



PREFEITURA MUNICIPAL DE SANTA ROSA - RS

IMPLANTAÇÃO DE TREVO DE ACESSO

E RUAS LATERAIS NA ERS-344

- ELEMENTOS DA TOPOGRAFIA -

VOLUME 1D

SER: 344ERS0090 – 344ERS0100

ERS-344 (KM 45+600 AO KM 48+600) – SANTA ROSA /RS

OUTUBRO/2023

ELEMENTOS GEOMÉTRICOS - RAMO 01														
Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L1	315° 14' 27.37"	-	-	-	-	-	9,269	-	0+0,000	0+9,269	N E	-	6910897,2566 748841,2387	6910903,8385 748834,7120
C1	-	-	2,328	-	-	230,000	65,178	016° 14' 12.01"	0+9,269	0+74,447	N E	6910927,1387 748811,6138	6910903,8385 748834,7120	6910955,9679 748795,9517
L2	331° 29' 10.01"	-	-	-	-	-	9,229	-	0+74,447	0+83,677	N E	-	6910955,9679 748795,9517	6910964,0777 748791,5459
C2	-	-	1,256	-	-	139,000	37,228	015° 20' 43.27"	0+83,677	0+120,905	N E	6910980,5323 748782,6066	6910964,0777 748791,5459	6910994,0347 748769,6316
L3	316° 08' 26.74"	-	-	-	-	-	105,887	-	0+120,905	0+226,791	N E	-	6910994,0347 748769,6316	6911070,3836 748696,2638
C3	-	-	1,176	-	-	139,000	36,032	014° 51' 08.67"	0+226,791	0+262,823	N E	6911083,4472 748683,7104	6911070,3836 748696,2638	6911092,8565 748668,2277
L4	301° 17' 18.07"	-	-	-	-	-	8,352	-	0+262,823	0+271,175	N E	-	6911092,8565 748668,2277	6911097,1939 748661,0907
C4	-	-	2,656	-	-	230,000	69,567	017° 19' 48.21"	0+271,175	0+340,742	N E	6911115,3976 748631,1371	6911097,1939 748661,0907	6911141,6974 748607,9658
L5	318° 37' 06.28"	-	-	-	-	-	7,638	-	0+340,742	0+348,380	N E	-	6911141,6974 748607,9658	6911147,4282 748602,9167

ELEMENTOS GEOMÉTRICOS - RAMO 02														
Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L6	138° 36' 58.55"	-	-	-	-	-	9,134	-	0+0,000	0+9,134	N E	-	6911142,8358 748597,6878	6911135,9829 748603,7259
C5	-	-	2,356	-	-	230,000	65,566	016° 19' 59.99"	0+9,134	0+74,700	N E	6911111,2178 748625,5468	6911135,9829 748603,7259	6911081,3157 748639,5224
L7	154° 56' 58.54"	-	-	-	-	-	7,565	-	0+74,700	0+82,264	N E	-	6911081,3157 748639,5224	6911074,4625 748642,7254
C6	-	-	1,894	-	-	139,000	45,630	018° 48' 31.80"	0+82,264	0+127,895	N E	6911053,6058 748652,4734	6911074,4625 748642,7254	6911037,0057 748668,4253
L8	136° 08' 26.74"	-	-	-	-	-	96,841	-	0+127,895	0+224,736	N E	-	6911037,0057 748668,4253	6910967,1790 748735,5255
C7	-	-	1,909	-	-	139,000	45,809	018° 52' 57.58"	0+224,736	0+270,545	N E	6910950,5125 748751,5411	6910967,1790 748735,5255	6910939,9262 748772,0887
L9	117° 15' 29.17"	-	-	-	-	-	2,525	-	0+270,545	0+273,070	N E	-	6910939,9262 748772,0887	6910938,7698 748774,3331
C8	-	-	2,851	-	-	230,000	72,056	017° 57' 00.40"	0+273,070	0+345,127	N E	6910922,1326 748806,6250	6910938,7698 748774,3331	6910896,3533 748832,2177
L10	135° 04' 30.63"	-	-	-	-	-	5,708	-	0+345,127	0+350,834	N E	-	6910896,3533 748832,2177	6910892,3118 748836,2485


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ELEMENTOS GEOMÉTRICOS - RAMO 03

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C9	-	-	1,436	-	-	36,600	20,177	031° 35' 10.82"	0+0,000	0+20,177	N E	6911057,1255 748697,9092	6911049,6612 748705,0821	6911059.7270 748687,8894
C10	-	-	8,728	-	-	9,600	19,575	116° 49' 38.37"	0+20,177	0+39,752	N E	6911063,6505 748672,7775	6911059,7270 748687,8894	6911048.3944 748676,0963
C11	-	-	1,436	-	-	36,600	20,177	031° 35' 10.82"	0+39,752	0+59,929	N E	6911038,2789 748678,2968	6911048,3944 748676,0963	6911030.8147 748685,4697

ELEMENTOS GEOMÉTRICOS - RAMO 04

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C12	-	-	1,436	-	-	36,600	20,177	031° 35' 10.82"	0+0,000	0+20,177	N E	6910976,9328 748737,2475	6910984,3971 748730,0747	6910974.3314 748747,2674
C13	-	-	8,728	-	-	9,600	19,575	116° 49' 38.37"	0+20,177	0+39,752	N E	6910970,4078 748762,3792	6910974,3314 748747,2674	6910985.6639 748759,0604
C14	-	-	1,436	-	-	36,600	20,177	031° 35' 10.82"	0+39,752	0+59,929	N E	6910995,7794 748756,8599	6910985,6639 748759,0604	6911003.2437 748749,6871

ELEMENTOS GEOMÉTRICOS - RAMO 05

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C15	-	-	5,515	-	-	21,400	27,891	074° 40' 26.58"	0+0,000	0+27,891	N E	6911031,7123 748748,4597	6911015,4006 748749,0999	6911036.6411 748764,0222



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ELEMENTOS GEOMÉTRICOS - RAMO 06

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L11	263° 22' 30.92"	-	-	-	-	-	20,870	-	0+0,000	0+20,870	N E	-	6911040,5715 748763,5749	6911038,1638 748742,8439
C16	-	-	2,256	-	-	19,400	17,866	052° 45' 55.82"	0+20,870	0+38,736	N E	6911037,0536 748733,2852	6911038,1638 748742,8439	6911043.9922 748726,6175
L12	316° 08' 26.74"	-	-	-	-	-	5,483	-	0+38,736	0+44,219	N E	-	6911043,9922 748726,6175	6911047,9457 748722,8184
C17	-	-	0,225	-	-	193,600	18,676	005° 31' 37.51"	0+44,219	0+62,895	N E	6911054,6840 748716,3432	6911047,9457 748722,8184	6911060.7672 748709,2492
C18	-	-	0,188	-	-	3,600	2,279	036° 16' 20.96"	0+62,895	0+65,174	N E	6911061,5348 748708,3541	6911060,7672 748709,2492	6911061.6241 748707,1783
L13	270° 00' 00.00"	-	-	-	-	-	2,497	-	0+65,174	0+67,671	N E	-	6911061,6241 748707,1783	6911061,6241 748704,6814

ELEMENTOS GEOMÉTRICOS - RAMO 07

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L14	136° 08' 26.74"	-	-	-	-	-	55,172	-	0+0,000	0+55,172	N E	-	6910953,5930 748749,9678	6910913,8115 748788,1959
C19	-	-	0,094	-	-	205,000	12,395	003° 27' 51.01"	0+55,172	0+67,567	N E	6910909,3416 748792,4913	6910913,8115 748788,1959	6910904.6204 748796,5087
L15	139° 36' 17.75"	-	-	-	-	-	53,209	-	0+67,567	0+120,776	N E	-	6910904,6204 748796,5087	6910864,0968 748830,9910
C20	-	-	0,096	-	-	195,000	12,248	003° 35' 55.34"	0+120,776	0+133,023	N E	6910859,4313 748834,9609	6910864,0968 748830,9910	6910855.0242 748839,2158
L16	136° 00' 22.41"	-	-	-	-	-	369,337	-	0+133,023	0+502,360	N E	-	6910855,0242 748839,2158	6910589,3178 749095,7497
C21	-	-	0,580	-	-	100,000	21,493	012° 18' 53.16"	0+502,360	0+523,853	N E	6910581,5566 749103,2430	6910589,3178 749095,7497	6910572.3758 749108,9086

ELEMENTOS GEOMÉTRICOS - RAMO 08

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C22	-	-	0,120	-	-	300,000	16,956	003° 14' 17.90"	0+0,000	0+16,956	N E	6910602,9850 749070,1119	6910609,8312 749065,1077	6910595.8671 749074,7214
L24	147° 04' 24.13"	-	-	-	-	-	38,187	-	0+16,956	0+55,143	N E	-	6910595,8671 749074,7214	6910563,8139 749095,4787
C23	-	-	4,733	-	-	50,000	41,892	048° 00' 16.48"	0+55,143	0+97,035	N E	6910545,1264 749107,5805	6910563,8139 749095,4787	6910523.6290 749101,7889
C24	-	-	0,445	-	-	5,000	4,069	046° 37' 48.63"	0+97,035	0+101,104	N E	6910521,5483 749101,2284	6910523,6290 749101,7889	6910520.5270 749099,3309



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ELEMENTOS GEOMÉTRICOS - RAMO 09

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L17	135° 14' 27.37"	-	-	-	-	-	0,799	-	0+0,000	0+0,799	N E	-	6910900,0976 748844,0547	6910899,5303 748844,6173
C25	-	-	0,000	-	-	500,000	1,266	000° 08' 42.32"	0+0,799	0+2,065	N E	6910899,0808 748845,0630	6910899,5303 748844,6173	6910898,6324 748845,5099
L18	135° 05' 45.05"	-	-	-	-	-	27,990	-	0+2,065	0+30,055	N E	-	6910898,6324 748845,5099	6910878,8073 748865,2688
C26	-	-	1,693	-	-	50,000	25,663	029° 24' 27.37"	0+30,055	0+55,718	N E	6910869,5140 748874,5310	6910878,8073 748865,2688	6910865,9661 748887,1631
L19	105° 41' 17.68"	-	-	-	-	-	12,872	-	0+55,718	0+68,590	N E	-	6910865,9661 748887,1631	6910862,4855 748899,5555
C27	-	-	2,079	-	-	60,000	31,145	029° 44' 29.61"	0+68,590	0+99,735	N E	6910858,1775 748914,8940	6910862,4855 748899,5555	6910846,8276 748926,0748
L20	135° 25' 47.30"	-	-	-	-	-	153,880	-	0+99,735	0+253,616	N E	-	6910846,8276 748926,0748	6910737,2047 749034,0652
C28	-	-	0,553	-	-	295,000	36,111	007° 00' 48.64"	0+253,616	0+289,726	N E	6910724,3262 749046,7520	6910737,2047 749034,0652	6910709,9949 749057,7713
L21	142° 26' 35.94"	-	-	-	-	-	101,359	-	0+289,726	0+391,085	N E	-	6910709,9949 749057,7713	6910629,6427 749119,5541
C29	-	-	0,813	-	-	85,000	23,419	015° 47' 09.35"	0+391,085	0+414,504	N E	6910620,3008 749126,7371	6910629,6427 749119,5541	6910613,2654 749136,1905

ELEMENTOS GEOMÉTRICOS - RAMO 10

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L22	135° 25' 47.30"	-	-	-	-	-	215,358	-	0+0,000	0+215,358	N E	-	6911015,8062 748759,6126	6910862,3867 748910,7474
L23	135° 25' 47.30"	-	-	-	-	-	44,874	-	0+215,358	0+260,233	N E	-	6910862,3867 748910,7474	6910830,4188 748942,2393


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ELEMENTOS GEOMÉTRICOS - RAMO 11

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C30	-	-	0,173	-	-	55,000	8,712	009° 04' 32.94"	0+0,000	0+8,712	N E	6910507,0136 749137,3656	6910508,7755 749133,3717	6910504.6437 749141,0315
L40	122° 52' 51.19"	-	-	-	-	-	29,006	-	0+8,712	0+37,718	N E	-	6910504,6437 749141,0315	6910488,8967 749165,3905
C31	-	-	0,382	-	-	85,000	16,090	010° 50' 43.73"	0+37,718	0+53,807	N E	6910484,5162 749172,1668	6910488,8967 749165,3905	6910478.9388 749177,9978
L41	133° 43' 34.92"	-	-	-	-	-	306,560	-	0+53,807	0+360,368	N E	-	6910478,9388 749177,9978	6910267,0397 749399,5333
C32	-	-	0,233	-	-	395,000	27,120	003° 56' 01.75"	0+360,368	0+387,488	N E	6910257,6631 749409,3363	6910267,0397 749399,5333	6910248.9812 749419,7594
L42	129° 47' 33.16"	-	-	-	-	-	197,239	-	0+387,488	0+584,727	N E	-	6910248,9812 749419,7594	6910122,7463 749571,3113
C33	-	-	0,005	-	-	395,000	3,970	000° 34' 33.13"	0+584,727	0+588,697	N E	6910121,4759 749572,8366	6910122,7463 749571,3113	6910120.2208 749574,3745
L43	129° 13' 00.03"	-	-	-	-	-	358,705	-	0+588,697	0+947,402	N E	-	6910120,2208 749574,3745	6909893,4280 749852,2847
C34	-	-	0,077	-	-	305,000	13,667	002° 34' 02.58"	0+947,402	0+961,068	N E	6909889,1068 749857,5799	6909893,4280 749852,2847	6909884.5528 749862,6762
L44	131° 47' 02.61"	-	-	-	-	-	28,291	-	0+961,068	0+989,359	N E	-	6909884,5528 749862,6762	6909865,7020 749883,7714
C35	-	-	0,795	-	-	85,000	23,159	015° 36' 38.76"	0+989,359	1+12,518	N E	6909857,9382 749892,4596	6909865,7020 749883,7714	6909852.7988 749902,9166
L45	116° 10' 23.86"	-	-	-	-	-	12,568	-	1+12,518	1+25,086	N E	-	6909852,7988 749902,9166	6909847,2552 749914,1959
C36	-	-	1,122	-	-	81,000	26,808	018° 57' 46.70"	1+25,086	1+51,894	N E	6909841,2882 749926,3367	6909847,2552 749914,1959	6909831.6999 749935,8796

ELEMENTOS GEOMÉTRICOS - RAMO 12

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L46	124° 27' 54.02"	-	-	-	-	-	2,723	-	0+0,000	0+2,723	N E	-	6910493,7566 749176,9425	6910492,2155 749179,1879
C37	-	-	1,042	-	-	100,000	28,754	016° 28' 28.67"	0+2,723	0+31,477	N E	6910484,0231 749191,1235	6910492,2155 749179,1879	6910472.7821 749200,2458
L47	140° 56' 22.69"	-	-	-	-	-	87,041	-	0+31,477	0+118,518	N E	-	6910472,7821 749200,2458	6910405,1965 749255,0936

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ELEMENTOS GEOMÉTRICOS - RAMO 13

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L34	136° 34' 50.80"	-	-	-	-	-	6,598	-	0+0,000	0+6,598	N E	-	6910547,3477 749204,0963	6910542,5550 749208,6315
C38	-	-	0,167	-	-	135,000	13,414	005° 41' 35.07"	0+6,598	0+20,012	N E	6910537,6794 749213,2452	6910542,5550 749208,6315	6910533,2856 749218,3199
L35	130° 53' 15.73"	-	-	-	-	-	20,817	-	0+20,012	0+40,829	N E	-	6910533,2856 749218,3199	6910519,6592 749234,0574
C39	-	-	0,381	-	-	135,000	20,269	008° 36' 08.70"	0+40,829	0+61,098	N E	6910513,0129 749241,7334	6910519,6592 749234,0574	6910505,2932 749248,3290
L36	139° 29' 24.43"	-	-	-	-	-	29,878	-	0+61,098	0+90,977	N E	-	6910505,2932 749248,3290	6910482,5768 749267,7374
C40	-	-	6,773	-	-	1705,000	303,447	010° 11' 49.90"	0+90,977	0+394,424	N E	6910366,9170 749366,5547	6910482,5768 749267,7374	6910270,5784 749484,2871
L37	129° 17' 34.53"	-	-	-	-	-	504,144	-	0+394,424	0+898,567	N E	-	6910270,5784 749484,2871	6909951,3115 749874,4533
C41	-	-	0,085	-	-	245,000	12,883	003° 00' 46.35"	0+898,567	0+911,450	N E	6909947,2312 749879,4397	6909951,3115 749874,4533	6909942,8944 749884,2048
L38	132° 18' 20.88"	-	-	-	-	-	121,962	-	0+911,450	1+33,412	N E	-	6909942,8944 749884,2048	6909860,8034 749974,4033
C42	-	-	0,068	-	-	205,000	10,532	002° 56' 36.92"	1+33,412	1+43,944	N E	6909857,2582 749978,2987	6909860,8034 749974,4033	6909853,9176 749982,3710
L39	129° 21' 43.96"	-	-	-	-	-	10,629	-	1+43,944	1+54,573	N E	-	6909853,9176 749982,3710	6909847,1766 749990,5888

ELEMENTOS GEOMÉTRICOS - RAMO 14

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L48	131° 47' 02.61"	-	-	-	-	-	66,320	-	0+0,000	0+66,320	N E	-	6909866,8340 749875,0008	6909822,6431 749924,4534
C43	-	-	20,517	-	-	40,000	67,895	097° 15' 10.09"	0+66,320	0+134,216	N E	6909792,3831 749958,3163	6909822,6431 749924,4534	6909762,6113 749924,0233



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ELEMENTOS GEOMÉTRICOS - RAMO 15

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C44	-	-	1,039	-	-	200,377	40,728	011° 38' 44.75"	0+0,000	2+0,728	N E	6910573,2455 749182,3559	6910586,5378 749166,8356	6910557.0939 749194,8736

ELEMENTOS GEOMÉTRICOS - RAMO 16

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
C45	-	-	24,540	-	-	70,000	103,192	084° 27' 50.58"	0+0,000	0+103,192	N E	6910573,5185 749196,6151	6910525,2068 749237,8916	6910619.2631 749240,7195
L31	043° 57' 15.02"	-	-	-	-	-	68,214	-	0+103,192	0+171,406	N E	-	6910619,2631 749240,7195	6910668,3698 749288,0654
C46	-	-	0,058	-	-	200,000	9,622	002° 45' 23.67"	0+171,406	0+181,028	N E	6910671,8340 749291,4054	6910668,3698 749288,0654	6910675.1335 749294,9081
L32	046° 42' 38.69"	-	-	-	-	-	44,051	-	0+181,028	0+225,079	N E	-	6910675,1335 749294,9081	6910705,3383 749326,9727
C47	-	-	0,061	-	-	200,000	9,898	002° 50' 08.46"	0+225,079	0+234,977	N E	6910708,7326 749330,5760	6910705,3383 749326,9727	6910712.3010 749334,0069
L33	043° 52' 30.23"	-	-	-	-	-	65,060	-	0+234,977	0+300,038	N E	-	6910712,3010 749334,0069	6910759,1999 749379,0994

ELEMENTOS GEOMÉTRICOS - RAMO 17

Nº	DEFLEXÃO/ AZIMUTE	LC (m)	TT (m)	TL (m)	TC (m)	R (m)	D/L (m)	AC	TE-PC	ET-PT	PONTO	PI	TE-PC	ET-PT
L25	228° 33' 39.81"	-	-	-	-	-	69,895	-	0+0,000	0+69,895	N E	-	6910695,1158 749296,7505	6910648,8575 749244,3526
C52	-	-	0,000	-	-	200,000	0,195	000° 03' 21.08"	0+69,895	0+70,090	N E	6910648,7929 749244,2795	6910648,8575 749244,3526	6910648.7283 749244,2065
L26	228° 30' 18.73"	-	-	-	-	-	23,762	-	0+70,090	0+93,852	N E	-	6910648,7283 749244,2065	6910632,9849 749226,4085
L27	228° 30' 18.73"	-	-	-	-	-	24,403	-	0+93,852	0+118,255	N E	-	6910632,9849 749226,4085	6910616,8167 749208,1304
C48	-	-	0,284	-	-	50,000	10,626	012° 10' 34.77"	0+118,255	0+128,881	N E	6910613,2833 749204,1359	6910616,8167 749208,1304	6910610.6720 749199,4860
L28	240° 40' 53.50"	-	-	-	-	-	2,932	-	0+128,881	0+131,813	N E	-	6910610,6720 749199,4860	6910609,2360 749196,9291
C49	-	-	0,681	-	-	40,000	14,656	020° 59' 37.99"	0+131,813	0+146,470	N E	6910605,6070 749190,4671	6910609,2360 749196,9291	6910604.5339 749183,1338
L29	261° 40' 31.49"	-	-	-	-	-	1,297	-	0+146,470	0+147,767	N E	-	6910604,5339 749183,1338	6910604,3462 749181,8504
C50	-	-	3,187	-	-	50,000	34,793	039° 52' 10.74"	0+147,767	0+182,560	N E	6910601,7207 749163,9073	6910604,3462 749181,8504	6910611.2079 749148,4529
L30	301° 32' 42.23"	-	-	-	-	-	3,953	-	0+182,560	0+186,512	N E	-	6910611,2079 749148,4529	6910613,2758 749145,0844
C51	-	-	0,080	-	-	80,000	7,138	005° 06' 44.36"	0+186,512	0+193,651	N E	6910615,1442 749142,0407	6910613,2758 749145,0844	6910617.2765 749139,1756



Eng. CAV. Lauson Serafini
CREA/RJ 123168-D