1049721.783	25.415
	54	12.3918	28.392	89.0334	1.70	MANHOLE	1.36	197.2548	28.388	1363128.273	1049722.781	25.386
	55	324.1251	12.727	88.2514	2.00	TERRENO	1.36	148.8139	12.722	1363144.500	1049737.789	24.971
	56	306.4520	6.837	91.5551	1.70	TERRENO	1.36	131.3553	6.833	1363150.869	1049736.330	24.690
	57	282.2016	3.383	97.3900	1.70	TERRENO	1.36	106.9375	3.353	1363154.407	1049734.409	24.470
	58	275.1745	2.813	113.3841	1.70	DES_DOMICI	1.36	99.8956	2.577	1363154.941	1049733.740	23.792
	59	257.2059	1.249	101.1619	1.70	TERRENO	1.36	81.9495	1.225	1363155.555	1049732.414	24.676
	60	220.4500	2.657	95.3555	1.70	TERRENO	1.36	45.3498	2.644	1363157.242	1049733.083	24.661
	61	223.2443	2.577	118.1040	1.70	DES_DOMICI	1.36	48.0117	2.272	1363156.903	1049732.890	23.703
	62	178.0544	4.840	94.3008	1.70	TERRENO	1.36	2.6953	4.825	1363160.203	1049731.428	24.540
	63	161.5400	8.450	89.5633	1.70	TERRENO	1.36	346.4998	8.450	1363163.600	1049729.229	24.928



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	64	158.5736	18.843	88.2128	1.70	TERRENO	1.36	343.5598	18.835	1363173.449	1049725.871	25.460
	65	210.2451	4.349	99.1240	1.70	ESTRUCTURA	1.36	35.0139	4.293	1363158.899	1049733.665	24.224
	66	209.4756	4.475	98.5451	1.70	ESTRUCTURA	1.36	34.3987	4.421	1363159.031	1049733.699	24.226
	67	211.4326	4.485	108.2409	1.70	ESTRUCTURA	1.36	36.3237	4.256	1363158.812	1049733.722	23.504
	68	210.0635	4.742	107.2928	1.70	ESTRUCTURA	1.36	34.7095	4.523	1363159.101	1049733.777	23.495
	69	190.5008	4.179	99.2313	1.70	ESTRUCTURA	1.36	15.4353	4.123	1363159.358	1049732.299	24.238
	70	190.1221	4.368	99.0504	1.70	ESTRUCTURA	1.36	14.8056	4.313	1363159.553	1049732.304	24.230
	71	227.1906	6.264	110.4753	1.70	ESTRUCTURA	1.36	51.9181	5.856	1363158.995	1049735.811	22.696
	72	225.5731	6.349	110.1437	1.70	ESTRUCTURA	1.36	50.5584	5.957	1363159.168	1049735.802	22.723
	73	208.4036	4.706	106.5403	2.30	ESTRUCTURA	1.36	33.2764	4.503	1363159.148	1049733.672	22.952
	74	208.5805	4.784	106.5849	2.30	ESTRUCTURA	1.36	33.5678	4.575	1363159.196	1049733.731	22.923
	75	194.5019	4.603	107.2806	2.30	ESTRUCTURA	1.36	19.4384	4.391	1363159.524	1049732.663	22.938
	76	193.3539	4.748	108.0307	2.30	ESTRUCTURA	1.36	18.1939	4.514	1363159.672	1049732.611	22.849
	77	208.2633	4.864	110.5440	2.30	ESTRUCTURA	1.36	33.0423	4.544	1363159.192	1049733.679	22.584
	78	193.5908	4.854	111.1052	2.30	ESTRUCTURA	1.36	18.5853	4.526	1363159.673	1049732.644	22.566
	79	205.3627	5.227	110.3737	2.30	ESTRUCTURA	1.36	30.2073	4.892	1363159.611	1049733.663	22.479
	80	193.1329	5.526	109.4325	2.30	ESTRUCTURA	1.36	17.8245	5.202	1363160.336	1049732.794	22.455
	81	191.3559	4.917	106.4116	2.30	ESTRUCTURA	1.36	16.1995	4.710	1363159.906	1049732.515	22.908
	82	192.5004	4.884	106.5058	2.30	ESTRUCTURA	1.36	17.4342	4.674	1363159.843	1049732.602	22.904
	83	192.5225	5.658	111.2040	2.30	ESTRUCTURA	1.36	17.4734	5.270	1363160.410	1049732.784	22.261
	84	191.4712	4.586	107.3046	2.30	ESTRUCTURA	1.36	16.3864	4.373	1363159.579	1049732.435	22.940
	85	193.3854	4.591	107.3339	2.30	ESTRUCTURA	1.36	18.2481	4.377	1363159.540	1049732.572	22.935
	86	192.4729	6.305	111.2230	2.30	ESTRUCTURA	1.36	17.3912	5.871	1363160.986	1049732.956	22.022
	87	193.0347	6.874	110.1647	2.30	ESTRUCTURA	1.36	17.6628	6.448	1363161.527	1049733.158	21.937
	88	192.5425	6.986	111.2125	2.30	ESTRUCTURA	1.36	17.5067	6.506	1363161.588	1049733.159	21.776
	89	193.0739	7.472	110.5947	2.30	ESTRUCTURA	1.36	17.7273	6.976	1363162.028	1049733.325	21.643
	90	192.3243	7.526	111.5846	2.30	ESTRUCTURA	1.36	17.1450	6.979	1363162.052	1049733.259	21.503
	91	191.4232	7.880	111.2121	2.30	ESTRUCTURA	1.36	16.3087	7.339	1363162.427	1049733.262	21.450
	92	191.5626	7.769	109.1501	2.30	ESTRUCTURA	1.36	16.5403	7.335	1363162.415	1049733.289	21.759
	93	191.2313	7.761	109.1428	2.30	ESTRUCTURA	1.36	15.9867	7.327	1363162.427	1049733.219	21.762
	94	203.2323	8.017	109.1628	2.30	ESTRUCTURA	1.36	27.9895	7.568	1363162.066	1049734.753	21.674
	95	202.5621	7.928	109.3653	2.30	ESTRUCTURA	1.36	27.5389	7.468	1363162.005	1049734.654	21.659
	96	202.4625	8.058	111.1006	2.30	ESTRUCTURA	1.36	27.3734	7.514	1363162.056	1049734.656	21.410
	97	203.0636	7.497	112.0853	2.30	ESTRUCTURA	1.36	27.7098	6.944	1363161.531	1049734.430	21.494
	98	203.3918	7.414	111.0721	2.30	ESTRUCTURA	1.36	28.2548	6.916	1363161.475	1049734.475	21.648
	99	203.4218	6.826	112.0121	2.30	ESTRUCTURA	1.36	28.3048	6.328	1363160.955	1049734.202	21.760



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	100	203.5718	6.712	110.4802	2.30	ESTRUCTURA	1.36	28.5548	6.275	1363160.895	1049734.201	21.936
	101	204.3705	6.166	112.0901	2.30	ESTRUCTURA	1.36	29.2178	5.711	1363160.368	1049733.989	21.995
	102	204.5410	6.007	110.3739	2.30	ESTRUCTURA	1.36	29.5025	5.622	1363160.276	1049733.970	22.204
	103	206.3812	5.410	112.0257	2.30	ESTRUCTURA	1.36	31.2364	5.014	1363159.671	1049733.802	22.289
	104	191.5929	4.652	108.5657	2.30	ESTRUCTURA	1.36	16.5912	4.400	1363159.600	1049732.458	22.809
	105	192.4531	4.806	108.5920	2.30	ESTRUCTURA	1.36	17.3584	4.544	1363159.721	1049732.557	22.756
	106	188.2347	5.365	102.3205	2.30	ESTRUCTURA	1.36	12.9962	5.237	1363160.486	1049732.379	23.156
	107	244.3327	9.014	114.2620	2.30	BORDE_RIO	1.36	69.1573	8.206	1363158.303	1049738.871	20.591
	108	230.0229	8.897	114.2956	2.30	BORDE_RIO	1.36	54.6412	8.096	1363160.069	1049737.804	20.631
	109	211.2440	9.996	107.5227	2.30	BORDE_RIO	1.36	36.0109	9.514	1363163.079	1049736.795	21.252
	110	205.1147	8.632	116.3000	2.90	BORDE_RIO	1.36	29.7962	7.725	1363162.087	1049735.040	19.868
	111	196.4214	7.763	107.2546	2.90	BORDE_RIO	1.36	21.3037	7.407	1363162.284	1049733.892	21.395
	112	199.3121	4.499	101.1728	2.90	CENTRO_TUB	1.36	24.1223	4.412	1363159.410	1049733.004	22.839
	113	198.4543	4.546	100.4751	2.90	COTA_BATEA	1.36	23.3617	4.466	1363159.483	1049732.972	22.868
	114	199.1235	4.496	104.4644	2.90	COTA_CLAVE	1.36	23.8095	4.347	1363159.361	1049732.956	22.573
E10009		0.0000				ESTACION		0.0000		1363038.384	1049811.346	26.578
E10010	E10009	0.0000	63.729	89.3347	1.70	ESTACION	1.47	303.3337		1363073.422	1049758.075	26.306
	E10011	168.5321	62.940	90.0634	1.70	DELTA	1.47	292.2228	62.940	1363097.226	1049699.810	25.958
	115	359.4923	66.183	89.3649	1.70	SUMIDERO	1.47	123.1567	66.181	1363037.225	1049813.480	26.525
	116	0.3528	65.582	89.3550	1.70	SUMIDERO	1.47	123.9248	65.580	1363036.821	1049812.491	26.539
	117	359.5835	63.691	89.3510	1.70	MANHOLE	1.47	123.3100	63.689	1363038.446	1049811.301	26.538
	118	356.5445	24.636	89.2204	1.70	MANHOLE	1.47	120.2462	24.635	1363061.013	1049779.356	26.350
	119	357.3631	64.567	89.2203	1.50	PARAMENTO	1.47	120.9423	64.563	1363040.225	1049813.450	26.991
	120	349.2102	31.017	88.4809	1.70	PARAMENTO	1.47	112.6842	31.010	1363061.463	1049786.686	26.726
	121	349.1320	27.376	88.4324	1.70	CANCHA	1.47	112.5559	27.369	1363062.924	1049783.350	26.688
	122	331.1355	31.465	88.5321	1.70	CANCHA	1.47	94.5656	31.459	1363070.918	1049789.434	26.688
	123	332.3452	7.810	85.4718	1.70	CANCHA	1.47	95.9148	7.789	1363072.619	1049765.822	26.652
	124	5.2723	25.089	89.1209	1.50	PARAMENTO	1.47	128.7900	25.087	1363057.706	1049777.628	26.627
	125	349.4401	22.658	89.0054	1.70	POSTE	1.47	113.0673	22.655	1363064.546	1049778.918	26.468
	126	344.5958	12.680	88.3404	1.70	POSTE	1.47	108.3331	12.676	1363069.435	1049770.107	26.395
	127	27.0238	9.044	88.2145	1.70	POSTE	1.47	150.3775	9.040	1363065.563	1049762.543	26.337
	128	315.3057	3.256	86.3721	1.70	POSTE	1.47	78.8495	3.250	1363074.051	1049761.264	26.270
	129	305.2215	4.263	85.5445	1.70	PARAMENTO	1.47	68.7045	4.252	1363074.966	1049762.037	26.382
	130	220.0600	4.084	87.2628	1.70	PARAMENTO	1.47	343.4337	4.080	1363077.333	1049756.911	26.261
	131	126.4122	10.248	88.4916	1.70	PARAMENTO	1.47	250.0231	10.246	1363069.922	1049748.445	26.289
	132	126.5320	11.790	88.3224	1.70	PARAMENTO	1.47	250.2225	11.786	1363069.434	1049746.984	26.379



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	133	152.5809	25.703	89.3125	1.70	PARAMENTO	1.47	276.3028	25.702	1363076.244	1049732.528	26.292
	134	154.2118	25.633	89.2417	1.70	PARAMENTO	1.47	277.6887	25.632	1363076.851	1049732.674	26.345
	135	4.1701	30.971	88.4844	1.70	PARAMENTO	1.47	127.6173	30.964	1363054.522	1049782.602	26.720
	136	162.3056	53.428	89.5913	1.50	PARAMENTO	1.47	285.8492	53.428	1363088.013	1049706.678	26.290
E10017		0.0000				ESTACION		0.0000		1363298.566	1049498.011	28.050
E10018	E10017	0.0000	91.801	88.3817	1.70	ESTACION	1.41	20.5003		1363384.576	1049530.169	26.148
	E11032	3.4331	37.227	89.0156	1.70	DELTA	1.41	204.2256	37.222	1363350.632	1049514.896	26.486
	137	358.0539	39.992	89.1515	1.70	SUMIDERO	1.41	198.5945	39.989	1363346.675	1049517.418	26.378
	138	357.5050	39.241	89.1515	1.70	SUMIDERO	1.41	198.3475	39.238	1363347.333	1049517.818	26.368
	139	359.1100	38.188	89.1241	1.70	SUMIDERO	1.41	199.6837	38.184	1363348.623	1049517.308	26.383
	140	359.0053	37.439	89.1508	1.70	SUMIDERO	1.41	199.5150	37.436	1363349.291	1049517.664	26.346
	141	0.5918	38.545	89.0728	1.70	MANHOLE	1.41	201.4887	38.540	1363348.714	1049516.051	26.446
	142	12.2742	18.181	89.1844	1.50	POSTE	1.41	212.9620	18.180	1363369.322	1049520.278	26.276
	142	184.0257	6.264	107.3148	2.00	ESTRUCTURA	1.41	24.5495	5.973	1363390.009	1049532.651	23.671
	143	173.3452	6.424	107.5324	2.00	ESTRUCTURA	1.41	14.0814	6.113	1363390.506	1049531.657	23.584
	144	167.0024	4.535	109.1326	2.00	ESTRUCTURA	1.41	7.5070	4.282	1363388.821	1049530.729	24.064
	145	185.3622	4.405	111.1929	2.00	ESTRUCTURA	1.41	26.1064	4.103	1363388.261	1049531.975	23.955
	146	186.4706	4.088	109.3811	2.00	ESTRUCTURA	1.41	27.2853	3.850	1363387.998	1049531.934	24.184
	147	164.4847	4.071	107.5353	2.00	ESTRUCTURA	1.41	5.3134	3.874	1363388.433	1049530.528	24.306
	148	178.3834	6.347	107.5354	2.00	ESTRUCTURA	1.41	19.1431	6.040	1363390.282	1049532.150	23.607
	149	179.0900	4.008	110.2730	2.00	ESTRUCTURA	1.41	19.6503	3.755	1363388.112	1049531.432	24.156
	150	174.5754	1.789	107.0956	2.00	ESTRUCTURA	1.41	15.4653	1.709	1363386.223	1049530.625	25.029
	151	173.1744	1.866	100.2236	2.90	C_BATEA	1.41	13.7959	1.835	1363386.358	1049530.607	24.321
	152	154.3104	1.811	96.1133	2.90	ESTRUCTURA	1.41	355.0181	1.800	1363386.369	1049530.013	24.462
	153	191.2816	1.730	99.2253	2.90	ESTRUCTURA	1.41	31.9714	1.707	1363386.024	1049531.073	24.375
	154	174.4800	1.516	98.2958	1.70	ESTRUCTURA	1.41	15.3003	1.499	1363386.022	1049530.565	25.633
	155	176.3816	1.525	101.5028	1.70	C_CLAVE	1.41	17.1381	1.493	1363386.002	1049530.609	25.544
	156	250.0344	10.019	90.5533	1.70	TERRENO	1.41	90.5625	10.018	1363384.477	1049540.187	25.695
	157	193.5205	4.360	97.3804	1.70	TERRENO	1.41	34.3684	4.321	1363388.143	1049532.609	25.278
	158	210.4801	1.596	88.3054	1.70	TERRENO	1.41	51.3006	1.595	1363385.573	1049531.415	25.899
	159	155.5658	1.402	88.2234	1.70	TERRENO	1.41	356.4498	1.401	1363385.975	1049530.083	25.897
	160	142.5129	1.661	101.4118	1.70	TERRENO	1.41	343.3584	1.627	1363386.134	1049529.704	25.521
	161	149.0132	2.233	92.3209	1.70	TERRENO	1.41	349.5259	2.231	1363386.769	1049529.764	25.758
	162	163.2427	5.439	102.0103	1.70	TERRENO	1.41	3.9078	5.320	1363389.883	1049530.532	24.725
	163	142.0614	6.097	97.3635	1.70	TERRENO	1.41	342.6042	6.043	1363390.343	1049528.363	25.050
	164	125.0314	5.938	94.3234	1.70	TERRENO	1.41	325.5542	5.919	1363389.457	1049526.821	25.387



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	165	104.3349	7.640	93.1522	1.70	TERRENO	1.41	305.0639	7.628	1363388.958	1049523.926	25.423
	166	98.4049	9.598	94.2959	1.70	TERRENO	1.41	299.1806	9.568	1363389.241	1049521.815	25.104
	167	98.0114	11.446	95.1945	1.70	TERRENO	1.41	298.5209	11.397	1363390.017	1049520.156	24.794
	168	62.5748	6.822	87.1937	1.70	PARAMENTO	1.41	263.4637	6.815	1363383.800	1049523.399	26.175
	169	312.2442	4.454	82.4127	1.70	PARAMENTO	1.41	152.9120	4.418	1363380.643	1049532.181	26.424
	170	40.4459	9.200	87.1318	1.70	PARAMENTO	1.41	241.2500	9.189	1363380.156	1049522.113	26.303
	171	280.4327	7.111	87.3703	1.70	PARAMENTO	1.41	121.2245	7.105	1363380.893	1049536.245	26.153
	172	292.4019	7.593	86.4239	1.70	PARAMENTO	1.41	133.1723	7.580	1363379.389	1049535.698	26.293
	173	73.0748	11.264	89.1227	1.70	PARAMENTO	1.41	273.6303	11.263	1363385.289	1049518.929	26.013
	174	317.1735	2.385	82.4456	1.70	POSTE	1.41	157.7934	2.366	1363382.385	1049531.064	26.158
	175	352.1854	18.169	88.4859	1.70	POSTE	1.41	192.8153	18.165	1363366.863	1049526.140	26.233
	176	348.4310	18.217	87.1542	1.70	PARAMENTO	1.41	189.2198	18.196	1363366.615	1049527.254	26.728
	177	20.4323	16.504	84.0611	1.70	PARAMENTO	1.41	221.2234	16.417	1363372.228	1049519.351	27.553
E11032-E10018	E10018	0.0000	37.205	90.1304	1.70	ESTACION	1.49	204.2256	37.222	1363350.632	1049514.896	26.486
	E11033	65.0408	52.034	90.0435	1.70	DELTA	1.49	89.2945	52.034	1363351.273	1049566.926	26.205
	178	175.0928	22.328	88.5245	1.70	ANDEN	1.49	199.3834	22.324	1363329.574	1049507.487	26.711
	179	179.0536	22.361	88.4918	1.70	ANDEN	1.49	203.3189	22.356	1363330.102	1049506.046	26.734
	180	167.3806	22.560	88.4736	1.70	ANDEN	1.49	191.8606	22.555	1363328.559	1049510.260	26.749
	181	164.0349	22.936	88.4736	1.70	ANDEN	1.49	188.2892	22.931	1363327.941	1049511.590	26.757
	182	183.4806	21.433	88.5503	1.70	PARAMENTO	1.49	208.0273	21.429	1363331.716	1049504.827	26.679
	183	159.0627	23.515	88.2728	1.70	PARAMENTO	1.49	183.3331	23.506	1363327.165	1049513.530	26.907
	184	162.2932	23.413	88.4332	1.70	POSTE	1.49	186.7178	23.407	1363327.385	1049512.158	26.795
	185	199.5941	5.089	85.5904	1.70	POSTE	1.49	224.2203	5.077	1363346.994	1049511.356	26.630
	186	128.4212	4.729	86.5326	1.70	ANDEN	1.49	152.9289	4.722	1363346.427	1049517.045	26.531
	187	160.3156	1.149	80.0341	1.70	ANDEN	1.49	184.7578	1.132	1363349.504	1049514.802	26.472
	188	253.0102	1.047	79.2820	1.70	ANDEN	1.49	277.2428	1.029	1363350.762	1049513.875	26.465
	189	126.3442	6.253	87.3354	1.70	ANDEN	1.49	150.8039	6.247	1363345.178	1049517.944	26.540
	190	87.1559	3.015	87.4006	1.70	ANDEN	1.49	111.4920	3.013	1363349.528	1049517.699	26.397
	191	57.4237	2.795	87.0109	1.70	ANDEN	1.49	81.9359	2.791	1363351.024	1049517.660	26.419
	192	126.1819	6.673	87.4032	1.70	POSTE	1.49	150.5309	6.668	1363344.827	1049518.176	26.545
	193	119.0408	5.046	88.1809	1.70	ANDEN	1.49	143.2945	5.044	1363346.588	1049517.911	26.424
	194	40.0802	8.791	89.2044	1.70	PARAMENTO	1.49	64.3595	8.790	1363354.436	1049522.821	26.374
	195	120.1202	8.914	85.1438	1.70	PARAMENTO	1.49	144.4262	8.883	1363343.407	1049520.064	27.013
	196	98.1318	15.667	86.5725	1.70	PARAMENTO	1.49	122.4473	15.645	1363342.238	1049528.099	27.106
	197	95.5629	15.433	87.0016	1.70	PARAMENTO	1.49	120.1670	15.412	1363342.887	1049528.221	27.081
	198	90.2518	18.887	87.2210	1.70	PARAMENTO	1.49	114.6473	18.867	1363342.764	1049532.044	27.141



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	199	53.5850	12.003	89.2250	1.70	PARAMENTO	1.49	78.2062	12.002	1363353.085	1049526.645	26.404
	200	61.2548	30.432	89.5144	1.70	ANDEN	1.49	85.6556	30.432	1363352.937	1049545.241	26.347
	201	64.1518	30.387	89.5801	1.70	ANDEN	1.49	88.4806	30.387	1363351.438	1049545.273	26.292
	202	69.4627	30.723	89.5802	1.70	ANDEN	1.49	93.9998	30.723	1363348.489	1049545.544	26.292
	203	72.1644	30.961	89.5528	1.70	ANDEN	1.49	96.5045	30.961	1363347.125	1049545.658	26.315
	204	85.5242	27.317	87.2905	2.20	PARAMENTO	1.49	110.1039	27.291	1363341.252	1049540.524	26.973
	205	79.5047	28.311	88.3657	2.20	PARAMENTO	1.49	104.0720	28.303	1363343.750	1049542.350	26.458
	206	68.1800	37.863	90.0822	1.70	ANDEN	1.49	92.5256	37.863	1363348.964	1049552.722	26.182
	207	70.3435	38.047	90.0511	1.70	ANDEN	1.49	94.8020	38.047	1363347.447	1049552.810	26.217
	208	79.1104	26.039	88.5232	1.70	POSTE	1.49	103.4100	26.034	1363344.594	1049540.220	26.785
	209	61.3041	40.980	89.5927	1.70	ANDEN	1.49	85.7370	40.980	1363353.678	1049555.763	26.281
	210	63.1852	48.619	90.0628	1.70	ANDEN	1.49	87.5400	48.619	1363352.719	1049563.470	26.183
E11033-E11032	E11032	0.0000	52.047	89.2525	1.70	ESTACION	1.44	89.2945	52.034	1363351.273	1049566.926	26.205
	211	13.2648	12.981	88.3958	1.70	SUMIDERO	1.44	282.7412	12.977	1363354.135	1049554.268	26.251
	212	12.1530	12.081	88.3403	1.70	SUMIDERO	1.44	281.5528	12.077	1363353.691	1049555.094	26.251
	213	40.0813	3.744	83.2814	1.70	PUENTE	1.44	309.4314	3.720	1363353.635	1049564.053	26.374
	214	39.2249	3.756	81.4337	1.70	PUENTE	1.44	308.6748	3.717	1363353.595	1049564.024	26.489
	215	33.2822	10.813	87.5746	1.70	PUENTE	1.44	302.7673	10.806	1363357.121	1049557.840	26.333
	216	34.0012	9.862	87.3006	1.70	PUENTE	1.44	303.2978	9.853	1363356.682	1049558.691	26.379
	217	53.3401	4.050	82.0847	1.70	PUENTE	1.44	322.8614	4.012	1363354.471	1049564.504	26.502
	218	27.5614	9.780	87.3940	1.70	PUENTE	1.44	297.2317	9.772	1363355.744	1049558.237	26.348
	219	29.3412	9.777	86.5124	1.70	PUENTE	1.44	298.8645	9.762	1363355.985	1049558.377	26.485
	220	28.0824	9.769	87.0533	1.70	PUENTE	1.44	297.4345	9.756	1363355.768	1049558.267	26.444
	221	29.5505	9.795	86.0458	1.70	PUENTE	1.44	299.2125	9.772	1363356.042	1049558.397	26.618
	222	31.2948	9.799	86.0154	1.70	PUENTE	1.44	300.7912	9.776	1363356.277	1049558.529	26.627
	223	31.3600	9.813	85.1638	1.70	PUENTE	1.44	300.8945	9.780	1363356.294	1049558.534	26.757
	224	33.0055	9.849	85.1017	1.70	PUENTE	1.44	302.3098	9.814	1363356.518	1049558.632	26.778
	225	33.2936	9.828	84.2005	1.70	PUENTE	1.44	302.7878	9.780	1363356.569	1049558.704	26.919
	226	35.4052	6.787	81.2302	1.70	PUENTE	1.44	304.9756	6.710	1363355.119	1049561.428	26.965
	227	35.2729	6.768	82.3714	1.70	PUENTE	1.44	304.7525	6.712	1363355.099	1049561.412	26.818
	228	33.1653	6.765	82.3714	1.70	PUENTE	1.44	302.5759	6.709	1363354.885	1049561.273	26.818
	229	32.5636	6.738	83.5529	1.70	PUENTE	1.44	302.2378	6.700	1363354.847	1049561.259	26.662
	230	30.4159	6.722	83.5723	1.70	PUENTE	1.44	299.9942	6.685	1363354.614	1049561.137	26.656
	231	30.2102	6.691	85.1730	1.70	PUENTE	1.44	299.6450	6.668	1363354.571	1049561.131	26.498
	232	28.2006	6.696	85.2306	1.70	PUENTE	1.44	297.6295	6.674	1363354.368	1049561.013	26.487
	233	27.5002	6.685	87.0121	1.70	PUENTE	1.44	297.1284	6.676	1363354.317	1049560.985	26.296



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	234	50.0229	5.213	78.3455	1.50	PUENTE	1.44	319.3359	5.110	1363355.149	1049563.597	27.181
	235	55.1003	4.183	75.4156	1.50	PUENTE	1.44	324.4620	4.053	1363354.571	1049564.570	27.182
	236	41.4256	10.054	86.5747	1.70	PUENTE	1.44	311.0100	10.040	1363357.861	1049559.350	26.481
	237	41.4603	10.046	84.3526	1.70	PUENTE	1.44	311.0620	10.001	1363357.842	1049559.385	26.896
	238	42.3143	9.127	83.4817	1.70	PUENTE	1.44	311.8231	9.074	1363357.323	1049560.164	26.934
	239	35.5109	6.666	86.5728	1.70	PUENTE	1.44	305.1470	6.657	1363355.105	1049561.483	26.302
	240	35.2633	6.646	88.3841	1.70	PUENTE	1.44	304.7370	6.644	1363355.059	1049561.466	26.106
	241	54.0339	10.710	86.1418	1.70	PUENTE	1.44	323.3553	10.687	1363359.847	1049560.548	26.651
	242	45.5047	6.899	87.0031	1.70	PUENTE	1.44	315.1409	6.890	1363356.156	1049562.067	26.309
	243	51.4638	5.232	86.0309	1.70	PUENTE	1.44	321.0717	5.220	1363355.333	1049563.646	26.309
	244	52.2021	5.295	84.0900	1.70	PUENTE	1.44	321.6337	5.267	1363355.403	1049563.657	26.488
	245	52.1552	11.591	86.4105	1.70	PUENTE	1.44	321.5589	11.572	1363360.336	1049559.732	26.619
	246	46.2908	6.922	85.4447	1.70	PUENTE	1.44	315.7800	6.903	1363356.220	1049562.112	26.462
	247	56.1227	11.913	86.4807	1.70	PUENTE	1.44	325.5020	11.894	1363361.075	1049560.189	26.613
	248	54.3704	7.292	85.3357	1.70	PUENTE	1.44	323.9123	7.270	1363357.148	1049562.644	26.512
	249	62.0136	5.752	84.2835	1.70	PUENTE	1.44	331.3212	5.725	1363356.296	1049564.179	26.502
	250	62.2759	5.791	82.5020	1.70	PUENTE	1.44	331.7609	5.746	1363356.335	1049564.208	26.671
	251	54.4703	7.348	84.2120	1.70	PUENTE	1.44	324.0787	7.312	1363357.194	1049562.636	26.671
	252	60.4619	10.071	86.0244	1.70	PUENTE	1.44	330.0664	10.047	1363359.980	1049561.913	26.643
	253	56.1634	9.793	85.4647	1.70	PUENTE	1.44	325.5706	9.766	1363359.328	1049561.404	26.669
	254	65.1514	10.091	81.5032	1.70	PUENTE	1.44	334.5484	9.989	1363360.292	1049562.633	27.381
	255	60.0315	10.091	81.5852	1.70	PUENTE	1.44	329.3487	9.992	1363359.869	1049561.832	27.356
	256	43.1950	9.056	81.4718	1.70	PUENTE	1.44	312.6250	8.963	1363357.343	1049560.331	27.242
	257	44.2529	8.188	80.5854	1.70	PUENTE	1.44	313.7192	8.087	1363356.862	1049561.082	27.232
	258	65.2909	9.471	81.1118	1.70	PUENTE	1.44	334.7803	9.359	1363359.740	1049562.938	27.400
	259	64.2823	10.139	81.5328	1.70	PUENTE	1.44	333.7675	10.038	1363360.277	1049562.489	27.379
	260	64.5313	9.700	81.2728	1.70	PUENTE	1.44	334.1814	9.592	1363359.908	1049562.749	27.389
	261	65.5318	9.467	81.1337	1.70	PUENTE	1.44	335.1828	9.356	1363359.765	1049562.999	27.393
	262	68.4341	9.899	81.3909	1.70	PUENTE	1.44	338.0225	9.794	1363360.355	1049563.261	27.386
	263	62.2602	7.889	84.3211	1.50	PUENTE	1.44	331.7284	7.853	1363358.189	1049563.207	26.900
	263	62.4445	7.927	83.0641	1.70	PUENTE	1.44	332.0403	7.870	1363358.224	1049563.236	26.899
	264	71.0241	6.514	81.4703	1.70	PUENTE	1.44	340.3392	6.447	1363357.344	1049564.757	26.880
	265	70.5021	6.584	80.2638	1.70	PUENTE	1.44	340.1337	6.493	1363357.379	1049564.720	27.042
	266	62.4744	7.961	82.0433	1.70	PUENTE	1.44	332.0900	7.885	1363358.241	1049563.235	27.046
	267	65.5603	8.233	82.1602	1.70	PUENTE	1.44	335.2287	8.158	1363358.680	1049563.508	27.056
	268	66.0843	8.309	81.0924	1.70	PUENTE	1.44	335.4398	8.210	1363358.740	1049563.514	27.226



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	269	74.1512	6.974	80.5052	1.70	PUENTE	1.44	343.5478	6.885	1363357.876	1049564.976	27.058
	270	74.1336	7.053	79.3314	1.70	PUENTE	1.44	343.5212	6.936	1363357.924	1049564.959	27.227
	271	77.1415	7.401	79.5229	1.70	PUENTE	1.44	346.5320	7.286	1363358.358	1049565.229	27.250
	272	77.3859	7.568	79.1137	1.70	PUENTE	1.44	346.9442	7.434	1363358.514	1049565.247	27.368
	273	69.2102	8.658	81.2344	1.70	PUENTE	1.44	338.6450	8.561	1363359.246	1049563.809	27.244
	274	68.4444	9.401	81.1503	1.70	PUENTE	1.44	338.0400	9.292	1363359.890	1049563.452	27.379
	275	78.2534	7.516	79.0526	1.70	PUENTE	1.44	347.7206	7.380	1363358.484	1049565.357	27.371
	276	80.1151	7.338	78.5024	1.70	PUENTE	1.44	349.4920	7.199	1363358.351	1049565.613	27.369
	277	73.2951	6.683	73.2410	1.70	PUENTE	1.44	342.7920	6.405	1363357.391	1049565.031	27.858
	278	71.5608	6.891	73.5324	1.70	PUENTE	1.44	341.2300	6.620	1363357.541	1049564.796	27.861
	279	83.5613	7.745	79.1524	1.70	PUENTE	1.44	353.2314	7.609	1363358.829	1049566.029	27.392
	280	83.5613	6.278	77.2311	1.70	PUENTE	1.44	353.2314	6.126	1363357.356	1049566.204	27.320
	281	77.0749	10.957	81.3631	1.70	PUENTE	1.44	346.4248	10.840	1363361.810	1049564.382	27.548
	282	87.1303	9.529	80.5053	1.70	PUENTE	1.44	356.5120	9.408	1363360.663	1049566.354	27.464
	283	248.2026	1.222	81.2640	1.70	MANHOLE	1.44	157.6350	1.208	1363350.155	1049567.386	26.130
	284	297.3646	1.302	80.4810	1.70	MANHOLE	1.44	206.9073	1.285	1363350.127	1049566.345	26.157
	285	285.3053	2.215	85.1438	1.70	MANHOLE	1.44	194.8092	2.207	1363349.139	1049566.362	26.132
	286	258.0959	2.259	85.5833	1.70	MANHOLE	1.44	167.4609	2.253	1363349.073	1049567.415	26.107
	287	197.1510	1.584	79.3226	1.70	LINDERO	1.44	106.5473	1.558	1363350.829	1049568.419	26.236
	288	197.4522	11.644	88.2411	1.70	LINDERO	1.44	107.0506	11.639	1363347.860	1049578.054	26.273
	289	269.3414	17.872	88.2612	1.70	LINDERO	1.44	178.8650	17.865	1363333.411	1049567.280	26.436
	290	280.0225	8.493	88.0810	1.70	POSTE	1.44	189.3348	8.489	1363342.897	1049565.549	26.225
	291	275.0814	32.973	89.1706	1.70	MANHOLE	1.44	184.4317	32.970	1363318.401	1049564.379	26.360
	292	273.3313	32.909	89.1707	1.70	MANHOLE	1.44	182.8481	32.906	1363318.407	1049565.291	26.359
	293	273.3311	33.829	89.2525	1.70	MANHOLE	1.44	182.8475	33.827	1363317.487	1049565.246	26.289
	294	274.4826	33.929	89.4520	1.50	MANHOLE	1.44	184.1017	33.929	1363317.431	1049564.499	26.293
	295	343.3759	25.693	88.5239	1.70	PARAMENTO	1.44	252.9275	25.688	1363343.731	1049542.370	26.452
	296	332.3532	19.811	88.5708	1.70	PARAMENTO	1.44	241.8867	19.808	1363341.939	1049549.455	26.311
	297	271.3539	29.040	88.0127	1.70	PARAMENTO	1.44	180.8887	29.023	1363322.253	1049566.476	26.950
	298	263.2938	18.646	86.3647	1.70	PARAMENTO	1.44	172.7884	18.613	1363332.807	1049569.263	27.050
	299	244.4944	10.859	88.1841	1.70	PARAMENTO	1.44	154.1234	10.854	1363341.507	1049571.663	26.269
	300	285.2659	27.357	88.3709	1.70	PARAMENTO	1.44	194.7442	27.349	1363324.824	1049559.966	26.608
	301	287.2034	20.464	88.1040	1.70	PARAMENTO	1.44	196.6373	20.454	1363331.675	1049561.070	26.599
	302	322.2546	11.196	88.3549	1.70	ESTR_PUENT	1.44	231.7239	11.193	1363344.339	1049558.140	26.223
	303	322.2545	11.199	86.3701	1.70	ESTR_PUENT	1.44	231.7237	11.179	1363344.348	1049558.150	26.610
	304	322.3616	11.320	85.4035	1.70	ESTR_PUENT	1.44	231.8989	11.288	1363344.308	1049558.044	26.802



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	305	319.3917	12.809	88.4810	1.70	ESTR_PUENT	1.44	228.9492	12.806	1363342.863	1049557.269	26.216
	306	321.1740	12.990	88.4401	1.70	ESTR_PUENT	1.44	230.5889	12.987	1363343.028	1049556.892	26.236
	307	324.3048	11.377	88.3831	1.70	ESTR_PUENT	1.44	233.8078	11.374	1363344.557	1049557.747	26.218
	308	324.1824	11.373	86.2840	1.70	ESTR_PUENT	1.44	233.6012	11.352	1363344.537	1049557.789	26.647
	309	324.0146	11.490	85.4522	1.70	ESTR_PUENT	1.44	233.3239	11.458	1363344.429	1049557.736	26.799
	310	335.1310	12.651	88.4738	1.70	ESTR_PUENT	1.44	244.5139	12.648	1363345.830	1049555.509	26.215
	311	335.0129	12.678	87.1124	1.70	ESTR_PUENT	1.44	244.3192	12.663	1363345.785	1049555.514	26.570
	312	334.5827	12.738	86.1459	1.70	ESTR_PUENT	1.44	244.2687	12.711	1363345.754	1049555.476	26.782
	313	330.5541	14.112	88.5303	1.70	ESTR_PUENT	1.44	240.2225	14.109	1363344.266	1049554.680	26.223
	314	332.3215	14.314	88.5303	1.70	ESTR_PUENT	1.44	241.8320	14.311	1363344.517	1049554.310	26.227
	315	336.4144	12.982	88.4718	1.70	ESTR_PUENT	1.44	245.9900	12.979	1363345.992	1049555.070	26.223
	316	336.3204	12.927	87.1318	1.70	ESTR_PUENT	1.44	245.8289	12.912	1363345.986	1049555.146	26.575
	317	336.1004	13.002	86.2437	1.70	ESTR_PUENT	1.44	245.4623	12.976	1363345.884	1049555.122	26.763
	318	18.2235	19.633	88.1520	1.70	POSTE	1.44	287.6709	19.624	1363357.230	1049548.228	26.546
E10020		0.0000				ESTACION		0.0000		1363365.678	1049427.293	26.265
E10022	E10020	0.0000	72.509	89.2442	1.70	ESTACION	1.40	18.9959		1363434.281	1049450.909	25.800
	319	0.4217	72.504	89.2509	1.70	MANHOLE	1.40	199.7006	72.500	1363366.024	1049426.469	26.236
	320	283.5405	5.136	96.3133	1.50	DESCARGA	1.40	122.8973	5.103	1363431.509	1049455.193	25.117
	321	284.0928	5.175	96.1210	1.50	DESCARGA	1.40	123.1537	5.145	1363431.467	1049455.216	25.142
	322	283.3402	6.954	89.2116	2.15	DESCARGA	1.40	122.5631	6.954	1363430.538	1049456.769	25.129
	323	284.1401	6.891	89.1558	2.15	DESCARGA	1.40	123.2295	6.890	1363430.505	1049456.673	25.139
	324	284.1305	7.920	89.4926	2.15	DESCARGA	1.40	123.2139	7.920	1363429.943	1049457.535	25.075
	325	281.0928	6.876	95.1159	2.90	DESCARGA	1.40	120.1537	6.848	1363430.841	1049456.830	23.678
	326	274.5434	6.850	99.2222	2.90	DESCARGA	1.40	113.9053	6.759	1363431.542	1049457.088	23.185
	327	282.3236	6.169	98.3623	2.90	DESCARGA	1.40	121.5392	6.100	1363431.090	1049456.107	23.378
	328	281.0950	6.151	98.2630	2.90	C_BATEA	1.40	120.1598	6.084	1363431.224	1049456.170	23.398
	329	282.3214	6.142	99.2253	1.70	C_CLAVE	1.40	121.5331	6.060	1363431.112	1049456.074	24.500
	330	282.0509	6.142	95.2433	1.50	DESCARGA	1.40	121.0817	6.115	1363431.124	1049456.146	25.122
	331	282.4717	9.584	96.5542	1.50	TERRENO	1.40	121.7839	9.514	1363429.270	1049458.996	24.545
	332	281.5352	8.191	96.3353	1.50	TERRENO	1.40	120.8937	8.137	1363430.103	1049457.892	24.764
	333	278.2224	7.545	104.5610	1.50	TERRENO	1.40	117.3692	7.290	1363430.929	1049457.383	23.756
	334	283.4030	5.198	97.2450	2.90	DESCARGA	1.40	122.6709	5.155	1363431.498	1049455.248	23.630
	335	275.0840	5.230	103.2540	2.90	DESCARGA	1.40	114.1403	5.087	1363432.200	1049455.551	23.086
	336	273.1343	6.897	99.0602	5.00	DESCARGA	1.40	112.2245	6.810	1363431.705	1049457.213	21.110
	336	272.4314	5.313	105.5741	5.00	DESCARGA	1.40	111.7164	5.108	1363432.391	1049455.654	20.740
	337	274.4949	6.275	112.5848	1.70	DESCARGA	1.40	113.8262	5.777	1363431.947	1049456.194	23.051



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E10020		0.0000				ESTACION		0.0000		1363365.678	1049427.293	26.265
E10022	E10020	0.0000	72.515	89.2524	1.70	ESTACION	1.42	18.9959		1363434.281	1049450.909	25.800
	338	286.3230	4.732	96.1141	1.70	TERRENO	1.42	125.5375	4.704	1363431.546	1049454.737	25.010
	339	271.3605	3.370	99.0836	1.70	TERRENO	1.42	110.5973	3.327	1363433.110	1049454.023	24.985
	340	244.0503	3.645	104.4801	1.70	TERRENO	1.42	83.0800	3.524	1363434.705	1049454.407	24.590
	341	227.0551	4.224	105.3542	1.70	TERRENO	1.42	66.0934	4.068	1363435.930	1049454.628	24.385
	342	206.5426	4.567	99.3743	2.50	TERRENO	1.42	45.9031	4.503	1363437.414	1049454.142	23.957
	343	163.2948	9.956	112.5741	2.60	TERRENO	1.42	2.4925	9.167	1363443.439	1049451.308	20.737
	344	163.1928	9.193	106.1319	1.70	TERRENO	1.42	2.3203	8.827	1363443.101	1049451.266	22.953
	345	187.0330	8.311	111.0524	2.90	TERRENO	1.42	26.0542	7.754	1363441.247	1049454.315	21.330
	346	185.4759	7.280	102.4246	2.90	TERRENO	1.42	24.7956	7.102	1363440.728	1049453.887	22.719
	347	4.4436	4.674	79.1434	1.70	ESTRUCTURA	1.42	203.7392	4.592	1363430.077	1049449.060	26.393
	348	13.3045	5.214	66.0155	1.70	ESTRUCTURA	1.42	212.5084	4.764	1363430.263	1049448.348	27.639
	349	12.2226	5.630	67.4914	1.70	ESTRUCTURA	1.42	211.3698	5.213	1363429.829	1049448.195	27.646
	350	4.3111	5.516	67.0624	1.70	ESTRUCTURA	1.42	203.5156	5.082	1363429.621	1049448.881	27.667
	351	4.5514	5.088	65.3432	1.70	ESTRUCTURA	1.42	203.9164	4.633	1363430.046	1049449.031	27.625
	352	3.5343	5.178	79.3700	1.70	ESTRUCTURA	1.42	202.8912	5.093	1363429.589	1049448.928	26.454
	353	12.3006	5.564	69.4909	1.70	ESTRUCTURA	1.42	211.4975	5.222	1363429.828	1049448.180	27.440
	354	13.0512	5.082	68.0135	1.70	ESTRUCTURA	1.42	212.0825	4.713	1363430.288	1049448.406	27.422
	355	36.0950	6.143	69.4250	2.90	ESTRUCTURA	1.42	235.1598	5.762	1363430.989	1049446.180	26.451
	356	34.0759	6.585	69.0741	3.10	ESTRUCTURA	1.42	233.1289	6.153	1363430.589	1049445.987	26.467
	357	35.5358	6.214	67.4049	2.00	ESTRUCTURA	1.42	234.8953	5.748	1363430.975	1049446.206	27.581
	358	33.2341	6.529	68.5233	2.00	ESTRUCTURA	1.42	232.3906	6.090	1363430.564	1049446.084	27.574
	359	27.2559	6.212	67.3139	2.00	ESTRUCTURA	1.42	226.4289	5.740	1363430.324	1049446.750	27.595
	360	29.4541	5.857	65.4901	2.00	ESTRUCTURA	1.42	228.7573	5.343	1363430.758	1049446.891	27.620
	361	29.3331	5.749	67.3444	2.00	ESTRUCTURA	1.42	228.5545	5.314	1363430.763	1049446.925	27.413
	362	26.5859	6.029	71.4008	1.70	ESTRUCTURA	1.42	225.9789	5.723	1363430.304	1049446.793	27.417
	363	25.3343	6.166	59.0139	2.50	TUBO_ACUED	1.42	224.5578	5.287	1363430.514	1049447.199	27.894
	364	18.2713	5.487	61.2740	1.70	TUBO_ACUED	1.42	217.4495	4.820	1363430.454	1049447.978	28.142
	365	51.2708	2.284	63.4505	0.09	TUBO_ACUED	1.42	250.4481	2.048	1363433.595	1049448.978	28.146
E10019		0.0000				ESTACION		0.0000		1363324.330	1049413.434	28.274
E10020	E10019	0.0001	50.738	87.2702	1.70	ESTACION	1.50	18.5295		1363365.678	1049427.293	26.265
	E11034	259.1134	35.490	89.5559	1.70	DELTA	1.50	97.7223	35.490	1363360.910	1049462.461	26.105
	366	259.0917	38.127	90.0842	1.70	MANHOLE	1.50	97.6842	38.127	1363360.580	1049465.077	25.967
	367	260.1029	38.017	90.0935	1.70	MANHOLE	1.50	98.7042	38.017	1363359.925	1049464.872	25.957
	368	260.0513	37.311	90.0756	1.70	MANHOLE	1.50	98.6164	37.311	1363360.088	1049464.182	25.977



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	369	258.5807	37.407	90.0756	1.70	MANHOLE	1.50	97.4981	37.407	1363360.797	1049464.380	25.977
	370	258.4142	28.440	89.0151	1.70	PARAMENTO	1.50	97.2245	28.436	1363362.102	1049455.503	26.544
	371	260.1102	17.272	90.0435	1.70	PARAMENTO	1.50	98.7134	17.272	1363363.062	1049444.365	26.040
	372	265.3756	13.105	91.0948	1.70	SUMIDERO	1.50	104.1617	13.102	1363362.473	1049439.997	25.797
	373	269.3244	12.561	91.2406	1.70	SUMIDERO	1.50	108.0750	12.557	1363361.782	1049439.230	25.756
	374	273.4145	17.357	90.1540	1.70	PARAMENTO	1.50	112.2253	17.357	1363359.113	1049443.360	25.984
	375	285.2706	18.431	90.0129	1.70	PARAMENTO	1.50	123.9812	18.431	1363355.377	1049442.576	26.055
	376	294.1402	19.463	89.4902	1.70	PARAMENTO	1.50	132.7634	19.463	1363352.464	1049441.582	26.125
	377	343.0155	8.749	86.0446	1.70	PARAMENTO	1.50	181.5614	8.729	1363356.953	1049427.055	26.661
	378	217.5504	2.077	86.0938	1.70	POSTE	1.50	56.4473	2.072	1363366.824	1049429.020	26.202
E10021		0.0000				ESTACION		0.0000		1363399.563	1049352.722	27.908
E10023	E10021	0.0000	57.124	88.2303	1.70	ESTACION	1.41	26.3245		1363450.795	1049378.070	26.593
	E11035	219.0455	9.464	94.4131	1.70	DELTA	1.41	65.4064	9.432	1363454.720	1049386.647	25.524
	379	125.3440	16.850	95.4209	1.70	TERRENO	1.41	331.9023	16.767	1363465.586	1049370.173	24.624
	380	144.5232	14.261	97.1909	1.70	TERRENO	1.41	351.2000	14.145	1363464.773	1049375.906	24.481
	381	144.2323	6.592	94.1708	1.70	TERRENO	1.41	350.7142	6.574	1363457.282	1049377.009	25.805
	382	156.1119	3.932	94.0016	1.70	TERRENO	1.41	2.5131	3.922	1363454.714	1049378.242	26.023
	383	144.0620	2.117	90.3346	1.70	CANAL	1.41	350.4300	2.117	1363452.882	1049377.718	26.277
	384	135.1044	2.356	90.1526	1.70	CANAL	1.41	341.5034	2.356	1363453.029	1049377.323	26.287
	385	138.4436	2.246	96.0845	1.70	CANAL	1.41	345.0678	2.233	1363452.953	1049377.495	26.057
	386	166.0451	4.516	99.3005	1.70	ESTRUCTURA	1.41	12.4053	4.454	1363455.145	1049379.027	25.552
	387	166.3213	4.725	100.0539	1.70	ESTRUCTURA	1.41	12.8614	4.652	1363455.330	1049379.105	25.470
	388	169.2608	4.655	102.3449	1.70	CANAL	1.41	15.7600	4.543	1363455.167	1049379.304	25.284
	389	166.2205	4.574	100.3000	1.70	CANAL	1.41	12.6925	4.497	1363455.182	1049379.058	25.464
	390	171.1011	4.510	97.3215	1.70	CANAL	1.41	17.4942	4.471	1363455.059	1049379.414	25.706
	391	183.0849	4.687	98.2101	1.70	TERRENO	1.41	29.4714	4.637	1363454.832	1049380.351	25.617
	392	196.4939	4.499	103.2518	1.70	TERRENO	1.41	43.1520	4.376	1363453.987	1049381.063	25.254
	393	197.4720	5.711	105.0405	1.70	TERRENO	1.41	44.1134	5.515	1363454.754	1049381.909	24.813
	394	194.0211	6.881	100.1938	2.60	TERRENO	1.41	40.3609	6.770	1363455.953	1049382.454	24.164
	395	191.3202	5.377	107.0229	2.60	DES_DOMICI	1.41	37.8584	5.141	1363454.854	1049381.225	23.822
	396	199.0616	4.414	92.2758	2.60	DES_DOMICI	1.41	45.4289	4.410	1363453.890	1049381.211	25.208
	397	193.3908	10.633	94.0716	2.00	TERRENO	1.41	39.9767	10.606	1363458.922	1049384.884	25.234
	398	182.4129	11.133	99.2332	2.00	TERRENO	1.41	29.0159	10.984	1363460.400	1049383.398	24.181
	399	174.1539	13.224	100.5258	2.00	TERRENO	1.41	20.5853	12.986	1363462.952	1049382.636	23.501
	400	186.5233	16.189	101.1923	2.00	TERRENO	1.41	33.2003	15.874	1363464.078	1049386.762	22.819
	401	173.5429	14.749	102.0011	1.70	TERRENO	1.41	20.2325	14.427	1363464.331	1049383.059	23.231



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	402	168.5501	11.662	106.4634	2.60	BORDE_CANO	1.41	15.2414	11.166	1363461.568	1049381.005	22.032
	403	171.3852	10.407	107.5631	2.60	BORDE_CANO	1.41	17.9723	9.901	1363460.213	1049381.125	22.192
	404	166.5212	11.592	111.4407	2.60	CANO	1.41	13.1945	10.768	1363461.279	1049380.528	21.105
	405	179.2849	8.128	104.4606	4.00	BORDE_CANO	1.41	25.8048	7.859	1363457.871	1049381.491	21.926
	406	176.4054	6.598	108.5957	4.00	BORDE_CANO	1.41	23.0062	6.239	1363456.537	1049380.508	21.850
	407	170.2454	7.414	112.1925	4.00	CANO	1.41	16.7395	6.858	1363457.363	1049380.045	21.182
	408	169.3651	5.763	101.1145	4.00	CANO	1.41	15.9387	5.653	1363456.231	1049379.622	22.879
	409	167.4111	6.023	101.2035	4.00	CANO	1.41	14.0109	5.905	1363456.525	1049379.500	22.813
	410	173.3123	6.286	110.0916	4.00	CANO	1.41	19.8475	5.901	1363456.345	1049380.073	21.832
	411	169.4507	5.353	97.1408	4.00	C_BATEA	1.41	16.0764	5.310	1363455.898	1049379.540	23.324
	412	170.0636	5.330	96.1640	4.00	C_CLAVE	1.41	16.4345	5.298	1363455.877	1049379.569	23.415
	413	179.0312	6.083	105.5207	3.50	ESTRUCTURA	1.41	25.3778	5.851	1363456.081	1049380.578	22.835
	414	166.3620	6.178	105.5944	3.50	ESTRUCTURA	1.41	12.9300	5.939	1363456.583	1049379.399	22.795
	415	179.0150	5.552	107.0153	3.50	ESTRUCTURA	1.41	25.3550	5.309	1363455.592	1049380.343	22.872
	416	166.5215	5.626	107.0152	3.50	ESTRUCTURA	1.41	13.1953	5.379	1363456.032	1049379.298	22.850
	417	97.3809	9.371	85.1316	1.70	CERRAMIENT	1.41	303.9603	9.338	1363456.012	1049370.324	27.079
	418	106.5031	4.892	79.2718	1.70	CERRAMIENT	1.41	313.1664	4.809	1363454.085	1049374.562	27.193
	419	124.1419	1.899	91.5228	1.70	CANAL	1.41	330.5631	1.898	1363452.448	1049377.137	26.236
	420	130.1015	1.565	91.0017	1.70	CANAL	1.41	336.4953	1.565	1363452.230	1049377.446	26.270
	421	127.5450	1.768	94.0238	1.70	CANAL	1.41	334.2384	1.764	1363452.383	1049377.303	26.173
	422	135.1652	2.066	80.5304	1.70	CERRAMIENT	1.41	341.6056	2.040	1363452.731	1049377.426	26.625
	423	235.5704	2.654	81.2548	1.70	CERRAMIENT	1.41	82.2756	2.624	1363451.148	1049380.670	26.693
	424	249.4621	4.131	83.1838	2.00	PARAMENTO	1.41	96.0970	4.103	1363450.359	1049382.150	26.479
	425	334.4126	10.514	88.0743	1.70	PARAMENTO	1.41	181.0150	10.508	1363440.288	1049377.884	26.641
	426	24.2236	8.822	84.3123	1.70	PARAMENTO	1.41	230.7012	8.782	1363445.233	1049371.274	27.140
	427	7.0921	21.693	86.2854	1.70	PARAMENTO	1.41	213.4803	21.652	1363432.735	1049366.126	27.629
	428	92.4902	2.626	82.1803	1.70	POSTE	1.41	299.1417	2.602	1363452.062	1049375.797	26.650
	429	96.3845	10.442	85.0314	1.70	PARAMENTO	1.41	302.9703	10.403	1363456.456	1049369.342	27.198
	430	215.2141	2.165	79.3418	1.70	MANHOLE	1.41	61.6859	2.129	1363451.805	1049379.944	26.690
E11035-E10023	E10023	359.5959	9.515	82.0800	1.70	ESTACION	1.45	65.4064	9.432	1363454.720	1049386.647	25.524
	E11036	56.3054	17.434	91.3904	1.50	DELTA	1.45	301.9214	17.427	1363463.935	1049371.855	24.970
	431	34.5002	17.607	87.3015	1.50	DES_DOMICI	1.45	280.2403	17.590	1363457.848	1049369.336	26.239
	432	33.5252	17.659	85.0710	1.50	DES_DOMICI	1.45	279.2875	17.595	1363457.560	1049369.282	26.975
	433	74.3918	22.146	102.2019	1.70	RIO	1.45	320.0614	21.634	1363471.308	1049372.758	20.540
	434	84.0415	17.512	105.5432	1.70	RIO	1.45	329.4773	16.841	1363469.228	1049378.093	20.473
	435	85.1924	15.587	107.2102	2.00	RIO	1.45	330.7298	14.878	1363467.699	1049379.372	20.324



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	436	82.0804	14.830	108.5525	2.00	BORDE_CANO	1.45	327.5409	14.028	1363466.557	1049379.118	20.163
	437	65.1939	9.100	109.3403	2.00	BORDE_CANO	1.45	310.7339	8.574	1363460.316	1049380.149	21.925
	438	56.2322	9.203	109.3156	2.00	BORDE_CANO	1.45	301.7959	8.673	1363459.290	1049379.275	21.896
	439	146.3338	6.808	93.1131	2.00	TERRENO	1.45	31.9670	6.797	1363460.487	1049390.245	24.594
	440	175.4143	7.199	89.0804	2.00	TERRENO	1.45	61.1017	7.198	1363458.199	1049392.948	25.081
	441	201.4212	7.551	87.2554	2.00	TERRENO	1.45	87.1098	7.543	1363455.101	1049394.180	25.311
	442	286.3120	6.463	84.2813	1.70	PARAMENTO	1.45	171.9287	6.433	1363448.351	1049387.550	25.896
	443	272.0119	7.399	85.1041	1.70	PARAMENTO	1.45	157.4284	7.373	1363447.912	1049389.477	25.895
	444	257.0725	5.620	85.0603	1.70	PARAMENTO	1.45	142.5300	5.599	1363450.276	1049390.053	25.753
	445	242.1029	9.722	86.2425	1.70	PARAMENTO	1.45	127.5812	9.703	1363448.803	1049394.336	25.882
	446	236.5745	11.943	87.2454	1.70	PARAMENTO	1.45	122.3689	11.931	1363448.333	1049396.724	25.811
	447	231.1201	11.606	88.3432	1.70	PARAMENTO	1.45	116.6067	11.602	1363449.524	1049397.020	25.561
	448	222.2839	15.613	90.1843	1.70	PARAMENTO	1.45	107.8839	15.613	1363449.926	1049401.505	25.188
	449	220.0507	17.521	89.3236	1.70	PARAMENTO	1.45	105.4917	17.520	1363450.041	1049403.530	25.412
	450	203.2846	10.493	93.3406	2.00	DES_DOMICI	1.45	88.8859	10.473	1363454.924	1049397.117	24.320
	451	211.1005	10.557	92.2903	2.00	DES_DOMICI	1.45	96.5745	10.547	1363453.513	1049397.124	24.515
	452	212.5047	12.442	94.4511	2.00	DES_DOMICI	1.45	98.2528	12.399	1363452.941	1049398.917	23.942
	453	214.5410	12.476	94.3543	2.00	DES_DOMICI	1.45	100.3092	12.436	1363452.495	1049398.882	23.973
	454	215.4943	15.293	89.3155	2.00	DES_DOMICI	1.45	101.2350	15.292	1363451.741	1049401.646	25.098
	455	217.2525	15.593	89.2412	2.00	DES_DOMICI	1.45	102.8300	15.592	1363451.258	1049401.849	25.135
	456	214.0518	13.231	93.2823	2.90	DES_DOMICI	1.45	99.4948	13.207	1363452.542	1049399.672	23.271
	457	214.4555	13.207	92.2549	2.90	DES_DOMICI	1.45	100.1717	13.195	1363452.390	1049399.634	23.513
	458	215.0027	13.584	93.3327	3.40	DES_DOMICI	1.45	100.4139	13.558	1363452.270	1049399.981	22.730
	459	215.2027	14.021	88.5616	3.40	DES_DOMICI	1.45	100.7473	14.019	1363452.106	1049400.419	23.833
	460	199.4737	12.450	94.4639	1.70	TERRENO	1.45	85.2000	12.407	1363455.759	1049399.010	24.236
	461	199.2619	14.363	94.3724	1.70	TERRENO	1.45	84.8450	14.316	1363456.007	1049400.905	24.115
	462	211.3456	15.044	93.0339	1.70	TERRENO	1.45	96.9887	15.023	1363452.893	1049401.557	24.469
	463	210.3816	17.165	92.0941	1.70	TERRENO	1.45	96.0442	17.153	1363452.914	1049403.704	24.625
	464	186.2314	12.234	95.5946	1.70	TERRENO	1.45	71.7937	12.167	1363458.522	1049398.205	23.995
	465	190.1411	13.625	91.3549	2.60	TERRENO	1.45	75.6428	13.620	1363458.098	1049399.841	23.993
E11036-E11035	E11035	0.0000	17.442	87.1303	1.70	ESTACION	1.40	301.9214	17.427	1363463.935	1049371.855	24.970
	466	147.0844	15.972	84.3120	2.00	DES_DOMICI	1.40	269.0670	15.899	1363463.676	1049355.958	25.890
	467	145.3655	16.418	84.0955	2.00	DES_DOMICI	1.40	267.5367	16.333	1363463.233	1049355.537	26.034
	468	160.1050	23.395	86.5249	2.00	DES_DOMICI	1.40	282.1020	23.360	1363468.832	1049349.014	25.639
	469	159.1354	23.542	86.0654	2.00	DES_DOMICI	1.40	281.1531	23.488	1363468.478	1049348.811	25.960
	470	160.4515	33.416	86.4504	2.00	DES_DOMICI	1.40	282.6756	33.362	1363471.256	1049339.306	26.259



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	471	160.1924	33.464	86.4504	2.00	DES_DOMICI	1.40	282.2448	33.410	1363471.021	1049339.205	26.262
	472	160.1607	33.822	86.4804	2.00	PARAMENTO	1.40	282.1900	33.769	1363471.065	1049338.847	26.253
	473	133.3626	14.585	81.4500	1.70	PARAMENTO	1.40	255.5287	14.434	1363460.328	1049357.879	26.758
	474	120.5734	9.117	78.5624	1.70	PARAMENTO	1.40	242.8809	8.948	1363459.856	1049363.891	26.414
	475	76.5016	7.176	75.0645	1.70	PARAMENTO	1.40	198.7592	6.935	1363457.368	1049369.625	26.509
	476	76.4815	8.008	74.5358	1.70	PARAMENTO	1.40	198.7256	7.731	1363456.613	1049369.373	26.752
	477	187.0728	20.816	99.3347	1.70	RIO	1.40	309.0459	20.527	1363476.866	1049355.913	21.207
	478	192.3907	15.305	101.2811	1.70	RIO	1.40	314.5734	14.999	1363474.462	1049361.170	21.622
	479	212.0750	9.879	109.3800	1.70	RIO	1.40	334.0520	9.305	1363472.302	1049367.784	21.346
	480	135.0455	11.464	85.5313	1.70	DES_DOMICI	1.40	257.0034	11.434	1363461.363	1049360.714	25.488
	481	132.1827	12.031	83.1248	1.70	DES_DOMICI	1.40	254.2289	11.947	1363460.688	1049360.358	26.087
E10024		0.0000				ESTACION		0.0000		1363431.158	1049275.009	27.839
E10025	E10024	0.0000	69.364	88.2549	1.70	ESTACION	1.45	22.3967		1363495.306	1049301.445	26.174
	E11037	160.2655	7.385	99.4812	1.70	DELTA	1.45	2.8453	7.277	1363502.574	1049301.806	24.670
	482	0.1354	65.441	88.2138	1.70	MANHOLE	1.45	202.6284	65.414	1363434.927	1049276.277	27.800
	483	248.3144	4.486	82.1430	1.70	PARAMENTO	1.45	90.9256	4.445	1363495.234	1049305.889	26.533
	484	246.5723	4.695	82.4252	1.70	CERRAMIENT	1.45	89.3531	4.657	1363495.358	1049306.102	26.523
	485	240.1811	3.240	85.2101	1.70	POSTE	1.45	82.6998	3.229	1363495.716	1049304.648	26.190
	486	3.1401	31.404	88.1142	1.70	MANHOLE	1.45	205.6303	31.388	1363467.006	1049287.867	26.917
	487	115.3944	6.396	86.5857	1.70	CERRAMIENT	1.45	318.0589	6.387	1363500.057	1049297.176	26.265
	488	112.5343	7.773	87.3546	1.70	PARAMENTO	1.45	315.2920	7.766	1363500.825	1049295.982	26.254
	489	343.4241	15.141	87.1322	1.70	PARAMENTO	1.45	186.1081	15.123	1363480.268	1049299.836	26.661
	490	74.2254	7.750	86.0249	1.70	PARAMENTO	1.45	276.7784	7.732	1363496.218	1049293.767	26.462
	491	63.2847	4.886	84.3212	1.70	PARAMENTO	1.45	265.8764	4.864	1363494.956	1049296.594	26.393
	492	8.5416	26.919	87.5219	1.70	PARAMENTO	1.45	211.3012	26.900	1363472.321	1049287.469	26.927
	493	22.4502	7.994	87.2911	1.70	POSTE	1.45	225.1473	7.986	1363489.673	1049295.783	26.278
	494	177.3116	1.372	76.3926	1.70	CAM_ACUED	1.45	19.9178	1.335	1363496.561	1049301.900	26.244
E11037-E10025	E10025	0.0001	7.511	75.4007	1.70	ESTACION	1.32	2.8453	7.277	1363502.574	1049301.806	24.670
	495	136.3529	7.317	111.3254	1.70	C_BATEA	1.32	319.4367	6.806	1363507.744	1049297.381	21.604
	496	135.4049	7.184	110.0636	1.70	C_CLAVE	1.32	318.5256	6.746	1363507.628	1049297.338	21.821
	497	136.2424	7.442	113.4635	1.70	DESCARGA	1.32	319.2520	6.810	1363507.733	1049297.361	21.291
	498	137.0504	7.344	113.2225	1.70	BORDE_CANO	1.32	319.9298	6.741	1363507.733	1049297.467	21.378
	499	135.3428	7.346	112.5045	1.70	BORDE_CANO	1.32	318.4198	6.770	1363507.638	1049297.313	21.439
	500	151.2303	8.405	120.3612	1.70	RIO	1.32	334.2295	7.234	1363509.089	1049298.661	20.013
	501	149.4522	8.989	119.2249	1.70	DESCARGA	1.32	332.6014	7.833	1363509.528	1049298.202	19.881
	502	145.4631	9.456	117.1905	1.70	RIO	1.32	328.6206	8.401	1363509.746	1049297.432	19.952



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	503	145.4137	9.403	117.3223	1.70	BORDE_CANO	1.32	328.5389	8.338	1363509.686	1049297.455	19.944
	504	136.0022	13.229	109.0616	1.70	RIO	1.32	318.8514	12.500	1363511.987	1049293.581	19.962
	505	246.2533	8.409	119.3017	1.70	RIO	1.32	69.2712	7.318	1363505.164	1049308.651	20.150
	506	310.1149	15.595	82.1316	1.70	PARAMENTO	1.32	133.0423	15.451	1363492.028	1049313.099	26.402
	507	300.2055	15.159	82.5034	1.70	PARAMENTO	1.32	123.1939	15.041	1363494.339	1049314.393	26.180
	508	293.1622	11.799	90.1650	1.70	TERRENO	1.32	116.1181	11.799	1363497.380	1049312.400	24.234
E10028		0.0000				ESTACION		0.0000		1363507.447	1049085.792	27.535
E10029	E10028	0.0000	45.742	90.0704	1.70	ESTACION	1.41	13.4764		1363551.970	1049096.462	27.929
	E11038	163.2142	20.494	102.5247	1.70	DELTA	1.41	356.8381	19.978	1363571.918	1049095.360	23.072
	509	4.0351	43.603	90.0035	1.70	PUENTE	1.41	197.5406	43.603	1363510.394	1049083.321	27.632
	510	3.5600	42.216	89.5719	1.70	PUENTE	1.41	197.4098	42.216	1363511.688	1049083.831	27.673
	511	5.1154	41.633	89.4758	1.70	PUENTE	1.41	198.6748	41.633	1363512.529	1049083.131	27.786
	512	5.4424	41.358	89.4322	1.70	PUENTE	1.41	199.2164	41.358	1363512.917	1049082.850	27.840
	513	6.4940	40.243	89.3128	1.70	PUENTE	1.41	200.3042	40.242	1363514.229	1049082.498	27.974
	514	5.5956	42.835	89.4800	1.70	PUENTE	1.41	199.4753	42.835	1363511.586	1049082.181	27.789
	515	14.2135	27.621	88.0312	1.70	PUENTE	1.41	207.8362	27.605	1363527.559	1049083.572	28.578
	516	7.3956	41.825	89.4135	1.70	PUENTE	1.41	201.1420	41.824	1363512.961	1049081.377	27.864
	517	16.0451	27.910	88.1443	1.70	PUENTE	1.41	209.5573	27.897	1363527.703	1049082.701	28.494
	518	115.5112	7.147	74.0346	1.70	PUENTE	1.41	309.3298	6.872	1363556.325	1049091.146	29.602
	519	112.4637	7.901	75.2923	1.70	PUENTE	1.41	306.2534	7.649	1363556.493	1049090.294	29.619
	520	117.1214	6.925	72.2948	1.70	PUENTE	1.41	310.6803	6.604	1363556.275	1049091.454	29.723
	521	115.3748	7.307	73.4209	1.70	PUENTE	1.41	309.1064	7.013	1363556.394	1049091.020	29.690
	522	118.1309	7.399	73.3633	1.70	PUENTE	1.41	311.6956	7.098	1363556.692	1049091.162	29.728
	523	119.1042	7.044	72.4715	1.70	PUENTE	1.41	312.6548	6.729	1363556.529	1049091.514	29.724
	524	130.4515	7.917	75.0430	1.70	PUENTE	1.41	324.2306	7.650	1363558.177	1049091.990	29.679
	525	133.1039	7.996	74.3441	1.70	POSTE	1.41	326.6539	7.708	1363558.409	1049092.225	29.766
	526	160.0220	16.256	82.2841	1.70	PUENTE	1.41	353.5153	16.116	1363567.983	1049094.642	29.768
	527	160.1152	19.465	83.3828	1.70	PUENTE	1.41	353.6742	19.345	1363571.197	1049094.331	29.796
	528	83.1419	5.561	73.0716	1.70	POSTE	1.41	276.7150	5.321	1363552.592	1049091.177	29.254
	529	109.2050	16.441	82.4552	1.70	PUENTE	1.41	302.8237	16.310	1363560.811	1049082.756	29.711
	530	109.2044	16.660	82.5212	1.70	PUENTE	1.41	302.8220	16.531	1363560.930	1049082.570	29.708
	531	138.3120	23.014	84.4058	1.70	PUENTE	1.41	331.9987	22.915	1363572.202	1049085.704	29.773
	532	140.0624	21.960	84.2457	1.70	PUENTE	1.41	333.5831	21.856	1363571.544	1049086.738	29.777
	533	102.2441	15.664	82.4656	1.70	PUENTE	1.41	295.8878	15.540	1363558.755	1049082.482	29.608
	534	102.2143	15.674	82.2730	1.70	PUENTE	1.41	295.8384	15.538	1363558.742	1049082.477	29.697
	535	102.0557	16.131	82.3605	1.70	PUENTE	1.41	295.5756	15.997	1363558.876	1049082.033	29.717



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	536	102.1211	16.088	82.5943	1.70	PUENTE	1.41	295.6795	15.968	1363558.889	1049082.071	29.602
	537	102.0811	16.140	82.3720	1.70	PUENTE	1.41	295.6128	16.006	1363558.889	1049082.029	29.712
	538	103.0535	16.186	82.3840	1.70	PUENTE	1.41	296.5695	16.053	1363559.150	1049082.105	29.712
	539	103.1627	15.856	82.2836	1.70	PUENTE	1.41	296.7506	15.720	1363559.045	1049082.425	29.716
	540	47.4228	22.058	86.2742	1.70	PUENTE	1.41	241.1842	22.016	1363541.358	1049077.172	29.001
	541	47.5539	22.227	86.2929	1.70	PUENTE	1.41	241.4039	22.185	1363541.351	1049076.983	29.000
	542	45.2851	21.282	86.1247	1.70	PUENTE	1.41	238.9573	21.236	1363541.019	1049078.268	29.045
	543	44.1156	23.740	86.5807	1.70	PUENTE	1.41	237.6753	23.707	1363539.294	1049076.429	28.895
	544	41.2225	23.133	86.4530	1.70	PUENTE	1.41	234.8500	23.096	1363538.673	1049077.578	28.948
	545	42.0859	24.862	87.2638	1.70	PUENTE	1.41	235.6262	24.837	1363537.947	1049075.962	28.749
	546	37.3323	25.643	87.3457	1.70	PUENTE	1.41	231.0328	25.620	1363535.858	1049076.542	28.721
	547	40.4144	26.213	88.0940	1.70	PUENTE	1.41	234.1720	26.200	1363536.634	1049075.220	28.481
	548	39.0454	27.376	88.3020	1.70	PUENTE	1.41	232.5581	27.367	1363535.332	1049074.734	28.354
	549	37.3713	26.772	87.5514	1.70	PUENTE	1.41	231.0967	26.754	1363535.168	1049075.642	28.611
	550	3.1939	48.900	90.0619	1.70	MANHOLE	1.41	196.8039	48.900	1363505.158	1049082.325	27.550
	551	359.1051	51.177	90.1236	1.70	MANHOLE	1.41	192.6573	51.177	1363502.037	1049085.248	27.452
	552	358.2933	54.279	90.2553	1.70	HIDRANTE	1.41	191.9689	54.277	1363498.872	1049085.206	27.231
	553	8.5922	41.368	89.4204	1.70	SUMIDERO	1.41	202.4659	41.367	1363513.742	1049080.654	27.856
	554	8.2851	40.393	89.4204	1.70	SUMIDERO	1.41	201.9573	40.392	1363514.507	1049081.359	27.851
	555	349.4821	42.040	90.0755	1.70	PARAMENTO	1.41	183.2823	42.040	1363509.999	1049094.055	27.543
	556	302.2355	10.474	91.2105	1.70	PARAMENTO	1.41	135.8750	10.471	1363544.454	1049103.752	27.393
	557	275.0957	9.137	91.2901	1.70	PARAMENTO	1.41	108.6423	9.134	1363549.050	1049105.117	27.403
	558	275.0328	3.935	90.2035	1.70	CERRAMIENT	1.41	108.5342	3.935	1363550.719	1049100.193	27.616
	559	131.3433	7.590	90.1453	1.70	CERRAMIENT	1.41	325.0523	7.590	1363558.191	1049092.114	27.607
E11038-E10029	E10029	0.0000	20.629	75.2832	1.70	ESTACION	1.40	356.8381	19.978	1363571.918	1049095.360	23.072
	560	341.1221	24.304	78.2946	1.80	CERRAMIENT	1.40	158.0439	23.816	1363549.829	1049104.265	27.517
	561	339.1018	25.040	78.3703	1.80	CERRAMIENT	1.40	156.0098	24.548	1363549.491	1049105.341	27.611
	562	338.1209	10.320	80.2626	4.00	C_BATEA	1.40	155.0406	10.177	1363562.692	1049099.654	22.183
	563	337.5036	10.273	78.4610	2.90	C_CLAVE	1.40	154.6814	10.076	1363562.809	1049099.669	23.570
	564	353.5439	9.322	77.1504	1.70	TERRENO	1.40	170.7489	9.092	1363562.944	1049096.822	24.827
	565	329.5631	13.569	84.0512	1.70	TERRENO	1.40	146.7800	13.497	1363560.627	1049102.754	24.168
	566	341.2736	11.215	77.4257	1.70	TERRENO	1.40	158.2981	10.958	1363561.736	1049099.412	25.156
	567	323.2341	13.161	89.5241	1.70	TERRENO	1.40	140.2328	13.161	1363561.802	1049103.779	22.798
	568	314.2943	12.063	96.2632	1.70	TERRENO	1.40	131.3334	11.987	1363564.001	1049104.361	21.416
	569	9.4144	9.391	78.4139	1.70	TERRENO	1.40	186.5337	9.209	1363562.769	1049094.312	24.611
	570	2.5234	3.788	79.0813	1.70	TERRENO	1.40	179.7142	3.720	1363568.198	1049095.379	23.483



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	571	306.5610	12.070	103.1737	1.70	TERRENO	1.40	123.7742	11.747	1363565.388	1049105.124	19.994
	572	328.3037	4.596	102.1547	1.70	TERRENO	1.40	145.3484	4.491	1363568.223	1049097.914	21.793
	573	298.1230	2.933	121.0216	1.70	TERRENO	1.40	115.0464	2.513	1363570.854	1049097.637	21.257
	574	270.3917	3.609	117.1217	1.70	TERRENO	1.40	87.4928	3.210	1363572.058	1049098.567	21.120
	575	296.3443	13.056	105.1427	1.70	B_RIO	1.40	113.4167	12.597	1363566.912	1049106.919	19.337
	576	274.0952	10.180	110.0833	1.70	B_RIO	1.40	91.0025	9.557	1363571.751	1049104.916	19.264
	577	301.3418	17.173	101.2426	1.70	B_RIO	1.40	118.4098	16.834	1363563.909	1049110.167	19.373
	578	248.1434	9.340	112.2817	1.70	B_RIO	1.40	65.0809	8.631	1363575.554	1049103.187	19.200
	579	215.3008	8.435	114.5614	1.70	B_RIO	1.40	32.3403	7.649	1363578.380	1049099.452	19.213
	580	306.2633	19.743	100.2414	1.70	B_RIO	1.40	123.2806	19.418	1363561.262	1049111.594	19.204
	581	296.3351	12.034	106.5147	1.70	BORDE_CANO	1.40	113.4023	11.517	1363567.344	1049105.929	19.279
	582	292.3824	10.955	109.2241	1.70	BORDE_CANO	1.40	109.4781	10.334	1363568.472	1049105.103	19.135
	583	309.2521	9.675	109.5651	1.70	BORDE_CANO	1.40	126.2606	9.095	1363566.539	1049102.693	19.469
	584	307.0643	9.033	111.3025	1.70	BORDE_CANO	1.40	123.9500	8.404	1363567.224	1049102.331	19.458
	585	319.3436	10.155	107.0428	1.70	BORDE_CANO	1.40	136.4148	9.707	1363564.886	1049102.053	19.788
	586	313.1310	6.378	121.0530	1.70	BORDE_CANO	1.40	130.0575	5.462	1363568.403	1049099.541	19.476
	587	326.4029	10.539	100.1631	2.90	BORDE_CANO	1.40	143.5128	10.370	1363563.581	1049101.527	19.690
	588	325.0952	6.110	124.1824	1.70	BORDE_CANO	1.40	142.0025	5.047	1363567.941	1049098.467	19.326
	589	333.0730	10.636	93.5318	2.90	BORDE_CANO	1.40	149.9631	10.612	1363562.731	1049100.672	20.848
	590	330.1846	10.677	100.2042	2.90	BORDE_CANO	1.40	147.1509	10.503	1363563.094	1049101.057	19.652
	591	334.5106	10.691	96.4258	2.90	BORDE_CANO	1.40	151.6898	10.618	1363562.570	1049100.395	20.319
	592	293.5943	11.518	107.3839	1.70	CANO	1.40	110.8334	10.976	1363568.014	1049105.619	19.278
	593	341.4926	9.653	96.4010	2.90	BORDE_CANO	1.40	158.6620	9.588	1363562.987	1049098.849	20.448
	594	347.0505	8.037	97.4151	3.70	BORDE_CANO	1.40	163.9228	7.965	1363564.265	1049097.566	19.693
	595	353.5820	7.066	89.0607	2.90	BORDE_CANO	1.40	170.8103	7.065	1363564.943	1049096.488	21.680
	596	173.5844	6.145	100.2102	1.70	PUENTE	1.40	350.8170	6.045	1363577.885	1049094.395	21.666
	597	178.1007	6.282	100.1024	1.70	PUENTE	1.40	355.0067	6.183	1363578.078	1049094.822	21.660
	598	177.4849	6.620	101.1459	1.70	PUENTE	1.40	354.6517	6.493	1363578.382	1049094.755	21.478
	599	149.3121	8.694	102.2538	1.70	PUENTE	1.40	326.3606	8.490	1363578.986	1049090.657	20.899
	600	149.0251	9.071	101.2626	1.70	PUENTE	1.40	325.8856	8.891	1363579.279	1049090.374	20.970
E10030		0.0000				ESTACION		0.0000		1363542.011	1048994.253	27.050
E10031	E10030	0.0000	14.594	88.5528	1.70	ESTACION	1.50	288.8403		1363546.739	1048980.397	26.973
	E11039	275.1646	56.388	89.4743	1.70	DELTA	1.50	24.12	56.39	1363598.20	1049003.44	26.98
	601	222.4124	7.084	86.5932	1.70	PARAMENTO	1.50	331.5303	7.074	1363552.957	1048977.025	27.146
	602	213.4113	4.760	85.3957	1.70	POSTE	1.50	322.5273	4.746	1363550.506	1048977.509	27.134
	603	203.3912	4.499	85.3959	1.70	POSTE	1.50	312.4937	4.486	1363549.769	1048977.089	27.114



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	604	197.2803	5.976	86.4514	1.70	CORDON	1.50	306.3078	5.966	1363550.272	1048975.589	27.112
	605	203.3233	4.223	87.2618	1.70	CORDON	1.50	312.3828	4.219	1363549.582	1048977.281	26.963
	606	220.5932	4.037	85.0041	1.70	CORDON	1.50	329.8325	4.022	1363550.216	1048978.376	27.125
	607	227.0708	4.389	88.0807	1.70	CORDON	1.50	335.9592	4.387	1363550.745	1048978.610	26.917
	608	226.2122	5.206	88.4632	1.70	SUMIDERO	1.50	335.1964	5.205	1363551.463	1048978.214	26.885
	609	237.1347	5.061	90.0326	1.70	SUMIDERO	1.50	346.0700	5.061	1363551.651	1048979.179	26.769
	610	241.4636	5.069	88.2110	1.70	CORDON	1.50	350.6170	5.067	1363551.738	1048979.571	26.920
	611	251.3225	5.451	88.2119	1.70	CORDON	1.50	0.3806	5.449	1363552.187	1048980.433	26.930
	612	261.3510	12.849	88.1735	1.70	CORDON	1.50	10.4264	12.843	1363559.370	1048982.721	27.157
	613	256.1411	13.674	88.2626	1.70	CORDON	1.50	5.0767	13.669	1363560.354	1048981.607	27.146
	614	259.3223	18.195	88.5021	1.70	CORDON	1.50	8.3800	18.191	1363564.736	1048983.048	27.143
	615	263.5326	18.606	88.4746	1.70	CORDON	1.50	12.7309	18.602	1363564.883	1048984.496	27.165
	616	274.1513	42.749	90.1657	1.70	SUMIDERO	1.50	23.0939	42.748	1363586.061	1048997.165	26.563
	617	273.3745	42.444	90.1158	1.70	SUMIDERO	1.50	22.4695	42.444	1363585.960	1048996.619	26.626
	618	274.1815	42.820	89.4449	1.70	CORDON	1.50	23.1445	42.820	1363586.112	1048997.227	26.963
	619	271.4056	42.751	89.4232	1.70	CORDON	1.50	20.5225	42.750	1363586.776	1048995.384	26.991
	620	271.3611	40.860	89.4232	1.70	CORDON	1.50	20.4434	40.859	1363585.025	1048994.668	26.982
	621	269.2633	40.639	89.4010	1.70	CORDON	1.50	18.2828	40.638	1363585.326	1048993.146	27.008
	622	269.1720	38.698	89.3547	1.70	CORDON	1.50	18.1292	38.697	1363583.515	1048992.438	27.047
	623	274.3448	19.710	89.2841	1.70	CORDON	1.50	23.4203	19.709	1363564.824	1048988.231	26.953
	624	278.0555	21.325	89.1832	1.70	CORDON	1.50	26.9389	21.323	1363565.748	1048990.057	27.031
	625	298.3336	4.121	85.3043	1.70	CORDON	1.50	47.4003	4.108	1363549.519	1048983.421	27.096
	626	328.2532	3.999	84.5405	1.70	CORDON	1.50	77.2659	3.983	1363547.617	1048984.282	27.129
	627	336.4419	4.971	85.3000	1.70	CORDON	1.50	85.5789	4.956	1363547.121	1048985.338	27.164
	628	344.2144	4.726	85.4540	1.70	CORDON	1.50	93.2025	4.713	1363546.475	1048985.103	27.123
	629	316.0657	6.586	85.5840	1.70	PARAMENTO	1.50	64.9562	6.570	1363549.520	1048986.349	27.236
	630	342.1753	15.504	88.1509	1.70	PARAMENTO	1.50	91.1384	15.497	1363546.431	1048995.891	27.247
E11039-E10031	E10031	0.0000	56.387	89.4253	1.70	ESTACION	1.42	24.12	56.39	1363598.20	1049003.44	26.98
	E11040	192.5159	22.55	96.0928	1.70	DELTA	1.42	36.99	22.42	1363616.11	1049016.93	24.28
	631	98.0926	7.875	118.4007	2.60	ESTRUCTURA	1.42	302.2770	6.910	1363601.893	1048997.598	22.021
	632	98.0253	7.753	117.3743	2.60	ESTRUCTURA	1.42	302.1678	6.869	1363601.860	1048997.625	22.204
	633	96.4718	7.634	117.5026	2.60	ESTRUCTURA	1.42	300.9081	6.750	1363601.671	1048997.648	22.234
	634	96.1417	7.448	116.4343	2.60	ESTRUCTURA	1.42	300.3578	6.652	1363601.565	1048997.699	22.450
	635	94.2654	7.301	117.0219	2.60	ESTRUCTURA	1.42	298.5681	6.503	1363601.313	1048997.728	22.480
	636	94.1213	7.192	115.2816	2.60	ESTRUCTURA	1.42	298.3234	6.493	1363601.284	1048997.724	22.706
	637	92.5047	7.085	115.4956	2.60	ESTRUCTURA	1.42	296.9662	6.377	1363601.095	1048997.756	22.712



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	638	92.3306	6.946	114.1204	2.60	ESTRUCTURA	1.42	296.6714	6.336	1363601.047	1048997.778	22.952
	639	93.1632	6.339	114.3820	2.60	C_BATEA	1.42	297.3953	5.762	1363600.854	1048998.324	23.157
	640	93.0404	6.352	116.4226	2.60	DESCARGA	1.42	297.1875	5.674	1363600.796	1048998.392	22.945
	641	105.4902	6.043	122.4658	3.15	ESTRUCTURA	1.42	309.9370	5.081	1363601.465	1048999.544	21.977
	642	103.2636	5.495	121.0029	3.15	ESTRUCTURA	1.42	307.5631	4.710	1363601.075	1048999.706	22.419
	643	100.2546	5.657	119.5207	3.15	ESTRUCTURA	1.42	304.5492	4.906	1363600.985	1048999.399	22.432
	644	100.5315	5.463	118.0301	3.15	ESTRUCTURA	1.42	305.0073	4.821	1363600.969	1048999.491	22.680
	645	98.4857	5.525	117.2614	3.15	ESTRUCTURA	1.42	302.9356	4.904	1363600.869	1048999.324	22.704
	646	98.2258	5.523	114.5348	3.15	ESTRUCTURA	1.42	302.5025	5.010	1363600.895	1048999.214	22.924
	647	95.2408	5.619	114.1034	3.15	ESTRUCTURA	1.42	299.5220	5.126	1363600.729	1048998.979	22.948
	648	100.3042	6.767	122.3410	2.60	ESTRUCTURA	1.42	304.6314	5.703	1363601.444	1048998.747	22.157
	649	115.0457	9.114	115.5219	2.60	ESTRUCTURA	1.42	319.2023	8.201	1363604.411	1048998.081	21.822
	650	116.2115	9.241	117.5651	2.60	BORDE_CANO	1.42	320.4739	8.163	1363604.500	1048998.244	21.468
	651	118.3403	8.455	120.0242	2.60	BORDE_CANO	1.42	322.6873	7.319	1363604.024	1048999.003	21.566
	652	125.4707	6.848	120.0242	3.15	ESTRUCTURA	1.42	329.9050	5.928	1363603.332	1049000.467	21.821
	653	124.3706	7.150	120.0242	3.15	BORDE_CANO	1.42	328.7381	6.189	1363603.494	1049000.228	21.670
	654	90.4757	5.896	109.2048	2.50	C_CLAVE	1.42	294.9189	5.563	1363600.547	1048998.394	23.946
	655	92.1408	5.164	105.4932	2.50	ESTRUCTURA	1.42	296.3553	4.968	1363600.409	1048998.988	24.491
	656	113.5029	6.057	126.1949	1.70	ESTRUCTURA	1.42	317.9612	4.880	1363601.827	1049000.172	23.111
	657	92.0121	6.425	103.0030	2.50	ESTRUCTURA	1.42	296.1423	6.260	1363600.961	1048997.820	24.453
	658	91.3601	6.419	101.4650	2.50	DES_DOMICI	1.42	295.7200	6.284	1363600.930	1048997.778	24.589
	659	90.2617	6.218	94.1859	2.50	DES_DOMICI	1.42	294.5578	6.200	1363600.780	1048997.800	25.431
	660	106.3720	8.537	109.4052	2.50	ESTRUCTURA	1.42	310.7420	8.038	1363603.449	1048997.349	23.024
	661	145.0531	11.324	120.2432	1.70	BORDE_CANO	1.42	349.2117	9.766	1363607.797	1049001.611	20.968
	662	146.1502	10.949	121.5551	1.70	BORDE_CANO	1.42	350.3703	9.292	1363607.365	1049001.885	20.909
	663	147.5349	10.555	122.4042	1.70	BORDE_CANO	1.42	352.0167	8.884	1363607.001	1049002.206	21.001
	664	168.5914	13.904	116.2441	1.70	BORDE_CANO	1.42	13.1070	12.453	1363610.332	1049006.263	20.515
	665	163.5558	14.477	115.2217	1.70	BORDE_CANO	1.42	8.0525	13.081	1363611.155	1049005.272	20.496
	666	167.0121	14.355	114.2929	2.00	BORDE_CANO	1.42	11.1423	13.063	1363611.020	1049005.964	20.448
	667	79.1259	3.456	95.2241	1.70	TERRENO	1.42	283.3362	3.441	1363598.997	1049000.092	26.375
	668	179.4531	3.446	98.2743	1.70	TERRENO	1.42	23.8784	3.408	1363601.320	1049004.819	26.192
	669	17.0519	18.875	86.1125	2.60	CORDON	1.42	221.2084	18.833	1363584.035	1048991.032	27.053
	670	16.3912	19.330	82.2540	4.30	SUMIDERO	1.42	220.7731	19.161	1363583.692	1048990.926	26.647
	671	15.4601	18.939	82.1042	4.30	SUMIDERO	1.42	219.8867	18.763	1363583.806	1048991.407	26.677
	672	358.3650	5.996	87.0428	1.70	PARAMENTO	1.42	202.7337	5.988	1363592.680	1049001.125	27.005
	673	70.3622	11.452	83.1954	2.60	PARAMENTO	1.42	274.7259	11.375	1363599.140	1048992.104	27.129



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	674	268.4956	17.140	96.0445	1.70	DES_DOMICI	1.42	112.9520	17.044	1363591.557	1049019.134	24.884
	675	272.3941	17.138	94.3840	1.70	DES_DOMICI	1.42	116.7812	17.082	1363590.507	1049018.689	25.312
	676	278.1756	18.276	89.4724	1.70	DES_DOMICI	1.42	122.4187	18.276	1363588.406	1049018.867	26.766
	677	281.2418	18.524	89.1038	1.70	DES_DOMICI	1.42	125.5248	18.522	1363587.441	1049018.514	26.965
	678	280.0511	22.347	90.2606	1.70	PARAMENTO	1.42	124.2062	22.346	1363585.641	1049021.920	26.530
	679	272.3849	22.276	92.3942	1.70	DES_DOMICI	1.42	116.7667	22.252	1363588.182	1049023.307	25.665
	680	274.1251	22.199	92.1203	1.70	DES_DOMICI	1.42	118.3339	22.183	1363587.675	1049022.965	25.847
	681	276.2439	25.134	91.0948	1.70	DES_DOMICI	1.42	120.5306	25.129	1363585.438	1049025.084	26.189
	682	271.5002	25.136	92.1315	1.70	DES_DOMICI	1.42	115.9537	25.117	1363587.211	1049026.024	25.725
	683	267.5115	17.821	97.0104	1.70	CANO	1.42	111.9739	17.687	1363591.585	1049019.842	24.522
	684	264.2607	17.862	97.0919	1.70	CANO	1.42	108.5550	17.723	1363592.564	1049020.241	24.475
	685	262.1210	17.871	96.5722	1.70	CANO	1.42	106.3225	17.739	1363593.218	1049020.464	24.535
	686	255.2829	20.352	96.1508	1.70	CANO	1.42	99.5945	20.231	1363594.831	1049023.387	24.483
	687	255.0318	21.037	96.2125	1.70	CANO	1.42	99.1748	20.908	1363594.870	1049024.080	24.370
	688	255.0915	20.697	96.2207	1.70	CANO	1.42	99.2739	20.569	1363594.888	1049023.740	24.404
	689	242.1910	20.847	96.4300	1.70	CANO	1.42	86.4392	20.704	1363599.489	1049024.103	24.261
	690	242.3207	21.293	96.2955	1.70	CANO	1.42	86.6550	21.156	1363599.438	1049024.560	24.289
E11040-E11039	11039	0.0000	22.629	82.2801	1.70	ESTACION	1.42	36.99	22.42	1363616.11	1049016.93	24.28
	691	135.0413	8.907	119.1543	1.70	BORDE_CANO	1.42	352.0564	7.770	1363623.808	1049015.854	19.643
	692	125.5547	9.560	119.1543	1.70	BORDE_CANO	1.42	342.9159	8.340	1363624.084	1049014.478	19.324
	693	130.1154	9.249	119.0716	1.70	BORDE_CANO	1.42	347.1845	8.080	1363623.990	1049015.136	19.495
	694	141.0510	9.307	114.4017	2.90	RIO	1.42	358.0723	8.457	1363624.565	1049016.643	18.912
	695	159.0145	8.646	117.0458	2.90	RIO	1.42	16.0153	7.698	1363623.511	1049019.052	18.860
	696	125.1357	10.431	113.2241	2.50	RIO	1.42	342.2187	9.575	1363625.229	1049014.004	19.058
	697	126.2752	13.251	111.1352	2.50	RIO	1.42	343.4506	12.352	1363627.952	1049013.410	18.398



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION C
INGENIERA CAROLINA MOSQUERA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12000		0.0000				ESTACION		0.0000		1363520.922	1049649.590	28.677
E12001	E12000	0.0001	113.800	89.4016	1.70	ESTACION	1.42	299.4056		1363576.804	1049550.439	28.269
	E12002	266.5403	108.847	89.5757	1.70	DELTA	1.42	26.3064	108.847	1363674.378	1049598.677	28.051
	EAUX_1	180.2952	117.323	90.0322	1.70	DELTA_AUX	1.42	299.9034	117.323	1363635.294	1049448.735	27.871
	1	187.2012	12.268	88.5624	1.70	BORDE_VIA	1.42	306.7422	12.266	1363584.142	1049540.610	28.213
	2	208.0448	9.480	88.1451	1.70	BORDE_VIA	1.42	327.4856	9.476	1363584.794	1049545.346	28.276
	3	243.2355	16.421	88.5310	1.70	BORDE_VIA	1.42	2.8042	16.418	1363593.202	1049551.242	28.305
	4	346.4049	5.469	87.0706	1.70	BORDE_VIA	1.42	106.0859	5.462	1363575.291	1049555.687	28.261
	5	318.4014	3.107	86.0157	1.70	BORDE_VIA	1.42	78.0761	3.100	1363577.444	1049553.472	28.201
	6	265.2601	12.922	88.4938	1.70	BORDE_VIA	1.42	24.8392	12.919	1363588.528	1049555.866	28.251
	7	305.0856	4.076	88.4302	1.70	SUMEDERO	1.42	64.5545	4.075	1363578.555	1049554.119	28.077
	8	314.5813	3.439	88.1320	1.70	SUMEDERO	1.42	74.3759	3.437	1363577.730	1049553.749	28.093
	9	288.5229	6.894	85.4537	1.70	CERRAMIENT	1.42	48.2803	6.875	1363581.379	1049555.571	28.496
	10	278.4240	12.807	86.5748	1.70	CERRAMIENT	1.42	38.1167	12.789	1363586.866	1049558.333	28.665
	11	213.5746	11.937	87.3838	1.70	CERRAMIENT	1.42	333.3684	11.927	1363587.466	1049545.093	28.477
	12	242.2450	19.487	88.3247	1.70	CERRAMIENT	1.42	1.8195	19.481	1363596.275	1049551.057	28.480
	13	200.4912	10.468	89.4338	1.70	SUMEDERO	1.42	320.2256	10.468	1363584.849	1049543.742	28.036
	14	196.4251	10.240	89.2640	1.70	SUMEDERO	1.42	316.1197	10.240	1363584.185	1049543.341	28.085
	15	197.1632	5.192	87.1403	1.70	MANHOLE	1.42	316.6811	5.186	1363580.577	1049546.881	28.237
	16	266.5402	78.349	89.4832	1.70	LINEAMIENT	1.42	26.3061	78.349	1363647.039	1049585.160	28.247
E12002-E12001	E12001	359.5959	108.805	89.4409	1.70	ESTACION	1.41	26.3064	108.847	1363674.378	1049598.677	28.051
	E12003	92.0354	112.240	89.5058	1.70	DELTA	1.41	298.3714	112.240	1363727.713	1049499.919	28.052
	47	159.5808	12.025	89.0248	1.70	BORDE_VIA	1.41	6.2753	12.023	1363686.330	1049599.991	27.957
	48	143.0951	9.694	89.1906	1.70	BORDE_VIA	1.41	349.4706	9.693	1363683.909	1049596.905	27.872
	49	123.3235	12.277	89.1136	1.70	BORDE_VIA	1.41	329.8495	12.276	1363684.993	1049592.511	27.930
	50	99.1502	34.770	89.1654	1.70	BORDE_VIA	1.41	305.5570	34.767	1363694.596	1049570.392	28.193
	51	103.1006	34.056	89.1612	1.70	CERRAMIENT	1.41	309.4747	34.053	1363696.027	1049572.391	28.191
	52	107.5202	34.684	89.1738	1.70	CERRAMIENT	1.41	314.1736	34.681	1363698.546	1049573.802	28.184
	53	108.1529	34.685	89.1916	1.70	BORDE_VIA	1.41	314.5645	34.683	1363698.716	1049573.967	28.168
	54	105.5104	30.326	89.1917	1.70	ANDEN	1.41	312.1575	30.324	1363694.731	1049576.198	28.116
	55	105.5319	31.146	89.1917	1.70	POSTE	1.41	312.1950	31.144	1363695.296	1049575.603	28.126
	56	108.3614	30.222	89.0438	1.70	PARAMENTO	1.41	314.9103	30.218	1363695.712	1049577.276	28.244
	57	117.4750	19.914	88.3530	1.70	PARAMENTO	1.41	324.1036	19.908	1363690.505	1049587.004	28.246
	58	113.5526	19.488	88.3437	1.70	ANDEN	1.41	320.2303	19.482	1363689.353	1049586.214	28.241
	59	102.1944	35.325	88.5715	1.70	ARBOL	1.41	308.6353	35.319	1363696.430	1049571.088	28.402
	60	100.5929	39.075	88.5342	1.70	ARBOL	1.41	307.2978	39.068	1363698.052	1049567.599	28.511



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	61	99.0940	42.503	89.0750	1.70	ARBOL	1.41	305.4675	42.498	1363699.038	1049564.064	28.402
	62	98.5633	45.867	88.5925	1.70	ARBOL	1.41	305.2489	45.860	1363700.846	1049561.225	28.565
	63	97.0841	51.982	89.2436	1.70	BORDE_VIA	1.41	303.4511	51.979	1363703.031	1049555.308	28.292
	64	97.0226	56.346	89.2546	1.70	MANHOLE	1.41	303.3470	56.343	1363705.351	1049551.610	28.318
	65	96.4439	60.784	89.2617	1.70	CERRAMIENT	1.41	303.0506	60.781	1363707.527	1049547.731	28.353
	66	97.4331	60.799	89.2914	1.70	CERRAMIENT	1.41	304.0317	60.797	1363708.403	1049548.293	28.301
	67	94.1847	63.033	89.2752	1.70	BORDE_VIA	1.41	300.6195	63.030	1363706.482	1049544.435	28.346
	68	98.1424	60.580	89.3503	1.70	SUMEDERO	1.41	304.5464	60.578	1363708.731	1049548.780	28.197
	69	99.0018	60.696	89.3329	1.70	SUMEDERO	1.41	305.3114	60.694	1363709.461	1049549.149	28.225
	70	92.0354	80.582	89.3922	1.70	LINEAMIENT	1.41	298.3714	80.581	1363712.669	1049527.775	28.241
	71	92.0356	36.238	89.1722	1.70	LINEAMIENT	1.41	298.3720	36.235	1363691.597	1049566.794	28.206
E12003-E12002	E12002	0.0000	112.221	89.5109	1.70	ESTACION	1.40	298.3714	112.240	1363727.713	1049499.919	28.052
	E12004	164.0215	162.966	90.0035	1.70	DELTA	1.40	282.4089	162.966	1363762.732	1049340.760	27.725
	72	5.0519	32.541	89.1412	1.70	BORDE_VIA	1.40	123.4600	32.538	1363709.773	1049527.064	28.186
	73	356.3353	33.182	89.0332	1.70	BORDE_VIA	1.40	114.9361	33.178	1363713.725	1049530.003	28.298
	74	354.4720	21.869	88.4011	1.70	BORDE_VIA	1.40	113.1603	21.863	1363719.114	1049520.020	28.261
	75	12.2402	22.301	88.5755	1.70	CERRAMIENT	1.40	130.7720	22.297	1363713.152	1049516.805	28.156
	76	349.1015	22.210	88.3213	1.70	CERRAMIENT	1.40	107.5422	22.203	1363721.021	1049521.089	28.320
	77	330.4353	8.180	87.0603	1.70	CERRAMIENT	1.40	89.1028	8.170	1363727.841	1049508.087	28.167
	78	20.4433	14.354	88.0610	1.70	CERRAMIENT	1.40	139.1139	14.346	1363716.867	1049509.309	28.228
	79	336.0737	6.838	87.0308	1.70	BORDE_VIA	1.40	94.4984	6.829	1363727.177	1049506.727	28.105
	80	26.1826	9.201	88.0637	1.70	BORDE_VIA	1.40	144.6786	9.196	1363720.210	1049505.236	28.056
	81	45.5043	7.190	88.0752	1.70	BORDE_VIA	1.40	164.2167	7.186	1363720.798	1049501.873	27.987
	82	308.5149	7.385	86.5555	1.70	BORDE_VIA	1.40	67.2350	7.374	1363730.567	1049506.719	28.148
	83	285.3230	13.670	87.5935	1.70	BORDE_VIA	1.40	43.9131	13.662	1363737.555	1049509.394	28.232
	84	72.3728	14.495	88.4302	1.70	BORDE_VIA	1.40	190.9959	14.491	1363713.488	1049497.155	28.077
	85	70.3637	16.850	88.3521	1.70	POSTE	1.40	188.9817	16.845	1363711.075	1049497.289	28.168
	86	290.5958	14.130	87.5724	1.70	CERRAMIENT	1.40	49.3709	14.121	1363736.908	1049510.636	28.257
	87	323.3138	7.054	86.2118	1.70	POSTE	1.40	81.8986	7.040	1363728.705	1049506.888	28.201
	88	300.2707	4.663	85.2451	1.70	VALVULA	1.40	58.8234	4.648	1363730.119	1049503.896	28.126
	89	232.4038	4.665	88.0609	1.70	SUMEDERO	1.40	351.0486	4.662	1363732.319	1049499.193	27.907
	90	224.3920	4.024	86.3748	1.70	SUMEDERO	1.40	343.0270	4.017	1363731.555	1049498.746	27.989
	91	61.0421	9.394	89.0120	1.70	SUMEDERO	1.40	179.4439	9.393	1363718.321	1049500.010	27.913
	92	61.3131	8.460	88.5743	1.70	SUMEDERO	1.40	179.8967	8.459	1363719.254	1049499.934	27.906
	93	127.2310	3.388	84.1151	1.70	MANHOLE	1.40	245.7575	3.371	1363726.329	1049496.845	28.095
	94	128.3648	14.440	89.3509	1.70	SUMEDERO	1.40	246.9847	14.440	1363722.067	1049486.628	27.857



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	95	126.4834	13.937	89.5231	1.70	SUMEDERO	1.40	245.1809	13.937	1363721.863	1049487.269	27.783
	96	109.0530	24.737	88.5825	1.70	PARAMENTO	1.40	227.4631	24.733	1363710.992	1049481.694	28.196
	97	104.4207	23.552	89.0805	1.70	BORDE_VIA	1.40	223.0734	23.549	1363710.511	1049483.836	28.109
	98	123.4019	14.015	89.0906	1.70	BORDE_VIA	1.40	242.0434	14.013	1363721.143	1049487.541	27.960
	99	140.5345	16.127	88.5731	1.70	BORDE_VIA	1.40	259.2672	16.124	1363724.710	1049484.076	28.046
	100	128.1520	17.577	88.4118	1.70	PARAMENTO	1.40	246.6270	17.572	1363720.742	1049483.788	28.155
	101	136.1116	17.957	89.1055	1.70	POSTE	1.40	254.5592	17.955	1363722.933	1049482.612	28.009
	102	143.5949	27.909	89.0927	1.70	PARAMENTO	1.40	262.3684	27.906	1363724.007	1049472.260	28.163
	103	165.5232	3.144	84.3331	1.70	BORDE_VIA	1.40	284.2470	3.130	1363728.483	1049496.885	28.051
	104	240.5846	3.729	86.2101	1.70	BORDE_VIA	1.40	359.3509	3.721	1363731.434	1049499.877	27.990
	105	264.0140	16.392	88.5432	1.70	BORDE_VIA	1.40	22.3992	16.389	1363742.866	1049506.164	28.065
	106	228.0242	28.445	88.3535	1.70	PARAMENTO	1.40	346.4164	28.436	1363755.354	1049493.240	28.451
	107	181.4312	14.055	83.5317	2.60	PARAMENTO	1.40	300.0914	13.975	1363734.720	1049487.827	28.349
	108	164.0216	97.013	89.5917	1.70	LINEAMIENT	1.40	282.4092	97.013	1363748.560	1049405.172	27.773
	109	162.2456	95.815	89.5848	1.70	BORDE_VIA	1.40	280.7870	95.815	1363745.646	1049405.797	27.786
	110	160.1127	93.956	89.5125	1.70	PARAMENTO	1.40	278.5622	93.956	1363741.702	1049407.010	27.987
	111	160.4807	85.930	89.5450	1.70	POSTE	1.40	279.1734	85.930	1363741.412	1049415.088	27.882
	112	162.0712	86.031	89.5904	1.70	SUMEDERO	1.40	280.4914	86.031	1363743.378	1049415.326	27.776
	113	162.2329	85.205	89.5957	1.70	SUMEDERO	1.40	280.7628	85.205	1363743.625	1049416.213	27.754
	114	163.3844	86.009	89.3647	1.70	MANHOLE	1.40	282.0170	86.007	1363745.620	1049415.796	28.334
	115	147.4628	16.105	89.0619	1.70	MANHOLE	1.40	266.1459	16.103	1363726.631	1049483.852	28.004
E12004-E12003	E12003	0.0000	162.957	89.4451	1.70	ESTACION	1.39	282.4089	162.966	1363762.732	1049340.760	27.725
	E12005	182.4054	179.917	89.5409	1.70	DELTA	1.39	285.0906	179.917	1363809.573	1049167.047	27.717
	116	357.1756	90.964	89.4246	1.70	ARBOL	1.39	99.7078	90.963	1363747.394	1049430.420	27.867
	117	356.4713	84.683	89.4129	1.70	ARBOL	1.39	99.1959	84.682	1363749.199	1049424.353	27.867
	118	357.3448	81.279	89.4347	1.70	BORDE_VIA	1.39	99.9889	81.278	1363748.634	1049420.806	27.795
	119	356.5004	78.667	89.4412	1.70	SUMEDERO	1.39	99.2434	78.666	1363750.096	1049418.404	27.773
	120	357.0744	77.816	89.4507	1.70	SUMEDERO	1.39	99.5378	77.815	1363749.839	1049417.499	27.748
	120	182.4055	109.581	90.0005	1.70	LINEAMIENT	1.39	285.0909	109.581	1363791.262	1049234.958	27.409
	121	182.4056	79.175	89.5731	1.70	LINEAMIENT	1.39	285.0911	79.175	1363783.346	1049264.315	27.468
	122	184.0757	111.819	89.4945	1.70	MANHOLE	1.39	286.5414	111.819	1363794.568	1049233.569	27.745
	123	1.0245	28.978	89.2630	1.70	BORDE_VIA	1.39	103.4547	28.977	1363755.990	1049368.941	27.694
	124	9.2729	29.291	89.0333	1.70	PARAMENTO	1.39	111.8670	29.287	1363751.824	1049367.940	27.892
	125	343.0647	30.230	89.1629	1.70	CERRAMIENT	1.39	85.5220	30.228	1363765.092	1049370.895	27.794
	126	348.4552	28.497	89.2953	1.70	BORDE_VIA	1.39	91.1734	28.496	1363762.149	1049369.250	27.661
	127	8.5228	3.193	85.1202	1.70	BORDE_VIA	1.39	111.2834	3.182	1363761.577	1049343.725	27.678



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	128	70.2208	1.892	81.0215	1.70	BORDE_VIA	1.39	172.7778	1.869	1363760.878	1049340.995	27.706
	129	93.3333	5.162	86.4307	1.70	CANALETA	1.39	195.9681	5.154	1363757.778	1049339.342	27.707
	130	88.2542	5.204	87.3320	1.70	BORDE_VIA	1.39	190.8372	5.199	1363757.626	1049339.782	27.633
	131	316.4302	9.533	88.4113	1.70	BORDE_VIA	1.39	59.1261	9.530	1363767.623	1049348.940	27.630
	132	307.5638	11.250	88.4551	1.70	POSTE	1.39	50.3528	11.247	1363769.909	1049349.420	27.654
	133	302.5319	11.928	88.2442	1.70	CERRAMIENT	1.39	45.2975	11.923	1363771.120	1049349.235	27.742
	134	286.2835	9.429	88.2443	1.70	BORDE_VIA	1.39	28.8853	9.425	1363770.985	1049345.313	27.673
	135	275.5647	11.527	88.4138	1.70	BORDE_VIA	1.39	18.3553	11.524	1363773.670	1049344.389	27.674
	136	273.1556	11.562	88.2122	1.70	CANALETA	1.39	15.6745	11.557	1363773.860	1049343.882	27.743
	137	273.0039	22.334	89.0757	1.70	CANALETA	1.39	15.4197	22.331	1363784.260	1049346.697	27.749
	138	286.0606	25.386	88.5744	1.70	PARAMENTO	1.39	28.5106	25.382	1363785.036	1049352.875	27.871
	139	274.1712	24.782	89.2320	1.70	BORDE_VIA	1.39	16.6956	24.781	1363786.468	1049347.879	27.676
	140	256.2158	25.744	89.2120	1.70	BORDE_VIA	1.39	358.7750	25.742	1363788.469	1049340.209	27.701
	141	257.2603	25.646	89.1402	1.70	CANALETA	1.39	359.8431	25.644	1363788.376	1049340.690	27.754
	142	245.1515	30.982	89.2232	1.70	PARAMENTO	1.39	347.6631	30.980	1363792.997	1049334.141	27.749
	143	218.2624	17.461	89.1508	1.70	PARAMENTO	1.39	320.8489	17.460	1363776.272	1049329.736	27.639
	144	208.2642	14.957	89.1239	1.70	BORDE_VIA	1.39	310.8539	14.956	1363772.515	1049329.448	27.617
	145	206.5712	14.637	88.5921	1.70	CANALETA	1.39	309.3622	14.635	1363772.014	1049329.445	27.669
	146	215.4358	11.634	88.4130	1.70	CANALETA	1.39	318.1417	11.631	1363771.395	1049332.999	27.677
	147	223.4128	12.093	88.4130	1.70	BORDE_VIA	1.39	326.1000	12.090	1363772.767	1049334.017	27.687
	148	223.3853	11.579	88.3259	1.70	CANALETA	1.39	326.0570	11.575	1363772.335	1049334.297	27.704
	149	223.5541	13.254	88.3302	1.70	POSTE	1.39	326.3370	13.250	1363773.760	1049333.415	27.747
	150	226.4349	12.152	88.4546	1.70	SUMEDERO	1.39	329.1392	12.149	1363773.161	1049334.528	27.674
	151	230.4815	11.782	88.3724	1.70	SUMEDERO	1.39	333.2131	11.779	1363773.247	1049335.452	27.694
	152	215.4602	8.337	91.2842	1.70	MANHOLE	1.39	318.1761	8.334	1363768.943	1049335.202	27.196
	153	221.4857	4.466	90.2607	1.70	MANHOLE	1.39	324.2247	4.466	1363766.356	1049338.149	27.377
	154	93.1849	59.780	89.5215	1.70	CANALETA	1.39	195.7225	59.780	1363705.189	1049324.561	27.546
	155	92.5058	59.607	89.5521	1.70	BORDE_VIA	1.39	195.2584	59.607	1363705.227	1049325.073	27.492
	156	100.1514	62.413	89.5524	1.70	BORDE_VIA	1.39	202.6628	62.413	1363705.138	1049316.712	27.495
	157	99.4909	62.319	89.5153	1.70	CANALETA	1.39	202.2281	62.319	1363705.045	1049317.185	27.558
	158	103.4027	63.413	89.4146	1.70	PARAMENTO	1.39	206.0831	63.412	1363705.778	1049312.879	27.748
	159	97.0311	59.717	90.0845	1.70	MANHOLE	1.39	199.4620	59.717	1363706.428	1049320.863	27.259
	160	84.5910	3.078	86.1143	1.70	SUMEDERO	1.39	187.3950	3.071	1363759.687	1049340.365	27.616
	161	68.3121	3.247	86.3458	1.70	SUMEDERO	1.39	170.9314	3.241	1363759.532	1049341.271	27.605
	162	64.2736	5.909	86.2005	1.70	ARBOL	1.39	166.8689	5.897	1363756.990	1049342.099	27.789
	163	153.2624	10.537	89.4513	1.70	SUMEDERO	1.39	255.8489	10.537	1363760.156	1049330.543	27.457



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	164	155.0851	9.644	89.2517	1.70	SUMEDERO	1.39	257.5564	9.644	1363760.654	1049331.343	27.509
	165	168.3958	11.670	88.2917	1.70	CERRAMIENT	1.39	271.0750	11.666	1363762.951	1049329.096	27.719
	166	147.5228	8.658	88.0434	1.70	CANALETA	1.39	250.2834	8.653	1363759.813	1049332.614	27.702
	167	149.0034	9.154	88.2839	1.70	BORDE_VIA	1.39	251.4184	9.151	1363759.816	1049332.086	27.654
	168	170.0430	9.586	88.3058	1.70	CANALETA	1.39	272.4839	9.583	1363763.148	1049331.186	27.659
	169	178.3241	13.650	88.5834	1.70	CANALETA	1.39	280.9536	13.648	1363765.326	1049327.361	27.655
	170	176.2306	13.604	89.1534	1.70	BORDE_VIA	1.39	278.7939	13.603	1363764.812	1049327.317	27.587
	171	176.5225	25.934	89.3600	1.70	CERRAMIENT	1.39	279.2825	25.933	1363766.915	1049315.166	27.592
	172	179.4445	38.844	89.3102	1.70	POSTE	1.39	282.1547	38.843	1363770.911	1049302.788	27.739
	173	197.3553	39.079	89.0240	2.00	PARAMENTO	1.39	300.0070	39.074	1363782.273	1049306.923	27.763
	174	192.3632	38.455	89.5053	1.70	BORDE_VIA	1.39	295.0178	38.455	1363778.995	1049305.913	27.513
	175	191.5443	38.384	89.4522	1.70	CANALETA	1.39	294.3209	38.384	1363778.541	1049305.783	27.575
	176	200.5011	25.616	89.0507	1.70	ARBOL	1.39	303.2453	25.613	1363776.774	1049319.339	27.820
	177	338.5114	22.668	89.1437	1.70	ARBOL	1.39	81.2628	22.666	1363766.175	1049363.163	27.711
	178	293.5051	15.753	88.1638	1.70	ARBOL	1.39	36.2564	15.746	1363775.429	1049350.072	27.885
E12005-E12004	E12004	359.5959	179.930	89.5511	1.70	ESTACION	1.47	285.0906	179.917	1363809.573	1049167.047	27.717
	E12006	176.2632	109.835	90.1609	1.70	DELTA	1.47	281.5328	109.834	1363831.532	1049059.431	26.973
	E12007	177.1334	109.970	90.2608	1.70	DELTA	1.47	282.3167	109.967	1363833.030	1049059.612	26.653
	213	177.1232	74.934	90.1949	1.70	BORDE_VIA	1.47	282.2995	74.933	1363825.535	1049093.835	27.057
	214	175.5955	74.483	90.1112	1.70	CERRAMIENT	1.47	281.0892	74.483	1363823.899	1049093.955	27.247
	215	176.4847	57.898	90.1216	1.70	POSTE	1.47	281.9036	57.898	1363821.515	1049110.395	27.283
	216	200.4248	29.664	89.4733	1.70	PARAMENTO	1.47	305.8039	29.664	1363826.927	1049142.989	27.597
	217	189.4842	47.361	90.0939	1.70	PARAMENTO	1.47	294.9022	47.361	1363829.515	1049124.090	27.356
	218	187.3022	46.845	90.2554	1.70	BORDE_VIA	1.47	292.5967	46.844	1363827.572	1049123.800	27.136
	219	180.4714	24.536	90.1005	1.70	BORDE_VIA	1.47	285.8778	24.536	1363816.286	1049143.448	27.417
	220	176.2416	23.615	89.3342	1.70	ANDEN	1.47	281.4950	23.614	1363814.279	1049143.907	27.670
	221	175.5422	18.794	89.4225	1.70	BORDE_VIA	1.47	280.9967	18.794	1363813.158	1049148.599	27.586
	222	171.3435	19.411	89.0318	1.70	ANDEN	1.47	276.6670	19.408	1363811.826	1049147.770	27.810
	223	163.3432	15.190	88.3850	1.70	BORDE_VIA	1.47	268.6661	15.186	1363809.219	1049151.866	27.848
	224	161.3805	17.835	89.0141	1.70	ANDEN	1.47	266.7253	17.832	1363808.554	1049149.244	27.792
	225	192.0531	35.393	90.2924	1.70	SUMEDERO	1.47	297.1825	35.392	1363825.741	1049135.565	27.187
	226	193.1304	34.817	90.3053	1.70	SUMEDERO	1.47	298.3084	34.816	1363826.083	1049136.395	27.177
	227	180.0759	34.106	90.3437	1.70	SUMEDERO	1.47	285.2236	34.104	1363818.528	1049134.140	27.146
	228	179.3137	33.313	90.3544	1.70	SUMEDERO	1.47	284.6175	33.311	1363817.979	1049134.814	27.143
	229	198.4041	26.864	90.0850	1.70	BORDE_VIA	1.47	303.7686	26.864	1363824.505	1049144.716	27.420
	230	201.4604	27.766	89.3719	1.70	ANDEN	1.47	306.8584	27.765	1363826.228	1049144.832	27.673



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	231	204.5940	23.231	89.4321	1.70	BORDE_VIA	1.47	310.0850	23.231	1363824.532	1049149.274	27.602
	232	207.4218	24.344	89.2735	1.70	ANDEN	1.47	312.7956	24.343	1363826.111	1049149.185	27.719
	233	227.0557	21.092	88.5308	1.70	ANDEN	1.47	332.1897	21.088	1363828.225	1049157.209	27.900
	234	224.2033	22.868	88.4621	1.70	ANDEN	1.47	329.4331	22.863	1363829.259	1049155.421	27.979
	235	228.3524	23.180	88.3602	1.70	SEMAFORO	1.47	333.6806	23.173	1363830.344	1049156.773	28.056
	236	235.1032	47.117	89.5450	1.70	PARAMENTO	1.47	340.2661	47.117	1363853.923	1049151.138	27.560
	237	249.4912	48.159	89.5112	1.70	BORDE_VIA	1.47	354.9106	48.159	1363857.542	1049162.775	27.613
	238	241.1411	38.720	89.4825	1.70	POSTE	1.47	346.3270	38.720	1363847.195	1049157.895	27.620
	239	204.3740	24.498	90.2243	1.70	MANHOLE	1.47	309.7184	24.497	1363825.227	1049148.204	27.328
	240	192.2431	18.986	90.5243	1.70	MANHOLE	1.47	297.4992	18.984	1363818.338	1049150.208	27.198
	241	208.4720	18.739	89.1001	1.70	CAJA_TELEF	1.47	313.8795	18.737	1363822.560	1049153.542	27.762
	242	209.5156	24.006	89.1003	1.70	MOJON	1.47	314.9561	24.003	1363826.533	1049150.061	27.838
	243	106.3640	52.363	89.2909	1.70	BORDE_VIA	1.47	211.7017	52.361	1363765.024	1049139.532	27.959
	244	108.2132	53.140	89.2016	1.70	SEMAFORO	1.47	213.4495	53.136	1363765.237	1049137.759	28.104
	245	120.0038	59.008	89.2224	1.70	PARAMENTO	1.47	225.1011	59.004	1363767.924	1049125.251	28.135
	246	125.5955	34.538	90.0120	1.70	CERRAMIENT	1.47	231.0892	34.538	1363787.879	1049140.173	27.476
E12007-E12005	E12005	0.0000	109.932	89.2757	1.70	ESTACION	1.38	282.3167	109.967	1363833.030	1049059.612	26.653
	E12008	178.5334	77.789	89.5723	1.70	DELTA	1.38	281.2095	77.789	1363848.152	1048983.307	26.393
	E12006	85.5605	1.485	78.2852	1.70	DELTA_REF	1.38	188.2514	1.455	1363831.590	1049059.403	26.630
	247	358.2158	110.124	89.2654	1.70	EJE_TUBO	1.38	100.6828	110.119	1363812.618	1049167.822	27.394
	248	358.2158	84.669	89.3112	1.70	LINEAMIENT	1.38	100.6828	84.666	1363817.336	1049142.810	27.043
	249	358.2157	22.332	89.0227	1.70	LINEAMIENT	1.38	100.6825	22.329	1363828.891	1049081.554	26.707
	250	0.4020	52.062	89.2000	1.70	POSTE	1.38	102.9889	52.058	1363821.330	1049110.338	26.939
	251	356.5147	23.956	89.5921	1.70	MANHOLE	1.38	99.1797	23.956	1363829.209	1049083.261	26.338
	252	342.1417	22.400	89.1133	1.70	SUMEDERO	1.38	84.5547	22.398	1363835.156	1049081.908	26.649
	253	343.0829	21.510	89.0830	1.70	SUMEDERO	1.38	85.4581	21.508	1363834.734	1049081.052	26.656
	254	9.1222	20.929	89.3148	1.70	PARAMENTO	1.38	111.5228	20.928	1363825.352	1049079.081	26.505
	255	5.2136	20.824	89.2932	1.70	POSTE	1.38	107.6767	20.823	1363826.708	1049079.452	26.518
	256	15.0509	9.702	87.4753	1.70	POSTE	1.38	117.4025	9.695	1363828.569	1049068.219	26.706
	257	21.2751	11.116	88.3529	1.70	CERRAMIENT	1.38	123.7809	11.113	1363826.852	1049068.848	26.607
	258	123.2906	5.597	86.1640	1.70	PUERTA	1.38	225.8017	5.585	1363829.137	1049055.607	26.697
	259	133.3354	6.496	86.4946	1.70	PUERTA	1.38	235.8817	6.486	1363829.392	1049054.242	26.693
	260	155.1223	7.385	86.2314	1.70	POSTE	1.38	257.5231	7.370	1363831.438	1049052.415	26.799
	261	199.5923	15.605	88.3020	1.70	PARAMENTO	1.38	302.3064	15.600	1363841.368	1049046.427	26.740
	262	193.0731	15.924	89.0640	1.70	BORDE_VIA	1.38	295.4420	15.922	1363839.871	1049045.234	26.580
	263	196.1731	18.333	89.2103	1.70	ANDEN	1.38	298.6086	18.332	1363841.808	1049043.518	26.541



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	264	193.4207	18.418	89.1827	1.70	SUMEDERO	1.38	296.0186	18.417	1363841.109	1049043.061	26.556
	265	194.0407	17.378	89.1627	1.70	SUMEDERO	1.38	296.3853	17.377	1363840.753	1049044.045	26.554
	266	169.0020	24.668	89.3022	1.70	SUMEDERO	1.38	271.3222	24.667	1363833.600	1049034.951	26.546
	267	170.0046	23.800	89.2745	1.70	SUMEDERO	1.38	272.3295	23.799	1363833.998	1049035.832	26.557
	268	177.5658	24.020	89.2241	1.70	MANHOLE	1.38	280.2661	24.019	1363837.311	1049035.978	26.594
	269	187.5302	23.739	89.2516	1.70	MANHOLE	1.38	290.2006	23.738	1363841.227	1049037.334	26.573
	270	189.0545	26.555	89.3226	1.70	BORDE_VIA	1.38	291.4125	26.554	1363842.725	1049034.890	26.546
	271	185.2819	28.413	89.3411	1.70	BORDE_VIA	1.38	287.7886	28.412	1363841.711	1049032.558	26.547
	272	170.3610	28.160	89.0730	1.70	POSTE	1.38	272.9195	28.157	1363834.465	1049031.491	26.763
	273	172.5549	51.850	89.3552	1.70	POSTE	1.38	275.2470	51.849	1363837.772	1049007.980	26.697
	274	173.0431	54.035	89.5235	1.70	SUMEDERO	1.38	275.3920	54.035	1363838.108	1049005.816	26.450
	275	173.2602	53.240	89.5208	1.70	SUMEDERO	1.38	275.7506	53.240	1363838.365	1049006.640	26.455
	276	172.1402	63.961	89.4258	1.70	CERRAMIENT	1.38	274.5506	63.960	1363838.105	1048995.853	26.650
	277	174.4416	61.813	89.5521	1.70	BORDE_VIA	1.38	277.0545	61.813	1363840.622	1048998.267	26.417
	278	175.5641	68.727	89.5716	1.70	BORDE_VIA	1.38	278.2614	68.727	1363842.906	1048991.598	26.388
	279	177.4216	68.727	89.5756	1.70	BORDE_VIA	1.38	280.0211	68.727	1363844.990	1048991.933	26.375
	280	176.4448	81.099	89.4532	1.70	BORDE_VIA	1.38	279.0634	81.098	1363845.806	1048979.526	26.675
	281	181.0623	54.522	89.5240	1.70	BORDE_VIA	1.38	283.4231	54.522	1363845.687	1049006.579	26.450
	282	181.2915	64.252	89.5627	1.70	BORDE_VIA	1.38	283.8042	64.252	1363848.361	1048997.215	26.400
	283	179.5628	81.908	89.5747	1.70	MANHOLE	1.38	282.2578	81.908	1363850.420	1048979.571	26.386
	284	193.0925	27.083	90.1930	1.70	SUMEDERO	1.38	295.4736	27.083	1363844.679	1049035.162	26.180
	285	191.3848	26.463	90.1842	1.70	SUMEDERO	1.38	293.9634	26.463	1363843.778	1049035.430	26.190
	286	194.3628	28.996	89.5444	1.70	CERRAMIENT	1.38	296.9245	28.996	1363846.160	1049033.759	26.378
	287	199.2247	29.433	89.5337	1.70	CERRAMIENT	1.38	301.6964	29.433	1363848.495	1049034.569	26.388
	288	192.4545	25.220	89.3802	1.70	BORDE_VIA	1.38	295.0792	25.219	1363843.720	1049036.770	26.495
	289	197.3658	25.624	89.4453	1.70	BORDE_VIA	1.38	299.9328	25.624	1363845.816	1049037.406	26.446
	290	177.0626	78.732	90.0040	1.70	SUMEDERO	1.38	279.4239	78.732	1363845.922	1048981.942	26.318
	291	177.2106	77.811	90.0040	1.70	SUMEDERO	1.38	279.6684	77.811	1363846.098	1048982.906	26.318
	292	177.5423	78.007	89.5810	1.70	DELTA_REF	1.38	280.2231	78.007	1363846.875	1048982.843	26.375
E12008-E12007	E12007	0.0000	77.801	89.3923	1.70	ESTACION	1.47	281.2095	77.789	1363848.152	1048983.307	26.393
	E12009	194.3355	65.139	89.5703	1.70	DELTA	1.47	295.7747	65.139	1363876.477	1048924.648	26.222
	293	0.0001	24.324	89.1550	1.70	LINEAMIENT	1.47	101.2097	24.322	1363843.424	1049007.165	26.478
	294	355.2251	25.260	89.2150	1.70	BORDE_VIA	1.47	96.5903	25.258	1363845.253	1049008.398	26.446
	295	350.1951	15.597	89.0856	1.70	BORDE_VIA	1.47	91.5403	15.595	1363847.733	1048998.896	26.397
	296	330.5620	8.066	88.4011	1.70	BORDE_VIA	1.47	72.1484	8.064	1363850.624	1048990.982	26.353
	297	296.5737	6.418	88.3604	1.70	BORDE_VIA	1.47	38.1697	6.416	1363853.197	1048987.272	26.322



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	298	275.4433	11.013	89.0530	1.70	BORDE_VIA	1.47	16.9520	11.012	1363858.686	1048986.517	26.340
	299	274.3942	30.991	89.4357	1.70	BORDE_VIA	1.47	15.8711	30.991	1363877.962	1048991.782	26.310
	300	278.2154	32.611	89.3718	1.70	CERRAMIENT	1.47	19.5745	32.610	1363878.878	1048994.232	26.381
	301	286.5504	11.207	89.1317	1.70	CERRAMIENT	1.47	28.1272	11.206	1363858.035	1048988.589	26.318
	302	297.0745	7.040	88.3659	1.70	MANHOLE	1.47	38.3386	7.038	1363853.673	1048987.672	26.336
	303	286.4441	7.530	89.1557	1.70	SUMEDERO	1.47	27.9542	7.529	1363854.803	1048986.836	26.262
	304	280.1138	7.851	89.2201	1.70	SUMEDERO	1.47	21.4034	7.851	1363855.461	1048986.172	26.252
	305	264.0915	14.123	89.0957	1.70	MANHOLE	1.47	5.3636	14.122	1363862.212	1048984.627	26.371
	306	262.4133	28.808	89.4242	1.70	BORDE_VIA	1.47	3.9020	28.808	1363876.893	1048985.267	26.311
	307	260.2749	29.117	89.2640	1.70	CERRAMIENT	1.47	1.6731	29.116	1363877.256	1048984.157	26.448
	308	253.5654	21.514	89.4556	1.70	CERRAMIENT	1.47	355.1578	21.514	1363869.589	1048981.491	26.254
	309	243.4642	23.390	89.3858	1.70	PARAMENTO	1.47	344.9878	23.390	1363870.744	1048977.248	26.309
	310	232.5954	18.112	89.3136	1.70	PARAMENTO	1.47	334.2078	18.111	1363864.459	1048975.426	26.315
	311	244.3302	15.412	89.5419	1.70	POSTE	1.47	345.7600	15.412	1363863.091	1048979.516	26.191
	312	244.3328	14.900	89.5420	1.70	ANDEN	1.47	345.7672	14.900	1363862.595	1048979.643	26.190
	313	249.4653	14.044	89.1546	1.70	BORDE_VIA	1.47	350.9909	14.043	1363862.022	1048981.108	26.346
	314	236.3712	10.871	88.5834	1.70	BORDE_VIA	1.47	337.8295	10.869	1363858.218	1048979.205	26.360
	315	234.0632	12.170	89.5756	1.70	ANDEN	1.47	335.3184	12.170	1363859.211	1048978.225	26.173
	316	221.4019	12.872	89.4546	1.70	ANDEN	1.47	322.8814	12.872	1363858.416	1048975.539	26.219
	317	215.4243	11.896	89.0504	1.70	BORDE_VIA	1.47	316.9214	11.894	1363856.840	1048975.183	26.356
	318	217.1313	16.680	89.0227	1.70	ARBOL	1.47	318.4297	16.678	1363860.630	1048972.240	26.445
	319	211.5125	20.096	89.2533	1.70	ARBOL	1.47	313.0664	20.095	1363861.874	1048968.626	26.367
	320	199.3244	51.865	90.0330	1.70	PARAMENTO	1.47	300.7550	51.865	1363874.674	1048938.736	26.113
	321	198.3802	49.786	89.5235	1.70	ANDEN	1.47	299.8434	49.786	1363872.927	1048940.123	26.273
	322	196.4623	50.395	89.5738	1.70	BORDE_VIA	1.47	297.9825	50.395	1363871.798	1048938.803	26.200
	323	315.4133	8.286	87.4609	1.70	ANDEN	1.47	56.9020	8.280	1363852.674	1048990.243	26.488
	324	343.0021	15.054	88.2543	1.70	ANDEN	1.47	84.2153	15.048	1363849.669	1048998.278	26.578
	325	351.3245	24.722	88.5414	1.70	ANDEN	1.47	92.7553	24.717	1363846.964	1049007.996	26.639
	326	354.2510	49.130	89.2527	1.70	ANDEN	1.47	95.6289	49.128	1363843.334	1049032.197	26.659
	327	235.0153	11.499	89.0926	1.70	SUMEDERO	1.47	336.2409	11.498	1363858.676	1048978.674	26.335
	328	231.0948	10.883	89.0926	1.70	SUMEDERO	1.47	332.3728	10.882	1363857.793	1048978.261	26.326
	329	187.1218	35.114	89.4928	1.70	BORDE_VIA	1.47	288.4145	35.114	1363859.244	1048949.991	26.273
	330	183.0913	35.646	89.4113	1.70	ANDEN	1.47	284.3631	35.645	1363856.995	1048948.775	26.360
	331	182.3057	31.527	89.2631	1.70	POSTE	1.47	283.7253	31.526	1363855.632	1048952.681	26.473
	332	178.3610	28.226	89.3406	1.70	PARAMENTO	1.47	279.8122	28.225	1363852.963	1048955.494	26.378
	333	158.4450	14.465	89.2823	1.70	PARAMENTO	1.47	259.9567	14.464	1363845.630	1048969.064	26.299



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	334	50.0304	9.944	89.1950	1.70	PARAMENTO	1.47	151.2606	9.943	1363839.434	1048988.088	26.282
	335	54.1526	7.116	89.0512	1.70	ANDEN	1.47	155.4667	7.115	1363841.680	1048986.261	26.279
	336	192.4438	65.811	89.5856	1.70	DELTA_REF	1.47	293.9534	65.811	1363874.871	1048923.164	26.186
	337	194.3440	23.883	89.3109	1.70	LINEAMIENT	1.47	295.7872	23.882	1363858.542	1048961.803	26.366
E12009-E12008	E12008	0.0000	65.140	89.3928	1.70	ESTACION	1.46	295.7747	65.139	1363876.477	1048924.648	26.222
	E12010	201.0906	145.299	89.5816	1.70	DELTA	1.46	316.9264	145.299	1363982.615	1048825.418	26.055
	338	19.4630	23.317	89.2132	1.70	PARAMENTO	1.46	135.5497	23.316	1363859.833	1048940.976	26.242
	339	12.4842	22.583	89.2257	1.70	BORDE_VIA	1.46	128.5864	22.582	1363862.393	1048942.300	26.225
	340	18.1730	17.037	89.1356	1.70	BORDE_VIA	1.46	134.0664	17.035	1363864.629	1048936.889	26.210
	341	34.1413	15.194	89.0624	1.70	BORDE_VIA	1.46	150.0117	15.192	1363863.319	1048932.242	26.218
	342	54.5529	17.717	89.1149	1.70	BORDE_VIA	1.46	170.6995	17.715	1363858.995	1048927.511	26.230
	343	56.4952	19.184	89.0923	1.70	CERRAMIENT	1.46	172.6059	19.182	1363857.455	1048927.117	26.264
	344	23.5928	16.460	89.0759	1.70	CERRAMIENT	1.46	139.7659	16.458	1363863.913	1048935.279	26.231
	345	41.3802	12.872	88.5837	1.70	MANHOLE	1.46	157.4086	12.870	1363864.595	1048929.592	26.211
	346	30.0747	12.195	89.0523	1.70	MANHOLE	1.46	145.9045	12.193	1363866.380	1048931.484	26.175
	347	25.5326	8.791	88.4509	1.70	MANHOLE	1.46	141.6653	8.789	1363869.583	1048930.100	26.173
	348	25.1454	15.691	89.2845	1.70	SUMEDERO	1.46	141.0231	15.690	1363864.279	1048934.518	26.124
	349	21.5142	15.612	89.2207	1.70	SUMEDERO	1.46	137.6364	15.611	1363864.942	1048935.168	26.154
	350	51.5829	6.944	88.4555	1.70	SUMEDERO	1.46	167.7495	6.942	1363869.693	1048926.121	26.131
	351	55.2622	6.146	88.5926	1.70	SUMEDERO	1.46	171.2142	6.145	1363870.404	1048925.587	26.090
	352	58.4743	6.539	91.2618	1.70	POSTE	1.46	174.5700	6.537	1363869.969	1048925.267	25.817
	353	65.3647	10.809	88.4418	1.70	BORDE_VIA	1.46	181.3878	10.806	1363865.674	1048924.387	26.220
	354	61.4539	10.162	88.3850	1.70	BORDE_VIA	1.46	177.5356	10.159	1363866.327	1048925.085	26.221
	355	55.5839	5.915	88.3105	1.70	BORDE_VIA	1.46	171.7522	5.913	1363870.625	1048925.497	26.135
	356	66.2435	7.915	88.1254	1.70	PARAMENTO	1.46	182.1845	7.911	1363868.572	1048924.347	26.228
	357	62.0134	7.258	88.5129	1.70	ANDEN	1.46	177.8009	7.257	1363869.226	1048924.927	26.126
	358	58.0538	4.162	87.3306	1.70	BORDE_VIA	1.46	173.8686	4.158	1363872.343	1048925.092	26.159
	359	350.4859	12.905	89.0729	1.70	BORDE_VIA	1.46	106.5911	12.903	1363872.793	1048937.015	26.179
	360	344.3353	13.587	88.5445	1.70	ANDEN	1.46	100.3395	13.585	1363874.039	1048938.012	26.239
	361	319.4812	11.158	88.5443	1.70	ANDEN	1.46	75.5781	11.156	1363879.256	1048935.453	26.193
	362	323.4826	9.661	88.3043	1.70	BORDE_VIA	1.46	79.5820	9.658	1363878.223	1048934.147	26.232
	363	315.5149	9.546	88.2550	1.70	BORDE_VIA	1.46	71.6384	9.542	1363879.483	1048933.705	26.243
	364	317.1114	9.969	88.5742	1.70	CANAleta	1.46	72.9620	9.967	1363879.398	1048934.178	26.162
	365	279.3917	23.047	89.1332	1.70	BORDE_VIA	1.46	35.4295	23.045	1363895.255	1048938.007	26.293
	366	280.5729	22.967	89.2305	1.70	CANAleta	1.46	36.7328	22.966	1363894.882	1048938.384	26.228
	367	281.5155	23.149	89.0350	1.70	POSTE	1.46	37.6400	23.146	1363894.805	1048938.783	26.360



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	368	288.4641	17.505	88.4832	1.70	POSTE	1.46	44.5528	17.501	1363888.948	1048936.927	26.345
	369	286.1801	31.316	89.3619	1.70	PARAMENTO	1.46	42.0750	31.315	1363899.721	1048945.633	26.197
	370	350.1008	12.719	89.2115	1.70	SUMEDERO	1.46	105.9436	12.718	1363872.983	1048936.877	26.125
	371	346.5846	12.144	89.2449	1.70	SUMEDERO	1.46	102.7542	12.143	1363873.796	1048936.492	26.106
	372	322.5547	9.704	89.4853	1.70	SUMEDERO	1.46	78.7045	9.704	1363878.378	1048934.164	26.013
	373	318.1502	10.095	89.5118	1.70	SUMEDERO	1.46	74.0253	10.095	1363879.255	1048934.353	26.007
	374	316.5210	8.573	88.1823	1.70	MANHOLE	1.46	72.6442	8.569	1363879.033	1048932.827	26.235
	375	261.2759	8.738	88.2112	1.70	MANHOLE	1.46	17.2411	8.734	1363884.819	1048927.237	26.233
	376	264.1909	9.871	88.4044	1.70	SUMEDERO	1.46	20.0939	9.868	1363885.745	1048928.039	26.209
	377	261.4534	10.652	88.5840	1.70	SUMEDERO	1.46	17.5342	10.650	1363886.632	1048927.857	26.172
	378	261.5451	22.092	89.0900	1.70	BORDE_VIA	1.46	17.6889	22.090	1363897.522	1048931.360	26.309
	379	260.3758	22.044	89.2112	1.70	CANAleta	1.46	16.4075	22.043	1363897.622	1048930.875	26.230
	380	243.3725	13.029	88.2010	1.70	PARQUE	1.46	359.3984	13.024	1363889.500	1048924.512	26.360
	381	251.3332	24.914	89.0032	1.70	PARQUE	1.46	7.3336	24.910	1363901.184	1048927.828	26.413
	382	223.0942	22.936	88.5508	1.70	PARQUE	1.46	338.9364	22.932	1363897.877	1048916.406	26.414
	383	264.2610	10.775	88.2912	1.70	BORDE_VIA	1.46	20.2109	10.771	1363886.585	1048928.370	26.266
	384	243.2216	6.232	87.5640	1.70	BORDE_VIA	1.46	359.1459	6.228	1363882.704	1048924.555	26.205
	385	228.0336	7.290	87.4649	1.70	BORDE_VIA	1.46	343.8347	7.285	1363883.474	1048922.620	26.264
	386	235.3103	10.508	86.5548	1.70	ARBOL	1.46	351.2922	10.493	1363886.849	1048923.060	26.544
	387	224.5151	15.852	87.5448	1.70	ARBOL	1.46	340.6389	15.841	1363891.423	1048919.397	26.559
	388	217.5443	19.638	88.1826	1.70	ARBOL	1.46	333.6867	19.629	1363894.073	1048915.947	26.562
	389	190.3215	22.722	89.3626	1.70	POSTE	1.46	306.3122	22.721	1363889.932	1048906.339	26.137
	390	192.4036	33.343	89.5725	1.70	ANDEN	1.46	308.4514	33.343	1363897.211	1048898.536	26.007
	391	191.1222	32.820	89.3602	1.70	PARAMENTO	1.46	306.9809	32.819	1363896.219	1048898.431	26.210
	392	194.2705	32.819	90.0935	1.70	BORDE_VIA	1.46	310.2261	32.819	1363897.672	1048899.591	25.890
	393	192.2356	34.558	90.0824	1.70	SUMEDERO	1.46	308.1736	34.558	1363897.835	1048897.481	25.897
	394	193.5942	34.459	90.1203	1.70	SUMEDERO	1.46	309.7697	34.459	1363898.520	1048898.163	25.861
	395	197.1312	38.713	89.5210	1.70	MANHOLE	1.46	312.9947	38.713	1363902.877	1048896.333	26.070
	396	200.3755	41.167	89.5210	1.70	MANHOLE	1.46	316.4067	41.167	1363906.292	1048896.262	26.075
	397	195.0631	42.317	90.0339	1.70	SUMIDERO	1.46	310.8834	42.317	1363904.174	1048892.655	25.937
	398	194.1041	42.926	90.0701	1.70	SUMEDERO	1.46	309.9528	42.926	1363904.042	1048891.742	25.894
	399	191.3532	43.048	90.0601	1.70	BORDE_VIA	1.46	307.3670	43.048	1363902.604	1048890.435	25.906
	400	192.1729	44.852	90.0147	1.70	PARAMENTO	1.46	308.0661	44.852	1363904.131	1048889.336	25.958
	401	194.1142	44.731	90.0011	1.70	PARAMENTO	1.46	309.9697	44.731	1363905.211	1048890.367	25.979
	402	195.3957	45.140	90.0127	1.70	POSTE	1.46	311.4406	45.140	1363906.353	1048890.809	25.963
	403	196.5443	51.199	89.5627	1.70	POSTE	1.46	312.6867	51.199	1363911.189	1048887.013	26.034



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	404	194.5853	52.129	89.5558	1.70	PARAMENTO	1.46	310.7561	52.129	1363910.509	1048885.161	26.043
	405	200.5055	57.034	89.5349	1.70	MANHOLE	1.46	316.6234	57.034	1363917.932	1048885.478	26.084
	406	204.4713	52.880	89.4842	1.70	BORDE_VIA	1.46	320.5617	52.880	1363917.316	1048891.057	26.155
	407	207.0653	51.356	89.2456	1.70	ARBOL	1.46	322.8895	51.353	1363917.430	1048893.664	26.505
	408	205.3440	54.641	89.5109	1.70	BORDE_VIA	1.46	321.3525	54.641	1363919.152	1048890.524	26.122
	409	200.3820	144.752	90.0912	1.70	DELTA_REF	1.46	316.4136	144.751	1363981.326	1048824.850	25.594
	410	201.0906	81.718	89.5925	1.70	LINEAMIENT	1.46	316.9264	81.718	1363936.170	1048868.840	25.995
E12010-E12009	E12009	0.0001	145.402	89.4045	1.70	ESTACION	1.43	316.9264	145.299	1363982.615	1048825.418	26.055
	E12011	230.2746	83.771	89.4444	1.70	DELTA	1.43	7.3892	83.770	1364065.689	1048836.192	26.159
	411	2.4321	40.250	89.3335	1.70	BORDE_VIA	1.43	139.6489	40.249	1363951.941	1048851.478	26.096
	412	1.1223	56.683	89.2623	1.70	MANHOLE	1.43	138.1328	56.680	1363940.405	1048863.247	26.341
	413	359.3740	55.181	89.2355	1.70	MANHOLE	1.43	136.5542	55.178	1363942.554	1048863.362	26.366
	414	1.4804	60.749	89.2933	1.70	BORDE_VIA	1.43	138.7275	60.747	1363936.959	1048865.489	26.325
	415	3.4013	60.184	89.2816	1.70	POSTE	1.43	140.5967	60.181	1363936.113	1048863.620	26.342
	416	8.1545	13.940	89.1307	1.70	BORDE_VIA	1.43	145.1889	13.939	1363971.170	1048833.375	25.977
	417	18.5659	10.722	89.1310	1.70	BORDE_VIA	1.43	155.8761	10.721	1363972.830	1048829.800	25.933
	418	42.1259	11.893	89.2106	1.70	BORDE_VIA	1.43	179.1428	11.892	1363970.724	1048825.596	25.921
	419	352.1946	21.924	89.4722	1.70	BORDE_VIA	1.43	129.2559	21.924	1363968.742	1048842.394	25.867
	420	60.3547	20.214	89.2720	1.70	BORDE_VIA	1.43	197.5228	20.213	1363963.339	1048819.332	25.979
	421	54.0632	21.133	89.1205	1.70	PARAMENTO	1.43	191.0353	21.131	1363961.874	1048821.373	26.081
	422	29.3257	13.609	87.5618	1.70	PARAMENTO	1.43	166.4756	13.600	1363969.392	1048828.599	26.276
	423	19.5708	19.474	88.2958	1.70	PARAMENTO	1.43	156.8786	19.467	1363964.711	1048833.063	26.297
	424	17.5154	17.608	88.2513	1.70	POSTE	1.43	154.7914	17.601	1363966.690	1048832.915	26.272
	425	27.4830	12.396	88.0800	1.70	POSTE	1.43	164.7347	12.389	1363970.662	1048828.680	26.191
	426	25.0020	11.323	89.1831	1.70	SUMEDERO	1.43	161.9320	11.322	1363971.851	1048828.930	25.923
	427	20.3746	10.763	89.1518	1.70	SUMEDERO	1.43	157.5559	10.762	1363972.668	1048829.527	25.927
	428	26.3135	5.696	85.1741	1.70	MANHOLE	1.43	163.4528	5.677	1363977.173	1048827.035	26.254
	429	339.4452	2.224	79.0510	1.70	MANHOLE	1.43	116.6742	2.184	1363981.634	1048827.370	26.208
	430	290.3922	11.537	90.1444	1.70	MANHOLE	1.43	67.5825	11.537	1363987.014	1048836.083	25.737
	431	345.5449	14.524	89.4327	1.70	BORDE_VIA	1.43	122.8400	14.524	1363974.738	1048837.621	25.857
	432	331.3218	10.115	89.5813	1.70	BORDE_VIA	1.43	108.4647	10.115	1363979.411	1048835.012	25.792
	433	286.3025	24.167	89.1426	1.70	BORDE_VIA	1.43	63.4334	24.165	1363993.422	1048847.032	26.107
	434	327.3500	14.127	87.2131	1.70	PARAMENTO	1.43	104.5097	14.112	1363979.079	1048839.080	26.438
	435	288.4105	36.285	89.1218	1.70	PARAMENTO	1.43	65.6111	36.282	1363997.596	1048858.462	26.290
	436	322.0713	11.261	89.3511	1.70	SUMEDERO	1.43	99.0467	11.261	1363980.844	1048836.539	25.868
	437	324.5640	10.427	89.3642	1.70	SUMEDERO	1.43	101.8709	10.427	1363980.470	1048835.622	25.857



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	438	274.5815	28.867	89.1446	1.70	BORDE_VIA	1.43	51.8972	28.865	1364000.426	1048848.132	26.167
	439	265.5008	50.180	89.0253	1.70	PARAMENTO	1.43	42.7620	50.173	1364019.451	1048859.483	26.620
	440	271.2849	14.833	88.4202	1.70	BORDE_VIA	1.43	48.4067	14.829	1363992.459	1048836.509	26.123
	441	257.1417	13.240	88.1528	1.70	BORDE_VIA	1.43	34.1645	13.234	1363993.565	1048832.850	26.189
	442	243.1826	13.244	88.2934	1.70	BORDE_VIA	1.43	20.2336	13.239	1363995.037	1048829.997	26.135
	443	262.1246	15.263	88.2243	1.70	POSTE	1.43	39.1392	15.257	1363994.448	1048835.048	26.219
	444	255.0123	17.259	88.3957	1.70	PARAMENTO	1.43	31.9495	17.254	1363997.255	1048834.549	26.189
	445	246.4258	18.656	88.5150	1.70	PARAMENTO	1.43	23.6425	18.652	1363999.701	1048832.898	26.157
	446	242.4727	18.898	88.2426	1.70	POSTE	1.43	19.7172	18.891	1364000.398	1048831.792	26.312
	447	236.4207	30.022	88.5204	1.70	BORDE_VIA	1.43	13.6284	30.016	1364011.786	1048832.491	26.380
	448	239.1406	30.614	88.3643	1.70	PARAMENTO	1.43	16.1614	30.605	1364012.010	1048833.937	26.528
	449	225.5504	34.705	88.5118	1.70	PARAMENTO	1.43	2.8442	34.698	1364017.270	1048827.140	26.480
	450	227.3842	34.390	88.5525	1.70	BORDE_VIA	1.43	4.5714	34.384	1364016.889	1048828.159	26.433
	451	220.3709	15.582	87.5159	1.70	CERRAMIENT	1.43	357.5456	15.571	1363998.172	1048824.751	26.367
	452	227.1102	15.502	87.5200	1.70	BORDE_VIA	1.43	4.1103	15.491	1363998.066	1048826.529	26.364
	453	205.1416	10.158	88.1916	1.70	PUERTA	1.43	342.1642	10.154	1363992.280	1048822.308	26.084
	454	178.3437	7.134	87.4220	1.70	PUERTA	1.43	315.5034	7.128	1363987.699	1048820.422	26.072
	455	129.0546	7.521	89.3441	1.70	PARAMENTO	1.43	266.0225	7.521	1363982.093	1048817.916	25.842
	456	94.5747	4.667	88.5707	1.70	POSTE	1.43	231.8895	4.666	1363979.735	1048821.747	25.872
	457	66.5950	1.430	80.1321	1.70	DELTA_REF	1.43	203.9236	1.409	1363981.326	1048824.847	26.030
	458	87.3831	27.247	90.1617	1.70	PARAMENTO	1.43	224.5684	27.247	1363963.204	1048806.298	25.658
	459	84.4608	26.351	90.4109	1.70	POSTE	1.43	221.6953	26.349	1363962.940	1048807.892	25.471
	460	79.5443	25.676	90.1828	1.70	BORDE_VIA	1.43	216.8384	25.676	1363962.066	1048810.024	25.649
	461	80.3629	14.340	90.2401	1.70	BORDE_VIA	1.43	217.5345	14.340	1363971.243	1048816.682	25.687
	462	230.2752	53.537	89.3108	1.70	LINEAMIENT	1.43	7.3909	53.535	1364035.705	1048832.305	26.236
	463	227.1427	50.445	89.3138	1.70	POSTE	1.43	4.1672	50.443	1364032.925	1048829.084	26.203
E12011-E12010	E12010	0.0000	83.793	89.5413	1.70	ESTACION	1.45	7.3892	83.770	1364065.689	1048836.192	26.159
	E12012	152.4252	52.668	90.0206	1.70	DELTA	1.45	340.1036	52.668	1364115.213	1048818.268	25.879
	464	4.3318	31.783	89.2606	1.70	BORDE_VIA	1.45	191.9442	31.781	1364034.596	1048829.614	26.224
	465	4.4922	39.691	89.2836	1.70	PARAMENTO	1.45	192.2120	39.689	1364026.898	1048827.796	26.273
	466	5.3841	39.640	89.1752	1.70	PARAMENTO	1.45	193.0339	39.637	1364027.073	1048827.253	26.397
	467	23.4825	11.291	87.4423	1.70	PARAMENTO	1.45	211.1961	11.282	1364056.038	1048830.348	26.356
	468	18.4749	10.993	87.5427	1.70	ANDEN	1.45	206.1861	10.986	1364055.831	1048831.344	26.312
	469	9.4428	10.626	90.4946	1.70	MANHOLE	1.45	197.1303	10.625	1364055.536	1048833.062	25.757
	470	4.5532	33.571	89.3138	1.70	POSTE	1.45	192.3147	33.570	1364032.892	1048829.032	26.188
	471	345.5533	15.470	86.0324	2.60	POSTE	1.45	173.3150	15.433	1364050.361	1048837.988	26.075



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	472	356.0951	32.710	89.2826	1.70	BORDE_VIA	1.45	183.5534	32.709	1364033.043	1048834.165	26.211
	473	349.4415	14.079	89.2135	1.70	BORDE_VIA	1.45	177.1267	14.078	1364051.629	1048836.897	26.068
	474	337.5417	9.152	88.4905	1.70	BORDE_VIA	1.45	165.2939	9.150	1364056.839	1048838.515	26.100
	475	336.5402	10.001	88.3718	1.70	ARBOL	1.45	164.2897	9.998	1364056.064	1048838.899	26.151
	476	353.2719	24.952	89.2604	1.70	ARBOL	1.45	180.8445	24.951	1364040.741	1048835.824	26.157
	477	341.1609	11.477	89.5839	1.70	SUMEDERO	1.45	168.6584	11.477	1364054.436	1048838.449	25.915
	478	337.4329	11.063	89.3447	1.70	SUMEDERO	1.45	165.1139	11.063	1364054.998	1048839.034	25.992
	479	347.5003	23.941	89.0356	1.70	PARAMENTO	1.45	175.2234	23.938	1364041.834	1048838.185	26.301
	480	340.5219	14.927	88.3157	1.70	PARAMENTO	1.45	168.2611	14.922	1364051.079	1048839.228	26.293
	481	335.3607	14.106	86.2624	2.20	PARAMENTO	1.45	162.9911	14.079	1364052.226	1048840.310	26.287
	482	339.4610	12.502	88.2233	1.70	CERRAMIENT	1.45	167.1586	12.497	1364053.505	1048838.969	26.265
	483	23.3211	11.213	90.5433	1.70	LINDERO	1.45	210.9256	11.212	1364056.071	1048830.430	25.733
	484	13.2903	6.204	88.5705	1.70	ARBOL	1.45	200.8734	6.203	1364059.893	1048833.982	26.024
	485	3.2453	7.003	89.2250	1.70	BORDE_VIA	1.45	190.8039	7.003	1364058.811	1048834.879	25.987
	486	15.1128	2.390	86.1125	1.70	BORDE_VIA	1.45	202.5803	2.385	1364063.487	1048835.276	26.070
	487	57.1307	5.740	91.5755	1.70	LINDERO	1.45	244.6078	5.737	1364063.229	1048831.009	25.714
	488	60.4542	7.525	93.4703	1.70	LINDERO	1.45	248.1509	7.509	1364062.895	1048829.223	25.414
	489	156.0315	2.736	86.2503	1.70	BORDE_VIA	1.45	343.4434	2.731	1364068.307	1048835.414	26.082
	490	154.0517	6.115	88.3519	1.70	BORDE_VIA	1.45	341.4772	6.113	1364071.486	1048834.250	26.061
	491	152.4526	11.471	88.5656	1.70	BORDE_VIA	1.45	340.1464	11.469	1364076.476	1048832.297	26.121
	492	141.4243	11.696	88.3746	1.70	PARAMENTO	1.45	329.1011	11.693	1364075.722	1048830.187	26.191
	493	144.1118	15.909	88.5109	1.70	PARAMENTO	1.45	331.5775	15.906	1364079.678	1048828.621	26.229
	494	176.1740	20.441	89.0714	1.70	PARAMENTO	1.45	3.6836	20.439	1364086.085	1048837.505	26.225
	495	171.5916	19.076	89.2706	1.70	CERRAMIENT	1.45	359.3770	19.075	1364084.763	1048835.984	26.093
	496	167.3049	18.435	89.1344	1.70	BORDE_VIA	1.45	354.9028	18.433	1364084.050	1048834.554	26.159
	497	219.4318	10.667	89.0248	1.70	BORDE_VIA	1.45	47.1109	10.666	1364072.948	1048844.006	26.088
	498	217.5549	12.592	89.2920	1.70	CERRAMIENT	1.45	45.3195	12.591	1364074.543	1048845.145	26.023
	499	288.0303	11.055	88.2442	1.70	POSTE	1.45	115.4400	11.051	1364060.942	1048846.171	26.217
	500	233.2541	30.773	89.3111	1.70	BORDE_VIA	1.45	60.8172	30.772	1364080.693	1048863.058	26.169
	501	238.2514	30.409	89.1941	1.70	CERRAMIENT	1.45	65.8097	30.407	1364078.149	1048863.929	26.267
	502	214.2835	28.857	89.3243	1.70	PARAMENTO	1.45	41.8656	28.856	1364087.179	1048855.450	26.140
	503	218.4458	28.781	89.3139	1.70	CERRAMIENT	1.45	46.1386	28.780	1364085.631	1048856.943	26.148
	504	222.3743	28.931	89.3216	1.70	BORDE_VIA	1.45	50.0178	28.930	1364084.278	1048858.359	26.144
	505	222.1442	22.008	89.2946	1.70	POSTE	1.45	49.6342	22.007	1364079.942	1048852.960	26.104
	506	220.0458	22.899	89.5922	1.70	SUMEDERO	1.45	47.4720	22.899	1364081.168	1048853.067	25.915
	507	218.4753	22.487	90.0109	1.70	SUMEDERO	1.45	46.1872	22.487	1364081.257	1048852.419	25.903



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	508	196.4625	2.486	84.3608	1.70	MANHOLE	1.45	24.1628	2.475	1364067.947	1048837.205	26.145
	509	152.4251	26.219	89.2713	1.70	LINEAMIENT	1.45	340.1034	26.218	1364090.342	1048827.269	26.161
	510	112.3444	16.328	89.4130	1.70	PARAMENTO	1.45	299.9681	16.328	1364073.845	1048822.047	25.999
E12012-E12011	E12011	0.0000	52.668	89.2258	1.70	ESTACION	1.41	340.1036	52.668	1364115.213	1048818.268	25.879
	EAUX_3	162.4451	3.952	87.1231	1.70	DELTA	1.41	322.8511	3.947	1364118.360	1048815.884	25.782
	E12013	243.3310	95.567	89.4804	1.70	DELTA	1.41	43.6564	95.566	1364184.355	1048884.240	25.921
	EAUX_4	2.0333	54.309	89.2808	1.70	DELTA_AUX	1.41	162.1628	54.307	1364063.517	1048834.903	26.093
	511	7.5147	25.859	88.3859	1.70	PARAMENTO	1.41	167.9667	25.852	1364089.930	1048823.657	26.199
	512	5.2439	20.933	88.2601	1.70	POSTE	1.41	165.5145	20.925	1364094.953	1048823.502	26.162
	513	9.4246	12.387	88.0353	1.70	BORDE_VIA	1.41	169.8164	12.380	1364103.028	1048820.457	26.008
	514	341.1542	8.741	85.5536	1.70	PARAMENTO	1.41	141.3653	8.719	1364108.403	1048823.712	26.211
	515	327.1522	6.013	85.1110	1.70	CERRAMIENT	1.41	127.3597	5.992	1364111.577	1048823.030	26.094
	516	37.3320	6.918	87.0416	1.70	PARAMENTO	1.41	197.6592	6.909	1364108.630	1048816.172	25.943
	517	72.0501	4.169	82.0543	1.70	PARAMENTO	1.41	232.1872	4.129	1364112.682	1048815.006	26.163
	518	123.5550	7.069	85.3045	1.70	PARAMENTO	1.41	284.0342	7.047	1364116.922	1048811.431	26.143
	519	83.3304	8.161	85.5523	1.70	PARAMENTO	1.41	243.6547	8.140	1364111.601	1048810.973	26.170
	520	58.2959	3.006	85.2910	1.70	BORDE_VIA	1.41	218.6034	2.997	1364112.871	1048816.398	25.826
	521	168.1235	3.200	86.4542	1.70	BORDE_VIA	1.41	328.3134	3.195	1364117.932	1048816.590	25.770
	522	318.4308	4.533	86.2715	1.70	BORDE_VIA	1.41	118.8225	4.524	1364113.032	1048822.232	25.870
	523	228.0012	9.072	88.3858	1.70	BORDE_VIA	1.41	28.1070	9.069	1364123.213	1048822.541	25.803
	524	257.1337	21.899	88.5444	1.70	BORDE_VIA	1.41	57.3306	21.895	1364127.032	1048836.699	26.005
	525	223.4557	8.688	87.4443	1.70	POSTE	1.41	23.8695	8.681	1364123.152	1048821.781	25.931
	526	261.5246	22.295	89.0014	1.70	CERRAMIENT	1.41	61.9831	22.292	1364125.684	1048837.947	25.977
	527	236.3520	21.759	89.0955	1.70	CERRAMIENT	1.41	36.6925	21.757	1364132.659	1048831.268	25.907
	528	262.0444	29.462	89.0524	1.70	PARAMENTO	1.41	62.1825	29.458	1364128.960	1048844.322	26.058
	529	230.1705	22.179	88.5508	1.70	PARAMENTO	1.41	30.3884	22.175	1364134.342	1048829.485	26.008
	530	240.2142	35.572	89.1447	1.70	CERRAMIENT	1.41	40.4653	35.569	1364142.274	1048841.352	26.058
	531	265.2109	35.571	83.4833	1.70	MANHOLE	1.41	65.4561	35.364	1364129.903	1048850.436	29.426
	532	243.3312	27.926	89.0408	1.70	LINEAMIENT	1.41	43.6570	27.922	1364135.415	1048837.544	26.043
	533	271.2806	15.641	88.1449	1.70	POSTE	1.41	71.5720	15.634	1364120.155	1048833.100	26.068
EAUX_3-E12012	E12012	0.0000	3.964	85.0737	1.70	ESTACION	1.46	322.8511	3.947	1364118.360	1048815.884	25.782
	EAUX_4	18.0116	58.054	89.2710	1.70	DELTA	1.46	160.8722	58.051	1364063.513	1048834.906	26.092
EAUX_4-EAUX_3	EAUX_3	0.0000	58.045	90.0102	1.70	ESTACION	1.40	160.8722	58.051	1364063.513	1048834.906	26.092
	E12011	49.4716	2.570	82.0634	1.70	DELTA	1.40	30.6600	2.546	1364065.703	1048836.204	26.144
	EAUX_5	207.3708	82.393	89.4839	1.70	DELTA	1.40	188.4911	82.393	1363982.024	1048822.740	26.064
EAUX_5-EAUX_4	EAUX_4	0.0000	82.392	89.4714	1.70	ESTACION	1.42	188.4911	82.393	1363982.024	1048822.740	26.064



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E12010	69.2617	2.769	84.3247	1.70	DELTA	1.42	77.9292	2.756	1363982.600	1048825.436	26.042
	EAUX_6	201.1932	82.231	90.0412	1.70	DELTA	1.42	209.8167	82.231	1363910.679	1048781.853	25.678
	534	202.1258	84.065	89.5717	1.70	PARAMENTO	1.42	210.7072	84.065	1363909.746	1048779.812	25.845
	535	201.1105	83.654	90.0206	1.70	POSTE	1.42	209.6759	83.654	1363909.342	1048781.324	25.728
	536	205.2744	68.330	89.4338	1.70	PARAMENTO	1.42	213.9534	68.329	1363925.345	1048784.577	26.104
	537	215.4358	17.102	90.1145	1.70	PARAMENTO	1.42	224.2239	17.102	1363969.768	1048810.812	25.720
	538	203.2159	39.150	90.3230	1.70	SUMEDERO	1.42	211.8575	39.148	1363948.773	1048802.078	25.408
	539	204.4151	39.465	90.3116	1.70	SUMEDERO	1.42	213.1886	39.463	1363948.998	1048801.138	25.420
EAUX_6-EAUX_5	EAUX_5	0.0000	82.229	89.3514	1.70	ESTACION	1.49	209.8167	82.231	1363910.679	1048781.853	25.678
	EAUX_7	149.4931	56.156	89.2914	1.70	DELTA	1.49	179.6420	56.154	1363854.526	1048782.204	25.966
	540	4.1130	27.222	88.4050	1.70	PARAMENTO	1.49	34.0084	27.215	1363933.238	1048797.075	26.090
	541	6.2032	19.941	88.0658	1.70	PARAMENTO	1.49	36.1589	19.930	1363926.770	1048793.612	26.119
	542	153.1019	47.842	89.2115	1.70	PARAMENTO	1.49	182.9886	47.839	1363862.905	1048779.359	26.002
	543	164.5541	16.964	88.3752	1.70	PARAMENTO	1.49	194.7447	16.959	1363894.278	1048777.537	25.868
	544	154.1452	42.747	89.1958	1.70	PARAMENTO	1.49	184.0645	42.744	1363868.042	1048778.823	25.961
	545	147.0017	30.728	89.1159	1.70	PARAMENTO	1.49	176.8214	30.725	1363880.001	1048783.557	25.892
	546	152.3110	41.866	89.3141	1.70	POSTE	1.49	182.3361	41.865	1363868.849	1048780.146	25.808
EAUX_7-EAUX_6	EAUX_6	0.0001	56.147	89.5946	1.70	ESTACION	1.41	179.6420	56.154	1363854.526	1048782.204	25.966
	EAUX_8	144.5120	67.749	89.2036	1.70	DELTA	1.41	144.4975	67.745	1363799.376	1048821.546	26.447
	547	24.1532	20.880	91.0717	1.70	MANHOLE	1.41	23.9009	20.876	1363873.612	1048790.662	25.262
	548	11.1425	24.142	89.2637	1.70	PARAMENTO	1.41	10.8822	24.141	1363878.233	1048786.761	25.905
	549	16.0739	27.591	89.2911	1.70	PARAMENTO	1.41	15.7695	27.590	1363881.077	1048789.702	25.918
	550	35.4123	15.361	89.0438	1.70	CERRAMIENT	1.41	35.3317	15.359	1363867.056	1048791.086	25.918
	551	30.3851	9.089	87.3522	1.70	CERRAMIENT	1.41	30.2895	9.081	1363862.367	1048786.784	26.053
	552	129.3350	18.277	88.3441	1.70	CERRAMIENT	1.41	129.2059	18.271	1363842.976	1048796.362	26.124
	553	156.2424	19.827	88.2749	1.70	PARAMENTO	1.41	156.0486	19.820	1363836.413	1048790.250	26.202
	554	166.4424	21.107	88.3257	1.70	PARAMENTO	1.41	166.3820	21.100	1363834.019	1048787.172	26.205
	555	112.3152	11.188	88.0121	1.70	POSTE	1.41	112.1731	11.181	1363850.306	1048792.558	26.057
EAUX_8-EAUX_7	EAUX_7	0.0000	67.747	90.0851	1.70	ESTACION	1.38	144.4975	67.745	1363799.376	1048821.546	26.447
	EAUX_9	145.5151	32.612	88.3241	1.70	DELTA	1.38	110.3617	32.601	1363788.032	1048852.110	26.958
	556	351.3313	8.567	89.3141	1.70	POSTE	1.38	316.0511	8.567	1363805.543	1048815.600	26.201
	557	23.5218	20.698	88.5355	1.70	CERRAMIENT	1.38	348.3692	20.694	1363819.645	1048817.374	26.528
	558	12.3343	32.200	89.2028	1.70	PARAMENTO	1.38	337.0595	32.198	1363829.027	1048808.996	26.500
	559	22.0000	32.890	89.4959	1.70	PARAMENTO	1.38	346.4975	32.890	1363831.357	1048813.866	26.226
	560	152.1349	32.612	88.2846	1.70	POSTE	1.38	116.7278	32.601	1363784.714	1048850.663	26.996
	561	153.4252	30.232	88.2726	1.70	PUENTE	1.38	118.2120	30.221	1363785.089	1048848.177	26.944



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	562	154.0841	25.967	87.2628	1.70	PUENTE	1.38	118.6422	25.941	1363786.941	1048844.312	27.289
	563	143.5108	23.453	88.3625	1.70	PARAMENTO	1.38	108.3497	23.446	1363791.995	1048843.800	26.700
	564	145.2546	23.289	88.4754	1.70	POSTE	1.38	109.9270	23.284	1363791.440	1048843.435	26.619
	565	349.3426	9.254	88.2441	1.70	ANDEN	1.38	314.0714	9.250	1363805.810	1048814.899	26.387
	566	313.4013	1.098	73.0519	1.70	ANDEN	1.38	278.1678	1.051	1363799.525	1048820.506	26.450
	567	357.1938	0.881	69.1832	1.70	ANDEN	1.38	321.8247	0.824	1363800.024	1048821.036	26.441
	568	167.0345	11.206	88.0807	1.70	ANDEN	1.38	131.5600	11.200	1363791.946	1048829.926	26.495
EAUX_9-EAUX_8	EAUX_8	0.0000	32.605	90.2651	1.70	ESTACION	1.44	110.3617	32.601	1363788.032	1048852.110	26.958
	EAUX_10	110.0218	52.402	89.5314	1.70	DELTA	1.44	40.4000	52.402	1363827.938	1048886.073	26.797
	569	303.5944	5.200	86.2733	1.70	PUENTE	1.44	234.3572	5.190	1363785.008	1048847.892	27.015
	570	304.5124	7.835	84.5507	1.70	ESTRUCTURA	1.44	235.2184	7.804	1363783.580	1048845.700	27.387
	571	306.4038	7.262	85.0917	1.70	ESTRUCTURA	1.44	237.0389	7.236	1363784.095	1048846.039	27.307
	572	309.4018	7.433	83.1918	1.70	ESTRUCTURA	1.44	240.0334	7.383	1363784.345	1048845.714	27.558
	573	313.2015	6.663	82.4416	1.70	PUENTE	1.44	243.6992	6.610	1363785.104	1048846.185	27.536
	574	315.1552	6.730	82.5111	1.70	PUENTE	1.44	245.6261	6.678	1363785.276	1048846.027	27.531
	575	314.0243	6.488	82.3425	1.70	ESCALERA	1.44	244.4070	6.434	1363785.253	1048846.308	27.532
	576	314.4229	6.391	84.3536	1.70	ESCALERA	1.44	245.0697	6.363	1363785.350	1048846.340	27.296
	577	316.5448	5.969	84.1907	1.70	ESCALERA	1.44	247.2750	5.940	1363785.738	1048846.631	27.284
	578	316.5222	5.880	85.2614	1.70	ESCALERA	1.44	247.2345	5.861	1363785.764	1048846.705	27.161
	579	318.3625	5.648	85.2614	1.70	ESCALERA	1.44	248.9686	5.630	1363786.012	1048846.855	27.143
	580	318.4428	5.591	87.0923	1.70	ESCALERA	1.44	249.1028	5.584	1363786.040	1048846.893	26.971
	581	328.0100	7.800	85.0647	1.70	PUENTE	1.44	258.3784	7.772	1363786.467	1048844.498	27.358
	581	329.1553	7.630	85.2732	1.70	ESCALERA	1.44	259.6264	7.606	1363786.663	1048844.628	27.298
	582	333.1314	7.453	85.3107	1.70	ESCALERA	1.44	263.5822	7.430	1363787.202	1048844.726	27.276
	583	333.2455	7.440	86.1927	1.70	ESCALERA	1.44	263.7770	7.425	1363787.227	1048844.729	27.170
	584	335.3444	7.190	86.1503	1.70	ESCALERA	1.44	265.9406	7.175	1363787.524	1048844.953	27.164
	585	336.0538	7.170	88.0806	1.70	ESCALERA	1.44	266.4556	7.166	1363787.589	1048844.958	26.927
	586	330.5323	9.457	90.2549	1.70	ESTRUCTURA	1.44	261.2514	9.457	1363786.594	1048842.763	26.622
	587	325.4322	8.620	84.1842	1.70	ESTRUCTURA	1.44	256.0845	8.578	1363785.969	1048843.784	27.548
	588	320.3605	9.622	84.3624	1.70	ESTRUCTURA	1.44	250.9631	9.579	1363784.908	1048843.055	27.598
	589	357.0500	9.852	91.1211	1.70	BORDE_VIA	1.44	287.4450	9.850	1363790.985	1048842.713	26.487
	590	6.5002	6.777	88.2510	1.70	BORDE_VIA	1.44	297.1956	6.774	1363791.128	1048846.084	26.880
	591	56.2546	6.837	87.5757	1.70	BORDE_VIA	1.44	346.7911	6.833	1363794.684	1048850.549	26.936
	592	67.0904	11.333	89.4552	1.70	PARAMENTO	1.44	357.5128	11.333	1363799.354	1048851.618	26.740
	593	280.1447	4.169	87.0336	1.70	BORDE_VIA	1.44	210.6081	4.164	1363784.449	1048849.990	26.907
	594	270.4334	8.405	90.5035	1.70	PARAMENTO	1.44	201.0878	8.404	1363780.191	1048849.086	26.570



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	595	23.2013	1.954	80.5531	1.70	MANHOLE	1.44	313.6986	1.930	1363789.365	1048850.715	27.002
EAUX_10-EAUX_9	EAUX_9	0.0000	52.390	89.3318	1.70	ESTACION	1.41	40.4000	52.402	1363827.938	1048886.073	26.797
	EAUX_11	246.2400	162.580	89.5050	1.70	DELTA	1.41	106.8000	162.579	1363780.948	1049041.713	26.935
	596	314.4724	8.160	88.1029	1.70	BORDE_VIA	1.41	175.1900	8.156	1363819.811	1048886.757	26.761
	597	275.0124	7.106	88.1030	1.70	BORDE_VIA	1.41	135.4234	7.102	1363822.879	1048891.058	26.728
	598	254.0629	22.118	89.2528	1.70	BORDE_VIA	1.41	114.5081	22.117	1363818.764	1048906.197	26.724
	599	261.2301	22.679	89.1046	1.70	PARAMENTO	1.41	121.7836	22.677	1363815.994	1048905.349	26.826
	600	276.1945	11.843	87.4613	1.70	PARAMENTO	1.41	136.7292	11.834	1363819.322	1048894.184	26.962
	601	293.5445	9.303	87.0453	1.70	PARAMENTO	1.41	154.3125	9.291	1363819.566	1048890.100	26.975
	602	286.4121	7.293	86.4832	1.70	POSTE	1.41	147.0892	7.282	1363821.825	1048890.029	26.908
	603	16.4021	5.141	85.5145	1.70	POSTE	1.41	237.0725	5.128	1363825.151	1048881.769	26.872
	604	181.4149	9.374	88.4609	1.70	BORDE_VIA	1.41	42.0970	9.372	1363834.892	1048892.356	26.703
	605	170.2231	11.109	89.3533	1.70	PARAMENTO	1.41	30.7753	11.109	1363837.483	1048891.757	26.581
	606	217.4123	16.448	88.3202	1.70	PARAMENTO	1.41	78.0897	16.443	1363831.332	1048902.161	26.922
	607	205.5058	25.343	89.1151	1.70	PARAMENTO	1.41	66.2495	25.341	1363838.144	1048909.267	26.856
	608	200.3514	24.788	89.3956	1.70	BORDE_VIA	1.41	60.9872	24.788	1363839.960	1048907.750	26.646
	609	216.3547	14.814	89.1328	1.70	BORDE_VIA	1.41	76.9964	14.813	1363831.271	1048900.506	26.702
	610	232.2125	15.813	89.1111	1.70	BORDE_VIA	1.41	92.7570	15.811	1363827.178	1048901.866	26.726
	611	224.4416	16.643	88.4907	1.70	PARAMENTO	1.41	85.1378	16.639	1363829.349	1048902.652	26.845
EAUX_11-EAUX_10	EAUX_10	0.0000	162.611	89.5901	1.70	ESTACION	1.46	106.8000	162.579	1363780.948	1049041.713	26.935
	EAUX_2	173.3421	86.483	89.1958	1.70	DELTA	1.46	100.3725	86.477	1363765.378	1049126.777	27.698
	612	349.1608	60.920	89.4725	1.70	PARAMENTO	1.46	276.0689	60.920	1363787.388	1048981.135	26.914
	613	350.4513	72.740	89.4953	1.70	PARAMENTO	1.46	277.5536	72.740	1363790.509	1048969.605	26.905
	614	358.4504	98.977	89.5911	1.70	BORDE_VIA	1.46	285.5511	98.977	1363807.483	1048946.360	26.715
	615	356.5309	63.946	90.0013	1.70	ANDEN	1.46	283.6859	63.946	1363796.077	1048979.583	26.687
	616	355.4252	59.582	89.5806	1.70	ANDEN	1.46	282.5145	59.582	1363793.858	1048983.547	26.724
	617	351.3047	57.416	89.5805	1.70	ANDEN	1.46	278.3131	57.416	1363789.249	1048984.900	26.723
	618	352.4015	51.832	89.5627	1.70	SEPARADOR	1.46	279.4709	51.832	1363789.476	1048990.588	26.745
	619	349.3938	45.106	90.0126	1.70	ANDEN	1.46	276.4606	45.106	1363786.023	1048996.894	26.672
	620	354.5119	40.444	89.5358	1.70	ANDEN	1.46	281.6553	40.444	1363789.118	1049002.103	26.762
	621	355.3143	35.788	89.5114	1.70	ANDEN	1.46	282.3286	35.788	1363788.589	1049006.751	26.782
	622	344.3823	41.497	89.2449	1.70	PARAMENTO	1.46	271.4397	41.495	1363781.990	1049000.231	27.116
	623	358.2754	34.265	89.5126	1.70	BORDE_VIA	1.46	285.2650	34.265	1363789.969	1049008.657	26.776
	624	6.3818	67.649	89.5216	1.70	PARAMENTO	1.46	293.4384	67.649	1363807.856	1048979.646	26.843
	625	5.1421	60.817	89.5636	1.70	BORDE_VIA	1.46	292.0392	60.817	1363803.769	1048985.340	26.751
	626	144.2521	16.308	86.5953	1.70	CERRAMIENT	1.46	71.2225	16.286	1363786.190	1049057.132	27.545



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	627	163.0744	34.756	88.5448	1.70	PARAMENTO	1.46	89.9289	34.750	1363780.991	1049076.463	27.350
	628	163.2653	34.978	88.5317	1.70	CERRAMIENT	1.46	90.2481	34.971	1363780.796	1049076.684	27.370
	629	169.2205	60.069	89.3226	1.70	CERRAMIENT	1.46	96.1681	60.067	1363774.494	1049101.433	27.173
	630	178.4430	27.448	89.1635	1.70	BORDE_VIA	1.46	105.5417	27.446	1363773.594	1049068.155	27.038
	631	193.2919	38.982	89.1312	1.70	PARAMENTO	1.46	120.2886	38.978	1363761.289	1049075.371	27.222
	632	284.2502	3.079	85.4610	1.70	PARAMENTO	1.46	211.2172	3.071	1363778.322	1049040.122	26.918
EAUX_2-EAUX_11	EAUX_11	0.0000	86.468	90.2114	1.70	ESTACION	1.47	100.3725	86.477	1363765.378	1049126.777	27.698
	EAUX_12	204.4008	65.960	89.4856	1.70	DELTA	1.47	125.0414	65.960	1363727.506	1049180.781	27.678
	633	202.1733	61.449	89.4145	1.70	BORDE_VIA	1.47	122.6650	61.448	1363732.212	1049178.507	27.792
	634	217.3714	33.629	89.2454	1.70	BORDE_VIA	1.47	137.9931	33.627	1363740.390	1049149.281	27.810
	635	226.0148	31.034	89.1335	1.70	BORDE_VIA	1.47	146.4025	31.031	1363739.530	1049143.948	27.885
	636	239.3131	37.430	88.4605	1.70	BORDE_VIA	1.47	159.8978	37.421	1363730.236	1049139.639	28.271
	637	196.1416	22.605	89.1318	1.70	BORDE_VIA	1.47	116.6103	22.603	1363755.253	1049146.986	27.773
	638	206.1839	28.520	89.4003	1.70	BORDE_VIA	1.47	126.6834	28.520	1363748.340	1049149.648	27.632
	639	200.5412	40.649	89.4915	1.70	BORDE_VIA	1.47	121.2759	40.649	1363744.274	1049161.519	27.593
	640	46.2335	2.924	88.0227	1.70	PARAMENTO	1.47	326.7656	2.922	1363767.822	1049125.175	27.566
	641	351.0506	2.998	90.0745	1.70	BORDE_VIA	1.47	271.4575	2.998	1363765.454	1049123.780	27.459
	642	188.4211	8.620	87.5529	1.70	BORDE_VIA	1.47	109.0756	8.614	1363762.562	1049134.918	27.778
	643	178.3430	11.686	87.5745	1.70	BORDE_VIA	1.47	98.9475	11.679	1363763.561	1049138.314	27.882
	644	285.5538	7.939	89.5154	1.70	BORDE_VIA	1.47	206.2997	7.939	1363758.260	1049123.260	27.485
	645	263.2509	9.928	89.0117	1.70	BORDE_VIA	1.47	183.7917	9.927	1363755.473	1049126.121	27.636
	646	252.3426	17.317	88.2640	1.70	BORDE_VIA	1.47	172.9464	17.311	1363748.198	1049128.903	27.936
	647	259.5859	26.432	88.3815	1.70	BORDE_VIA	1.47	180.3556	26.425	1363738.954	1049126.613	28.095
	648	295.0043	18.822	90.1227	1.70	PARAMENTO	1.47	215.3845	18.822	1363750.032	1049115.878	27.398
	649	286.0711	33.286	90.0905	1.70	PARAMENTO	1.47	206.4922	33.286	1363735.587	1049111.929	27.378
EAUX_12-EAUX_2	EAUX_2	0.0000	65.950	89.4635	1.70	ESTACION	1.46	125.0414	65.960	1363727.506	1049180.781	27.678
	EAUX_13	154.4948	148.691	89.5840	1.70	DELTA	1.46	99.8714	148.691	1363702.014	1049327.270	27.491
	650	146.1906	16.089	89.1906	1.70	BORDE_VIA	1.46	91.3597	16.088	1363727.124	1049196.864	27.625
	651	127.0936	20.277	89.4623	1.70	BORDE_VIA	1.46	72.2014	20.277	1363733.704	1049200.087	27.514
	652	139.1731	30.923	89.5136	1.70	BORDE_VIA	1.46	84.3334	30.923	1363730.559	1049211.553	27.509
	653	143.0439	37.525	89.5756	1.70	BORDE_VIA	1.46	88.1189	37.525	1363728.737	1049218.286	27.456
	654	138.1407	38.684	90.0037	1.70	BORDE_VIA	1.46	83.2767	38.684	1363732.035	1049219.199	27.427
	655	145.5214	44.674	89.5709	1.70	BORDE_VIA	1.46	90.9120	44.674	1363726.795	1049225.449	27.471
	656	152.5838	31.271	89.4255	1.70	BORDE_VIA	1.46	98.0186	31.271	1363723.144	1049211.746	27.589
	657	155.1735	37.131	89.4434	1.70	BORDE_VIA	1.46	100.3345	37.131	1363720.845	1049217.309	27.600
	658	159.5842	37.587	89.5046	1.70	BORDE_VIA	1.46	105.0197	37.587	1363717.765	1049217.084	27.534



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	659	155.2537	46.818	89.4849	1.70	BORDE_VIA	1.46	100.4684	46.818	1363718.999	1049226.819	27.586
	660	160.1900	31.011	89.5205	1.70	BORDE_VIA	1.46	105.3581	31.011	1363719.292	1049210.684	27.505
	661	164.0424	4.200	83.3430	1.70	POSTE	1.46	109.1147	4.174	1363726.139	1049184.724	27.903
EAUX_13-EAUX_12	EAUX_12	0.0001	148.682	89.5021	1.70	ESTACION	1.45	99.8714	148.691	1363702.014	1049327.270	27.491
	EAUX_1	198.5750	138.631	89.4551	1.70	DELTA	1.45	118.8353	138.630	1363635.154	1049448.711	27.812
	662	353.3852	57.465	89.3408	1.70	BORDE_VIA	1.45	273.5192	57.463	1363705.542	1049269.915	27.674
	663	349.2852	58.848	89.4252	1.70	BORDE_VIA	1.45	269.3525	58.847	1363701.349	1049268.427	27.534
	664	350.5701	52.151	89.4251	1.70	BORDE_VIA	1.45	270.8217	52.150	1363702.762	1049275.125	27.501
	665	248.1547	3.523	85.4427	1.70	BORDE_VIA	1.45	168.1345	3.513	1363698.576	1049327.993	27.503
	666	36.2440	4.013	86.5953	1.70	BORDE_VIA	1.45	316.2825	4.007	1363704.911	1049324.501	27.451
	667	82.4100	15.358	89.0212	1.70	BORDE_VIA	1.45	2.5547	15.356	1363717.355	1049327.955	27.499
	668	60.0848	18.104	89.1130	1.70	BORDE_VIA	1.45	340.0181	18.102	1363719.027	1049321.084	27.497
	669	4.1500	10.531	88.4353	1.70	BORDE_VIA	1.45	284.1214	10.528	1363704.583	1049317.060	27.474
	670	350.5815	11.984	88.5606	1.70	BORDE_VIA	1.45	270.8422	11.982	1363702.191	1049315.290	27.464
	671	358.1900	24.700	89.2655	1.70	BORDE_VIA	1.45	278.1881	24.699	1363705.532	1049302.823	27.479
	672	350.2532	51.798	89.3848	1.70	BORDE_VIA	1.45	270.2970	51.797	1363702.283	1049275.474	27.561
	673	350.3823	39.418	89.2043	1.70	BORDE_VIA	1.45	270.5111	39.415	1363702.366	1049287.856	27.692
	674	344.5846	39.418	89.1035	1.70	BORDE_VIA	1.45	264.8509	39.414	1363698.477	1049288.015	27.808
EAUX_1-EAUX_13	EAUX_13	0.0000	138.619	90.0202	1.70	ESTACION	1.46	118.8353	138.630	1363635.154	1049448.711	27.812
	E12003	90.0918	105.597	89.4635	1.70	DELTA	1.46	28.9903	105.596	1363727.519	1049499.890	27.987
	E12001	181.0430	117.325	89.4126	1.70	DELTA	1.46	119.9103	117.323	1363576.652	1049550.408	28.208
	675	297.4120	3.819	83.0929	1.70	SEPARADOR	1.46	236.5242	3.792	1363633.063	1049445.549	28.030
	676	295.2653	3.889	85.0848	1.70	SEPARADOR	1.46	234.2834	3.875	1363632.892	1049445.565	27.904
	677	41.1516	11.193	88.0641	1.70	CERRAMIENT	1.46	340.0897	11.187	1363645.672	1049444.902	27.944
	678	18.1700	24.964	89.0956	1.70	CERRAMIENT	1.46	317.1186	24.961	1363653.445	1049431.726	27.938
	679	57.0641	15.366	88.3807	1.70	CERRAMIENT	1.46	355.9467	15.362	1363650.477	1049447.626	27.941
	680	147.3838	12.935	87.4642	1.70	CERRAMIENT	1.46	86.4792	12.925	1363635.948	1049461.612	28.076
	681	137.0727	14.716	88.0006	1.70	CERRAMIENT	1.46	75.9595	14.707	1363638.722	1049462.979	28.088
	682	142.3440	11.870	88.0250	1.70	POSTE	1.46	81.4131	11.863	1363636.925	1049460.442	27.979
	683	156.4923	17.294	88.0941	1.70	CERRAMIENT	1.46	95.6584	17.285	1363633.450	1049465.912	28.130
	684	196.5806	11.827	88.1506	1.70	SEPARADOR	1.46	135.8036	11.821	1363626.679	1049456.952	27.936
	685	198.4524	12.048	88.2111	1.70	SEPARADOR	1.46	137.5920	12.043	1363626.262	1049456.833	27.921
	686	190.5622	19.330	88.1959	1.70	POSTE	1.46	129.7747	19.322	1363622.793	1049463.562	28.137
	687	272.2733	10.517	89.0540	1.70	BORDE_VIA	1.46	211.2945	10.516	1363626.168	1049443.249	27.741
	688	206.5231	24.585	89.2442	1.70	BORDE_VIA	1.46	145.7106	24.584	1363614.843	1049462.561	27.827
E12001		0.0000				ESTACION		0.0000		1363576.804	1049550.439	28.269



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12002	E12001	0.0000	108.814	89.4421	1.70	ESTACION	1.41	26.3064		1363674.378	1049598.677	28.051
	17	9.4822	57.653	89.2847	1.70	CERRAMIENT	1.41	216.1125	57.651	1363627.805	1049564.699	28.285
	18	10.5228	54.676	89.2412	1.70	BORDE_VIA	1.41	217.1809	54.673	1363630.819	1049565.636	28.331
	19	9.1300	46.747	89.1720	1.70	BORDE_VIA	1.41	215.5231	46.743	1363636.335	1049571.517	28.342
	20	11.3737	45.818	88.5611	1.70	PARAMENTO	1.41	217.9334	45.810	1363638.247	1049570.515	28.612
	21	9.2747	46.743	89.1230	1.70	POSTE	1.41	215.7695	46.739	1363636.456	1049571.357	28.408
	22	4.5736	51.179	89.2019	1.70	MANHOLE	1.41	211.2664	51.176	1363630.635	1049572.116	28.353
	23	359.3211	57.654	89.0542	1.70	POSTE	1.41	205.8428	57.647	1363622.497	1049573.548	28.673
	24	356.5040	18.849	89.0243	1.70	BORDE_VIA	1.41	203.1509	18.846	1363657.050	1049591.267	28.076
	25	351.5222	15.509	89.1628	1.70	BORDE_VIA	1.41	198.1792	15.508	1363659.645	1049593.839	27.958
	26	341.1011	16.274	89.0025	1.70	BORDE_VIA	1.41	187.4761	16.272	1363658.245	1049596.560	28.044
	27	346.3738	18.465	88.2226	1.70	CERRAMIENT	1.41	192.9336	18.458	1363656.389	1049594.546	28.286
	28	351.5554	17.612	88.2732	1.70	POSTE	1.41	198.2381	17.606	1363657.657	1049593.167	28.236
	29	352.1936	16.623	89.3608	1.70	SUMEDERO	1.41	198.6331	16.623	1363658.627	1049593.366	27.877
	30	350.4846	15.777	89.1729	1.70	SUMEDERO	1.41	197.1192	15.776	1363659.302	1049594.033	27.957
	31	342.5801	10.477	88.3328	1.70	POSTE	1.41	189.2734	10.474	1363664.042	1049596.989	28.026
	32	346.5434	10.562	88.2901	1.70	BORDE_VIA	1.41	193.2159	10.558	1363664.100	1049596.263	28.041
	33	354.1148	7.864	87.3821	1.70	BORDE_VIA	1.41	200.5031	7.857	1363667.019	1049595.925	28.086
	34	49.1453	8.183	88.2237	1.70	BORDE_VIA	1.41	255.5545	8.180	1363672.338	1049590.756	27.994
	35	65.3124	7.779	87.5355	1.70	BORDE_VIA	1.41	271.8297	7.774	1363674.627	1049590.907	28.047
	36	78.2411	8.779	88.4907	1.70	BORDE_VIA	1.41	284.7095	8.777	1363676.607	1049590.187	27.943
	37	90.2720	19.782	89.1507	1.70	BORDE_VIA	1.41	296.7620	19.780	1363683.285	1049581.015	28.020
	38	59.3856	10.312	86.4557	1.70	PARAMENTO	1.41	265.9553	10.296	1363673.652	1049588.407	28.344
	39	11.0004	11.766	88.0809	1.70	MANHOLE	1.41	217.3075	11.760	1363665.025	1049591.549	28.145
	40	158.2724	2.297	82.0153	1.70	MANHOLE	1.41	4.7631	2.275	1363676.645	1049598.866	28.080
	41	148.4451	5.053	86.2333	1.70	MANHOLE	1.41	355.0539	5.043	1363679.403	1049598.242	28.080
	42	173.5448	23.525	88.5649	1.70	MANHOLE	1.41	20.2197	23.521	1363696.450	1049606.806	28.194
	43	76.0208	7.872	89.0114	1.70	SUMEDERO	1.41	282.3420	7.871	1363676.061	1049590.988	27.897
	44	74.1952	6.980	89.0005	1.70	SUMEDERO	1.41	280.6375	6.979	1363675.667	1049591.818	27.884
	45	138.0314	11.190	89.5215	1.70	SUMEDERO	1.41	344.3603	11.190	1363685.154	1049595.660	27.787
	46	142.3619	10.759	89.4741	1.70	SUMEDERO	1.41	348.9117	10.759	1363684.937	1049596.608	27.801
E12004		0.0000				ESTACION		0.0000		1363762.732	1049340.760	27.725
E12005	E12004	0.0000	179.924	89.5604	1.70	ESTACION	1.46	285.0906		1363809.573	1049167.047	27.717
	179	100.1511	16.703	89.0400	1.70	BORDE_VIA	1.46	205.3436	16.701	1363794.479	1049159.899	27.752
	180	107.5322	10.568	88.2948	1.70	BORDE_VIA	1.46	212.9800	10.564	1363800.711	1049161.297	27.758
	181	112.2439	8.436	86.4510	1.70	SEMAFORO	1.46	217.5014	8.422	1363802.891	1049161.920	27.958



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	182	114.5458	6.123	87.5802	1.70	BORDE_VIA	1.46	220.0067	6.119	1363804.886	1049163.114	27.698
	183	51.0010	2.230	85.2418	1.70	BORDE_VIA	1.46	156.0934	2.223	1363807.541	1049167.948	27.659
	184	10.5722	3.227	87.1739	1.70	BORDE_VIA	1.46	116.0467	3.223	1363808.157	1049169.943	27.633
	185	0.5625	3.133	86.0343	1.70	CANAleta	1.46	106.0309	3.126	1363808.710	1049170.051	27.696
	186	1.2910	27.425	89.5658	1.70	BORDE_VIA	1.46	106.5767	27.425	1363801.749	1049193.333	27.505
	187	0.2757	27.503	89.4558	1.70	CANAleta	1.46	105.5564	27.503	1363802.197	1049193.543	27.593
	188	8.4248	29.122	89.3047	1.70	PARAMENTO	1.46	113.8039	29.121	1363797.819	1049193.691	27.728
	189	4.3301	35.467	89.5829	1.70	POSTE	1.46	109.6409	35.467	1363797.652	1049200.451	27.496
	190	354.4443	98.568	89.4611	1.70	ARBOL	1.46	99.8359	98.567	1363792.735	1049264.166	27.877
	191	355.5441	96.892	90.0403	1.70	BORDE_VIA	1.46	101.0020	96.892	1363791.082	1049262.159	27.366
	192	356.1057	96.891	90.0217	1.70	CANAL	1.46	101.2731	96.891	1363790.632	1049262.069	27.416
	193	295.5437	9.204	87.1710	1.70	SEMAFORO	1.46	41.0009	9.194	1363816.511	1049173.079	27.916
	194	284.1357	8.231	88.3028	1.70	BORDE_VIA	1.46	29.3231	8.228	1363816.747	1049171.077	27.695
	195	266.0202	11.057	88.4605	1.70	BORDE_VIA	1.46	11.1245	11.054	1363820.420	1049169.180	27.718
	196	255.2029	14.209	88.4608	1.70	BORDE_VIA	1.46	0.4320	14.206	1363823.778	1049167.155	27.786
	197	263.0029	34.161	89.2945	1.70	BORDE_VIA	1.46	8.0986	34.160	1363843.392	1049171.860	27.781
	198	271.5053	48.658	89.3502	1.70	POSTE	1.46	16.9386	48.657	1363856.119	1049181.223	27.834
	199	275.3757	46.885	89.4349	1.70	CERRAMIENT	1.46	20.7231	46.884	1363853.424	1049183.638	27.701
	200	299.4303	10.283	88.3144	1.70	CERRAMIENT	1.46	44.8081	10.280	1363816.866	1049174.292	27.744
	201	332.4404	18.819	89.1856	1.70	CERRAMIENT	1.46	77.8250	18.818	1363813.542	1049185.442	27.705
	202	336.5903	21.224	88.2603	1.70	POSTE	1.46	82.0747	21.216	1363812.498	1049188.061	28.060
	203	338.3426	21.265	89.1335	1.70	ARBOL	1.46	83.6645	21.263	1363811.919	1049188.181	27.768
	204	44.5809	6.754	87.4132	1.70	PARAMENTO	1.46	150.0597	6.749	1363803.725	1049170.416	27.752
	205	348.4313	45.248	89.5351	1.70	PARAMENTO	1.46	93.8109	45.248	1363806.566	1049212.195	27.561
	206	15.1904	11.285	88.4009	1.70	POSTE	1.46	120.4084	11.282	1363803.862	1049176.777	27.743
	207	88.0005	5.125	86.3151	1.70	POSTE	1.46	193.0920	5.116	1363804.590	1049165.889	27.791
	208	30.0025	2.701	86.4121	1.70	SUMEDERO	1.46	135.0975	2.696	1363807.663	1049168.951	27.636
	209	46.3117	2.107	84.1520	1.70	SUMEDERO	1.46	151.6120	2.096	1363807.729	1049168.044	27.691
	210	305.2343	2.225	83.5335	1.50	MANHOLE	1.46	50.4859	2.212	1363810.981	1049168.754	27.917
	211	278.0314	6.827	85.0926	1.70	MANHOLE	1.46	23.1445	6.803	1363815.828	1049169.721	28.057
	212	239.0122	5.201	84.0018	1.70	MANHOLE	1.46	344.1134	5.173	1363814.548	1049165.632	28.024
	213	266.1555	9.026	88.2708	1.70	CAJA_TELEF	1.46	11.3559	9.023	1363818.419	1049168.824	27.724
	214	75.2412	18.785	88.5222	1.70	PARAMENTO	1.46	180.4939	18.781	1363790.792	1049166.886	27.850
E12009		0.0000				ESTACION		0.0000		1363876.477	1048924.648	26.222
E12010	E12009	0.0000	146.936	90.1900	0.09	ESTACION	1.39	316.9264		1363982.615	1048825.418	26.055
	E12020	75.3440	58.554	90.1051	1.70	DELTA	1.39	212.5042	58.554	1363933.233	1048793.954	25.562



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12020-E12010	E12010	0.0000	58.572	89.1447	1.70	ESTACION	1.41	212.5042	58.554	1363933.233	1048793.954	25.562
	E12021	161.5837	25.216	89.0845	1.70	DELTA	1.41	194.4811	25.213	1363908.821	1048787.649	25.650
	1	0.0001	37.861	89.3150	1.70	LINEAMIENT	1.43	32.5045	37.860	1363965.162	1048814.298	25.584
	2	0.0000	19.770	89.4934	1.70	LINEAMIENT	1.43	32.5042	19.770	1363949.906	1048804.577	25.334
E12021-E12020	E12020	359.5959	25.213	89.5723	1.70	ESTACION	1.58	194.4811	25.213	1363908.821	1048787.649	25.650
	E12022	172.3903	27.755	89.3157	1.70	DELTA	1.58	187.1320	27.754	1363881.282	1048784.203	25.760
	3	0.0000	12.116	88.5948	1.70	LINEAMIENT	1.42	14.4811	12.114	1363920.550	1048790.678	25.746
	4	4.1421	43.595	89.5744	1.70	SUMIDERO	1.42	18.7203	43.595	1363950.110	1048801.641	25.563
	5	3.3632	44.381	89.5942	1.70	SUMIDERO	1.42	18.0900	44.381	1363951.008	1048801.430	25.538
E12022-E12021	E12021	0.0000	27.747	89.3559	1.70	ESTACION	1.39	187.1320	27.754	1363881.282	1048784.203	25.760
	E12023	161.2046	36.260	89.1342	1.70	DELTA	1.39	168.4781	36.257	1363845.756	1048791.445	25.943
	6	0.0000	13.018	88.4412	1.70	LINEAMIENT	1.39	7.1320	13.015	1363894.196	1048785.819	25.741
	7	295.0822	2.049	84.1451	1.70	MHVIRTUAL	1.39	302.2714	2.039	1363882.370	1048782.479	25.660
	8	139.0547	6.214	87.2853	1.70	SUMIDERO	1.39	146.2284	6.208	1363876.121	1048787.654	25.727
	9	132.1531	6.718	87.3623	1.70	SUMIDERO	1.39	139.3906	6.712	1363876.186	1048788.572	25.735
E12023-E12022	E12022	0.0000	36.239	89.5244	1.70	ESTACION	1.44	168.4781	36.257	1363845.756	1048791.445	25.943
	E12024	155.2421	52.275	89.2711	1.70	DELTA	1.44	143.8839	52.273	1363803.529	1048822.256	26.177
	10	0.0000	15.532	89.2935	1.70	LINEAMIENT	1.44	348.4781	15.531	1363860.974	1048788.343	25.815
	11	153.0213	29.933	89.0900	1.70	MANHOLE	1.44	141.5150	29.930	1363822.327	1048810.071	26.122
E12024-E12023	E12023	0.0000	52.252	89.5836	1.70	ESTACION	1.44	143.8839	52.273	1363803.529	1048822.256	26.177
	EAUX_8	190.5625	3.991	82.4450	1.70	DELTA_AUX	1.44	154.8242	3.959	1363799.946	1048823.940	26.416
	E12025	160.4700	27.324	88.3139	1.70	DELTA	1.44	124.6672	27.315	1363787.992	1048844.722	26.614
	12	0.0000	19.387	89.2931	1.70	LINEAMIENT	1.44	323.8839	19.386	1363819.189	1048810.829	26.084
	13	20.4643	17.978	89.5009	1.70	SUMIDERO	1.44	344.6625	17.978	1363820.866	1048817.501	25.963
	14	22.3820	18.703	89.4348	1.70	SUMIDERO	1.44	346.5228	18.703	1363821.716	1048817.897	26.000
	15	12.3726	25.820	89.4854	1.70	SUMIDERO	1.44	336.5078	25.820	1363827.208	1048811.963	25.995
	16	13.5349	26.554	89.4628	1.70	SUMIDERO	1.44	337.7809	26.554	1363828.111	1048812.214	26.016
	17	18.1305	22.430	89.3029	1.70	MANHOLE	1.44	342.1020	22.429	1363824.872	1048815.363	26.104
	18	156.0950	26.118	88.3536	1.70	VALVULA	1.44	120.0478	26.110	1363790.455	1048844.857	26.553
E12025-E12024	E12024	0.0000	27.302	90.1751	1.70	ESTACION	1.40	124.6672	27.315	1363787.992	1048844.722	26.614
	E12026	117.4024	7.699	85.1650	1.70	DELTA	1.40	62.3406	7.673	1363791.553	1048851.518	26.944
	EAUX_9	142.0414	9.805	86.2237	1.70	DELTA_AUX	1.40	86.7378	9.785	1363788.548	1048854.491	26.930
	19	0.0001	16.503	90.1242	1.70	LINEAMIENT	1.40	304.6675	16.503	1363797.379	1048831.148	26.250
	20	0.0000	8.321	89.4849	1.70	LINEAMIENT	1.40	304.6672	8.321	1363792.725	1048837.878	26.338
	21	0.0000	2.264	86.5120	1.70	LINEAMIENT	1.40	304.6672	2.261	1363789.277	1048842.862	26.435
E12026-E12025	E12025	0.0000	7.670	90.3922	1.70	ESTACION	1.45	62.3406	7.673	1363791.553	1048851.518	26.944



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	EAUX_9	252.4050	4.241	86.5203	1.70	DELTA_AUX	1.45	135.0211	4.235	1363788.558	1048854.511	26.927
	E12027	163.0923	56.236	89.5503	1.70	DELTA	1.45	45.4970	56.236	1363830.972	1048891.626	26.776
	EAUX_10	162.4618	52.260	89.5413	1.70	DELTA_AUX	1.45	45.1122	52.260	1363828.434	1048888.543	26.783
	22	0.0000	3.764	86.4124	1.70	LINEAMIENT	1.45	242.3406	3.758	1363789.809	1048848.189	26.913
E12027-E12026	E12026	0.0000	56.233	89.3332	1.70	ESTACION	1.44	45.4970	56.236	1363830.972	1048891.626	26.776
	E12028	180.2241	53.935	90.0044	1.70	DELTA	1.44	45.8750	53.935	1363868.523	1048930.342	26.500
E12028-E12027	E12027	0.0000	53.971	89.2748	1.70	ESTACION	1.45	45.8750	53.935	1363868.523	1048930.342	26.500
	EAUX_10	0.1858	57.935	89.2937	1.70	DELTA_AUX	1.45	226.1911	57.933	1363828.419	1048888.534	26.757
	E12009	100.0407	8.153	88.1519	1.70	DELTA	1.45	325.9436	8.149	1363875.274	1048925.778	26.493



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E1051		0.0000				ESTACION		0.0000		1363481.907	1049714.826	28.473
E12000	E1051	0.0000	75.975	89.4831	1.70	ESTACION	1.31	300.8824		1363520.922	1049649.590	28.677
	EAUX_14	87.5333	100.752	90.2201	1.70	DELTA	1.31	208.7749	100.750	1363432.613	1049601.092	27.640
	689	55.0334	17.061	89.3541	1.70	BORDE_VIA	1.31	175.9418	17.061	1363503.905	1049650.798	28.406
	690	70.2606	18.164	89.3204	1.70	BORDE_VIA	1.31	191.3174	18.163	1363503.112	1049646.026	28.433
	691	75.0100	21.381	89.1926	1.70	BORDE_VIA	1.31	195.8990	21.380	1363500.361	1049643.733	28.538
	692	88.0357	23.005	89.2228	1.70	BORDE_VIA	1.31	208.9482	23.004	1363500.793	1049638.456	28.536
	693	88.0700	19.333	89.1434	1.70	BORDE_VIA	1.31	208.9990	19.331	1363504.015	1049640.218	28.541
	694	92.5733	18.800	89.2348	1.70	BORDE_VIA	1.31	213.8415	18.799	1363505.308	1049639.121	28.483
	695	95.2138	14.063	89.3149	1.70	BORDE_VIA	1.31	216.2429	14.063	1363509.581	1049641.276	28.401
	696	119.4525	15.832	89.4216	1.70	BORDE_VIA	1.31	240.6393	15.832	1363513.160	1049635.792	28.367
	697	83.2055	13.896	89.4120	1.70	MANHOLE	1.31	204.2310	13.896	1363508.251	1049643.887	28.361
	698	78.3222	17.611	87.1320	2.20	MANHOLE	1.31	199.4218	17.590	1363504.333	1049643.741	28.639
EAUX_14-E12000	E12000	0.0000	100.755	88.5955	2.20	ESTACION	1.43	208.7749	100.750	1363432.613	1049601.092	27.640
	EAUX_15	174.2018	15.826	90.2704	1.70	DELTA	1.43	203.1132	15.826	1363418.058	1049594.880	27.248
	699	6.0636	22.882	88.0456	1.70	MANHOLE	1.43	34.8849	22.869	1363451.373	1049614.172	28.139
	700	6.4132	20.037	88.0609	1.70	ANDEN	1.43	35.4671	20.026	1363448.923	1049612.712	28.036
	701	357.2624	9.805	86.4325	1.70	ANDEN	1.43	26.2149	9.789	1363441.395	1049605.416	27.933
	702	190.5426	2.886	80.4828	1.70	ANDEN	1.43	219.6821	2.849	1363430.421	1049599.273	27.834
	703	170.1724	6.435	87.5511	1.70	ANDEN	1.43	199.0649	6.431	1363426.535	1049598.992	27.607
	704	162.0830	6.496	87.4530	1.70	ANDEN	1.43	190.9165	6.491	1363426.240	1049599.863	27.627
	705	136.3438	3.525	79.4305	1.70	MANHOLE	1.43	165.3521	3.468	1363429.258	1049601.969	28.002
	706	159.4055	12.146	89.3957	1.70	PUENTE	1.43	188.4568	12.146	1363420.600	1049599.306	27.444
	707	161.2502	12.020	89.3712	1.70	PUENTE	1.43	190.1921	12.020	1363420.783	1049598.965	27.453
	708	176.0228	11.299	90.3756	1.70	PUENTE	1.43	204.8160	11.298	1363422.358	1049596.350	27.248
	709	173.5412	11.359	91.0752	1.70	PUENTE	1.43	202.6782	11.357	1363422.135	1049596.714	27.149
	710	176.5817	15.215	90.3956	1.70	PUENTE	1.43	205.7463	15.214	1363418.910	1049594.484	27.196
	711	175.1720	15.220	90.3025	1.70	PUENTE	1.43	204.0638	15.219	1363418.717	1049594.887	27.238
	712	164.2953	15.797	90.2712	1.70	PUENTE	1.43	193.2729	15.797	1363417.239	1049597.466	27.248
	713	165.5356	15.708	90.2712	1.70	PUENTE	1.43	194.6738	15.708	1363417.418	1049597.113	27.249
	714	169.0716	22.792	90.3045	1.70	PUENTE	1.43	197.8960	22.791	1363410.925	1049594.089	27.169
	715	177.3855	23.348	90.1448	1.70	PUENTE	1.43	206.4235	23.348	1363411.705	1049590.702	27.273
	716	176.4411	24.625	90.0904	1.70	PUENTE	1.43	205.5113	24.625	1363410.389	1049590.487	27.308
	717	177.3956	24.485	90.0617	1.70	PUENTE	1.43	206.4404	24.485	1363410.690	1049590.190	27.328
	718	169.5935	24.895	90.0816	1.70	PUENTE	1.43	198.7679	24.895	1363409.042	1049593.083	27.313
	719	170.4114	24.884	90.0852	1.70	PUENTE	1.43	199.4621	24.884	1363409.151	1049592.801	27.309



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
EAUX_15-EAUX_14	EAUX_14	0.0000	15.839	87.3821	1.70	ESTACION	1.45	203.1132	15.826	1363418.058	1049594.880	27.248
	EAUX_16	94.5046	14.442	98.0302	1.70	DELTA	1.45	117.9593	14.300	1363411.354	1049607.511	24.974
	720	6.2657	68.515	88.4959	1.70	MANHOLE	1.45	29.5624	68.501	1363477.641	1049628.676	28.392
	721	98.5205	16.120	99.1347	1.70	DESCARGA	1.45	121.9813	15.911	1363409.631	1049608.376	24.411
	722	101.0926	15.424	99.2255	1.70	DESCARGA	1.45	124.2704	15.218	1363409.489	1049607.456	24.482
EAUX_16-EAUX_15	EAUX_15	359.5959	14.522	79.5349	1.70	ESTACION	1.42	117.9593	14.300	1363411.354	1049607.511	24.974
	723	233.3845	2.203	110.4358	1.70	TUBO_DESC	1.42	171.6051	2.060	1363409.315	1049607.811	23.915
	724	233.0213	2.201	113.3045	1.70	TUBO_DESC	1.42	170.9963	2.018	1363409.360	1049607.826	23.817
	725	232.1108	2.416	113.4812	1.70	DESCARGA	1.42	170.1449	2.210	1363409.176	1049607.889	23.720
	726	231.3425	4.123	115.3132	2.90	DESCARGA	1.42	169.5329	3.721	1363407.695	1049608.187	21.718
	727	229.5808	6.113	107.3723	4.00	DESCARGA	1.42	167.9282	5.826	1363405.656	1049608.729	20.544
	728	232.4046	7.289	108.5439	4.00	DESCARGA	1.42	170.6388	6.896	1363404.550	1049608.632	20.033
	729	224.1447	7.299	108.1931	4.00	RIO	1.42	162.2057	6.929	1363404.756	1049609.628	20.100
	730	219.2850	7.871	105.0609	4.00	RIO	1.42	157.4399	7.599	1363404.336	1049610.426	20.344
	731	214.3757	10.646	101.3258	4.00	RIO	1.42	152.5918	10.430	1363402.094	1049612.312	20.263
	732	265.4949	8.223	107.4009	4.00	RIO	1.42	203.7896	7.835	1363404.184	1049604.350	19.899
	733	274.1331	8.755	106.0144	4.00	RIO	1.42	212.1846	8.415	1363404.232	1049603.029	19.977
E12001		0.0000				ESTACION		0.0000		1363576.804	1049550.439	28.269
EAUX_1	E12001	0.0000	117.324	89.4043	1.70	ESTACION	1.44	299.9034		1363635.294	1049448.735	27.871
	EAUX_18	15.5730	49.690	89.3012	1.70	DELTA	1.44	135.8617	49.688	1363599.635	1049483.338	28.037
EAUX_18-EAUX_1	EAUX_1	0.0000	49.694	89.5214	1.70	ESTACION	1.42	135.8617	49.688	1363599.635	1049483.338	28.037
	EAUX_19	250.5816	50.834	89.4913	1.70	DELTA	1.42	206.8328	50.834	1363554.274	1049460.392	27.918
EAUX_19-EAUX_18	EAUX_18	0.0000	50.838	89.3410	1.70	ESTACION	1.43	206.8328	50.834	1363554.274	1049460.392	27.918
	EAUX_20	151.3152	63.107	90.2818	1.70	DELTA	1.43	178.3639	63.105	1363491.195	1049462.194	27.133
EAUX_20-EAUX_19	EAUX_19	0.0000	63.101	89.0339	1.70	ESTACION	1.44	178.3639	63.105	1363491.195	1049462.194	27.133
	EAUX_21	294.4218	46.460	87.0735	1.70	DELTA	1.44	293.0689	46.402	1363509.377	1049419.503	29.202
EAUX_21-EAUX_20	EAUX_20	0.0000	46.450	90.1313	1.70	ESTACION	1.41	293.0689	46.402	1363509.377	1049419.503	29.202
	EAUX_22	138.2707	33.224	91.2953	1.70	DELTA	1.41	251.5209	33.213	1363498.850	1049388.003	28.047
	736	113.0411	12.793	100.4256	0.09	MANHOLE	1.41	226.1386	12.570	1363500.667	1049410.440	28.152
EAUX_22-EAUX_21	EAUX_21	0.0000	33.230	87.3258	1.70	ESTACION	1.44	251.5209	33.213	1363498.850	1049388.003	28.047
	EAUX_23	92.2338	10.796	97.3237	1.70	DELTA	1.44	163.9147	10.703	1363488.567	1049390.968	26.365
EAUX_23-EAUX_22	EAUX_22	0.0000	10.877	79.0723	1.70	ESTACION	1.32	163.9147	10.703	1363488.567	1049390.968	26.365
	737	285.1932	2.170	92.1319	3.00	TUBO_DESC	1.32	269.2403	2.168	1363488.538	1049388.800	24.601
	738	285.4649	2.447	105.5342	3.00	TUBO_DESC	1.32	269.6950	2.353	1363488.554	1049388.615	24.015
	739	272.4058	2.650	118.4418	3.00	ESTRUCTURA	1.32	256.5975	2.324	1363488.028	1049388.708	23.411
	740	261.2024	4.202	108.1000	3.00	ESTRUCTURA	1.32	245.2547	3.993	1363486.895	1049387.342	23.375



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	741	255.5205	4.130	106.1539	3.00	ESTRUCTURA	1.32	239.7828	3.965	1363486.571	1049387.542	23.529
	742	271.3840	4.587	106.4649	3.00	ESTRUCTURA	1.32	255.5592	4.392	1363487.471	1049386.715	23.361
	743	274.2324	4.760	104.5335	3.00	ESTRUCTURA	1.32	258.3047	4.600	1363487.634	1049386.463	23.462
	744	267.1843	4.410	107.2100	3.00	ESTRUCTURA	1.32	251.2267	4.209	1363487.212	1049386.983	23.370
	745	268.0159	4.408	104.4437	3.00	ESTRUCTURA	1.32	251.9478	4.263	1363487.246	1049386.915	23.563
	746	267.3755	4.450	104.4057	3.00	ESTRUCTURA	1.32	251.5467	4.305	1363487.204	1049386.885	23.557
	747	271.1151	4.576	104.3510	3.00	ESTRUCTURA	1.32	255.1122	4.429	1363487.429	1049386.688	23.533
	748	270.5116	4.610	104.0642	3.00	ESTRUCTURA	1.32	254.7692	4.471	1363487.392	1049386.654	23.561
	749	270.5611	4.557	102.0455	2.70	ESTRUCTURA	1.32	254.8511	4.456	1363487.402	1049386.667	24.031
	750	271.2929	4.616	102.0038	2.70	ESTRUCTURA	1.32	255.4061	4.515	1363487.429	1049386.599	24.025
	751	260.2217	4.076	104.3016	2.70	ESTRUCTURA	1.32	244.2861	3.946	1363486.854	1049387.413	23.964
	752	256.4425	4.053	104.3402	2.70	ESTRUCTURA	1.32	240.6550	3.923	1363486.644	1049387.549	23.966
	753	292.0358	3.655	113.4750	2.70	ESTRUCTURA	1.32	275.9809	3.344	1363488.915	1049387.642	23.510
	754	273.1744	3.731	115.4721	2.70	ESTRUCTURA	1.32	257.2103	3.359	1363487.823	1049387.692	23.362
	755	271.0530	3.661	115.3832	2.70	ESTRUCTURA	1.32	255.0064	3.300	1363487.713	1049387.780	23.401
	756	266.5508	4.464	111.3446	2.70	ESTRUCTURA	1.32	250.8336	4.151	1363487.204	1049387.047	23.343
	757	264.5725	4.389	111.4627	2.70	ESTRUCTURA	1.32	248.8717	4.076	1363487.097	1049387.166	23.357
	758	262.0942	4.427	111.2800	2.70	ESTRUCTURA	1.32	246.0764	4.120	1363486.896	1049387.202	23.365
	759	262.5015	4.342	111.5841	2.70	ESTRUCTURA	1.32	246.7522	4.026	1363486.977	1049387.268	23.360
	760	261.4717	4.388	110.5648	2.70	ESTRUCTURA	1.32	245.7028	4.098	1363486.880	1049387.233	23.416
	761	262.1551	4.335	111.1258	2.70	ESTRUCTURA	1.32	246.1789	4.041	1363486.934	1049387.271	23.416
	762	260.5610	4.359	110.3612	2.70	ESTRUCTURA	1.32	244.8509	4.080	1363486.833	1049387.275	23.451
	763	261.3638	4.289	111.2649	2.70	ESTRUCTURA	1.32	245.5253	3.992	1363486.913	1049387.335	23.417
	764	279.5754	2.935	122.4552	2.70	DESCARGA	1.32	263.8797	2.468	1363488.303	1049388.514	23.397
	765	267.5034	5.099	108.1554	4.00	BORDE_CANO	1.32	251.7575	4.842	1363487.051	1049386.369	22.087
	766	264.4017	6.252	105.2011	4.00	BORDE_CANO	1.32	248.5861	6.029	1363486.365	1049385.355	22.032
	767	261.1120	6.953	104.5603	4.00	BORDE_CANO	1.32	245.1036	6.718	1363485.738	1049384.874	21.893
	768	254.3322	8.512	103.2814	4.00	BORDE_CANO	1.32	238.4709	8.278	1363484.238	1049383.912	21.702
	769	256.5852	9.100	103.0608	4.00	RIO	1.32	240.8959	8.863	1363484.256	1049383.224	21.622
	770	265.2017	9.771	102.0654	4.00	RIO	1.32	249.2528	9.553	1363485.182	1049382.034	21.634
	771	239.4252	7.273	105.4339	4.00	RIO	1.32	223.6292	7.001	1363483.499	1049386.138	21.714
	772	219.0823	7.026	106.2452	4.00	RIO	1.32	203.0545	6.740	1363482.365	1049388.329	21.700
	773	245.5653	6.901	106.1856	4.00	BORDE_CANO	1.32	229.8628	6.623	1363484.297	1049385.905	21.746
	774	247.4422	5.454	105.0004	4.00	BORDE_CANO	1.32	231.6542	5.268	1363485.298	1049386.836	22.273
	775	254.1917	4.308	103.3137	4.00	BORDE_CANO	1.32	238.2361	4.188	1363486.362	1049387.407	22.677
	776	262.5628	4.691	108.4443	4.00	CANO	1.32	246.8559	4.442	1363486.821	1049386.883	22.178



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	777	255.0454	6.881	105.5345	4.00	CANO	1.32	238.9964	6.618	1363485.158	1049385.296	21.801
E12001		0.0000				ESTACION		0.0000		1363576.804	1049550.439	28.269
EAUX_1	E12001	0.0000	117.335	89.4110	1.70	ESTACION	1.42	299.9034		1363635.294	1049448.735	27.871
	734	355.4853	33.391	91.2052	0.09	MANHOLE	1.42	115.7181	33.382	1363620.808	1049478.810	28.423
	735	334.4058	6.304	87.5511	1.70	MANHOLE	1.42	94.5861	6.300	1363634.790	1049455.015	27.822
	AUX_17	163.3947	38.613	89.4404	1.70	DELTA_AUX	1.42	283.5664	38.613	1363644.351	1049411.200	27.772
EAUX_2		0.0000				ESTACION		0.0000		1363765.378	1049126.777	27.698
EAUX_11	EAUX_2	0.0000	86.483	89.1807	1.70	ESTACION	1.42	280.3725		1363780.948	1049041.713	26.935
	EAUX_24	176.0840	44.832	90.2357	2.50	DELTA	1.42	276.5170	44.831	1363786.036	1048997.172	25.541
EAUX_24-EAUX_11	EAUX_11	0.0000	44.843	89.2400	1.70	ESTACION	1.27	276.5170	44.831	1363786.036	1048997.172	25.541
	EAUX_25	114.4247	89.490	89.4551	1.70	DELTA	1.27	211.2300	89.489	1363709.514	1048950.774	25.477
	778	287.0632	6.553	87.1846	1.70	MANHOLE	1.27	23.6259	6.546	1363792.033	1048999.795	25.416
	779	244.2606	10.216	88.2346	1.70	MANHOLE	1.27	340.9520	10.212	1363795.689	1048993.839	25.395
	780	203.3942	12.352	88.4757	1.70	MANHOLE	1.27	300.1786	12.349	1363792.244	1048986.496	25.368
	781	196.0649	11.264	88.4149	1.70	MANHOLE	1.27	292.6306	11.261	1363790.369	1048986.778	25.365
	782	353.5814	3.726	81.5716	1.70	MANHOLE	1.27	90.4875	3.689	1363786.004	1049000.861	25.630
	783	99.3106	23.851	89.1528	1.70	MANHOLE	1.27	196.0353	23.849	1363763.115	1048990.584	25.418
	784	127.0943	27.955	89.2419	1.70	MANHOLE	1.27	223.6789	27.953	1363765.819	1048977.867	25.399
	785	108.5848	34.307	89.2616	1.70	MANHOLE	1.27	205.4970	34.305	1363755.071	1048982.405	25.445
EAUX_25-EAUX_24	EAUX_24	0.0000	89.483	89.4534	1.70	ESTACION	1.37	211.2300	89.489	1363709.514	1048950.774	25.477
	EAUX_26	169.1826	27.119	93.0638	1.70	DELTA	1.37	200.5372	27.079	1363684.156	1048941.274	23.676
	787	73.1936	1.657	80.1613	1.70	MANHOLE	1.37	104.5567	1.633	1363709.104	1048952.355	25.427
EAUX_26-EAUX_25	EAUX_25	0.0000	27.152	85.3343	1.70	ESTACION	1.39	200.5372	27.079	1363684.156	1048941.274	23.676
	788	302.5350	3.408	94.5809	4.00	ESTRUCTURA	1.39	323.4345	3.395	1363686.883	1048939.252	20.767
	788	289.3105	2.151	105.1951	4.00	ESTRUCTURA	1.39	310.0553	2.074	1363685.491	1048939.686	20.494
	789	300.0857	2.561	91.2831	4.00	TUBO_DESC	1.39	320.6864	2.560	1363686.137	1048939.652	20.997
	790	299.1839	2.671	102.4331	4.00	TUBO_DESC	1.39	319.8481	2.605	1363686.148	1048939.594	20.474
	791	291.5825	2.161	105.2913	4.00	ESTRUCTURA	1.39	312.5109	2.083	1363685.563	1048939.739	20.485
	792	293.1958	1.926	91.4041	1.70	ESTRUCTURA	1.39	313.8700	1.925	1363685.490	1048939.886	23.306
	793	307.0427	3.438	91.4850	1.70	ESTRUCTURA	1.39	327.6114	3.436	1363687.058	1048939.434	23.254
	794	282.5546	4.308	101.2941	1.70	ESTRUCTURA	1.39	303.4667	4.222	1363686.484	1048937.753	22.504
	795	278.3505	4.514	102.4919	1.70	ESTRUCTURA	1.39	299.1220	4.401	1363686.298	1048937.429	22.361
	796	270.3146	3.476	105.0709	1.70	ESTRUCTURA	1.39	291.0667	3.356	1363685.362	1048938.143	22.456
	797	266.3233	3.697	106.4535	1.70	ESTRUCTURA	1.39	287.0797	3.540	1363685.196	1048937.890	22.296
	798	265.1751	6.103	97.0512	4.00	ESTRUCTURA	1.39	285.8347	6.056	1363685.809	1048935.448	20.310
	799	266.2035	6.015	95.5356	5.00	ESTRUCTURA	1.39	286.8803	5.983	1363685.893	1048935.549	19.444



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	800	265.0750	6.289	104.3844	1.70	ESTRUCTURA	1.39	285.6678	6.085	1363685.799	1048935.416	21.772
	801	264.5742	5.938	104.5440	1.70	ESTRUCTURA	1.39	285.4989	5.738	1363685.689	1048935.745	21.835
	802	255.3046	5.601	104.4747	1.70	ESTRUCTURA	1.39	276.0500	5.415	1363684.727	1048935.889	21.932
	803	256.0929	5.359	106.5346	1.70	ESTRUCTURA	1.39	276.6953	5.128	1363684.754	1048936.182	21.805
	804	200.1229	1.995	107.3010	1.70	DES_DOMICI	1.39	220.7453	1.903	1363682.715	1048940.032	22.763
	805	193.4718	3.538	104.5033	1.70	DES_DOMICI	1.39	214.3256	3.420	1363681.332	1048939.346	22.456
E10026		0.0000				ESTACION		0.0000		1363470.691	1049176.137	27.477
E10027	E10026	0.0000	60.222	88.0555	1.70	ESTACION	1.41	20.9975		1363526.894	1049197.708	25.766
	EAUX_27	209.4443	12.128	93.1953	1.70	DELTA	1.41	50.7428	12.108	1363534.556	1049207.083	24.772
EAUX_27-E10027	E10027	0.0000	12.169	84.0329	1.70	ESTACION	1.43	50.7428	12.108	1363534.556	1049207.083	24.772
	806	106.3902	23.190	102.4211	1.70	RIO	1.43	337.3934	22.622	1363555.440	1049198.387	19.406
	807	93.3526	23.329	102.4518	1.70	RIO	1.43	324.3334	22.753	1363553.041	1049193.817	19.355
	808	85.0248	25.544	101.5329	1.70	RIO	1.43	315.7895	24.996	1363552.473	1049189.654	19.242
	809	85.0928	28.105	100.5029	1.70	RIO	1.43	315.9006	27.603	1363554.379	1049187.874	19.219
	810	84.0922	29.600	100.0808	1.70	RIO	1.43	314.8989	29.138	1363555.123	1049186.443	19.296
	811	87.1749	27.525	100.3552	1.70	BORDE_CANO	1.43	318.0398	27.055	1363554.675	1049188.994	19.443
	812	88.3349	27.964	100.0333	1.70	BORDE_CANO	1.43	319.3064	27.534	1363555.433	1049189.131	19.621
	813	89.1101	28.666	98.4337	1.70	BORDE_CANO	1.43	319.9264	28.334	1363556.238	1049188.843	20.156
	814	89.4514	26.170	100.5807	1.70	BORDE_CANO	1.43	320.4967	25.692	1363554.380	1049190.740	19.526
	815	91.2228	26.402	100.1011	1.70	BORDE_CANO	1.43	322.1173	25.987	1363555.067	1049191.126	19.844
	816	92.5253	27.077	99.2640	1.70	BORDE_CANO	1.43	323.6242	26.710	1363556.061	1049191.242	20.062
	817	90.1514	28.218	99.3126	1.70	DESCARGA	1.43	320.9967	27.829	1363556.182	1049189.569	19.836
	818	92.4627	27.005	97.1441	1.70	ESTRUCTURA	1.43	323.5170	26.789	1363556.096	1049191.155	21.100
	819	93.2124	27.265	97.0837	1.70	ESTRUCTURA	1.43	324.0995	27.053	1363556.470	1049191.220	21.115
	820	93.4907	27.312	96.0011	1.70	ESTRUCTURA	1.43	324.5614	27.162	1363556.686	1049191.334	21.649
	821	93.2957	27.315	95.5831	1.70	ESTRUCTURA	1.43	324.2420	27.167	1363556.602	1049191.208	21.662
	822	89.0052	28.776	96.4452	1.70	ESTRUCTURA	1.43	319.7573	28.577	1363556.369	1049188.622	21.124
	823	89.0859	28.892	96.3007	1.70	ESTRUCTURA	1.43	319.8925	28.706	1363556.512	1049188.590	21.234
	824	89.2621	28.969	95.4310	1.70	ESTRUCTURA	1.43	320.1820	28.825	1363556.696	1049188.625	21.618
	825	88.5207	28.993	95.5908	1.70	ESTRUCTURA	1.43	319.6114	28.835	1363556.519	1049188.399	21.482
	826	91.1059	29.395	95.2429	1.70	ESTRUCTURA	1.43	321.9259	29.264	1363557.593	1049189.037	21.735
	827	91.1819	29.338	94.3507	1.70	ESTRUCTURA	1.43	322.0481	29.244	1363557.616	1049189.098	22.160
	828	93.2310	27.416	95.5640	1.70	ESTRUCTURA	1.43	324.1289	27.269	1363556.653	1049191.105	21.666
	829	93.3917	28.418	95.3021	1.70	ESTRUCTURA	1.43	324.3975	28.287	1363557.555	1049190.616	21.779
	830	93.5215	28.438	94.3218	1.70	ESTRUCTURA	1.43	324.6137	28.349	1363557.668	1049190.667	22.255
	831	93.5009	28.833	94.2340	1.70	ESTRUCTURA	1.43	324.5787	28.748	1363557.983	1049190.421	22.296



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	832	91.4707	29.545	94.2847	1.70	ESTRUCTURA	1.43	322.5281	29.455	1363557.933	1049189.164	22.198
	833	91.5928	29.607	93.3417	1.70	ESTRUCTURA	1.43	322.7339	29.550	1363558.073	1049189.191	22.661
	834	92.1508	29.606	93.3219	1.70	ESTRUCTURA	1.43	322.9950	29.550	1363558.154	1049189.298	22.678
	835	94.0218	28.915	93.3036	1.70	ESTRUCTURA	1.43	324.7812	28.861	1363558.134	1049190.439	22.735
	836	94.0220	29.040	93.3157	1.70	ESTRUCTURA	1.43	324.7817	28.985	1363558.236	1049190.368	22.716
	837	92.2906	28.906	94.3604	1.70	DESCARGA	1.43	323.2278	28.813	1363557.636	1049189.835	22.186
	838	93.3831	29.065	91.4730	1.70	TUBO_DESC	1.43	324.3848	29.051	1363558.173	1049190.166	23.597
	839	93.3253	29.044	91.2640	1.70	TUBO_DESC	1.43	324.2909	29.035	1363558.132	1049190.137	23.773
	840	94.1034	28.744	91.3603	1.70	ESTRUCTURA	1.43	324.9189	28.733	1363558.069	1049190.570	23.702
	841	96.1633	28.532	92.5150	0.09	ESTRUCTURA	1.43	327.0187	28.496	1363558.460	1049191.571	24.695
	842	93.4827	29.169	92.5336	0.09	ESTRUCTURA	1.43	324.5503	29.132	1363558.288	1049190.187	24.648
	843	11.3530	11.178	100.5300	1.70	ESTRUCTURA	1.43	242.3345	10.977	1363529.459	1049197.361	22.395
	844	11.0725	10.988	100.3033	1.70	ESTRUCTURA	1.43	241.8664	10.804	1363529.462	1049197.556	22.501
	845	18.1037	12.044	101.2647	1.70	ESTRUCTURA	1.43	248.9198	11.804	1363530.310	1049196.069	22.115
	846	18.4555	12.080	101.2601	1.70	ESTRUCTURA	1.43	249.5081	11.840	1363530.411	1049195.992	22.111
	847	18.0118	12.079	102.1607	1.70	ESTRUCTURA	1.43	248.7645	11.803	1363530.281	1049196.082	21.939
	848	12.3851	11.090	102.3445	1.70	ESTRUCTURA	1.43	243.3903	10.824	1363529.708	1049197.406	22.090
	849	25.0301	9.401	107.1837	1.70	ESTRUCTURA	1.43	255.7931	8.975	1363532.353	1049198.383	21.708
	850	25.3720	9.491	106.5410	1.70	ESTRUCTURA	1.43	256.3650	9.081	1363532.415	1049198.258	21.746
	851	25.3619	9.595	108.0224	1.70	ESTRUCTURA	1.43	256.3481	9.123	1363532.403	1049198.218	21.534
	852	31.0631	10.903	105.4710	1.70	ESTRUCTURA	1.43	261.8514	10.492	1363533.069	1049196.697	21.539
	853	30.5607	10.737	106.0610	1.70	ESTRUCTURA	1.43	261.6781	10.316	1363533.063	1049196.876	21.527
	854	30.5118	10.780	107.1013	1.70	ESTRUCTURA	1.43	261.5978	10.300	1363533.051	1049196.894	21.323
	855	13.5611	11.772	102.1857	1.70	DESCARGA	1.43	244.6792	11.501	1363529.637	1049196.687	21.994
	856	33.0609	10.196	108.3200	2.90	ESTRUCTURA	1.43	263.8453	9.667	1363533.520	1049197.472	20.064
	857	33.1537	11.127	106.1333	2.90	BORDE_CANO	1.43	264.0031	10.684	1363533.440	1049196.458	20.196
	857	11.4325	11.484	85.2930	4.00	TUBO_DESC	1.43	242.4664	11.448	1363529.264	1049196.932	23.108
	858	10.4355	11.464	80.0329	4.00	TUBO_DESC	1.43	241.4748	11.292	1363529.164	1049197.162	24.185
	859	15.0540	12.025	86.1557	4.00	ESTRUCTURA	1.43	245.8373	11.999	1363529.644	1049196.135	22.988
	860	18.3119	12.538	86.0004	4.00	ESTRUCTURA	1.43	249.2648	12.507	1363530.128	1049195.386	23.080
	861	8.3331	10.405	83.3028	2.60	ESTRUCTURA	1.43	239.3014	10.338	1363529.278	1049198.194	24.782
	862	16.3419	12.415	84.2448	2.60	ESTRUCTURA	1.43	247.3148	12.356	1363529.791	1049195.683	24.814
	863	52.4552	8.972	116.4830	1.70	BORDE_CANO	1.43	283.5073	8.008	1363536.426	1049199.297	20.459
	864	65.0003	8.535	119.2942	1.70	BORDE_CANO	1.43	295.7437	7.429	1363537.783	1049200.392	20.303
	865	112.2746	14.126	111.3100	1.70	RIO	1.43	343.2056	13.142	1363547.137	1049203.286	19.324
	866	99.1508	13.820	111.4719	1.70	RIO	1.43	329.9950	12.833	1363545.669	1049200.666	19.376



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	867	87.1650	15.056	110.1743	1.70	RIO	1.43	318.0234	14.121	1363545.054	1049197.639	19.283



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12014		0.0000				ESTACION		0.0000		1364003.248	1048626.187	25.440
E12015	E12014	0.0001	105.382	89.3444	1.70	ESTACION	1.44	314.3153		1364076.868	1048550.786	25.180
	E12016	105.1735	51.648	89.1843	1.70	DELTA	1.44	239.6084	51.644	1364050.741	1048506.238	25.538
	868	348.3855	13.759	88.2900	1.70	ARBOL	1.44	122.9639	13.754	1364069.385	1048562.326	25.282
	869	344.2750	10.648	88.2450	1.70	ARBOL	1.44	118.7792	10.644	1364071.744	1048560.115	25.213
	870	345.1941	15.188	89.0545	1.70	CERRAMIENT	1.44	119.6434	15.186	1364069.357	1048563.984	25.158
	871	335.3501	9.339	88.2009	1.70	CERRAMIENT	1.44	109.8989	9.335	1364073.691	1048559.564	25.189
	872	334.2359	9.042	88.2731	1.70	POSTE	1.44	108.7150	9.039	1364073.968	1048559.347	25.161
	873	299.3616	16.844	89.1913	1.70	CERRAMIENT	1.44	73.9198	16.843	1364081.533	1048566.970	25.118
	874	300.4643	14.289	89.1342	1.70	ANDEN	1.44	75.0939	14.288	1364080.544	1048564.593	25.110
	875	329.2501	8.642	88.3220	1.70	ANDEN	1.44	103.7323	8.639	1364074.817	1048559.178	25.138
	876	323.4815	8.024	88.4806	1.70	SUMEDERO	1.44	98.1195	8.022	1364075.735	1048558.728	25.086
	877	328.4344	7.291	88.4853	1.70	SUMEDERO	1.44	103.0442	7.289	1364075.223	1048557.887	25.069
	878	350.5058	13.410	89.0115	1.70	BORDE_VIA	1.44	125.1648	13.408	1364069.146	1048561.747	25.147
	879	15.3238	14.849	89.2651	1.70	BORDE_VIA	1.44	149.8592	14.848	1364064.028	1048558.242	25.061
	880	342.3327	7.815	88.1140	1.70	BORDE_VIA	1.44	116.8728	7.811	1364073.338	1048557.754	25.164
	881	330.2436	7.097	88.2507	1.70	BORDE_VIA	1.44	104.7253	7.094	1364075.065	1048557.647	25.114
	882	314.4751	7.832	88.0717	1.70	BORDE_VIA	1.44	89.1128	7.828	1364076.990	1048558.613	25.175
	883	293.3235	15.279	89.0618	1.70	BORDE_VIA	1.44	67.8584	15.277	1364082.626	1048564.936	25.157
	884	29.4410	7.738	88.4420	1.70	BORDE_VIA	1.44	164.0514	7.736	1364069.430	1048552.912	25.088
	885	42.3352	7.073	88.2037	1.70	BORDE_VIA	1.44	176.8798	7.070	1364069.809	1048551.171	25.122
	886	60.1211	7.563	88.0704	1.70	BORDE_VIA	1.44	194.5184	7.559	1364069.551	1048548.891	25.166
	887	87.3153	18.179	89.0130	1.70	BORDE_VIA	1.44	221.8467	18.176	1364063.328	1048538.660	25.227
	888	271.1154	13.809	88.5609	1.70	BORDE_VIA	1.44	45.5136	13.807	1364086.543	1048560.636	25.174
	889	105.5718	16.545	89.0319	1.70	BORDE_VIA	1.44	240.2703	16.543	1364068.665	1048536.421	25.191
	890	338.2433	4.014	85.1838	1.70	MANHOLE	1.44	112.7245	4.001	1364075.323	1048554.476	25.246
	891	17.2554	4.019	88.5919	1.70	CERRAMIENT	1.44	151.7470	4.018	1364073.329	1048552.688	24.989
	892	40.0001	9.146	88.2206	1.70	CERRAMIENT	1.44	174.3156	9.142	1364067.771	1048551.691	25.178
	893	17.1354	14.272	89.0444	1.70	ANDEN	1.44	151.5470	14.270	1364064.322	1048557.585	25.147
	894	31.1109	8.337	88.5120	1.70	ANDEN	1.44	165.5011	8.335	1364068.798	1048552.873	25.085
	895	33.5517	10.113	88.1244	1.70	POSTE	1.44	168.2367	10.108	1364066.973	1048552.847	25.234
	896	42.3302	7.764	88.4830	1.70	SUMEDERO	1.44	176.8659	7.762	1364069.118	1048551.210	25.079
	897	48.1125	7.111	88.2917	1.70	SUMEDERO	1.44	182.5056	7.109	1364069.767	1048550.475	25.106
	898	68.0307	19.004	89.3357	1.70	CERRAMIENT	1.44	202.3673	19.003	1364059.295	1048543.554	25.062
	899	60.2020	12.361	88.3754	1.70	ARBOL	1.44	194.6542	12.357	1364064.913	1048547.660	25.213
	900	67.0705	22.675	89.4019	1.70	LINDERO	1.44	201.4334	22.675	1364055.762	1048542.500	25.048



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	901	88.3205	20.973	89.2910	1.70	LINDERO	1.44	222.8500	20.972	1364061.493	1048536.523	25.106
	902	115.0400	25.752	89.1351	1.70	POSTE	1.44	249.3820	25.750	1364067.801	1048526.686	25.264
	903	124.3221	14.634	89.0123	1.70	ARBOL	1.44	258.8545	14.632	1364074.040	1048536.430	25.168
	904	147.5944	9.050	87.4102	1.70	ARBOL	1.44	282.3109	9.043	1364078.796	1048541.951	25.284
	905	167.3402	8.434	86.0955	1.70	ARBOL	1.44	301.8825	8.415	1364081.313	1048543.640	25.482
	906	177.4236	6.828	87.4650	1.70	ARBOL	1.44	312.0253	6.823	1364081.436	1048545.718	25.182
	907	97.0930	35.884	89.2134	1.70	BORDE_VIA	1.44	231.4736	35.882	1364054.518	1048522.715	25.319
	908	95.5705	41.506	89.2407	1.70	BORDE_VIA	1.44	230.2667	41.504	1364050.338	1048518.868	25.351
	909	93.2746	36.766	89.2854	1.70	ARBOL	1.44	227.7781	36.764	1364052.162	1048523.560	25.251
	910	92.5403	38.726	89.2636	1.70	LINDERO	1.44	227.2161	38.724	1364050.566	1048522.365	25.294
	911	105.3709	41.591	89.2216	1.70	BORDE_VIA	1.44	239.9345	41.588	1364056.033	1048514.793	25.375
E12016-E12015	E12015	0.0000	51.649	90.0410	1.70	ESTACION	1.40	239.6084	51.644	1364050.741	1048506.238	25.538
	E12017	239.3628	121.543	89.5429	1.70	DELTA	1.40	299.2161	121.543	1364110.067	1048400.157	25.435
	914	76.0503	27.073	89.2250	1.70	BORDE_VIA	1.40	135.6925	27.071	1364031.369	1048525.148	25.533
	915	59.4125	14.487	89.1623	1.70	BORDE_VIA	1.40	119.2986	14.486	1364043.652	1048518.871	25.424
	916	60.3648	19.695	89.0704	1.70	BORDE_VIA	1.40	120.2217	19.693	1364040.829	1048523.254	25.543
	917	58.5741	19.818	88.5812	1.70	SEPARADOR	1.40	118.5698	19.815	1364041.265	1048523.640	25.596
	918	58.4220	19.847	88.5811	1.70	SEPARADOR	1.40	118.3139	19.844	1364041.329	1048523.708	25.597
	919	77.1334	27.294	89.1506	1.70	SEPARADOR	1.40	136.8345	27.292	1364030.835	1048524.909	25.597
	920	77.2407	27.297	89.1546	1.70	SEPARADOR	1.40	137.0103	27.295	1364030.776	1048524.850	25.591
	921	59.5728	26.426	89.0910	1.70	SEPARADOR	1.40	119.5661	26.423	1364037.703	1048529.221	25.631
	922	59.4243	26.440	89.0910	1.70	SEPARADOR	1.40	119.3203	26.437	1364037.795	1048529.289	25.631
	923	61.0905	26.563	89.1854	1.70	BORDE_VIA	1.40	120.7598	26.561	1364037.157	1048529.063	25.558
	924	80.0401	29.591	89.3618	1.70	LINDERO	1.40	139.6753	29.590	1364028.182	1048525.387	25.444
	925	50.1249	29.987	89.2029	1.70	PARAMENTO	1.40	109.8220	29.985	1364040.573	1048534.447	25.585
	926	39.2819	19.937	89.1438	1.70	PARAMENTO	1.40	99.0803	19.935	1364047.595	1048525.924	25.503
	927	87.0942	20.329	89.5735	1.70	ARBOL	1.40	146.7700	20.329	1364033.736	1048517.378	25.255
	928	58.0355	15.532	89.2543	1.70	SUMEDERO	1.40	117.6736	15.531	1364043.528	1048519.993	25.395
	929	59.5255	16.362	89.0916	1.70	SUMEDERO	1.40	119.4903	16.360	1364042.687	1048520.479	25.482
	930	122.0600	7.797	88.5854	1.70	SUMEDERO	1.40	181.7084	7.796	1364042.949	1048506.006	25.379
	931	125.5331	7.023	88.0943	1.70	SUMEDERO	1.40	185.5003	7.019	1364043.754	1048505.565	25.465
	932	74.1600	12.373	88.3537	1.70	MANHOLE	1.40	133.8750	12.369	1364042.168	1048515.155	25.544
	933	262.4502	3.125	88.1744	1.70	SUMEDERO	1.40	322.3589	3.124	1364053.215	1048504.331	25.333
	934	259.0143	2.197	83.4527	1.70	SUMEDERO	1.40	318.6370	2.184	1364052.380	1048504.795	25.479
	935	338.0456	3.066	86.3447	1.70	BORDE_VIA	1.40	37.6906	3.061	1364053.163	1048508.109	25.423
	936	258.4337	1.955	82.1313	1.70	BORDE_VIA	1.40	318.3353	1.937	1364052.188	1048504.951	25.505



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	937	274.0854	2.317	81.2635	1.70	SEPARADOR	1.40	333.7567	2.291	1364052.796	1048505.225	25.585
	938	275.3939	2.271	81.3752	1.70	SEPARADOR	1.40	335.2692	2.247	1364052.782	1048505.298	25.571
	939	279.5044	2.408	81.3347	1.70	SEPARADOR	1.40	339.4539	2.382	1364052.971	1048505.402	25.594
	940	276.5131	2.418	81.3238	1.70	SEPARADOR	1.40	336.4670	2.392	1364052.934	1048505.283	25.596
	941	266.4437	3.316	83.5243	1.70	SEPARADOR	1.40	326.3520	3.297	1364053.486	1048504.411	25.594
	942	267.4606	3.367	84.1202	1.70	SEPARADOR	1.40	327.3767	3.350	1364053.562	1048504.432	25.580
	943	262.3436	3.306	84.1201	1.70	SEPARADOR	1.40	322.1850	3.289	1364053.339	1048504.222	25.574
	944	262.0230	3.449	84.1202	1.70	SEPARADOR	1.40	321.6500	3.431	1364053.432	1048504.109	25.589
	945	259.3605	3.382	84.0808	1.70	SEPARADOR	1.40	319.2098	3.364	1364053.288	1048504.040	25.586
	946	261.1440	3.411	84.1520	1.70	SEPARADOR	1.40	320.8528	3.394	1364053.373	1048504.096	25.582
	947	121.2053	7.997	87.2455	1.70	SEPARADOR	1.40	180.9564	7.989	1364042.753	1048506.105	25.601
	948	122.5210	8.300	87.3008	1.70	SEPARADOR	1.40	182.4778	8.292	1364042.457	1048505.880	25.602
	949	122.0206	8.353	87.3008	1.70	SEPARADOR	1.40	181.6434	8.345	1364042.399	1048505.999	25.604
	950	120.4734	8.044	87.2410	1.70	SEPARADOR	1.40	180.4011	8.036	1364042.706	1048506.182	25.605
	951	129.4746	7.518	87.1940	1.70	SEPARADOR	1.40	189.4045	7.510	1364043.332	1048505.011	25.591
	952	129.0205	7.554	87.2707	1.70	SEPARADOR	1.40	188.6431	7.547	1364043.280	1048505.104	25.576
	953	129.4911	7.816	87.2916	1.70	SEPARADOR	1.40	189.4281	7.808	1364043.038	1048504.959	25.583
	954	130.2728	7.774	87.3610	1.70	SEPARADOR	1.40	190.0661	7.767	1364043.093	1048504.881	25.565
	955	205.4356	12.683	88.2251	1.70	SEPARADOR	1.40	265.3406	12.678	1364049.711	1048493.602	25.599
	956	243.0328	19.119	89.0246	1.70	SEPARADOR	1.40	302.6661	19.116	1364061.059	1048490.145	25.559
	957	243.1645	19.144	89.0410	1.70	SEPARADOR	1.40	302.8875	19.141	1364061.135	1048490.164	25.551
	958	241.2247	19.203	89.1507	1.70	BORDE_VIA	1.40	300.9881	19.201	1364060.627	1048489.777	25.491
	959	208.0441	12.236	88.4426	1.70	BORDE_VIA	1.40	267.6864	12.233	1364050.247	1048494.015	25.509
	960	204.0253	12.964	88.2435	1.70	POSTE	1.40	263.6564	12.959	1364049.309	1048493.359	25.600
	961	247.1025	20.468	89.2835	1.70	POSTE	1.40	306.7820	20.467	1364062.996	1048489.846	25.427
	962	198.3835	13.153	88.4001	1.70	LINDERO	1.40	258.2514	13.149	1364048.064	1048493.364	25.546
	963	298.3704	3.713	83.2444	1.70	POSTE	1.40	358.2261	3.688	1364054.428	1048506.124	25.666
	964	239.3621	72.574	89.5009	1.70	LINEAMIENT	1.40	299.2142	72.574	1364086.163	1048442.896	25.448
	964	239.3628	72.570	89.5010	1.70	LINEAMIENT	1.40	299.2161	72.570	1364086.163	1048442.900	25.448
	965	236.3454	58.286	89.4545	1.70	MANHOLE	1.40	296.1900	58.285	1364076.465	1048453.937	25.482
	966	240.1658	47.875	89.4544	1.70	BORDE_VIA	1.40	299.8911	47.875	1364074.600	1048464.732	25.439
	967	243.0443	49.244	89.4131	1.70	BORDE_VIA	1.40	302.6870	49.243	1364077.335	1048464.793	25.505
	968	244.2641	49.961	89.4015	1.70	BORDE_VIA	1.40	304.0531	49.960	1364078.717	1048464.845	25.527
	969	257.3829	58.757	89.1100	1.70	BORDE_VIA	1.40	317.2498	58.751	1364093.883	1048466.358	26.078
	970	240.5740	47.241	89.5639	1.70	SUMEDERO	1.40	300.5695	47.241	1364074.767	1048465.563	25.286
	971	240.2438	46.423	89.4903	1.70	SUMEDERO	1.40	300.0189	46.423	1364073.966	1048466.043	25.388



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	972	242.0446	40.060	89.3201	1.70	POSTE	1.40	301.6878	40.059	1364071.784	1048472.151	25.566
E12017-E12016	E12016	0.0000	121.605	89.5022	1.70	ESTACION	1.46	299.2161	121.543	1364110.067	1048400.157	25.435
	E12018	185.3632	45.914	90.0820	1.70	DELTA	1.46	304.8250	45.914	1364136.287	1048362.467	25.079
	1017	17.5659	26.073	89.1514	1.70	ARBOL	1.46	137.1659	26.071	1364090.948	1048417.882	25.530
	1018	34.2628	15.873	89.0555	1.70	ARBOL	1.46	153.6573	15.871	1364095.844	1048407.200	25.440
	1019	25.5450	18.665	89.5027	1.70	LINDERO	1.46	145.1300	18.665	1364094.753	1048410.829	25.242
	1020	58.0023	18.874	90.1932	1.70	LINDERO	1.46	177.2225	18.874	1364091.215	1048401.072	25.083
	1021	81.5806	7.964	87.4742	1.70	ARBOL	1.46	201.1845	7.958	1364102.647	1048397.282	25.497
	1022	91.3733	7.877	88.2810	1.70	ARBOL	1.46	210.8420	7.874	1364103.306	1048396.121	25.401
	1023	127.4430	9.218	89.0408	1.70	ARBOL	1.46	246.9578	9.217	1364106.459	1048391.676	25.340
	1024	131.4639	11.349	90.0831	1.70	ARBOL	1.46	250.9936	11.349	1364106.371	1048389.427	25.162
	1025	153.4427	17.484	90.2340	1.70	ARBOL	1.46	272.9570	17.484	1364110.969	1048382.697	25.070
	1026	159.1101	15.379	89.3841	1.70	BORDE_VIA	1.46	278.3998	15.379	1364112.313	1048384.944	25.286
	1027	157.1921	15.764	89.2911	1.70	CORDON	1.46	276.5386	15.763	1364111.862	1048384.497	25.332
	1028	157.3515	15.735	89.2744	1.70	CORDON	1.46	276.8036	15.734	1364111.931	1048384.534	25.338
	1029	225.0124	7.808	86.5932	1.70	ANDEN	1.46	344.2395	7.797	1364117.571	1048398.040	25.600
	1030	215.4116	6.916	86.3850	1.70	ANDEN	1.46	334.9039	6.904	1364116.319	1048397.229	25.595
	1031	198.1109	6.041	87.0317	1.70	ANDEN	1.46	317.4020	6.033	1364114.508	1048396.074	25.501
	1032	188.4613	15.289	89.2342	1.70	ANDEN	1.46	307.9864	15.288	1364119.476	1048388.108	25.352
	1033	196.0514	15.540	88.3325	1.70	ANDEN	1.46	315.3034	15.535	1364121.110	1048389.231	25.582
	1034	186.5418	8.867	89.0057	1.70	BORDE_VIA	1.46	306.1211	8.866	1364115.293	1048392.996	25.343
	1035	190.4128	9.174	88.3823	1.70	CORDON	1.46	309.9073	9.171	1364115.951	1048393.122	25.408
	1036	190.1759	9.179	88.3823	1.70	CORDON	1.46	309.5159	9.176	1364115.906	1048393.078	25.408
	1037	196.5403	12.864	88.0950	1.70	POSTE	1.46	316.1170	12.857	1364119.334	1048391.245	25.602
	1038	185.3632	19.513	89.4428	1.70	LINEAMIENT	1.46	304.8250	19.513	1364121.210	1048384.139	25.278
E12018-E12017	E12017	0.0000	45.911	89.1542	1.70	ESTACION	1.46	304.8250	45.914	1364136.287	1048362.467	25.079
	E12019	234.4052	48.965	89.4738	1.70	DELTA	1.46	359.5061	48.965	1364185.250	1048362.045	25.018
	1039	324.0956	6.763	86.3737	1.70	ANDEN	1.46	88.9906	6.751	1364136.406	1048369.217	25.240
	1040	335.1500	6.113	85.2907	1.70	ANDEN	1.46	100.0750	6.094	1364135.221	1048368.467	25.323
	1041	323.0108	4.276	84.3824	1.70	ANDEN	1.46	87.8439	4.257	1364136.447	1048366.721	25.241
	1042	295.1627	3.038	85.0955	1.70	ANDEN	1.46	60.0992	3.027	1364137.796	1048365.091	25.098
	1043	326.1256	3.075	85.2941	1.70	ANDEN	1.46	91.0406	3.065	1364136.231	1048365.532	25.084
	1044	322.5454	11.396	88.0038	1.70	ANDEN	1.46	87.7400	11.389	1364136.736	1048373.847	25.238
	1045	316.0816	11.468	88.0550	1.70	ANDEN	1.46	80.9628	11.462	1364138.087	1048373.786	25.223
	1046	355.0603	6.400	87.4248	1.70	BORDE_VIA	1.46	119.9259	6.395	1364133.097	1048368.009	25.097
	1047	350.1026	6.717	87.1422	1.70	CORDON	1.46	114.9989	6.709	1364133.452	1048368.547	25.165



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1048	349.0533	6.759	87.1422	1.70	CORDON	1.46	113.9175	6.751	1364133.550	1048368.638	25.167
	1049	33.2217	13.014	88.3629	1.70	CORDON	1.46	158.1964	13.010	1364124.208	1048367.299	25.158
	1050	33.3958	13.077	88.3941	1.70	CORDON	1.46	158.4911	13.073	1364124.124	1048367.260	25.147
	1051	30.4316	12.774	88.5122	1.70	BORDE_VIA	1.46	155.5461	12.771	1364124.661	1048367.754	25.097
	1052	38.0605	19.956	89.3206	1.70	LINDERO	1.46	162.9264	19.955	1364117.211	1048368.326	25.004
	1053	349.3343	6.197	88.5308	1.70	SUMEDERO	1.46	114.3870	6.196	1364133.729	1048368.110	24.962
	1054	353.2412	5.284	87.2337	1.70	SUMEDERO	1.46	118.2284	5.279	1364133.790	1048367.118	25.082
	1055	344.0806	8.020	86.3231	1.70	POSTE	1.46	108.9600	8.005	1364133.686	1048370.038	25.326
	1056	54.2724	10.835	88.1119	1.70	ARBOL	1.46	179.2817	10.830	1364125.458	1048362.603	25.184
	1057	102.1703	8.967	88.2556	1.70	ARBOL	1.46	227.1092	8.964	1364130.186	1048355.900	25.087
	1058	95.2846	7.086	90.0607	1.70	SUMEDERO	1.46	220.3045	7.086	1364130.883	1048357.883	24.829
	1059	88.4237	6.556	88.5515	1.70	SUMEDERO	1.46	213.5353	6.555	1364130.823	1048358.846	24.965
	1060	190.5135	6.231	89.5440	1.70	SUMEDERO	1.46	315.6848	6.231	1364140.745	1048358.114	24.852
	1061	187.2824	5.349	88.5703	1.70	SUMEDERO	1.46	312.2984	5.348	1364139.886	1048358.511	24.940
	1062	180.5557	41.489	90.0254	1.70	BORDE_VIA	1.46	305.7575	41.489	1364160.531	1048328.799	24.807
	1063	181.3956	41.367	90.0326	1.70	CORDON	1.46	306.4906	41.367	1364160.888	1048329.210	24.801
	1064	181.4619	41.325	90.0326	1.70	CORDON	1.46	306.5970	41.325	1364160.924	1048329.289	24.801
	1065	196.4630	5.287	87.4857	1.70	CORDON	1.46	321.6000	5.283	1364140.427	1048359.185	25.043
	1066	196.3934	5.444	88.0102	1.70	CORDON	1.46	321.4845	5.441	1364140.544	1048359.079	25.030
	1067	193.0443	5.312	88.0025	1.70	CORDON	1.46	317.9036	5.309	1364140.226	1048358.908	25.027
	1068	193.1928	5.228	88.0026	1.70	CORDON	1.46	318.1495	5.225	1364140.179	1048358.981	25.024
	1069	191.1231	6.427	88.1707	1.70	CORDON	1.46	316.0336	6.424	1364140.911	1048358.007	25.034
	1070	191.1446	6.372	88.2904	1.70	CORDON	1.46	316.0711	6.370	1364140.874	1048358.048	25.010
	1071	194.2507	6.403	88.1747	1.70	CORDON	1.46	319.2436	6.400	1364141.135	1048358.288	25.032
	1072	193.3541	6.401	88.1747	1.70	CORDON	1.46	318.4198	6.398	1364141.073	1048358.221	25.032
	1073	188.3623	28.575	89.3636	1.70	CERRAMIENT	1.46	313.4314	28.574	1364155.931	1048341.716	25.036
	1074	201.3744	12.310	89.1507	1.70	CERRAMIENT	1.46	326.4539	12.309	1364146.546	1048355.665	25.003
	1075	217.4108	15.658	89.0712	1.70	CERRAMIENT	1.46	342.5106	15.656	1364151.219	1048357.762	25.082
	1076	225.2734	36.435	89.4433	1.70	CERRAMIENT	1.46	350.2845	36.435	1364172.199	1048356.318	25.006
	1077	187.2604	15.914	88.5722	1.70	POSTE	1.46	312.2595	15.911	1364146.987	1048350.691	25.132
	1078	101.5730	3.014	85.0226	1.70	MANHOLE	1.46	226.7834	3.003	1364134.231	1048360.279	25.103
	1079	246.5616	10.685	88.4719	1.70	MANHOLE	1.46	11.7628	10.683	1364146.745	1048364.645	25.068
	1080	221.0629	15.503	88.5923	1.70	BOLARDO	1.46	345.9331	15.501	1364151.323	1048358.699	25.115
	1081	224.5537	15.243	88.5001	1.70	BOLARDO	1.46	349.7520	15.240	1364151.284	1048359.755	25.152
	1082	229.2256	15.080	88.5800	1.70	BOLARDO	1.46	354.2073	15.078	1364151.288	1048360.945	25.114
	1083	233.2915	14.970	88.5652	1.70	BOLARDO	1.46	358.3125	14.967	1364151.248	1048362.026	25.117



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1084	237.5345	14.876	88.5030	1.70	BOLARDO	1.46	2.7209	14.873	1364151.143	1048363.173	25.143
	1085	234.4053	32.743	89.3922	1.70	LINEAMIENT	1.46	359.5064	32.742	1364169.028	1048362.185	25.038
E12019-E12018	E12018	0.0000	48.967	89.3824	1.70	ESTACION	1.44	359.5061	48.965	1364185.250	1048362.045	25.018
	E12020	192.2748	80.219	89.4922	1.70	DELTA	1.44	11.9695	80.219	1364263.724	1048378.681	25.006
	1086	354.5735	20.091	89.1521	1.70	POSTE	1.44	174.4659	20.089	1364165.254	1048363.982	25.019
	1087	350.2613	22.881	89.0121	1.70	ARBOL	1.44	169.9431	22.878	1364162.724	1048366.040	25.148
	1088	347.4410	16.907	88.5858	1.70	ARBOL	1.44	167.2423	16.904	1364168.763	1048365.778	25.058
	1089	356.5920	15.763	88.3844	1.70	ARBOL	1.44	176.4950	15.759	1364169.521	1048363.008	25.131
	1090	87.1221	7.809	85.4544	1.70	ARBOL	1.44	266.7120	7.788	1364184.803	1048354.270	25.335
	1091	49.3736	20.786	88.4118	1.70	PARAMENTO	1.44	229.1328	20.781	1364171.653	1048346.330	25.234
	1092	86.5752	6.465	88.4649	1.70	BORDE_VIA	1.44	266.4706	6.464	1364184.852	1048355.593	24.896
	1093	108.5737	7.886	89.3405	1.70	BORDE_VIA	1.44	288.4664	7.886	1364187.748	1048354.565	24.818
	1094	125.0352	12.886	90.0156	1.70	BORDE_VIA	1.44	304.5706	12.886	1364192.562	1048351.434	24.751
	1095	127.5109	20.412	90.0349	1.70	BORDE_VIA	1.44	307.3586	20.412	1364197.636	1048345.820	24.735
	1096	124.1051	20.909	88.2751	1.70	PARAMENTO	1.44	303.6870	20.901	1364196.843	1048344.653	25.319
	1097	146.4833	16.700	88.4538	1.70	CERRAMIENT	1.44	326.3153	16.696	1364199.143	1048352.785	25.119
	1098	165.5300	9.694	87.3642	1.70	CERRAMIENT	1.44	345.3895	9.686	1364194.622	1048359.602	25.162
	1099	143.2050	16.203	89.5941	1.70	BORDE_VIA	1.44	322.8534	16.203	1364198.165	1048352.260	24.760
	1100	164.0020	8.892	89.2519	1.70	BORDE_VIA	1.44	343.5117	8.892	1364193.776	1048359.521	24.848
	1101	170.0712	9.186	89.0645	1.70	BORDE_VIA	1.44	349.6261	9.185	1364194.285	1048360.391	24.900
	1102	188.4730	30.850	89.3426	1.70	BORDE_VIA	1.44	8.2978	30.849	1364215.776	1048366.497	24.988
	1103	205.1906	16.958	89.2454	1.70	BORDE_VIA	1.44	24.8245	16.957	1364200.640	1048369.164	24.931
	1104	198.2717	31.519	89.5249	1.70	BORDE_VIA	1.44	17.9609	31.519	1364215.233	1048371.764	24.824
	1105	187.2002	30.002	89.2527	1.70	CERRAMIENT	1.44	6.8400	30.000	1364215.037	1048365.618	25.060
	1106	164.2350	3.548	86.2234	1.70	MANHOLE	1.44	343.9034	3.541	1364188.652	1048361.063	24.982
	1107	192.2750	23.107	89.2334	1.70	LINEAMIENT	1.44	11.9700	23.106	1364207.853	1048366.837	25.003
E12020-E12019	E12019	0.0000	80.218	89.4854	1.70	ESTACION	1.44	11.9695	80.219	1364263.724	1048378.681	25.006
	E12021	135.1841	36.347	89.4819	1.70	DELTA	1.44	327.2809	36.347	1364294.304	1048359.035	24.872
	1108	1.1901	16.148	88.5917	1.70	CERRAMIENT	1.44	193.2864	16.145	1364248.011	1048374.971	25.033
	1109	2.5552	12.675	88.5450	1.70	POSTE	1.44	194.9006	12.673	1364251.478	1048375.423	24.988
	1110	117.2205	6.354	87.5425	1.70	CERRAMIENT	1.44	309.3375	6.350	1364267.749	1048373.770	24.980
	1111	306.5859	1.301	76.2314	1.70	CERRAMIENT	1.44	138.9525	1.264	1364262.771	1048379.512	25.054
	1112	122.3919	9.706	88.5653	1.70	CERRAMIENT	1.44	314.6248	9.704	1364270.541	1048371.775	24.926
	1113	229.2228	19.428	89.2114	1.70	CERRAMIENT	1.44	61.3439	19.427	1364273.040	1048395.729	24.967
	1114	136.1336	29.477	89.2346	1.70	CERRAMIENT	1.44	328.1961	29.475	1364288.774	1048363.147	25.059
	1115	190.0637	29.421	89.4347	1.70	CERRAMIENT	1.44	22.0798	29.421	1364290.987	1048389.740	24.887



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1116	170.4745	36.080	89.4035	1.70	CERRAMIENT	1.44	2.7653	36.079	1364299.762	1048380.422	24.952
	1117	178.5414	38.017	89.0116	1.70	PARAMENTO	1.44	10.8734	38.011	1364301.053	1048385.852	25.398
	1118	164.0904	32.553	89.0806	1.70	CANCHA	1.44	356.1206	32.549	1364296.199	1048376.479	25.240
	1119	223.0905	15.718	88.0556	1.70	CANCHA	1.44	55.1209	15.709	1364272.708	1048391.569	25.270
	1120	137.1628	28.634	89.0339	1.70	CANCHA	1.44	329.2439	28.630	1364288.328	1048364.040	25.218
	1121	183.3048	1.117	64.4147	1.70	CANCHA	1.44	15.4828	1.010	1364264.698	1048378.951	25.226
	1122	128.4836	16.124	89.0113	1.70	POSTE	1.44	320.7795	16.122	1364276.214	1048368.488	25.024
	1123	184.0209	24.055	89.0431	1.70	POSTE	1.44	16.0053	24.052	1364286.844	1048385.313	25.136
	1124	121.1233	41.042	90.0515	1.70	BORDE_VIA	1.44	313.1786	41.042	1364291.808	1048348.753	24.686
	1125	130.5820	38.544	89.5930	1.70	BORDE_VIA	1.44	322.9417	38.544	1364294.483	1048355.454	24.754
	1126	126.4441	46.750	90.0315	1.70	BORDE_VIA	1.44	318.7142	46.750	1364298.854	1048347.835	24.704
	1127	131.4533	44.781	90.0232	1.70	BORDE_VIA	1.44	323.7286	44.781	1364299.828	1048352.188	24.715
	1128	126.4611	32.432	89.5630	1.70	BORDE_VIA	1.44	318.7392	32.432	1364288.104	1048357.293	24.781
	1129	140.2539	36.919	89.5134	1.70	BORDE_VIA	1.44	332.3970	36.919	1364296.441	1048361.575	24.839
	1130	159.2301	39.626	89.4155	1.70	BORDE_VIA	1.44	351.3531	39.625	1364302.899	1048372.724	24.957
	1131	169.2842	46.966	89.4244	1.70	PARAMENTO	1.44	1.4478	46.965	1364310.675	1048379.868	24.984
E12021-E12020	E12020	0.0000	36.351	89.2532	1.70	ESTACION	1.46	327.2809	36.347	1364294.304	1048359.035	24.872
	E12022	277.5420	95.311	89.4621	1.70	DELTA	1.46	65.1864	95.310	1364334.303	1048445.546	25.007
	1132	356.4659	6.746	88.1406	1.70	CANCHA	1.46	144.0639	6.743	1364288.845	1048362.992	24.837
	1133	96.3823	12.599	89.3404	1.70	BORDE_VIA	1.46	243.9206	12.599	1364288.765	1048347.719	24.724
	1134	93.1811	27.631	89.4659	1.70	BORDE_VIA	1.46	240.5839	27.631	1364280.733	1048334.967	24.733
	1135	70.1659	11.451	89.4930	1.70	BORDE_VIA	1.46	217.5639	11.451	1364285.227	1048352.054	24.664
	1136	83.0634	28.347	89.5626	1.70	BORDE_VIA	1.46	230.3903	28.347	1364276.231	1048337.196	24.658
	1137	83.0159	31.551	89.5108	1.70	CERRAMIENT	1.46	230.3139	31.551	1364274.156	1048334.755	24.710
	1138	47.2340	15.128	88.5137	1.70	CERRAMIENT	1.46	194.6753	15.125	1364279.672	1048355.203	24.930
	1139	97.1708	31.425	89.5336	1.70	CERRAMIENT	1.46	244.5664	31.425	1364280.808	1048330.656	24.687
	1140	101.1519	14.760	89.0204	1.70	CERRAMIENT	1.46	248.5361	14.758	1364288.904	1048345.301	24.877
	1141	143.3701	16.101	88.4032	1.70	CERRAMIENT	1.46	290.8978	16.097	1364300.046	1048343.997	25.001
	1142	142.1221	17.039	88.4033	1.70	PARAMENTO	1.46	289.4867	17.034	1364299.986	1048342.976	25.023
	1143	84.4510	17.039	89.2148	1.70	MANHOLE	1.46	232.0336	17.038	1364283.822	1048345.603	24.818
	1144	115.5304	11.319	90.2123	1.70	SUMEDERO	1.46	263.1653	11.319	1364292.957	1048347.797	24.558
	1145	111.5155	10.894	90.0523	1.70	SUMEDERO	1.46	259.1461	10.894	1364292.253	1048348.336	24.612
	1146	98.3732	13.769	88.5033	1.70	POSTE	1.46	245.9064	13.766	1364288.684	1048346.468	24.907
	1147	67.3929	12.572	90.1845	1.70	SUMEDERO	1.46	214.9389	12.572	1364283.998	1048351.835	24.560
	1148	63.4505	12.192	90.1551	1.70	SUMEDERO	1.46	211.0323	12.192	1364283.857	1048352.750	24.573
	1149	262.1321	11.482	88.5441	1.70	POSTE	1.46	49.5034	11.480	1364301.759	1048367.765	24.847



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1150	203.3239	12.874	88.2638	1.70	PARAMENTO	1.46	350.8250	12.869	1364307.009	1048356.983	24.978
	1151	205.5133	10.803	89.1612	1.70	PARAMENTO	1.46	353.1400	10.802	1364305.029	1048357.745	24.766
	1152	283.3548	39.017	88.5755	1.70	PARAMENTO	1.46	70.8775	39.011	1364307.083	1048395.893	25.333
	1153	272.2238	37.842	89.1909	1.70	POSTE	1.46	59.6581	37.839	1364313.419	1048391.691	25.078
	1154	280.5557	54.547	89.3017	1.70	POSTE	1.46	68.2134	54.545	1364314.548	1048409.684	25.100
	1155	270.2807	37.916	89.1724	1.70	PARAMENTO	1.46	57.7495	37.913	1364314.535	1048391.099	25.099
	1156	277.5420	56.469	89.3044	1.70	LINEAMIENT	1.46	65.1864	56.467	1364318.001	1048410.289	25.109
E12022-E12021	E12021	0.0000	95.299	89.5429	1.70	ESTACION	1.41	65.1864	95.310	1364334.303	1048445.546	25.007
	E12023	98.5017	80.033	89.5702	1.70	DELTA	1.41	344.0245	80.033	1364411.245	1048423.519	24.783
	1157	4.0831	15.270	88.5638	1.70	POSTE	1.41	249.3284	15.267	1364328.913	1048431.262	24.996
	1158	349.1618	23.130	89.0814	1.70	POSTE	1.41	234.4581	23.127	1364320.859	1048426.728	25.062
	1159	20.2513	8.725	87.4619	1.70	PARAMENTO	1.41	265.6067	8.718	1364333.635	1048436.853	25.053
	1160	74.5144	5.242	87.4849	1.70	PARAMENTO	1.41	320.0486	5.238	1364338.318	1048442.183	24.914
	1161	80.3737	8.546	87.3849	1.70	PARAMENTO	1.41	325.8134	8.539	1364341.366	1048440.748	25.065
	1162	89.1003	8.473	88.0614	1.70	PARAMENTO	1.41	334.3539	8.468	1364341.937	1048441.881	24.995
	1163	190.0526	5.148	91.5442	1.70	PARAMENTO	1.41	75.2770	5.145	1364335.610	1048450.522	24.542
	1164	183.3815	4.266	89.2202	1.70	MANHOLE	1.41	68.8239	4.266	1364335.844	1048449.524	24.761
	1165	142.3047	5.409	88.3536	1.70	MANHOLE	1.41	27.6995	5.407	1364339.090	1048448.060	24.847
	1166	143.1325	8.567	90.5445	1.70	POSTE	1.41	28.4100	8.566	1364341.837	1048449.622	24.578
	1167	128.4123	16.492	89.0559	1.70	PARAMENTO	1.41	13.8761	16.490	1364350.311	1048449.501	24.973
	1168	134.1548	17.448	89.5554	1.70	PARAMENTO	1.41	19.4498	17.448	1364350.755	1048451.356	24.735
	1169	116.4131	24.251	89.3716	1.70	PARAMENTO	1.41	1.8784	24.250	1364358.540	1048446.341	24.875
	1170	100.5518	48.789	90.0134	1.70	POSTE	1.41	346.1081	48.789	1364381.665	1048433.832	24.692
	1171	106.4517	40.894	90.0419	1.70	PARAMENTO	1.41	351.9411	40.894	1364374.793	1048439.813	24.663
	1172	107.4159	38.649	90.0412	1.70	LINDERO	1.41	352.8861	38.649	1364372.654	1048440.760	24.667
	1173	98.5017	46.140	89.5307	1.70	LINEAMIENT	1.41	344.0245	46.140	1364378.661	1048432.847	24.807
E12023-E12022	E12022	0.0000	80.031	89.3852	1.70	ESTACION	1.42	344.0245	80.033	1364411.245	1048423.519	24.783
	E12024	170.4928	87.733	89.4827	1.70	DELTA	1.42	334.8489	87.733	1364490.659	1048386.232	24.795
	1174	341.4220	6.926	88.2559	1.70	POSTE	1.42	145.7300	6.923	1364405.523	1048427.417	24.690
	1175	17.3956	14.767	88.3148	1.70	POSTE	1.42	181.6900	14.762	1364396.489	1048423.084	24.879
	1176	302.4417	3.222	86.2858	1.70	PARAMENTO	1.42	106.7625	3.216	1364410.317	1048426.598	24.698
	1177	43.5630	10.376	87.3610	1.70	PARAMENTO	1.42	207.9661	10.367	1364402.088	1048418.657	24.934
	1178	55.1350	10.376	88.1348	1.70	PARAMENTO	1.42	219.2550	10.371	1364403.214	1048416.956	24.821
	1179	274.3020	11.517	91.1241	1.70	PARAMENTO	1.42	78.5300	11.514	1364413.534	1048434.803	24.257
	1180	73.0748	12.273	87.1257	1.70	PARAMENTO	1.42	237.1545	12.259	1364404.596	1048413.220	25.096
	1181	99.1032	12.565	87.1702	1.70	PARAMENTO	1.42	263.2000	12.551	1364409.759	1048411.056	25.096



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1182	143.3435	11.014	87.1937	1.70	PARAMENTO	1.42	307.6009	11.002	1364417.958	1048414.802	25.014
	1183	151.4523	10.081	87.4701	1.70	POSTE	1.42	315.7809	10.073	1364418.464	1048416.494	24.890
	1184	195.0450	14.530	89.1855	1.70	ARBOL	1.42	359.1050	14.529	1364425.772	1048423.292	24.674
	1185	196.5249	17.646	90.0549	1.70	ARBOL	1.42	0.9048	17.646	1364428.888	1048423.798	24.470
	1186	195.3527	20.079	90.2151	1.70	ARBOL	1.42	359.6153	20.079	1364431.323	1048423.384	24.373
	1187	186.2127	28.862	89.4336	1.70	ARBOL	1.42	350.3820	28.862	1364439.701	1048418.697	24.638
	1188	185.1135	31.927	89.2017	1.70	ARBOL	1.42	349.2175	31.925	1364442.606	1048417.546	24.869
	1189	182.2115	36.273	89.1320	1.70	ARBOL	1.42	346.3786	36.270	1364446.494	1048414.977	24.993
	1190	168.0643	28.392	89.1923	1.70	POSTE	1.42	332.1364	28.390	1364436.343	1048410.250	24.836
	1191	197.1337	22.261	91.0933	1.70	POSTE	1.42	1.2514	22.256	1364433.496	1048424.005	24.050
	1192	164.3935	33.787	89.1107	1.70	POSTE	1.42	328.6842	33.784	1364440.106	1048405.960	24.981
	1193	170.1848	68.313	89.3751	1.70	PARAMENTO	1.42	334.3378	68.312	1364472.818	1048393.936	24.940
	1194	166.5316	68.044	89.1915	1.70	PARAMENTO	1.42	330.9123	68.039	1364470.702	1048390.442	25.307
	1195	160.1618	21.021	88.1556	1.70	PARAMENTO	1.42	324.2961	21.011	1364428.307	1048411.257	25.137
	1196	21.2031	5.312	86.2642	1.70	MANHOLE	1.42	185.3664	5.302	1364405.966	1048423.023	24.830
	1197	170.4829	46.326	89.2738	1.70	LINEAMIENT	1.42	334.8325	46.324	1364453.171	1048403.819	24.936
	1198	168.5437	40.740	89.2511	1.70	MANHOLE	1.42	332.9348	40.738	1364447.521	1048404.983	24.913
	1199	175.2134	42.650	89.3613	1.70	MANHOLE	1.42	339.3839	42.649	1364451.162	1048408.502	24.795
E12024-E12023	E12023	0.0000	87.727	89.4834	1.70	ESTACION	1.40	334.8489	87.733	1364490.659	1048386.232	24.795
	E12025	150.3237	122.835	90.0043	1.70	DELTA	1.40	305.3925	122.835	1364561.802	1048286.097	24.465
	1213	137.3313	11.397	88.2528	1.70	PARAMENTO	1.40	292.4025	11.393	1364495.001	1048375.699	24.804
	1214	90.5410	3.888	85.3504	1.70	MANHOLE	1.40	245.7517	3.876	1364489.067	1048382.698	24.790
	1215	145.2038	23.260	89.1414	1.70	PARAMENTO	1.40	300.1928	23.258	1364502.356	1048366.129	24.801
	1216	148.2937	48.732	89.3604	1.70	PARAMENTO	1.40	303.3425	48.731	1364517.444	1048345.522	24.830
	1217	156.4538	36.952	89.3752	1.70	POSTE	1.40	311.6095	36.951	1364515.197	1048358.604	24.729
	1218	149.5302	49.437	89.4235	1.70	POSTE	1.40	304.7328	49.436	1364518.826	1048345.604	24.741
	1219	155.5055	43.342	89.4235	1.70	POSTE	1.40	310.6975	43.341	1364518.921	1048353.372	24.711
	1220	154.1526	71.638	89.4819	1.70	POSTE	1.40	309.1061	71.638	1364535.845	1048330.643	24.734
	1221	151.2107	52.157	89.4251	1.70	MANHOLE	1.40	306.2009	52.156	1364521.464	1048344.144	24.751
	1222	343.3927	6.120	88.5341	1.70	SUMEDERO	1.40	138.5064	6.119	1364486.076	1048390.286	24.609
	1223	350.0158	5.398	88.2002	1.70	SUMEDERO	1.40	144.8817	5.396	1364486.246	1048389.336	24.648
	1224	150.3240	75.766	89.5037	1.70	LINEAMIENT	1.40	305.3934	75.766	1364534.542	1048324.468	24.698
E12025-E12024	E12024	0.0000	122.830	89.4416	1.70	ESTACION	1.44	305.3925	122.835	1364561.802	1048286.097	24.465
	EAUX_28	0.4805	71.954	89.3712	1.70	DELTA	1.44	126.1939	71.952	1364519.313	1048344.164	24.683
	1225	9.5402	38.074	89.0049	1.70	PARAMENTO	1.44	135.2931	38.068	1364534.746	1048312.877	24.861
	1226	350.1427	33.314	89.1440	1.70	PARAMENTO	1.44	115.6334	33.311	1364547.391	1048316.129	24.645



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1227	3.3733	37.221	89.1953	1.70	POSTE	1.44	129.0184	37.218	1364538.371	1048315.013	24.640
	1228	22.1732	17.028	88.5330	1.70	POSTE	1.44	147.6848	17.025	1364547.414	1048295.198	24.535
	1229	289.2525	4.983	85.2828	1.70	PARAMENTO	1.44	54.8161	4.967	1364564.664	1048290.157	24.599
	1230	280.2348	8.894	87.1729	1.70	PARAMENTO	1.44	45.7892	8.884	1364567.997	1048292.464	24.626
	1231	55.2937	8.082	88.4919	1.70	PARAMENTO	1.44	180.8861	8.080	1364553.723	1048285.972	24.372
	1232	62.3437	10.528	89.0107	1.70	PARAMENTO	1.44	187.9695	10.526	1364551.377	1048284.637	24.386
	1233	108.3621	4.493	87.2118	1.70	POSTE	1.44	233.9984	4.488	1364559.164	1048282.466	24.413
	1234	7.3807	13.748	88.2711	1.70	ARBOL	1.44	133.0278	13.743	1364552.425	1048296.143	24.577
	1235	186.1428	3.990	85.2455	1.70	BANANERA	1.44	311.6336	3.977	1364564.445	1048283.124	24.524
	1236	121.2843	9.036	88.4528	1.70	BANANERA	1.44	246.8711	9.034	1364558.254	1048277.789	24.401
	1237	0.2551	31.414	89.1703	1.70	MANHOLE	1.44	125.8234	31.412	1364543.417	1048311.566	24.598
EAUX_28-E12025	E12025	0.0000	71.944	89.5846	1.70	ESTACION	1.45	126.1939	71.952	1364519.313	1048344.164	24.683
	EAUX_29	181.0349	44.939	89.3144	1.70	DELTA	1.45	127.2575	44.937	1364492.108	1048379.931	24.803
	1238	295.1837	16.154	89.2409	1.70	PARAMENTO	1.45	241.5042	16.153	1364511.606	1048329.968	24.602
	1239	261.3111	17.341	89.3508	1.70	PARAMENTO	1.45	207.7136	17.341	1364503.962	1048336.100	24.559
EAUX_29-EAUX_28	EAUX_28	0.0000	44.957	89.5025	1.70	ESTACION	1.45	127.2575	44.937	1364492.108	1048379.931	24.803
	EAUX_30	273.1211	16.354	89.0140	1.70	DELTA	1.45	220.4606	16.352	1364479.667	1048369.320	24.829
	1240	264.2856	12.745	88.3153	1.70	PARAMENTO	1.45	211.7398	12.741	1364481.272	1048373.228	24.878
	1241	281.3947	21.389	88.4325	1.70	PARAMENTO	1.45	228.9206	21.384	1364478.056	1048363.812	25.028
EAUX_30-EAUX_29	EAUX_29	0.0000	16.354	89.0408	1.70	ESTACION	1.41	220.4606	16.352	1364479.667	1048369.320	24.829
	EAUX_31	129.5343	55.895	89.5052	1.70	DELTA	1.41	170.3559	55.895	1364424.562	1048378.684	24.687
	1242	103.2951	24.991	88.5543	1.70	PARAMENTO	1.41	143.9581	24.987	1364459.463	1048384.021	25.006
EAUX_31-EAUX_30	EAUX_30	0.0000	55.899	89.3702	1.70	ESTACION	1.47	170.3559	55.895	1364424.562	1048378.684	24.687
	EAUX_32	249.0141	140.401	90.0302	1.70	DELTA	1.47	239.3839	140.401	1364353.058	1048257.855	24.333
	1243	248.4638	139.628	90.0355	1.70	BORDE_VIA	1.47	239.1331	139.628	1364352.926	1048258.832	24.298
	1244	23.0428	9.411	88.5345	1.70	BORDE_VIA	1.47	13.4303	9.409	1364433.714	1048380.869	24.638
	1245	42.3147	13.945	89.0008	1.70	BORDE_VIA	1.47	32.8856	13.943	1364436.270	1048386.254	24.700
	1246	67.2216	11.701	88.4141	1.70	BORDE_VIA	1.47	57.7270	11.698	1364430.808	1048388.574	24.724
	1247	82.3324	7.953	87.0630	1.70	PARAMENTO	1.47	72.9125	7.943	1364426.896	1048386.276	24.858
	1248	97.5752	8.106	86.5144	1.70	PARAMENTO	1.47	88.3203	8.094	1364424.799	1048386.774	24.901
	1249	241.5541	14.328	89.0443	1.70	BORDE_VIA	1.47	232.2839	14.326	1364415.798	1048367.351	24.688
	1250	230.4322	15.695	89.1042	1.70	BORDE_VIA	1.47	221.0786	15.693	1364412.732	1048368.372	24.682
	1251	246.5137	23.590	89.3833	1.70	BORDE_VIA	1.47	237.2161	23.590	1364411.789	1048358.851	24.604
	1252	233.2215	21.124	89.2829	1.70	BORDE_VIA	1.47	223.7267	21.123	1364409.297	1048364.083	24.651
	1253	246.4521	31.744	89.4402	1.70	BORDE_VIA	1.47	237.1117	31.744	1364407.325	1048352.027	24.605
	1254	257.1535	32.652	89.5112	1.70	BORDE_VIA	1.47	247.6156	32.652	1364412.127	1048348.492	24.541



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1255	311.2127	8.471	87.2943	1.70	CERRAMIENT	1.47	301.7134	8.463	1364429.010	1048371.484	24.827
EAUX_32-EAUX_31	EAUX_31	0.0000	140.400	89.4530	1.70	ESTACION	1.44	239.3839	140.401	1364353.058	1048257.855	24.333
	EAUX_33	173.3045	108.365	89.5906	1.70	DELTA	1.44	232.8964	108.365	1364287.686	1048171.429	24.105
	1257	16.1946	23.627	89.2320	1.70	BORDE_VIA	1.44	75.7134	23.626	1364358.888	1048280.750	24.328
	1258	23.2542	23.516	89.3321	1.70	BORDE_VIA	1.44	82.8123	23.515	1364356.000	1048281.185	24.259
	1259	36.4743	19.753	89.2202	1.70	BORDE_VIA	1.44	96.1792	19.752	1364350.932	1048277.492	24.294
	1260	26.0732	15.285	89.1002	1.70	BORDE_VIA	1.44	85.5095	15.283	1364354.255	1048273.091	24.298
	1261	101.2736	7.235	89.0650	1.70	BORDE_VIA	1.44	160.8439	7.234	1364346.224	1048260.228	24.188
	1262	172.5820	96.785	90.0110	1.70	BORDE_VIA	1.44	232.3561	96.785	1364293.946	1048181.218	24.043
	1263	178.4131	43.530	89.4938	1.70	CERRAMIENT	1.44	238.0759	43.530	1364330.040	1048220.909	24.208
	1264	176.2229	44.934	89.5631	1.70	BORDE_VIA	1.44	235.7586	44.934	1364327.774	1048220.709	24.122
EAUX_33-EAUX_32	EAUX_32	0.0000	108.366	89.4510	1.70	ESTACION	1.44	232.8964	108.365	1364287.686	1048171.429	24.105
	EAUX_34	81.0823	130.165	89.4334	1.70	DELTA	1.44	134.0361	130.164	1364197.208	1048265.003	24.467
	1265	21.0157	7.192	87.5826	1.70	BORDE_VIA	1.44	73.9289	7.188	1364289.676	1048178.335	24.099
	1266	65.0848	17.810	89.0835	1.70	BORDE_VIA	1.44	118.0431	17.808	1364279.314	1048187.146	24.111
	1267	88.4747	13.303	88.5959	1.70	BORDE_VIA	1.44	141.6928	13.301	1364277.249	1048179.673	24.077
	1268	318.3532	8.415	88.2126	1.70	BORDE_VIA	1.44	11.4886	8.412	1364295.929	1048173.104	24.086
	1269	296.3230	11.298	88.3152	1.70	BORDE_VIA	1.44	349.4381	11.294	1364298.789	1048169.358	24.134
	1270	264.1402	16.635	88.5947	1.70	BORDE_VIA	1.44	317.1303	16.632	1364299.876	1048160.113	24.136
	1271	78.3006	45.550	89.3223	1.70	BORDE_VIA	1.44	131.3981	45.549	1364257.565	1048205.596	24.211
	1272	86.4444	80.711	89.3455	1.70	BORDE_VIA	1.44	139.6420	80.709	1364226.185	1048223.692	24.434
	1273	72.1738	47.741	89.3949	1.70	BORDE_VIA	1.44	125.1903	47.740	1364260.173	1048210.444	24.125
	1274	74.2340	54.706	89.4138	1.70	BORDE_VIA	1.44	127.2909	54.705	1364254.542	1048214.950	24.137
	1275	80.0750	56.727	89.3746	1.70	BORDE_VIA	1.44	133.0270	56.726	1364248.979	1048212.897	24.211
	1276	81.4713	79.550	89.3944	1.70	BORDE_VIA	1.44	134.6834	79.549	1364231.748	1048227.988	24.314
	1277	82.0338	120.714	89.4406	1.70	BORDE_VIA	1.44	134.9570	120.713	1364202.393	1048256.849	24.403
EAUX_34-EAUX_33	EAUX_33	0.0000	130.168	90.0553	1.70	ESTACION	1.48	134.0361	130.164	1364197.208	1048265.003	24.467
	EAUX_35	170.5809	140.154	89.3739	1.70	DELTA	1.48	125.0053	140.151	1364116.810	1048379.801	25.153
	1277	4.4826	27.587	89.5011	1.70	BORDE_VIA	1.48	318.8434	27.587	1364217.978	1048246.848	24.321
	1278	20.0009	30.095	89.5034	1.70	BORDE_VIA	1.48	334.0386	30.095	1364224.266	1048251.829	24.324
	1279	19.3608	35.091	89.5034	1.70	BORDE_VIA	1.48	333.6384	35.091	1364228.649	1048249.422	24.338
	1280	1.1512	36.416	89.5034	1.70	BORDE_VIA	1.48	315.2895	36.416	1364223.087	1048239.384	24.342
EAUX_35-EAUX_34	EAUX_34	0.0000	140.150	90.1149	1.70	ESTACION	1.38	125.0053	140.151	1364116.810	1048379.801	25.153
	EAUX_36	175.1622	177.926	89.4859	1.70	DELTA	1.38	120.2781	177.925	1364027.100	1048533.455	25.403
	12018	13.2922	26.058	89.4610	1.70	DELTA	1.38	318.4948	26.058	1364136.324	1048362.533	24.938
EAUX_36-EAUX_35	EAUX_35	0.0000	177.925	90.0100	1.70	ESTACION	1.36	120.2781	177.925	1364027.100	1048533.455	25.403



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	E10040	188.5820	105.097	89.5610	1.70	DELTA	1.36	129.2503	105.097	1363960.604	1048614.841	25.184
	1281	253.4040	2.078	82.3941	1.70	BORDE_VIA	1.36	193.9559	2.061	1364025.100	1048532.958	25.333
	1282	261.3339	10.170	89.0233	1.70	BORDE_VIA	1.36	201.8389	10.169	1364017.661	1048529.672	25.237
	1283	272.1102	20.309	89.4754	1.70	BORDE_VIA	1.36	212.4620	20.309	1364009.965	1048522.554	25.139
	1284	260.2949	21.982	89.3948	1.70	BORDE_VIA	1.36	200.7750	21.982	1364006.548	1048525.658	25.196
	1285	190.5033	9.143	87.5030	1.70	BORDE_VIA	1.36	131.1206	9.137	1364021.092	1048540.338	25.412
	1286	187.4158	17.634	89.0435	1.70	BORDE_VIA	1.36	127.9775	17.632	1364016.251	1048547.353	25.351
E10040-EAUX_36	EAUX_36	0.0000	105.100	89.4444	1.70	ESTACION	1.40	129.2503	105.097	1363960.604	1048614.841	25.184
	EAUX_37	96.1040	35.252	89.1153	1.70	DELTA	1.40	45.4281	35.249	1363985.342	1048639.951	25.378
	1287	14.5238	5.840	87.1343	1.70	BORDE_VIA	1.40	324.1275	5.833	1363965.331	1048611.423	25.167
	1288	67.2422	11.495	88.2431	1.70	BORDE_VIA	1.40	16.6564	11.491	1363971.613	1048618.134	25.204
	1289	96.4438	9.355	88.0915	1.70	BORDE_VIA	1.40	45.9942	9.350	1363967.100	1048621.566	25.186
	1290	129.5642	1.785	80.5800	1.70	BORDE_VIA	1.40	79.1953	1.763	1363960.935	1048616.572	25.165
	1291	185.3859	14.730	89.2154	1.70	BORDE_VIA	1.40	134.9000	14.729	1363950.208	1048625.274	25.048
	1292	216.1507	13.665	89.1833	1.70	BORDE_VIA	1.40	165.5023	13.664	1363947.376	1048618.261	25.049
	1293	241.0224	9.062	89.1322	1.70	BORDE_VIA	1.40	190.2903	9.061	1363951.689	1048613.222	25.007
	1294	269.5839	11.761	89.5737	1.70	BORDE_VIA	1.40	219.2278	11.761	1363951.494	1048607.403	24.893
	1295	273.3038	21.123	89.5514	1.70	BORDE_VIA	1.40	222.7609	21.123	1363945.096	1048600.500	24.914
	1296	293.0352	20.868	89.5323	1.70	BORDE_VIA	1.40	242.3148	20.868	1363950.909	1048596.362	24.925
	1297	317.0140	9.872	88.3418	1.70	BORDE_VIA	1.40	266.2781	9.869	1363959.964	1048604.993	25.130
EAUX_37-E10040	E10040	0.0001	35.234	89.4901	1.70	ESTACION	1.40	45.4281	35.249	1363985.342	1048639.951	25.378
	E12014	97.1809	22.564	89.0449	1.70	DELTA	1.40	322.7306	22.561	1364003.296	1048626.289	25.440
	1038	266.3512	80.090	89.3613	1.70	DELTA	1.40	132.0148	80.088	1363931.737	1048699.454	25.632
E12014-EAUX_37	EAUX_37	0.0000	22.567	89.1232	1.70	ESTACION	1.34	322.7306	22.561	1364003.296	1048626.289	25.440
	E10038	351.3811	102.344	89.4154	1.70	DELTA	1.34	134.3670	102.343	1363931.733	1048699.451	25.619
	E12015	171.2945	105.366	90.0430	1.70	DELTA	1.34	314.2264	105.366	1364076.788	1048550.785	24.942
E12015		0.0000				ESTACION		0.0000		1364076.868	1048550.786	25.180
E12016	E12015	359.5959	51.667	90.0721	1.70	ESTACION	1.46	239.6084		1364050.741	1048506.238	25.538
	E12000	62.4513	41.102	89.2902	1.70	DELTA	1.46	122.3620	41.100	1364028.741	1048540.955	25.670
E12000-E12016	E12016	0.0000	41.114	89.4852	1.70	ESTACION	1.43	122.3620	41.100	1364028.741	1048540.955	25.670
	E12001	281.3642	81.883	90.0643	1.70	DELTA	1.43	223.9736	81.883	1363969.814	1048484.101	25.237
	1	148.0634	2.181	84.5611	1.70	POSTE	1.43	90.4714	2.172	1364028.724	1048543.127	25.590
	2	175.1458	6.038	87.4333	1.70	SUMIDERO	1.43	117.6114	6.033	1364025.945	1048546.301	25.637
	3	172.2957	6.657	88.1650	1.70	SUMIDERO	1.43	114.8611	6.654	1364025.944	1048546.992	25.597
	4	232.5556	9.249	88.4947	1.70	SUMIDERO	1.43	175.2942	9.247	1364019.526	1048541.714	25.586
	5	228.3731	9.388	88.5621	1.70	SUMIDERO	1.43	170.9873	9.386	1364019.471	1048542.425	25.571



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	6	214.1230	21.023	89.2223	1.70	CERRAMIENT	1.43	156.5703	21.022	1364009.453	1048549.314	25.627
	7	246.5224	10.016	88.3239	1.70	CERRAMIENT	1.43	189.2353	10.013	1364018.858	1048539.348	25.652
	8	263.1754	17.008	89.0409	1.70	CERRAMIENT	1.43	205.6603	17.006	1364013.413	1048533.591	25.674
	9	251.0624	11.747	88.2423	1.70	POSTE	1.43	193.4686	11.742	1364017.322	1048538.220	25.724
	10	273.4354	38.304	89.4921	1.70	CERRAMIENT	1.43	216.0936	38.304	1363997.790	1048518.390	25.516
	11	307.0609	11.027	88.1222	1.70	LINDERO	1.43	249.4645	11.022	1364024.875	1048530.634	25.743
	12	243.1046	3.329	88.5225	1.70	MANHOLE	1.43	185.5414	3.328	1364025.429	1048540.634	25.463
	13	286.4305	16.848	88.1204	2.10	POSTE	1.43	229.0800	16.840	1364017.711	1048528.230	25.526
	14	281.3642	50.960	90.1157	1.70	LINEAMIENT	1.43	223.9736	50.960	1363992.068	1048505.572	25.220
	15	281.3642	14.606	89.4256	1.70	LINEAMIENT	1.43	223.9736	14.606	1364018.230	1048530.814	25.470
	16	281.3642	6.405	88.1412	1.70	LINEAMIENT	1.43	223.9736	6.402	1364024.134	1048536.510	25.595
	17	261.4122	7.575	88.4512	1.70	MHVIRTUAL	1.43	204.0514	7.573	1364021.826	1048537.868	25.562
E12001-E12000	E12000	0.0000	81.892	89.2843	1.70	ESTACION	1.37	223.9736	81.883	1363969.814	1048484.101	25.237
	E12002	181.0741	72.994	90.1352	1.70	DELTA	1.37	225.1017	72.993	1363918.291	1048432.396	24.615
	18	18.3247	45.885	89.2159	1.70	CERRAMIENT	1.37	62.5200	45.882	1363990.985	1048524.807	25.417
	19	21.2642	36.983	89.2848	1.70	LINDERO	1.37	65.4186	36.981	1363985.197	1048517.731	25.245
	20	14.2931	39.556	89.3254	1.70	MANHOLE	1.37	58.4656	39.555	1363990.501	1048517.815	25.221
	21	8.5213	34.775	89.2831	1.70	LINDERO	1.37	52.8439	34.774	1363990.817	1048511.816	25.228
	22	37.4435	8.617	89.0732	1.70	LINDERO	1.37	81.7167	8.616	1363971.055	1048492.628	25.041
	23	79.0859	31.116	89.4021	1.70	LINDERO	1.37	123.1234	31.115	1363952.811	1048510.161	25.087
	24	103.4443	19.883	89.3014	1.70	POSTE	1.37	147.7189	19.882	1363953.004	1048494.720	25.082
	25	109.1833	20.289	89.3338	1.70	PARAMENTO	1.37	153.2828	20.288	1363951.691	1048493.223	25.065
	26	128.2337	10.678	87.0418	1.70	PARAMENTO	1.37	172.3673	10.664	1363959.244	1048485.518	25.455
	27	180.5453	43.828	90.0755	1.70	MANHOLE	1.37	224.8884	43.828	1363938.762	1048453.171	24.809
	28	144.2538	14.200	87.4937	1.70	PARAMENTO	1.37	188.4009	14.190	1363955.776	1048482.028	25.448
	29	148.2225	13.361	87.4645	1.70	PARAMENTO	1.37	192.3473	13.351	1363956.772	1048481.247	25.427
	30	166.2226	29.217	89.5537	1.70	PARAMENTO	1.37	210.3475	29.217	1363944.600	1048469.340	24.947
	31	169.1800	36.552	90.0808	1.70	CERRAMIENT	1.37	213.2736	36.552	1363939.254	1048464.048	24.823
	32	169.1800	36.544	90.0533	1.70	CERRAMIENT	1.37	213.2736	36.544	1363939.261	1048464.052	24.850
	33	166.2207	29.216	89.4501	1.70	PARAMENTO	1.37	210.3423	29.216	1363944.600	1048469.343	25.037
	34	195.3656	12.070	90.3927	1.70	LINDERO	1.37	239.5892	12.069	1363963.704	1048473.693	24.771
	35	186.1049	28.987	89.4336	1.70	LINDERO	1.37	230.1539	28.987	1363951.241	1048461.846	25.048
	36	172.4734	39.608	90.0528	1.70	POSTE	1.37	216.7664	39.608	1363938.084	1048460.394	24.846
	37	85.5811	11.806	89.1242	1.70	MHVIRTUAL	1.37	129.9434	11.805	1363962.235	1048493.152	25.072
	38	173.2239	50.764	90.2507	1.70	CERRAMIENT	1.37	217.3511	50.763	1363929.461	1048453.304	24.539
	39	169.4200	51.208	90.2259	1.70	CERRAMIENT	1.37	213.6736	51.207	1363927.199	1048455.709	24.567



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	40	181.0741	50.497	90.1230	1.70	LINEAMIENT	1.37	225.1017	50.497	1363934.171	1048448.332	24.726
	41	181.0741	15.353	89.1726	1.70	LINEAMIENT	1.37	225.1017	15.352	1363958.978	1048473.227	25.100
	42	323.5308	3.243	85.2538	1.70	POSTE	1.37	7.8592	3.233	1363973.016	1048484.543	25.168
E12002-E12001	E12001	359.5959	72.996	89.1636	1.70	ESTACION	1.39	225.1017	72.993	1363918.291	1048432.396	24.615
	E12003	173.3731	54.693	90.0232	1.70	DELTA	1.39	218.7270	54.693	1363875.623	1048398.179	24.260
	43	132.0159	11.070	90.2407	1.70	PARAMENTO	1.39	177.1348	11.070	1363907.235	1048432.949	24.222
	44	133.1909	13.040	90.2124	1.70	POSTE	1.39	178.4209	13.040	1363905.256	1048432.755	24.219
	45	147.4914	11.845	90.5429	1.70	SUMIDERO	1.39	192.9223	11.844	1363906.748	1048429.747	24.112
	46	149.3544	12.729	90.5658	1.70	SUMIDERO	1.39	194.6973	12.727	1363905.980	1048429.167	24.089
	47	158.0301	18.865	90.3357	1.70	SUMIDERO	1.39	203.1520	18.864	1363900.946	1048424.979	24.114
	48	159.1835	19.525	90.4203	1.70	SUMIDERO	1.39	204.4114	19.524	1363900.513	1048424.327	24.061
	49	151.0453	18.551	90.1428	1.70	MANHOLE	1.39	196.1831	18.551	1363900.475	1048427.226	24.222
	50	140.4612	24.854	90.1606	1.70	PARAMENTO	1.39	185.8717	24.854	1363893.568	1048429.853	24.184
	51	159.1619	20.850	90.0731	1.70	PARAMENTO	1.39	204.3736	20.850	1363899.300	1048423.791	24.254
	52	152.5930	21.675	90.0450	1.70	POSTE	1.39	198.0934	21.675	1363897.688	1048425.664	24.270
	53	167.1436	14.146	89.5923	1.70	MANHOLE	1.39	212.3450	14.146	1363906.340	1048424.827	24.303
	54	173.3731	13.582	88.5052	1.70	LINEAMIENT	1.39	218.7270	13.579	1363907.698	1048423.900	24.573
	55	173.3731	40.375	89.4754	1.70	LINEAMIENT	1.39	218.7270	40.375	1363886.793	1048407.137	24.442
E12003-E12002	E12002	0.0000	54.707	89.2128	1.70	ESTACION	1.43	218.7270	54.693	1363875.623	1048398.179	24.260
	E12004	96.4218	88.396	89.4603	1.70	DELTA	1.43	135.4320	88.395	1363812.649	1048460.211	24.345
	56	312.4045	7.533	87.0445	1.70	POSTE	1.43	351.4061	7.523	1363883.062	1048397.055	24.371
	57	266.2445	7.320	86.2728	1.70	LINDERO	1.43	305.1395	7.306	1363879.828	1048392.205	24.439
	58	312.1950	5.574	86.0006	1.70	EJE_COLEC	1.43	351.0575	5.560	1363881.116	1048397.315	24.375
	59	253.1815	2.767	84.2408	1.70	MANHOLE	1.43	292.0311	2.754	1363876.656	1048395.627	24.257
	60	152.5916	3.353	85.4958	1.70	MANHOLE	1.43	191.7148	3.344	1363872.349	1048397.500	24.230
	61	178.4913	4.767	88.0310	1.70	SUMIDERO	1.43	217.5473	4.764	1363871.846	1048395.276	24.149
	62	174.0136	5.636	88.4205	1.70	SUMIDERO	1.43	212.7536	5.635	1363870.885	1048395.131	24.114
	63	64.5155	1.919	83.4636	1.70	SUMIDERO	1.43	103.5923	1.908	1363875.175	1048400.034	24.195
	64	34.2303	1.633	81.4337	1.70	SUMIDERO	1.43	73.1111	1.616	1363876.093	1048399.726	24.222
	65	41.5738	3.282	82.4328	1.70	PARAMENTO	1.43	80.6875	3.256	1363876.150	1048401.392	24.402
	66	79.5511	10.245	87.4049	1.70	PARAMENTO	1.43	118.6467	10.237	1363870.716	1048407.163	24.401
	67	106.4347	29.689	89.5409	1.70	PARAMENTO	1.43	145.4567	29.689	1363851.169	1048415.014	24.037
	68	159.3511	6.730	86.5955	1.70	PARAMENTO	1.43	198.3134	6.721	1363869.243	1048396.068	24.339
	69	174.1358	16.074	88.3242	1.70	PARAMENTO	1.43	212.9598	16.069	1363862.141	1048389.437	24.395
	70	146.0304	7.638	87.4750	1.70	POSTE	1.43	184.7781	7.632	1363868.017	1048397.544	24.280
	71	106.2806	30.384	89.5311	1.70	POSTE	1.43	145.1953	30.384	1363850.675	1048415.522	24.047



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	72	67.4656	5.414	85.4044	1.70	POSTE	1.43	106.5092	5.399	1363874.089	1048403.355	24.395
	73	96.1631	37.142	90.0135	1.70	MANHOLE	1.43	135.0023	37.142	1363849.359	1048424.442	23.970
E12004-E12003	E12003	0.0001	88.399	89.5330	1.70	ESTACION	1.45	135.4320	88.395	1363812.649	1048460.211	24.345
	E12005	202.4824	20.496	88.5706	1.70	DELTA	1.45	158.2386	20.493	1363793.617	1048467.809	24.467
	74	8.3551	31.297	89.4752	1.70	POSTE	1.45	324.0295	31.297	1363837.978	1048441.828	24.203
	75	352.3218	30.792	89.5106	1.70	POSTE	1.45	307.9703	30.792	1363831.594	1048435.937	24.172
	76	17.5517	17.506	89.2857	1.70	CERRAMIENT	1.45	333.3534	17.505	1363828.295	1048452.360	24.251
	77	24.1453	18.197	87.0623	2.25	CERRAMIENT	1.45	339.6800	18.174	1363829.692	1048453.900	24.461
	78	74.2220	8.168	87.1753	1.70	PARAMENTO	1.45	29.8042	8.159	1363819.729	1048464.266	24.477
	79	83.3001	15.299	85.1904	2.60	PARAMENTO	1.45	38.9323	15.248	1363824.510	1048469.793	24.441
	80	268.1445	3.073	84.0920	1.70	CERRAMIENT	1.45	223.6778	3.057	1363810.438	1048458.100	24.405
	81	73.2645	3.887	87.2451	1.70	EJE_COLEC	1.45	28.8778	3.883	1363816.049	1048462.086	24.268
	82	74.5159	6.894	86.5424	1.70	HIDRANTE	1.45	30.2984	6.884	1363818.593	1048463.684	24.464
	83	37.3215	3.309	84.0350	1.70	MANHOLE	1.45	352.9695	3.291	1363815.915	1048459.808	24.435
	84	157.0839	4.917	85.3945	1.70	MANHOLE	1.45	112.5761	4.903	1363810.767	1048464.738	24.464
E12005-E12004	E12004	0.0000	20.499	89.3727	1.70	ESTACION	1.43	158.2386	20.493	1363793.617	1048467.809	24.467
	E12006	132.5429	78.959	89.3636	1.70	DELTA	1.43	111.1467	78.957	1363765.132	1048541.449	24.736
	85	356.0209	19.329	89.3841	1.70	SUMIDERO	1.43	334.2745	19.329	1363811.030	1048459.419	24.318
	86	354.1212	18.587	89.3454	1.70	SUMIDERO	1.43	332.4420	18.587	1363810.094	1048459.210	24.334
	87	24.0512	13.725	89.2840	1.70	SUMIDERO	1.43	2.3253	13.724	1363807.330	1048468.365	24.324
	88	22.0649	14.515	89.2348	1.70	SUMIDERO	1.43	0.3523	14.514	1363808.131	1048467.898	24.351
	89	13.4128	22.907	89.5529	1.70	SUMIDERO	1.43	351.9298	22.907	1363816.297	1048464.593	24.229
	90	12.4009	22.051	89.4241	1.70	SUMIDERO	1.43	350.9078	22.051	1363815.390	1048464.324	24.310
	91	7.2831	23.159	89.5122	1.70	EJE_COLEC	1.43	345.7139	23.159	1363816.059	1048462.094	24.257
	92	351.2129	19.970	89.2500	1.70	POSTE	1.43	329.5967	19.969	1363810.840	1048457.703	24.402
	93	342.3412	18.841	88.4910	1.70	PARAMENTO	1.43	320.8086	18.837	1363808.216	1048455.905	24.587
	94	335.2643	17.727	89.0344	1.70	BORDE_VIA	1.43	313.6839	17.725	1363805.859	1048454.991	24.489
	95	26.4016	27.763	89.3407	1.70	BORDE_VIA	1.43	4.9098	27.762	1363821.277	1048470.185	24.407
	96	334.2334	9.893	88.4846	1.70	BORDE_VIA	1.43	312.6314	9.891	1363800.316	1048460.532	24.403
	97	303.1415	2.097	82.4734	1.70	BORDE_VIA	1.43	281.4761	2.080	1363794.031	1048465.770	24.462
	98	40.0805	24.387	89.3125	1.70	BORDE_VIA	1.43	18.3734	24.386	1363816.760	1048475.495	24.401
	99	53.1748	21.753	88.0831	1.70	CERRAMIENT	1.43	31.5353	21.742	1363812.147	1048479.180	24.904
	100	47.3018	14.048	86.2850	1.70	CERRAMIENT	1.43	25.7436	14.022	1363806.247	1048473.899	25.061
	101	75.2806	13.000	86.5006	1.70	CERRAMIENT	1.43	53.7070	12.980	1363801.300	1048478.271	24.916
	102	24.4818	16.171	89.1628	1.70	BORDE_VIA	1.43	3.0436	16.170	1363809.764	1048468.667	24.403
	103	25.1858	11.989	89.0643	1.70	BORDE_VIA	1.43	3.5548	11.988	1363805.581	1048468.552	24.384



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	104	56.0813	7.155	88.0203	1.70	BORDE_VIA	1.43	34.3756	7.151	1363799.519	1048471.846	24.444
	105	98.2205	9.488	88.1522	1.70	BORDE_VIA	1.43	76.6067	9.484	1363795.813	1048477.034	24.487
	106	118.4216	20.608	89.0619	1.70	BORDE_VIA	1.43	96.9431	20.605	1363791.126	1048488.263	24.520
	107	142.0653	6.345	87.2158	1.70	BORDE_VIA	1.43	120.3534	6.338	1363790.414	1048473.278	24.490
	108	167.2013	6.446	85.2757	1.70	POSTE	1.43	145.5756	6.426	1363788.316	1048471.441	24.708
	109	128.3306	71.172	89.3747	1.70	BORDE_VIA	1.43	106.7903	71.171	1363773.058	1048535.945	24.658
	110	133.2726	69.772	89.3500	1.70	BORDE_VIA	1.43	111.6959	69.770	1363767.824	1048532.636	24.706
E12006-E12005	E12005	0.0000	78.954	89.5937	1.70	ESTACION	1.43	111.1467	78.957	1363765.132	1048541.449	24.736
	EAPA06	159.3105	35.469	89.0520	1.70	MOJON	1.43	90.6648	35.465	1363764.721	1048576.911	25.028
	E12007	270.4234	46.268	90.1102	1.70	DELTA	1.43	201.8561	46.268	1363722.190	1048524.224	24.315
	111	143.4546	15.308	87.3926	1.70	CERRAMIENT	1.43	74.9095	15.295	1363769.114	1048556.217	25.090
	112	157.0435	14.185	88.5416	1.70	BORDE_VIA	1.43	88.2231	14.182	1363765.572	1048555.624	24.735
	113	162.3344	23.535	90.1124	1.70	MANHOLE	1.43	93.7089	23.535	1363763.610	1048564.934	24.362
	114	180.4639	30.605	89.2357	1.70	BORDE_VIA	1.43	111.9242	30.603	1363753.706	1048569.839	24.785
	115	196.4821	2.178	83.0105	1.70	BORDE_VIA	1.43	127.9525	2.162	1363763.803	1048543.153	24.729
	116	212.2023	1.580	80.5148	1.70	BORDE_VIA	1.43	143.4864	1.560	1363763.879	1048542.377	24.715
	117	247.3748	1.851	83.3937	1.70	BORDE_VIA	1.43	178.7767	1.840	1363763.293	1048541.488	24.668
	118	256.4527	2.989	85.4403	1.70	PARAMENTO	1.43	187.9042	2.981	1363762.180	1048541.039	24.686
	119	186.0551	26.872	89.0634	1.70	PARAMENTO	1.43	117.2442	26.869	1363752.832	1048565.337	24.882
	120	266.4303	10.915	89.5504	1.70	PARAMENTO	1.43	197.8642	10.915	1363754.744	1048538.100	24.480
	121	353.2445	8.135	88.1854	1.70	BORDE_VIA	1.43	284.5592	8.131	1363767.176	1048533.578	24.703
	122	345.0933	7.327	88.1207	1.70	BORDE_VIA	1.43	276.3059	7.323	1363765.937	1048534.170	24.694
	123	334.0645	5.558	87.3106	1.70	MANHOLE	1.43	265.2592	5.553	1363764.673	1048535.915	24.705
	124	333.1012	8.206	87.4542	1.70	POSTE	1.43	264.3167	8.200	1363764.320	1048533.289	24.784
	125	270.4234	32.786	90.1123	1.70	LINEAMIENT	1.43	201.8561	32.786	1363734.703	1048529.243	24.355
	126	270.4235	17.570	90.4409	1.70	LINEAMIENT	1.43	201.8564	17.569	1363748.827	1048534.908	24.238
	127	270.4235	3.656	87.5250	1.70	LINEAMIENT	1.43	201.8564	3.653	1363761.741	1048540.089	24.599
E12007-E12006	E12006	0.0000	46.279	89.0903	1.70	ESTACION	1.42	201.8561	46.268	1363722.190	1048524.224	24.315
	E12008	89.4809	85.604	89.4405	1.70	DELTA	1.42	111.6586	85.603	1363690.596	1048603.784	24.433
	128	32.1221	4.866	85.0731	1.70	PARAMENTO	1.42	54.0620	4.848	1363725.036	1048528.150	24.450
	129	81.4804	27.203	88.2936	1.70	PARAMENTO	1.42	103.6573	27.194	1363715.769	1048550.649	24.752
	130	85.3312	26.856	88.3045	1.70	POSTE	1.42	107.4095	26.847	1363714.158	1048549.841	24.734
	131	105.3923	25.304	88.5803	1.70	POSTE	1.42	127.5125	25.300	1363706.784	1048544.293	24.492
	132	107.1939	28.259	88.4050	1.70	PARAMENTO	1.42	129.1836	28.252	1363704.341	1048546.123	24.687
	133	169.5507	23.712	87.5718	1.70	PARAMENTO	1.42	191.7748	23.697	1363698.992	1048519.389	24.883
	134	128.2908	14.013	86.2427	1.70	PARAMENTO	1.42	150.3417	13.985	1363710.037	1048531.145	24.914



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	135	156.4852	9.885	88.0832	1.70	LINDERO	1.42	178.6706	9.880	1363712.313	1048524.454	24.357
	136	161.2407	7.388	86.4813	1.70	POSTE	1.42	183.2581	7.377	1363714.826	1048523.805	24.448
	137	154.1927	25.665	89.1415	1.70	PARAMENTO	1.42	176.1803	25.663	1363696.585	1048525.934	24.378
	138	92.3947	55.972	89.3326	1.70	MANHOLE	1.42	114.5192	55.970	1363698.963	1048575.147	24.469
	139	199.4806	2.959	85.2608	1.70	MHVIRTUAL	1.42	221.6578	2.950	1363719.987	1048522.264	24.272
	140	98.1350	45.816	89.2255	1.70	POSTE	1.42	120.0867	45.813	1363699.224	1048563.865	24.531
	141	100.2026	44.651	89.2346	1.70	PARAMENTO	1.42	122.1967	44.649	1363698.400	1048562.007	24.507
E12008-E12007	E12007	0.0001	85.608	89.5447	1.70	ESTACION	1.45	111.6586	85.603	1363690.596	1048603.784	24.433
	E12009	178.4252	97.407	89.3613	1.70	DELTA	1.45	110.3731	97.405	1363656.687	1048695.095	24.856
	142	0.0000	38.264	89.3447	1.70	LINEAMIENT	1.45	291.6586	38.263	1363704.718	1048568.222	24.462
	143	0.0000	12.307	89.1251	1.70	LINEAMIENT	1.45	291.6586	12.306	1363695.138	1048592.347	24.351
	144	11.5056	18.454	88.3528	1.70	PARAMENTO	1.45	303.5075	18.448	1363700.781	1048588.401	24.635
	145	336.2621	19.905	88.1241	1.70	PARAMENTO	1.45	268.0978	19.895	1363689.936	1048583.899	24.803
	146	9.4200	17.705	89.5501	1.70	POSTE	1.45	301.3586	17.705	1363699.810	1048588.665	24.207
	147	305.4857	7.126	87.4638	1.70	POSTE	1.45	237.4745	7.121	1363686.768	1048597.780	24.458
	148	300.1606	9.051	88.3916	1.70	PARAMENTO	1.45	231.9270	9.049	1363685.016	1048596.661	24.394
	149	291.1310	12.637	89.3051	1.70	PARAMENTO	1.45	222.8781	12.637	1363681.336	1048595.185	24.289
	150	216.2149	10.271	88.0257	1.70	POSTE	1.45	148.0223	10.265	1363681.889	1048609.220	24.531
	151	160.4822	7.656	87.4725	1.70	POSTE	1.45	92.4648	7.650	1363690.267	1048611.427	24.477
	152	194.1847	23.814	88.4749	1.70	POSTE	1.45	125.9717	23.809	1363676.611	1048623.052	24.682
	153	174.1635	32.671	89.0852	1.70	POSTE	1.45	105.9350	32.667	1363681.627	1048635.196	24.668
	154	172.2131	30.210	89.1320	1.70	PARAMENTO	1.45	104.0173	30.207	1363683.280	1048633.091	24.592
	155	87.2824	2.999	85.0835	1.70	PARAMENTO	1.45	19.1320	2.988	1363693.419	1048604.763	24.436
	156	183.4011	30.136	89.0157	1.70	MANHOLE	1.45	115.3284	30.132	1363677.706	1048631.019	24.691
	157	182.2025	35.960	89.2327	1.70	MANHOLE	1.45	113.9989	35.958	1363675.971	1048636.633	24.564
	158	182.0205	39.620	89.2855	1.70	MANHOLE	1.45	113.6934	39.618	1363674.676	1048640.063	24.540
	159	176.5533	42.981	89.3623	1.70	SUMIDERO	1.45	108.5845	42.980	1363676.898	1048644.523	24.477
	160	176.3559	42.099	89.3422	1.70	SUMIDERO	1.45	108.2584	42.098	1363677.407	1048643.762	24.496
	161	174.3012	45.871	89.2155	1.70	PARAMENTO	1.45	106.1620	45.868	1363677.829	1048647.839	24.690
	162	177.4129	43.723	89.3338	1.70	BORDE_VIA	1.45	109.3500	43.722	1363676.110	1048645.036	24.517
	163	186.2726	43.792	89.3411	1.70	BORDE_VIA	1.45	118.1159	43.791	1363669.960	1048642.407	24.511
	164	188.2737	35.629	89.2836	1.70	BORDE_VIA	1.45	120.1189	35.628	1363672.718	1048634.601	24.507
	165	175.1214	35.031	89.2652	1.70	BORDE_VIA	1.45	106.8625	35.029	1363680.435	1048637.307	24.519
	166	172.2957	35.364	89.2413	1.70	BORDE_VIA	1.45	104.1578	35.362	1363681.947	1048638.072	24.550
	167	172.4744	42.031	89.2959	1.70	BORDE_VIA	1.45	104.4542	42.029	1363680.105	1048644.483	24.549
	168	178.4252	44.714	89.3329	1.70	LINEAMIENT	1.45	110.3731	44.713	1363675.030	1048645.699	24.527



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	169	178.4252	21.295	89.0621	1.70	LINEAMIENT	1.45	110.3731	21.292	1363683.184	1048623.744	24.514
	170	178.4253	72.102	89.3501	1.70	LINEAMIENT	1.45	110.3734	72.100	1363665.496	1048671.374	24.706
E12009-E12008	E12008	0.0000	97.419	90.0709	1.70	ESTACION	1.47	110.3731	97.405	1363656.687	1048695.095	24.856
	E12010	180.1455	88.095	89.0825	1.70	DELTA	1.47	110.6217	88.085	1363625.663	1048777.536	25.942
	171	11.4758	10.497	97.0209	0.09	POSTE	1.47	302.1725	10.418	1363662.234	1048686.277	24.950
	172	350.2321	40.681	89.5349	1.70	POSTE	1.47	280.7623	40.681	1363664.283	1048655.130	24.694
	173	324.3631	10.516	89.0652	1.70	BORDE_VIA	1.47	254.9817	10.515	1363653.962	1048684.940	24.783
	174	3.5700	7.951	88.5303	1.70	BORDE_VIA	1.47	294.3231	7.949	1363659.961	1048687.851	24.775
	175	319.1502	11.007	88.1808	1.70	POSTE	1.47	249.6236	11.002	1363652.856	1048684.782	24.947
	176	199.2746	22.144	88.3318	1.70	POSTE	1.47	129.8359	22.137	1363642.506	1048712.094	25.179
	177	202.1543	23.407	87.2803	1.70	PARAMENTO	1.47	132.6350	23.384	1363640.848	1048712.299	25.655
	178	171.5221	22.020	87.5753	1.70	PARAMENTO	1.47	102.2456	22.006	1363652.019	1048716.601	25.403
	179	195.3223	23.149	88.5739	1.70	BORDE_VIA	1.47	125.9128	23.145	1363643.111	1048713.841	25.040
	180	178.5708	22.331	89.0209	1.70	BORDE_VIA	1.47	109.3253	22.328	1363649.298	1048716.165	24.996
	181	172.2038	24.249	89.0642	1.70	BORDE_VIA	1.47	102.7170	24.246	1363651.349	1048718.747	24.997
	182	198.5623	25.194	88.5403	1.70	BORDE_VIA	1.47	129.3128	25.189	1363640.728	1048714.584	25.104
	183	186.0405	27.033	89.0318	1.70	MANHOLE	1.47	116.4411	27.029	1363644.651	1048719.297	25.066
	184	187.0241	19.826	88.5654	1.70	MANHOLE	1.47	117.4178	19.823	1363647.559	1048712.691	24.984
	185	196.2632	32.921	89.2158	1.70	BORDE_VIA	1.47	126.8153	32.919	1363636.960	1048721.449	24.985
	186	191.3314	34.479	89.1949	1.70	BORDE_VIA	1.47	121.9270	34.477	1363638.454	1048724.356	25.024
	187	179.0300	33.738	89.1613	1.70	BORDE_VIA	1.47	109.4231	33.735	1363645.468	1048726.911	25.050
	188	172.5916	31.785	89.1613	1.70	BORDE_VIA	1.47	103.3609	31.782	1363649.342	1048726.018	25.025
	189	173.1030	33.919	87.5154	1.70	PARAMENTO	1.47	103.5481	33.895	1363648.746	1048728.048	25.884
	190	194.5004	34.760	88.3002	1.70	PARAMENTO	1.47	125.2075	34.748	1363636.653	1048723.487	25.530
	191	201.1807	36.041	88.3255	1.70	PARAMENTO	1.47	131.6750	36.029	1363632.730	1048722.007	25.533
	192	192.3112	41.043	88.3939	1.70	PARAMENTO	1.47	122.8931	41.032	1363634.403	1048729.549	25.580
	193	177.3955	33.110	89.3422	1.70	SUMIDERO	1.47	108.0384	33.109	1363646.434	1048726.577	24.867
	194	176.3234	32.434	89.2858	1.70	SUMIDERO	1.47	106.9159	32.433	1363647.250	1048726.125	24.913
	195	196.3830	32.628	89.1613	1.70	SUMIDERO	1.47	127.0148	32.625	1363637.045	1048721.146	25.036
	196	197.4327	33.321	89.1442	1.70	SUMIDERO	1.47	128.0973	33.318	1363636.129	1048721.316	25.060
E12010-E12009	E12009	0.0000	88.099	90.3359	1.70	ESTACION	1.44	110.6217	88.085	1363625.663	1048777.536	25.942
	E12011	180.5210	92.710	89.2829	1.70	DELTA	1.44	111.4911	92.706	1363591.700	1048863.797	26.533
	197	36.0646	5.328	84.5817	1.70	PARAMENTO	1.44	326.7345	5.307	1363630.101	1048774.625	26.150
	198	19.0752	9.726	87.1635	1.70	PARAMENTO	1.44	309.7528	9.715	1363631.876	1048770.067	26.146
	199	68.0525	11.545	87.4300	1.70	PARAMENTO	1.44	358.7120	11.536	1363637.196	1048777.277	26.143
	200	295.5402	9.587	87.5341	1.70	PARAMENTO	1.44	226.5223	9.581	1363619.071	1048770.584	26.036



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	201	286.0424	15.125	88.0030	1.70	PARAMENTO	1.44	216.6950	15.116	1363613.543	1048768.504	26.209
	202	165.1252	12.525	87.1359	1.70	PARAMENTO	1.44	95.8361	12.510	1363624.391	1048789.982	26.288
	203	137.5646	16.358	87.5331	1.70	PARAMENTO	1.44	68.5678	16.347	1363631.636	1048792.753	26.285
	204	170.1337	18.582	88.1025	1.70	PARAMENTO	1.44	100.8486	18.573	1363622.168	1048795.777	26.276
	205	212.5043	13.498	87.3621	1.70	PARAMENTO	1.44	143.4670	13.486	1363614.827	1048785.565	26.247
	206	234.4631	19.002	88.2827	1.70	PARAMENTO	1.44	165.3970	18.995	1363607.282	1048782.326	26.189
	207	206.0515	16.748	88.0141	1.70	PARAMENTO	1.44	136.7092	16.738	1363613.480	1048789.014	26.260
	208	167.3740	11.076	88.1600	1.70	POSTE	1.44	98.2495	11.071	1363624.075	1048788.493	26.018
	209	297.1922	6.855	88.0755	1.70	POSTE	1.44	227.9445	6.851	1363621.074	1048772.449	25.907
	210	288.4012	8.226	89.0926	1.70	SUMIDERO	1.44	219.2917	8.225	1363619.298	1048772.328	25.804
	211	288.3344	7.259	88.5933	1.70	SUMIDERO	1.44	219.1839	7.258	1363620.038	1048772.951	25.811
	212	220.5029	11.723	89.2104	1.70	SUMIDERO	1.44	151.4631	11.722	1363615.365	1048783.136	25.816
	213	223.4420	11.061	89.0232	1.70	SUMIDERO	1.44	154.3606	11.059	1363615.693	1048782.322	25.868
	214	143.3617	9.399	88.4545	1.70	SUMIDERO	1.44	74.2264	9.397	1363628.218	1048786.579	25.886
	215	142.2215	10.092	89.0218	1.70	SUMIDERO	1.44	72.9925	10.091	1363628.615	1048787.186	25.853
	216	163.5338	9.669	88.5304	1.70	SUMIDERO	1.44	94.5156	9.667	1363624.902	1048787.174	25.872
	217	167.1010	10.433	88.5740	1.70	SUMIDERO	1.44	97.7911	10.431	1363624.249	1048787.871	25.873
	218	89.5238	5.644	87.5805	1.70	SUMIDERO	1.44	20.4989	5.640	1363630.947	1048779.512	25.884
	219	93.4115	6.284	88.0759	1.70	SUMIDERO	1.44	24.3092	6.281	1363631.387	1048780.122	25.888
	220	220.3046	3.041	85.1229	1.70	MANHOLE	1.44	151.1345	3.030	1363623.009	1048778.999	25.937
	221	214.2313	9.286	88.0321	1.70	CAMA_TELEF	1.44	145.0086	9.281	1363618.060	1048782.858	25.998
	222	165.0848	7.503	87.4626	1.70	CAMA_TELEF	1.44	95.7684	7.497	1363624.910	1048784.996	25.975
	223	294.5600	5.905	87.1539	1.70	CAMA_TELEF	1.44	225.5550	5.898	1363621.533	1048773.326	25.966
	224	173.0355	10.955	88.3617	1.70	BORDE_VIA	1.44	103.6870	10.952	1363623.072	1048788.177	25.950
	225	206.5556	12.484	88.5508	1.70	BORDE_VIA	1.44	137.5539	12.482	1363616.453	1048785.960	25.919
	226	127.5401	12.104	88.5740	1.70	BORDE_VIA	1.44	58.5220	12.102	1363631.983	1048787.858	25.903
	227	160.1343	8.616	88.1314	1.70	BORDE_VIA	1.44	90.8503	8.612	1363625.536	1048786.147	25.951
	228	92.4820	9.469	88.3841	1.70	BORDE_VIA	1.44	23.4273	9.466	1363634.349	1048781.300	25.907
	229	82.4644	1.864	83.4841	1.70	BORDE_VIA	1.44	13.4006	1.853	1363627.466	1048777.966	25.884
	230	10.0248	5.556	88.4951	1.70	BORDE_VIA	1.44	300.6684	5.555	1363628.497	1048772.759	25.797
E12011-E12010	E12010	0.0000	92.727	90.1329	1.70	ESTACION	1.46	111.4911	92.706	1363591.700	1048863.797	26.533
	E12012	183.0856	83.889	89.3107	1.70	DELTA	1.46	114.6400	83.886	1363556.726	1048940.045	26.994
	231	269.4103	6.281	88.2245	1.70	POSTE	1.46	201.1753	6.278	1363585.845	1048861.529	26.467
	232	5.1405	30.917	89.5803	1.70	POSTE	1.46	296.7259	30.917	1363605.604	1048836.183	26.307
	233	7.1234	32.639	89.4052	1.70	PARAMENTO	1.46	298.7006	32.638	1363607.374	1048835.169	26.471
	234	7.4104	32.655	89.4053	1.70	PARAMENTO	1.46	299.1756	32.654	1363607.618	1048835.286	26.471



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	235	3.2911	31.788	90.0435	1.70	SUMIDERO	1.46	294.9775	31.788	1363605.123	1048834.982	26.247
	236	4.2305	31.078	90.1026	1.70	SUMIDERO	1.46	295.8759	31.078	1363605.263	1048835.835	26.195
	237	3.2750	23.886	90.0550	1.70	SUMIDERO	1.46	294.9550	23.886	1363601.777	1048842.141	26.249
	238	4.4626	23.164	90.2040	1.70	SUMIDERO	1.46	296.2650	23.164	1363601.950	1048843.025	26.150
	239	347.0212	25.680	89.5944	1.70	SUMIDERO	1.46	278.5278	25.680	1363595.508	1048838.401	26.291
	240	345.2809	25.031	90.1914	1.70	SUMIDERO	1.46	276.9603	25.031	1363594.733	1048838.951	26.149
	241	3.1138	32.293	89.5807	1.70	BORDE_VIA	1.46	294.6850	32.293	1363605.186	1048834.455	26.307
	242	7.3030	31.660	90.1118	1.70	BORDE_VIA	1.46	298.9995	31.660	1363607.048	1048836.107	26.185
	243	354.5012	27.393	89.4930	1.70	MANHOLE	1.46	286.3278	27.393	1363599.401	1048837.509	26.373
	244	8.1337	22.587	89.3237	1.70	PARAMENTO	1.46	299.7181	22.586	1363602.897	1048844.181	26.469
	245	3.2917	21.775	89.4411	1.70	BORDE_VIA	1.46	294.9792	21.775	1363600.895	1048844.059	26.390
	246	199.0619	27.192	89.0249	1.70	PARAMENTO	1.46	130.5964	27.188	1363574.008	1048884.441	26.742
	247	171.0913	24.818	88.4534	1.70	PARAMENTO	1.46	102.6448	24.812	1363586.268	1048888.008	26.827
	248	166.0523	14.253	88.3142	1.70	PARAMENTO	1.46	97.5809	14.248	1363589.820	1048877.921	26.655
	249	173.4708	37.316	89.0836	1.70	PARAMENTO	1.46	105.2767	37.312	1363581.869	1048899.791	26.847
	250	168.4341	24.943	88.5445	1.70	PARAMENTO	1.46	100.2192	24.939	1363587.275	1048888.340	26.763
	251	167.4150	24.088	88.5338	1.70	POSTE	1.46	99.1884	24.084	1363587.854	1048887.572	26.754
	252	170.0134	23.411	89.1119	1.70	BORDE_VIA	1.46	101.5173	23.409	1363587.026	1048886.734	26.621
	253	166.3822	16.479	88.5735	1.70	BORDE_VIA	1.46	98.1306	16.476	1363589.370	1048880.108	26.589
	254	176.2250	16.019	88.0202	1.90	BORDE_VIA	1.46	107.8717	16.010	1363586.787	1048879.034	26.639
	255	173.3245	15.540	88.5846	1.70	SUMIDERO	1.46	105.0370	15.538	1363587.669	1048878.803	26.566
	256	170.1759	15.834	89.0425	1.70	SUMIDERO	1.46	101.7909	15.832	1363588.465	1048879.295	26.545
	257	189.2345	19.588	88.5301	1.70	MANHOLE	1.46	120.8870	19.584	1363581.646	1048880.604	26.671
E12012-E12011	E12011	0.0000	83.897	90.0919	1.70	ESTACION	1.45	114.6400	83.886	1363556.726	1048940.045	26.994
	E10030	170.3034	56.156	89.4835	1.70	DELTA	1.45	105.1495	56.156	1363542.051	1048994.249	26.932
	258	355.1623	49.962	89.4812	2.00	SUMIDERO	1.45	289.9131	49.962	1363573.743	1048893.070	26.617
	259	355.2814	49.265	89.4846	2.00	SUMIDERO	1.45	290.1106	49.265	1363573.665	1048893.784	26.606
	260	355.3802	56.941	89.4858	2.00	SUMIDERO	1.45	290.2739	56.941	1363576.457	1048886.632	26.628
	261	355.1737	56.029	89.4840	2.00	SUMIDERO	1.45	289.9336	56.029	1363575.828	1048887.373	26.630
	262	2.4102	60.899	90.0911	1.70	SUMIDERO	1.45	297.3239	60.899	1363584.680	1048885.941	26.582
	263	2.2924	59.979	90.0717	1.70	SUMIDERO	1.45	297.1300	59.979	1363584.077	1048886.665	26.618
	264	2.4155	68.126	90.0859	1.70	SUMIDERO	1.45	297.3386	68.126	1363588.013	1048879.528	26.567
	265	2.2357	69.015	90.0918	1.70	SUMIDERO	1.45	297.0392	69.015	1363588.100	1048878.574	26.558
	266	358.4738	53.409	89.5736	1.70	MANHOLE	1.45	293.4339	53.409	1363577.967	1048891.041	26.782
	267	355.1542	51.779	89.3849	2.00	CAMA_TELEF	1.45	289.9017	51.778	1363574.352	1048891.359	26.764
	268	354.1129	34.215	89.3617	1.70	POSTE	1.45	288.8314	34.214	1363567.770	1048907.662	26.981



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	269	352.1514	34.455	89.3801	1.70	PARAMENTO	1.45	286.8939	34.454	1363566.739	1048907.078	26.966
	270	334.2106	36.335	88.1236	2.60	PARAMENTO	1.45	268.9917	36.317	1363556.087	1048903.733	26.980
	271	331.2116	26.826	87.2511	2.60	PARAMENTO	1.45	265.9945	26.799	1363554.854	1048913.312	27.053
	272	331.0154	22.989	86.5135	2.60	PARAMENTO	1.45	265.6717	22.954	1363554.994	1048917.156	27.105
	273	326.5648	19.944	88.5901	1.70	PARAMENTO	1.45	261.5867	19.941	1363553.809	1048920.319	27.099
	274	320.5609	20.422	87.4701	1.70	PARAMENTO	1.45	255.5759	20.407	1363551.643	1048920.281	27.535
	275	315.3025	17.098	89.0141	1.70	PARAMENTO	1.45	250.1470	17.096	1363550.921	1048923.965	27.035
	276	307.2750	20.420	88.5821	1.70	PARAMENTO	1.45	242.1039	20.417	1363547.174	1048922.001	27.111
	277	247.4744	16.109	88.5134	1.70	PARAMENTO	1.45	182.4356	16.106	1363540.635	1048939.360	27.066
	278	206.2619	5.963	87.2318	1.70	PARAMENTO	1.45	141.0786	5.957	1363552.092	1048943.787	27.017
E12016		0.0000				ESTACION		0.0000		1364050.741	1048506.238	25.538
E12017	E12016	0.0000	121.613	89.5829	1.70	ESTACION	1.42	299.2161		1364110.067	1048400.157	25.435
	973	347.4711	58.867	89.3008	1.70	BORDE_VIA	1.42	107.0025	58.865	1364092.854	1048456.449	25.669
	974	347.3903	58.235	89.2444	1.70	CORDON	1.42	106.8670	58.232	1364093.171	1048455.884	25.755
	975	347.3930	58.370	89.2444	1.70	CORDON	1.42	106.8745	58.367	1364093.124	1048456.011	25.756
	976	359.2913	53.971	89.5404	1.70	BORDE_VIA	1.42	118.7031	53.971	1364084.146	1048447.496	25.250
	977	358.3039	53.497	89.5620	1.70	CORDON	1.42	117.7270	53.497	1364085.177	1048447.512	25.214
	978	358.2152	53.509	89.5538	1.70	CORDON	1.42	117.5806	53.509	1364085.292	1048447.586	25.225
	979	357.0555	52.564	89.5200	1.70	POSTE	1.42	116.3148	52.564	1364086.765	1048447.274	25.280
	980	356.3537	50.609	89.5308	1.70	ANDEN	1.42	115.8098	50.609	1364088.032	1048445.718	25.258
	981	356.2914	48.617	89.5000	1.70	ANDEN	1.42	115.7034	48.617	1364088.981	1048443.964	25.299
	982	354.2939	46.948	89.5800	1.70	ANDEN	1.42	113.7103	46.948	1364091.188	1048443.143	25.185
	983	359.0828	32.286	89.4306	1.70	BORDE_VIA	1.42	118.3573	32.286	1364094.732	1048428.569	25.316
	984	15.2106	24.703	89.3749	1.70	BORDE_VIA	1.42	134.5678	24.702	1364092.732	1048417.756	25.317
	985	358.1012	32.102	89.3640	1.70	CORDON	1.42	117.3861	32.101	1364095.301	1048428.661	25.375
	986	357.5747	32.102	89.3853	1.70	CORDON	1.42	117.1792	32.101	1364095.404	1048428.714	25.354
	987	16.3153	24.996	89.2339	1.70	CORDON	1.42	135.7475	24.995	1364092.164	1048417.599	25.422
	988	16.4636	24.990	89.2429	1.70	CORDON	1.42	135.9928	24.989	1364092.094	1048417.518	25.415
	989	20.0231	20.770	89.1923	1.70	CORDON	1.42	139.2581	20.769	1364094.331	1048413.712	25.403
	990	21.0144	20.935	89.1922	1.70	CORDON	1.42	140.2450	20.934	1364093.973	1048413.545	25.405
	991	21.1124	20.845	89.2021	1.70	CORDON	1.42	140.4061	20.844	1364094.005	1048413.442	25.398
	992	21.1800	19.600	89.1455	1.70	CORDON	1.42	140.5161	19.598	1364094.941	1048412.619	25.414
	993	22.2139	19.826	89.1947	1.70	CORDON	1.42	141.5770	19.825	1364094.535	1048412.478	25.389
	994	22.3141	19.685	89.2041	1.70	CORDON	1.42	141.7442	19.684	1364094.610	1048412.345	25.382
	995	21.2838	19.513	89.1415	1.70	CORDON	1.42	140.6934	19.511	1364094.970	1048412.517	25.417
	996	24.0918	17.605	89.1454	1.70	CORDON	1.42	143.3711	17.603	1364095.940	1048410.660	25.388



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	997	23.5322	17.587	89.1454	1.70	CORDON	1.42	143.1056	17.585	1364096.003	1048410.715	25.388
	998	19.1050	20.432	89.4412	1.70	SUMEDERO	1.42	138.3967	20.432	1364094.789	1048413.724	25.251
	999	21.0839	19.856	90.2104	1.70	SUMEDERO	1.42	140.3603	19.856	1364094.777	1048412.825	25.036
	1000	356.5327	19.639	89.5117	1.70	SUMEDERO	1.42	116.1070	19.639	1364101.425	1048417.793	25.207
	1001	358.2146	18.763	89.2725	1.70	SUMEDERO	1.42	117.5789	18.762	1364101.380	1048416.788	25.335
	1002	7.4708	21.969	89.1556	1.70	MANHOLE	1.42	127.0017	21.967	1364096.846	1048417.701	25.439
	1003	354.4937	32.103	89.4323	1.70	POSTE	1.42	114.0431	32.103	1364096.987	1048429.475	25.312
	1004	357.0906	19.909	89.0647	1.70	CORDON	1.42	116.3678	19.907	1364101.226	1048417.993	25.465
	1005	356.5417	19.915	89.0854	1.70	CORDON	1.42	116.1209	19.913	1364101.300	1048418.037	25.453
	1006	356.0822	19.627	89.1130	1.70	CORDON	1.42	115.3556	19.625	1364101.663	1048417.892	25.434
	1007	355.4906	19.568	89.1650	1.70	CORDON	1.42	115.0345	19.566	1364101.787	1048417.886	25.403
	1008	355.5255	18.759	89.1803	1.70	CORDON	1.42	115.0981	18.758	1364102.110	1048417.144	25.386
	1009	355.4154	18.838	89.2017	1.70	CORDON	1.42	114.9145	18.837	1364102.132	1048417.241	25.375
	1010	356.2921	18.570	89.0520	1.70	CORDON	1.42	115.7053	18.568	1364102.013	1048416.888	25.453
	1011	356.5125	18.575	89.0520	1.70	CORDON	1.42	116.0731	18.573	1364101.904	1048416.840	25.453
	1012	355.5543	13.687	88.3809	1.70	CORDON	1.42	115.1448	13.683	1364104.253	1048412.544	25.483
	1013	355.3409	13.603	88.4230	1.70	CORDON	1.42	114.7853	13.600	1364104.366	1048412.504	25.464
	1014	343.5006	14.052	88.4915	1.70	POSTE	1.42	103.0511	14.049	1364106.894	1048413.844	25.446
	1015	340.0838	12.354	88.2954	1.70	ANDEN	1.42	99.3600	12.350	1364108.058	1048412.343	25.481
	1016	334.0558	12.853	88.2557	1.70	ANDEN	1.42	93.3156	12.848	1364109.324	1048412.984	25.509
E12023		0.0000				ESTACION		0.0000		1364411.245	1048423.519	24.783
E12024	E12023	0.0000	87.724	89.4921	1.70	ESTACION	1.40	334.8489		1364490.659	1048386.232	24.795
	1200	345.2623	24.106	89.0234	1.70	PARAMENTO	1.40	140.2886	24.103	1364472.118	1048401.632	24.894
	1201	346.0400	26.024	88.5916	1.70	PARAMENTO	1.40	140.9156	26.020	1364470.462	1048402.637	24.951
	1202	341.0856	24.357	89.2620	1.70	PARAMENTO	1.40	135.9978	24.356	1364473.140	1048403.152	24.730
	1203	1.4837	19.469	88.4348	1.70	PARAMENTO	1.40	156.6592	19.464	1364472.788	1048393.944	24.923
	1204	6.1018	11.446	88.3946	1.70	PARAMENTO	1.40	161.0206	11.443	1364479.838	1048389.954	24.758
	1205	10.3340	11.627	88.1931	1.70	PARAMENTO	1.40	165.4100	11.622	1364479.412	1048389.160	24.831
	1206	60.5429	4.858	84.5504	1.70	PARAMENTO	1.40	215.7570	4.839	1364486.732	1048383.404	24.921
	1207	70.4404	7.648	87.3350	1.70	PARAMENTO	1.40	225.5834	7.641	1364485.311	1048380.774	24.816
	1208	4.4955	11.257	88.4356	1.70	POSTE	1.40	159.6809	11.254	1364480.105	1048390.140	24.740
	1209	138.5708	10.603	88.2547	1.70	POSTE	1.40	293.8011	10.599	1364494.937	1048376.534	24.782
	1210	165.1926	6.013	85.1335	1.70	ARBOL	1.40	320.1728	5.992	1364495.261	1048382.394	24.991
	1211	114.4857	10.147	88.1230	1.70	PARAMENTO	1.40	269.6648	10.142	1364490.600	1048376.090	24.808
	1212	129.5012	8.254	87.5023	1.70	PARAMENTO	1.40	284.6856	8.248	1364492.750	1048378.253	24.802



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12018		0.0000				ESTACION		0.0000		1364136.287	1048362.467	25.079
E12017	E12018	359.5959	45.904	90.0640	1.70	ESTACION	1.43	124.8250		1364110.067	1048400.157	25.435
	EAUX_38	121.0857	27.855	91.0754	1.70	DELTA	1.43	65.9742	27.850	1364121.406	1048425.594	24.610
EAUX_38-E12017	E12017	0.0000	27.864	87.4752	1.70	ESTACION	1.45	65.9742	27.850	1364121.406	1048425.594	24.610
	EAUX_39	145.4852	9.426	94.2620	1.70	DELTA	1.45	31.7886	9.398	1364129.394	1048430.545	23.634
EAUX_39-EAUX_38	EAUX_38	0.0000	9.477	82.1647	1.70	ESTACION	1.40	31.7886	9.398	1364129.394	1048430.545	23.634
	1298	49.1007	5.983	97.1401	2.60	TUBO_DESC	1.40	260.9573	5.935	1364128.461	1048424.683	21.675
	1299	48.2318	5.823	95.4846	4.00	TUBO_DESC	1.40	260.1770	5.793	1364128.405	1048424.837	20.439
	1300	50.0548	5.876	96.5920	5.00	TUBO_DESC	1.40	261.8853	5.832	1364128.570	1048424.771	19.314
	1301	53.0233	7.204	99.5735	4.00	BORDE_CANO	1.40	264.8311	7.095	1364128.755	1048423.478	19.783
	1302	65.3732	7.436	99.3608	4.00	BORDE_CANO	1.40	277.4142	7.332	1364130.340	1048423.274	19.788
	1303	70.0318	8.329	99.4103	4.00	BORDE_CANO	1.40	281.8436	8.210	1364131.079	1048422.509	19.628
	1304	73.2308	8.310	99.1850	4.00	BORDE_CANO	1.40	285.1742	8.200	1364131.540	1048422.630	19.684
	1305	74.1611	8.779	99.5524	4.00	BORDE_CANO	1.40	286.0584	8.648	1364131.786	1048422.235	19.516
	1306	71.5603	9.167	99.0504	4.00	BORDE_CANO	1.40	283.7228	9.052	1364131.541	1048421.751	19.581
	1307	102.2552	5.175	111.0401	4.00	BORDE_CANO	1.40	314.2198	4.829	1364132.762	1048427.084	19.168
	1308	101.1033	5.993	102.5244	4.00	BORDE_CANO	1.40	312.9645	5.842	1364133.375	1048426.270	19.693
	1309	96.3520	6.195	102.0122	4.00	BORDE_CANO	1.40	308.3775	6.059	1364133.155	1048425.795	19.738
	1310	95.3558	7.572	99.2522	4.00	BORDE_CANO	1.40	307.3881	7.470	1364133.930	1048424.610	19.789
	1311	88.3637	8.048	99.1009	4.00	BORDE_CANO	1.40	300.3989	7.945	1364133.414	1048423.692	19.746
	1312	80.2644	7.966	99.2710	4.00	BORDE_CANO	1.40	292.2342	7.858	1364132.367	1048423.271	19.720
	1313	79.2210	8.557	99.4959	4.00	BORDE_CANO	1.40	291.1581	8.431	1364132.437	1048422.682	19.567
	1314	81.5419	9.936	99.1756	4.00	BORDE_CANO	1.40	293.6939	9.805	1364133.334	1048421.566	19.423
	1315	80.1330	10.883	99.0844	4.00	BORDE_CANO	1.40	292.0136	10.745	1364133.421	1048420.584	19.299
	1316	74.4225	10.541	99.0620	4.00	BORDE_CANO	1.40	286.4956	10.408	1364132.349	1048420.565	19.360
	1317	77.5341	11.901	98.4206	4.00	BORDE_CANO	1.40	289.6834	11.764	1364133.356	1048419.468	19.228
	1318	81.2748	12.321	98.5115	4.00	BORDE_CANO	1.40	293.2520	12.174	1364134.200	1048419.359	19.132
	1319	83.4139	11.101	99.2056	4.00	BORDE_CANO	1.40	295.4828	10.954	1364134.106	1048420.657	19.225
	1320	92.5357	10.434	101.0324	4.00	BORDE_CANO	1.40	304.6878	10.240	1364135.222	1048422.125	19.028
	1321	91.2944	11.452	99.4748	4.00	BORDE_CANO	1.40	303.2842	11.285	1364135.587	1048421.111	19.080
	1322	102.0814	9.173	102.3927	4.00	BORDE_CANO	1.40	313.9259	8.950	1364135.603	1048424.099	19.019
	1323	104.4118	9.808	102.3957	4.00	BORDE_CANO	1.40	316.4770	9.569	1364136.332	1048423.955	18.878
	1324	109.5849	8.880	104.5119	4.00	BORDE_CANO	1.40	321.7689	8.583	1364136.136	1048425.233	18.752
	1325	108.1451	9.493	103.2002	4.00	BORDE_CANO	1.40	320.0361	9.237	1364136.474	1048424.612	18.839
	1326	119.3517	9.369	105.5158	4.00	BORDE_CANO	1.40	331.3767	9.012	1364137.304	1048426.228	18.467
	1327	123.1427	9.989	104.4315	4.00	BORDE_CANO	1.40	335.0295	9.661	1364138.152	1048426.466	18.490



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1328	129.5210	9.392	106.1214	4.00	BORDE_CANO	1.40	341.6581	9.019	1364137.954	1048427.707	18.408
	1329	127.4040	9.801	107.1634	4.00	BORDE_CANO	1.40	339.4664	9.359	1364138.158	1048427.262	18.118
	1330	139.5707	9.707	106.4236	4.00	BORDE_CANO	1.40	351.7406	9.297	1364138.594	1048429.209	18.238
	1331	139.3902	10.621	104.5009	4.00	BORDE_CANO	1.40	351.4392	10.267	1364139.546	1048429.016	18.309
	1332	144.4946	14.151	104.3742	4.00	RIO	1.40	356.6181	13.692	1364143.062	1048429.737	17.455
	1333	144.2529	14.089	104.4536	4.00	RIO	1.40	356.2134	13.624	1364142.988	1048429.645	17.439
	1334	143.2845	14.424	104.5137	4.00	RIO	1.40	355.2678	13.942	1364143.288	1048429.395	17.329
	1335	122.2217	9.509	102.0727	4.00	TUBO_DESC	1.40	334.1600	9.297	1364137.761	1048426.493	19.031
	1336	111.0517	9.334	106.1727	4.00	DESCARGA	1.40	322.8767	8.959	1364136.537	1048425.138	18.410
	1337	123.3042	10.098	99.5647	2.90	TUBO_DESC	1.40	335.3003	9.946	1364138.430	1048426.389	20.384
	1338	131.3903	9.901	99.1658	1.70	ESTRUCTURA	1.40	343.4395	9.771	1364138.760	1048427.760	21.731
	1339	125.1639	11.091	97.3328	1.70	ESTRUCTURA	1.40	337.0661	10.995	1364139.519	1048426.261	21.870
	1340	126.3711	11.256	97.3327	1.70	ESTRUCTURA	1.40	338.4084	11.158	1364139.769	1048426.439	21.848
	1341	132.4314	10.025	99.2014	1.70	ESTRUCTURA	1.40	344.5092	9.892	1364138.927	1048427.903	21.702
	1342	129.3427	9.464	98.5643	4.00	ESTRUCTURA	1.40	341.3628	9.349	1364138.252	1048427.557	19.557
DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12024		0.0000				ESTACION		0.0000		1364490.659	1048386.232	24.795
E12023	E12024	0.0000	87.732	89.5030	1.70	ESTACION	1.45	154.8489		1364411.245	1048423.519	24.783
	EAUX_40	78.2415	45.248	92.4310	1.70	DELTA	1.45	53.2531	45.197	1364438.285	1048459.735	22.387
EAUX_40-E12023	E12023	0.0001	45.265	86.4112	1.70	ESTACION	1.47	53.2531	45.197	1364438.285	1048459.735	22.387
	1343	306.4812	12.172	92.5034	2.00	TUBO_DESC	1.47	180.0564	12.157	1364426.128	1048459.723	21.249
	1344	306.5054	12.061	91.2828	2.00	TUBO_DESC	1.47	180.1014	12.057	1364426.228	1048459.713	21.542
	1345	306.2315	12.247	92.3213	2.00	ESTRUCTURA	1.47	179.6406	12.235	1364426.050	1048459.811	21.310
	1346	308.0214	11.916	92.3014	2.00	ESTRUCTURA	1.47	181.2903	11.905	1364426.384	1048459.467	21.332
	1347	300.4423	12.259	92.3015	2.00	ESTRUCTURA	1.47	173.9928	12.247	1364426.105	1048461.016	21.317
	1348	306.4855	10.670	90.2055	2.00	ESTRUCTURA	1.47	180.0684	10.670	1364427.615	1048459.722	21.788
	1349	306.0057	12.494	88.3138	1.70	ESTRUCTURA	1.47	179.2689	12.490	1364425.796	1048459.894	22.474
	1350	305.2301	12.567	88.4138	1.70	ESTRUCTURA	1.47	178.6367	12.564	1364425.725	1048460.034	22.439
	1351	300.4946	12.490	90.0719	1.70	ESTRUCTURA	1.47	174.0825	12.490	1364425.862	1048461.022	22.126
	1352	300.3951	12.384	90.1852	1.70	ESTRUCTURA	1.47	173.9173	12.384	1364425.971	1048461.047	22.084
	1353	306.2359	12.170	92.3017	2.00	ESTRUCTURA	1.47	179.6528	12.158	1364426.127	1048459.808	21.321
	1354	306.2035	11.983	92.4112	2.00	ESTRUCTURA	1.47	179.5961	11.970	1364426.316	1048459.819	21.291
	1355	302.2019	11.700	92.3442	2.00	ESTRUCTURA	1.47	175.5917	11.688	1364426.632	1048460.633	21.326
	1356	303.4339	11.374	92.3845	2.00	ESTRUCTURA	1.47	176.9806	11.362	1364426.939	1048460.333	21.327
	1357	306.4248	12.056	92.5442	2.00	DESCARGA	1.47	179.9664	12.040	1364426.245	1048459.742	21.240
	1358	289.1424	10.293	97.3546	2.00	ESTRUCTURA	1.47	162.4931	10.203	1364428.555	1048462.804	20.492



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1359	291.4545	9.411	98.1614	2.00	ESTRUCTURA	1.47	165.0156	9.313	1364429.289	1048462.143	20.499
	1360	290.3348	9.971	97.5357	2.00	ESTRUCTURA	1.47	163.8164	9.876	1364428.800	1048462.487	20.482
	1361	287.5028	8.682	99.1712	2.00	BORDE_CANO	1.47	161.0942	8.568	1364430.179	1048462.511	20.451
	1362	282.2231	7.338	101.5225	2.00	BORDE_CANO	1.47	155.6284	7.181	1364431.744	1048462.698	20.343
	1363	270.3114	6.159	103.5039	2.00	BORDE_CANO	1.47	143.7736	5.980	1364433.461	1048463.269	20.379
	1364	245.5359	4.587	101.2109	3.10	BORDE_CANO	1.47	119.1528	4.497	1364436.094	1048463.662	19.850
	1365	210.2734	4.539	100.3857	4.10	BORDE_CANO	1.47	83.7125	4.461	1364438.774	1048464.169	18.914
	1364	182.3729	8.841	92.1731	5.00	BORDE_CANO	1.47	55.8778	8.834	1364443.241	1048467.048	18.499
	1365	176.2319	10.145	93.0806	5.00	BORDE_CANO	1.47	49.6417	10.130	1364444.845	1048467.454	18.298
	1366	172.0439	11.702	93.3611	5.00	BORDE_CANO	1.47	45.3306	11.679	1364446.496	1048468.040	18.117
	1367	172.1244	14.944	97.1216	4.00	BORDE_CANO	1.47	45.4653	14.826	1364448.683	1048470.303	17.978
	1368	178.3957	16.442	96.3716	4.00	BORDE_CANO	1.47	51.9189	16.332	1364448.359	1048472.591	17.957
	1369	181.1446	18.607	96.3716	4.00	BORDE_CANO	1.47	54.4992	18.483	1364449.018	1048474.782	17.707
	1370	180.4622	20.071	96.1450	4.00	BORDE_CANO	1.47	54.0259	19.952	1364450.005	1048475.881	17.668
	1371	177.3345	21.310	96.5639	4.00	BORDE_CANO	1.47	50.8156	21.154	1364451.650	1048476.131	17.276
	1372	175.1344	22.526	96.4027	4.00	RIO	1.47	48.4820	22.373	1364453.115	1048476.487	17.234
	1372	174.1513	22.104	96.4327	4.00	RIO	1.47	47.5067	21.952	1364453.114	1048475.921	17.264
	1373	172.0927	21.778	96.5925	4.00	RIO	1.47	45.4106	21.616	1364453.460	1048475.129	17.202
	1374	167.0219	20.697	97.2505	4.00	RIO	1.47	40.2917	20.524	1364453.940	1048473.007	17.180
	1375	178.5750	21.636	97.2406	4.00	BORDE_CANO	1.47	52.2170	21.456	1364451.431	1048476.692	17.065
	1376	184.4016	19.992	96.2207	4.00	BORDE_CANO	1.47	57.9242	19.869	1364448.836	1048476.570	17.635
	1377	188.0436	16.976	93.3633	5.00	BORDE_CANO	1.47	61.3298	16.942	1364446.414	1048474.600	17.784
	1378	185.5141	15.980	93.0713	5.00	BORDE_CANO	1.47	59.1145	15.956	1364446.476	1048473.428	17.983
	1379	178.5050	14.108	97.3023	5.00	BORDE_CANO	1.47	52.1003	13.987	1364446.877	1048470.772	17.009
	1380	180.1947	12.011	96.5311	4.00	BORDE_CANO	1.47	53.5828	11.924	1364445.364	1048469.330	18.412
	1381	187.0234	11.061	96.5312	4.00	BORDE_CANO	1.47	60.2959	10.981	1364443.727	1048469.273	18.526
	1382	202.0104	9.438	96.1855	4.00	BORDE_CANO	1.47	75.2709	9.381	1364440.670	1048468.807	18.814
	1383	207.5754	8.646	97.5210	4.00	BORDE_CANO	1.47	81.2181	8.565	1364439.593	1048468.199	18.669
	1384	213.2428	6.746	95.4108	4.00	BORDE_CANO	1.47	86.6609	6.713	1364438.676	1048466.436	19.184
	1385	240.5207	6.336	91.1310	4.00	BORDE_CANO	1.47	114.1217	6.335	1364435.696	1048465.516	19.718
	1386	262.2144	6.948	97.0712	2.90	BORDE_CANO	1.47	135.6153	6.894	1364433.358	1048464.557	20.091
	1387	279.0339	8.625	93.1052	2.90	BORDE_CANO	1.47	152.3139	8.612	1364430.659	1048463.736	20.474
	1388	282.1544	9.996	99.5917	1.70	BORDE_CANO	1.47	155.5153	9.844	1364429.326	1048463.815	20.419
	1389	287.2808	10.398	99.4100	1.70	BORDE_CANO	1.47	160.7220	10.250	1364428.610	1048463.119	20.403
	1390	281.1737	13.411	91.5735	0.09	DES_DOMICI	1.47	154.5467	13.403	1364426.183	1048465.495	23.309
	1391	307.2830	12.118	85.3451	1.70	DES_DOMICI	1.47	180.7281	12.082	1364426.204	1048459.581	23.086



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1392	311.5631	12.610	83.5826	1.70	DES_DOMICI	1.47	185.1950	12.540	1364425.796	1048458.599	23.476
	1393	320.4640	10.763	84.4402	1.70	PARAMENTO	1.47	194.0309	10.718	1364427.887	1048457.136	23.140
	1394	325.3345	11.811	82.4717	1.70	PARAMENTO	1.47	198.8156	11.718	1364427.194	1048455.956	23.635
	1395	308.0643	14.439	91.0130	0.09	PARAMENTO	1.47	181.3650	14.437	1364423.853	1048459.391	23.509
	1396	279.1318	13.310	89.1640	1.70	PARAMENTO	1.47	152.4748	13.309	1364426.483	1048465.885	22.320
E12024		0.0000				ESTACION		0.0000		1364490.659	1048386.232	24.795
E12023	E12024	359.5959	87.725	89.5047	1.70	ESTACION	1.48	154.8489		1364411.245	1048423.519	24.783
	EAUX_41	17.4009	58.380	90.5519	1.70	DELTA	1.48	352.5181	58.372	1364469.120	1048415.918	23.622
EAUX_41-E12023	E12023	0.0001	58.379	88.3521	1.70	ESTACION	1.43	352.5181	58.372	1364469.120	1048415.918	23.622
	1397	267.5619	3.099	107.4918	3.00	TUBO_DESC	1.43	80.4567	2.950	1364469.609	1048418.828	21.103
	1398	270.3022	3.128	98.5559	3.00	TUBO_DESC	1.43	83.0242	3.090	1364469.495	1048418.985	21.566
	1399	272.1728	3.455	105.2012	3.00	ESTRUCTURA	1.43	84.8092	3.332	1364469.422	1048419.236	21.138
	1400	266.4926	2.668	110.2214	3.00	ESTRUCTURA	1.43	79.3420	2.501	1364469.583	1048418.376	21.123
	1401	246.2947	4.305	103.0330	3.00	ESTRUCTURA	1.43	59.0145	4.194	1364471.279	1048419.513	21.079
	1402	237.5332	3.552	105.3958	3.00	ESTRUCTURA	1.43	50.4103	3.420	1364471.300	1048418.554	21.093
	1403	235.2648	3.660	108.2821	3.00	ESTRUCTURA	1.43	47.9648	3.471	1364471.444	1048418.496	20.892
	1404	245.4305	4.360	105.3502	3.00	ESTRUCTURA	1.43	58.2361	4.200	1364471.331	1048419.489	20.881
	1405	230.3655	5.773	104.2847	3.00	ESTRUCTURA	1.43	43.1334	5.590	1364473.199	1048419.740	20.608
	1406	230.2024	5.866	106.2123	3.00	ESTRUCTURA	1.43	42.8581	5.629	1364473.246	1048419.747	20.400
	1407	220.1133	5.229	105.5800	3.00	ESTRUCTURA	1.43	32.7106	5.027	1364473.350	1048418.635	20.614
	1408	219.1517	5.341	107.5137	3.00	ESTRUCTURA	1.43	31.7728	5.084	1364473.442	1048418.595	20.414
	1409	219.5139	7.399	104.5540	3.00	ESTRUCTURA	1.43	32.3789	7.149	1364475.158	1048419.747	20.146
	1410	219.4454	7.565	106.1358	3.00	ESTRUCTURA	1.43	32.2664	7.263	1364475.262	1048419.796	19.937
	1411	213.3512	7.106	105.3828	3.00	ESTRUCTURA	1.43	26.1048	6.843	1364475.265	1048418.929	20.136
	1412	212.0708	7.286	106.4345	3.00	ESTRUCTURA	1.43	24.6370	6.978	1364475.463	1048418.827	19.955
	1413	210.0547	8.803	105.3417	3.00	ESTRUCTURA	1.43	22.6145	8.480	1364476.948	1048419.179	19.689
	1414	210.1814	8.984	106.4249	3.00	ESTRUCTURA	1.43	22.8220	8.604	1364477.051	1048419.256	19.468
	1415	215.0045	9.279	105.0705	3.00	ESTRUCTURA	1.43	27.5306	8.958	1364477.064	1048420.059	19.632
	1416	215.0717	9.433	106.1342	3.00	ESTRUCTURA	1.43	27.6395	9.057	1364477.144	1048420.120	19.416
	1417	205.1328	10.963	104.4914	3.00	ESTRUCTURA	1.43	17.7425	10.598	1364479.214	1048419.148	19.248
	1418	205.4624	11.045	105.3947	3.00	ESTRUCTURA	1.43	18.2914	10.635	1364479.218	1048419.256	19.070
	1419	211.1744	11.308	104.1313	3.00	ESTRUCTURA	1.43	23.8136	10.962	1364479.148	1048420.344	19.274
	1420	211.2648	11.286	105.1346	3.00	ESTRUCTURA	1.43	23.9648	10.890	1364479.071	1048420.341	19.087
	1421	209.0044	13.193	103.5914	3.00	ESTRUCTURA	1.43	21.5303	12.802	1364481.029	1048420.616	18.863
	1422	209.1110	13.219	105.1009	3.00	ESTRUCTURA	1.43	21.7042	12.758	1364480.974	1048420.636	18.593
	1423	203.3416	12.879	104.2537	3.00	ESTRUCTURA	1.43	16.0892	12.473	1364481.104	1048419.375	18.843



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1424	203.3810	13.015	105.2206	3.00	ESTRUCTURA	1.43	16.1542	12.550	1364481.174	1048419.410	18.603
	1425	206.3351	14.853	102.5821	4.00	ESTRUCTURA	1.43	19.0823	14.474	1364482.799	1048420.650	17.718
	1426	206.4705	15.036	105.4306	4.00	ESTRUCTURA	1.43	19.3028	14.474	1364482.780	1048420.703	16.979
	1427	202.5953	14.735	105.2835	3.40	ESTRUCTURA	1.43	15.5161	14.201	1364482.803	1048419.717	17.720
	1428	202.4246	14.876	106.4156	3.40	ESTRUCTURA	1.43	15.2309	14.249	1364482.868	1048419.661	17.377
	1429	207.1800	15.417	102.2326	5.00	RIO	1.43	19.8181	15.058	1364483.286	1048421.023	16.744
	1430	203.0936	15.776	105.5420	3.50	RIO	1.43	15.6781	15.172	1364483.728	1048420.018	17.228
	1431	219.0342	7.108	113.1603	1.70	DES_DOMICI	1.43	31.5798	6.530	1364474.683	1048419.338	20.544
	1432	139.0403	5.155	76.0940	1.70	DES_DOMICI	1.43	311.5856	5.005	1364472.442	1048412.174	24.585
E12024		0.0000				ESTACION		0.0000		1364490.659	1048386.232	24.795
EAUX_28	E12024	0.0000	50.916	89.3606	1.70	ESTACION	1.43	304.2596		1364519.313	1048344.164	24.683
	EAUX_42	252.2217	20.405	90.5146	1.70	DELTA	1.43	16.6310	20.403	1364538.862	1048350.003	24.100
EAUX_42-EAUX_28	EAUX_28	0.0000	20.428	87.4549	1.70	ESTACION	1.49	16.6310	20.403	1364538.862	1048350.003	24.100
	1433	226.4151	2.897	107.5128	1.70	TUBO_DESC	1.49	63.3285	2.757	1364540.100	1048352.467	22.999
	1434	204.5706	6.163	105.1708	1.70	TUBO_DESC	1.49	41.5827	5.945	1364543.309	1048353.949	22.263
	1435	204.1733	6.209	106.5238	1.70	TUBO_DESC	1.49	40.9235	5.942	1364543.351	1048353.895	22.085
	1436	194.4356	15.726	116.2245	1.70	RIO	1.49	31.3633	14.089	1364550.892	1048357.336	16.900
	1437	188.3045	15.929	115.5956	1.70	RIO	1.49	25.1435	14.317	1364551.822	1048356.086	16.905
	1438	204.3924	15.923	116.0710	1.70	RIO	1.49	41.2877	14.297	1364549.605	1048359.437	16.877
	1439	213.5832	16.419	115.0710	1.70	RIO	1.49	50.6066	14.866	1364548.297	1048361.492	16.917
	1440	223.4616	17.646	113.1917	1.70	RIO	1.49	60.4021	16.204	1364546.865	1048364.093	16.902
	1441	113.0348	2.171	80.5640	1.70	ARBOL	1.49	309.6944	2.144	1364540.231	1048348.354	24.229
E12014		0.0000				ESTACION		0.0000		1364003.248	1048626.187	25.440
E12015	E12014	0.0000	105.367	89.3553	1.70	ESTACION	1.47	314.3153		1364076.868	1048550.786	25.180
	EAUX_43	235.1957	48.450	90.2652	1.70	DELTA	1.47	9.6478	48.449	1364124.632	1048558.905	24.566
EAUX_43-E12015	E12015	0.0000	48.465	88.4856	1.70	ESTACION	1.32	9.6478	48.449	1364124.632	1048558.905	24.566
	1442	173.4336	11.204	114.2848	3.00	TUBO_DESC	1.32	3.3745	10.197	1364134.811	1048559.506	18.241
	1443	173.3120	11.452	116.0926	3.00	TUBO_DESC	1.32	3.1700	10.279	1364134.895	1048559.474	17.835
	1444	157.4104	11.318	116.5120	3.00	RIO	1.32	347.3323	10.097	1364134.483	1048556.691	17.771
	1445	148.0631	11.036	118.0053	3.00	RIO	1.32	337.7564	9.743	1364133.649	1048555.217	17.700
	1446	181.2406	12.043	115.2816	3.00	RIO	1.32	11.0495	10.872	1364135.302	1048560.989	17.704
	1447	192.1829	13.244	112.5344	3.00	RIO	1.32	21.9559	12.201	1364135.947	1048563.467	17.731
	1448	142.3532	1.759	96.3621	1.70	ARBOL	1.32	332.2400	1.747	1364126.178	1048558.092	23.981
	1449	207.4928	2.930	97.0912	1.70	ARBOL	1.32	37.4723	2.907	1364126.939	1048560.674	23.818
E10034		0.0000				ESTACION		0.0000		1363665.675	1048800.758	26.305
E10036	E10034	0.0000	135.708	89.5555	1.70	ESTACION	1.50	327.5137		1363780.147	1048727.870	26.319



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	EAUX_44	186.2728	67.134	90.1703	1.70	DELTA	1.50	333.9714	67.133	1363840.472	1048698.410	25.781
EAUX_44-E10036	E10036	0.0000	67.151	89.2202	1.70	ESTACION	1.49	333.9714	67.133	1363840.472	1048698.410	25.781
	EAUX_45	260.0022	43.759	89.1907	1.70	DELTA	1.49	53.9775	43.756	1363866.205	1048733.799	26.092
EAUX_45-EAUX_44	EAUX_44	0.0000	43.763	89.5944	1.70	ESTACION	1.38	53.9775	43.756	1363866.205	1048733.799	26.092
	1450	199.4818	8.136	110.0503	1.70	TUBO_DESC	1.38	73.7825	7.641	1363868.339	1048741.137	22.976
	1451	199.2359	8.622	116.2104	1.70	TUBO_DESC	1.38	73.3773	7.726	1363868.415	1048741.203	21.943
	1452	199.3821	8.723	116.5949	1.70	DESCARGA	1.38	73.6167	7.772	1363868.397	1048741.256	21.810
	1453	193.4621	8.450	116.0837	1.70	ESTRUCTURA	1.38	67.7500	7.586	1363869.077	1048740.820	22.047
	1454	191.5730	9.678	114.3242	1.70	ESTRUCTURA	1.38	65.9359	8.803	1363869.794	1048741.838	21.750
	1455	191.1928	10.702	113.2710	1.70	ESTRUCTURA	1.38	65.3020	9.818	1363870.307	1048742.719	21.511
	1456	190.5603	11.660	111.4123	1.70	ESTRUCTURA	1.38	64.9117	10.834	1363870.799	1048743.612	21.461
	1457	190.5116	11.809	112.3008	1.70	ESTRUCTURA	1.38	64.8320	10.910	1363870.844	1048743.674	21.250
	1458	190.2858	12.860	111.0522	1.70	ESTRUCTURA	1.38	64.4603	11.999	1363871.378	1048744.626	21.142
	1459	190.3442	12.868	111.0500	1.70	ESTRUCTURA	1.38	64.5559	12.007	1363871.363	1048744.641	21.141
	1460	190.3114	12.821	111.1031	1.70	ESTRUCTURA	1.38	64.4981	11.955	1363871.352	1048744.590	21.139
	1461	190.2812	11.855	112.2639	1.70	ESTRUCTURA	1.38	64.4475	10.957	1363870.931	1048743.685	21.244
	1462	190.5900	11.821	112.3053	1.70	ESTRUCTURA	1.38	64.9609	10.920	1363870.826	1048743.693	21.243
	1463	190.2921	11.638	111.4755	1.70	ESTRUCTURA	1.38	64.4667	10.806	1363870.862	1048743.550	21.448
	1464	190.5319	11.681	111.4038	1.70	ESTRUCTURA	1.38	64.8662	10.855	1363870.815	1048743.627	21.455
	1465	190.5019	10.704	113.2330	1.70	ESTRUCTURA	1.38	64.8162	9.824	1363870.385	1048742.690	21.520
	1466	191.2312	10.728	113.2331	1.70	ESTRUCTURA	1.38	65.3642	9.846	1363870.309	1048742.749	21.511
	1467	190.5058	10.624	112.3437	1.70	ESTRUCTURA	1.38	64.8270	9.810	1363870.377	1048742.678	21.691
	1468	191.3803	10.646	112.3100	1.70	ESTRUCTURA	1.38	65.6117	9.834	1363870.265	1048742.756	21.693
	1469	191.5555	9.624	114.4234	1.70	ESTRUCTURA	1.38	65.9095	8.743	1363869.773	1048741.781	21.747
	1470	192.2320	9.810	114.1558	1.70	ESTRUCTURA	1.38	66.3664	8.943	1363869.790	1048741.993	21.738
	1471	193.2944	8.408	116.1506	1.70	ESTRUCTURA	1.38	67.4731	7.541	1363869.094	1048740.765	22.051
	1472	194.1732	8.489	116.0007	1.70	ESTRUCTURA	1.38	68.2698	7.630	1363869.029	1048740.887	22.048
	1473	203.4238	8.761	115.0457	1.70	ESTRUCTURA	1.38	77.6881	7.935	1363867.897	1048741.552	22.056
	1474	202.2925	8.745	115.0244	1.70	ESTRUCTURA	1.38	76.4678	7.923	1363868.058	1048741.502	22.068
	1475	202.0500	9.734	113.2727	1.70	ESTRUCTURA	1.38	76.0609	8.930	1363868.356	1048742.466	21.895
	1476	201.2116	9.623	113.5103	1.70	ESTRUCTURA	1.38	75.3320	8.801	1363868.433	1048742.314	21.879
	1477	201.4015	9.851	114.0637	1.70	ESTRUCTURA	1.38	75.6484	8.992	1363868.433	1048742.510	21.746
	1478	201.0133	9.836	114.1649	1.70	ESTRUCTURA	1.38	75.0034	8.966	1363868.525	1048742.460	21.725
	1479	201.0637	10.666	112.3734	1.70	ESTRUCTURA	1.38	75.0878	9.845	1363868.738	1048743.313	21.666
	1480	200.0647	10.718	112.3358	1.70	ESTRUCTURA	1.38	74.0906	9.897	1363868.918	1048743.318	21.657
	1481	200.1835	10.930	113.0652	1.70	ESTRUCTURA	1.38	74.2873	10.053	1363868.927	1048743.476	21.479



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	1482	199.4745	10.823	113.3029	1.70	ESTRUCTURA	1.38	73.7734	9.925	1363868.978	1048743.329	21.453
	1483	199.5449	11.726	111.4924	1.70	ESTRUCTURA	1.38	73.8912	10.886	1363869.225	1048744.258	21.411
	1484	199.1201	11.732	111.4459	1.70	ESTRUCTURA	1.38	73.1778	10.897	1363869.358	1048744.230	21.423
	1485	199.2907	12.758	112.2853	1.70	ESTRUCTURA	1.38	73.4628	11.788	1363869.560	1048745.100	20.891
	1486	184.0355	17.295	111.5327	2.30	RIO	1.38	58.0428	16.048	1363874.699	1048747.415	18.722
	1487	193.1101	14.734	116.4323	2.30	RIO	1.38	67.1612	13.160	1363871.313	1048745.928	18.544
	1488	235.2454	13.776	115.0745	2.90	RIO	1.38	109.3925	12.472	1363862.063	1048745.564	18.720
	1489	348.3545	5.355	86.1326	1.70	MANHOLE	1.38	222.5734	5.343	1363862.270	1048730.184	26.123



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E11032		0.0000				ESTACION		0.0000		1363350.632	1049514.896	26.486
E10017	E11032	0.0000	54.666	91.1824	1.70	ESTACION	1.38	197.9680		1363298.566	1049498.011	28.050
	E12000	134.1726	8.313	85.1103	1.70	DELTA	1.38	152.2586	8.284	1363291.234	1049501.867	28.429
E12000-E10017	E10017	0.0000	8.284	90.4428	1.70	ESTACION	1.42	152.2586	8.284	1363291.234	1049501.867	28.429
	E12001	133.4720	125.377	89.5006	1.70	DELTA	1.42	106.0475	125.376	1363256.576	1049622.358	28.513
	1	40.4545	2.932	83.0124	1.70	PARAMENTO	1.42	13.0211	2.910	1363294.070	1049502.523	28.508
	2	225.0322	7.622	85.4224	1.70	PARAMENTO	1.42	197.3147	7.601	1363283.978	1049499.605	28.722
	3	116.4416	7.460	84.3936	1.70	POSTE	1.42	88.9963	7.428	1363291.364	1049509.293	28.846
	4	149.1329	23.116	88.4900	1.70	POSTE	1.42	121.4833	23.111	1363279.164	1049521.576	28.629
	5	128.1730	27.874	89.0357	1.70	PARAMENTO	1.42	100.5502	27.870	1363286.131	1049529.266	28.606
	6	146.1737	35.411	89.2317	1.70	PARAMENTO	1.42	118.5522	35.409	1363274.310	1049532.969	28.530
	7	132.2132	40.813	89.3323	1.70	POSTE	1.42	104.6175	40.812	1363280.935	1049541.358	28.468
	8	140.2504	53.367	89.4404	1.70	POSTE	1.42	112.6763	53.366	1363270.660	1049551.108	28.399
	9	131.3920	57.754	89.3414	1.70	PARAMENTO	1.42	103.9141	57.752	1363277.347	1049557.925	28.585
	10	141.1734	59.112	89.4806	1.70	PARAMENTO	1.42	113.5513	59.112	1363267.615	1049556.055	28.356
	11	136.3411	63.173	89.4406	1.70	MANHOLE	1.42	108.8283	63.172	1363270.846	1049561.659	28.444
	12	134.3545	63.034	89.4307	1.70	EJE_COLEC	1.42	106.8544	63.033	1363272.958	1049562.192	28.461
	13	134.3545	22.219	89.0320	1.70	LINEAMIENT	1.42	106.8544	22.216	1363284.793	1049523.129	28.518
E12001-E12000	E12000	0.0000	125.376	89.5537	1.70	ESTACION	1.41	106.0475	125.376	1363256.576	1049622.358	28.513
	E12002	238.1646	14.539	88.3240	1.70	DELTA	1.41	164.3269	14.534	1363242.582	1049626.284	28.596
	14	359.1102	62.356	89.4825	1.70	EJE_COLEC	1.41	285.2313	62.356	1363272.958	1049562.192	28.437
	15	0.5355	56.611	89.5341	1.70	POSTE	1.41	286.9461	56.611	1363273.076	1049568.205	28.331
	16	351.4734	45.039	89.5143	1.70	POSTE	1.41	277.8402	45.039	1363262.720	1049577.740	28.335
	17	352.5135	47.798	89.5656	1.70	SUMIDERO	1.41	278.9072	47.798	1363263.977	1049575.136	28.270
	18	352.1519	48.607	89.5938	1.70	SUMIDERO	1.41	278.3027	48.607	1363263.595	1049574.260	28.232
	19	0.4038	38.474	89.5750	1.70	SUMIDERO	1.41	286.7247	38.474	1363267.648	1049585.511	28.251
	20	359.5500	37.680	89.5629	1.70	SUMIDERO	1.41	285.9641	37.680	1363266.939	1049586.131	28.265
	21	340.1807	19.070	89.2113	1.70	POSTE	1.41	266.3494	19.069	1363255.362	1049603.328	28.442
	22	2.0452	28.096	89.4502	1.70	POSTE	1.41	288.1286	28.096	1363265.318	1049595.657	28.349
	23	7.1540	18.069	88.3344	1.70	PARAMENTO	1.41	293.3086	18.063	1363263.723	1049605.769	28.680
	24	337.0145	19.689	89.0403	1.70	PARAMENTO	1.41	263.0766	19.686	1363254.203	1049602.815	28.547
	25	163.0200	4.062	86.4932	1.70	POSTE	1.41	89.0808	4.056	1363256.641	1049626.413	28.452
	26	250.0355	9.564	88.2143	1.70	POSTE	1.41	176.1127	9.560	1363247.038	1049623.006	28.500
	27	178.3919	9.462	88.1013	1.70	POSTE	1.41	104.7027	9.457	1363254.176	1049631.505	28.529
	28	169.3336	12.182	85.3832	2.30	PARAMENTO	1.41	95.6075	12.147	1363255.389	1049634.446	28.553
	29	254.5337	7.959	87.3647	1.70	PARAMENTO	1.41	180.9411	7.952	1363248.625	1049622.227	28.558



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	30	231.2848	18.769	88.1949	1.70	PARAMENTO	1.41	157.5275	18.761	1363239.239	1049629.529	28.774
	31	244.1748	7.892	88.3821	1.70	SUMIDERO	1.41	170.3441	7.890	1363248.798	1049623.681	28.414
	32	244.1611	8.815	88.3448	1.70	SUMIDERO	1.41	170.3172	8.812	1363247.889	1049623.840	28.445
	33	203.2720	11.335	88.2224	2.10	MANHOLE	1.41	129.5030	11.330	1363249.368	1049631.100	28.149
E12002-E12001	E12001	0.0000	14.549	89.1557	1.70	ESTACION	1.42	164.3269	14.534	1363242.582	1049626.284	28.596
	E12003	209.3125	48.187	89.3055	1.70	DELTA	1.42	193.8505	48.185	1363195.798	1049614.749	28.725
	34	203.5932	21.917	89.1925	1.70	POSTE	1.42	188.3191	21.915	1363220.897	1049623.113	28.576
	35	219.2015	32.095	89.1041	1.70	POSTE	1.42	203.6644	32.092	1363213.189	1049613.403	28.778
	36	200.2109	21.497	89.0542	1.70	PARAMENTO	1.42	184.6794	21.494	1363221.159	1049624.531	28.657
	37	226.3417	21.659	88.5613	1.70	PARAMENTO	1.42	210.8983	21.655	1363224.000	1049615.164	28.719
	38	205.5013	45.497	89.1636	1.70	PARAMENTO	1.42	190.1638	45.493	1363197.802	1049618.256	28.892
	39	218.5717	43.995	89.1823	1.70	PARAMENTO	1.42	203.2816	43.992	1363202.172	1049608.896	28.850
	40	212.3048	51.401	89.3508	1.70	MHVIRTUAL	1.42	196.8402	51.400	1363193.386	1049611.394	28.689
E12003-E12002	E12002	0.0000	48.198	89.5202	1.70	ESTACION	1.45	193.8505	48.185	1363195.798	1049614.749	28.725
	E12004	95.2655	45.368	92.0441	1.70	DELTA	1.45	109.2991	45.338	1363180.813	1049657.540	26.830
	41	0.0000	22.553	89.2957	1.70	LINEAMIENT	1.45	13.8505	22.552	1363217.694	1049620.148	28.672
	42	230.4054	8.459	88.3929	1.70	POSTE	1.45	244.5322	8.457	1363192.161	1049607.114	28.673
	43	276.5016	20.040	89.5332	1.70	POSTE	1.45	290.6883	20.040	1363202.877	1049596.001	28.513
	44	280.2715	19.802	89.0020	1.70	PARAMENTO	1.45	294.3047	19.799	1363203.947	1049596.705	28.819
	45	290.1202	9.304	87.4401	1.70	PARAMENTO	1.45	304.0511	9.297	1363201.003	1049607.046	28.843
	46	250.3531	19.097	89.5803	1.70	PARAMENTO	1.45	264.4425	19.097	1363193.948	1049595.742	28.486
	47	118.4718	15.613	88.4039	1.70	PARAMENTO	1.45	132.6388	15.609	1363185.225	1049626.232	28.835
	48	81.5002	16.583	89.1148	1.70	PARAMENTO	1.45	95.6844	16.581	1363194.155	1049631.249	28.707
	49	98.2813	17.805	89.4827	1.70	MANHOLE	1.45	112.3208	17.805	1363189.036	1049631.220	28.535
	50	98.4745	25.826	90.5006	1.70	MANHOLE	1.45	112.6463	25.823	1363185.855	1049638.581	28.098
	51	103.4336	17.210	89.4007	1.70	MANHOLE	1.45	117.5772	17.210	1363187.831	1049630.004	28.574
	52	118.4418	27.300	89.5326	1.70	POSTE	1.45	132.5888	27.300	1363177.323	1049634.848	28.527
	53	116.5438	28.299	89.2054	1.70	PARAMENTO	1.45	130.7611	28.297	1363177.322	1049636.183	28.797
	54	111.0253	26.079	89.1529	1.70	PARAMENTO	1.45	124.8986	26.077	1363180.879	1049636.136	28.813
	55	107.0350	26.642	89.3429	1.70	PARAMENTO	1.45	120.9144	26.641	1363182.111	1049637.606	28.673
	56	104.5802	30.640	89.3913	1.70	PARAMENTO	1.45	118.8177	30.639	1363181.029	1049641.594	28.660
	57	103.5306	29.601	89.3831	1.70	POSTE	1.45	117.7355	29.600	1363182.022	1049640.949	28.660
	58	95.2655	21.558	90.2206	1.70	LINEAMIENT	1.45	109.2991	21.558	1363188.673	1049635.095	28.336
	59	95.2655	28.183	91.1857	1.70	LINEAMIENT	1.45	109.2991	28.176	1363186.486	1049641.341	27.828
	60	95.2655	32.115	91.3739	1.70	LINEAMIENT	1.45	109.2991	32.102	1363185.188	1049645.047	27.563
	61	95.2655	37.942	92.0834	1.70	LINEAMIENT	1.45	109.2991	37.915	1363183.267	1049650.534	27.056



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E12004-E12003	E12003	0.0000	45.398	87.1613	1.70	ESTACION	1.43	109.2991	45.338	1363180.813	1049657.540	26.830
	E12005	200.1426	36.774	90.1621	1.70	DELTA	1.43	129.5397	36.774	1363157.403	1049685.899	26.384
	62	176.0604	3.277	88.0110	1.70	MANHOLE	1.43	105.4002	3.275	1363179.944	1049660.697	26.672
	63	45.4117	3.893	77.4001	1.70	POSTE	1.43	334.9872	3.803	1363184.260	1049655.932	27.390
	64	68.4833	5.237	81.5235	1.70	PARAMENTO	1.43	358.1083	5.184	1363185.995	1049657.368	27.299
	65	283.4210	4.049	85.1318	1.70	PARAMENTO	1.43	213.0019	4.035	1363177.430	1049655.342	26.896
	66	192.5852	15.372	89.4006	1.70	POSTE	1.43	122.2802	15.372	1363172.604	1049670.536	26.648
	67	209.0420	16.033	90.0322	1.70	POSTE	1.43	138.3713	16.033	1363168.829	1049668.190	26.543
	68	188.0916	15.887	86.5327	1.70	PARAMENTO	1.43	117.4536	15.864	1363173.500	1049671.617	27.420
	69	207.5304	28.267	90.1312	1.70	PARAMENTO	1.43	137.1836	28.267	1363160.079	1049676.751	26.450
	70	202.1615	47.706	90.3712	1.70	MANHOLE	1.43	131.5700	47.703	1363149.161	1049693.229	26.043
E12005-E12004	E12004	0.0000	36.783	88.5048	1.70	ESTACION	1.39	129.5397	36.774	1363157.403	1049685.899	26.384
	E12006	137.0432	23.759	89.1329	1.70	DELTA	1.39	86.6152	23.757	1363158.806	1049709.614	26.393
	71	353.0944	20.686	88.4850	1.70	POSTE	1.39	302.7019	20.682	1363168.577	1049668.495	26.500
	72	336.5545	9.483	87.5032	1.70	PARAMENTO	1.39	286.4688	9.476	1363160.089	1049676.811	26.429
	73	329.5513	10.085	87.3049	1.70	PARAMENTO	1.39	279.4600	10.076	1363159.059	1049675.960	26.509
	74	56.0954	3.023	83.4507	1.70	PARAMENTO	1.39	5.7047	3.005	1363160.393	1049686.197	26.401
	75	171.0718	7.507	88.3650	1.70	POSTE	1.39	120.6613	7.505	1363153.576	1049692.354	26.253
	76	209.3046	15.839	89.2253	1.70	PARAMENTO	1.39	159.0525	15.838	1363142.612	1049691.561	26.243
	77	172.0354	17.106	89.1710	1.70	PARAMENTO	1.39	121.6047	17.105	1363148.439	1049700.467	26.285
	78	141.2411	23.242	89.1954	1.70	PARAMENTO	1.39	90.9427	23.240	1363157.021	1049709.136	26.343
	79	177.3454	22.399	87.1000	2.50	PARAMENTO	1.39	127.1213	22.372	1363143.902	1049703.737	26.379
	80	89.4909	15.998	89.5311	1.70	LINDERO	1.39	39.3588	15.998	1363169.772	1049696.044	26.104
	81	153.3205	12.547	89.2930	1.70	ARBOL	1.39	103.0744	12.547	1363154.565	1049698.120	26.183
	82	138.1826	25.873	89.2826	1.70	ARBOL	1.39	87.8469	25.872	1363158.375	1049711.752	26.309
E12006-E12005	E12005	0.0000	23.763	89.1835	1.70	ESTACION	1.40	86.6152	23.757	1363158.806	1049709.614	26.393
	E12007	237.2017	27.189	89.4017	1.70	DELTA	1.40	143.9533	27.189	1363136.823	1049725.613	26.244
	83	0.0000	12.094	89.2758	1.70	LINEAMIENT	1.40	266.6152	12.093	1363158.092	1049697.542	26.201
	84	241.3217	7.145	87.5351	1.70	PARAMENTO	1.40	148.1533	7.140	1363152.740	1049713.382	26.350
	85	214.5955	7.108	87.4924	1.70	ARBOL	1.40	121.6138	7.103	1363155.082	1049715.663	26.358
	86	143.0046	1.803	83.1103	1.70	ARBOL	1.40	49.6280	1.790	1363159.965	1049710.978	26.302
	87	112.1720	3.338	85.5732	1.70	ARBOL	1.40	18.9041	3.330	1363161.956	1049710.693	26.324
	88	153.0641	5.837	87.4719	1.70	ARBOL	1.40	59.7266	5.833	1363161.746	1049714.651	26.314
	89	237.2017	15.694	89.1333	1.70	LINEAMIENT	1.40	143.9533	15.693	1363146.118	1049718.848	26.300
E12007-E12006	E12006	0.0000	27.189	89.0740	1.70	ESTACION	1.42	143.9533	27.189	1363136.823	1049725.613	26.244
	E10011	249.1430	47.630	89.2321	1.70	DELTA	1.42	213.1950	47.627	1363096.967	1049699.538	26.475



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	90	230.2345	14.584	88.5740	1.70	EJE_COLEC	1.42	194.3491	14.582	1363122.696	1049721.999	26.232
	91	230.2345	9.326	89.0514	1.70	LINEAMIENT	1.42	194.3491	9.325	1363127.789	1049723.302	26.116



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION D
INGENIERA YINNA XIMENA PERAFAN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
E13000		0.0000				ESTACION		0.0000		1363560.122	1049549.674	28.258
E13001	E13000	0.0000	73.595	89.3830	1.70	ESTACION	1.47	300.7346		1363597.752	1049486.385	28.009
	E13002	180.2645	46.717	90.0508	1.70	DELTA	1.47	301.1805	46.717	1363621.939	1049446.417	27.705
	1	1.1133	66.355	89.3600	1.70	CERRAMIENT	1.47	121.9271	66.353	1363562.662	1049542.701	28.238
	2	2.5110	29.794	89.1939	1.70	CERRAMIENT	1.47	123.5874	29.792	1363581.271	1049511.203	28.124
	3	148.5748	3.327	85.5333	1.70	CERRAMIENT	1.47	269.6980	3.318	1363597.735	1049483.067	28.013
	4	169.4840	10.064	88.4807	1.70	CERRAMIENT	1.47	290.5458	10.062	1363601.283	1049476.963	27.985
	5	173.4435	17.407	89.2324	1.70	CERRAMIENT	1.47	294.4777	17.406	1363604.964	1049470.543	27.960
	6	358.1353	49.855	89.3400	1.70	POSTE	1.47	118.9660	49.854	1363573.609	1049530.002	28.152
	7	350.4751	7.652	88.0701	1.70	POSTE	1.47	111.5321	7.648	1363594.945	1049493.499	28.026
	8	182.0653	31.638	89.4630	1.70	POSTE	1.47	302.8494	31.638	1363614.913	1049459.806	27.899
	9	357.0822	44.124	89.3541	1.70	ANDEN	1.47	117.8741	44.123	1363577.123	1049525.389	28.087
	10	344.2313	6.836	87.5847	1.70	ANDEN	1.47	105.1216	6.832	1363595.970	1049492.980	28.016
	11	188.1835	11.866	89.5946	1.70	ANDEN	1.47	309.0444	11.866	1363605.227	1049477.169	27.776
E13002-E13001	E13001	0.0001	46.717	89.1843	1.70	ESTACION	1.43	301.1805	46.717	1363621.939	1049446.417	27.705
	E13003	181.0940	41.530	89.4200	1.70	DELTA	1.43	302.3416	41.529	1363644.156	1049411.330	27.656
	12	5.5613	29.412	88.5612	1.70	CERRAMIENT	1.43	127.1174	29.407	1363604.194	1049469.866	27.985
	13	18.3420	16.011	88.3052	1.70	CERRAMIENT	1.43	139.7527	16.006	1363609.723	1049456.758	27.854
	14	8.2700	15.284	88.1500	1.70	CERRAMIENT	1.43	129.6305	15.277	1363612.195	1049458.183	27.906
	15	8.4450	14.558	88.0525	1.70	CERRAMIENT	1.43	129.9277	14.550	1363612.601	1049457.574	27.924
	16	12.3021	10.679	87.3620	1.70	CERRAMIENT	1.43	133.6863	10.670	1363614.570	1049454.132	27.885
	17	44.0912	3.314	84.4954	1.70	CERRAMIENT	1.43	165.3338	3.301	1363618.746	1049447.252	27.738
	18	166.2633	11.791	85.2931	2.35	CERRAMIENT	1.43	287.6230	11.755	1363625.498	1049435.214	27.716
	19	170.0308	15.634	86.3252	2.35	CERRAMIENT	1.43	291.2327	15.606	1363627.591	1049431.871	27.730
	20	55.3815	11.353	89.2642	1.70	CERRAMIENT	1.43	176.8180	11.352	1363610.604	1049447.047	27.549
	21	174.2146	29.617	89.3326	1.70	CERRAMIENT	1.43	295.5433	29.616	1363634.709	1049419.695	27.668
	22	164.3958	9.819	88.2013	1.70	CERRAMIENT	1.43	285.8466	9.815	1363624.619	1049436.975	27.724
	23	153.1706	10.784	89.0702	1.70	CERRAMIENT	1.43	274.4655	10.783	1363622.779	1049435.667	27.605
	24	179.0810	21.522	89.1959	1.70	POSTE	1.43	300.3166	21.521	1363632.802	1049427.839	27.690
	25	189.0850	11.384	89.0022	1.70	BORDE_VIA	1.43	310.3277	11.382	1363629.305	1049437.739	27.636
	26	183.5847	24.762	89.3522	1.70	BORDE_VIA	1.43	305.1602	24.761	1363636.198	1049426.173	27.616
	27	345.2827	8.649	88.1335	1.70	BORDE_VIA	1.43	106.6546	8.645	1363619.462	1049454.699	27.707
	28	11.3418	25.024	88.5109	1.70	PARAMENTO	1.43	132.7521	25.019	1363604.956	1049464.788	27.940
	29	42.1156	20.609	89.4311	1.70	PARAMENTO	1.43	163.3794	20.609	1363602.191	1049452.312	27.540
	30	18.4507	16.073	88.2127	1.70	PARAMENTO	1.43	139.9324	16.066	1363609.644	1049456.759	27.900
	31	42.2245	20.729	89.3856	1.70	CERRAMIENT	1.43	163.5596	20.729	1363602.058	1049452.283	27.566



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	32	58.1828	29.359	90.0249	1.70	CERRAMIENT	1.43	179.4883	29.359	1363592.581	1049446.679	27.415
	33	59.2759	29.075	89.5946	1.70	CERRAMIENT	1.43	180.6469	29.075	1363592.866	1049446.089	27.441
	34	70.2720	26.481	89.5904	1.70	CERRAMIENT	1.43	191.6360	26.481	1363596.002	1049441.076	27.446
	35	73.5745	32.187	90.0213	1.70	CERRAMIENT	1.43	195.1430	32.187	1363590.870	1049438.009	27.418
	36	93.0249	23.174	89.4756	1.70	CERRAMIENT	1.43	214.2274	23.174	1363602.779	1049433.382	27.520
	37	92.2647	26.775	89.5932	1.70	CERRAMIENT	1.43	213.6269	26.775	1363599.645	1049431.589	27.443
	38	114.4345	26.701	89.5212	1.70	PARAMENTO	1.43	235.9096	26.701	1363606.973	1049424.304	27.500
	39	117.1442	30.312	89.4415	1.70	PARAMENTO	1.43	238.4255	30.312	1363606.068	1049420.592	27.578
	40	121.4024	31.651	89.4541	1.70	PARAMENTO	1.43	242.8538	31.651	1363607.498	1049418.253	27.571
	41	124.2029	29.661	89.5703	1.70	PARAMENTO	1.43	245.5219	29.661	1363609.649	1049419.422	27.464
	42	129.4012	32.240	89.3046	1.70	PARAMENTO	1.43	250.8505	32.239	1363611.364	1049415.962	27.713
	43	155.5636	32.443	89.4815	1.70	CERRAMIENT	1.43	277.1238	32.443	1363625.963	1049414.224	27.550
	44	141.2341	38.265	90.0119	1.70	CERRAMIENT	1.43	262.5752	38.265	1363616.994	1049408.473	27.424
	45	123.4136	25.891	89.5939	1.70	POSTE	1.43	244.8738	25.891	1363610.946	1049422.976	27.442
	46	174.2323	29.661	89.3359	1.70	PARAMENTO	1.43	295.5702	29.660	1363634.741	1049419.662	27.663
	47	171.5307	29.825	89.1018	1.70	PARAMENTO	1.43	293.0658	29.822	1363633.623	1049418.979	27.870
	48	145.0822	23.588	89.0705	1.70	ARBOL	1.43	266.3199	23.585	1363620.425	1049422.880	27.802
	49	110.1443	14.586	89.1740	1.70	ARBOL	1.43	231.4258	14.585	1363612.845	1049435.014	27.619
	50	55.2210	15.118	89.3804	1.70	ARBOL	1.43	176.5499	15.118	1363606.849	1049447.327	27.535
	51	155.0259	12.263	89.2621	1.70	CAMINO	1.43	276.2302	12.262	1363623.270	1049434.227	27.559
	52	161.3751	15.469	89.2621	1.70	CAMINO	1.43	282.8113	15.468	1363625.369	1049431.334	27.590
	53	154.3243	14.739	89.2621	1.70	CAMINO	1.43	275.7258	14.738	1363623.410	1049431.752	27.583
	54	152.3109	24.438	89.4836	1.70	CAMINO	1.43	273.6996	24.438	1363623.516	1049422.030	27.520
	55	143.2420	13.805	89.3205	1.70	CAMINO	1.43	264.5860	13.805	1363620.637	1049432.674	27.551
	56	157.3322	24.758	89.4350	1.70	CAMINO	1.43	278.7366	24.758	1363625.700	1049421.946	27.555
	57	142.1217	11.118	89.3019	1.70	CAMINO	1.43	263.3852	11.118	1363620.658	1049435.373	27.535
	58	156.2406	28.042	89.4425	1.70	CAMINO	1.43	277.5821	28.042	1363625.639	1049418.620	27.566
	59	96.3833	10.179	89.3734	1.70	CAMINO	1.43	217.8230	10.179	1363613.899	1049440.175	27.505
	60	151.3134	27.124	89.4819	1.70	CAMINO	1.43	272.7066	27.124	1363623.220	1049419.323	27.531
	61	97.1751	12.731	89.4613	1.70	CAMINO	1.43	218.4780	12.731	1363611.973	1049438.495	27.490
	62	80.4734	14.009	89.3849	1.70	CAMINO	1.43	201.9733	14.009	1363608.948	1049441.175	27.525
	63	91.0916	15.085	89.5145	1.70	CAMINO	1.43	212.3349	15.085	1363609.193	1049438.348	27.475
E13003-E13002	E13002	0.0000	41.531	89.2917	1.70	ESTACION	1.38	302.3416	41.529	1363644.156	1049411.330	27.656
	E13004	91.5512	43.980	89.4130	1.70	DELTA	1.38	214.2616	43.979	1363607.808	1049386.571	27.572
E13003-E13002	E13002	0.0000	41.529	89.2932	1.70	ESTACION	1.38	302.3416	41.529	1363644.156	1049411.330	27.656
	E13004	91.5524	43.979	89.4115	1.70	DELTA	1.38	214.2649	43.978	1363607.810	1049386.569	27.576



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	EAUXJ	182.1219	101.818	89.5623	1.70	DELTA	1.38	304.5469	101.818	1363701.895	1049327.466	27.444
	64	16.1954	12.444	88.2959	1.70	PARAMENTO	1.38	138.6733	12.440	1363634.814	1049419.544	27.662
	65	31.3221	7.225	87.2140	1.70	PARAMENTO	1.38	153.8808	7.217	1363637.676	1049414.507	27.669
	66	23.4944	6.639	87.3152	1.70	PARAMENTO	1.38	146.1705	6.633	1363638.646	1049415.022	27.622
	67	73.5435	3.064	84.4046	1.70	PARAMENTO	1.38	196.2513	3.051	1363641.227	1049410.476	27.621
	68	83.0852	9.761	88.1515	1.70	PARAMENTO	1.38	205.4894	9.756	1363635.349	1049407.131	27.634
	69	114.5350	10.578	88.0738	1.70	PARAMENTO	1.38	237.2388	10.572	1363638.435	1049402.439	27.682
	70	140.4442	15.537	88.3948	1.70	PARAMENTO	1.38	263.0866	15.533	1363642.286	1049395.910	27.699
	71	165.0022	12.903	88.4946	1.70	CERRAMIENT	1.38	287.3477	12.900	1363648.002	1049399.016	27.600
	72	142.1810	15.763	87.0604	1.70	CERRAMIENT	1.38	264.6444	15.743	1363642.687	1049395.656	28.134
	73	170.0527	23.754	89.2540	1.70	CERRAMIENT	1.38	292.4324	23.753	1363653.220	1049389.374	27.574
	74	117.3737	26.497	88.3505	1.70	CERRAMIENT	1.38	239.9685	26.489	1363630.899	1049388.397	27.991
	75	110.1531	34.798	89.1035	1.70	CERRAMIENT	1.38	232.6002	34.794	1363623.023	1049383.688	27.837
	76	104.4614	45.421	89.4825	1.70	CERRAMIENT	1.38	227.1121	45.421	1363613.244	1049378.050	27.489
	77	103.4652	45.252	89.4744	1.80	PARAMENTO	1.38	226.1227	45.252	1363612.791	1049378.711	27.398
	78	180.2759	12.926	89.0717	1.70	BORDE_VIA	1.38	302.8080	12.924	1363651.159	1049400.467	27.535
	79	192.1238	2.241	84.2951	1.70	BORDE_VIA	1.38	314.5521	2.231	1363645.721	1049409.740	27.551
	80	345.3121	2.786	84.5346	1.70	BORDE_VIA	1.38	107.8641	2.775	1363643.305	1049413.971	27.584
	81	68.1558	1.656	77.5941	1.70	ARBOL	1.38	190.6077	1.620	1363642.564	1049411.031	27.681
	82	11.3102	12.194	88.4429	1.70	ANDEN	1.38	133.8588	12.191	1363635.709	1049420.120	27.604
	83	358.4059	11.830	88.3714	1.70	ANDEN	1.38	121.0246	11.827	1363638.060	1049421.464	27.621
	84	165.4330	12.922	88.4402	1.70	ANDEN	1.38	288.0666	12.919	1363648.162	1049399.048	27.622
	85	177.5908	12.690	89.0004	1.70	ANDEN	1.38	300.3271	12.688	1363650.563	1049400.378	27.558
E13004-E13003	E13003	0.0001	43.980	89.3337	1.70	ESTACION	1.43	214.2616	43.979	1363607.808	1049386.571	27.572
	E13005	185.2011	47.157	89.4930	1.70	DELTA	1.43	219.5980	47.157	1363571.472	1049356.513	27.448
	86	188.3154	7.855	87.4820	1.70	PARAMENTO	1.43	222.7933	7.849	1363602.048	1049381.238	27.605
	87	272.3541	1.632	86.2132	1.70	PARAMENTO	1.43	306.8563	1.629	1363608.785	1049385.267	27.408
	88	85.1204	15.096	88.4052	1.70	CERRAMIENT	1.43	119.4627	15.092	1363600.385	1049399.711	27.652
	89	145.2455	30.336	89.2411	1.70	CERRAMIENT	1.43	179.6769	30.334	1363577.474	1049386.742	27.620
	90	96.4350	12.768	87.4415	1.70	PISINA	1.43	130.9921	12.758	1363599.439	1049396.200	27.808
	91	142.1816	22.716	88.4243	1.70	PISINA	1.43	176.5660	22.710	1363585.139	1049387.931	27.815
	92	143.5436	23.063	88.4243	1.70	PISINA	1.43	178.1716	23.057	1363584.763	1049387.306	27.823
	93	107.1904	5.107	84.2032	1.70	PISINA	1.43	141.5794	5.082	1363603.826	1049389.729	27.808
	94	162.0008	20.162	88.3359	1.70	PISINA	1.43	196.2638	20.156	1363588.459	1049380.926	27.809
	95	99.4554	2.980	82.3118	1.70	CAMINO	1.43	134.0266	2.955	1363605.755	1049388.695	27.692
	96	180.4124	22.848	89.1934	1.70	CAMINO	1.43	214.9516	22.846	1363589.082	1049373.482	27.573



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	97	220.3143	1.279	74.1101	1.70	CAMINO	1.43	254.7902	1.231	1363607.485	1049385.383	27.653
	98	188.1113	24.389	89.1422	1.70	CAMINO	1.43	222.4485	24.387	1363589.813	1049370.111	27.628
E13005-E13004	E13004	0.0001	47.157	89.2953	1.70	ESTACION	1.40	219.5980	47.157	1363571.472	1049356.513	27.448
	E13006	148.2526	30.071	93.0118	1.70	DELTA	1.40	188.0219	30.029	1363541.737	1049352.322	25.565
	99	355.1814	38.776	89.2814	1.70	PARAMENTO	1.40	34.9019	38.774	1363603.272	1049378.699	27.508
	100	358.0522	39.012	89.2326	1.70	PARAMENTO	1.40	37.6874	39.010	1363602.343	1049380.362	27.565
	101	353.3621	30.244	89.2009	1.70	PARAMENTO	1.40	33.2038	30.242	1363596.776	1049373.074	27.501
	102	346.1138	28.530	89.0050	1.70	CERRAMIENT	1.40	25.7919	28.526	1363597.156	1049368.925	27.641
	103	232.2937	2.508	90.5648	1.70	CERRAMIENT	1.40	272.0916	2.508	1363571.564	1049354.007	27.109
	104	178.2801	15.193	95.5101	1.70	CERRAMIENT	1.40	218.0649	15.114	1363559.573	1049347.194	25.602
	105	20.4935	21.863	88.2011	1.70	PISINA	1.40	60.4244	21.854	1363582.259	1049375.519	27.785
	106	8.4312	23.926	88.2827	1.70	PISINA	1.40	48.3180	23.918	1363587.377	1049374.376	27.787
	107	12.3931	25.440	88.3311	1.70	PISINA	1.40	52.2566	25.432	1363587.040	1049376.623	27.793
	108	16.1702	20.376	88.1216	1.70	PISINA	1.40	55.8819	20.366	1363582.895	1049373.374	27.789
	109	17.0902	25.360	88.3253	1.70	PISINA	1.40	56.7485	25.352	1363585.373	1049377.714	27.793
	110	9.0804	21.536	88.1805	1.70	PISINA	1.40	48.7324	21.527	1363585.671	1049372.693	27.789
	111	80.1340	23.414	90.1843	1.70	CERRAMIENT	1.40	119.8258	23.414	1363559.827	1049376.825	27.023
	112	55.0415	25.151	89.1543	1.70	CERRAMIENT	1.40	94.6688	25.149	1363569.425	1049381.578	27.474
E13005-E13004	E13004	0.0000	47.157	89.3010	1.70	ESTACION	1.41	219.5980	47.157	1363571.472	1049356.513	27.448
	E13006	148.2451	30.072	93.0122	1.70	DELTA	1.41	188.0121	30.030	1363541.735	1049352.327	25.567
	99	355.1628	38.783	89.2913	1.70	PARAMENTO	1.41	34.8724	38.781	1363603.289	1049378.686	27.500
	100	358.0550	39.023	89.2415	1.70	PARAMENTO	1.41	37.6952	39.021	1363602.348	1049380.373	27.559
	101	353.3527	30.253	89.2040	1.70	PARAMENTO	1.41	33.1888	30.251	1363596.788	1049373.072	27.499
	102	346.1142	28.256	89.1035	1.70	CERRAMIENT	1.41	25.7930	28.253	1363596.910	1049368.806	27.559
	103	232.1147	2.516	90.3303	1.70	CERRAMIENT	1.41	271.7944	2.516	1363571.551	1049353.998	27.129
	104	178.2942	15.026	95.5320	1.70	CERRAMIENT	1.41	218.0930	14.947	1363559.709	1049347.292	25.611
	105	80.1343	23.472	90.1621	1.70	CERRAMIENT	1.41	119.8266	23.472	1363559.798	1049376.875	27.042
	106	55.3221	25.092	89.0418	1.70	CERRAMIENT	1.41	95.1371	25.089	1363569.226	1049381.501	27.560
E13006-E13005	E13005	0.0000	30.109	86.0004	1.70	ESTACION	1.48	188.0219	30.029	1363541.737	1049352.322	25.565
	E13007	120.2647	53.416	89.2642	1.70	DELTA	1.48	128.4683	53.413	1363508.509	1049394.143	25.858
	107	251.5808	16.863	89.5811	1.70	CERRAMIENT	1.48	259.9908	16.863	1363538.806	1049335.716	25.350
	108	299.1356	13.169	88.5851	1.70	CERRAMIENT	1.48	307.2541	13.167	1363549.707	1049341.842	25.575
	109	242.3830	19.667	89.4353	1.70	CERRAMIENT	1.48	250.6635	19.667	1363535.225	1049333.765	25.433
	110	240.3031	21.518	89.5510	1.70	CERRAMIENT	1.48	248.5305	21.518	1363533.861	1049332.297	25.371
	111	239.4555	23.430	89.5856	1.70	CERRAMIENT	1.48	247.7871	23.430	1363532.879	1049330.631	25.348
	112	288.2442	9.458	87.1852	1.70	ARBOL	1.48	296.4335	9.448	1363545.942	1049343.862	25.784



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	113	234.4551	22.797	88.4858	1.70	ARBOL	1.48	242.7860	22.792	1363531.314	1049332.053	25.812
	114	212.5055	25.694	90.1232	1.70	ARBOL	1.48	220.8705	25.694	1363522.307	1049335.510	25.247
	115	198.1407	22.753	89.4218	1.70	ARBOL	1.48	206.2571	22.753	1363521.332	1049342.257	25.458
	116	209.4603	29.988	89.4527	1.70	RIO	1.48	217.7894	29.988	1363518.038	1049333.947	25.468
	117	218.4223	31.415	90.0434	1.70	RIO	1.48	226.7283	31.415	1363520.203	1049329.449	25.299
	118	194.5755	29.616	90.1954	1.70	RIO	1.48	202.9871	29.616	1363514.473	1049340.757	25.170
E13006-E13005	E13005	0.0000	30.109	86.0013	1.70	ESTACION	1.48	188.0219	30.029	1363541.737	1049352.322	25.565
	119	94.0730	15.899	88.2428	1.70	ARBOL	1.48	102.1469	15.893	1363538.393	1049367.859	25.783
	120	62.1900	39.328	87.1725	1.70	LINDERO	1.48	70.3385	39.284	1363554.954	1049389.316	27.200
	121	56.1600	36.772	87.1831	1.70	LINDERO	1.48	64.2885	36.731	1363557.672	1049385.417	27.068
	122	48.2037	34.477	86.5609	1.70	LINDERO	1.48	56.3655	34.428	1363560.806	1049380.986	27.184
	123	77.1447	50.351	87.3035	1.70	LINDERO	1.48	85.2683	50.303	1363545.886	1049402.454	27.529
	124	273.1158	9.197	88.3726	1.70	PARAMENTO	1.48	281.2213	9.194	1363543.526	1049343.304	25.562
	125	252.5009	11.350	88.3813	1.70	PARAMENTO	1.48	260.8577	11.347	1363539.934	1049341.120	25.611
	126	278.4903	12.346	89.0802	1.70	PARAMENTO	1.48	286.8394	12.345	1363545.313	1049340.507	25.528
	127	284.4935	47.293	84.3033	1.70	ESTRUCTURA	1.48	292.8483	47.076	1363560.016	1049308.940	29.866
	128	284.5952	47.144	84.2905	1.70	ESTRUCTURA	1.48	293.0196	46.926	1363560.087	1049309.133	29.872
	129	284.4457	47.708	84.3407	1.70	ESTRUCTURA	1.48	292.7710	47.494	1363560.119	1049308.530	29.857
	130	284.3945	47.536	84.4051	1.70	ESTRUCTURA	1.48	292.6844	47.331	1363559.990	1049308.652	29.748
	131	281.4840	49.028	84.4339	1.70	ESTRUCTURA	1.48	289.8330	48.821	1363558.301	1049306.398	29.846
	132	281.4551	48.740	84.4654	1.70	ESTRUCTURA	1.48	289.7860	48.538	1363558.167	1049306.650	29.774
	133	281.0655	48.896	84.4040	1.70	ESTRUCTURA	1.48	289.1371	48.685	1363557.697	1049306.328	29.876
	134	281.3637	49.158	84.4256	1.70	ESTRUCTURA	1.48	289.6321	48.949	1363558.183	1049306.219	29.868
	135	282.5441	55.671	85.1956	2.60	ESTRUCTURA	1.48	290.9333	55.486	1363561.561	1049300.498	28.971
	136	283.1218	55.596	85.1918	2.60	ESTRUCTURA	1.48	291.2269	55.411	1363561.799	1049300.671	28.975
E13007-E13006	E13006	0.0000	53.417	89.5946	1.70	ESTACION	1.40	128.4683	53.413	1363508.509	1049394.143	25.858
	E13008	143.5650	27.901	85.5505	1.70	DELTA	1.40	92.4155	27.830	1363507.336	1049421.948	27.548
	137	333.3928	41.704	89.1438	1.70	LINDERO	1.40	282.1260	41.700	1363517.269	1049353.373	26.113
	138	349.0618	40.384	90.0026	1.70	LINDERO	1.40	297.5733	40.384	1363527.202	1049358.345	25.557
	139	331.4932	41.254	89.1906	1.70	ARBOL	1.40	280.2938	41.251	1363515.881	1049353.555	26.053
	140	321.3828	14.565	88.4159	1.70	ARBOL	1.40	270.1094	14.561	1363508.537	1049379.581	25.893
	141	353.3231	25.129	89.2119	1.70	ARBOL	1.40	302.0102	25.127	1363521.829	1049372.836	25.845
	142	184.0450	2.839	82.3933	1.70	ARBOL	1.40	132.5488	2.816	1363506.605	1049396.217	25.925
	143	297.3604	24.567	89.2425	1.70	ARBOL	1.40	246.0694	24.566	1363498.545	1049371.689	25.817
	144	318.5304	36.975	89.4107	1.70	RIO	1.40	267.3527	36.974	1363506.801	1049357.208	25.766
	145	295.1056	26.087	90.3820	1.70	RIO	1.40	243.6505	26.085	1363496.931	1049370.767	25.272



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	146	256.5921	18.819	90.3820	1.70	RIO	1.40	205.4574	18.818	1363491.519	1049386.054	25.353
	147	239.4713	21.483	92.4228	2.20	RIO	1.40	188.2552	21.459	1363487.273	1049391.061	24.048
	148	245.2035	19.976	91.5918	2.50	DESCARGA	1.40	193.8113	19.964	1363489.122	1049389.377	24.069
	149	211.5105	21.603	89.2748	1.70	RIO	1.40	160.3196	21.602	1363488.169	1049401.418	25.765
	150	201.3621	17.188	88.3239	1.70	CERRAMIENT	1.40	150.0741	17.182	1363493.618	1049402.715	25.999
	151	154.3524	15.880	88.2812	1.70	CERRAMIENT	1.40	103.0583	15.874	1363504.923	1049409.606	25.986
	152	86.0121	35.847	87.1316	1.70	CERRAMIENT	1.40	34.4908	35.805	1363538.020	1049414.418	27.300
	153	105.0718	37.794	87.2745	1.70	CERRAMIENT	1.40	53.5899	37.757	1363530.920	1049424.529	27.236
	154	122.1130	26.819	85.5638	1.70	CERRAMIENT	1.40	70.6599	26.752	1363517.369	1049419.385	27.459
	155	144.1034	44.524	87.4239	1.70	CERRAMIENT	1.40	92.6444	44.488	1363506.457	1049438.584	27.341
	156	9.3641	10.552	89.2531	1.70	PISINA	1.40	318.0796	10.551	1363516.360	1049387.093	25.668
	157	6.2527	16.862	89.3828	1.70	PISINA	1.40	314.8924	16.862	1363520.410	1049382.197	25.668
	158	19.0255	12.520	89.2822	1.70	PISINA	1.40	327.5169	12.519	1363519.070	1049387.419	25.678
	159	356.2127	15.545	89.3117	1.70	PISINA	1.40	304.8258	15.544	1363517.386	1049381.382	25.692
	160	18.0925	14.815	89.3415	1.70	PISINA	1.40	326.6252	14.815	1363520.881	1049385.993	25.673
	161	353.0835	13.155	89.2450	1.70	PISINA	1.40	301.6113	13.154	1363515.404	1049382.940	25.697
	162	12.5345	16.350	89.3730	1.70	PISINA	1.40	321.3641	16.350	1363521.280	1049383.934	25.669
	163	0.1805	10.787	89.2118	1.70	PISINA	1.40	308.7696	10.786	1363515.264	1049385.733	25.684
	164	55.5343	7.435	89.3621	1.70	ESTRUCTURA	1.40	4.3635	7.435	1363515.923	1049394.708	25.614
	165	35.2629	9.907	89.1249	1.70	ESTRUCTURA	1.40	343.9096	9.906	1363518.027	1049391.397	25.698
	166	347.3557	3.367	89.1740	1.70	ESTRUCTURA	1.40	296.0674	3.367	1363509.989	1049391.118	25.604
	167	350.3051	7.013	88.2255	1.70	ESTRUCTURA	1.40	298.9824	7.010	1363511.906	1049388.010	25.760
E13008-E13007	E13007	359.5959	27.872	92.5157	1.70	ESTACION	1.40	92.4155	27.830	1363507.336	1049421.948	27.548
	E13009	57.3722	50.885	89.5107	1.70	DELTA	1.40	330.0383	50.885	1363551.421	1049396.535	27.377
	168	197.0025	42.016	90.4205	1.70	CERRAMIENT	1.40	109.4224	42.013	1363493.366	1049461.570	26.731
	169	201.3710	76.570	89.4358	1.70	CERRAMIENT	1.40	114.0349	76.569	1363476.150	1049491.879	27.603
	170	213.2027	50.626	89.1334	1.70	PUENTE	1.40	125.7563	50.621	1363477.756	1049463.028	27.929
	171	212.5443	51.901	89.4506	1.70	PUENTE	1.40	125.3274	51.901	1363477.325	1049464.292	27.470
	172	213.2018	50.641	88.5618	1.70	PUENTE	1.40	125.7538	50.632	1363477.752	1049463.038	28.184
	173	212.5519	51.877	88.5900	1.70	PUENTE	1.40	125.3374	51.869	1363477.336	1049464.261	28.166
	174	216.2018	51.503	90.0957	1.70	PUENTE	1.40	128.7538	51.503	1363475.097	1049462.112	27.096
	175	216.0223	52.809	90.0821	1.70	PUENTE	1.40	128.4552	52.809	1363474.494	1049463.302	27.117
	176	216.1851	51.548	88.2701	1.70	PUENTE	1.40	128.7296	51.529	1363475.097	1049462.146	28.640
	177	216.2020	52.932	88.2504	1.70	PUENTE	1.40	128.7544	52.912	1363474.214	1049463.211	28.707
	178	213.0218	50.410	89.1126	1.70	TUBO	1.40	125.4538	50.405	1363478.099	1049463.007	27.958
	179	212.5740	50.850	89.2451	1.70	TUBO	1.40	125.3766	50.847	1363477.898	1049463.407	27.765



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	180	213.1058	50.941	89.2259	1.70	TUBO	1.40	125.5983	50.938	1363477.685	1049463.367	27.794
	181	214.2938	51.290	89.2259	1.70	TUBO	1.40	126.9094	51.287	1363476.536	1049462.957	27.798
	182	212.0837	51.034	90.0010	1.70	TUBO	1.40	124.5591	51.034	1363478.387	1049463.977	27.243
	183	211.5202	50.774	89.3256	1.70	TUBO	1.40	124.2827	50.772	1363478.737	1049463.900	27.645
	184	203.0320	58.476	89.4620	1.70	MANHOLE	1.40	115.4710	58.476	1363482.189	1049474.740	27.478
	185	327.2404	13.203	93.0549	1.70	MANHOLE	1.40	239.8166	13.184	1363500.708	1049410.552	26.532
	186	212.3326	27.385	92.0531	1.70	ESTRUCTURA	1.40	124.9727	27.367	1363491.650	1049444.373	26.246
	187	210.3103	27.428	92.0531	1.70	ESTRUCTURA	1.40	122.9330	27.410	1363492.435	1049444.953	26.244
	188	210.2939	28.158	92.0908	1.70	ESTRUCTURA	1.40	122.9096	28.138	1363492.048	1049445.571	26.188
	189	209.5218	39.146	91.2718	1.70	ESTRUCTURA	1.40	122.2871	39.133	1363486.433	1049455.031	26.252
	190	210.5154	39.150	91.2841	1.70	ESTRUCTURA	1.40	123.2805	39.137	1363485.860	1049454.666	26.236
	191	210.4619	40.134	91.2356	1.70	ESTRUCTURA	1.40	123.1874	40.122	1363485.374	1049455.526	26.266
	192	211.4715	31.738	92.0537	1.70	ESTRUCTURA	1.40	124.2030	31.717	1363489.507	1049448.180	26.086
	193	210.3052	32.564	92.0239	1.70	ESTRUCTURA	1.40	122.9299	32.543	1363489.645	1049449.263	26.084
	194	210.3501	31.686	92.0635	1.70	ESTRUCTURA	1.40	122.9991	31.665	1363490.091	1049448.504	26.079
	195	211.3033	28.245	92.1228	1.70	TUBO	1.40	123.9246	28.224	1363491.584	1049445.368	26.157
	196	211.1018	31.681	92.1229	1.70	TUBO	1.40	123.5871	31.657	1363489.823	1049448.320	26.025
	197	211.0619	32.612	92.1056	1.70	TUBO	1.40	123.5208	32.588	1363489.340	1049449.117	26.004
	198	210.2230	39.074	91.3656	1.70	TUBO	1.40	122.7905	39.058	1363486.184	1049454.783	26.144
	199	223.2027	36.115	89.0228	1.70	POSTE	1.40	135.7563	36.110	1363481.468	1049447.142	27.850
	200	241.1912	29.026	91.1111	1.70	RIO	1.40	153.7355	29.020	1363481.313	1049434.790	26.645
	201	285.4024	23.279	92.2628	1.70	RIO	1.40	198.0888	23.258	1363485.228	1049414.727	26.254
	202	266.5217	25.047	90.2610	2.20	RIO	1.40	179.2869	25.046	1363482.292	1049422.260	26.555
	203	237.3901	40.874	92.1302	1.70	RIO	1.40	150.0658	40.843	1363471.942	1049442.329	25.664
	204	226.2837	43.439	91.0910	2.60	RIO	1.40	138.8924	43.430	1363474.613	1049450.502	25.472
	205	220.0933	60.886	90.4829	1.70	RIO	1.40	132.5746	60.880	1363466.148	1049466.780	26.387
	206	278.5821	4.355	90.5312	1.70	ARBOL	1.40	191.3880	4.354	1363503.068	1049421.088	27.178
	207	74.5144	13.301	90.2132	1.70	ARBOL	1.40	347.2777	13.301	1363520.311	1049419.019	27.162
E13009-E13008	E13008	0.0000	50.885	89.2507	1.70	ESTACION	1.36	330.0383	50.885	1363551.421	1049396.535	27.377
	E13010	282.2531	21.602	88.1243	1.70	DELTA	1.36	72.4635	21.591	1363557.927	1049417.123	27.708
	208	274.2540	12.812	86.4454	1.70	PARAMENTO	1.36	64.4660	12.791	1363556.935	1049408.077	27.761
	209	186.4612	17.434	88.3649	1.70	PARAMENTO	1.36	336.8083	17.429	1363567.441	1049389.671	27.456
	210	178.5702	24.035	89.0727	1.70	CERRAMIENT	1.36	328.9888	24.032	1363572.018	1049384.154	27.401
	211	186.1617	26.166	89.0019	1.70	CERRAMIENT	1.36	336.3096	26.162	1363575.378	1049386.023	27.488
	212	304.1049	8.920	86.1716	1.70	ARBOL	1.36	94.2185	8.901	1363550.766	1049405.412	27.612
	213	302.1417	15.945	86.5246	1.70	ARBOL	1.36	92.2763	15.921	1363550.788	1049412.444	27.902



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



DELTA	DETALLE	ANG.HOR.DER	DIS.INC	ANG.VER	ALT.PRIS	OBSERVACION	ALT.INST	AZIMUT	DIS.HOR	NORTE	ESTE	COTA
	214	317.4042	14.564	86.4404	1.70	ARBOL	1.36	107.7166	14.540	1363546.996	1049410.386	27.864
E13010-E13009	E13009	0.0001	21.588	90.0452	1.70	ESTACION	1.39	72.4635	21.591	1363557.927	1049417.123	27.708
	E13011	144.0105	67.049	89.3320	1.70	DELTA	1.39	36.4816	67.047	1363611.836	1049456.987	27.921
	215	11.1951	9.007	87.4243	1.70	PARAMENTO	1.39	263.7944	9.000	1363556.954	1049408.176	27.761
	216	70.2934	7.939	87.1644	1.70	PARAMENTO	1.39	322.9563	7.930	1363564.256	1049412.346	27.778
	217	70.2932	9.163	87.3416	1.70	PARAMENTO	1.39	322.9558	9.155	1363565.234	1049411.608	27.789
	218	119.1350	27.097	89.4542	1.70	PARAMENTO	1.39	11.6941	27.097	1363584.461	1049422.615	27.514
	219	306.4202	15.891	91.3212	1.70	CERRAMIENT	1.39	199.1641	15.885	1363542.922	1049411.908	26.975
	220	150.3454	10.321	89.1831	1.70	CERRAMIENT	1.39	43.0452	10.320	1363565.469	1049424.167	27.526
	221	141.2910	30.413	89.4934	1.70	CERRAMIENT	1.39	33.9496	30.413	1363583.155	1049434.108	27.493
	222	167.3225	41.103	89.4446	1.70	CERRAMIENT	1.39	60.0038	41.103	1363578.476	1049452.720	27.583
	223	150.3834	36.699	89.5355	1.70	CERRAMIENT	1.39	43.1063	36.699	1363584.720	1049442.201	27.466
	224	175.5731	35.146	89.2406	1.70	LINDERO	1.39	68.4221	35.144	1363570.851	1049449.804	27.768
	225	180.2015	22.514	89.1007	1.70	ARBOL	1.39	72.8010	22.512	1363564.583	1049438.628	27.728
	226	177.1942	31.263	88.2901	1.70	ARBOL	1.39	69.7919	31.252	1363568.722	1049446.451	28.228
	227	270.0915	28.101	90.2930	1.70	LINDERO	1.39	162.6177	28.100	1363531.110	1049425.518	27.160
E13011-E13010	E13010	0.0001	67.049	89.5738	1.70	ESTACION	1.45	36.4816	67.047	1363611.836	1049456.987	27.921
	E13001	259.0301	32.774	89.2811	1.70	DELTA	1.45	115.5319	32.773	1363597.710	1049486.559	27.969
E13001-E13011	E13011	0.0000	32.774	89.4239	1.70	ESTACION	1.48	115.5319	32.773	1363597.710	1049486.559	27.969
	E13002	5.4440	46.717	90.0631	1.70	DELTA	1.48	301.2763	46.717	1363621.964	1049446.631	27.658
	E13000	185.1749	73.596	89.3920	1.70	DELTA	1.48	120.8288	73.595	1363559.995	1049549.755	28.189



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



PLANTILLAS DE CÁLCULOS NIVELACIÓN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION A
INGENIERO LUIS JORGE MONCADA



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 08/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 30.673

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1000JM	1.027			30.673	Delta Jorge M
1			2.204	29.496	APA013SC060
C#E1001JM		2.455		29.245	Delta Jorge M

C#E1001JM	1.858			29.245	Delta Jorge M
2			1.590	29.513	APA013CC021
3			1.675	29.428	APA013CC022
C#E1006JM		2.270		28.833	Delta Jorge M

C#E1006JM	1.544			28.833	Delta Jorge M
E1005JM			1.278	29.099	Delta Jorge M
APA_04			0.749	29.628	MOJON
4			2.057	28.320	APA013CC012
5			1.374	29.003	MH NUEVO
C#APA_03		1.171		29.206	MOJON

C#APA_03	2.080			29.206	MOJON
C#E1009JM		0.608		30.678	Delta Jorge M

C#E1009JM	3.097			30.678	Delta Jorge M
6			1.852	31.923	APA012SC008
7			1.572	32.203	APA012SC006
C#E1011JM		0.654		33.121	Delta Jorge M

C#E1011JM	1.312			33.121	Delta Jorge M
E1012JM			1.548	32.885	Delta Jorge M
9			1.507	32.926	APA012CC020
10			1.590	32.843	APA012CC022
11			1.235	33.198	APA012SC007
C#E1014JM		1.610		32.823	Delta Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E1001JM	2.467			29.245	Delta Jorge M	0.000
1			2.214	29.498	APA013SC060	0.002
C#E1000JM		1.038		30.674	Delta Jorge M	0.001

C#E1006JM	2.281			28.833	Delta Jorge M	0.000
3			1.686	29.428	APA013CC022	0.000
2			1.601	29.513	APA013CC021	0.000
C#E1001JM		1.869		29.245	Delta Jorge M	0.000

C#APA_03	1.173			29.206	MOJON	0.000
5			1.375	29.004	MH NUEVO	0.001
4			2.058	28.321	APA013CC012	0.001
APA_04			0.751	29.628	MOJON	0.000
E1005JM			1.280	29.099	Delta Jorge M	0.000
C#E1006JM		1.546		28.833	Delta Jorge M	0.000

C#E1009JM	0.627			30.678	Delta Jorge M	0.000
C#APA_03		2.100		29.205	MOJON	0.001

C#E1011JM	0.670			33.121	Delta Jorge M	0.000
7			1.588	32.203	APA012SC006	0.000
6			1.869	31.922	APA012SC008	0.001
C#E1009JM		3.114		30.677	Delta Jorge M	0.001

C#E1014JM	1.628			32.823	Delta Jorge M	0.000
11			1.253	33.198	APA012SC007	0.000
10			1.608	32.843	APA012CC022	0.000
9			1.525	32.926	APA012CC020	0.000
E1012JM			1.566	32.885	Delta Jorge M	0.000
C#E1011JM		1.327		33.124	Delta Jorge M	0.003



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1014JM	1.398			32.823	Delta Jorge M
E1015JM			1.483	32.738	Delta Jorge M
12			1.419	32.802	APA012CC027
13			1.403	32.818	APA012CC025
14			1.424	32.797	APA012CC026
15			1.688	32.533	APA012CC047
C#E1017JM		1.672		32.549	Delta Jorge M

C#E1017JM	1.236			32.549	Delta Jorge M
16			1.633	32.152	APA012CC055
E1019JM			1.499	32.286	Delta Jorge M
C#01JM		1.834		31.951	Cambio Jorge M

C#01JM	1.287			31.951	Cambio Jorge M
E1022JM			1.296	31.942	Delta Jorge M
17			1.262	31.976	APA012CC071
18			2.174	31.064	APA012CC074
C#E1025JM		2.832		30.406	Delta Jorge M

C#E1025JM	1.494			30.406	Delta Jorge M
19			0.991	30.909	Lineamiento eje colector pto 631
20			1.434	30.466	Lineamiento eje colector pto 632
21			2.135	29.765	APA012CC076
C#E1027JM		2.593		29.307	Delta Jorge M

C#E1027JM	1.119			29.307	Delta Jorge M
22			1.519	28.907	APA012CC095
C#E1028JM		1.676		28.750	Delta Jorge M

C#E1028JM	0.679			28.750	Delta Jorge M
E1032JM			1.408	28.021	Delta Jorge M
23			1.404	28.025	APA011SC086
24			1.398	28.031	APA011CC082
25			1.373	28.056	APA011SC080
26			1.339	28.090	APA011SC081
C#E1036JM		1.436		27.993	Delta Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E1017JM	1.683			32.549	Delta Jorge M	0.000
15			1.698	32.534	APA012CC047	0.001
14			1.435	32.797	APA012CC026	0.000
13			1.414	32.818	APA012CC025	0.000
12			1.43	32.802	APA012CC027	0.000
E1015JM			1.494	32.738	Delta Jorge M	0.000
C#E1014JM		1.411		32.821	Delta Jorge M	0.002

C#01JM	1.847			31.951	Cambio Jorge M	0.000
E1019JM			1.514	32.284	Delta Jorge M	0.002
16			1.646	32.152	APA012CC055	0.000
C#E1017JM		1.249		32.549	Delta Jorge M	0.000

C#E1025JM	2.843			30.406	Delta Jorge M	0.000
18			2.184	31.065	APA012CC074	0.001
17			1.274	31.975	APA012CC071	0.001
E1022JM			1.308	31.941	Delta Jorge M	0.001
C#01JM		1.298		31.951	Cambio Jorge M	0.000

C#E1027JM	2.565			29.307	Delta Jorge M	0.000
21			2.104	29.768	APA012CC076	0.003
20			1.404	30.468	Lineamiento eje colector pto 632	0.002
19			0.961	30.911	Lineamiento eje colector pto 631	0.002
C#E1025JM		1.467		30.405	Delta Jorge M	0.001

C#E1028JM	1.685			28.750	Delta Jorge M	0.000
22			1.528	28.907	APA012CC095	0.000
C#E1027JM		1.128		29.307	Delta Jorge M	0.000

C#E1036JM	1.448			27.993	Delta Jorge M	0.000
26			1.352	28.089	APA011SC081	0.001
25			1.383	28.058	APA011SC080	0.002
24			1.404	28.037	APA011CC082	0.006
23			1.414	28.027	APA011SC086	0.002
E1032JM			1.419	28.022	Delta Jorge M	0.001
C#E1028JM		0.689		28.752	Delta Jorge M	0.002



ELBER DE J HERNÁNDEZ D

INGENIERÍA CIVIL & AMBIENTAL

CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 09/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 27.993

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#1036JM	1.228			27.993	Delta Jorge M
27			1.335	27.886	APA011CC076
28			1.072	28.149	APA011SC077
29			1.703	27.518	APA029SC001
C#1038JM		1.478		27.743	Delta Jorge M

C#1038JM	1.212			27.743	Delta Jorge M
08GP			1.345	27.610	Cambio Ginna P. C#08GP
C#02JM		1.605		27.350	Delta Jorge M

C#02JM	1.336			27.350	Delta Jorge M
C#03JM		1.212		27.474	Delta Jorge M

C#03JM	2.183			27.474	Delta Jorge M
C#04JM		0.627		29.030	Delta Jorge M

C#04JM	3.072			29.030	Delta Jorge M
C#05JM		0.445		31.657	Delta Jorge M

C#05JM	1.956			31.657	Delta Jorge M
C#01JM		1.643		31.970	Delta Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
	1.494			27.743	Delta Jorge M	0.000
29			1.717	27.520	APA029SC001	0.002
28			1.086	28.151	APA011SC077	0.002
27			1.348	27.889	APA011CC076	0.003
C#1036JM		1.241		27.996	Delta Jorge M	0.003

C#02JM	1.595			27.350	Delta Jorge M	0.000
08GP			1.333	27.612	Cambio Ginna P. C#08GP	0.002
C#1038JM		1.201		27.744	Delta Jorge M	0.001

C#03JM	1.204			27.474	Delta Jorge M	0.000
C#02JM		1.330		27.348	Delta Jorge M	0.002

C#04JM	0.601			29.030	Delta Jorge M	0.000
C#03JM		2.158		27.473	Delta Jorge M	0.001

C#05JM	0.403			31.657	Delta Jorge M	0.000
C#04JM		3.028		29.032	Delta Jorge M	0.002

C#01JM	1.620			31.970	Delta Jorge M	0.000
C#05JM		1.933		31.657	Delta Jorge M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 09/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 32.549

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#1017JM	1.486			32.549	Delta Jorge M
C#06JM		1.761		32.274	Delta Jorge M

C#06JM	1.673			32.274	Delta Jorge M
C#07JM		1.332		32.615	Delta Jorge M

C#07JM	2.002			32.615	Delta Jorge M
C#1011JM		1.496		33.121	Delta Jorge M

C#1011JM	1.635			33.121	Delta Jorge M
C#08JM		1.883		32.873	Delta Jorge M

C#08JM	2.175			32.873	Delta Jorge M
C#09JM		1.305		33.743	Delta Jorge M

C#09JM	0.968			33.743	Delta Jorge M
C#10JM		3.374		31.337	Delta Jorge M

C#10JM	1.025			31.337	Delta Jorge M
AUX06JM			1.347	31.015	Delta Jorge M
C#1000JM		1.700		30.662	Delta Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#06JM	1.776			32.274	Delta Jorge M	0.000
C#1017JM		1.500		32.550	Delta Jorge M	0.001

C#07JM	1.360			32.615	Delta Jorge M	0.000
C#06JM		1.702		32.273	Delta Jorge M	0.001

C#1011JM	1.506			33.121	Delta Jorge M	0.000
C#07JM		2.012		32.615	Delta Jorge M	0.000

C#08JM	1.885			32.873	Delta Jorge M	0.000
C#1011JM		1.637		33.121	Delta Jorge M	0.000

C#09JM	1.325			33.743	Delta Jorge M	0.000
C#08JM		2.195		32.873	Delta Jorge M	0.000

C#10JM	3.386			31.337	Delta Jorge M	0.000
C#09JM		0.981		33.742	Delta Jorge M	0.001

C#1000JM	1.710			30.662	Delta Jorge M	0.000
AUX06JM			1.357	31.015	Delta Jorge M	0.000
C#10JM		1.035		31.337	Delta Jorge M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 10/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 28.348

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1077JM	1.601			28.348	Delta Jorge M
E1079JM			1.481	28.468	Delta Jorge M
C#11JM		1.490		28.459	Cambio Jorge M

C#11JM	1.434			28.459	Cambio Jorge M
C#12JM		1.679		28.214	Cambio Jorge M

C#12JM	1.393			28.214	Cambio Jorge M
C#13JM		1.783		27.824	Cambio Jorge M

C#13JM	1.318			27.824	Cambio Jorge M
C#14JM		1.520		27.622	Cambio Jorge M

C#14JM	1.685			27.622	Cambio Jorge M
EAUX13CM			1.692	27.615	Delta Carolina M
C#15JM		1.712		27.595	Cambio Jorge M

C#15JM	1.613			27.595	Cambio Jorge M
C#16JM		1.619		27.589	Cambio Jorge M

C#16JM	1.742			27.589	Cambio Jorge M
C#17JM		1.424		27.907	Cambio Jorge M

C#17JM	1.228			27.907	Cambio Jorge M
C#18JM		1.186		27.949	Cambio Jorge M

C#18JM	1.220			27.949	Cambio Jorge M
13JM			1.346	27.823	Cambio Jorge M C#13JM
C#19JM		0.854		28.315	Cambio Jorge M

C#19JM	1.534			28.315	Cambio Jorge M
C#20JM		1.326		28.523	Cambio Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#11JM	1.474			28.459	Cambio Jorge M	0.000
E1079JM			1.465	28.468	Delta Jorge M	0.000
C#E1077JM		1.582		28.351	Delta Jorge M	0.003

C#12JM	1.693			28.214	Cambio Jorge M	0.000
C#11JM		1.449		28.458	Cambio Jorge M	0.001

C#13JM	1.792			27.824	Cambio Jorge M	0.000
C#12JM		1.402		28.214	Cambio Jorge M	0.000

C#14JM	1.529			27.622	Cambio Jorge M	0.000
C#13JM		1.327		27.824	Cambio Jorge M	0.000

C#15JM	1.719			27.595	Cambio Jorge M	0.000
EAUX13CM			1.698	27.616	Delta Carolina M	0.001
C#14JM		1.691		27.623	Cambio Jorge M	0.001

C#16JM	1.613			27.589	Cambio Jorge M	0.000
C#15JM		1.605		27.597	Cambio Jorge M	0.002

C#17JM	1.435			27.907	Cambio Jorge M	0.000
C#16JM		1.753		27.589	Cambio Jorge M	0.000

C#18JM	1.212			27.949	Cambio Jorge M	0.000
C#17JM		1.252		27.909	Cambio Jorge M	0.002

C#19JM	0.867			28.315	Cambio Jorge M	0.000
13JM			1.360	27.822	Cambio Jorge M C#13JM	0.001
C#18JM		1.235		27.947	Cambio Jorge M	0.002

C#20JM	1.333			28.523	Cambio Jorge M	0.000
C#19JM		1.541		28.315	Cambio Jorge M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#20JM	1.399			28.523	Cambio Jorge M
E1079JM			1.446	28.476	Delta Jorge M
C#E1077JM		1.564		28.358	Delta Jorge M

C#16JM	1.112			27.589	Cambio Jorge M
C#EAUX11CM		1.659		27.042	Delta Carolina M

C#EAUX11CM	1.536			27.042	Delta Carolina M
C#21JM		1.709		26.869	Cambio Jorge M

C#21JM	1.526			26.869	Cambio Jorge M
EAUX10CM			1.545	26.850	Delta Carolina M
C#E12026CM		1.381		27.014	Delta Carolina M

C#E12026CM	0.961			27.014	Delta Carolina M
EAUX09CM			0.975	27.000	Delta Carolina M
E12025CM			1.301	26.674	Delta Carolina M
E12024CM			1.738	26.237	Delta Carolina M
E12023CM			1.973	26.002	Delta Carolina M
EAUX08CM			1.493	26.482	Delta Carolina M
C#EAUX07CM		1.976		25.999	Delta Carolina M

C#E12026CM	1.508			27.014	Delta Carolina M
30			1.494	27.028	APA009CC054
C#MH31		1.636		26.886	APA009CC056

C#EAUX07CM	1.658			25.999	Delta Carolina M
32			1.460	26.197	APA009SC163
C#MH33		1.482		26.175	APA009CC166

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E1077JM	1.585			28.358	Delta Jorge M	0.000
E1079JM			1.467	28.476	Delta Jorge M	0.000
C#20JM		1.418		28.525	Cambio Jorge M	0.002

C#EAUX11CM	1.743			27.042	Delta Carolina M		0.000
C#16JM		1.194		27.591	Cambio Jorge M		0.002

C#21JM	1.719			26.869	Cambio Jorge M		0.000
C#EAUX11CM		1.546		27.042	Delta Carolina M		0.000

C#E12026CM	1.393			27.014	Delta Carolina M		0.000
EAUX10CM			1.558	26.849	Delta Carolina M		0.001
C#21JM		1.541		26.866	Cambio Jorge M		0.003

C#EAUX07CM	2.006			25.999	Delta Carolina M		0.000
EAUX08CM			1.523	26.482	Delta Carolina M		0.000
E12023CM			2.004	26.001	Delta Carolina M		0.001
E12024CM			1.768	26.237	Delta Carolina M		0.000
E12025CM			1.330	26.675	Delta Carolina M		0.001
EAUX09CM			1.005	27.000	Delta Carolina M		0.000
C#E12026CM		0.993		27.012	Delta Carolina M		0.002

C#MH31	1.622			26.886	APA009CC056		0.000
30			1.479	27.029	APA009CC054		0.001
C#E12026CM		1.492		27.016	Delta Carolina M		0.002

C#MH33	1.492			26.175	APA009CC166		0.000
32			1.470	26.197	APA009SC163		0.000
C#EAUX07CM		1.669		25.998	Delta Carolina M		0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 11/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 25.999

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#EAUX07CM	1.333			25.999	Delta Carolina M
34			1.478	25.854	APA009SC182
E12021CM			1.623	25.709	Delta Carolina M
E12022CM			1.518	25.814	Delta Carolina M
EAUX06CM			1.619	25.713	Delta Carolina M
C#22JM		1.467		25.865	Cambio Jorge M

C#22JM	1.335			25.865	Cambio Jorge M
E12020CM			1.587	25.613	Delta Carolina M
35			1.047	26.153	APA009CC149
36			1.073	26.127	APA009CC147
E12010CM			1.098	26.102	Delta Carolina M
C#23JM		1.060		26.140	Cambio Jorge M

C#23JM	1.686			26.140	Cambio Jorge M
C#24JM		1.036		26.790	Cambio Jorge M

C#24JM	1.372			26.790	Cambio Jorge M
C#25JM		1.174		26.988	Cambio Jorge M

C#25JM	1.577			26.988	Cambio Jorge M
C#26JM		1.162		27.403	Cambio Jorge M

C#26JM	1.949			27.403	Cambio Jorge M
C#16JM		1.760		27.592	Cambio Jorge M

C#23JM	1.487			26.140	Cambio Jorge M
37			1.453	26.174	APA009CC168
C#27JM		1.356		26.271	Cambio Jorge M

C#27JM	1.296			26.271	Cambio Jorge M
E11001XC			1.664	25.903	Delta Ximena Cruz
38			1.605	25.962	APA009SC175
C#E11002XC		1.625		25.942	Delta Ximena Cruz

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#22JM	1.469			25.865	Cambio Jorge M	0.000
EAUX06CM			1.620	25.714	Delta Carolina M	0.001
E12022CM			1.520	25.814	Delta Carolina M	0.000
E12021CM			1.624	25.710	Delta Carolina M	0.001
34			1.481	25.853	APA009SC182	0.001
C#EAUX07CM		1.336		25.998	Delta Carolina M	0.001

C#23JM	1.081			26.140	Cambio Jorge M	0.000
E12010CM			1.119	26.102	Delta Carolina M	0.000
36			1.093	26.128	APA009CC147	0.001
35			1.068	26.153	APA009CC149	0.000
E12020CM			1.608	25.613	Delta Carolina M	0.000
C#22JM		1.356		25.865	Cambio Jorge M	0.000

C#24JM	1.064			26.790	Cambio Jorge M	0.000
C#23JM		1.713		26.141	Cambio Jorge M	0.001

C#25JM	1.157			26.988	Cambio Jorge M	0.000
C#24JM		1.357		26.788	Cambio Jorge M	0.002

C#26JM	1.147			27.403	Cambio Jorge M	0.000
C#25JM		1.561		26.989	Cambio Jorge M	0.001

C#16JM	1.770			27.592	Cambio Jorge M	0.000
C#26JM		1.960		27.402	Cambio Jorge M	0.001

C#27JM	1.369			26.271	Cambio Jorge M	0.000
37			1.466	26.174	APA009CC168	0.000
C#23JM		1.501		26.139	Cambio Jorge M	0.001

C#E11002XC	1.642			25.942	Delta Ximena Cruz	0.000
38			1.620	25.964	APA009SC175	0.002
E11001XC			1.681	25.903	Delta Ximena Cruz	0.000
C#27JM		1.311		26.273	Cambio Jorge M	0.002



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E11002XC	1.544			25.942	Delta Ximena Cruz
39			1.491	25.995	APA024CC047
40			1.483	26.003	APA009CC174
41			1.567	25.919	APA024CC053
42			1.618	25.868	APA024CC052
C#E11003XC		1.789		25.697	Delta Ximena Cruz

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E11003XC	1.807			25.697	Delta Ximena Cruz	0.000
42			1.636	25.868	APA024CC052	0.000
41			1.586	25.918	APA024CC053	0.001
40			1.500	26.004	APA009CC174	0.001
39			1.509	25.995	APA024CC047	0.000
C#E11002XC		1.564		25.940	Delta Ximena Cruz	0.002



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 13/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 25.697

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E11003XC	1.384			25.697	Delta Ximena Cruz
43			1.378	25.703	APA024SC057
44			1.297	25.784	APA024CC058
45			1.461	25.620	APA023CC006
46			1.395	25.686	APA023CC008
47			1.684	25.397	APA023CC001
48			1.617	25.464	APA023CC004
C#E11004XC		1.707		25.374	Delta Ximena Cruz
C#E11004XC	1.356			25.374	Delta Ximena Cruz
C#E11005XC		1.845		24.885	Delta Ximena Cruz
C#E11004XC	1.356			25.374	Delta Ximena Cruz
49			1.569	25.161	APA023CC020
C#MH50		1.475		25.255	APA023CC013
C#E11005XC	1.488			24.885	Delta Ximena Cruz
51			1.465	24.908	APA031CC015
52			1.514	24.859	APA031CC007
53			1.496	24.877	APA031SC013
54			1.468	24.905	APA031SC012
C#MH55		1.486		24.887	APA031SC011
C#E11005XC	1.742			24.885	Delta Ximena Cruz
56			1.223	25.404	APA031PC044
57			1.169	25.458	APA023SC035
58			1.339	25.288	APA031PC041
59			1.124	25.503	APA023SC036
60			1.255	25.372	APA023SC034
61			1.210	25.417	MH NUEVO
C#28JM		1.381		25.246	Cambio Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E11004XC	1.692			25.374	Delta Ximena Cruz	0.000
48			1.607	25.459	APA023CC004	0.005
47			1.673	25.393	APA023CC001	0.004
46			1.384	25.682	APA023CC008	0.004
45			1.449	25.617	APA023CC006	0.003
44			1.286	25.780	APA024CC058	0.004
43			1.367	25.699	APA024SC057	0.004
C#E11003XC		1.371		25.695	Delta Ximena Cruz	0.002
C#E11005XC	1.793			24.885	Delta Ximena Cruz	0.000
C#E11004XC		1.303		25.375	Delta Ximena Cruz	0.001
C#MH50	1.454			25.255	APA023CC013	0.000
49			1.548	25.161	APA023CC020	0.000
C#E11004XC		1.334		25.375	Delta Ximena Cruz	0.001
C#MH55	1.502			24.887	APA031SC011	0.000
54			1.482	24.907	APA031SC012	0.002
53			1.513	24.876	APA031SC013	0.001
52			1.530	24.859	APA031CC007	0.000
51			1.481	24.908	APA031CC015	0.000
C#E11005XC		1.504		24.885	Delta Ximena Cruz	0.000
C#28JM	1.407			25.246	Cambio Jorge M	0.000
61			1.236	25.417	MH NUEVO	0.000
60			1.282	25.371	APA023SC034	0.001
59			1.150	25.503	APA023SC036	0.000
58			1.367	25.286	APA031PC041	0.002
57			1.196	25.457	APA023SC035	0.001
56			1.250	25.403	APA031PC044	0.001
C#E11005XC		1.769		24.884	Delta Ximena Cruz	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#28JM	1.483			25.246	Cambio Jorge M
62			1.525	25.204	APA031PC048
63			1.482	25.247	APA023SC037
64			1.787	24.942	APA030PC005
65			1.726	25.003	APA023SC143
C#29JM		1.729		25.000	Cambio Jorge M

C#29JM	1.159			25.000	Cambio Jorge M
APA_05			1.566	24.593	MOJON
66			1.536	24.623	APA030PC017
E11010XC			1.345	24.814	Delta Ximena Cruz
C#30JM		1.267		24.892	Cambio Jorge M

C#30JM	1.067			24.892	Cambio Jorge M
APA_06			0.999	24.960	MOJON
67			1.235	24.724	APA030PC030
68			1.490	24.469	APA030PC023
69			1.436	24.523	APA030SC024
C#31JM		1.540		24.419	Cambio Jorge M

C#31JM	1.430			24.419	Cambio Jorge M
C#33JM		1.574		24.275	Cambio Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#29JM	1.737			25.000	Cambio Jorge M	0.000
65			1.736	25.001	APA023SC143	0.002
64			1.795	24.942	APA030PC005	0.000
63			1.491	25.246	APA023SC037	0.001
62			1.534	25.203	APA031PC048	0.001
C#28JM		1.492		25.245	Cambio Jorge M	0.001

C#30JM	1.285			24.892	Cambio Jorge M	0.000
E11010XC			1.363	24.814	Delta Ximena Cruz	0.000
66			1.554	24.623	APA030PC017	0.000
APA_05			1.585	24.592	MOJON	0.001
C#29JM		1.176		25.001	Cambio Jorge M	0.001

C#31JM	1.557			24.419	Cambio Jorge M	0.000
69			1.454	24.522	APA030SC024	0.001
68			1.507	24.469	APA030PC023	0.000
67			1.252	24.724	APA030PC030	0.000
APA_06			1.017	24.959	MOJON	0.001
C#30JM		1.085		24.891	Cambio Jorge M	0.001

C#33JM	1.594			24.275	Cambio Jorge M	0.000
C#31JM		1.450		24.419	Cambio Jorge M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN DERECHA
 FECHA LEVANTAMIENTO: 14/09/2010
 TOPOGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 24.275

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#33JM	1.540			24.275	Cambio Jorge M
E11013XC			1.623	24.192	Delta Ximena Cruz
C#31JM		1.685		24.130	Cambio Jorge M

C#31JM	1.687			24.130	Cambio Jorge M
C#34JM		1.658		24.159	Cambio Jorge M

C#34JM	1.531			24.159	Cambio Jorge M
C#35JM		1.637		24.053	Cambio Jorge M

C#35JM	1.738			24.053	Cambio Jorge M
C#36JM		1.136		24.655	Cambio Jorge M

C#36JM	1.647			24.655	Cambio Jorge M
C#37JM		1.472		24.830	Cambio Jorge M

C#37JM	1.864			24.830	Cambio Jorge M
C#38JM		1.267		25.427	Cambio Jorge M

C#38JM	1.053			25.427	Cambio Jorge M
C#39JM		1.308		25.172	Cambio Jorge M

C#39JM	1.758			25.172	Cambio Jorge M
C#E11003XC		1.513		25.417	Delta Ximena Cruz

C#E11003XC	1.603			25.417	Delta Ximena Cruz
C#40JM		1.360		25.660	Cambio Jorge M

C#40JM	1.824			25.660	Cambio Jorge M
C#41JM		1.562		25.922	Cambio Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#31JM	1.674			24.130	Cambio Jorge M	0.000
E11013XC			1.612	24.192	Delta Ximena Cruz	0.000
C#33JM		1.528		24.276	Cambio Jorge M	0.001

C#34JM	1.683			24.159	Cambio Jorge M	0.000
C#31JM		1.711		24.131	Cambio Jorge M	0.001

C#35JM	1.633			24.053	Cambio Jorge M	0.000
C#34JM		1.528		24.158	Cambio Jorge M	0.001

C#36JM	1.146			24.655	Cambio Jorge M	0.000
C#35JM		1.748		24.053	Cambio Jorge M	0.000

C#37JM	1.494			24.830	Cambio Jorge M	0.000
C#36JM		1.667		24.657	Cambio Jorge M	0.002

C#38JM	1.284			25.427	Cambio Jorge M	0.000
C#37JM		1.881		24.830	Cambio Jorge M	0.000

C#39JM	1.314			25.172	Cambio Jorge M	0.000
C#38JM		1.059		25.427	Cambio Jorge M	0.000

C#E11003XC	1.543			25.417	Delta Ximena Cruz	0.000
C#39JM		1.788		25.172	Cambio Jorge M	0.000

C#40JM	1.380			25.660	Cambio Jorge M	0.000
C#E11003XC		1.623		25.417	Delta Ximena Cruz	0.000

C#41JM	1.565			25.922	Cambio Jorge M	0.000
C#40JM		1.826		25.661	Cambio Jorge M	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#41JM	1.489			25.922	Cambio Jorge M
C#42JM		1.517		25.894	Cambio Jorge M

C#42JM	1.696			25.894	Cambio Jorge M
C#23JM		1.735		25.855	Cambio Jorge M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#42JM	1.527			25.894	Cambio Jorge M	0.000
C#41JM		1.500		25.921	Cambio Jorge M	0.001

C#23JM	1.753			25.855	Cambio Jorge M	0.000
C#42JM		1.713		25.895	Cambio Jorge M	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO MARGEN IZQUIERDA
 FECHA LEVANTAMIENTO: 15/09/2010
 TOPÓGRAFO: JORGE MONCADA
 COMISIÓN: JM
 AMARRE: 25.302

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E12017CM	1.114			25.302	Delta Carolina M
E12018CM			1.476	24.940	Delta Carolina M
70			1.437	24.979	APA007CC051
71			1.570	24.846	APA007SC050
C#E12019CM		1.529		24.887	Delta Carolina M

C#E12019CM	1.448			24.887	Delta Carolina M
72			1.747	24.588	APA007SC040
C#E12020CM		1.454		24.881	Delta Carolina M

C#E12020CM	1.491			24.881	Delta Carolina M
APA_09			1.320	25.052	MOJON APARTADO
APA_10			1.167	25.205	MOJON APARTADO
73			1.908	24.464	APA007CC016
C#E12022CM		1.723		24.649	Delta Carolina M

C#E12022CM	1.491			24.649	Delta Carolina M
C#E12023CM		1.494		24.646	Delta Carolina M

C#E12023CM	1.560			24.646	Delta Carolina M
C#43JM		1.463		24.743	Cambio Jorge M

C#43JM	1.395			24.743	Cambio Jorge M
74			1.724	24.414	APA008CC102
75			1.526	24.612	APA008CC101
C#E12025CM		1.797		24.341	Delta Carolina M

C#E12023CM	1.553			24.646	Delta Carolina M
C#44JM		1.654		24.545	Cambio Jorge M

C#44JM	1.376			24.545	Cambio Jorge M
C#45JM		1.632		24.289	Cambio Jorge M

CONTRA NIVELACIÓN							ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN		
C#E12019CM	1.534			24.887	Delta Carolina M		0.000
71			1.573	24.848	APA007SC050		0.002
70			1.442	24.979	APA007CC051		0.000
E12018CM			1.481	24.940	Delta Carolina M		0.000
C#E12017CM		1.121		25.300	Delta Carolina M		0.002

C#E12020CM	1.476			24.881	Delta Carolina M		0.000
72			1.768	24.589	APA007SC040		0.001
C#E12019CM		1.470		24.887	Delta Carolina M		0.000

C#E12022CM	1.726			24.649	Delta Carolina M		0.000
73			1.911	24.464	APA007CC016		0.000
APA_10			1.169	25.206	MOJON APARTADO		0.001
APA_09			1.322	25.053	MOJON APARTADO		0.001
C#E12020CM		1.493		24.882	Delta Carolina M		0.001

C#E12023CM	1.509			24.646	Delta Carolina M		0.000
C#E12022CM		1.505		24.650	Delta Carolina M		0.001

C#43JM	1.477			24.743	Cambio Jorge M		0.000
C#E12023CM		1.575		24.645	Delta Carolina M		0.001

C#E12025CM	1.821			24.341	Delta Carolina M		0.000
75			1.551	24.611	APA008CC101		0.001
74			1.749	24.413	APA008CC102		0.001
C#43JM		1.420		24.742	Cambio Jorge M		0.001

C#44JM	1.617			24.545	Cambio Jorge M		0.000
C#E12023CM		1.515		24.647	Delta Carolina M		0.001

C#45JM	1.647			24.289	Cambio Jorge M		0.000
C#44JM		1.391		24.545	Cambio Jorge M		0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#45JM	1.282			24.289	Cambio Jorge M
C#46JM		1.620		23.951	Cambio Jorge M

C#46JM	1.742			23.951	Cambio Jorge M
C#47JM		1.345		24.348	Cambio Jorge M

C#47JM	1.764			24.348	Cambio Jorge M
C#48JM		1.227		24.885	Cambio Jorge M

C#48JM	1.678			24.885	Cambio Jorge M
E12018CM			1.636	24.927	Delta Carolina M
EAUX35CM			1.436	25.127	Delta Carolina M
C#E12017CM		1.281		25.282	Delta Carolina M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#46JM	1.639			23.951	Cambio Jorge M	0.000
C#45JM		1.300		24.290	Cambio Jorge M	0.001

C#47JM	1.323			24.348	Cambio Jorge M	0.000
C#46JM		1.721		23.950	Cambio Jorge M	0.001

C#48JM	1.252			24.885	Cambio Jorge M	0.000
C#47JM		1.789		24.348	Cambio Jorge M	0.000

C#E12017CM	1.304			25.282	Delta Carolina M	0.000
EAUX35CM			1.459	25.127	Delta Carolina M	0.000
E12018CM			1.659	24.927	Delta Carolina M	0.000
C#48JM		1.702		24.884	Cambio Jorge M	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



COMISION D
INGENIERA YINNA XIMENA PERAFAN



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO AMARRE COLECTOR
 FECHA LEVANTAMIENTO: 08 SEPTIEMBRE DE 2010
 TOPOÓGRAFO: YINNA PERAFAN ORTEGA
 COMISIÓN: GP
 AMARRE: 35.335

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#APA_03	1.219			35.335	MOJON GPS APARTADO
C#EAUX1JM		1.320		35.234	DELTA JORGE M

C#EAUX1JM	1.242			35.234	DELTA JORGE M
C#1GP		1.314		35.162	CAMBIO GINNA P

C#1GP	1.199			35.162	CAMBIO GINNA P
C#2GP		1.517		34.844	CAMBIO GINNA P

C#2GP	1.212			34.844	CAMBIO GINNA P
C#EAUX3JM		1.425		34.631	DELTA JORGE M

C#EAUX3JM	1.251			34.631	DELTA JORGE M
C#3GP		1.725		34.157	CAMBIO GINNA P

C#3GP	1.130			34.157	CAMBIO GINNA P
C#EAUX4		1.379		33.908	DELTA JORGE M

C#EAUX4	1.510			33.908	DELTA JORGE M
C#EAUX5		1.380		34.038	DELTA JORGE M

C#EAUX5	1.296			34.038	DELTA JORGE M
C#E1060JM		1.474		33.860	DELTA JORGE M

C#E1060JM	1.421			33.860	DELTA JORGE M
C#4GP		1.703		33.578	CAMBIO GINNA P

C#4GP	1.635			33.578	CAMBIO GINNA P
C#E1061JM		1.812		33.401	DELTA JORGE M

C#E1061JM	0.373			33.401	DELTA JORGE M
C#E1000JM		2.963		30.811	DELTA JORGE M

CONTRA NIVELACIÓN							ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN		
C#EAUX1JM	1.332			35.234	DELTA JORGE M		0.000
C#APA_03		1.232		35.334	MOJON GPS APARTADO		0.001

C#1GP	1.315			35.162	CAMBIO GINNA P		0.000
C#EAUX1JM		1.242		35.235	DELTA JORGE M		0.001

C#2GP	1.514			34.844	CAMBIO GINNA P		0.000
C#1GP		1.194		35.164	CAMBIO GINNA P		0.002

C#EAUX3JM	1.411			34.631	DELTA JORGE M		0.000
C#2GP		1.202		34.840	CAMBIO GINNA P		0.004

C#3GP	1.710			34.157	CAMBIO GINNA P		0.000
C#EAUX3JM		1.238		34.629	DELTA JORGE M		0.002

C#EAUX4	1.345			33.908	DELTA JORGE M		0.000
C#3GP		1.098		34.155	CAMBIO GINNA P		0.002

C#EAUX5	1.369			34.038	DELTA JORGE M		0.000
C#EAUX4		1.500		33.907	DELTA JORGE M		0.001

C#E1060JM	1.471			33.860	DELTA JORGE M		0.000
C#EAUX5		1.293		34.038	DELTA JORGE M		0.000

C#4GP	1.700			33.578	CAMBIO GINNA P		0.000
C#E1060JM		1.418		33.860	DELTA JORGE M		0.000

C#E1061JM	1.813			33.401	DELTA JORGE M		0.000
C#4GP		1.634		33.580	CAMBIO GINNA P		0.002

C#E1000JM	2.960			30.811	DELTA JORGE M		0.000
C#E1061JM		0.371		33.400	DELTA JORGE M		0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1000JM	1.006			30.811	DELTA JORGE M
1			2.176	29.641	APA013SC060
C#E1001JM		2.428		29.389	DELTA JORGE M

C#E1000JM	2.214			30.811	DELTA JORGE M
EAUX6			1.846	31.179	DELTA JORGE M
C#EAUX7		2.287		30.738	DELTA JORGE M

C#EAUX7	3.694			30.738	DELTA JORGE M
C#EAUX8		0.719		33.713	DELTA JORGE M

C#EAUX8	1.791			33.713	DELTA JORGE M
C#5GP		1.639		33.865	CAMBIO GINNA P

C#5GP	1.573			33.865	CAMBIO GINNA P
C#EAUX9		1.376		34.062	DELTA JORGE M

C#EAUX9	1.532			34.062	DELTA JORGE M
C#6GP		1.173		34.421	CAMBIO GINNA P

C#6GP	1.512			34.421	CAMBIO GINNA P
C#EAUX10		1.188		34.745	DELTA JORGE M

C#EAUX10	1.486			34.745	DELTA JORGE M
C#7GP		1.286		34.945	CAMBIO GINNA P

C#7GP	1.487			34.945	CAMBIO GINNA P
C#APA_10		0.971		35.461	MOJON APAD 10

C#APA_10	1.195			35.461	MOJON GPS APARTADO
E1064			1.255	35.401	DELTA JORGE M
C#APA_03		1.322		35.334	MOJON GPS APARTADO

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E1001JM	2.429			29.389	DELTA JORGE M	0.000
1			2.173	29.645	APA013SC060	0.004
C#E1000JM		1.005		30.813	DELTA JORGE M	0.002

C#EAUX7	2.286			30.738	DELTA JORGE M	0.000
EAUX6			1.845	31.179	DELTA JORGE M	0.000
C#E1000JM		2.212		30.812	DELTA JORGE M	0.001

C#EAUX8	0.708			33.713	DELTA JORGE M	0.000
C#EAUX7		3.685		30.736	DELTA JORGE M	0.002

C#5GP	1.638			33.865	CAMBIO GINNA P	0.000
C#EAUX8		1.792		33.711	DELTA JORGE M	0.002

C#EAUX9	1.372			34.062	DELTA JORGE M	0.000
C#5GP		1.568		33.866	CAMBIO GINNA P	0.001

C#6GP	1.163			34.421	CAMBIO GINNA P	0.000
C#EAUX9		1.521		34.063	DELTA JORGE M	0.001

C#EAUX10	1.186			34.745	DELTA JORGE M	0.000
C#6GP		1.512		34.419	CAMBIO GINNA P	0.002

C#7GP	1.280			34.945	CAMBIO GINNA P	0.000
C#EAUX10		1.479		34.746	DELTA JORGE M	0.001

C#APA_10	0.965			35.461	MOJON APAD 10	0.000
C#7GP		1.481		34.945	CAMBIO GINNA P	0.000

C#APA_03	1.320			35.334	MOJON GPS APARTADO	0.000
E1064			1.253	35.401	DELTA JORGE M	0.000
C#APA_10		1.193		35.461	MOJON GPS APARTADO	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 09 SEPTIEMBRE DE 2010
 TOPOGRAFO: YINNA PERAFAN ORTEGA
 COMISIÓN: GP
 AMARRE: 27.965

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1038JM	1.068			27.965	DELTA JORGE M
C#08GP		1.193		27.840	CAMBIO GINNA P

C#08GP	2.153			27.840	CAMBIO GINNA P
2			1.356	28.637	APA011SC090
3			1.339	28.654	APA011SC031
C#E1041JM		0.736		29.257	DELTA JORGE M

C#E1041JM	1.718			29.257	DELTA JORGE M
4			1.417	29.558	APA011SC031
5			1.516	29.459	APA011SC030
6			1.282	29.693	APA011CC14
C#E1065JM		1.533		29.442	DELTA JORGE M

C#E1065JM	1.659			29.442	DELTA JORGE M
7			1.544	29.557	APA029SC019
C#09GP		1.49		29.611	CAMBIO GINNA P

C#09GP	1.117			29.611	CAMBIO GINNA P
C#E1066JM		1.533		29.195	DELTA JORGE M

C#E1066JM	1.482			29.195	DELTA JORGE M
8			0.797	29.880	APA029SC081
9			0.721	29.956	APA029SC021
C#E1067JM		0.781		29.896	DELTA JORGE M

C#E1067JM	1.306			29.896	DELTA JORGE M
10			1.414	29.788	APA029SC030
C#10GP		1.428		29.774	CAMBIO GINNA P

C#10GP	1.229			29.774	CAMBIO GINNA P
11			1.515	29.488	APA029SC028
C#11GP		1.405		29.598	CAMBIO GINNA P

CONTRA NIVELACIÓN							ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN		
C#08GP	1.192			27.840	CAMBIO GINNA P		0.000
C#E1038JM		1.066		27.966	DELTA JORGE M		0.001

C#E1041JM	0.732			29.257	DELTA JORGE M		0.000
3			1.334	28.655	APA011SC031		0.001
2			1.352	28.637	APA011SC090		0.000
C#08GP		2.148		27.841	CAMBIO GINNA P		0.001

C#E1065JM	1.532			29.442	DELTA JORGE M		0.000
6			1.282	29.692	APA011CC14		0.001
5			1.516	29.458	APA011SC030		0.001
4			1.417	29.557	APA011SC031		0.001
C#E1041JM		1.717		29.257	DELTA JORGE M		0.000

C#09GP	1.488			29.611	CAMBIO GINNA P		0.000
7			1.545	29.554	APA029SC019		0.003
C#E1065JM		1.660		29.439	DELTA JORGE M		0.003

C#E1066JM	1.528			29.195	DELTA JORGE M		0.000
C#09GP		1.109		29.614	CAMBIO GINNA P		0.003

C#E1067JM	0.763			29.896	DELTA JORGE M		0.000
9			0.702	29.957	APA029SC021		0.001
8			0.778	29.881	APA029SC081		0.001
C#E1066JM		1.462		29.197	DELTA JORGE M		0.002

C#10GP	1.424			29.774	CAMBIO GINNA P		0.000
10			1.413	29.785	APA029SC030		0.003
C#E1067JM		1.303		29.895	DELTA JORGE M		0.001

C#11GP	1.403			29.598	CAMBIO GINNA P		0.000
11			1.514	29.487	APA029SC028		0.001
C#10GP		1.228		29.773	CAMBIO GINNA P		0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#11GP	1.324			29.598	CAMBIO GINNA P
12			1.33	29.592	APA029SC036
C#12GP		1.338		29.584	CAMBIO GINNA P

C#12GP	1.144			29.584	CAMBIO GINNA P
13			1.345	29.383	APA029SC036
C#E1069JM		1.665		29.063	DELTA JORGE M

C#E1069JM	1.128			29.063	DELTA JORGE M
14			1.135	29.056	APA029SC039
C#E1070JM		1.309		28.882	DELTA JORGE M

C#E1070JM	1.566			28.882	DELTA JORGE M
15			0.865	29.583	APA029CC038
C#13GP		0.865		29.583	CAMBIO GINNA P

C#13GP	1.552			29.583	CAMBIO GINNA P
C#14GP		1.382		29.753	CAMBIO GINNA P

C#14GP	1.384			29.753	CAMBIO GINNA P
16			1.313	29.824	APA029CC033
C#15GP		1.376		29.761	CAMBIO GINNA P

C#15GP	1.424			29.761	CAMBIO GINNA P
C#16GP		1.34		29.845	CAMBIO GINNA P

C#16GP	1.176			29.845	CAMBIO GINNA P
C#17GP		1.208		29.813	CAMBIO GINNA P

C#17GP	1.398			29.813	CAMBIO GINNA P
C#18GP		1.322		29.889	CAMBIO GINNA P

C#18GP	1.432			29.889	CAMBIO GINNA P
C#19GP		1.341		29.980	CAMBIO GINNA P

C#19GP	1.31			29.980	CAMBIO GINNA P
C#20GP		1.167		30.123	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#12GP	1.337			29.584	CAMBIO GINNA P	0.000
12			1.329	29.592	APA029SC036	0.000
C#11GP		1.323		29.598	CAMBIO GINNA P	0.000

C#E1069JM	1.664			29.063	DELTA JORGE M	0.000
13			1.345	29.382	APA029SC036	0.001
C#12GP		1.142		29.585	CAMBIO GINNA P	0.001

C#E1070JM	1.309			28.882	DELTA JORGE M	0.000
14			1.134	29.057	APA029SC039	0.001
C#E1069JM		1.129		29.062	DELTA JORGE M	0.001

C#13GP	0.863			29.583	CAMBIO GINNA P	0.000
15			0.867	29.579	APA029CC038	0.004
C#E1070JM		1.564		28.882	DELTA JORGE M	0.000

C#14GP	1.380			29.753	CAMBIO GINNA P	0.000
C#13GP		1.550		29.583	CAMBIO GINNA P	0.000

C#15GP	1.376			29.761	CAMBIO GINNA P	0.000
16			1.313	29.824	APA029CC033	0.000
C#14GP		1.383		29.754	CAMBIO GINNA P	0.001

C#16GP	1.337			29.845	CAMBIO GINNA P	0.000
C#15GP		1.421		29.761	CAMBIO GINNA P	0.000

C#17GP	1.225			29.813	CAMBIO GINNA P	0.000
C#16GP		1.193		29.845	CAMBIO GINNA P	0.000

C#18GP	1.309			29.889	CAMBIO GINNA P	0.000
C#17GP		1.383		29.815	CAMBIO GINNA P	0.002

C#19GP	1.341			29.980	CAMBIO GINNA P	0.000
C#18GP		1.432		29.889	CAMBIO GINNA P	0.000

C#20GP	1.201			30.123	CAMBIO GINNA P	0.000
C#19GP		1.342		29.982	CAMBIO GINNA P	0.002



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#20GP	1.37			30.123	CAMBIO GINNA P
C#21GP		1.549		29.944	CAMBIO GINNA P

C#21GP	0.754			29.944	CAMBIO GINNA P
C#E1066JM		1.262		29.436	DELTA JORGE M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#21GP	1.552			29.944	CAMBIO GINNA P	0.000
C#20GP		1.375		30.121	CAMBIO GINNA P	0.002

C#E1066JM	1.268			29.436	DELTA JORGE M	0.000
C#21GP		0.760		29.944	CAMBIO GINNA P	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 10 SEPTIEMBRE DE 2010
 TOPOGRAFO: YINNA PERAFAN
 COMISIÓN: GP
 AMARRE: 28.882

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1070JM	1.712			28.882	DELTA JORGE M
17			1.782	28.812	APA029SC040
18			1.958	28.636	DELTA JORGE M
19			1.646	28.948	APA029SC042
C#22GP		1.753		28.841	CAMBIO GINNA P
C#22GP	1.438			28.841	CAMBIO GINNA P
20			1.318	28.961	APA029SC043
C#23GP		1.390		28.889	CAMBIO GINNA P
C#23GP	1.351			28.889	CAMBIO GINNA P
C#E1072JM		1.235		29.005	DELTA JORGE M
C#E1072JM	1.411			29.005	DELTA JORGE M
C#E1073JM		1.365		29.051	DELTA JORGE M
C#E1073JM	1.396			29.051	DELTA JORGE M
C#24GP		1.480		28.967	CAMBIO GINNA P
C#24GP	1.188			28.967	CAMBIO GINNA P
21			1.298	28.857	APA029SC069
C#25GP		1.490		28.665	CAMBIO GINNA P
C#25GP	1.385			28.665	CAMBIO GINNA P
C#E1075JM		1.737		28.313	DELTA JORGE M
C#E1075JM	1.579			28.313	DELTA JORGE M
22			1.267	28.625	APA029SC076
C#26GP		1.243		28.649	CAMBIO GINNA P
C#26GP	1.320			28.649	CAMBIO GINNA P
23			1.508	28.461	APA010CC032
C#E1077JM		1.621		28.348	DELTA JORGE M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#22GP	1.751			28.841	CAMBIO GINNA P	0.000
19			1.645	28.947	APA029SC042	0.001
18			1.956	28.636	DELTA JORGE M	0.000
17			1.782	28.810	APA029SC040	0.002
C#E1070JM		1.709		28.883	DELTA JORGE M	0.001
C#23GP	1.387			28.889	CAMBIO GINNA P	0.000
20			1.315	28.961	APA029SC043	0.000
C#22GP		1.436		28.840	CAMBIO GINNA P	0.001
C#E1072JM	1.218			29.005	DELTA JORGE M	0.000
C#23GP		1.334		28.889	CAMBIO GINNA P	0.000
C#E1073JM	1.337			29.051	DELTA JORGE M	0.000
C#E1072JM		1.383		29.005	DELTA JORGE M	0.000
C#24GP	1.465			28.967	CAMBIO GINNA P	0.000
C#E1073JM		1.379		29.053	DELTA JORGE M	0.002
C#25GP	1.479			28.665	CAMBIO GINNA P	0.000
21			1.288	28.856	APA029SC069	0.001
C#24GP		1.180		28.964	CAMBIO GINNA P	0.003
C#E1075JM	1.795			28.313	DELTA JORGE M	0.000
C#25GP		1.443		28.665	CAMBIO GINNA P	0.000
C#26GP	1.217			28.649	CAMBIO GINNA P	0.000
22			1.242	28.624	APA029SC076	0.001
C#E1075JM		1.554		28.312	DELTA JORGE M	0.001
C#E1077JM	1.627			28.348	DELTA JORGE M	0.000
23			1.514	28.461	APA010CC032	0.000
C#26GP		1.326		28.649	CAMBIO GINNA P	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E1077JM	1.626			28.348	DELTA JORGE M
C#E1079JM		1.501		28.473	DELTA JORGE M

C#E1079JM	1.424			28.473	DELTA JORGE M
24			1.457	28.440	APA010CC031
25			1.180	28.717	APA010CC200
C#27GP		1.412		28.485	CAMBIO GINNA P

C#27GP	1.400			28.485	CAMBIO GINNA P
C#28GP		0.809		29.076	CAMBIO GINNA P

C#28GP	1.044			29.076	CAMBIO GINNA P
C#29GP		0.651		29.469	CAMBIO GINNA P

C#29GP	0.970			29.469	CAMBIO GINNA P
C#30GP		0.892		29.547	CAMBIO GINNA P

C#30GP	1.321			29.547	CAMBIO GINNA P
C#31GP		1.022		29.846	CAMBIO GINNA P

C#31GP	1.245			29.846	CAMBIO GINNA P
C#E1067JM		2.144		28.947	DELTA JORGE M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E1079JM	1.492			28.473	DELTA JORGE M	0.000
C#E1077JM		1.616		28.349	DELTA JORGE M	0.001

C#27GP	1.412			28.485	CAMBIO GINNA P	0.000
25			1.182	28.715	APA010CC200	0.002
24			1.458	28.439	APA010CC031	0.001
C#E1079JM		1.425		28.472	DELTA JORGE M	0.001

C#28GP	0.815			29.076	CAMBIO GINNA P	0.000
C#27GP		1.404		28.487	CAMBIO GINNA P	0.002

C#29GP	0.646			29.469	CAMBIO GINNA P	0.000
C#28GP		1.036		29.079	CAMBIO GINNA P	0.003

C#30GP	0.893			29.547	CAMBIO GINNA P	0.000
C#29GP		0.971		29.469	CAMBIO GINNA P	0.000

C#31GP	1.023			29.846	CAMBIO GINNA P	0.000
C#30GP		1.320		29.549	CAMBIO GINNA P	0.002

C#E1067JM	2.124			28.947	DELTA JORGE M	0.000
C#31GP		1.224		29.847	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 11 SEPTIEMBRE DE 2010
 TOPOGRAFO: YINNA PERAFAN
 COMISIÓN: GP
 AMARRE: 25.870

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E10001JM	1.385			25.870	DELTA JORGE M
C#E10000JM		1.393		25.862	DELTA JORGE M

C#E10000JM	1.579			25.862	DELTA JORGE M
C#E10002JM		1.506		25.935	DELTA JORGE M

C#E10002JM	1.596			25.935	DELTA JORGE M
C#E10003JM		1.401		26.130	DELTA JORGE M

C#E10003JM	1.483			26.130	DELTA JORGE M
26			1.256	26.357	APA003SC040
C#E10004JM		1.369		26.244	DELTA JORGE M

C#E10004JM	1.834			26.244	DELTA JORGE M
C#E10005JM		1.521		26.557	DELTA JORGE M

C#E10005JM	1.438			26.557	DELTA JORGE M
C#E10006JM		1.461		26.534	DELTA JORGE M

C#E10006JM	1.326			26.534	DELTA JORGE M
27			1.411	26.449	APA003SC051
C#E10007JM		1.395		26.465	DELTA JORGE M

C#E10007JM	1.167			26.465	DELTA JORGE M
C#E10008JM		1.481		26.151	DELTA JORGE M

C#E10008JM	1.273			26.151	DELTA JORGE M
C#E10009JM		1.472		25.952	DELTA JORGE M

C#E10009JM	1.230			25.952	DELTA JORGE M
28			1.245	25.937	MOJON APA08IZQ
C#E10010JM		1.496		25.686	DELTA JORGE M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E10000JM	1.391			25.862	DELTA JORGE M	0.000
C#E10001JM		1.382		25.871	DELTA JORGE M	0.001

C#E10002JM	1.503			25.935	DELTA JORGE M	0.000
C#E10000JM		1.576		25.862	DELTA JORGE M	0.000

C#E10003JM	1.406			26.130	DELTA JORGE M	0.000
C#E10002JM		1.600		25.936	DELTA JORGE M	0.001

C#E10004JM	1.364			26.244	DELTA JORGE M	0.000
26			1.250	26.358	APA003SC040	0.001
C#E10003JM		1.477		26.131	DELTA JORGE M	0.001

C#E10005JM	1.527			26.557	DELTA JORGE M	0.000
C#E10004JM		1.840		26.244	DELTA JORGE M	0.000

C#E10006JM	1.456			26.534	DELTA JORGE M	0.000
C#E10005JM		1.432		26.558	DELTA JORGE M	0.001

C#E10007JM	1.396			26.465	DELTA JORGE M	0.000
27			1.412	26.449	APA003SC051	0.000
C#E10006JM		1.326		26.535	DELTA JORGE M	0.001

C#E10008JM	1.489			26.151	DELTA JORGE M	0.000
C#E10007JM		1.175		26.465	DELTA JORGE M	0.000

C#E10009JM	1.465			25.952	DELTA JORGE M	0.000
C#E10008JM		1.266		26.151	DELTA JORGE M	0.000

C#E10010JM	1.487			25.686	DELTA JORGE M	0.000
28			1.237	25.936	MOJON APA08IZQ	0.001
C#E10009JM		1.222		25.951	DELTA JORGE M	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E10010JM	1.309			25.686	DELTA JORGE M
29			1.401	25.594	APA003SC089
30			1.613	25.382	APA003SC088
31			1.334	25.661	APA003SC090
C#E10011JM		1.653		25.342	DELTA JORGE M

C#E10011JM	2.784			25.342	DELTA JORGE M
32			0.511	27.615	APA003SC093
C#E10012JM		0.551		27.575	DELTA JORGE M

C#E10012JM	1.719			27.575	DELTA JORGE M
C#E10054JM		1.187		28.107	DELTA JORGE M

C#E10054JM	1.606			28.107	DELTA JORGE M
C#E10055JM		1.256		28.457	DELTA JORGE M

C#E10055JM	1.321			28.457	DELTA JORGE M
C#E10056JM		1.267		28.511	DELTA JORGE M

C#E10056JM	1.378			28.511	DELTA JORGE M
C#32GP		1.753		28.136	CAMBIO GINNA P

C#32GP	0.875			28.136	CAMBIO GINNA P
C#33GP		1.911		27.100	CAMBIO GINNA P

C#33GP	1.128			27.100	CAMBIO GINNA P
C#34GP		1.691		26.537	CAMBIO GINNA P

C#34GP	1.173			26.537	CAMBIO GINNA P
C#35GP		1.389		26.321	CAMBIO GINNA P

C#35GP	1.101			26.321	CAMBIO GINNA P
C#36GP		1.312		26.110	CAMBIO GINNA P

C#36GP	1.218			26.110	CAMBIO GINNA P
C#E10001JM		1.443		25.885	DELTA JORGE M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E10011JM	1.653			25.342	DELTA JORGE M	0.000
31			1.335	25.660	APA003SC090	0.001
30			1.613	25.382	APA003SC088	0.000
29			1.402	25.593	APA003SC089	0.001
C#E10010JM		1.309		25.686	DELTA JORGE M	0.000

C#E10012JM	0.543			27.575	DELTA JORGE M	0.000
32			0.504	27.614	APA003SC093	0.001
C#E10011JM		2.777		25.341	DELTA JORGE M	0.001

C#E10054JM	1.191			28.107	DELTA JORGE M	0.000
C#E10012JM		1.723		27.575	DELTA JORGE M	0.000

C#E10055JM	1.263			28.457	DELTA JORGE M	0.000
C#E10054JM		1.613		28.107	DELTA JORGE M	0.000

C#E10056JM	1.270			28.511	DELTA JORGE M	0.000
C#E10055JM		1.324		28.457	DELTA JORGE M	0.000

C#32GP	1.755			28.136	CAMBIO GINNA P	0.000
C#E10056JM		1.379		28.512	DELTA JORGE M	0.001

C#33GP	1.913			27.100	CAMBIO GINNA P	0.000
C#32GP		0.876		28.137	CAMBIO GINNA P	0.001

C#34GP	1.689			26.537	CAMBIO GINNA P	0.000
C#33GP		1.126		27.100	CAMBIO GINNA P	0.000

C#35GP	1.395			26.321	CAMBIO GINNA P	0.000
C#34GP		1.181		26.535	CAMBIO GINNA P	0.002

C#36GP	1.306			26.110	CAMBIO GINNA P	0.000
C#35GP		1.094		26.322	CAMBIO GINNA P	0.001

C#E10001JM	1.448			25.885	DELTA JORGE M	0.000
C#36GP		1.222		26.111	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 13 SEPTIEMBRE DE 2010
 TOPOGRAFO: YINNA PERAFAN
 COMISIÓN: GP
 AMARRE: 27.575

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E10012JM	1.638			27.575	DELTA JORGE M
33			1.54	27.673	APA003CC089
34			1.492	27.721	APA003SC090
C#E10014JM		1.609		27.604	DELTA JORGE M

C#E10014JM	1.267			27.604	DELTA JORGE M
C#37GP		1.447		27.424	CAMBIO GINNA P

C#37GP	1.412			27.424	CAMBIO GINNA P
C#E10015JM		1.528		27.308	DELTA JORGE M

C#E10015JM	1.332			27.308	DELTA JORGE M
C#38GP		1.355		27.285	CAMBIO GINNA P

C#E10012JM	0.606			27.575	DELTA JORGE M
C#E10011JM		2.837		25.344	DELTA JORGE M

C#E10011JM	1.193			25.344	DELTA JORGE M
C#E12007CM		1.442		25.095	DELTA CAROLINA M

C#E12007CM	1.524			25.095	DELTA CAROLINA M
C#E12006CM		1.385		25.234	DELTA CAROLINA M

C#E12006CM	1.23			25.234	DELTA CAROLINA M
C#E12005CM		1.248		25.216	DELTA CAROLINA M

C#E12005CM	1.571			25.216	DELTA CAROLINA M
35			1.25	25.537	APA003SCC125
C#E12004CM		1.145		25.642	DELTA CAROLINA M

C#E12004CM	2.851			25.642	DELTA CAROLINA M
36			1.098	27.395	APA003SC122
37			1.132	27.361	APA003SCC124
C#E12003CM		0.957		27.536	DELTA CAROLINA M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E10014JM	1.619			27.604	DELTA JORGE M	0.000
34			1.501	27.722	APA003SC090	0.001
33			1.549	27.674	APA003CC089	0.001
C#E10012JM		1.646		27.577	DELTA JORGE M	0.002

C#37GP	1.442			27.424	CAMBIO GINNA P	0.000
C#E10014JM		1.259		27.607	DELTA JORGE M	0.003

C#E10015JM	1.528			27.308	DELTA JORGE M	0.000
C#37GP		1.410		27.426	CAMBIO GINNA P	0.002

C#38GP	1.362			27.285	CAMBIO GINNA P	0.000
C#E10015JM		1.339		27.308	DELTA JORGE M	0.000

C#E10011JM	2.834			25.344	DELTA JORGE M	0.000
C#E10012JM		0.602		27.576	DELTA JORGE M	0.001

C#E12007CM	1.449			25.095	DELTA CAROLINA M	0.000
C#E10011JM		1.200		25.344	DELTA JORGE M	0.000

C#E12006CM	1.389			25.234	DELTA CAROLINA M	0.000
C#E12007CM		1.527		25.096	DELTA CAROLINA M	0.001

C#E12005CM	1.237			25.216	DELTA CAROLINA M	0.000
C#E12006CM		1.220		25.233	DELTA CAROLINA M	0.001

C#E12004CM	1.140			25.642	DELTA CAROLINA M	0.000
35			1.245	25.537	APA003SCC125	0.000
C#E12005CM		1.566		25.216	DELTA CAROLINA M	0.000

C#E12003CM	0.963			27.536	DELTA CAROLINA M	0.000
37			1.138	27.361	APA003SCC124	0.000
36			1.104	27.395	APA003SC122	0.000
C#E12004CM		2.857		25.642	DELTA CAROLINA M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E12003CM	1.372			27.536	DELTA CAROLINA M
C#E12002CM		1.508		27.400	DELTA CAROLINA M

C#E12002CM	1.435			27.400	DELTA CAROLINA M
C#E12001CM		1.524		27.311	DELTA CAROLINA M

C#E12001CM	1.379			27.311	DELTA CAROLINA M
C#11EJEC		1.428		27.262	DELTA EJE COLECTOR

C#11EJEC	1.498			27.262	DELTA EJE COLECTOR
C#39GP		1.4		27.360	CAMBIO GINNA P

C#39GP	1.365			27.360	CAMBIO GINNA P
C#E10017JM			1.875	28.725	DELTA JORGE M
C#40GP		1.319		27.406	CAMBIO GINNA P

C#40GP	1.427			27.406	CAMBIO GINNA P
C#38GP		1.559		27.274	CAMBIO GINNA P

C#E10017JM	2.026			28.725	DELTA JORGE M
C#41GP		1.481		29.270	CAMBIO GINNA P

C#41GP	0.453			29.270	CAMBIO GINNA P
38			0.732	28.991	APA001SC153
39			0.726	28.997	APA001CC147
C#42GP		2.212		27.511	CAMBIO GINNA P

C#42GP	2.064			27.511	CAMBIO GINNA P
40			0.968	28.607	APA001CC212
41			0.927	28.648	APA001SC211
C#E10021JM		0.947		28.628	DELTA JORGE M

C#E10021JM	1.482			28.628	DELTA JORGE M
42			1.582	28.528	APA001CC202
43			1.614	28.496	APA001SC206
44			1.469	28.641	APA001CC210
45			1.482	28.628	APA001SC211
C#43GP		1.586		28.524	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E12002CM	1.504			27.400	DELTA CAROLINA M	0.000
C#E12003CM		1.368		27.536	DELTA CAROLINA M	0.000

C#E12001CM	1.519			27.311	DELTA CAROLINA M	0.000
C#E12002CM		1.429		27.401	DELTA CAROLINA M	0.001

C#11EJEC	1.424			27.262	DELTA EJE COLECTOR	0.000
C#E12001CM		1.373		27.313	DELTA CAROLINA M	0.002

C#39GP	1.405			27.360	CAMBIO GINNA P	0.000
C#11EJEC		1.502		27.263	DELTA EJE COLECTOR	0.001

C#40GP	1.304			27.406	CAMBIO GINNA P	0.000
C#E10017JM			1.859	28.710	DELTA JORGE M	0.015
C#39GP		1.350		27.360	CAMBIO GINNA P	0.000

C#38GP	1.569			27.274	CAMBIO GINNA P	0.000
C#40GP		1.440		27.403	CAMBIO GINNA P	0.003

C#41GP	1.485			29.270	CAMBIO GINNA P	0.000
C#E10017JM		2.030		28.725	DELTA JORGE M	0.000

C#42GP	2.229			27.511	CAMBIO GINNA P	0.000
39			0.743	28.997	APA001CC147	0.000
38			0.749	28.991	APA001SC153	0.000
C#41GP		0.471		29.269	CAMBIO GINNA P	0.001

C#E10021JM	0.960			28.628	DELTA JORGE M	0.000
41			0.940	28.648	APA001SC211	0.000
40			0.979	28.609	APA001CC212	0.002
C#42GP		2.076		27.512	CAMBIO GINNA P	0.001

C#43GP	1.585			28.524	CAMBIO GINNA P	0.000
45			1.480	28.629	APA001SC211	0.001
44			1.469	28.640	APA001CC210	0.001
43			1.614	28.495	APA001SC206	0.001
42			1.580	28.529	APA001CC202	0.001
C#E10021JM		1.481		28.628	DELTA JORGE M	0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 14 SEPTIEMBRE DE 2010
 TOPOÓGRAFO: YINNA PERAFAN ORTEGA
 COMISIÓN: GP
 AMARRE: 28.524

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#43GP	1.295			28.524	CAMBIO GINNA P
C#44GP		1.301		28.518	CAMBIO GINNA P

C#44GP	1.16			28.518	CAMBIO GINNA P
46			1.404	28.274	APA001CC195
47			1.404	28.274	APA001CC194
C#E10026JM		1.47		28.208	DELTA JORGE M

C#E10026JM	1.415			28.208	DELTA JORGE M
C#45GP		1.386		28.237	CAMBIO GINNA P

C#45GP	1.272			28.237	CAMBIO GINNA P
48			1.305	28.204	APA001SC186
49			1.232	28.277	APA001CC187
50			1.476	28.033	APA001SC191
51			1.418	28.091	APA001CC190
C#E10028JM		1.242		28.267	DELTA JORGE M

C#E10028JM	1.593			28.267	DELTA JORGE M
C#46GP		1.533		28.327	CAMBIO GINNA P

C#46GP	1.351			28.327	CAMBIO GINNA P
C#E10030JM		1.872		27.806	DELTA JORGE M

C#E10030JM	1.506			27.806	DELTA JORGE M
52			1.383	27.929	APA00SCC155
53			1.549	27.763	APA00SCC157
54			1.541	27.771	APA00SCC156
C#E10032JM		1.456		27.856	DELTA JORGE M

C#E10032JM	1.341			27.856	DELTA JORGE M
E10044JM			1.532	27.665	DELTA JORGE M
C#47GP		1.551		27.646	CAMBIO GINNA P

CONTRA NIVELACIÓN							ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN		
C#44GP	1.297			28.518	CAMBIO GINNA P		0.000
C#43GP		1.289		28.526	CAMBIO GINNA P		0.002

C#E10026JM	1.474			28.208	DELTA JORGE M		0.000
47			1.410	28.272	APA001CC194		0.002
46			1.409	28.273	APA001CC195		0.001
C#44GP		1.165		28.517	CAMBIO GINNA P		0.001

C#45GP	1.383			28.237	CAMBIO GINNA P		0.000
C#E10026JM		1.411		28.209	DELTA JORGE M		0.001

C#E10028JM	1.246			28.267	DELTA JORGE M		0.000
51			1.421	28.092	APA001CC190		0.001
50			1.481	28.032	APA001SC191		0.001
49			1.235	28.278	APA001CC187		0.001
48			1.308	28.205	APA001SC186		0.001
C#45GP		1.275		28.238	CAMBIO GINNA P		0.001

C#46GP	1.537			28.327	CAMBIO GINNA P		0.000
C#E10028JM		1.596		28.268	DELTA JORGE M		0.001

C#E10030JM	1.875			27.806	DELTA JORGE M		0.000
C#46GP		1.354		28.327	CAMBIO GINNA P		0.000

C#E10032JM	1.457			27.856	DELTA JORGE M		0.000
54			1.543	27.770	APA00SCC156		0.001
53			1.551	27.762	APA00SCC157		0.001
52			1.384	27.929	APA00SCC155		0.000
C#E10030JM		1.508		27.805	DELTA JORGE M		0.001

C#47GP	1.556			27.646	CAMBIO GINNA P		0.000
E10044JM			1.537	27.665	DELTA JORGE M		0.000
C#E10032JM		1.346		27.856	DELTA JORGE M		0.000



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#47GP	1.265			27.646	CAMBIO GINNA P
55			1.37	27.541	APA005CC147
C#E12011CM		1.529		27.382	DELTA CAROLINA M

C#E12011CM	1.221			27.382	DELTA CAROLINA M
56			1.358	27.245	APA005CC142
C#48GP		1.467		27.136	CAMBIO GINNA P

C#48GP	1.248			27.136	CAMBIO GINNA P
57			1.576	26.808	APA005CC136
58			1.555	26.829	DELTA 10043 LUIS JORGE
C#E12010CM		1.597		26.787	DELTA CAROLINA M

C#E12010CM	0.992			26.787	DELTA CAROLINA M
C#49GP		1.619		26.160	CAMBIO GINNA P

C#49GP	1.138			26.160	CAMBIO GINNA P
59			1.475	25.823	APA005SC039
60			1.401	25.897	APA005SC035
C#E12009CM		1.635		25.663	DELTA CAROLINA M

C#E12009CM	1.237			25.663	DELTA CAROLINA M
61			1.53	25.370	APA005CC009
62			1.526	25.374	APA005CC008
C#50GP		1.433		25.467	CAMBIO GINNA P

C#50GP	1.329			25.467	CAMBIO GINNA P
63			1.305	25.491	APA005SC011
C#E12008CM		1.571		25.225	DELTA CAROLINA M

C#E12008CM	1.471			25.225	DELTA CAROLINA M
64			1.409	25.287	APA005SC012
C#51GP		1.363		25.333	CAMBIO GINNA P

C#51GP	1.409			25.333	CAMBIO GINNA P
C#E12007CM		1.634		25.108	DELTA CAROLINA M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E12011CM	1.532			27.382	DELTA CAROLINA M	0.000
55			1.372	27.542	APA005CC147	0.001
C#47GP		1.268		27.646	CAMBIO GINNA P	0.000

C#48GP	1.460			27.136	CAMBIO GINNA P	0.000
56			1.351	27.245	APA005CC142	0.000
C#E12011CM		1.214		27.382	DELTA CAROLINA M	0.000

C#E12010CM	1.589			26.787	DELTA CAROLINA M	0.000
58			1.551	26.825	DELTA 10043 LUIS JORGE	0.004
57			1.569	26.807	APA005CC136	0.001
C#48GP		1.240		27.136	CAMBIO GINNA P	0.000

C#49GP	1.619			26.160	CAMBIO GINNA P	0.000
C#E12010CM		0.990		26.789	DELTA CAROLINA M	0.002

C#E12009CM	1.631			25.663	DELTA CAROLINA M	0.000
60			1.398	25.896	APA005SC035	0.001
59			1.473	25.821	APA005SC039	0.002
C#49GP		1.133		26.161	CAMBIO GINNA P	0.001

C#50GP	1.435			25.467	CAMBIO GINNA P	0.000
62			1.528	25.374	APA005CC008	0.000
61			1.533	25.369	APA005CC009	0.001
C#E12009CM		1.239		25.663	DELTA CAROLINA M	0.000

C#E12008CM	1.579			25.225	DELTA CAROLINA M	0.000
63			1.313	25.491	APA005SC011	0.000
C#50GP		1.337		25.467	CAMBIO GINNA P	0.000

C#51GP	1.370			25.333	CAMBIO GINNA P	0.000
64			1.416	25.287	APA005SC012	0.000
C#E12008CM		1.478		25.225	DELTA CAROLINA M	0.000

C#E12007CM	1.646			25.108	DELTA CAROLINA M	0.000
C#51GP		1.420		25.334	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#E12007CM	1.345			25.108	DELTA CAROLINA M
65			0.944	25.509	APA005SC001
C#E12006CM		0.932		25.521	DELTA CAROLINA M

C#E12006CM	1.487			25.521	DELTA CAROLINA M
C#52GP		1.207		25.801	CAMBIO GINNA P

C#52GP	1.354			25.801	CAMBIO GINNA P
C#53GP		0.78		26.375	CAMBIO GINNA P

C#53GP	1.495			26.375	CAMBIO GINNA P
C#54GP		1.408		26.462	CAMBIO GINNA P

C#54GP	1.874			26.462	CAMBIO GINNA P
C#55GP		1.259		27.077	CAMBIO GINNA P

C#55GP	1.633			27.077	CAMBIO GINNA P
C#56GP		1.443		27.267	CAMBIO GINNA P

C#56GP	1.737			27.267	CAMBIO GINNA P
C#57GP		1.428		27.576	CAMBIO GINNA P

C#57GP	1.735			27.576	CAMBIO GINNA P
C#58GP		1.461		27.850	CAMBIO GINNA P

C#58GP	1.392			27.850	CAMBIO GINNA P
C#E10032CM		1.366		27.876	CAMBIO GINNA P

C#E10032CM	1.491			27.876	CAMBIO GINNA P
C#59GP		1.442		27.925	CAMBIO GINNA P

C#59GP	1.295			27.925	CAMBIO GINNA P
C#60GP		1.416		27.804	CAMBIO GINNA P

C#60GP	1.056			27.804	CAMBIO GINNA P
C#61GP		1.333		27.527	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#E12006CM	0.932			25.521	DELTA CAROLINA M	0.000
65			0.944	25.509	APA005SC001	0.000
C#E12007CM		1.345		25.108	DELTA CAROLINA M	0.000

C#52GP	1.209			25.801	CAMBIO GINNA P	0.000
C#E12006CM		1.489		25.521	DELTA CAROLINA M	0.000

C#53GP	0.786			26.375	CAMBIO GINNA P	0.000
C#52GP		1.358		25.803	CAMBIO GINNA P	0.002

C#54GP	1.407			26.462	CAMBIO GINNA P	0.000
C#53GP		1.494		26.375	CAMBIO GINNA P	0.000

C#55GP	1.255			27.077	CAMBIO GINNA P	0.000
C#54GP		1.870		26.462	CAMBIO GINNA P	0.000

C#56GP	1.444			27.267	CAMBIO GINNA P	0.000
C#55GP		1.631		27.080	CAMBIO GINNA P	0.003

C#57GP	1.428			27.576	CAMBIO GINNA P	0.000
C#56GP		1.737		27.267	CAMBIO GINNA P	0.000

C#58GP	1.453			27.850	CAMBIO GINNA P	0.000
C#57GP		1.728		27.575	CAMBIO GINNA P	0.001

C#E10032CM	1.370			27.876	CAMBIO GINNA P	0.000
C#58GP		1.397		27.849	CAMBIO GINNA P	0.001

C#59GP	1.445			27.925	CAMBIO GINNA P	0.000
C#E10032CM		1.494		27.876	CAMBIO GINNA P	0.000

C#60GP	1.420			27.804	CAMBIO GINNA P	0.000
C#59GP		1.297		27.927	CAMBIO GINNA P	0.002

C#61GP	1.334			27.527	CAMBIO GINNA P	0.000
C#60GP		1.056		27.805	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#61GP	1.541			27.527	CAMBIO GINNA P
C#62GP		0.959		28.109	CAMBIO GINNA P

C#62GP	1.394			28.109	CAMBIO GINNA P
C#63GP		1.452		28.051	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#62GP	0.962			28.109	CAMBIO GINNA P	0.000
C#61GP		1.543		27.528	CAMBIO GINNA P	0.001

C#63GP	1.456			28.051	CAMBIO GINNA P	0.000
C#62GP		1.399		28.108	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 15 DE SEPTIEMBRE DE 2010
 TOPOGRAFO: GINA PERAFAN
 COMISIÓN: GP
 AMARRE: 28.051

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#63GP	1.463			28.051	CAMBIO GINNA P
C#64GP		1.229		28.285	CAMBIO GINNA P

C#64GP	1.569			28.285	CAMBIO GINNA P
C#65GP		1.509		28.345	CAMBIO GINNA P

C#65GP	1.664			28.345	CAMBIO GINNA P
C#66GP		1.482		28.527	CAMBIO GINNA P

C#66GP	1.355			28.527	CAMBIO GINNA P
C#67GP		1.090		28.792	CAMBIO GINNA P

C#67GP	1.462			28.792	CAMBIO GINNA P
C#68GP		1.159		29.095	CAMBIO GINNA P

C#68GP	1.429			29.095	CAMBIO GINNA P
C#69GP		1.204		29.320	CAMBIO GINNA P

C#69GP	1.125			29.320	CAMBIO GINNA P
103			1.178	29.267	C#39 GINA
C#40GP		1.130		29.315	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#64GP	1.230			28.285	CAMBIO GINNA P	0.000
C#63GP		1.463		28.052	CAMBIO GINNA P	0.001

C#65GP	1.507			28.345	CAMBIO GINNA P	0.000
C#64GP		1.566		28.286	CAMBIO GINNA P	0.001

C#66GP	1.481			28.527	CAMBIO GINNA P	0.000
C#65GP		1.662		28.346	CAMBIO GINNA P	0.001

C#67GP	1.086			28.792	CAMBIO GINNA P	0.000
C#66GP		1.352		28.526	CAMBIO GINNA P	0.001

C#68GP	1.162			29.095	CAMBIO GINNA P	0.000
C#67GP		1.464		28.793	CAMBIO GINNA P	0.001

C#69GP	1.205			29.320	CAMBIO GINNA P	0.000
C#68GP		1.429		29.096	CAMBIO GINNA P	0.001

C#40GP	1.134			29.315	CAMBIO GINNA P	0.000
103			1.181	29.268	C#39 GINA	0.001
C#69GP		1.128		29.321	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



LUGAR: APARTADO
 FECHA LEVANTAMIENTO: 16 DE SEPTIEMBRE DE 2010
 TOPOGRAFO: GINA PERAFAN
 COMISIÓN: GP
 AMARRE: 24.736

NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#12006CM	1.530			24.736	DELTA CAROLINA M
C#12005CM		1.784		24.482	DELTA CAROLINA M

C#12005CM	1.602			24.482	DELTA CAROLINA M
104			1.581	24.503	DELTA 10041JM
105			1.629	24.455	MHAPA006SC006
106			1.603	24.481	APA006PC001
107			1.727	24.357	DELTA CAROLINA M
C#12004CM		1.807		24.277	DELTA CAROLINA M

C#12004CM	1.369			24.277	DELTA CAROLINA M
108			1.632	24.014	MHAPA006SC007
C#70GP		1.678		23.968	CAMBIO GINNA P

C#70GP	1.414			23.968	CAMBIO GINNA P
109			1.134	24.248	APA006SC008
110			1.113	24.269	MHAPA006CC110
111			0.997	24.385	DELTA CAROLINA M
C#12003CM		1.118		24.264	DELTA CAROLINA M

C#12003CM	1.331			24.264	DELTA CAROLINA M
112			1.494	24.101	MHAPA006PC011
C#12002CM		1.115		24.480	DELTA CAROLINA M

C#12002CM	1.481			24.480	DELTA CAROLINA M
113			1.266	24.695	MHAPA006PC023
C#12001CM		0.859		25.102	DELTA CAROLINA M

C#12001CM	1.461			25.102	DELTA CAROLINA M
114			1.048	25.515	MHAPA006CC0
115			1.452	25.111	MHAPA006CC036
C#12000CM		1.034		25.529	DELTA CAROLINA M

CONTRA NIVELACIÓN							ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN		
C#12005CM	1.782			24.482	DELTA CAROLINA M		0.000
C#12006CM		1.528		24.736	DELTA CAROLINA M		0.000

C#12004CM	1.804			24.277	DELTA CAROLINA M		0.000
107			1.726	24.355	DELTA CAROLINA M		0.002
106			1.602	24.479	APA006PC001		0.002
105			1.627	24.454	MHAPA006SC006		0.001
104			1.579	24.502	DELTA 10041JM		0.001
C#12005CM		1.601		24.480	DELTA CAROLINA M		0.002

C#70GP	1.671			23.968	CAMBIO GINNA P		0.000
108			1.625	24.014	MHAPA006SC007		0.000
C#12004CM		1.362		24.277	DELTA CAROLINA M		0.000

C#12003CM	1.115			24.264	DELTA CAROLINA M		0.000
111			0.995	24.384	DELTA CAROLINA M		0.001
110			1.109	24.270	MHAPA006CC110		0.001
109			1.131	24.248	APA006SC008		0.000
C#70GP		1.412		23.967	CAMBIO GINNA P		0.001

C#12002CM	1.119			24.480	DELTA CAROLINA M		0.000
112			1.498	24.101	MHAPA006PC011		0.000
C#12003CM		1.335		24.264	DELTA CAROLINA M		0.000

C#12001CM	0.858			25.102	DELTA CAROLINA M		0.000
113			1.266	24.694	MHAPA006PC023		0.001
C#12002CM		1.481		24.479	DELTA CAROLINA M		0.001

C#12000CM	1.039			25.529	DELTA CAROLINA M		0.000
115			1.458	25.110	MHAPA006CC036		0.001
114			1.053	25.515	MHAPA006CC0		0.000
C#12001CM		1.465		25.103	DELTA CAROLINA M		0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#12000CM	1.256			25.529	DELTA CAROLINA M
116			1.315	25.470	MHAPA006CC040
C#12016CM		1.383		25.402	DELTA CAROLINA M

C#12016CM	1.409			25.402	DELTA CAROLINA M
117			1.417	25.394	MHAPA007CC150
C#71GP		1.428		25.383	CAMBIO GINNA P

C#71GP	1.403			25.383	CAMBIO GINNA P
118			1.412	25.374	MHAPA007CC055
C#12017CM		1.484		25.302	DELTA CAROLINA M

C#12017CM	1.294			25.302	DELTA CAROLINA M
119			1.614	24.982	MHAPA007CC051
C#12018CM		1.652		24.944	DELTA CAROLINA M

C#12018CM	1.653			24.944	DELTA CAROLINA M
C#72GP		1.312		25.285	CAMBIO GINNA P

C#72GP	1.491			25.285	CAMBIO GINNA P
C#73GP		1.390		25.386	CAMBIO GINNA P

C#73GP	1.448			25.386	CAMBIO GINNA P
C#74GP		1.356		25.478	CAMBIO GINNA P

C#74GP	1.235			25.478	CAMBIO GINNA P
C#75GP		1.115		25.598	CAMBIO GINNA P

C#75GP	1.307			25.598	CAMBIO GINNA P
C#76GP		1.464		25.441	CAMBIO GINNA P

C#76GP	1.338			25.441	CAMBIO GINNA P
C#77GP		1.431		25.348	CAMBIO GINNA P

C#77GP	1.167			25.348	CAMBIO GINNA P
C#78GP		1.988		24.527	CAMBIO GINNA P

C#78GP	1.210			24.527	CAMBIO GINNA P
C#79GP		1.390		24.347	CAMBIO GINNA P

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#12016CM	1.369			25.402	DELTA CAROLINA M	0.000
116			1.301	25.470	MHAPA006CC040	0.000
C#12000CM		1.242		25.529	DELTA CAROLINA M	0.000

C#71GP	1.431			25.383	CAMBIO GINNA P	0.000
117			1.421	25.393	MHAPA007CC150	0.001
C#12016CM		1.413		25.401	DELTA CAROLINA M	0.001

C#12017CM	1.485			25.302	DELTA CAROLINA M	0.000
118			1.413	25.374	MHAPA007CC055	0.000
C#71GP		1.404		25.383	CAMBIO GINNA P	0.000

C#12018CM	1.652			24.944	DELTA CAROLINA M	0.000
119			1.615	24.981	MHAPA007CC051	0.001
C#12017CM		1.296		25.300	DELTA CAROLINA M	0.002

C#72GP	1.310			25.285	CAMBIO GINNA P	0.000
C#12018CM		1.650		24.945	DELTA CAROLINA M	0.001

C#73GP	1.393			25.386	CAMBIO GINNA P	0.000
C#72GP		1.494		25.285	CAMBIO GINNA P	0.000

C#74GP	1.360			25.478	CAMBIO GINNA P	0.000
C#73GP		1.452		25.386	CAMBIO GINNA P	0.000

C#75GP	1.113			25.598	CAMBIO GINNA P	0.000
C#74GP		1.233		25.478	CAMBIO GINNA P	0.000

C#76GP	1.465			25.441	CAMBIO GINNA P	0.000
C#75GP		1.307		25.599	CAMBIO GINNA P	0.001

C#77GP	1.427			25.348	CAMBIO GINNA P	0.000
C#76GP		1.333		25.442	CAMBIO GINNA P	0.001

C#78GP	1.991			24.527	CAMBIO GINNA P	0.000
C#77GP		1.171		25.347	CAMBIO GINNA P	0.001

C#79GP	1.396			24.347	CAMBIO GINNA P	0.000
C#78GP		1.217		24.526	CAMBIO GINNA P	0.001



ELBER DE J HERNÁNDEZ D
INGENIERÍA CIVIL & AMBIENTAL
CONTRATO DE CONSULTORIA N° 003 DE 2010



NIVELACIÓN					
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN
C#79GP	1.459			24.347	CAMBIO GINNA P
C#80GP		1.422		24.384	CAMBIO GINNA P

C#80GP	1.465			24.384	CAMBIO GINNA P
C#81GP		1.308		24.541	CAMBIO GINNA P

C#81GP	1.648			24.541	CAMBIO GINNA P
C#12006CM		1.574		24.615	DELTA CAROLINA M

C#12017CM	1.791			25.302	DELTA CAROLINA M
C#APA_2		0.263		26.830	MOJON

C#APA_2	1.733			26.830	MOJON
C#11059XC		1.589		26.974	DELTA 11059XC

C#11059XC	0.787			26.974	DELTA 11059XC
C#82GP		2.129		25.632	CAMBIO GINNA P

C#82GP	0.643			25.632	CAMBIO GINNA P
C#11005XC		1.591		24.684	DELTA 11005XC

C#11005XC	1.171			24.684	DELTA 11005XC
C#83GP		0.202		25.653	CAMBIO GINNA P

C#83GP	2.385			25.653	CAMBIO GINNA P
C#84GP		0.575		27.463	CAMBIO GINNA P

C#84GP	1.133			27.463	CAMBIO GINNA P
C#85GP		3.088		25.508	CAMBIO GINNA P

C#85GP	1.195			25.508	CAMBIO GINNA P
C#12017CM		1.390		25.313	DELTA CAROLINA M

CONTRA NIVELACIÓN						ERROR
EN	V (+)	V (-)	VI	COTA	OBSERVACIÓN	
C#80GP	1.423			24.384	CAMBIO GINNA P	0.000
C#79GP		1.461		24.346	CAMBIO GINNA P	0.001

C#81GP	1.308			24.541	CAMBIO GINNA P	0.000
C#80GP		1.464		24.385	CAMBIO GINNA P	0.001

C#12006CM	1.570			24.615	DELTA CAROLINA M	0.000
C#81GP		1.644		24.541	CAMBIO GINNA P	0.000

C#APA_2	0.270			26.830	MOJON	0.000
C#12017CM		1.797		25.303	DELTA CAROLINA M	0.001

C#11059XC	1.597			26.974	DELTA 11059XC	0.000
C#APA_2		1.739		26.832	MOJON	0.002

C#82GP	2.129			25.632	CAMBIO GINNA P	0.000
C#11059XC		0.786		26.975	DELTA 11059XC	0.001

C#11005XC	1.623			24.684	DELTA 11005XC	0.000
C#82GP		0.674		25.633	CAMBIO GINNA P	0.001

C#83GP	0.199			25.653	CAMBIO GINNA P	0.000
C#11005XC		1.167		24.685	DELTA 11005XC	0.001

C#84GP	0.579			27.463	CAMBIO GINNA P	0.000
C#83GP		2.388		25.654	CAMBIO GINNA P	0.001

C#85GP	3.101			25.508	CAMBIO GINNA P	0.000
C#84GP		1.147		27.462	CAMBIO GINNA P	0.001

C#12017CM	1.402			25.313	DELTA CAROLINA M	0.000
C#85GP		1.206		25.509	CAMBIO GINNA P	0.001