



PREFEITURA MUNICIPAL DE VARZEA GRANDE

SECRETARIA DE VIAÇÃO, OBRAS E URBANISMO.

PROJETO EXECUTIVO DE READEQUAÇÃO E AMPLIAÇÃO

RODOVIA: MT-050 (AV. LEÔNCIO)

TRECHO: AV. ALZIRA SANTANA – ENTRº - MT-407 (ROD. DOS IMIGRANTES)

EXTENSÃO: 4.503,83 m (Incluindo limpa rodas, ramos das rotatórias e retornos)

VOLUME 3A – NOTAS DE SERVIÇO E CÁLCULO DE VOLUMES

MARÇO/2019

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1 - APRESENTAÇÃO

1 – Apresentação

A PREFEITURA MUNICIPAL DE VÁRZEA GRANDE., apresenta o Volume 3A – Notas de Serviço e Cálculo de Volumes referente ao Projeto Final de Engenharia para readequação e ampliação da Rodovia MT-050 (Av. Leônicio) no município de Várzea Grande/MT do Trecho que vai da Avenida Alzira Santana – Rodovia dos Imigrantes (MT-407) com extensão de 4.503,83 **m**

O Projeto foi concebido seguindo as orientações estabelecidas nas normas da Prefeitura Municipal de Várzea Grande, do DNIT e ABNT.

O Projeto foi concebido seguindo as orientações estabelecidas no Termo de Referência.

Este Projeto Final é constituído dos seguintes Volumes:

Volume – 1: Relatório do Projeto e Documentos para Concorrência;

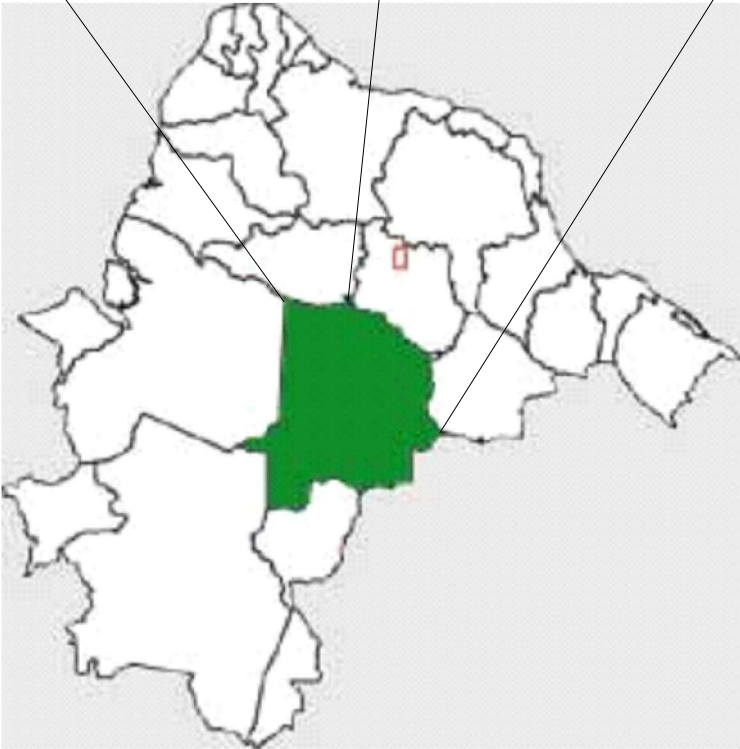
Volume – 2: Projeto de Execução;

Volume – 3A: Notas de Serviço e Cálculo de Volumes;

Volume – 4: Orçamento;

2- MAPA DE SITUAÇÃO E LOCALIZAÇÃO

MAPA DE LOCALIZAÇÃO



BAIRRO: JARDIM PETRÓPOLIS - VÁRZEA GRANDE-MT



VIA PROJETADA

LOCAL: RODOVIA MT-050 (AV. LEÔNÍCIO)									
TRECHO: AV. ALZIRA SANTANA – ENTRº - MT-407 (ROD. DOS IMIGRANTES)									
EXTENSÃO: 4.651,75 m									
COORDENADAS DO TRECHO									
VÉRTICE		LESTE			NORTE				
ESTACA DE		GRAUS	UTM		GRAUS	UTM			
INICIO		0	56° 07' 41,80"	593.418,4421	15° 40' 40,63"		8.266.495,9289		
FINAL		161+15,74	56° 07' 56"	592.986,6674	15° 42' 21"		8.263.412,2720		
PREFEITURA MUNICIPAL DE VÁRZEA GRANDE									
PMVG									
FOLHA:									
ML - 01									
RODOVIA: MT-050 (AV. LEÔNÍCIO)									
TRECHO: AV. ALZIRA SANTANA – ENTRº - MT-407 (ROD. DOS IMIGRANTES)									
ASSUNTO: MAPA DE LOCALIZAÇÃO									
ESCALA: S/E									

3 - MARCOS, RNs E COORDENADAS DO EIXO.

Escritório Técnico B.E. Schuring

C.N.P.J.: 32 957 169 /0001-20

I.E. 13.166.792-0

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Porto

Cuiabá

Mato Grosso

1. Os Marcos e RNs

QUADRO DE MARCOS E RN's - MT-050 AV, LEÔNICIO						
MARCO E RN'S	COORD.GEOGRÁFICAS		COTA	COORD. UTM		
BASE	15° 40' 41,8526" S	56° 07' 42,7181" W	174,390	8.266.457,6570	593.390,4670	ESTACA 0+0,00 LE PÉ DO POSTE
M01	15° 40' 38,7326" S	56° 07' 44,6230" W	175,284	8.266.553,7917	593.334,1350	ESTACA 0+0,00 LD PÉ DO POSTE
M02/RN=00	15° 40' 41,9270" S	56° 07' 43,3536" W	173,753	8.266.455,4463	593.371,5329	ESTACA 6 DO RAMO 02 LD PÉ DO POSTE
RN=01	15° 41' 00,2000" S	56° 07' 44,2700" W	160,432	8.265.894,3910	593.342,5095	ESTACA 29+16,40 LD PÉ DO POSTE
RN=02	15° 41' 16,2000" S	56° 07' 49,9100" W	155,612	8.265.403,1975	593.172,2691	ESTACA 55+16,00 LD PÉ DO POSTE
M03/RN=03	15° 41' 34,0905" S	56° 07' 48,9396" W	151,963	8.264.852,7164	593.198,6076	ESTACA 83+9,00 LD PÉ DO POSTE
M04	15° 41' 36,6898" S	56° 07' 48,1193" W	151,866	8.264.772,7189	593.222,7056	ESTACA 87+12,50 LD PÉ DO POSTE
RN=04	15° 41' 47,4200" S	56° 07' 44,5000" W	165,911	8.264.443,7762	593.329,7570	ESTACA 104+8,40 LD PÉ DO POSTE
RN=05	15° 42' 02,4300" S	56° 07' 45,6200" W	172,408	8.263.982,6407	593.291,3046	ESTACA 128+15,00 LD PÉ DO POSTE
M05/RN=06	15° 42' 17,4696" S	56° 07' 53,1452" W	176,210	8.263.519,8330	593.067,9138	ESTACA 155 LD PÉ DO POSTE
M06	15° 42' 20,0559" S	56° 07' 55,5301" W	177,607	8.263.440,6272	592.996,5764	ESTACA 161 LD PÉ DO POSTE

2. Coordenadas do eixo

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Traçado Horizontal: RUA LEÔNCIO

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.266.495,9289	593.418,4421	174,905	96°21'52"
1		20,000	8.266.476,0522	593.416,2250	174,477	96°21'52"
2	PCV2	40,000	8.266.456,1754	593.414,0080	174,138	96°21'52"
3		60,000	8.266.436,2987	593.411,7909	173,732	96°21'52"
4		80,000	8.266.416,4220	593.409,5739	173,213	96°21'52"
5		100,000	8.266.396,5452	593.407,3568	172,900	96°21'52"
6	PTV2	120,000	8.266.376,6685	593.405,1397	172,409	96°21'52"
7		140,000	8.266.356,7917	593.402,9227	172,060	96°21'52"
8		160,000	8.266.336,9150	593.400,7056	171,522	96°21'52"
9		180,000	8.266.317,0383	593.398,4886	171,120	96°21'52"
10		200,000	8.266.297,1615	593.396,2715	170,620	96°21'52"
10+14,023		214,023	8.266.283,2251	593.394,7170	170,205	96°21'52"
11		220,000	8.266.277,2685	593.394,2323	170,041	92°56'23"
11+3,562	PT1	223,562	8.266.273,7088	593.394,1130	169,962	90°53'56"
12		240,000	8.266.257,2728	593.393,8551	169,559	90°53'56"
13		260,000	8.266.237,2753	593.393,5413	169,171	90°53'56"
14		280,000	8.266.217,2777	593.393,2275	168,774	90°53'56"
15	PCV3	300,000	8.266.197,2802	593.392,9138	168,395	90°53'56"
16		320,000	8.266.177,2826	593.392,6000	167,957	90°53'56"
17		340,000	8.266.157,2851	593.392,2862	167,515	90°53'56"
18		360,000	8.266.137,2876	593.391,9724	167,084	90°53'56"
19		380,000	8.266.117,2900	593.391,6586	166,709	90°53'56"
20		400,000	8.266.097,2925	593.391,3448	166,379	90°53'56"
21		420,000	8.266.077,2949	593.391,0310	166,044	90°53'56"
22		440,000	8.266.057,2974	593.390,7172	165,743	90°53'56"
22+12,016	PC2	452,016	8.266.045,2825	593.390,5287	165,504	90°53'56"
23	PCCV4	460,000	8.266.037,3032	593.390,2760	165,377	92°43'43"
24		480,000	8.266.017,3852	593.388,5263	165,105	97°18'44"
25		500,000	8.265.997,6708	593.385,1903	164,830	101°53'46"
26		520,000	8.265.978,2860	593.380,2896	164,369	106°28'47"
26+18,847	PT2	538,847	8.265.960,4316	593.374,2673	163,766	110°47'57"
27	PCCV4	540,000	8.265.959,3539	593.373,8579	163,725	110°47'57"
28		560,000	8.265.940,6573	593.366,7560	162,926	110°47'57"
29		580,000	8.265.921,9607	593.359,6542	162,047	110°47'57"
30	PCCV5	600,000	8.265.903,2640	593.352,5523	161,074	110°47'57"
31		620,000	8.265.884,5674	593.345,4505	160,022	110°47'57"
32		640,000	8.265.865,8708	593.338,3486	158,939	110°47'57"
33		660,000	8.265.847,1742	593.331,2468	157,853	110°47'57"
34	PCCV6	680,000	8.265.828,4776	593.324,1449	156,766	110°47'57"
35		700,000	8.265.809,7809	593.317,0430	155,770	110°47'57"
36		720,000	8.265.791,0843	593.309,9412	154,927	110°47'57"
37		740,000	8.265.772,3877	593.302,8393	154,211	110°47'57"
38	PTV6	760,000	8.265.753,6911	593.295,7375	153,648	110°47'57"
39	PCV7	780,000	8.265.734,9945	593.288,6356	153,196	110°47'57"
40		800,000	8.265.716,2978	593.281,5338	152,947	110°47'57"
41	PTV7	820,000	8.265.697,6012	593.274,4319	152,815	110°47'57"
42		840,000	8.265.678,9046	593.267,3300	152,725	110°47'57"
43		860,000	8.265.660,2080	593.260,2282	152,692	110°47'57"
44		880,000	8.265.641,5113	593.253,1263	152,721	110°47'57"
45		900,000	8.265.622,8147	593.246,0245	152,731	110°47'57"
45+11,174	PCV	911,174	8.265.612,3687	593.242,0566		110°47'57"
46		920,000	8.265.604,1181	593.238,9226	152,692	110°47'57"

Traçado Horizontal: RUA LEÔNCIO

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
46+11,174	BTCC 3X3m	931,174	8.265.593,6721	593.234,9547	152,689	110°47'57"
47		940,000	8.265.585,4215	593.231,8208	152,714	110°47'57"
47+11,174	PTV	951,174	8.265.574,9755	593.227,8529		110°47'57"
48	PCV9	960,000	8.265.566,7249	593.224,7189	152,797	110°47'57"
49		980,000	8.265.548,0282	593.217,6171	152,901	110°47'57"
50		1000,000	8.265.529,3316	593.210,5152	153,016	110°47'57"
51		1020,000	8.265.510,6350	593.203,4133	153,155	110°47'57"
51+9,456	PC3	1029,456	8.265.501,7952	593.200,0556	153,232	110°47'57"
52	PCCV10	1040,000	8.265.491,8835	593.196,4605	153,320	109°04'23"
53		1060,000	8.265.472,8051	593.190,4685	153,585	105°47'57"
54		1080,000	8.265.453,4156	593.185,5759	154,030	102°31'30"
55		1100,000	8.265.433,7783	593.181,7986	154,586	99°15'03"
56	PCCV11	1120,000	8.265.413,9573	593.179,1490	155,188	95°58'37"
57		1140,000	8.265.394,0174	593.177,6358	155,742	92°42'10"
57+8,867	PT3	1148,867	8.265.385,1555	593.177,3299	155,955	91°15'04"
58		1160,000	8.265.374,0256	593.177,0868	156,175	91°15'04"
59		1180,000	8.265.354,0303	593.176,6501	156,515	91°15'04"
60	PCCV12	1200,000	8.265.334,0351	593.176,2133	156,657	91°15'04"
61		1220,000	8.265.314,0399	593.175,7766	156,793	91°15'04"
62		1240,000	8.265.294,0446	593.175,3399	156,771	91°15'04"
63		1260,000	8.265.274,0494	593.174,9031	156,609	91°15'04"
64	PCCV13	1280,000	8.265.254,0542	593.174,4664	156,258	91°15'04"
65		1300,000	8.265.234,0590	593.174,0297	155,729	91°15'04"
66		1320,000	8.265.214,0637	593.173,5929	155,141	91°15'04"
67		1340,000	8.265.194,0685	593.173,1562	154,530	91°15'04"
68	PCCV14	1360,000	8.265.174,0733	593.172,7195	153,942	91°15'04"
69		1380,000	8.265.154,0780	593.172,2827	153,425	91°15'04"
70		1400,000	8.265.134,0828	593.171,8460	153,028	91°15'04"
71		1420,000	8.265.114,0876	593.171,4093	152,735	91°15'04"
72	PCCV15	1440,000	8.265.094,0923	593.170,9725	152,431	91°15'04"
73		1460,000	8.265.074,0971	593.170,5358	152,364	91°15'04"
74		1480,000	8.265.054,1019	593.170,0991	152,302	91°15'04"
75		1500,000	8.265.034,1066	593.169,6623	152,296	91°15'04"
76	PTV15	1520,000	8.265.014,1114	593.169,2256	152,301	91°15'04"
76+3,859	PC4	1523,859	8.265.010,2530	593.169,1413	152,313	91°15'04"
77		1540,000	8.264.994,1194	593.169,4401	152,386	86°37'38"
78		1560,000	8.264.974,2461	593.171,6122	152,432	80°53'52"
79		1580,000	8.264.954,6889	593.175,7574	152,426	75°10'05"
79+4,747	PT4	1584,747	8.264.950,1147	593.177,0270	152,415	73°48'29"
80		1600,000	8.264.935,4670	593.181,2803	152,390	73°48'29"
81		1620,000	8.264.916,2603	593.186,8574	152,368	73°48'29"
82		1640,000	8.264.897,0537	593.192,4345	152,349	73°48'29"
82+8,523	BTCC 3X3m	1648,523	8.264.888,8685	593.194,8112	152,340	73°48'29"
82+8,699	INTERSEÇÃO	1648,699	8.264.888,6995	593.194,8603	152,339	73°48'29"
83	PCV	1660,000	8.264.877,8470	593.198,0116	152,323	73°48'29"
84		1680,000	8.264.858,6403	593.203,5887	152,292	73°48'29"
85		1700,000	8.264.839,4337	593.209,1658	152,256	73°48'29"
86		1720,000	8.264.820,2270	593.214,7429	152,239	73°48'29"
87	PCCV20	1740,000	8.264.801,0203	593.220,3200	152,257	73°48'29"
88		1760,000	8.264.781,8137	593.225,8971	152,320	73°48'29"
88+7,334	PI5	1767,334	8.264.774,7707	593.227,9422	152,346	72°53'24"
89		1780,000	8.264.762,7264	593.231,8622	152,477	71°58'18"

Traçado Horizontal: RUA LEÔNCIO

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
90		1800,000	8.264.743,7083	593.238,0519	152,795	71°58'18"
91	PCCV20	1820,000	8.264.724,6903	593.244,2417	153,231	71°58'18"
92		1840,000	8.264.705,6722	593.250,4314	153,853	71°58'18"
92+4,870	INTERSEÇÃO	1844,870	8.264.701,0411	593.251,9387	154,031	71°58'18"
93		1860,000	8.264.686,6541	593.256,6212	154,718	71°58'18"
94	PCCV21	1880,000	8.264.667,6361	593.262,8109	155,745	71°58'18"
95		1900,000	8.264.648,6180	593.269,0007	156,822	71°58'18"
96		1920,000	8.264.629,5999	593.275,1904	157,918	71°58'18"
97		1940,000	8.264.610,5818	593.281,3802	159,039	71°58'18"
98	PCCV22	1960,000	8.264.591,5638	593.287,5699	160,144	71°58'18"
98+16,845	PI6	1976,845	8.264.575,5459	593.292,7832	161,048	72°02'46"
99		1980,000	8.264.572,5432	593.293,7519	161,217	72°07'14"
100		2000,000	8.264.553,5091	593.299,8921	162,275	72°07'14"
101		2020,000	8.264.534,4750	593.306,0324	163,148	72°07'14"
102	PTV22	2040,000	8.264.515,4409	593.312,1727	163,817	72°07'14"
103		2060,000	8.264.496,4068	593.318,3129	164,396	72°07'14"
104	PCV23	2080,000	8.264.477,3727	593.324,4532	164,915	72°07'14"
105		2100,000	8.264.458,3386	593.330,5935	165,432	72°07'14"
106		2120,000	8.264.439,3045	593.336,7337	165,989	72°07'14"
107		2140,000	8.264.420,2704	593.342,8740	166,540	72°07'14"
108	PCCV24	2160,000	8.264.401,2363	593.349,0143	167,016	72°07'14"
109		2180,000	8.264.382,2022	593.355,1545	167,379	72°07'14"
109+4,800	PC7	2184,800	8.264.377,6338	593.356,6283	167,444	72°07'14"
110		2200,000	8.264.363,0245	593.360,8136	167,630	75°54'26"
111		2220,000	8.264.343,4393	593.364,8345	167,897	80°53'22"
112	PTV24	2240,000	8.264.323,5788	593.367,1393	168,159	85°52'18"
113		2260,000	8.264.303,5933	593.367,7105	168,433	90°51'14"
114	PCV25	2280,000	8.264.283,6337	593.366,5439	168,662	95°50'10"
115		2300,000	8.264.263,8508	593.363,6483	168,944	100°49'06"
115+9,309	PT7	2309,309	8.264.254,7452	593.361,7166	169,062	103°08'14"
116		2320,000	8.264.244,3338	593.359,2866	169,189	103°08'14"
117		2340,000	8.264.224,8572	593.354,7409	169,424	103°08'14"
118	PTV25	2360,000	8.264.205,3807	593.350,1952	169,585	103°08'14"
119		2380,000	8.264.185,9041	593.345,6495	169,883	103°08'14"
120		2400,000	8.264.166,4276	593.341,1038	170,010	103°08'14"
121		2420,000	8.264.146,9510	593.336,5581	170,360	103°08'14"
122	PCV26	2440,000	8.264.127,4744	593.332,0124	170,637	103°08'14"
123		2460,000	8.264.107,9979	593.327,4667	170,901	103°08'14"
124		2480,000	8.264.088,5213	593.322,9210	170,979	103°08'14"
124+0,991	INTERSEÇÃO	2480,991	8.264.087,5564	593.322,6958	170,983	103°08'14"
125		2500,000	8.264.069,0447	593.318,3753	171,153	103°08'14"
126	PTV26	2520,000	8.264.049,5682	593.313,8296	171,423	103°08'14"
127		2540,000	8.264.030,0916	593.309,2839	171,811	103°08'14"
128	PCV27	2560,000	8.264.010,6150	593.304,7382	172,157	103°08'14"
129		2580,000	8.263.991,1385	593.300,1925	172,471	103°08'14"
130		2600,000	8.263.971,6619	593.295,6468	172,740	103°08'14"
130+11,071	INTERSEÇÃO	2611,071	8.263.960,8808	593.293,1306	172,865	103°08'14"
131		2620,000	8.263.952,1853	593.291,1011	172,945	103°08'14"
132	PTV27	2640,000	8.263.932,7088	593.286,5554	173,019	103°08'14"
133		2660,000	8.263.913,2322	593.282,0098	173,089	103°08'14"
134	PCV28	2680,000	8.263.893,7556	593.277,4641	173,233	103°08'14"
135		2700,000	8.263.874,2791	593.272,9184	173,397	103°08'14"

Traçado Horizontal: RUA LEÔNCIO

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
135+1,848	PC8	2701,848	8.263.872,4791	593.272,4983	173,413	103°08'14"
136		2720,000	8.263.854,8541	593.268,1592	173,600	104°31'26"
137		2740,000	8.263.835,5625	593.262,8859	173,794	106°03'07"
138	PTV28	2760,000	8.263.816,4182	593.257,1002	173,967	107°34'47"
139		2780,000	8.263.797,4351	593.250,8061	174,096	109°06'27"
140	PCV29	2800,000	8.263.778,6265	593.244,0080	174,228	110°38'08"
141		2820,000	8.263.760,0059	593.236,7109	174,382	112°09'48"
142		2840,000	8.263.741,5864	593.228,9198	174,506	113°41'29"
143		2860,000	8.263.723,3812	593.220,6404	174,618	115°13'09"
144	PTV29	2880,000	8.263.705,4033	593.211,8785	174,683	116°44'49"
145		2900,000	8.263.687,6654	593.202,6404	174,730	118°16'30"
146	PCV30	2920,000	8.263.670,1801	593.192,9327	174,756	119°48'10"
147		2940,000	8.263.652,9599	593.182,7621	174,802	121°19'51"
148		2960,000	8.263.636,0170	593.172,1360	174,883	122°51'31"
149		2980,000	8.263.619,3634	593.161,0620	174,955	124°23'11"
150	PTV30	3000,000	8.263.603,0110	593.149,5478	175,024	125°54'52"
151	PCV31	3020,000	8.263.586,9714	593.137,6017	175,092	127°26'32"
152		3040,000	8.263.571,2561	593.125,2322	175,417	128°58'13"
153		3060,000	8.263.555,8762	593.112,4481	175,597	130°29'53"
153+9,622	PT8	3069,622	8.263.548,5994	593.106,1524	175,659	131°13'59"
154		3080,000	8.263.540,7951	593.099,3122	175,728	131°13'59"
154+13,779	INTERSEÇÃO	3093,779	8.263.530,4326	593.090,2299	175,844	131°13'59"
155		3100,000	8.263.525,7544	593.086,1297	175,901	131°13'59"
156		3120,000	8.263.510,7137	593.072,9472	176,137	131°13'59"
157	PTV31	3140,000	8.263.495,6730	593.059,7648	176,353	131°13'59"
158		3160,000	8.263.480,6324	593.046,5823	176,597	131°13'59"
159		3180,000	8.263.465,5917	593.033,3998	176,844	131°13'59"
160		3200,000	8.263.450,5510	593.020,2173	177,070	131°13'59"
161		3220,000	8.263.435,5103	593.007,0348	177,337	131°13'59"
162		3240,000	8.263.420,4696	592.993,8523	177,569	131°13'59"
162+10,901	V32	3250,901	8.263.412,2720	592.986,6674	177,939	131°13'59"

COORDENADAS DO EIXO INTERSEÇÃO 1

Traçado Horizontal: INTERSEÇÃO 1 RAMO 1

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0	PC1	0,000	8.266.476,3141	593.373,3362	174,055	69°07'17"
1		5,000	8.266.471,9157	593.375,6860	174,028	54°39'09"
2		10,000	8.266.468,2439	593.379,0602	174,073	40°11'02"
3		15,000	8.266.465,5316	593.383,2448	174,158	25°42'55"
4		20,000	8.266.463,9508	593.387,9744	174,355	11°14'48"
5		25,000	8.266.463,6019	593.392,9489	174,684	356°46'41"
6		30,000	8.266.464,5069	593.397,8528	174,770	342°18'34"
7		35,000	8.266.466,6085	593.402,3751	174,745	327°50'27"
8		40,000	8.266.469,7732	593.406,2288	174,534	313°22'20"
9		45,000	8.266.473,8005	593.409,1697	174,561	298°54'13"
10		50,000	8.266.478,4348	593.411,0110	174,633	284°26'06"
10+2,789	PI-2	52,789	8.266.481,1756	593.411,5140	174,686	276°21'52"

Traçado Horizontal: INTERSEÇÃO 1 RAMO 2

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.266.429,5993	593.350,4680	172,756	53°30'41"
0+0,428	PC1	0,428	8.266.429,2549	593.350,7227	172,744	53°30'41"
1		5,000	8.266.426,6559	593.354,3905	172,741	17°07'51"
2	PCV1	10,000	8.266.426,8922	593.359,2850	172,977	337°20'32"
2+4,249	PT1	14,249	8.266.429,5598	593.362,5135	173,155	303°31'36"
2+4,655	PC2	14,655	8.266.429,8980	593.362,7376	173,172	303°31'36"
3		15,000	8.266.430,1862	593.362,9269	173,186	303°05'15"
4		20,000	8.266.434,5183	593.365,4184	173,300	296°43'17"
5		25,000	8.266.439,0999	593.367,4142	173,372	290°21'18"
6	PCCV2	30,000	8.266.443,8746	593.368,8897	173,444	283°59'20"
7		35,000	8.266.448,7834	593.369,8266	173,474	277°37'22"
8		40,000	8.266.453,7658	593.370,2134	173,675	271°15'24"
9		45,000	8.266.458,7604	593.370,0454	173,726	264°53'25"
10	PTV2	50,000	8.266.463,7056	593.369,3246	173,816	258°31'27"
11		55,000	8.266.468,5404	593.368,0600	173,871	252°09'29"
11+2,177	PT2	57,177	8.266.470,5956	593.367,3431	173,883	249°23'10"
12		60,000	8.266.473,2380	593.366,3492	173,896	249°23'10"
12+0,384	V3	60,384	8.266.473,5974	593.366,2140	173,898	249°23'10"

Traçado Horizontal: INTERSEÇÃO 1 RAMO 3

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.266.282,9038	593.389,4023	170,182	268°03'08"
1		5,000	8.266.287,9009	593.389,2324	170,316	268°03'08"
2		10,000	8.266.292,8980	593.389,0624	170,441	268°03'08"
3		15,000	8.266.297,8951	593.388,8925	170,545	268°03'08"
4		20,000	8.266.302,8922	593.388,7225	170,649	268°03'08"
5		25,000	8.266.307,8893	593.388,5526	170,753	268°03'08"
6		30,000	8.266.312,8864	593.388,3826	170,877	268°03'08"
7		35,000	8.266.317,8836	593.388,2127	171,052	268°03'08"
7+4,979	PC1	39,979	8.266.322,8598	593.388,0435	171,206	268°03'08"
8		40,000	8.266.322,8807	593.388,0427	171,206	268°02'39"
9		45,000	8.266.327,8740	593.387,7883	171,272	266°07'17"
10		50,000	8.266.332,8559	593.387,3665	171,345	264°11'56"
11		55,000	8.266.337,8209	593.386,7777	171,492	262°16'34"
12		60,000	8.266.342,7633	593.386,0227	171,646	260°21'12"
13		65,000	8.266.347,6776	593.385,1023	171,806	258°25'51"
14		70,000	8.266.352,5583	593.384,0176	171,992	256°30'29"
15		75,000	8.266.357,3998	593.382,7697	172,056	254°35'07"
16	PTV2	80,000	8.266.362,1968	593.381,3600	172,030	252°39'46"
17		85,000	8.266.366,9437	593.379,7903	171,996	250°44'24"
18		90,000	8.266.371,6353	593.378,0621	171,987	248°49'02"
19		95,000	8.266.376,2663	593.376,1775	172,251	246°53'41"
20	PCV	100,000	8.266.380,8314	593.374,1386	172,565	244°58'19"
21		105,000	8.266.385,3256	593.371,9477	172,687	243°02'58"
22		110,000	8.266.389,7437	593.369,6072	172,687	241°07'36"
23		115,000	8.266.394,0809	593.367,1199	172,379	239°12'14"
24		120,000	8.266.398,3321	593.364,4884	172,380	237°16'53"
25		125,000	8.266.402,4926	593.361,7157	172,433	235°21'31"
26		130,000	8.266.406,5578	593.358,8051	172,485	233°26'09"
26+0,340	PT1	130,340	8.266.406,8309	593.358,6020	172,489	233°18'18"
26+0,346	PC2	130,346	8.266.406,8354	593.358,5986	172,489	233°18'18"
27		135,000	8.266.409,3094	593.354,7726	172,625	192°28'08"
28	PTV	140,000	8.266.408,5069	593.349,9603	172,640	148°35'52"
28+0,568	PT2	140,568	8.266.408,1906	593.349,4894	172,656	143°37'06"
28+4,765	V6	144,765	8.266.405,7009	593.346,1102	172,777	143°37'06"

Traçado Horizontal: INTERSEÇÃO 1 RAMO 4

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.266.283,2251	593.394,7170	170,229	276°21'52"
1	PCV2	20,000	8.266.303,1019	593.396,9341	170,680	276°21'52"
2		40,000	8.266.322,9786	593.399,1511	171,284	276°21'52"
3		60,000	8.266.342,8553	593.401,3682	171,681	276°21'52"
4		80,000	8.266.362,7321	593.403,5853	172,158	276°21'52"
5	PCCV	100,000	8.266.382,6088	593.405,8023	172,516	276°21'52"
6		120,000	8.266.402,4856	593.408,0194	173,129	276°21'52"
7		140,000	8.266.422,3623	593.410,2364	173,603	276°21'52"
8		160,000	8.266.442,2390	593.412,4535	174,092	276°21'52"
9	PTV	180,000	8.266.462,1158	593.414,6706	174,228	276°21'52"
10		200,000	8.266.481,9925	593.416,8876	174,610	276°21'52"
10+14,023	V32	214,023	8.266.495,9289	593.418,4421	174,905	276°21'52"

Traçado Horizontal: INTERSEÇÃO 1 ROTULA

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.266.394,2883	593.377,9051	172,592	54°20'14"
0+0,089	PC1	0,089	8.266.394,2158	593.377,9571	172,597	54°20'14"
1		5,000	8.266.390,7546	593.381,4106	172,601	35°47'22"
2		10,000	8.266.388,5456	593.385,8709	172,658	16°54'18"
3		15,000	8.266.387,8991	593.390,8062	172,782	358°01'14"
4		20,000	8.266.388,8848	593.395,6850	172,776	339°08'09"
5		25,000	8.266.391,3965	593.399,9822	172,842	320°15'05"
6		30,000	8.266.395,1639	593.403,2351	172,944	301°22'00"
7		35,000	8.266.399,7813	593.405,0936	173,046	282°28'56"
7+1,268	PT1	36,268	8.266.401,0297	593.405,3156	173,104	277°41'30"
8	PCCV2	40,000	8.266.404,7278	593.405,8151	173,137	277°41'30"
9		45,000	8.266.409,6828	593.406,4843	173,140	277°41'30"
10		50,000	8.266.414,6378	593.407,1536	173,275	277°41'30"
11		55,000	8.266.419,5928	593.407,8228	173,546	277°41'30"
12		60,000	8.266.424,5478	593.408,4920	173,607	277°41'30"
12+0,005	PC2	60,005	8.266.424,5524	593.408,4926	173,607	277°41'30"
13		65,000	8.266.429,5259	593.408,3790	173,635	259°41'28"
14	PCCV	70,000	8.266.434,2250	593.406,7318	173,864	241°40'25"
15		75,000	8.266.438,1841	593.403,7119	174,067	223°39'22"
15+2,307		77,307	8.266.439,6501	593.401,9336	174,167	215°20'38"
16		80,000	8.266.441,0151	593.399,6155	174,268	205°38'19"
17		85,000	8.266.442,4401	593.394,8443	174,143	187°37'16"
18	PCCV	90,000	8.266.442,3195	593.389,8664	173,796	169°36'13"
19		95,000	8.266.440,6651	593.385,1698	173,666	151°35'09"
19+2,553		97,553	8.266.439,2758	593.383,0316	173,548	142°23'14"
20		100,000	8.266.437,6392	593.381,2153	173,439	133°34'06"
20+4,616	PT2	104,616	8.266.433,8825	593.378,5603	173,430	116°56'00"
21		105,000	8.266.433,5405	593.378,3865	173,436	116°56'00"
22	PTV	110,000	8.266.429,0828	593.376,1218	173,429	116°56'00"
22+1,769	PC3	111,769	8.266.427,5054	593.375,3204	173,375	116°56'00"
23	PCV	115,000	8.266.424,5562	593.374,0048	173,308	111°08'49"
24		120,000	8.266.419,7712	593.372,5720	173,415	102°11'30"
25		125,000	8.266.414,8215	593.371,9016	173,123	93°14'11"
26		130,000	8.266.409,8278	593.372,0098	172,786	84°16'52"
27	PTV	135,000	8.266.404,9117	593.372,8940	172,513	75°19'33"
28		140,000	8.266.400,1933	593.374,5327	172,363	66°22'14"
29		145,000	8.266.395,7874	593.376,8859	172,470	57°24'55"
29+1,813	V4	146,813	8.266.394,2883	593.377,9051	172,592	54°10'02"

COORDENADAS DO EIXO INTERSEÇÃO 2

Traçado Horizontal: INTERSEÇÃO 2 RAMO 1

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.887,2359	593.189,8187	151,993	73°48'29"
0+0,044	PC1	0,044	8.264.887,1936	593.189,8310	151,980	73°48'29"
1		5,000	8.264.882,4032	593.191,0995	151,622	76°31'38"
2		10,000	8.264.877,5148	593.192,1476	151,782	79°16'15"
3		15,000	8.264.872,5818	593.192,9605	151,438	82°00'52"
4		20,000	8.264.867,6155	593.193,5363	150,676	84°45'28"
5		25,000	8.264.862,6274	593.193,8738	150,161	87°30'05"
6		30,000	8.264.857,6289	593.193,9721	149,892	90°14'42"
7		35,000	8.264.852,6313	593.193,8311	150,109	92°59'18"
8		40,000	8.264.847,6463	593.193,4510	151,314	95°43'55"
9		45,000	8.264.842,6851	593.192,8327	151,382	98°28'32"
10		50,000	8.264.837,7593	593.191,9777	151,154	101°13'08"
11		55,000	8.264.832,8800	593.190,8878	150,919	103°57'45"
12		60,000	8.264.828,0584	593.189,5657	150,720	106°42'22"
12+4,315	V1	64,315	8.264.823,9536	593.188,2407	150,823	109°04'26"

Traçado Horizontal: INTERSEÇÃO 2 RAMO 2

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.783,5510	593.200,7459	151,689	51°06'50"
1		5,000	8.264.779,6306	593.203,8490	151,609	52°09'44"
2		10,000	8.264.775,6540	593.206,8799	151,598	53°12'38"
3		15,000	8.264.771,6226	593.209,8375	151,452	54°15'32"
4		20,000	8.264.767,5378	593.212,7208	151,269	55°18'26"
5		25,000	8.264.763,4009	593.215,5289	151,196	56°21'20"
6		30,000	8.264.759,2133	593.218,2609	151,155	57°24'13"
7		35,000	8.264.754,9765	593.220,9158	151,108	58°27'07"
8		40,000	8.264.750,6918	593.223,4927	151,131	59°30'01"
9		45,000	8.264.746,3607	593.225,9908	151,650	60°32'55"
9+0,865	PCV2	45,865	8.264.745,6068	593.226,4149	151,731	60°43'48"
10		50,000	8.264.741,9846	593.228,4093	152,113	61°35'49"
11		55,000	8.264.737,5649	593.230,7473	152,480	62°38'43"
12		60,000	8.264.733,1033	593.233,0040	152,759	63°41'37"
13		65,000	8.264.728,6011	593.235,1788	152,852	64°44'30"
14		70,000	8.264.724,0598	593.237,2708	153,003	65°47'24"
15		75,000	8.264.719,4811	593.239,2793	153,224	66°50'18"
16		80,000	8.264.714,8664	593.241,2038	153,431	67°53'12"
17		85,000	8.264.710,2172	593.243,0435	153,707	68°56'06"
17+0,865	PTV2	85,865	8.264.709,4095	593.243,3532	153,735	69°06'59"
18		90,000	8.264.705,5351	593.244,7979	153,871	69°59'00"
19		95,000	8.264.700,8218	593.246,4663	154,040	71°01'54"
19+1,623	V3	96,623	8.264.699,2879	593.246,9884	154,088	71°22'18"

Traçado Horizontal: INTERSEÇÃO 2 RAMO 3

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.797,7494	593.246,6741	150,272	96°20'45"
1		5,000	8.264.792,7742	593.246,1777	150,289	95°02'56"
2		10,000	8.264.787,7891	593.245,7941	150,212	93°45'07"
3		15,000	8.264.782,7965	593.245,5234	150,785	92°27'18"
4		20,000	8.264.777,7991	593.245,3658	150,521	91°09'29"
5		25,000	8.264.772,7994	593.245,3213	150,588	89°51'40"
6		30,000	8.264.767,8000	593.245,3901	150,760	88°33'51"
7		35,000	8.264.762,8034	593.245,5719	151,250	87°16'02"
8		40,000	8.264.757,8122	593.245,8668	151,884	85°58'13"
9	PCV	45,000	8.264.752,8290	593.246,2746	152,455	84°40'24"
10		50,000	8.264.747,8563	593.246,7950	152,604	83°22'35"
11		55,000	8.264.742,8966	593.247,4279	152,721	82°04'46"
12		60,000	8.264.737,9525	593.248,1729	152,835	80°46'57"
13		65,000	8.264.733,0266	593.249,0296	152,984	79°29'09"
14		70,000	8.264.728,1212	593.249,9975	153,114	78°11'20"
15		75,000	8.264.723,2391	593.251,0763	153,246	76°53'31"
16		80,000	8.264.718,3826	593.252,2653	153,379	75°35'42"
17	PTV	85,000	8.264.713,5543	593.253,5638	153,561	74°17'53"
18		90,000	8.264.708,7566	593.254,9714	153,749	73°00'04"
19		95,000	8.264.703,9920	593.256,4871	153,933	71°42'15"
19+1,285	PT1	96,285	8.264.702,7755	593.256,8933	153,979	71°22'17"
19+1,426	V1	96,426	8.264.702,6419	593.256,9383	153,984	71°22'17"

Traçado Horizontal: INTERSEÇÃO 2 RAMO 4

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0	PC1	0,000	8.264.890,1619	593.199,8952	152,139	73°48'27"
1		5,000	8.264.885,3954	593.201,4038	152,039	71°04'01"
2		10,000	8.264.880,7065	593.203,1386	152,125	68°19'34"
3		15,000	8.264.876,1059	593.205,0956	152,152	65°35'08"
4		20,000	8.264.871,6042	593.207,2703	152,115	62°50'42"
5		25,000	8.264.867,2115	593.209,6579	151,658	60°06'15"
6		30,000	8.264.862,9381	593.212,2527	151,441	57°21'49"
7		35,000	8.264.858,7937	593.215,0489	151,231	54°37'23"
8		40,000	8.264.854,7876	593.218,0400	151,736	51°52'57"
9		45,000	8.264.850,9292	593.221,2193	151,723	49°08'30"
10		50,000	8.264.847,2272	593.224,5794	151,667	46°24'04"
11		55,000	8.264.843,6901	593.228,1127	151,606	43°39'38"
12		60,000	8.264.840,3260	593.231,8111	151,488	40°55'11"
12+3,226	PI-2	63,226	8.264.838,2523	593.234,2793	151,578	39°09'06"

Traçado Horizontal: INTERSEÇÃO 2 ROTULA

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0	PC1	0,000	8.264.791,8145	593.223,6606	152,302	341°58'17"
1		5,000	8.264.793,9371	593.228,1733	152,337	327°38'51"
2		10,000	8.264.797,1102	593.232,0206	152,054	313°19'25"
3		15,000	8.264.801,1365	593.234,9632	151,678	298°59'59"
4		20,000	8.264.805,7656	593.236,8183	151,721	284°40'32"
5		25,000	8.264.810,7098	593.237,4704	151,538	270°21'06"
6		30,000	8.264.815,6616	593.236,8790	151,523	256°01'40"
6+1,416	PC3	31,416	8.264.817,0223	593.236,4888	151,526	251°58'17"
7		35,000	8.264.820,3131	593.235,0809	151,508	241°42'14"
8		40,000	8.264.824,3752	593.232,1880	151,545	227°22'47"
9		45,000	8.264.827,5953	593.228,3799	151,800	213°03'21"
10		50,000	8.264.829,7732	593.223,8936	151,997	198°43'55"
11		55,000	8.264.830,7734	593.219,0079	152,175	184°24'29"
12		60,000	8.264.830,5338	593.214,0267	152,284	170°05'03"
12+2,832	PC5	62,832	8.264.829,8506	593.211,2810	152,202	161°58'17"
13		65,000	8.264.829,0693	593.209,2597	152,093	155°45'37"
14		70,000	8.264.826,4709	593.205,0031	151,750	141°26'11"
15		75,000	8.264.822,9002	593.201,5217	151,247	127°06'45"
16		80,000	8.264.818,5791	593.199,0320	150,865	112°47'19"
17		85,000	8.264.813,7765	593.197,6886	150,900	98°27'52"
18		90,000	8.264.808,7908	593.197,5753	150,911	84°08'26"
18+4,248	PC7	94,248	8.264.804,6427	593.198,4527	150,893	71°58'17"
19		95,000	8.264.803,9320	593.198,6989	150,948	69°49'00"
20		100,000	8.264.799,5023	593.200,9897	151,253	55°29'34"
21		105,000	8.264.795,7770	593.204,3052	151,643	41°10'07"
22		110,000	8.264.792,9879	593.208,4393	151,872	26°50'41"
23		115,000	8.264.791,3082	593.213,1349	151,869	12°31'15"
24		120,000	8.264.790,8424	593.218,1001	151,932	358°11'49"
25		125,000	8.264.791,6196	593.223,0262	152,287	343°52'22"
25+0,664	PI-8	125,664	8.264.791,8145	593.223,6606	152,302	341°58'17"

Traçado Horizontal: INTERSEÇÃO 3 RAMO 1

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.263.962,0741	593.288,0181	172,692	283°08'14"
0+1,748	PC1	1,748	8.263.963,7768	593.288,4155	172,678	283°08'14"
1		5,000	8.263.966,9593	593.289,0807	172,645	280°28'33"
2		10,000	8.263.971,9042	593.289,8135	172,572	276°23'00"
3		15,000	8.263.976,8889	593.290,1915	172,487	272°17'26"
4		20,000	8.263.981,8878	593.290,2129	172,334	268°11'53"
4+4,061	PT1	24,061	8.263.985,9405	593.289,9676	172,223	264°52'28"
5		25,000	8.263.986,8760	593.289,8836	172,206	264°52'28"
6		30,000	8.263.991,8560	593.289,4369	172,136	264°52'28"
6+1,098	PC2	31,098	8.263.992,9500	593.289,3388	172,127	264°52'28"
7		35,000	8.263.996,8457	593.289,1421	172,095	269°20'43"
8		40,000	8.264.001,8399	593.289,3349	172,027	275°04'30"
9		45,000	8.264.006,7899	593.290,0252	171,973	280°48'16"
9+2,036	PT2	47,036	8.264.008,7812	593.290,4475	171,974	283°08'14"
10	PCV2	50,000	8.264.011,6678	593.291,1212	171,975	283°08'14"
11		55,000	8.264.016,5370	593.292,2576	171,978	283°08'14"
12		60,000	8.264.021,4061	593.293,3940	171,980	283°08'14"
13		65,000	8.264.026,2753	593.294,5304	171,982	283°08'14"
14		70,000	8.264.031,1444	593.295,6669	171,962	283°08'14"
15		75,000	8.264.036,0135	593.296,8033	171,894	283°08'14"
16		80,000	8.264.040,8827	593.297,9397	171,721	283°08'14"
17		85,000	8.264.045,7518	593.299,0761	171,548	283°08'14"
17+2,882	PC3	87,882	8.264.048,5587	593.299,7312	171,626	283°08'14"
18	PCCV3	90,000	8.264.050,6102	593.300,2561	171,626	285°33'50"
19		95,000	8.264.055,3518	593.301,8361	171,540	291°17'37"
20		100,000	8.264.059,9120	593.303,8815	171,466	297°01'23"
21		105,000	8.264.064,2452	593.306,3720	171,490	302°45'10"
21+0,102	PT3	105,102	8.264.064,3312	593.306,4274	171,489	302°52'12"
22	PTV3	110,000	8.264.068,4448	593.309,0856	171,449	302°52'12"
22+0,406	PC4	110,406	8.264.068,7855	593.309,3058	171,446	302°52'12"
23		115,000	8.264.072,7359	593.311,6491	171,469	298°28'58"
24		120,000	8.264.077,2249	593.313,8478	171,451	293°42'29"
25		125,000	8.264.081,8814	593.315,6653	171,386	288°56'00"
26		130,000	8.264.086,6730	593.317,0888	171,280	284°09'32"
26+1,070	PT4	131,070	8.264.087,7124	593.317,3412	171,185	283°08'14"
26+2,134	V5	132,134	8.264.088,7492	593.317,5832	171,094	283°08'14"

Traçado Horizontal: INTERSEÇÃO 3 RAMO 2

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.001,4730	593.306,1993	172,266	102°26'43"
0+0,058	PC1	0,058	8.264.001,4166	593.306,1869	172,267	102°26'43"
1		5,000	8.263.998,7663	593.302,5272	172,358	185°43'53"
1+0,397	PT1	5,397	8.263.998,8289	593.302,1355	172,348	192°25'12"
1+0,497	PI2	5,497	8.263.998,8504	593.302,0381	172,345	192°25'12"
1+0,596	PC3	5,596	8.263.998,8718	593.301,9407	172,342	192°25'11"
2	PTV1	10,000	8.264.001,9923	593.299,2779	172,165	266°37'40"
2+0,938	PT3	10,938	8.264.002,9240	593.299,3517	172,146	282°25'43"
2+1,081	V2	11,081	8.264.003,0639	593.299,3825	172,144	282°25'43"

Traçado Horizontal: INTERSEÇÃO 3 RAMO 3

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.086,3627	593.327,8083	170,968	103°08'14"
0+1,065	PC1	1,065	8.264.085,3260	593.327,5664	170,982	103°08'14"
1		5,000	8.264.081,4670	593.326,7982	171,112	99°22'45"
2		10,000	8.264.076,5056	593.326,1897	171,300	94°36'17"
3		15,000	8.264.071,5108	593.325,9963	171,333	89°49'48"
4	PCV1	20,000	8.264.066,5172	593.326,2194	171,352	85°03'19"
4+1,729	PT1	21,729	8.264.064,7974	593.326,3931	171,343	83°24'17"
5		25,000	8.264.061,5478	593.326,7689	171,327	83°24'17"
5+2,032	PC2	27,032	8.264.059,5291	593.327,0023	171,319	83°24'17"
6		30,000	8.264.056,5724	593.327,2555	171,318	86°48'20"
7		35,000	8.264.051,5746	593.327,2842	171,320	92°32'07"
8		40,000	8.264.046,5988	593.326,8139	171,351	98°15'53"
8+4,252	PT2	44,252	8.264.042,4220	593.326,0246	171,376	103°08'14"
9		45,000	8.264.041,6936	593.325,8546	171,393	103°08'14"
10		50,000	8.264.036,8245	593.324,7182	171,527	103°08'14"
11		55,000	8.264.031,9553	593.323,5817	171,528	103°08'14"
12	PCCV2	60,000	8.264.027,0862	593.322,4453	171,641	103°08'14"
13		65,000	8.264.022,2170	593.321,3089	171,760	103°08'14"
14		70,000	8.264.017,3479	593.320,1725	171,851	103°08'14"
15		75,000	8.264.012,4787	593.319,0360	171,931	103°08'14"
16		80,000	8.264.007,6096	593.317,8996	171,995	103°08'14"
16+4,548	PC3	84,548	8.264.003,1807	593.316,8659	171,974	103°08'14"
17		85,000	8.264.002,7410	593.316,7612	171,983	103°39'19"
18		90,000	8.263.997,9494	593.315,3401	172,095	109°23'05"
19		95,000	8.263.993,3236	593.313,4476	172,224	115°06'52"
20	PTV2	100,000	8.263.988,9099	593.311,1029	172,360	120°50'38"
20+0,032	PT3	100,032	8.263.988,8822	593.311,0863	172,361	120°52'51"
21		105,000	8.263.984,6187	593.308,5366	172,496	120°52'51"
21+3,372	PC4	108,372	8.263.981,7248	593.306,8060	172,562	120°52'51"
22	PCV3	110,000	8.263.980,3179	593.305,9866	172,565	119°32'53"
23		115,000	8.263.975,8838	593.303,6782	172,574	115°27'20"
24		120,000	8.263.971,2963	593.301,6922	172,625	111°21'47"
25		125,000	8.263.966,5788	593.300,0386	172,696	107°16'14"
26	PTV3	130,000	8.263.961,7553	593.298,7258	172,772	103°10'41"
26+0,049	PT4	130,049	8.263.961,7073	593.298,7146	172,773	103°08'15"
26+2,123	PI-5	132,123	8.263.959,6876	593.298,2432	172,799	103°08'15"

Traçado Horizontal: INTERSEÇÃO 3 RAMO 4

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.264.058,7286	593.312,3836	171,274	359°36'22"
1		5,000	8.264.057,9367	593.317,2971	171,273	18°42'17"
1+1,892	PT1	6,892	8.264.057,2195	593.319,0444	171,259	25°55'27"
1+2,044	V1	7,044	8.264.057,1532	593.319,1810	171,258	25°55'27"

COORDENADAS DO EIXO INTERSEÇÃO 4

Traçado Horizontal: INTERSEÇÃO 4 RAMO 1

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.263.436,8620	593.001,2384	177,410	311°14'00"
1		5,000	8.263.440,7550	593.004,3736	177,330	306°27'32"
2		10,000	8.263.444,8955	593.007,1740	177,264	301°41'03"
3		15,000	8.263.449,2547	593.009,6199	177,098	296°54'34"
4		20,000	8.263.453,8024	593.011,6946	176,976	292°08'06"
4+3,029	PT1	23,029	8.263.456,6362	593.012,7647	176,934	289°14'31"
4+3,660	PC2	23,660	8.263.457,2317	593.012,9726	176,925	289°14'31"
5		25,000	8.263.458,4909	593.013,4311	176,920	290°46'40"
6		30,000	8.263.463,0694	593.015,4354	176,912	296°30'26"
7		35,000	8.263.467,4248	593.017,8868	176,894	302°14'13"
8	PCV1	40,000	8.263.471,5138	593.020,7608	176,855	307°57'59"
8+2,841	PT2	42,841	8.263.473,7025	593.022,5711	176,820	311°13'18"
9		45,000	8.263.475,3266	593.023,9940	176,791	311°13'18"
10		50,000	8.263.479,0874	593.027,2888	176,726	311°13'18"
11		55,000	8.263.482,8482	593.030,5837	176,660	311°13'18"
12		60,000	8.263.486,6091	593.033,8786	176,595	311°13'18"
13		65,000	8.263.490,3699	593.037,1735	176,671	311°13'18"
14		70,000	8.263.494,1307	593.040,4683	176,584	311°13'18"
15		75,000	8.263.497,8915	593.043,7632	176,436	311°13'18"
16	PTV1	80,000	8.263.501,6523	593.047,0581	176,405	311°13'18"
16+4,690	PC3	84,690	8.263.505,1801	593.050,1488	176,379	311°13'18"
17		85,000	8.263.505,4125	593.050,3537	176,377	311°34'37"
18		90,000	8.263.508,9809	593.053,8532	176,330	317°18'23"
19	PCV	95,000	8.263.512,1820	593.057,6914	176,263	323°02'10"
20		100,000	8.263.514,9840	593.061,8300	176,189	328°45'56"
21		105,000	8.263.517,3588	593.066,2277	176,178	334°29'43"
21+0,624	PT3	105,624	8.263.517,6238	593.066,7922	176,181	335°12'35"
21+2,587	PI4	107,587	8.263.518,4471	593.068,5748	176,182	330°50'49"
21+3,397	PC5	108,397	8.263.518,8941	593.069,2497	176,168	326°29'03"
22		110,000	8.263.519,7922	593.070,5778	176,139	325°22'38"
23		115,000	8.263.522,7552	593.074,6043	176,039	321°55'33"
24		120,000	8.263.525,9553	593.078,4452	175,980	318°28'27"
25	PTV	125,000	8.263.529,3808	593.082,0864	175,934	315°01'22"
26		130,000	8.263.533,0193	593.085,5148	175,879	311°34'16"
26+0,609	PT5	130,609	8.263.533,4764	593.085,9172	175,872	311°09'02"
26+0,876	PI-6	130,876	8.263.533,6772	593.086,0927	175,870	311°09'02"

Traçado Horizontal: INTERSEÇÃO 4 RAMO 2

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.263.454,4127	593.018,2936	176,959	44°34'55"
0+0,027	PC1	0,027	8.263.454,3940	593.018,3126	176,958	44°34'55"
1		2,000	8.263.453,1066	593.019,8061	176,988	36°56'33"
1+1,989	PT1	3,989	8.263.452,0215	593.021,4710	177,047	29°14'37"
1+1,994	V1	3,994	8.263.452,0191	593.021,4754	177,047	29°14'37"

Traçado Horizontal: INTERSEÇÃO 4 RAMO 3

Estaca	Descrição	Progressiva	Norte	Este	Cota	Azimute
0		0,000	8.263.412,2720	592.986,6674	177,939	311°13'59"
1		20,000	8.263.427,3127	592.999,8499	177,443	311°13'59"
2		40,000	8.263.442,3534	593.013,0324	177,222	311°13'59"
3	PCV	60,000	8.263.457,3940	593.026,2149	176,964	311°13'59"
4		80,000	8.263.472,4347	593.039,3974	176,731	311°13'59"
5		100,000	8.263.487,4754	593.052,5799	176,478	311°13'59"
6		120,000	8.263.502,5161	593.065,7624	176,263	311°13'59"
7	PTV	140,000	8.263.517,5567	593.078,9449	176,018	311°13'59"
7+17,122	V32	157,122	8.263.530,4330	593.090,2303	175,844	311°13'59"

4 – NOTAS DE SERVIÇO DE TERRAPLENAGEM

Escritório Técnico B.E. Schuring

C.N.P.J.: 32 957 169 /0001-20

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Porto

Cuiabá

Mato Grosso

Nota de Serviço de Terraplenagem: RUA LEÔNICIO

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Lateral		Cota		Altura	Distância		Cota	Terreno	Projeto	Vermelha		Cota	Distância		Cota	Lateral		Distância	Cota
Distância	Cota	Distância	Cota		Distância	Cota													
Estaca	0	5,750	174,823	1,140	5,750	173,683	5,250	173,698	-3,00	174,905	173,855	1,050	5,250	173,698	-3,00	5,750	173,683	5,750	174,858
	1	5,750	174,377	0,021	5,750	174,356	5,250	174,371	-3,00	174,477	174,529	-0,052	5,250	174,371	-3,00	5,750	174,356	5,750	174,602
	2	5,750	174,104	0,124	5,750	173,980	5,250	173,995	-3,00	174,138	174,153	-0,015	5,250	173,995	-3,00	5,750	173,980	5,750	174,242
	3	5,750	173,685	0,091	5,750	173,594	5,250	173,609	-3,00	173,732	173,766	-0,034	5,250	173,609	-3,00	5,750	173,594	5,750	173,949
	4	5,750	173,384	0,197	5,750	173,187	5,250	173,202	-3,00	173,213	173,359	-0,146	5,250	173,202	-3,00	5,750	173,187	5,750	173,348
	5	5,750	173,018	0,259	5,750	172,759	5,250	172,774	-3,00	172,900	172,932	-0,032	5,250	172,774	-3,00	5,750	172,759	5,750	172,888
	6	5,750	172,619	0,307	5,750	172,312	5,250	172,327	-3,00	172,409	172,484	-0,075	5,250	172,327	-3,00	5,750	172,312	5,750	172,459
	7	5,750	172,080	0,226	5,750	171,854	5,250	171,869	-3,00	172,060	172,026	0,034	5,250	171,869	-3,00	5,750	171,854	5,750	171,933
	8	5,750	171,740	0,344	5,750	171,396	5,250	171,411	-3,00	171,522	171,568	-0,046	5,250	171,411	-3,00	5,750	171,396	5,750	171,497
	9	5,750	171,159	0,221	5,750	170,938	5,250	170,953	-3,00	171,120	171,110	0,010	5,250	170,953	-3,00	5,750	170,938	5,750	171,050
	10	7,466	170,571	0,139	7,327	170,432	5,527	170,486	-3,00	170,620	170,652	-0,032	5,527	170,569	-1,50	7,327	170,542	7,332	170,547
10+14,02		5,750	170,254	1,146	5,750	169,108	5,250	169,123	-3,00	170,205	169,281	0,924	5,250	169,123	-3,00	5,750	169,108	5,750	170,200
	11	5,750	170,070	1,098	5,750	168,972	5,250	168,987	-3,00	170,041	169,144	0,897	5,250	168,987	-3,00	5,750	168,972	5,750	170,085
11+3,562		5,750	169,973	1,083	5,750	168,890	5,250	168,905	-3,00	169,962	169,062	0,900	5,250	168,905	-3,00	5,750	168,890	5,750	170,023
	12	5,750	169,444	0,930	5,750	168,514	5,250	168,529	-3,00	169,559	168,686	0,873	5,250	168,529	-3,00	5,750	168,514	5,750	169,635
	13	5,750	168,871	0,815	5,750	168,066	5,250	168,071	-3,00	169,171	168,228	0,943	5,250	168,071	-3,00	5,750	168,066	5,750	169,080
	14	5,750	168,403	0,805	5,750	167,598	5,250	167,613	-3,00	168,774	167,770	1,004	5,250	167,613	-3,00	5,750	167,598	5,750	168,678
	15	5,750	168,154	1,014	5,750	167,140	5,250	167,155	-3,00	168,395	167,312	1,083	5,250	167,155	-3,00	5,750	167,140	5,750	168,342
	16	5,750	167,726	1,033	5,750	166,693	5,250	166,708	-3,00	167,957	166,865	1,092	5,250	166,708	-3,00	5,750	166,693	5,750	167,778
	17	5,750	167,349	1,081	5,750	166,268	5,250	166,283	-3,00	167,515	166,441	1,074	5,250	166,283	-3,00	5,750	166,268	5,750	167,356
	18	5,750	167,044	1,178	5,750	165,866	5,250	165,881	-3,00	167,084	166,039	1,045	5,250	165,881	-3,00	5,750	165,866	5,750	166,898
	19	5,750	166,741	1,254	5,750	165,487	5,250	165,502	-3,00	166,709	165,659	1,050	5,250	165,502	-3,00	5,750	165,487	5,750	166,654
	20	5,750	166,437	1,307	5,750	165,130	5,250	165,145	-3,00	166,379	165,302	1,077	5,250	165,145	-3,00	5,750	165,130	5,750	166,260
	21	5,750	166,168	1,373	5,750	164,795	5,250	164,810	-3,00	166,044	164,967	1,077	5,250	164,810	-3,00	5,750	164,795	5,750	166,014
	22	5,750	165,834	1,352	5,750	164,482	5,250	164,497	-3,00	165,743	164,655	1,088	5,250	164,497	-3,00	5,750	164,482	5,750	165,700
22+12,01		5,750	165,657	1,351	5,750	164,306	5,250	164,321	-3,00	165,504	164,478	1,026	5,250	164,321	-3,00	5,750	164,306	5,750	165,492
	23	5,750	165,517	1,324	5,750	164,193	5,250	164,208	-3,00	165,377	164,365	1,012	5,250	164,208	-3,00	5,750	164,193	5,750	165,316
	24	5,750	165,342	1,471	5,750	163,871	5,250	163,886	-3,00	165,105	164,044	1,061	5,250	163,886	-3,00	5,750	163,871	5,750	164,797
	25	5,750	165,021	1,556	5,750	163,465	5,250	163,480	-3,00	164,830	163,637	1,193	5,250	163,480	-3,00	5,750	163,465	5,750	164,562
	26	5,750	164,581	1,607	5,750	162,974	5,250	162,989	-3,00	164,369	163,146	1,223	5,250	162,989	-3,00	5,750	162,974	5,750	164,103
26+18,84		5,750	163,940	1,507	5,750	162,433	5,250	162,448	-3,00	163,766	162,605	1,161	5,250	162,448	-3,00	5,750	162,433	5,750	163,597
	27	5,750	163,897	1,500	5,750	162,397	5,250	162,412	-3,00	163,725	162,570	1,155	5,250	162,412	-3,00	5,750	162,397	5,750	163,561

Nota de Serviço de Terraplenagem: RUA LEÔNICIO

Lado Esquerdo										Lado Direito									
Offset					Eixo					Bordo					Lateral				
Estaca	Distância	Cota	Altura		Distância	Cota	%	Terreno	Projeto	Cota Vermelha	Distância	Cota	%	Distância	Cota	Distância	Cota	Offset	
28	5,750	163,148	1,445		5,750	161,703	-3,00	162,926	161,876	1,050	5,250	161,718	-3,00	5,750	161,703	5,750	162,757	1,054	
29	5,750	162,127	1,269		5,750	160,858	-3,00	162,047	161,030	1,017	5,250	160,873	-3,00	5,750	160,858	5,750	161,906	1,048	
30	5,750	161,128	1,267		5,750	159,861	-3,00	161,074	160,033	1,041	5,250	159,876	-3,00	5,750	159,861	5,750	160,955	1,094	
31	5,750	159,900	1,111		5,750	158,789	-3,00	160,022	158,961	1,061	5,250	158,804	-3,00	5,750	158,789	5,750	159,833	1,044	
32	5,750	158,748	1,032		5,750	157,716	-3,00	158,939	157,889	1,050	5,250	157,731	-3,00	5,750	157,716	5,750	158,745	1,029	
33	5,750	157,729	1,085		5,750	156,644	-3,00	157,853	156,817	1,036	5,250	156,659	-3,00	5,750	156,644	5,750	157,614	0,970	
34	5,750	156,597	1,025		5,750	155,572	-3,00	156,766	155,745	1,021	5,250	155,587	-3,00	5,750	155,572	5,750	156,616	1,044	
35	8,700	155,519	1,025		8,700	154,494	-3,00	155,770	154,755	1,015	5,250	154,597	-3,00	8,700	154,494	8,700	155,257	0,763	
36	8,700	154,357	0,688		8,700	153,669	-3,00	154,927	153,930	0,997	5,250	153,772	-3,00	8,700	153,669	8,700	154,108	0,439	
37	8,700	153,598	0,589		8,700	153,009	-3,00	154,211	153,270	0,941	5,250	153,112	-3,00	8,700	153,009	8,700	153,648	0,639	
38	8,700	153,129	0,615		8,700	152,514	-3,00	153,648	152,775	0,873	5,250	152,618	-3,00	8,700	152,514	8,700	152,703	0,189	
39	8,700	152,428	0,326		8,700	152,102	-3,00	153,196	152,363	0,833	5,250	152,205	-3,00	8,700	152,102	8,700	152,263	0,161	
40	8,700	152,089	0,316		8,700	151,773	-3,00	152,947	152,034	0,913	5,250	151,877	-3,00	8,700	151,773	8,700	152,084	0,311	
41	8,700	151,631	0,017		8,700	151,614	-3,00	152,815	151,875	0,940	5,250	151,717	-3,00	8,700	151,614	9,675	150,964	-0,650	
42	8,700	152,121	0,583		8,700	151,538	-3,00	152,725	151,799	0,926	5,250	151,642	-3,00	8,700	151,538	9,153	151,236	-0,302	
43	10,416	150,319	-1,144		8,700	151,463	-3,00	152,692	151,724	0,968	5,250	151,566	-3,00	8,700	151,463	8,700	151,760	0,297	
44	11,229	149,701	-1,686		8,700	151,387	-3,00	152,721	151,648	1,073	5,250	151,491	-3,00	8,700	151,387	8,700	151,798	0,411	
45	9,100	151,045	-0,267		8,700	151,312	-3,00	152,731	151,573	1,158	5,250	151,415	-3,00	8,700	151,312	8,700	151,649	0,337	
45+11,17	11,635	149,312	-1,957		8,700	151,269	-3,00	152,717	151,530	1,187	5,250	151,373	-3,00	8,700	151,269	8,700	151,415	0,146	
46	10,155	150,271	-0,970		8,700	151,241	-3,00	152,692	151,502	1,190	5,250	151,345	-3,00	8,700	151,241	9,758	150,536	-0,705	
46+11,17	14,784	147,164	-4,056		8,700	151,220	-3,00	152,689	151,481	1,208	5,250	151,323	-3,00	8,700	151,220	8,700	151,506	0,286	
47	12,168	148,902	-2,312		8,700	151,214	-3,00	152,714	151,475	1,239	5,250	151,318	-3,00	8,700	151,214	8,700	151,408	0,194	
47+11,17	11,392	149,428	-1,794		8,700	151,222	-3,00	152,751	151,483	1,268	5,250	151,325	-3,00	8,700	151,222	8,700	151,474	0,252	
48	11,476	149,383	-1,851		8,700	151,234	-3,00	152,797	151,495	1,302	5,250	151,337	-3,00	8,700	151,234	8,700	151,341	0,107	
49	10,839	149,869	-1,426		8,700	151,295	-3,00	152,901	151,556	1,345	5,250	151,399	-3,00	8,700	151,295	8,700	152,875	1,580	
50	9,487	150,901	-0,524		8,700	151,425	-3,00	153,016	151,686	1,330	5,250	151,529	-3,00	8,700	151,425	8,700	153,072	1,647	
51	9,254	151,254	-0,369		8,700	151,623	-3,00	153,155	151,884	1,271	5,250	151,727	-3,00	8,700	151,623	8,700	153,228	1,605	
51+9,456	8,700	151,909	0,169		8,700	151,740	-3,00	153,232	152,001	1,231	5,250	151,844	-3,00	8,700	151,740	8,700	153,120	1,380	
52	8,700	151,970	0,081		8,700	151,889	-3,00	153,320	152,150	1,170	5,250	151,993	-3,00	8,700	151,889	8,700	153,172	1,283	
53	8,700	152,500	0,267		8,700	152,233	-3,00	153,585	152,494	1,091	5,250	152,336	-3,00	8,700	152,233	8,700	153,501	1,268	
54	5,750	153,559	0,806		5,750	152,753	-3,00	154,030	152,925	1,105	5,250	152,768	-3,00	5,750	152,753	5,750	154,065	1,312	
55	5,750	154,062	0,791		5,750	153,271	-3,00	154,586	153,444	1,142	5,250	153,286	-3,00	5,750	153,271	5,750	154,546	1,275	

Lado Esquerdo										Eixo				Lado Direito									
Offset					Bordo					Cota		Cota		Bordo					Lateral		Offset		
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Cota	Projeto	Vermelha	Distância	Cota	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura
56	5,750	154,792	0,914	5,750	153,878	5,250	153,893	-3,00	155,188	154,050	1,138	154,050	1,138	5,750	153,878	-3,00	5,750	153,878	5,750	153,878	5,750	153,878	1,241
57	5,750	155,342	0,874	5,750	154,468	5,250	154,483	-3,00	155,742	154,641	1,101	154,641	1,101	5,750	154,468	-3,00	5,750	154,468	5,750	154,468	5,750	154,468	1,265
57+8,867	5,750	155,590	0,898	5,750	154,692	5,250	154,707	-3,00	155,955	154,864	1,091	154,864	1,091	5,750	154,692	-3,00	5,750	154,692	5,750	154,692	5,750	154,692	1,209
58	5,750	155,983	1,043	5,750	154,940	5,250	154,955	-3,00	156,175	155,113	1,062	155,113	1,062	5,750	154,940	-3,00	5,750	154,940	5,750	154,940	5,750	154,940	1,330
59	5,750	156,155	0,862	5,750	155,293	5,250	155,308	-3,00	156,515	155,466	1,049	155,466	1,049	5,750	155,293	-3,00	5,750	155,293	5,750	155,293	5,750	155,293	1,374
60	5,750	156,485	0,957	5,750	155,528	5,250	155,543	-3,00	156,657	155,700	0,957	155,700	0,957	5,750	155,528	-3,00	5,750	155,528	5,750	155,528	5,750	155,528	1,392
61	5,750	156,501	0,882	5,750	155,619	5,250	155,634	-3,00	156,793	155,792	1,001	155,792	1,001	5,750	155,619	-3,00	5,750	155,619	5,750	155,619	5,750	155,619	1,339
62	5,750	156,600	1,055	5,750	155,545	5,250	155,560	-3,00	156,771	155,718	1,053	155,718	1,053	5,750	155,545	-3,00	5,750	155,545	5,750	155,545	5,750	155,545	1,327
63	5,750	156,405	1,100	5,750	155,305	5,250	155,320	-3,00	156,609	155,477	1,132	155,477	1,132	5,750	155,305	-3,00	5,750	155,305	5,750	155,305	5,750	155,305	1,377
64	5,750	155,993	1,095	5,750	154,898	5,250	154,913	-3,00	156,258	155,071	1,187	155,071	1,187	5,750	154,898	-3,00	5,750	154,898	5,750	154,898	5,750	154,898	1,381
65	5,750	155,448	1,052	5,750	154,396	5,250	154,411	-3,00	155,729	154,569	1,160	154,569	1,160	5,750	154,396	-3,00	5,750	154,396	5,750	154,396	5,750	154,396	1,334
66	5,750	155,082	1,211	5,750	153,871	5,250	153,886	-3,00	155,141	154,043	1,098	154,043	1,098	5,750	153,871	-3,00	5,750	153,871	5,750	153,871	5,750	153,871	1,261
67	5,750	154,368	1,047	5,750	153,321	5,250	153,336	-3,00	154,530	153,494	1,036	153,494	1,036	5,750	153,321	-3,00	5,750	153,321	5,750	153,321	5,750	153,321	1,184
68	5,750	153,567	0,819	5,750	152,748	5,250	152,763	-3,00	153,942	152,921	1,021	152,921	1,021	5,750	152,748	-3,00	5,750	152,748	5,750	152,748	5,750	152,748	1,201
69	5,750	153,109	0,890	5,750	152,219	5,250	152,234	-3,00	153,425	152,392	1,033	152,392	1,033	5,750	152,219	-3,00	5,750	152,219	5,750	152,219	5,750	152,219	1,184
70	5,750	152,937	1,134	5,750	151,803	5,250	151,818	-3,00	153,028	151,976	1,052	151,976	1,052	5,750	151,803	-3,00	5,750	151,803	5,750	151,803	5,750	151,803	1,245
71	5,750	152,617	1,117	5,750	151,500	5,250	151,515	-3,00	152,735	151,673	1,062	151,673	1,062	5,750	151,500	-3,00	5,750	151,500	5,750	151,500	5,750	151,500	1,144
72	5,750	152,412	1,102	5,750	151,310	5,250	151,325	-3,00	152,431	151,483	0,948	151,483	0,948	5,750	151,310	-3,00	5,750	151,310	5,750	151,310	5,750	151,310	1,104
73	5,750	152,230	1,037	5,750	151,193	5,250	151,208	-3,00	152,364	151,365	0,999	151,365	0,999	5,750	151,193	-3,00	5,750	151,193	5,750	151,193	5,750	151,193	1,128
74	8,700	152,027	1,007	8,700	151,020	5,250	151,124	-3,00	152,302	151,281	1,021	151,281	1,021	8,700	151,020	-3,00	8,700	151,020	8,700	151,020	8,700	151,020	0,366
75	8,700	152,018	1,048	8,700	150,970	5,250	151,073	-3,00	152,296	151,231	1,065	151,231	1,065	8,700	150,970	-3,00	8,700	150,970	8,700	150,970	8,700	150,970	0,213
76	8,700	151,929	0,977	8,700	150,952	5,250	151,056	-3,00	152,301	151,213	1,088	151,213	1,088	8,700	150,952	-3,00	8,700	150,952	8,700	150,952	8,700	150,952	0,016
76+3,859	8,700	151,918	0,966	8,700	150,952	5,250	151,056	-3,00	152,313	151,213	1,100	151,213	1,100	8,700	150,952	-3,00	8,700	150,952	8,700	150,952	8,700	150,952	0,402
77	8,700	151,710	0,758	8,700	150,952	5,250	151,055	-3,00	152,386	151,213	1,173	151,213	1,173	8,700	150,952	-3,00	8,700	150,952	8,700	150,952	8,700	150,952	0,284
78	8,700	151,629	0,678	8,700	150,951	5,250	151,054	-3,00	152,432	151,212	1,220	151,212	1,220	8,700	150,951	-3,00	8,700	150,951	10,127	150,000	10,127	150,000	-0,951
79	11,492	149,088	-1,862	8,700	150,950	5,250	151,053	-3,00	152,426	151,211	1,215	151,211	1,215	8,700	150,950	-3,00	8,700	150,950	10,956	149,446	10,956	149,446	-1,504
79+4,747	11,595	149,020	-1,930	8,700	150,950	5,250	151,053	-3,00	152,415	151,211	1,204	151,211	1,204	8,700	150,950	-3,00	8,700	150,950	10,426	149,799	10,426	149,799	-1,151
80	11,927	148,798	-2,151	8,700	150,949	5,250	151,053	-3,00	152,390	151,210	1,180	151,210	1,180	8,700	150,949	-3,00	8,700	150,949	9,498	150,417	9,498	150,417	-0,532
81	11,774	148,899	-2,049	8,700	150,948	5,250	151,052	-3,00	152,368	151,209	1,159	151,209	1,159	8,700	150,948	-3,00	8,700	150,948	8,700	150,948	8,700	150,948	0,233
82	12,794	148,218	-2,729	8,700	150,947	5,250	151,051	-3,00	152,349	151,208	1,141	151,208	1,141	8,700	150,947	-3,00	8,700	150,947	13,292	147,886	13,292	147,886	-3,061
82+8,523	15,308	146,541	-4,406	8,700	150,947	5,250	151,051	-3,00	152,340	151,208	1,132	151,208	1,132	8,700	150,947	-3,00	8,700	150,947	14,774	146,898	14,774	146,898	-4,049
83	8,700	150,995	0,048	8,700	150,947	5,250	151,050	-3,00	152,323	151,208	1,115	151,208	1,115	8,700	150,947	-3,00	8,700	150,947	11,367	149,169	11,367	149,169	-1,778

Nota de Serviço de Terraplenagem: RUA LEÔNICIO

Lado Esquerdo										Lado Direito									
Eixo					Bordo					Bordo					Lateral				
Offset		Lateral		Cota		Terreno		Projeto		Vermelha		Distância		Cota		Distância		Cota	
Estaca	Distância	Altura	Distância	Cota	Distância	Cota	%	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Cota	Distância	Altura
84	8,700	151,563	0,616	8,700	150,947	5,250	151,050	-3,00	152,292	151,208	1,084	5,250	151,050	-3,00	8,700	150,947	11,906	148,810	-2,137
85	8,700	152,090	1,141	8,700	150,949	5,250	151,053	-3,00	152,256	151,210	1,046	5,250	151,053	-3,00	8,700	150,949	8,700	151,693	0,744
86	5,750	152,245	1,203	5,750	151,042	5,250	151,057	-3,00	152,239	151,214	1,025	5,250	151,057	-3,00	5,750	151,042	5,750	151,839	0,797
87	5,750	152,312	1,264	5,750	151,048	5,250	151,063	-3,00	152,257	151,221	1,036	5,250	151,063	-3,00	5,750	151,048	5,750	151,846	0,798
88	5,750	152,363	1,248	5,750	151,115	5,250	151,130	-3,00	152,320	151,288	1,032	5,250	151,130	-3,00	5,750	151,115	5,750	151,849	0,734
88+7,334	5,750	152,375	1,205	5,750	151,170	5,250	151,185	-3,00	152,346	151,343	1,003	5,250	151,185	-3,00	5,750	151,170	5,750	151,838	0,668
89	5,750	152,480	1,177	5,750	151,303	5,250	151,318	-3,00	152,477	151,475	1,002	5,250	151,318	-3,00	5,750	151,303	5,750	151,767	0,464
90	5,750	152,744	1,134	5,750	151,610	5,250	151,625	-3,00	152,795	151,782	1,013	5,250	151,625	-3,00	5,750	151,610	5,750	152,604	0,994
91	5,750	153,169	1,132	5,750	152,037	5,250	152,052	-3,00	153,231	152,209	1,022	5,250	152,052	-3,00	5,750	152,037	5,750	153,207	1,170
92	5,750	153,790	1,160	5,750	152,630	5,250	152,645	-3,00	153,853	152,803	1,050	5,250	152,645	-3,00	5,750	152,630	5,750	153,937	1,307
93	5,750	154,662	1,225	5,750	153,437	5,250	153,452	-3,00	154,718	153,609	1,109	5,250	153,452	-3,00	5,750	153,437	5,750	154,767	1,330
94	5,750	155,643	1,186	5,750	154,457	5,250	154,472	-3,00	155,745	154,629	1,116	5,250	154,472	-3,00	5,750	154,457	5,750	155,346	0,889
95	5,750	156,686	1,105	5,750	155,581	5,250	155,596	-3,00	156,822	155,754	1,068	5,250	155,596	-3,00	5,750	155,581	5,750	156,852	1,271
96	5,750	157,856	1,154	5,750	156,702	5,250	156,717	-3,00	157,918	156,875	1,043	5,250	156,717	-3,00	5,750	156,702	5,750	157,949	1,247
97	5,750	158,788	0,969	5,750	157,819	5,250	157,834	-3,00	159,039	157,992	1,047	5,250	157,834	-3,00	5,750	157,819	5,750	158,954	1,135
98	5,750	159,988	1,055	5,750	158,933	5,250	158,948	-3,00	160,144	159,105	1,039	5,250	158,948	-3,00	5,750	158,933	5,750	160,240	1,307
98+16,84	5,750	160,831	1,003	5,750	159,828	5,250	159,843	-3,00	161,048	160,001	1,047	5,250	159,843	-3,00	5,750	159,828	5,750	161,277	1,449
99	5,750	161,009	1,022	5,750	159,987	5,250	160,002	-3,00	161,217	160,159	1,058	5,250	160,002	-3,00	5,750	159,987	5,750	161,360	1,373
100	5,750	162,194	1,267	5,750	160,927	5,250	160,942	-3,00	162,275	161,099	1,176	5,250	160,942	-3,00	5,750	160,927	5,750	162,195	1,268
101	5,750	162,904	1,152	5,750	161,752	5,250	161,767	-3,00	163,148	161,924	1,224	5,250	161,767	-3,00	5,750	161,752	5,750	163,216	1,464
102	5,750	163,848	1,385	5,750	162,463	5,250	162,478	-3,00	163,817	162,635	1,182	5,250	162,478	-3,00	5,750	162,463	5,750	163,861	1,398
103	5,750	164,362	1,245	5,750	163,117	5,250	163,132	-3,00	164,396	163,289	1,107	5,250	163,132	-3,00	5,750	163,117	5,750	164,193	1,076
104	5,750	164,890	1,120	5,750	163,770	5,250	163,785	-3,00	164,915	163,943	0,972	5,250	163,785	-3,00	5,750	163,770	5,750	164,872	1,102
105	5,750	165,344	0,959	5,750	164,385	5,250	164,400	-3,00	165,432	164,557	0,875	5,250	164,400	-3,00	5,750	164,385	5,750	165,502	1,117
106	5,750	165,944	1,022	5,750	164,922	5,250	164,937	-3,00	165,989	165,094	0,895	5,250	164,937	-3,00	5,750	164,922	5,750	166,047	1,125
107	5,750	166,453	1,073	5,750	165,380	5,250	165,395	-3,00	166,540	165,553	0,987	5,250	165,395	-3,00	5,750	165,380	5,750	166,570	1,190
108	5,750	167,033	1,272	5,750	165,761	5,250	165,776	-3,00	167,016	165,934	1,082	5,250	165,776	-3,00	5,750	165,761	5,750	166,861	1,100
109	5,750	167,359	1,268	5,750	166,091	5,250	166,106	-3,00	167,379	166,264	1,115	5,250	166,106	-3,00	5,750	166,091	5,750	167,340	1,249
109+4,80	5,750	167,412	1,245	5,750	166,167	5,250	166,182	-3,00	167,444	166,339	1,105	5,250	166,182	-3,00	5,750	166,167	5,750	167,381	1,214
110	5,750	167,635	1,237	5,750	166,398	5,250	166,413	-3,00	167,630	166,570	1,060	5,250	166,413	-3,00	5,750	166,398	5,750	167,565	1,167
111	5,750	167,900	1,219	5,750	166,681	5,250	166,696	-3,00	167,897	166,853	1,044	5,250	166,696	-3,00	5,750	166,681	5,750	167,670	0,989
112	5,750	167,995	1,055	5,750	166,940	5,250	166,955	-3,00	168,159	167,113	1,046	5,250	166,955	-3,00	5,750	166,940	5,750	167,963	1,023

Nota de Serviço de Terraplenagem: RUA LEÔNICIO

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Estaca	Distância	Cota	Altura	Lateral	Distância	Cota	Distância	Cota	%	Cota	Terreno	Projeto	Cota	Vermelha	Distância	Cota	%	Distância	Cota
113	5,750	168,325	1,137	5,750	167,188	5,250	167,203	-3,00	168,433	167,361	1,072	5,250	167,203	-3,00	5,750	167,188	5,750	168,118	0,930
114	5,750	168,578	1,142	5,750	167,436	5,250	167,451	-3,00	168,662	167,608	1,054	5,250	167,451	-3,00	5,750	167,436	5,750	168,363	0,927
115	5,750	168,852	1,169	5,750	167,683	5,250	167,698	-3,00	168,944	167,856	1,088	5,250	167,698	-3,00	5,750	167,683	5,750	168,754	1,071
115+9,30	5,750	168,967	1,169	5,750	167,798	5,250	167,813	-3,00	169,062	167,970	1,092	5,250	167,813	-3,00	5,750	167,798	5,750	168,771	0,973
116	5,750	169,072	1,143	5,750	167,929	5,250	167,944	-3,00	169,189	168,102	1,087	5,250	167,944	-3,00	5,750	167,929	5,750	168,933	1,004
117	5,750	169,218	1,044	5,750	168,174	5,250	168,189	-3,00	169,424	168,347	1,077	5,250	168,189	-3,00	5,750	168,174	5,750	169,125	0,951
118	5,750	169,565	1,147	5,750	168,418	5,250	168,433	-3,00	169,585	168,591	0,994	5,250	168,433	-3,00	5,750	168,418	5,750	169,520	1,102
119	5,750	169,588	0,927	5,750	168,661	5,250	168,676	-3,00	169,883	168,834	1,049	5,250	168,676	-3,00	5,750	168,661	5,750	169,803	1,142
120	5,750	169,932	1,027	5,750	168,905	5,250	168,920	-3,00	170,010	169,077	0,933	5,250	168,920	-3,00	5,750	168,905	5,750	169,996	1,091
121	5,750	170,241	1,093	5,750	169,148	5,250	169,163	-3,00	170,360	169,320	1,040	5,250	169,163	-3,00	5,750	169,148	5,750	170,161	1,013
122	5,750	170,594	1,203	5,750	169,391	5,250	169,406	-3,00	170,637	169,564	1,073	5,250	169,406	-3,00	5,750	169,391	5,750	170,407	1,016
123	5,750	170,808	1,169	5,750	169,639	5,250	169,654	-3,00	170,901	169,812	1,089	5,250	169,654	-3,00	5,750	169,639	5,750	170,609	0,970
124	5,750	170,952	1,054	5,750	169,898	5,250	169,913	-3,00	170,979	170,070	0,909	5,250	169,913	-3,00	5,750	169,898	5,750	171,089	1,191
124+0,99	5,750	170,958	1,047	5,750	169,911	5,250	169,926	-3,00	170,983	170,083	0,900	5,250	169,926	-3,00	5,750	169,911	5,750	171,099	1,188
125	5,750	171,266	0,050	5,750	171,216	5,250	171,231	-3,00	171,153	171,388	-0,235	5,250	171,231	-3,00	5,750	171,216	5,750	171,377	0,161
126	5,750	171,348	-0,146	5,750	171,494	5,250	171,509	-3,00	171,423	171,667	-0,244	5,250	171,509	-3,00	5,750	171,494	5,750	171,425	-0,069
127	5,750	171,722	-0,056	5,750	171,778	5,250	171,793	-3,00	171,811	171,950	-0,139	5,250	171,793	-3,00	5,750	171,778	5,750	171,871	0,093
128	5,750	172,084	0,023	5,750	172,061	5,250	172,076	-3,00	172,157	172,233	-0,076	5,250	172,076	-3,00	5,750	172,061	5,750	171,956	-0,105
129	5,750	172,399	0,071	5,750	172,328	5,250	172,343	-3,00	172,471	172,500	-0,029	5,250	172,343	-3,00	5,750	172,328	5,750	172,133	-0,195
130	5,750	172,641	0,080	5,750	172,561	5,250	172,576	-3,00	172,740	172,733	0,007	5,250	172,576	-3,00	5,750	172,561	5,750	172,558	-0,003
130+11,0	5,750	172,803	1,177	5,750	171,626	5,250	171,641	-3,00	172,865	171,798	1,067	5,250	171,641	-3,00	5,750	171,626	5,750	172,677	1,051
131	5,750	172,929	1,218	5,750	171,711	5,250	171,726	-3,00	172,945	171,883	1,062	5,250	171,726	-3,00	5,750	171,711	5,750	172,749	1,038
132	5,750	173,126	1,248	5,750	171,878	5,250	171,893	-3,00	173,019	172,050	0,969	5,250	171,893	-3,00	5,750	171,878	5,750	172,868	0,990
133	5,750	173,270	1,242	5,750	172,028	5,250	172,043	-3,00	173,089	172,200	0,889	5,250	172,043	-3,00	5,750	172,028	5,750	172,985	0,957
134	5,750	173,383	1,205	5,750	172,178	5,250	172,193	-3,00	173,233	172,350	0,883	5,250	172,193	-3,00	5,750	172,178	5,750	173,314	1,136
135	5,750	173,534	1,211	5,750	172,323	5,250	172,338	-3,00	173,397	172,496	0,901	5,250	172,338	-3,00	5,750	172,323	5,750	173,353	1,030
135+1,84	5,750	173,547	1,211	5,750	172,336	5,250	172,351	-3,00	173,413	172,509	0,904	5,250	172,351	-3,00	5,750	172,336	5,750	173,467	1,131
136	5,750	173,639	1,178	5,750	172,461	5,250	172,476	-3,00	173,600	172,633	0,967	5,250	172,476	-3,00	5,750	172,461	5,750	173,570	1,109
137	5,750	173,835	1,245	5,750	172,590	5,250	172,605	-3,00	173,794	172,763	1,031	5,250	172,605	-3,00	5,750	172,590	5,750	173,714	1,124
138	5,750	173,855	1,144	5,750	172,711	5,250	172,726	-3,00	173,967	172,883	1,084	5,250	172,726	-3,00	5,750	172,711	5,750	173,764	1,053
139	5,750	174,100	1,272	5,750	172,828	5,250	172,843	-3,00	174,096	173,000	1,096	5,250	172,843	-3,00	5,750	172,828	5,750	173,986	1,158
140	5,750	174,204	1,260	5,750	172,944	5,250	172,959	-3,00	174,228	173,117	1,111	5,250	172,959	-3,00	5,750	172,944	5,750	174,142	1,198

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	Lado Esquerdo								Eixo				Lado Direito							
	Offset			Lateral			Bordo		Cota	Cota	Cota	Bordo		Lateral			Offset			
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Vermelha	Distância	Cota	Distância	Cota	Distância	Cota	Altura		
0	0,500	174,068	1,192	0,500	172,876	0,000	172,891	-3,00	174,005	172,948	1,057	3,810	173,005	3,00	4,310	173,020	4,310	173,960	0,940	
1	0,500	174,038	1,181	0,500	172,857	0,000	172,872	-3,00	173,991	172,930	1,061	3,810	172,987	3,00	4,310	173,002	4,310	173,945	0,943	
2	0,500	174,088	1,209	0,500	172,879	0,000	172,894	-3,00	174,014	172,951	1,063	3,810	173,008	3,00	4,310	173,023	4,310	173,940	0,917	
3	0,500	174,184	1,204	0,500	172,980	0,000	172,995	-3,00	174,069	173,052	1,017	3,810	173,109	3,00	4,310	173,124	4,310	174,004	0,880	
4	0,500	174,376	1,216	0,500	173,160	0,000	173,175	-3,00	174,275	173,233	1,042	3,810	173,290	3,00	4,310	173,305	4,310	174,204	0,899	
5	0,500	174,707	1,286	0,500	173,421	0,000	173,436	-3,00	174,598	173,493	1,105	3,810	173,550	3,00	4,310	173,565	4,310	174,487	0,922	
6	0,500	174,777	1,181	0,500	173,596	0,000	173,611	-3,00	174,689	173,668	1,021	3,810	173,725	3,00	4,310	173,740	4,310	174,617	0,877	
7	0,500	174,762	1,241	0,500	173,521	0,000	173,536	-3,00	174,680	173,593	1,087	3,810	173,650	3,00	4,310	173,665	4,310	174,568	0,903	
8	0,500	174,539	1,181	0,500	173,358	0,000	173,373	-3,00	174,606	173,430	1,176	3,810	173,487	3,00	4,310	173,502	4,310	174,477	0,975	
9	0,500	174,575	1,305	0,500	173,270	0,000	173,285	-3,00	174,507	173,342	1,165	3,810	173,400	3,00	4,310	173,415	4,310	174,440	1,025	
10	0,500	174,645	1,425	0,500	173,220	0,000	173,235	-3,00	174,586	173,292	1,294	3,810	173,349	3,00	4,310	173,364	4,310	174,527	1,163	
10+2,789	0,500	174,697	1,505	0,500	173,192	0,000	173,207	-3,00	174,645	173,264	1,381	3,810	173,321	3,00	4,310	173,336	4,310	174,601	1,265	

Lado Esquerdo										Eixo					Lado Direito						
Offset					Lateral			Bordo		Cota		Cota		Vermelha		Bordo		Lateral		Offset	
	Distância	Cota	Altura		Distância	Cota	%	Terreno	Projeto			Distância	Cota	%	Distância	Cota		Distância	Cota		
Estaca	0,500	172,770	1,319	0,500	171,451	0,000	-3,00	172,769	171,586	1,183		8,000	171,706	3,00	8,500	171,721	8,500	172,803		Altura	1,082
0+0,428	0,500	172,760	1,297	0,500	171,463	0,000	-3,00	172,757	171,598	1,159		8,000	171,718	3,00	8,500	171,733	8,500	172,794		1,061	
1	0,500	172,781	1,189	0,500	171,592	0,000	-3,00	172,666	171,727	0,939		8,000	171,847	3,00	8,500	171,862	8,500	172,662		0,800	
2	0,500	172,986	1,253	0,500	171,733	0,000	-3,00	172,894	171,868	1,026		8,000	171,988	3,00	8,500	172,003	8,500	172,799		0,796	
2+4,249	0,500	173,152	1,305	0,500	171,847	0,000	-3,00	173,207	171,982	1,225		8,000	172,102	3,00	8,500	172,117	8,500	173,242		1,125	
2+4,655	0,500	173,169	1,311	0,500	171,858	0,000	-3,00	173,221	171,993	1,228		8,000	172,113	3,00	8,500	172,128	8,500	173,250		1,122	
3	0,500	173,180	1,313	0,500	171,867	0,000	-3,00	173,232	172,002	1,230		8,000	172,122	3,00	8,500	172,137	8,500	173,258		1,121	
4	0,500	173,298	1,310	0,500	171,988	0,000	-3,00	173,325	172,123	1,202		8,000	172,243	3,00	8,500	172,258	8,500	173,410		1,152	
5	0,500	173,368	1,146	0,500	172,222	0,000	-3,00	173,388	172,294	1,094		3,810	172,352	3,00	4,310	172,367	4,310	173,409		1,042	
6	0,500	173,439	1,121	0,500	172,318	0,000	-3,00	173,463	172,390	1,073		3,810	172,447	3,00	4,310	172,462	4,310	173,488		1,026	
7	0,500	173,473	1,069	0,500	172,404	0,000	-3,00	173,478	172,476	1,002		3,810	172,533	3,00	4,310	172,548	4,310	173,482		0,934	
8	0,500	173,673	1,314	0,500	172,359	0,000	-3,00	173,652	172,494	1,158		8,000	172,614	3,00	8,500	172,629	8,500	173,704		1,075	
9	0,500	173,721	1,286	0,500	172,435	0,000	-3,00	173,795	172,570	1,225		8,000	172,690	3,00	8,500	172,705	8,500	173,900		1,195	
10	0,500	173,810	1,305	0,500	172,505	0,000	-3,00	173,866	172,640	1,226		8,000	172,760	3,00	8,500	172,775	8,500	173,992		1,217	
11	0,500	173,862	1,290	0,500	172,572	0,000	-3,00	173,944	172,707	1,237		8,000	172,827	3,00	8,500	172,842	8,500	174,019		1,177	
11+2,177	0,500	173,874	1,272	0,500	172,602	0,000	-3,00	173,957	172,737	1,220		8,000	172,857	3,00	8,500	172,872	8,500	174,040		1,168	
12	0,500	173,887	1,247	0,500	172,640	0,000	-3,00	173,971	172,775	1,196		8,000	172,895	3,00	8,500	172,910	8,500	174,072		1,162	
12+0,384	0,500	173,889	1,244	0,500	172,645	0,000	-3,00	173,972	172,780	1,192		8,000	172,900	3,00	8,500	172,915	8,500	174,077		1,162	

Nota de Serviço de Terraplenagem: INTERSEÇÃO 1 RAMO 3

Lado Esquerdo										Eixo										Lado Direito									
Offset					Bordo					Cota					Bordo					Lateral					Offset				
Estaca	Distância	Cota	Altura	Lateral	Distância	Cota	%	Terreno	Projeto	Vermelha	Distância	Cota	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura									
0	1,800	170,182	1,234	1,800	168,948	0,000	169,002	-3,00	170,231	169,182	1,049	12,000	169,362	3,00	13,800	169,416	13,800	170,334	0,918										
1	1,800	170,307	1,260	1,800	169,047	0,000	169,101	-3,00	170,347	169,281	1,066	12,000	169,461	3,00	13,800	169,515	13,800	170,426	0,911										
2	1,800	170,433	1,289	1,800	169,144	0,000	169,198	-3,00	170,482	169,378	1,104	12,000	169,558	3,00	13,800	169,612	13,800	170,504	0,892										
3	1,800	170,538	1,297	1,800	169,241	0,000	169,295	-3,00	170,567	169,475	1,092	12,000	169,655	3,00	13,800	169,709	13,800	170,577	0,868										
4	1,800	170,643	1,307	1,800	169,336	0,000	169,390	-3,00	170,684	169,570	1,114	12,000	169,750	3,00	13,800	169,804	13,800	170,690	0,886										
5	1,800	170,751	1,321	1,800	169,430	0,000	169,484	-3,00	170,800	169,664	1,136	12,000	169,844	3,00	13,800	169,898	13,800	170,852	0,954										
6	1,800	170,896	1,373	1,800	169,523	0,000	169,577	-3,00	170,984	169,757	1,227	12,000	169,937	3,00	13,800	169,991	13,800	171,036	1,045										
7	1,800	171,071	1,456	1,800	169,615	0,000	169,669	-3,00	171,107	169,849	1,258	12,000	170,029	3,00	13,800	170,083	13,800	171,192	1,109										
7+4,979	1,800	171,197	1,492	1,800	169,705	0,000	169,759	-3,00	171,207	169,939	1,268	12,000	170,119	3,00	13,800	170,173	13,800	171,340	1,167										
8	1,800	171,198	1,493	1,800	169,705	0,000	169,759	-3,00	171,207	169,939	1,268	12,000	170,119	3,00	13,800	170,173	13,800	171,341	1,168										
9	1,800	171,263	1,468	1,800	169,795	0,000	169,849	-3,00	171,312	170,029	1,283	12,000	170,209	3,00	13,800	170,263	13,800	171,379	1,116										
10	1,800	171,384	1,501	1,800	169,883	0,000	169,937	-3,00	171,403	170,117	1,286	12,000	170,297	3,00	13,800	170,351	13,800	171,562	1,211										
11	1,800	171,551	1,581	1,800	169,970	0,000	170,024	-3,00	171,502	170,204	1,298	12,000	170,384	3,00	13,800	170,438	13,800	171,625	1,187										
12	1,800	171,712	1,656	1,800	170,056	0,000	170,110	-3,00	171,587	170,290	1,297	12,000	170,470	3,00	13,800	170,524	13,800	171,698	1,174										
13	1,800	171,870	1,729	1,800	170,141	0,000	170,195	-3,00	171,664	170,375	1,289	12,000	170,555	3,00	13,800	170,609	13,800	171,856	1,247										
14	1,800	172,046	1,821	1,800	170,225	0,000	170,279	-3,00	171,812	170,459	1,353	12,000	170,639	3,00	13,800	170,693	13,800	171,913	1,220										
15	1,800	172,043	1,735	1,800	170,308	0,000	170,362	-3,00	172,051	170,542	1,509	12,000	170,722	3,00	13,800	170,776	13,800	172,000	1,224										
16	1,800	172,011	1,622	1,800	170,389	0,000	170,443	-3,00	172,046	170,623	1,423	12,000	170,803	3,00	13,800	170,857	13,800	172,055	1,198										
17	1,800	171,977	1,507	1,800	170,470	0,000	170,524	-3,00	172,042	170,704	1,338	12,000	170,884	3,00	13,800	170,938	13,800	172,091	1,153										
18	1,800	172,083	1,532	1,800	170,551	0,000	170,605	-3,00	172,082	170,785	1,297	12,000	170,965	3,00	13,800	171,019	13,800	172,213	1,194										
19	1,800	172,400	1,768	1,800	170,632	0,000	170,686	-3,00	172,224	170,866	1,358	12,000	171,046	3,00	13,800	171,100	13,800	172,577	1,477										
20	1,800	172,570	1,857	1,800	170,713	0,000	170,767	-3,00	172,374	170,947	1,427	12,000	171,127	3,00	13,800	171,181	13,800	172,635	1,454										
21	1,800	172,755	1,966	1,800	170,789	0,000	170,843	-3,00	172,441	171,023	1,418	12,000	171,203	3,00	13,800	171,257	13,800	172,722	1,465										
22	1,800	172,730	1,873	1,800	170,857	0,000	170,911	-3,00	172,515	171,091	1,424	12,000	171,271	3,00	13,800	171,325	13,800	172,598	1,273										
23	1,800	172,414	1,498	1,800	170,916	0,000	170,970	-3,00	172,475	171,150	1,325	12,000	171,330	3,00	13,800	171,384	13,800	172,303	0,919										
24	1,800	172,461	1,494	1,800	170,967	0,000	171,021	-3,00	172,440	171,201	1,239	12,000	171,381	3,00	13,800	171,435	13,800	172,592	1,157										
25	1,800	172,525	1,516	1,800	171,009	0,000	171,063	-3,00	172,453	171,243	1,210	12,000	171,423	3,00	13,800	171,477	13,800	172,831	1,354										
26	1,800	172,599	1,557	1,800	171,042	0,000	171,096	-3,00	172,528	171,276	1,252	12,000	171,456	3,00	13,800	171,510	13,800	172,990	1,480										
26+0,340	1,800	172,604	1,560	1,800	171,044	0,000	171,098	-3,00	172,534	171,278	1,256	12,000	171,458	3,00	13,800	171,512	13,800	173,001	1,489										
26+0,346	1,800	172,604	1,560	1,800	171,044	0,000	171,098	-3,00	172,534	171,278	1,256	12,000	171,458	3,00	13,800	171,512	13,800	173,001	1,489										
27	1,800	172,741	1,674	1,800	171,067	0,000	171,121	-3,00	172,665	171,301	1,364	12,000	171,481	3,00	13,800	171,535	13,800	172,667	1,132										
28	1,800	172,822	1,739	1,800	171,083	0,000	171,137	-3,00	172,649	171,317	1,332	12,000	171,497	3,00	13,800	171,551	13,800	172,796	1,245										

Lado Esquerdo										Eixo					Lado Direito														
Offset					Bordo					Cota					Bordo					Lateral					Offset				
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Cota	Projeto	Vermelha	Distância	Cota	%	Distância	Cota	Distância	Cota	Distância	Cota	Altura							
28+0,568	1,800	172,820	1,736	1,800	171,084	0,000	171,138	-3,00	172,656	171,318	1,338	12,000	171,498	3,00	13,800	171,552	13,800	172,809	1,257										
28+4,765	1,800	172,828	1,734	1,800	171,094	0,000	171,148	-3,00	172,681	171,328	1,353	12,000	171,508	3,00	13,800	171,562	13,800	172,838	1,276										

	Lado Esquerdo								Eixo				Lado Direito									
	Offset			Lateral			Bordo		Cota		Cota		Bordo		Lateral			Offset				
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Projeto	Vermelha	Distância	Cota	%	Terreno	Projeto	Cota	Distância	Cota	Distância	Cota	Altura
0	5,750	170,200	1,269	5,750	168,931	5,250	168,946	-3,00	170,229	169,103	1,126	5,250	168,946	-3,00	170,229	169,103	1,126	5,750	168,931	5,750	170,254	1,323
1	5,750	170,693	1,280	5,750	169,413	5,250	169,428	-3,00	170,680	169,585	1,095	5,250	169,428	-3,00	170,680	169,585	1,095	5,750	169,413	5,750	170,666	1,253
2	5,750	171,225	1,324	5,750	169,901	5,250	169,916	-3,00	171,284	170,073	1,211	5,250	169,916	-3,00	171,284	170,073	1,211	5,750	169,901	5,750	171,360	1,459
3	5,750	171,620	1,221	5,750	170,399	5,250	170,414	-3,00	171,681	170,572	1,109	5,250	170,414	-3,00	171,681	170,572	1,109	5,750	170,399	5,750	171,857	1,458
4	5,750	172,028	1,119	5,750	170,909	5,250	170,924	-3,00	172,158	171,081	1,077	5,250	170,924	-3,00	172,158	171,081	1,077	5,750	170,909	5,750	172,239	1,330
5	5,750	172,484	1,055	5,750	171,429	5,250	171,444	-3,00	172,516	171,602	0,914	5,250	171,444	-3,00	172,516	171,602	0,914	5,750	171,429	5,750	172,627	1,198
6	5,750	173,118	1,188	5,750	171,930	5,250	171,945	-3,00	173,129	172,102	1,027	5,250	171,945	-3,00	173,129	172,102	1,027	5,750	171,930	5,750	173,142	1,212
7	5,750	173,575	1,195	5,750	172,380	5,250	172,395	-3,00	173,603	172,553	1,050	5,250	172,395	-3,00	173,603	172,553	1,050	5,750	172,380	5,750	173,576	1,196
8	5,750	174,138	1,358	5,750	172,780	5,250	172,795	-3,00	174,092	172,953	1,139	5,250	172,795	-3,00	174,092	172,953	1,139	5,750	172,780	5,750	174,045	1,265
9	5,750	174,279	1,149	5,750	173,130	5,250	173,145	-3,00	174,228	173,303	0,925	5,250	173,145	-3,00	174,228	173,303	0,925	5,750	173,130	5,750	174,138	1,008
10	5,750	174,727	1,272	5,750	173,455	5,250	173,470	-3,00	174,610	173,627	0,983	5,250	173,470	-3,00	174,610	173,627	0,983	5,750	173,455	5,750	174,465	1,010
10+14,02	5,750	174,858	1,175	5,750	173,683	5,250	173,698	-3,00	174,905	173,855	1,050	5,250	173,698	-3,00	174,905	173,855	1,050	5,750	173,683	5,750	174,823	1,140

Nota de Serviço de Terraplenagem: INTERSEÇÃO 1 ROTULA

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Cota	Projeto	Cota	Vermelha	Distância	Cota	Distância	Cota	Distância	Cota
0	0,500	172,589	1,032	0,500	171,557	0,000	171,542	3,00	172,597	171,362	1,235	12,000	171,182	-3,00	12,500	171,167	12,500	172,770	1,603
0+0,089	0,500	172,594	1,037	0,500	171,557	0,000	171,542	3,00	172,597	171,362	1,235	12,000	171,182	-3,00	12,500	171,167	12,500	172,770	1,603
1	0,500	172,626	1,043	0,500	171,583	0,000	171,568	3,00	172,429	171,388	1,041	12,000	171,208	-3,00	12,500	171,193	12,500	172,554	1,361
2	0,500	172,681	1,065	0,500	171,616	0,000	171,601	3,00	172,384	171,421	0,963	12,000	171,241	-3,00	12,500	171,226	12,500	172,139	0,913
3	0,500	172,796	1,141	0,500	171,655	0,000	171,640	3,00	172,611	171,460	1,151	12,000	171,280	-3,00	12,500	171,265	12,500	172,150	0,885
4	0,500	172,786	1,086	0,500	171,700	0,000	171,685	3,00	172,666	171,573	1,093	7,500	171,460	-3,00	8,000	171,445	8,000	172,573	1,128
5	0,500	172,849	1,097	0,500	171,752	0,000	171,737	3,00	172,774	171,624	1,150	7,500	171,512	-3,00	8,000	171,497	8,000	172,596	1,099
6	0,500	172,950	1,140	0,500	171,810	0,000	171,795	3,00	172,856	171,682	1,174	7,500	171,570	-3,00	8,000	171,555	8,000	172,813	1,258
7	0,500	173,057	1,183	0,500	171,874	0,000	171,859	3,00	173,120	171,747	1,373	7,500	171,634	-3,00	8,000	171,619	8,000	173,167	1,548
7+1,268	0,500	173,091	1,199	0,500	171,892	0,000	171,877	3,00	173,145	171,764	1,381	7,500	171,652	-3,00	8,000	171,637	8,000	173,155	1,518
8	0,500	173,139	1,194	0,500	171,945	0,000	171,930	3,00	173,120	171,818	1,302	7,500	171,705	-3,00	8,000	171,690	8,000	173,158	1,468
9	0,500	173,127	1,096	0,500	172,031	0,000	172,016	3,00	173,124	171,904	1,220	7,500	171,791	-3,00	8,000	171,776	8,000	173,248	1,472
10	0,500	173,256	1,114	0,500	172,142	0,000	172,127	3,00	173,343	172,014	1,329	7,500	171,902	-3,00	8,000	171,887	8,000	173,505	1,618
11	0,500	173,540	1,264	0,500	172,276	0,000	172,261	3,00	173,589	172,149	1,440	7,500	172,036	-3,00	8,000	172,021	8,000	173,586	1,565
12	0,500	173,605	1,170	0,500	172,435	0,000	172,420	3,00	173,578	172,308	1,270	7,500	172,195	-3,00	8,000	172,180	8,000	173,568	1,388
12+0,005	0,500	173,605	1,170	0,500	172,435	0,000	172,420	3,00	173,578	172,308	1,270	7,500	172,195	-3,00	8,000	172,180	8,000	173,568	1,388
13	0,500	173,632	1,014	0,500	172,618	0,000	172,603	3,00	173,615	172,491	1,124	7,500	172,378	-3,00	8,000	172,363	8,000	173,537	1,174
14	0,500	173,875	1,049	0,500	172,826	0,000	172,811	3,00	173,863	172,631	1,232	12,000	172,451	-3,00	12,500	172,436	12,500	173,982	1,546
15	0,500	174,072	1,082	0,500	172,990	0,000	172,975	3,00	174,119	172,795	1,324	12,000	172,615	-3,00	12,500	172,600	12,500	174,226	1,626
15+2,307	0,500	174,169	1,141	0,500	173,028	0,000	173,013	3,00	174,276	172,698	1,578	21,000	172,383	-3,00	21,500	172,368	21,500	174,223	1,855
16	0,500	174,260	1,217	0,500	173,043	0,000	173,028	3,00	174,324	172,713	1,611	21,000	172,398	-3,00	21,500	172,383	21,500	174,284	1,901
17	0,500	174,140	1,156	0,500	172,984	0,000	172,969	3,00	174,382	172,654	1,728	21,000	172,339	-3,00	21,500	172,324	21,500	174,735	2,411
18	0,500	173,775	0,960	0,500	172,815	0,000	172,800	3,00	174,006	172,485	1,521	21,000	172,170	-3,00	21,500	172,155	21,500	174,235	2,080
19	0,500	173,668	1,059	0,500	172,609	0,000	172,594	3,00	173,575	172,279	1,296	21,000	171,964	-3,00	21,500	171,949	21,500	173,825	1,876
19+2,553	0,500	173,554	1,035	0,500	172,519	0,000	172,504	3,00	173,486	172,189	1,297	21,000	171,874	-3,00	21,500	171,859	21,500	173,747	1,888
20	0,500	173,448	1,006	0,500	172,442	0,000	172,427	3,00	173,425	172,247	1,178	12,000	172,067	-3,00	12,500	172,052	12,500	173,456	1,404
20+4,616	0,500	173,418	1,097	0,500	172,321	0,000	172,306	3,00	173,436	172,126	1,310	12,000	171,946	-3,00	12,500	171,931	12,500	173,377	1,446
21	0,500	173,424	1,112	0,500	172,312	0,000	172,297	3,00	173,431	172,117	1,314	12,000	171,937	-3,00	12,500	171,922	12,500	173,371	1,449
22	0,500	173,431	1,210	0,500	172,221	0,000	172,206	3,00	173,372	172,026	1,346	12,000	171,846	-3,00	12,500	171,831	12,500	173,298	1,467
22+1,769	0,500	173,378	1,182	0,500	172,196	0,000	172,181	3,00	173,343	172,001	1,342	12,000	171,821	-3,00	12,500	171,806	12,500	173,268	1,462
23	0,500	173,313	1,164	0,500	172,149	0,000	172,134	3,00	173,248	171,954	1,294	12,000	171,774	-3,00	12,500	171,759	12,500	173,135	1,376
24	0,500	173,459	1,386	0,500	172,073	0,000	172,058	3,00	173,137	171,878	1,259	12,000	171,698	-3,00	12,500	171,683	12,500	172,817	1,134

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Distância		Cota		Altura	Distância		Cota		%	Cota		Terreno	Projeto	Vermelha	Distância		Cota		%
Distância		Cota		Altura	Distância		Cota		%	Distância		Cota		Offset	Distância		Cota		Offset
Estaca	25	0,500	173,158	1,168	0,500	171,990	0,000	171,975	3,00	172,931	171,795	1,136	12,000	171,615	-3,00	12,500	171,600	12,500	172,673
	26	0,500	172,798	0,900	0,500	171,898	0,000	171,883	3,00	172,632	171,703	0,929	12,000	171,523	-3,00	12,500	171,508	12,500	172,524
	27	0,500	172,524	0,724	0,500	171,800	0,000	171,785	3,00	172,418	171,605	0,813	12,000	171,425	-3,00	12,500	171,410	12,500	172,477
	28	0,500	172,348	0,651	0,500	171,697	0,000	171,682	3,00	172,412	171,502	0,910	12,000	171,322	-3,00	12,500	171,307	12,500	172,388
	29	0,500	172,469	0,875	0,500	171,594	0,000	171,579	3,00	172,550	171,399	1,151	12,000	171,219	-3,00	12,500	171,204	12,500	172,692
	29+1,813	0,500	172,589	1,032	0,500	171,557	0,000	171,542	3,00	172,597	171,362	1,235	12,000	171,182	-3,00	12,500	171,167	12,500	172,770

NOTA DE SERVIÇO DA TERRAPLENAGEM INTERSEÇÃO 2

Lado Esquerdo										Eixo										Lado Direito									
Offset					Bordo					Cota					Bordo					Lateral					Offset				
Estaca	Distância	Cota	Altura		Distância	Cota		%		Terreno	Projeto	Vermelha	Distância	Cota		%		Distância	Cota	Distância	Cota		Distância	Cota	Altura				
0	7,050	152,289	1,292		7,050	150,997	5,250	151,051	-3,00	152,293	151,130	1,163	0,000	151,209	3,00	1,800	151,263	8,402	146,862	-4,401									
0+0,044	7,050	152,289	1,292		7,050	150,997	5,250	151,051	-3,00	152,293	151,130	1,163	0,000	151,208	3,00	1,800	151,262	8,403	146,860	-4,402									
1	7,050	152,294	1,310		7,050	150,984	5,250	151,038	-3,00	152,278	151,116	1,162	0,000	151,195	3,00	1,800	151,249	6,798	147,917	-3,332									
2	7,050	152,306	1,336		7,050	150,970	5,250	151,024	-3,00	152,257	151,103	1,154	0,000	151,182	3,00	1,800	151,236	3,205	150,299	-0,937									
3	9,800	152,220	1,263		9,800	150,957	8,000	151,011	-3,00	152,255	151,131	1,124	0,000	151,251	3,00	1,800	151,305	4,217	149,694	-1,611									
4	9,800	152,252	1,309		9,800	150,943	8,000	150,997	-3,00	152,207	151,117	1,090	0,000	151,237	3,00	1,800	151,291	5,214	149,015	-2,276									
5	9,800	152,301	1,371		9,800	150,930	8,000	150,984	-3,00	152,123	151,104	1,019	0,000	151,224	3,00	1,800	151,278	7,020	147,798	-3,480									
6	9,800	152,286	1,370		9,800	150,916	8,000	150,970	-3,00	152,011	151,090	0,921	0,000	151,210	3,00	1,800	151,264	6,521	148,117	-3,147									
7	9,800	152,223	1,320		9,800	150,903	8,000	150,957	-3,00	151,772	151,077	0,695	0,000	151,197	3,00	1,800	151,251	6,592	148,056	-3,195									
8	9,800	152,127	1,238		9,800	150,889	8,000	150,943	-3,00	151,652	151,063	0,589	0,000	151,183	3,00	1,800	151,237	1,931	151,150	-0,087									
9	9,800	151,992	1,116		9,800	150,876	8,000	150,930	-3,00	151,658	151,050	0,608	0,000	151,170	3,00	1,800	151,224	1,800	151,258	0,034									
10	9,800	151,846	0,983		9,800	150,863	8,000	150,917	-3,00	151,565	151,037	0,528	0,000	151,157	3,00	1,800	151,211	2,148	150,979	-0,232									
11	9,800	151,616	0,767		9,800	150,849	8,000	150,903	-3,00	151,384	151,023	0,361	0,000	151,143	3,00	1,800	151,197	2,686	150,606	-0,591									
12	9,800	151,436	0,600		9,800	150,836	8,000	150,890	-3,00	151,238	151,010	0,228	0,000	151,130	3,00	1,800	151,184	3,016	150,374	-0,810									
12+4,315	9,800	151,022	0,198		9,800	150,824	8,000	150,878	-3,00	151,276	150,998	0,278	0,000	151,118	3,00	1,800	151,172	2,796	150,508	-0,664									

Nota de Serviço de Terraplenagem: INTERSEÇÃO 2 RAMO 2

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Lateral		Distância		Altura	Distância		Cota	Terreno		Cota	Projeto	Cota	Vermelha	Cota	Distância		Cota	Distância	
Estaca	Distância	Cota	Altura	Offset	Distância	Cota	Altura	Distância	Cota	Terreno	Projeto	Cota	Vermelha	Cota	Distância	Cota	Distância	Cota	Altura
0	9,800	151,897	0,965		9,800	150,932	8,000	150,878	3,00	151,796	150,758	1,038	0,000	150,638	-3,00	1,800	150,584	1,800	151,597
1	9,800	151,900	0,955		9,800	150,945	8,000	150,891	3,00	151,792	150,771	1,021	0,000	150,651	-3,00	1,800	150,597	1,800	151,573
2	9,800	151,866	0,909		9,800	150,957	8,000	150,903	3,00	151,796	150,783	1,013	0,000	150,663	-3,00	1,800	150,609	1,800	151,505
3	9,800	151,813	0,843		9,800	150,970	8,000	150,916	3,00	151,584	150,796	0,788	0,000	150,676	-3,00	1,800	150,622	1,800	151,426
4	9,800	151,739	0,756		9,800	150,983	8,000	150,929	3,00	151,465	150,809	0,656	0,000	150,689	-3,00	1,800	150,635	1,800	151,281
5	9,800	151,673	0,678		9,800	150,995	8,000	150,941	3,00	151,404	150,821	0,583	0,000	150,701	-3,00	1,800	150,647	1,800	151,194
6	9,800	151,894	0,886		9,800	151,008	8,000	150,954	3,00	151,346	150,834	0,512	0,000	150,714	-3,00	1,800	150,660	1,800	151,147
7	9,800	152,108	1,087		9,800	151,021	8,000	150,967	3,00	151,401	150,847	0,554	0,000	150,727	-3,00	1,800	150,673	1,800	151,104
8	9,800	152,349	1,315		9,800	151,034	8,000	150,980	3,00	151,590	150,860	0,730	0,000	150,740	-3,00	1,800	150,686	1,800	151,013
9	9,800	152,638	1,592		9,800	151,046	8,000	150,992	3,00	152,131	150,872	1,259	0,000	150,752	-3,00	1,800	150,698	1,800	151,476
9+0,865	9,800	152,656	0,525		9,800	152,131	8,000	152,077	3,00	152,207	151,957	0,250	0,000	151,837	-3,00	1,800	151,783	2,180	151,530
10	9,800	152,736	1,660		9,800	151,076	8,000	151,022	3,00	152,497	150,902	1,595	0,000	150,782	-3,00	1,800	150,728	1,800	151,882
11	9,800	152,842	1,703		9,800	151,139	8,000	151,085	3,00	152,840	150,965	1,875	0,000	150,845	-3,00	1,800	150,791	1,800	152,310
12	9,800	152,947	1,711		9,800	151,236	8,000	151,182	3,00	153,014	151,062	1,952	0,000	150,942	-3,00	1,800	150,888	1,800	152,619
13	9,800	153,070	1,704		9,800	151,366	8,000	151,312	3,00	153,113	151,192	1,921	0,000	151,072	-3,00	1,800	151,018	1,800	152,706
14	9,800	153,192	1,662		9,800	151,530	8,000	151,476	3,00	153,213	151,356	1,857	0,000	151,236	-3,00	1,800	151,182	1,800	152,791
15	9,800	153,299	1,572		9,800	151,727	8,000	151,673	3,00	153,316	151,553	1,763	0,000	151,433	-3,00	1,800	151,379	1,800	152,964
16	9,800	153,412	1,453		9,800	151,959	8,000	151,905	3,00	153,428	151,785	1,643	0,000	151,665	-3,00	1,800	151,611	1,800	153,170
17	7,050	153,618	1,395		7,050	152,223	5,250	152,169	3,00	153,627	152,091	1,536	0,000	152,012	-3,00	1,800	151,958	1,800	153,558
17+0,865	7,050	153,652	0,330		7,050	153,322	5,250	153,268	3,00	153,654	153,190	0,464	0,000	153,111	-3,00	1,800	153,057	1,800	153,625
18	7,050	153,811	1,306		7,050	152,505	5,250	152,451	3,00	153,798	152,372	1,426	0,000	152,293	-3,00	1,800	152,239	1,800	153,925
19	7,050	154,002	1,215		7,050	152,787	5,250	152,733	3,00	153,972	152,654	1,318	0,000	152,575	-3,00	1,800	152,521	1,800	154,088
19+1,623	7,050	154,065	1,187		7,050	152,878	5,250	152,824	3,00	154,030	152,745	1,285	0,000	152,667	-3,00	1,800	152,613	1,800	154,131

Nota de Serviço de Terraplenagem: INTERSEÇÃO 2 RAMO 3

Lado Esquerdo										Eixo										Lado Direito									
Estaca	Offset			Lateral			Bordo			%	Cota			Vermelha	Bordo			%	Lateral			Offset							
	Distância	Cota	Altura	Distância	Cota	Distância	Cota	Terreno	Projeto		Cota	Distância	Cota		Distância	Cota	Distância		Cota	Distância	Cota	Distância	Cota	Altura					
0	2,624	150,383	-0,549	1,800	150,932	0,000	150,878	3,00	149,992	150,758	-0,766	8,000	150,638	-3,00	9,800	150,584	9,800	151,410	0,826										
1	2,736	150,330	-0,624	1,800	150,954	0,000	150,900	3,00	150,138	150,780	-0,642	8,000	150,660	-3,00	9,800	150,606	9,800	151,088	0,482										
2	2,657	150,405	-0,571	1,800	150,976	0,000	150,922	3,00	150,737	150,802	-0,065	8,000	150,682	-3,00	9,800	150,628	9,800	151,554	0,926										
3	2,651	150,431	-0,567	1,800	150,998	0,000	150,944	3,00	151,321	150,824	0,497	8,000	150,704	-3,00	9,800	150,650	9,800	152,097	1,447										
4	2,515	150,543	-0,477	1,800	151,020	0,000	150,966	3,00	150,694	150,846	-0,152	8,000	150,726	-3,00	9,800	150,672	9,800	152,255	1,583										
5	2,450	150,609	-0,433	1,800	151,042	0,000	150,988	3,00	151,210	150,868	0,342	8,000	150,748	-3,00	9,800	150,694	9,800	152,378	1,684										
6	2,384	150,675	-0,389	1,800	151,064	0,000	151,010	3,00	151,998	150,890	1,108	8,000	150,770	-3,00	9,800	150,716	9,800	152,465	1,749										
7	2,087	150,893	-0,192	1,800	151,085	0,000	151,031	3,00	152,355	150,911	1,444	8,000	150,791	-3,00	9,800	150,737	9,800	152,540	1,803										
8	1,800	151,314	0,207	1,800	151,107	0,000	151,053	3,00	152,479	150,933	1,546	8,000	150,813	-3,00	9,800	150,759	9,800	152,589	1,830										
9	1,800	152,268	1,139	1,800	151,129	0,000	151,075	3,00	152,604	150,955	1,649	8,000	150,835	-3,00	9,800	150,781	9,800	152,651	1,870										
10	1,800	152,468	1,301	1,800	151,167	0,000	151,113	3,00	152,712	150,993	1,719	8,000	150,873	-3,00	9,800	150,819	9,800	152,735	1,916										
11	1,800	152,644	1,406	1,800	151,238	0,000	151,184	3,00	152,820	151,064	1,756	8,000	150,944	-3,00	9,800	150,890	9,800	152,853	1,963										
12	1,800	152,791	1,450	1,800	151,341	0,000	151,287	3,00	152,943	151,167	1,776	8,000	151,047	-3,00	9,800	150,993	9,800	152,971	1,978										
13	1,800	152,903	1,426	1,800	151,477	0,000	151,423	3,00	153,080	151,303	1,777	8,000	151,183	-3,00	9,800	151,129	9,800	153,088	1,959										
14	1,800	152,994	1,349	1,800	151,645	0,000	151,591	3,00	153,217	151,471	1,746	8,000	151,351	-3,00	9,800	151,297	9,800	153,205	1,908										
15	1,800	153,091	1,245	1,800	151,846	0,000	151,792	3,00	153,336	151,672	1,664	8,000	151,552	-3,00	9,800	151,498	9,800	153,346	1,848										
16	1,800	153,172	1,093	1,800	152,079	0,000	152,025	3,00	153,454	151,905	1,549	8,000	151,785	-3,00	9,800	151,731	9,800	153,484	1,753										
17	1,800	153,451	1,107	1,800	152,344	0,000	152,290	3,00	153,634	152,211	1,423	5,250	152,133	-3,00	7,050	152,079	7,050	153,588	1,509										
18	1,800	153,628	1,002	1,800	152,626	0,000	152,572	3,00	153,825	152,493	1,332	5,250	152,414	-3,00	7,050	152,360	7,050	153,774	1,414										
19	1,800	153,785	0,877	1,800	152,908	0,000	152,854	3,00	154,013	152,775	1,238	5,250	152,696	-3,00	7,050	152,642	7,050	153,958	1,316										
19+1,285	1,800	153,823	0,843	1,800	152,980	0,000	152,926	3,00	154,060	152,847	1,213	5,250	152,769	-3,00	7,050	152,715	7,050	154,004	1,289										
19+1,426	1,800	153,827	0,839	1,800	152,988	0,000	152,934	3,00	154,065	152,855	1,210	5,250	152,777	-3,00	7,050	152,723	7,050	154,009	1,286										

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Distância		Cota		Altura	Distância		Cota		%	Terreno		Projeto		Vermelha	Distância		Cota		%
Lateral		Distância		Cota	Lateral		Distância		Cota	Lateral		Distância		Cota	Lateral		Distância		Cota
Offset		Cota		Altura	Distância		Cota		%	Distância		Cota		Offset	Distância		Cota		Offset
Estaca	Distância	1,800	146,499	-4,552	1,800	151,051	0,000	151,105	-3,00	152,265	151,184	1,081	5,250	151,263	3,00	7,050	151,317	7,050	152,308
0																			0,991
1	1,800	151,678	0,645		1,800	151,033	0,000	151,087	-3,00	152,263	151,166	1,097	5,250	151,245	3,00	7,050	151,299	7,050	152,296
2	1,800	151,610	0,595		1,800	151,015	0,000	151,069	-3,00	152,241	151,148	1,093	5,250	151,227	3,00	7,050	151,281	7,050	152,290
3	1,800	151,326	0,329		1,800	150,997	0,000	151,051	-3,00	152,263	151,171	1,092	8,000	151,291	3,00	9,800	151,345	9,800	152,181
4	1,800	151,025	0,046		1,800	150,979	0,000	151,033	-3,00	152,220	151,153	1,067	8,000	151,273	3,00	9,800	151,327	9,800	152,242
5	5,442	148,533	-2,428		1,800	150,961	0,000	151,015	-3,00	152,181	151,135	1,046	8,000	151,255	3,00	9,800	151,309	9,800	152,260
6	2,942	150,182	-0,761		1,800	150,943	0,000	150,997	-3,00	152,145	151,117	1,028	8,000	151,237	3,00	9,800	151,291	9,800	152,294
7	1,800	151,094	0,169		1,800	150,925	0,000	150,979	-3,00	151,696	151,099	0,597	8,000	151,219	3,00	9,800	151,273	9,800	152,281
8	1,800	151,584	0,677		1,800	150,907	0,000	150,961	-3,00	152,025	151,081	0,944	8,000	151,201	3,00	9,800	151,255	9,800	152,228
9	1,800	151,644	0,755		1,800	150,889	0,000	150,943	-3,00	151,925	151,063	0,862	8,000	151,183	3,00	9,800	151,237	9,800	152,163
10	1,800	151,593	0,722		1,800	150,871	0,000	150,925	-3,00	151,838	151,045	0,793	8,000	151,165	3,00	9,800	151,219	9,800	152,107
11	1,800	151,532	0,678		1,800	150,854	0,000	150,908	-3,00	151,769	151,028	0,741	8,000	151,148	3,00	9,800	151,202	9,800	152,016
12	1,800	151,472	0,636		1,800	150,836	0,000	150,890	-3,00	151,599	151,010	0,589	8,000	151,130	3,00	9,800	151,184	9,800	151,900
12+3,226	1,800	151,578	0,754		1,800	150,824	0,000	150,878	-3,00	151,526	150,998	0,528	8,000	151,118	3,00	9,800	151,172	9,800	151,786

Nota de Serviço de Terraplenagem: INTERSEÇÃO 2 ROTULA

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
		Distância	Altura	Lateral	Distância	Cota	%			Cota	Terreno	Projeto	Cota	Vermelha	Distância	Cota	%		
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Distância	Cota	Terreno	Projeto	Cota	Vermelha	Distância	Cota	%	Distância	Cota
0	1,800	152,295	1,003	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,325	151,058	1,267	12,000	150,878	-3,00	13,800	150,824	13,800
1	1,800	152,332	1,040	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,304	151,058	1,246	12,000	150,878	-3,00	13,800	150,824	13,800
2	1,800	152,128	0,836	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,141	151,058	0,083	12,000	150,878	-3,00	13,800	150,824	13,800
3	1,800	151,843	0,551	1,800	151,292	0,000	151,238	3,00	151,238	0,000	149,985	151,058	-1,073	12,000	150,878	-3,00	13,800	150,824	14,584
4	1,800	151,792	0,500	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,249	151,058	0,191	12,000	150,878	-3,00	13,800	150,824	14,293
5	1,800	151,563	0,271	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,472	151,058	0,414	12,000	150,878	-3,00	13,800	150,824	13,800
6	1,800	151,632	0,340	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,540	151,058	0,482	12,000	150,878	-3,00	13,800	150,824	13,800
6+1,416	1,800	151,621	0,329	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,503	151,058	0,445	12,000	150,878	-3,00	13,800	150,824	13,800
7	1,800	151,582	0,290	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,454	151,058	0,396	12,000	150,878	-3,00	13,800	150,824	13,800
8	1,800	151,651	0,359	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,495	151,058	0,437	12,000	150,878	-3,00	13,800	150,824	13,800
9	1,800	151,892	0,600	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,533	151,058	0,475	12,000	150,878	-3,00	13,800	150,824	13,800
10	1,800	152,012	0,720	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,816	151,058	0,758	12,000	150,878	-3,00	13,800	150,824	13,800
11	1,800	152,190	0,898	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,079	151,058	1,021	12,000	150,878	-3,00	13,800	150,824	13,800
12	1,800	152,286	0,994	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,286	151,058	1,228	12,000	150,878	-3,00	13,800	150,824	13,800
12+2,832	1,800	152,207	0,915	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,212	151,058	1,154	12,000	150,878	-3,00	13,800	150,824	13,800
13	1,800	152,107	0,815	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,082	151,058	1,024	12,000	150,878	-3,00	13,800	150,824	13,800
14	1,800	151,790	0,498	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,671	151,058	0,613	12,000	150,878	-3,00	13,800	150,824	13,800
15	1,947	151,194	-0,098	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,422	151,058	0,364	12,000	150,878	-3,00	13,800	150,824	13,800
16	2,582	150,770	-0,522	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,243	151,058	0,185	12,000	150,878	-3,00	13,800	150,824	14,105
17	2,612	150,751	-0,541	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,281	151,058	0,223	12,000	150,878	-3,00	13,800	150,824	13,800
18	2,558	150,786	-0,506	1,800	151,292	0,000	151,238	3,00	151,238	0,000	150,821	151,058	-0,237	12,000	150,878	-3,00	13,800	150,824	14,433
18+4,248	2,392	150,898	-0,394	1,800	151,292	0,000	151,238	3,00	151,238	0,000	150,623	151,058	-0,435	12,000	150,878	-3,00	13,800	150,824	14,582
19	2,344	150,929	-0,363	1,800	151,292	0,000	151,238	3,00	151,238	0,000	150,651	151,058	-0,407	12,000	150,878	-3,00	13,800	150,824	14,565
20	1,875	151,242	-0,050	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,133	151,058	0,075	12,000	150,878	-3,00	13,800	150,824	13,800
21	1,800	151,601	0,309	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,684	151,058	0,626	12,000	150,878	-3,00	13,800	150,824	13,800
22	1,800	151,860	0,568	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,862	151,058	0,804	12,000	150,878	-3,00	13,800	150,824	13,800
23	1,800	151,878	0,586	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,899	151,058	0,841	12,000	150,878	-3,00	13,800	150,824	13,800
24	1,800	152,075	0,783	1,800	151,292	0,000	151,238	3,00	151,238	0,000	151,831	151,058	0,773	12,000	150,878	-3,00	13,800	150,824	13,800
25	1,800	152,282	0,990	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,306	151,058	1,248	12,000	150,878	-3,00	13,800	150,824	13,800
25+0,664	1,800	152,295	1,003	1,800	151,292	0,000	151,238	3,00	151,238	0,000	152,325	151,058	1,267	12,000	150,878	-3,00	13,800	150,824	13,800

Nota de Serviço de Terraplenagem: INTERSEÇÃO 3 RAMO 1

Lado Esquerdo										Lado Direito									
Offset					Eixo					Bordo					Bordo				
Lateral		Distância		Altura	Terreno		Projeto		Cota	Vermelha		Distância		Cota	Lateral		Distância		Altura
Estaca	Distância	Cota	Altura	Offset	%	Cota	Terreno	Projeto	Cota	%	Cota	Distância	Cota	Vermelha	%	Cota	Distância	Cota	Altura
0	1,800	172,638	1,130		-3,00	171,562	172,773	171,641	1,132	3,00	171,720	5,250	171,720	1,132	3,00	171,774	7,050	172,890	1,116
0+1,748	1,800	172,624	1,134		-3,00	171,544	172,759	171,623	1,136	3,00	171,702	5,250	171,702	1,136	3,00	171,756	7,050	172,874	1,118
1	1,800	172,593	1,137		-3,00	171,510	172,724	171,589	1,135	3,00	171,668	5,250	171,668	1,135	3,00	171,722	7,050	172,840	1,118
2	1,800	172,521	1,117		-3,00	171,458	172,651	171,537	1,114	3,00	171,616	5,250	171,616	1,114	3,00	171,670	7,050	172,787	1,117
3	1,800	172,439	1,087		-3,00	171,352	172,565	171,485	1,080	3,00	171,564	5,250	171,564	1,080	3,00	171,618	7,050	172,692	1,074
4	1,800	172,273	0,973		-3,00	171,300	172,464	171,433	1,031	3,00	171,512	5,250	171,512	1,031	3,00	171,566	7,050	172,585	1,019
4+4,061	1,800	172,245	0,987		-3,00	171,258	172,204	171,390	0,814	3,00	171,469	5,250	171,469	0,814	3,00	171,523	7,050	172,489	0,966
5	1,800	172,216	0,968		-3,00	171,248	172,190	171,381	0,809	3,00	171,459	5,250	171,459	0,809	3,00	171,513	7,050	172,455	0,942
6	1,800	172,159	1,019		-3,00	171,140	172,109	171,329	0,780	3,00	171,464	9,000	171,464	0,780	3,00	171,518	10,800	172,434	0,916
6+1,098	1,800	172,140	1,012		-3,00	171,128	172,094	171,317	0,777	3,00	171,452	9,000	171,452	0,777	3,00	171,506	10,800	172,407	0,901
7	1,800	172,076	0,988		-3,00	171,088	172,044	171,277	0,767	3,00	171,412	9,000	171,412	0,767	3,00	171,466	10,800	172,335	0,869
8	1,800	171,999	0,963		-3,00	171,036	171,983	171,225	0,758	3,00	171,360	9,000	171,360	0,758	3,00	171,414	10,800	172,252	0,838
9	1,800	171,971	0,988		-3,00	170,983	171,934	171,172	0,762	3,00	171,307	9,000	171,307	0,762	3,00	171,361	10,800	172,179	0,818
9+2,036	1,800	171,972	1,010		-3,00	170,962	171,936	171,151	0,785	3,00	171,286	9,000	171,286	0,785	3,00	171,340	10,800	172,170	0,830
10	1,800	171,973	1,042		-3,00	170,931	171,938	171,120	0,818	3,00	171,255	9,000	171,255	0,818	3,00	171,309	10,800	172,141	0,832
11	1,800	171,976	1,099		-3,00	170,877	171,941	171,066	0,875	3,00	171,201	9,000	171,201	0,875	3,00	171,255	10,800	172,066	0,811
12	1,800	171,978	1,159		-3,00	170,819	171,944	171,008	0,936	3,00	171,143	9,000	171,143	0,936	3,00	171,197	10,800	171,991	0,794
13	1,800	171,980	1,224		-3,00	170,756	171,947	170,945	1,002	3,00	171,080	9,000	171,080	1,002	3,00	171,134	10,800	171,912	0,778
14	1,800	171,947	1,257		-3,00	170,690	171,957	170,879	1,078	3,00	171,014	9,000	171,014	1,078	3,00	171,068	10,800	171,911	0,843
15	1,800	171,906	1,287		-3,00	170,619	171,890	170,808	1,082	3,00	170,943	9,000	170,943	1,082	3,00	170,997	10,800	171,792	0,795
16	1,800	171,733	1,189		-3,00	170,544	171,766	170,733	1,033	3,00	170,868	9,000	170,868	1,033	3,00	170,922	10,800	171,707	0,785
17	1,800	171,606	1,142		-3,00	170,464	171,800	170,653	1,147	3,00	170,788	9,000	170,788	1,147	3,00	170,842	10,800	171,549	0,707
17+2,882	1,800	171,640	1,223		-3,00	170,417	171,598	170,606	0,992	3,00	170,741	9,000	170,741	0,992	3,00	170,795	10,800	171,403	0,608
18	1,800	171,642	1,261		-3,00	170,381	171,504	170,570	0,934	3,00	170,705	9,000	170,705	0,934	3,00	170,759	10,800	171,359	0,600
19	1,800	171,574	1,277		-3,00	170,297	171,481	170,486	0,995	3,00	170,621	9,000	170,621	0,995	3,00	170,675	10,800	171,355	0,680
20	1,800	171,522	1,307		-3,00	170,215	171,336	170,404	0,932	3,00	170,539	9,000	170,539	0,932	3,00	170,593	10,800	171,338	0,745
21	1,800	171,479	1,286		-3,00	170,193	171,514	170,326	1,188	3,00	170,404	5,250	170,404	1,188	3,00	170,458	7,050	171,242	0,784
21+0,102	1,800	171,479	1,288		-3,00	170,191	171,513	170,324	1,189	3,00	170,403	5,250	170,403	1,189	3,00	170,457	7,050	171,241	0,784
22	1,800	171,449	1,332		-3,00	170,117	171,388	170,250	1,138	3,00	170,329	5,250	170,329	1,138	3,00	170,383	7,050	171,200	0,817
22+0,406	1,800	171,446	1,335		-3,00	170,111	171,365	170,244	1,121	3,00	170,323	5,250	170,323	1,121	3,00	170,377	7,050	171,199	0,822
23	1,800	171,389	1,346		-3,00	170,043	171,450	170,175	1,275	3,00	170,254	5,250	170,254	1,275	3,00	170,308	7,050	171,300	0,992
24	1,800	171,502	1,534		-3,00	170,022	171,485	170,101	1,384	3,00	170,180	5,250	170,180	1,384	3,00	170,234	7,050	171,385	1,151

Lado Esquerdo										Eixo										Lado Direito									
Offset					Bordo					Cota					Bordo					Lateral					Offset				
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%	Terreno	Cota	Projeto	Vermelha	Cota	Distância	Cota	Distância	Cota	%	Terreno	Cota	Projeto	Vermelha	Cota	Distância	Cota	Distância	Cota	Altura	
25	1,800	171,519	1,625	1,800	169,894	0,000	169,948	-3,00	171,230	170,026	170,026	1,204	170,105	5,250	170,105	3,00	7,050	170,159	7,050	171,105	171,105	171,105	7,050	171,105	7,050	171,105	0,946		
26	1,800	171,132	1,313	1,800	169,819	0,000	169,873	-3,00	171,023	169,952	169,952	1,071	170,031	5,250	170,031	3,00	7,050	170,085	7,050	171,036	171,036	171,036	7,050	171,036	7,050	171,036	0,951		
26+1,070	1,800	171,121	1,318	1,800	169,803	0,000	169,857	-3,00	171,036	169,936	169,936	1,100	170,015	5,250	170,015	3,00	7,050	170,069	7,050	171,029	171,029	171,029	7,050	171,029	7,050	171,029	0,960		
26+2,134	1,800	171,110	1,323	1,800	169,787	0,000	169,841	-3,00	171,048	169,920	169,920	1,128	169,999	5,250	169,999	3,00	7,050	170,053	7,050	171,014	171,014	171,014	7,050	171,014	7,050	171,014	0,961		

Lado Esquerdo										Eixo						Lado Direito					
Offset					Lateral			Bordo		Cota		Cota		Cota		Bordo		Lateral		Offset	
Estaca	Distância	Cota	Altura		Distância	Cota	%	Distância	Cota	Terreno	Projeto	Vermelha	Distância	Cota	%	Distância	Cota	Distância	Cota	Altura	
0	1,800	172,232	1,070		1,800	171,162	-3,00	0,000	171,216	-3,00	172,274	171,336	0,938	8,000	171,456	3,00	9,800	171,510	9,800	171,971	0,461
0+0,058	1,800	172,233	1,070		1,800	171,163	-3,00	0,000	171,217	-3,00	172,275	171,337	0,938	8,000	171,457	3,00	9,800	171,511	9,800	171,972	0,461
1	1,800	172,393	1,206		1,800	171,187	-3,00	0,000	171,241	-3,00	172,280	171,361	0,919	8,000	171,481	3,00	9,800	171,535	9,800	172,172	0,637
1+0,397	1,800	172,378	1,195		1,800	171,183	-3,00	0,000	171,237	-3,00	172,282	171,357	0,925	8,000	171,477	3,00	9,800	171,531	9,800	172,192	0,661
1+0,497	1,800	172,375	1,193		1,800	171,182	-3,00	0,000	171,236	-3,00	172,279	171,356	0,923	8,000	171,476	3,00	9,800	171,530	9,800	172,189	0,659
1+0,596	1,800	172,372	1,191		1,800	171,181	-3,00	0,000	171,235	-3,00	172,276	171,355	0,921	8,000	171,475	3,00	9,800	171,529	9,800	172,186	0,657
2	1,800	172,063	0,985		1,800	171,078	-3,00	0,000	171,132	-3,00	172,300	171,252	1,048	8,000	171,372	3,00	9,800	171,426	9,800	172,178	0,752
2+0,938	1,800	172,034	0,989		1,800	171,045	-3,00	0,000	171,099	-3,00	172,303	171,219	1,084	8,000	171,339	3,00	9,800	171,393	9,800	172,210	0,817
2+1,081	1,800	172,032	0,992		1,800	171,040	-3,00	0,000	171,094	-3,00	172,301	171,214	1,087	8,000	171,334	3,00	9,800	171,388	9,800	172,207	0,819

Nota de Serviço de Terraplenagem: INTERSEÇÃO 3 RAMO 3

Lado Esquerdo										Eixo										Lado Direito									
Offset					Bordo					Cota					Vermelha					Bordo					Lateral				
Estaca	Distância	Cota	Altura	Distância	Cota	Distância	Cota	%		Terreno	Projeto	Cota			Cota					Distância	Cota	Distância	Cota		Distância	Cota	Distância	Cota	Altura
0	1,800	170,893	1,100	1,800	169,793	0,000	169,847	-3,00		171,003	169,926	1,077			170,005	5,250	170,059	3,00		7,050	170,059	7,050	171,053		7,050	170,059	7,050	171,053	0,994
0+1,065	1,800	170,901	1,099	1,800	169,802	0,000	169,856	-3,00		171,018	169,935	1,083			170,013	5,250	170,067	3,00		7,050	170,067	7,050	171,056		7,050	170,067	7,050	171,056	0,989
1	1,800	171,115	1,281	1,800	169,834	0,000	169,888	-3,00		171,061	169,967	1,094			170,045	5,250	170,099	3,00		7,050	170,099	7,050	171,009		7,050	170,099	7,050	171,009	0,910
2	1,800	171,346	1,472	1,800	169,874	0,000	169,928	-3,00		171,189	170,007	1,182			170,086	5,250	170,140	3,00		7,050	170,140	7,050	171,448		7,050	170,140	7,050	171,448	1,308
3	1,800	171,378	1,463	1,800	169,915	0,000	169,969	-3,00		171,279	170,048	1,231			170,126	5,250	170,180	3,00		7,050	170,180	7,050	171,353		7,050	170,180	7,050	171,353	1,173
4	1,800	171,357	1,402	1,800	169,955	0,000	170,009	-3,00		171,259	170,088	1,171			170,167	5,250	170,221	3,00		7,050	170,221	7,050	171,288		7,050	170,221	7,050	171,288	1,067
4+1,729	1,800	171,348	1,378	1,800	169,970	0,000	170,024	-3,00		171,269	170,102	1,167			170,181	5,250	170,235	3,00		7,050	170,235	7,050	171,319		7,050	170,235	7,050	171,319	1,084
5	1,800	171,332	1,333	1,800	169,999	0,000	170,053	-3,00		171,287	170,131	1,156			170,210	5,250	170,264	3,00		7,050	170,264	7,050	171,248		7,050	170,264	7,050	171,248	0,984
5+2,032	1,800	171,323	1,361	1,800	169,962	0,000	170,016	-3,00		171,260	170,151	1,109			170,286	9,000	170,340	3,00		10,800	170,340	10,800	171,309		10,800	170,340	10,800	171,309	0,969
6	1,800	171,308	1,316	1,800	169,992	0,000	170,046	-3,00		171,292	170,181	1,111			170,316	9,000	170,370	3,00		10,800	170,370	10,800	171,297		10,800	170,370	10,800	171,297	0,927
7	1,800	171,330	1,283	1,800	170,047	0,000	170,101	-3,00		171,309	170,236	1,073			170,371	9,000	170,425	3,00		10,800	170,425	10,800	171,327		10,800	170,425	10,800	171,327	0,902
8	1,800	171,361	1,254	1,800	170,107	0,000	170,161	-3,00		171,326	170,296	1,030			170,431	9,000	170,485	3,00		10,800	170,485	10,800	171,331		10,800	170,485	10,800	171,331	0,846
8+4,252	1,800	171,382	1,218	1,800	170,164	0,000	170,218	-3,00		171,355	170,353	1,002			170,488	9,000	170,542	3,00		10,800	170,542	10,800	171,493		10,800	170,542	10,800	171,493	0,951
9	1,800	171,407	1,233	1,800	170,174	0,000	170,228	-3,00		171,360	170,363	0,997			170,498	9,000	170,552	3,00		10,800	170,552	10,800	171,506		10,800	170,552	10,800	171,506	0,954
10	1,800	171,585	1,339	1,800	170,246	0,000	170,300	-3,00		171,456	170,435	1,021			170,570	9,000	170,624	3,00		10,800	170,624	10,800	171,603		10,800	170,624	10,800	171,603	0,979
11	1,800	171,587	1,262	1,800	170,325	0,000	170,379	-3,00		171,570	170,514	1,056			170,649	9,000	170,703	3,00		10,800	170,703	10,800	171,699		10,800	170,703	10,800	171,699	0,996
12	1,800	171,623	1,214	1,800	170,409	0,000	170,463	-3,00		171,684	170,598	1,086			170,733	9,000	170,787	3,00		10,800	170,787	10,800	171,786		10,800	170,787	10,800	171,786	0,999
13	1,800	171,757	1,262	1,800	170,495	0,000	170,549	-3,00		171,797	170,684	1,113			170,819	9,000	170,873	3,00		10,800	170,873	10,800	171,875		10,800	170,873	10,800	171,875	1,002
14	1,800	171,842	1,262	1,800	170,580	0,000	170,634	-3,00		171,889	170,769	1,120			170,904	9,000	170,958	3,00		10,800	170,958	10,800	171,926		10,800	170,958	10,800	171,926	0,968
15	1,800	171,918	1,253	1,800	170,665	0,000	170,719	-3,00		171,965	170,854	1,111			170,989	9,000	171,043	3,00		10,800	171,043	10,800	172,031		10,800	171,043	10,800	172,031	0,988
16	1,800	171,967	1,219	1,800	170,748	0,000	170,802	-3,00		172,028	170,937	1,091			171,072	9,000	171,126	3,00		10,800	171,126	10,800	172,137		10,800	171,126	10,800	172,137	1,011
16+4,548	1,800	171,937	1,114	1,800	170,823	0,000	170,877	-3,00		172,086	171,012	1,074			171,147	9,000	171,201	3,00		10,800	171,201	10,800	172,224		10,800	171,201	10,800	172,224	1,023
17	1,800	171,946	1,116	1,800	170,830	0,000	170,884	-3,00		172,092	171,019	1,073			171,154	9,000	171,208	3,00		10,800	171,208	10,800	172,229		10,800	171,208	10,800	172,229	1,021
18	1,800	172,063	1,152	1,800	170,911	0,000	170,965	-3,00		172,176	171,100	1,076			171,235	9,000	171,289	3,00		10,800	171,289	10,800	172,294		10,800	171,289	10,800	172,294	1,005
19	1,800	172,196	1,204	1,800	170,992	0,000	171,046	-3,00		172,295	171,181	1,114			171,316	9,000	171,370	3,00		10,800	171,370	10,800	172,372		10,800	171,370	10,800	172,372	1,002
20	1,800	172,336	1,265	1,800	171,071	0,000	171,125	-3,00		172,403	171,260	1,143			171,395	9,000	171,449	3,00		10,800	171,449	10,800	172,437		10,800	171,449	10,800	172,437	0,988
20+0,032	1,800	172,337	1,209	1,800	171,128	0,000	171,182	-3,00		172,396	171,261	1,135			171,339	5,250	171,393	3,00		7,050	171,393	7,050	172,370		7,050	171,393	7,050	172,370	0,977
21	1,800	172,473	1,267	1,800	171,206	0,000	171,260	-3,00		172,480	171,339	1,141			171,418	5,250	171,472	3,00		7,050	171,472	7,050	172,495		7,050	171,472	7,050	172,495	1,023
21+3,372	1,800	172,537	1,278	1,800	171,259	0,000	171,313	-3,00		172,498	171,392	1,106			171,471	5,250	171,525	3,00		7,050	171,525	7,050	172,580		7,050	171,525	7,050	172,580	1,055
22	1,800	172,552	1,267	1,800	171,285	0,000	171,339	-3,00		172,501	171,418	1,083			171,496	5,250	171,550	3,00		7,050	171,550	7,050	172,625		7,050	171,550	7,050	172,625	1,075
23	1,800	172,612	1,255	1,800	171,357	0,000	171,411	-3,00		172,584	171,490	1,094			171,569	5,250	171,623	3,00		7,050	171,623	7,050	172,649		7,050	171,623	7,050	172,649	1,026
24	1,800	172,635	1,219	1,800	171,416	0,000	171,470	-3,00		172,686	171,549	1,137			171,628	5,250	171,682	3,00		7,050	171,682	7,050	172,686		7,050	171,682	7,050	172,686	1,004

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Distância		Cota		Altura	Distância		Cota		Lateral	Distância		Cota		%	Distância		Cota		Vermelha
Estaca	Distância	Cota	Altura		Distância	Cota	Terreno	Projeto	Cota	Vermelha	Distância	Cota	Projeto	%	Distância	Cota	Vermelha	Distância	Offset
0	1,800	171,240	1,070		0,000	170,170	-3,00	171,350	170,344	1,006	0,000	170,464	170,344	3,00	9,800	170,518	9,800	171,350	0,832
1	1,800	171,287	1,128		0,000	170,213	-3,00	171,317	170,333	0,984	8,000	170,453	170,333	3,00	9,800	170,507	9,800	171,341	0,834
1+1,892	1,800	171,238	1,083		0,000	170,155	-3,00	171,306	170,329	0,977	8,000	170,449	170,329	3,00	9,800	170,503	9,800	171,337	0,834
1+2,044	1,800	171,237	1,083		0,000	170,154	-3,00	171,305	170,328	0,977	8,000	170,448	170,328	3,00	9,800	170,502	9,800	171,336	0,834

Nota de Serviço de Terraplenagem: INTERSEÇÃO 4 RAMO 1

Lado Esquerdo										Eixo										Lado Direito									
Offset					Bordo					Terreno					Bordo					Lateral					Offset				
Estaca	Distância	Cota	Altura		Distância	Cota	%			Distância	Cota	Projeto	Cota	Vermelha	Distância	Cota	%			Distância	Cota		Distância	Cota		Distância	Cota		
0	1,800	177,468	0,947		1,800	176,521	-3,00	176,575	0,000	176,521	1,800	177,365	176,653	0,712	5,250	176,732	3,00	7,050	176,786	7,050	176,786		7,050	177,350	0,564				
1	1,800	177,391	0,969		1,800	176,422	-3,00	176,476	0,000	176,422	1,800	177,273	176,555	0,718	5,250	176,634	3,00	7,050	176,688	7,050	176,688		7,050	177,283	0,595				
2	1,800	177,282	0,958		1,800	176,324	-3,00	176,378	0,000	176,324	1,800	177,181	176,456	0,725	5,250	176,535	3,00	7,050	176,589	7,050	176,589		7,050	177,221	0,632				
3	1,800	177,094	0,869		1,800	176,225	-3,00	176,279	0,000	176,225	1,800	177,104	176,358	0,746	5,250	176,437	3,00	7,050	176,491	7,050	176,491		7,050	177,157	0,666				
4	1,800	176,961	0,834		1,800	176,127	-3,00	176,181	0,000	176,127	1,800	176,998	176,259	0,739	5,250	176,338	3,00	7,050	176,392	7,050	176,392		7,050	177,029	0,637				
4+3,029	1,800	176,954	0,887		1,800	176,067	-3,00	176,121	0,000	176,067	1,800	176,954	176,200	0,754	5,250	176,278	3,00	7,050	176,332	7,050	176,332		7,050	176,956	0,624				
4+3,660	1,800	176,954	0,877		1,800	176,077	-3,00	176,131	0,000	176,077	1,800	176,959	176,266	0,693	9,000	176,401	3,00	10,800	176,455	10,800	176,455		10,800	177,026	0,571				
5	1,800	176,952	0,901		1,800	176,051	-3,00	176,105	0,000	176,051	1,800	176,942	176,240	0,702	9,000	176,375	3,00	10,800	176,429	10,800	176,429		10,800	177,000	0,571				
6	1,800	176,940	0,988		1,800	175,952	-3,00	176,006	0,000	175,952	1,800	176,880	176,141	0,739	9,000	176,276	3,00	10,800	176,330	10,800	176,330		10,800	176,910	0,580				
7	1,800	176,821	0,967		1,800	175,854	-3,00	175,908	0,000	175,854	1,800	176,822	176,043	0,779	9,000	176,178	3,00	10,800	176,232	10,800	176,232		10,800	176,833	0,601				
8	1,800	176,715	0,960		1,800	175,755	-3,00	175,809	0,000	175,755	1,800	176,779	175,944	0,835	9,000	176,079	3,00	10,800	176,133	10,800	176,133		10,800	176,776	0,643				
8+2,841	1,800	176,713	1,013		1,800	175,700	-3,00	175,754	0,000	175,700	1,800	176,748	175,889	0,859	9,000	176,024	3,00	10,800	176,078	10,800	176,078		10,800	176,752	0,674				
9	1,800	176,716	1,056		1,800	175,660	-3,00	175,714	0,000	175,660	1,800	176,721	175,849	0,872	9,000	175,984	3,00	10,800	176,038	10,800	176,038		10,800	176,732	0,694				
10	1,800	176,722	1,150		1,800	175,572	-3,00	175,626	0,000	175,572	1,800	176,656	175,761	0,895	9,000	175,896	3,00	10,800	175,950	10,800	175,950		10,800	176,685	0,735				
11	1,800	176,686	1,196		1,800	175,490	-3,00	175,544	0,000	175,490	1,800	176,596	175,679	0,917	9,000	175,814	3,00	10,800	175,868	10,800	175,868		10,800	176,638	0,770				
12	1,800	176,620	1,204		1,800	175,416	-3,00	175,470	0,000	175,416	1,800	176,537	175,605	0,932	9,000	175,740	3,00	10,800	175,794	10,800	175,794		10,800	176,577	0,783				
13	1,800	176,625	1,276		1,800	175,349	-3,00	175,403	0,000	175,349	1,800	176,663	175,538	1,125	9,000	175,673	3,00	10,800	175,727	10,800	175,727		10,800	176,512	0,785				
14	1,800	176,578	1,290		1,800	175,288	-3,00	175,342	0,000	175,288	1,800	176,548	175,477	1,071	9,000	175,612	3,00	10,800	175,666	10,800	175,666		10,800	176,448	0,782				
15	1,800	176,464	1,230		1,800	175,234	-3,00	175,288	0,000	175,234	1,800	176,379	175,423	0,956	9,000	175,558	3,00	10,800	175,612	10,800	175,612		10,800	176,383	0,771				
16	1,800	176,442	1,255		1,800	175,187	-3,00	175,241	0,000	175,187	1,800	176,275	175,376	0,899	9,000	175,511	3,00	10,800	175,565	10,800	175,565		10,800	176,322	0,757				
16+4,690	1,800	176,416	1,269		1,800	175,147	-3,00	175,201	0,000	175,147	1,800	176,234	175,336	0,898	9,000	175,471	3,00	10,800	175,525	10,800	175,525		10,800	176,276	0,751				
17	1,800	176,414	1,270		1,800	175,144	-3,00	175,198	0,000	175,144	1,800	176,231	175,333	0,898	9,000	175,468	3,00	10,800	175,522	10,800	175,522		10,800	176,274	0,752				
18	1,800	176,379	1,278		1,800	175,101	-3,00	175,155	0,000	175,101	1,800	176,183	175,290	0,893	9,000	175,425	3,00	10,800	175,479	10,800	175,479		10,800	176,241	0,762				
19	1,800	176,325	1,268		1,800	175,057	-3,00	175,111	0,000	175,057	1,800	176,140	175,246	0,894	9,000	175,381	3,00	10,800	175,435	10,800	175,435		10,800	176,218	0,783				
20	1,800	176,252	1,266		1,800	174,986	-3,00	175,040	0,000	174,986	1,800	176,118	175,118	1,000	5,250	175,197	3,00	7,050	175,251	7,050	175,251		7,050	176,104	0,853				
21	1,800	176,200	1,274		1,800	174,926	-3,00	174,980	0,000	174,926	1,800	176,169	175,058	1,111	5,250	175,137	3,00	7,050	175,191	7,050	175,191		7,050	176,106	0,915				
21+0,624	1,800	176,193	1,276		1,800	174,917	-3,00	174,971	0,000	174,917	1,800	176,175	175,050	1,125	5,250	175,129	3,00	7,050	175,183	7,050	175,183		7,050	176,095	0,912				
21+2,587	1,800	176,200	1,310		1,800	174,890	-3,00	174,944	0,000	174,890	1,800	176,131	175,023	1,108	5,250	175,102	3,00	7,050	175,156	7,050	175,156		7,050	176,086	0,930				
21+3,397	1,800	176,214	1,335		1,800	174,879	-3,00	174,933	0,000	174,879	1,800	176,113	175,011	1,102	5,250	175,090	3,00	7,050	175,144	7,050	175,144		7,050	176,079	0,935				
22	1,800	176,184	1,329		1,800	174,855	-3,00	174,909	0,000	174,855	1,800	176,083	174,987	1,096	5,250	175,066	3,00	7,050	175,120	7,050	175,120		7,050	176,067	0,947				
23	1,800	176,099	1,327		1,800	174,772	-3,00	174,826	0,000	174,772	1,800	175,998	174,905	1,093	5,250	174,984	3,00	7,050	175,038	7,050	175,038		7,050	176,027	0,989				
24	1,800	176,012	1,333		1,800	174,679	-3,00	174,733	0,000	174,679	1,800	175,924	174,812	1,112	5,250	174,890	3,00	7,050	174,944	7,050	174,944		7,050	175,979	1,035				

Lado Esquerdo										Lado Direito									
Ofiset					Bordo					Eixo					Bordo				
Distância		Altura		Lateral	Distância	Cota	%			Cota Terreno	Cota Projeto	Cota Vermelha	Distância	Cota	Distância	Cota	%		
Estaca	Distância	Cota	Altura	Distância	Cota														
25	1,800	175,986	1,412	1,800	174,574	0,000	174,628	-3,00	175,857	174,707	1,150	5,250	174,786	3,00	7,050	174,840	7,050	175,922	1,082
26	1,800	175,932	1,468	1,800	174,464	0,000	174,518	-3,00	175,801	174,597	1,204	5,250	174,676	3,00	7,050	174,730	7,050	175,869	1,139
26+0,609	1,800	175,926	1,475	1,800	174,451	0,000	174,505	-3,00	175,794	174,584	1,210	5,250	174,663	3,00	7,050	174,717	7,050	175,863	1,146
26+0,876	1,800	175,924	1,479	1,800	174,445	0,000	174,499	-3,00	175,792	174,578	1,214	5,250	174,657	3,00	7,050	174,711	7,050	175,860	1,149

Lado Esquerdo										Lado Direito									
Offset					Bordo					Eixo					Bordo				
Distância		Cota		Altura	Distância		Cota		Lateral	Terreno		Projeto		Cota	Distância		Cota		Vermelha
Offset		Cota		Altura	Distância		Cota		Lateral	Terreno		Projeto		Cota	Distância		Cota		Vermelha
Distância		Cota		Altura	Distância		Cota		Lateral	Terreno		Projeto		Cota	Distância		Cota		Vermelha
Estaca	Distância	1,800	176,932	1,157	1,800	175,775	0,000	175,829	-3,00	176,999	175,908	1,091	5,250	175,987	3,00	7,050	176,041	7,050	177,050
0		1,800	176,932	1,157	1,800	175,775	0,000	175,829	-3,00	176,999	175,908	1,091	5,250	175,987	3,00	7,050	176,041	7,050	177,050
0+0,027	1,800	176,931	1,155	1,155	1,800	175,776	0,000	175,830	-3,00	176,998	175,909	1,089	5,250	175,987	3,00	7,050	176,041	7,050	177,051
1	1,800	176,958	1,138	1,138	1,800	175,820	0,000	175,874	-3,00	177,032	175,952	1,080	5,250	176,031	3,00	7,050	176,085	7,050	177,109
1+1,989	1,800	177,012	1,148	1,148	1,800	175,864	0,000	175,918	-3,00	177,084	175,997	1,087	5,250	176,075	3,00	7,050	176,129	7,050	177,106
1+1,994	1,800	177,012	1,148	1,148	1,800	175,864	0,000	175,918	-3,00	177,084	175,997	1,087	5,250	176,075	3,00	7,050	176,129	7,050	177,105

Lado Esquerdo										Eixo					Lado Direito								
Estaca	Offset			Lateral			Bordo			Cota		Cota		Cota		Bordo			Lateral		Offset		
	Distância	Cota	Altura	Distância	Cota		Distância	Cota	%	Terreno	Projeto	Vermelha	Distância	Cota	%	Distância	Cota		Distância	Cota	Distância	Cota	Altura
0	5,750	177,697	0,980	5,750	176,717		5,250	176,732	-3,00	177,801	176,889	0,912	5,250	176,732	-3,00	5,750	176,717		5,750	176,717	5,750	177,646	0,929
1	5,750	177,415	1,006	5,750	176,409		5,250	176,424	-3,00	177,443	176,581	0,862	5,250	176,424	-3,00	5,750	176,409		5,750	176,409	5,750	177,317	0,908
2	5,750	177,219	1,118	5,750	176,101		5,250	176,116	-3,00	177,222	176,273	0,949	5,250	176,116	-3,00	5,750	176,101		5,750	176,101	5,750	177,004	0,903
3	5,750	176,859	1,066	5,750	175,793		5,250	175,808	-3,00	176,964	175,966	0,998	5,250	175,808	-3,00	5,750	175,793		5,750	175,793	5,750	176,787	0,994
4	5,750	176,638	1,139	5,750	175,499		5,250	175,514	-3,00	176,731	175,672	1,059	5,250	175,514	-3,00	5,750	175,499		5,750	175,499	5,750	176,492	0,993
5	5,750	176,469	1,236	5,750	175,233		5,250	175,248	-3,00	176,478	175,405	1,073	5,250	175,248	-3,00	5,750	175,233		5,750	175,233	5,750	176,305	1,072
6	5,750	176,128	1,134	5,750	174,994		5,250	175,009	-3,00	176,263	175,166	1,097	5,250	175,009	-3,00	5,750	174,994		5,750	174,994	5,750	176,030	1,036
7	5,750	176,053	1,270	5,750	174,783		5,250	174,798	-3,00	175,973	174,955	1,018	5,250	174,798	-3,00	5,750	174,783		5,750	174,783	5,750	175,808	1,025
7+17,122	5,750	175,882	1,268	5,750	174,614		5,250	174,629	-3,00	175,844	174,786	1,058	5,250	174,629	-3,00	5,750	174,614		5,750	174,614	5,750	175,773	1,159

5 – CÁLCULO DOS VOLUMES

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	12,256	12,256	0,000	0,000						
1	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
5	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
6	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
7	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
8	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
9	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
10	0,000	12,256	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
10+14,023	12,333	24,589	0,000	0,000						
11	12,052	36,641	0,000	0,000	2,989	72,875	72,875	0,000	0,000	0,000
11+3,562	11,930	48,571	0,000	0,000	1,781	42,712	115,587	0,000	0,000	0,000
12	11,249	59,820	0,000	0,000	8,219	190,508	306,095	0,000	0,000	0,000
					10,000	221,960	528,055	0,000	0,000	0,000
13	10,947	70,767	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
13	10,947	70,767	0,000	0,000					
					10,000	225,070	753,125	0,000	0,000
14	11,560	82,327	0,000	0,000					
					10,000	240,670	993,795	0,000	0,000
15	12,507	94,834	0,000	0,000					
					10,000	250,650	1.244,445	0,000	0,000
16	12,558	107,392	0,000	0,000					
					10,000	251,810	1.496,255	0,000	0,000
17	12,623	120,015	0,000	0,000					
					10,000	250,830	1.747,085	0,000	0,000
18	12,460	132,475	0,000	0,000					
					10,000	253,460	2.000,545	0,000	0,000
19	12,886	145,361	0,000	0,000					
					10,000	261,370	2.261,915	0,000	0,000
20	13,251	158,612	0,000	0,000					
					10,000	268,910	2.530,825	0,000	0,000
21	13,640	172,252	0,000	0,000					
					10,000	273,320	2.804,145	0,000	0,000
22	13,692	185,944	0,000	0,000					
					6,008	159,957	2.964,102	0,000	0,000
22+12,016	12,932	198,876	0,000	0,000					
					3,992	102,363	3.066,465	0,000	0,000
23	12,710	211,586	0,000	0,000					
					10,000	256,120	3.322,585	0,000	0,000
24	12,902	224,488	0,000	0,000					
					10,000	272,470	3.595,055	0,000	0,000
25	14,345	238,833	0,000	0,000					
					10,000	290,650	3.885,705	0,000	0,000
26	14,720	253,553	0,000	0,000					
					9,424	271,793	4.157,498	0,000	0,000
26+18,847	14,122	267,675	0,000	0,000					

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
26+18,847	14,122	267,675	0,000	0,000						
27	14,066	281,741	0,000	0,000	0,577	16,250	4.173,748	0,000	0,000	
28	12,942	294,683	0,000	0,000	10,000	270,080	4.443,828	0,000	0,000	
29	12,314	306,997	0,000	0,000	10,000	252,560	4.696,388	0,000	0,000	
30	12,744	319,741	0,000	0,000	10,000	250,580	4.946,968	0,000	0,000	
31	12,604	332,345	0,000	0,000	10,000	253,480	5.200,448	0,000	0,000	
32	12,095	344,440	0,000	0,000	10,000	246,990	5.447,438	0,000	0,000	
33	12,082	356,522	0,000	0,000	10,000	241,770	5.689,208	0,000	0,000	
34	12,120	368,642	0,000	0,000	10,000	242,020	5.931,228	0,000	0,000	
35	17,497	386,139	0,000	0,000	10,000	296,170	6.227,398	0,000	0,000	
36	16,240	402,379	0,000	0,000	10,000	337,370	6.564,768	0,000	0,000	
37	14,993	417,372	0,000	0,000	10,000	312,330	6.877,098	0,000	0,000	
38	13,554	430,926	0,000	0,000	10,000	285,470	7.162,568	0,000	0,000	
39	12,675	443,601	0,000	0,000	10,000	262,290	7.424,858	0,000	0,000	
40	14,307	457,908	0,000	0,000	10,000	269,820	7.694,678	0,000	0,000	
41	14,428	472,336	0,068	0,068	10,000	287,350	7.982,028	0,680	0,680	

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
41	14,428	472,336	0,068	0,068						
					10,000	286,350	8.268,378	1,780	2,460	
42	14,207	486,543	0,110	0,178						
					10,000	284,990	8.553,368	4,460	6,920	
43	14,292	500,835	0,336	0,514						
					10,000	310,010	8.863,378	11,440	18,360	
44	16,709	517,544	0,808	1,322						
					10,000	343,510	9.206,888	9,350	27,710	
45	17,642	535,186	0,127	1,449						
					5,587	195,014	9.401,902	1,732	29,442	
45+11,174	17,263	552,449	0,183	1,632						
					4,413	140,806	9.542,708	4,360	33,802	
46	14,644	567,093	0,805	2,437						
					5,587	181,538	9.724,246	34,947	68,749	
46+11,174	17,849	584,942	5,450	7,887						
					4,413	159,720	9.883,966	31,363	100,112	
47	18,344	603,286	1,657	9,544						
					5,587	201,093	10.085,059	13,090	113,202	
47+11,174	17,649	620,935	0,686	10,230						
					4,413	156,975	10.242,034	6,686	119,888	
48	17,922	638,857	0,829	11,059						
					10,000	367,760	10.609,794	16,110	135,998	
49	18,854	657,711	0,782	11,841						
					10,000	375,970	10.985,764	8,560	144,558	
50	18,743	676,454	0,074	11,915						
					10,000	367,260	11.353,024	1,910	146,468	
51	17,983	694,437	0,117	12,032						
					4,728	166,804	11.519,828	0,553	147,021	
51+9,456	17,297	711,734	0,000	12,032						
					5,272	176,306	11.696,134	0,000	147,021	
52	16,145	727,879	0,000	12,032						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
52	16,145	727,879	0,000	12,032						
					10,000	306,020	12.002,154	0,000		147,021
53	14,457	742,336	0,000	12,032						
					10,000	271,570	12.273,724	0,000		147,021
54	12,700	755,036	0,000	12,032						
					10,000	256,370	12.530,094	0,000		147,021
55	12,937	767,973	0,000	12,032						
					10,000	258,110	12.788,204	0,000		147,021
56	12,874	780,847	0,000	12,032						
					10,000	256,640	13.044,844	0,000		147,021
57	12,790	793,637	0,000	12,032						
					4,434	113,294	13.158,138	0,000		147,021
57+8,867	12,764	806,401	0,000	12,032						
					5,567	143,298	13.301,436	0,000		147,021
58	12,979	819,380	0,000	12,032						
					10,000	255,260	13.556,696	0,000		147,021
59	12,547	831,927	0,000	12,032						
					10,000	245,460	13.802,156	0,000		147,021
60	11,999	843,926	0,000	12,032						
					10,000	240,800	14.042,956	0,000		147,021
61	12,081	856,007	0,000	12,032						
					10,000	247,760	14.290,716	0,000		147,021
62	12,695	868,702	0,000	12,032						
					10,000	262,570	14.553,286	0,000		147,021
63	13,562	882,264	0,000	12,032						
					10,000	276,090	14.829,376	0,000		147,021
64	14,047	896,311	0,000	12,032						
					10,000	277,240	15.106,616	0,000		147,021
65	13,677	909,988	0,000	12,032						
					10,000	269,460	15.376,076	0,000		147,021
66	13,269	923,257	0,000	12,032						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
66	13,269	923,257	0,000	12,032						
					10,000	257,220	15.633,296	0,000		147,021
67	12,453	935,710	0,000	12,032						
					10,000	244,210	15.877,506	0,000		147,021
68	11,968	947,678	0,000	12,032						
					10,000	240,810	16.118,316	0,000		147,021
69	12,113	959,791	0,000	12,032						
					10,000	248,940	16.367,256	0,000		147,021
70	12,781	972,572	0,000	12,032						
					10,000	255,610	16.622,866	0,000		147,021
71	12,780	985,352	0,000	12,032						
					10,000	247,460	16.870,326	0,000		147,021
72	11,966	997,318	0,000	12,032						
					10,000	240,050	17.110,376	0,000		147,021
73	12,039	1.009,357	0,000	12,032						
					10,000	300,490	17.410,866	0,000		147,021
74	18,010	1.027,367	0,000	12,032						
					10,000	360,990	17.771,856	0,000		147,021
75	18,089	1.045,456	0,000	12,032						
					10,000	346,630	18.118,486	3,040		150,061
76	16,574	1.062,030	0,304	12,336						
					1,930	61,005	18.179,491	0,587		150,648
76+3,859	15,043	1.077,073	0,000	12,336						
					8,071	247,361	18.426,852	4,673		155,321
77	15,607	1.092,680	0,579	12,915						
					10,000	300,030	18.726,882	41,080		196,401
78	14,396	1.107,076	3,529	16,444						
					10,000	303,040	19.029,922	73,790		270,191
79	15,908	1.122,984	3,850	20,294						
					2,374	74,955	19.104,877	17,842		288,033
79+4,747	15,672	1.138,656	3,667	23,961						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
79+4,747	15,672	1.138,656	3,667	23,961						
					7,627	235,308	19.340,185	47,315	335,348	
80	15,182	1.153,838	2,537	26,498						
					10,000	309,850	19.650,035	40,660	376,008	
81	15,803	1.169,641	1,529	28,027						
					10,000	286,960	19.936,995	122,370	498,378	
82	12,893	1.182,534	10,708	38,735						
					4,262	111,366	20.048,361	186,006	684,384	
82+8,523	13,240	1.195,774	32,940	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
82+8,699	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
83	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
84	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
85	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
86	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
87	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
88	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
88+7,334	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
89	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
90	0,000	1.195,774	0,000	71,675						
					4,262	0,000	20.048,361	0,000	684,384	
91	0,000	1.195,774	0,000	71,675						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
91	0,000	1.195,774	0,000	71,675						
92	0,000	1.195,774	0,000	71,675	4,262	0,000	20.048,361	0,000	684,384	
92+4,870	0,000	1.195,774	0,000	71,675	4,262	0,000	20.048,361	0,000	684,384	
93	13,773	1.209,547	0,000	71,675	4,262	0,000	20.048,361	0,000	684,384	
94	13,105	1.222,652	0,000	71,675	10,000	268,780	20.317,141	0,000	684,384	
95	13,128	1.235,780	0,000	71,675	10,000	262,330	20.579,471	0,000	684,384	
96	12,868	1.248,648	0,000	71,675	10,000	259,960	20.839,431	0,000	684,384	
97	12,531	1.261,179	0,000	71,675	10,000	253,990	21.093,421	0,000	684,384	
98	12,635	1.273,814	0,000	71,675	10,000	251,660	21.345,081	0,000	684,384	
98+16,845	12,935	1.286,749	0,000	71,675	8,423	215,363	21.560,444	0,000	684,384	
99	13,064	1.299,813	0,000	71,675	1,578	41,013	21.601,457	0,000	684,384	
100	13,801	1.313,614	0,000	71,675	10,000	268,650	21.870,107	0,000	684,384	
101	14,648	1.328,262	0,000	71,675	10,000	284,490	22.154,597	0,000	684,384	
102	14,201	1.342,463	0,000	71,675	10,000	288,490	22.443,087	0,000	684,384	
103	12,851	1.355,314	0,000	71,675	10,000	270,520	22.713,607	0,000	684,384	
104	11,559	1.366,873	0,000	71,675	10,000	244,100	22.957,707	0,000	684,384	

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
104	11,559	1.366,873	0,000	71,675						
					10,000	223,090	23.180,797	0,000		684,384
105	10,750	1.377,623	0,000	71,675						
					10,000	218,700	23.399,497	0,000		684,384
106	11,120	1.388,743	0,000	71,675						
					10,000	231,940	23.631,437	0,000		684,384
107	12,074	1.400,817	0,000	71,675						
					10,000	251,050	23.882,487	0,000		684,384
108	13,031	1.413,848	0,000	71,675						
					10,000	264,950	24.147,437	0,000		684,384
109	13,464	1.427,312	0,000	71,675						
					2,400	63,994	24.211,431	0,000		684,384
109+4,800	13,200	1.440,512	0,000	71,675						
					7,600	196,468	24.407,899	0,000		684,384
110	12,651	1.453,163	0,000	71,675						
					10,000	248,820	24.656,719	0,000		684,384
111	12,231	1.465,394	0,000	71,675						
					10,000	240,750	24.897,469	0,000		684,384
112	11,844	1.477,238	0,000	71,675						
					10,000	239,290	25.136,759	0,000		684,384
113	12,085	1.489,323	0,000	71,675						
					10,000	241,790	25.378,549	0,000		684,384
114	12,094	1.501,417	0,000	71,675						
					10,000	246,410	25.624,959	0,000		684,384
115	12,547	1.513,964	0,000	71,675						
					4,655	117,205	25.742,164	0,000		684,384
115+9,309	12,634	1.526,598	0,000	71,675						
					5,346	134,739	25.876,903	0,000		684,384
116	12,572	1.539,170	0,000	71,675						
					10,000	250,070	26.126,973	0,000		684,384
117	12,435	1.551,605	0,000	71,675						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
117	12,435	1.551,605	0,000	71,675						
					10,000	247,310	26.374,283	0,000	684,384	
118	12,296	1.563,901	0,000	71,675						
					10,000	244,700	26.618,983	0,000	684,384	
119	12,174	1.576,075	0,000	71,675						
					10,000	236,880	26.855,863	0,000	684,384	
120	11,514	1.587,589	0,000	71,675						
					10,000	235,130	27.090,993	0,000	684,384	
121	11,999	1.599,588	0,000	71,675						
					10,000	245,430	27.336,423	0,000	684,384	
122	12,544	1.612,132	0,000	71,675						
					10,000	251,920	27.588,343	0,000	684,384	
123	12,648	1.624,780	0,000	71,675						
					10,000	245,020	27.833,363	0,000	684,384	
124	11,854	1.636,634	0,000	71,675						
					0,496	11,744	27.845,107	0,000	684,384	
124+0,991	11,848	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
125	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
126	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
127	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
128	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
129	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
130	0,000	1.648,482	0,000	71,675						
					0,496	0,000	27.845,107	0,000	684,384	
130+11,071	12,609	1.661,091	0,000	71,675						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
130+11,071	12,609	1.661,091	0,000	71,675						
					4,465	112,505	27.957,612	0,000	684,384	
131	12,591	1.673,682	0,000	71,675						
					10,000	244,470	28.202,082	0,000	684,384	
132	11,856	1.685,538	0,000	71,675						
					10,000	231,570	28.433,652	0,000	684,384	
133	11,301	1.696,839	0,000	71,675						
					10,000	227,760	28.661,412	0,000	684,384	
134	11,475	1.708,314	0,000	71,675						
					10,000	222,150	28.883,562	0,000	684,384	
135	10,740	1.719,054	0,000	71,675						
					0,924	19,946	28.903,508	0,000	684,384	
135+1,848	10,847	1.729,901	0,000	71,675						
					9,076	198,420	29.101,928	0,000	684,384	
136	11,015	1.740,916	0,000	71,675						
					10,000	226,880	29.328,808	0,000	684,384	
137	11,673	1.752,589	0,000	71,675						
					10,000	234,480	29.563,288	0,000	684,384	
138	11,775	1.764,364	0,000	71,675						
					10,000	240,200	29.803,488	0,000	684,384	
139	12,245	1.776,609	0,000	71,675						
					10,000	244,910	30.048,398	0,000	684,384	
140	12,246	1.788,855	0,000	71,675						
					10,000	249,870	30.298,268	0,000	684,384	
141	12,741	1.801,596	0,000	71,675						
					10,000	261,040	30.559,308	0,000	684,384	
142	13,363	1.814,959	0,000	71,675						
					10,000	271,930	30.831,238	0,000	684,384	
143	13,830	1.828,789	0,000	71,675						
					10,000	270,850	31.102,088	0,000	684,384	
144	13,255	1.842,044	0,000	71,675						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
144	13,255	1.842,044	0,000	71,675						
					10,000	260,500	31.362,588	0,000		684,384
145	12,795	1.854,839	0,000	71,675						
					10,000	261,590	31.624,178	0,000		684,384
146	13,364	1.868,203	0,000	71,675						
					10,000	271,990	31.896,168	0,000		684,384
147	13,835	1.882,038	0,000	71,675						
					10,000	274,390	32.170,558	0,000		684,384
148	13,604	1.895,642	0,000	71,675						
					10,000	265,870	32.436,428	0,000		684,384
149	12,983	1.908,625	0,000	71,675						
					10,000	255,070	32.691,498	0,000		684,384
150	12,524	1.921,149	0,000	71,675						
					10,000	244,910	32.936,408	0,000		684,384
151	11,967	1.933,116	0,000	71,675						
					10,000	250,690	33.187,098	0,000		684,384
152	13,102	1.946,218	0,000	71,675						
					10,000	265,420	33.452,518	0,000		684,384
153	13,440	1.959,658	0,000	71,675						
					4,811	128,483	33.581,001	0,000		684,384
153+9,622	13,266	1.972,924	0,000	71,675						
					5,189	137,607	33.718,608	0,000		684,384
154	13,253	1.986,177	0,000	71,675						
					6,890	181,490	33.900,098	0,000		684,384
154+13,779	13,090	1.999,267	0,000	71,675						
					6,890	0,000	33.900,098	0,000		684,384
155	0,000	1.999,267	0,000	71,675						
					6,890	0,000	33.900,098	0,000		684,384
156	0,000	1.999,267	0,000	71,675						
					6,890	0,000	33.900,098	0,000		684,384
157	0,000	1.999,267	0,000	71,675						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
157	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
158	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
159	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
160	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
161	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
162	0,000	1.999,267	0,000	71,675					
					6,890	0,000	33.900,098	0,000	684,384
162+10,901	11,251	2.010,518	0,000	71,675					

	Corte	Aterro
Áreas	2.010,5180 m²	71,675 m²
Volumes	33.900,098 m3	684,384 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	5,105	5,105	0,000	0,000					
1	5,106	10,211	0,000	0,000	2,500	25,528	25,528	0,000	0,000
2	5,114	15,325	0,000	0,000	2,500	25,550	51,078	0,000	0,000
3	4,942	20,267	0,000	0,000	2,500	25,140	76,218	0,000	0,000
4	5,049	25,316	0,000	0,000	2,500	24,977	101,195	0,000	0,000
5	0,000	25,316	0,000	0,000	2,500	0,000	101,195	0,000	0,000
6	4,922	30,238	0,000	0,000	2,500	0,000	101,195	0,000	0,000
7	5,198	35,436	0,000	0,000	2,500	25,300	126,495	0,000	0,000
8	5,401	40,837	0,000	0,000	2,500	26,498	152,993	0,000	0,000
9	5,605	46,442	0,000	0,000	2,500	27,515	180,508	0,000	0,000
10	6,225	52,667	0,000	0,000	2,500	29,575	210,083	0,000	0,000
10+2,789	6,649	59,316	0,000	0,000	1,395	17,953	228,036	0,000	0,000

	Corte	Aterro
Áreas	59,3160 m²	0,000 m²
Volumes	228,036 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	10,662	10,662	0,000	0,000						
0+0,428	10,448	21,110	0,000	0,000	0,214	4,518	4,518	0,000	0,000	
1	8,553	29,663	0,000	0,000	2,286	43,436	47,954	0,000	0,000	
2	9,232	38,895	0,000	0,000	2,500	44,462	92,416	0,000	0,000	
2+4,249	10,957	49,852	0,000	0,000	2,125	42,892	135,308	0,000	0,000	
2+4,655	10,970	60,822	0,000	0,000	0,203	4,451	139,759	0,000	0,000	
3	10,987	71,809	0,000	0,000	0,173	3,788	143,547	0,000	0,000	
4	10,972	82,781	0,000	0,000	2,500	54,898	198,445	0,000	0,000	
5	0,000	82,781	0,000	0,000	2,500	0,000	198,445	0,000	0,000	
6	0,000	82,781	0,000	0,000	2,500	0,000	198,445	0,000	0,000	
7	0,000	82,781	0,000	0,000	2,500	0,000	198,445	0,000	0,000	
8	10,627	93,408	0,000	0,000	2,500	0,000	198,445	0,000	0,000	
9	11,053	104,461	0,000	0,000	2,500	54,200	252,645	0,000	0,000	
10	11,136	115,597	0,000	0,000	2,500	55,472	308,117	0,000	0,000	
11	11,126	126,723	0,000	0,000	2,500	55,655	363,772	0,000	0,000	
11+2,177	10,979	137,702	0,000	0,000	1,089	24,061	387,833	0,000	0,000	

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
11+2,177	10,979	137,702	0,000	0,000						
					1,412	30,714	418,547	0,000	0,000	
12	10,781	148,483	0,000	0,000						
					0,192	4,136	422,683	0,000	0,000	
12+0,384	10,760	159,243	0,000	0,000						

	Corte	Aterro
Áreas	159,2430 m²	0,000 m²
Volumes	422,683 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	16,413	16,413	0,000	0,000					
1	16,774	33,187	0,000	0,000	2,500	82,968	82,968	0,000	0,000
2	16,992	50,179	0,000	0,000	2,500	84,415	167,383	0,000	0,000
3	16,984	67,163	0,000	0,000	2,500	84,940	252,323	0,000	0,000
4	17,240	84,403	0,000	0,000	2,500	85,560	337,883	0,000	0,000
5	17,901	102,304	0,000	0,000	2,500	87,852	425,735	0,000	0,000
6	18,727	121,031	0,000	0,000	2,500	91,570	517,305	0,000	0,000
7	19,413	140,444	0,000	0,000	2,500	95,350	612,655	0,000	0,000
7+4,979	20,229	160,673	0,000	0,000	2,490	98,689	711,344	0,000	0,000
8	20,238	180,911	0,000	0,000	0,011	0,425	711,769	0,000	0,000
9	20,227	201,138	0,000	0,000	2,500	101,163	812,932	0,000	0,000
10	20,532	221,670	0,000	0,000	2,500	101,898	914,830	0,000	0,000
11	20,618	242,288	0,000	0,000	2,500	102,875	1,017,705	0,000	0,000
12	20,792	263,080	0,000	0,000	2,500	103,525	1,121,230	0,000	0,000
13	21,258	284,338	0,000	0,000	2,500	105,125	1,226,355	0,000	0,000
14	22,284	306,622	0,000	0,000	2,500	108,855	1,335,210	0,000	0,000

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
14	22,284	306,622	0,000	0,000					
					2,500	113,897	1.449,107	0,000	0,000
15	23,275	329,897	0,000	0,000					
					2,500	113,540	1.562,647	0,000	0,000
16	22,141	352,038	0,000	0,000					
					2,500	107,327	1.669,974	0,000	0,000
17	20,790	372,828	0,000	0,000					
					2,500	102,052	1.772,026	0,000	0,000
18	20,031	392,859	0,000	0,000					
					2,500	106,140	1.878,166	0,000	0,000
19	22,425	415,284	0,000	0,000					
					2,500	115,795	1.993,961	0,000	0,000
20	23,893	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
21	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
22	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
23	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
24	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
25	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
26	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
26+0,340	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
26+0,346	0,000	439,177	0,000	0,000					
					2,500	0,000	1.993,961	0,000	0,000
27	0,000	439,177	0,000	0,000					

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
27	0,000	439,177	0,000	0,000					
28	21,299	460,476	0,000	0,000	2,500	0,000	1.993,961	0,000	0,000
28+0,568	21,414	481,890	0,000	0,000	0,284	12,130	2.006,091	0,000	0,000
28+4,765	22,027	503,917	0,000	0,000	2,099	91,161	2.097,252	0,000	0,000

	Corte	Aterro
Áreas	503,9170 m²	0,000 m²
Volumes	2.097,252 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	13,949	13,949	0,000	0,000					
1	13,582	27,531	0,000	0,000	10,000	275,310	275,310	0,000	0,000
2	14,921	42,452	0,000	0,000	10,000	285,030	560,340	0,000	0,000
3	13,924	56,376	0,000	0,000	10,000	288,450	848,790	0,000	0,000
4	13,175	69,551	0,000	0,000	10,000	270,990	1.119,780	0,000	0,000
5	11,671	81,222	0,000	0,000	10,000	248,460	1.368,240	0,000	0,000
6	0,000	81,222	0,000	0,000	10,000	0,000	1.368,240	0,000	0,000
7	0,000	81,222	0,000	0,000	10,000	0,000	1.368,240	0,000	0,000
8	14,091	95,313	0,000	0,000	10,000	0,000	1.368,240	0,000	0,000
9	11,204	106,517	0,000	0,000	10,000	252,950	1.621,190	0,000	0,000
10	12,219	118,736	0,000	0,000	10,000	234,230	1.855,420	0,000	0,000
10+14,023	12,256	130,992	0,000	0,000	7,012	171,606	2.027,026	0,000	0,000

	Corte	Aterro
Áreas	130,9920 m²	0,000 m²
Volumes	2.027,026 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	16,322	16,322	0,000	0,000						
0+0,089	16,318	32,640	0,000	0,000	0,045	1,452	1,452	0,000	0,000	
					2,456	75,583	77,035	0,000	0,000	
1	14,463	47,103	0,000	0,000						
					2,500	67,680	144,715	0,000	0,000	
2	12,609	59,712	0,000	0,000						
					2,500	67,433	212,148	0,000	0,000	
3	14,364	74,076	0,000	0,000						
					2,500	59,470	271,618	0,000	0,000	
4	9,424	83,500	0,000	0,000						
					2,500	47,632	319,250	0,000	0,000	
5	9,629	93,129	0,000	0,000						
					2,500	49,195	368,445	0,000	0,000	
6	10,049	103,178	0,000	0,000						
					2,500	54,200	422,645	0,000	0,000	
7	11,631	114,809	0,000	0,000						
					0,634	14,787	437,432	0,000	0,000	
7+1,268	11,692	126,501	0,000	0,000						
					1,866	42,532	479,964	0,000	0,000	
8	11,101	137,602	0,000	0,000						
					2,500	54,135	534,099	0,000	0,000	
9	10,553	148,155	0,000	0,000						
					2,500	55,050	589,149	0,000	0,000	
10	11,467	159,622	0,000	0,000						
					2,500	59,020	648,169	0,000	0,000	
11	12,141	171,763	0,000	0,000						
					2,500	57,547	705,716	0,000	0,000	
12	10,878	182,641	0,000	0,000						
					0,003	0,054	705,770	0,000	0,000	
12+0,005	10,878	193,519	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
12+0,005	10,878	193,519	0,000	0,000					
					2,498	50,679	756,449	0,000	0,000
13	9,414	202,933	0,000	0,000					
					2,500	64,095	820,544	0,000	0,000
14	16,224	219,157	0,000	0,000					
					2,500	84,013	904,557	0,000	0,000
15	17,381	236,538	0,000	0,000					
					1,154	58,901	963,458	0,000	0,000
15+2,307	33,682	270,220	0,000	0,000					
					1,347	92,527	1,055,985	0,000	0,000
16	35,035	305,255	0,000	0,000					
					2,500	182,310	1,238,295	0,000	0,000
17	37,889	343,144	0,000	0,000					
					2,500	179,477	1,417,772	0,000	0,000
18	33,902	377,046	0,000	0,000					
					2,500	161,610	1,579,382	0,000	0,000
19	30,742	407,788	0,000	0,000					
					1,277	77,532	1,656,914	0,000	0,000
19+2,553	29,996	437,784	0,000	0,000					
					1,224	55,475	1,712,389	0,000	0,000
20	15,345	453,129	0,000	0,000					
					2,308	74,620	1,787,009	0,000	0,000
20+4,616	16,986	470,115	0,000	0,000					
					0,192	6,538	1,793,547	0,000	0,000
21	17,068	487,183	0,000	0,000					
					2,500	86,218	1,879,765	0,000	0,000
22	17,419	504,602	0,000	0,000					
					0,885	30,666	1,910,431	0,000	0,000
22+1,769	17,252	521,854	0,000	0,000					
					1,616	54,838	1,965,269	0,000	0,000
23	16,693	538,547	0,000	0,000					

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	16,693	538,547	0,000	0,000					
					2,500	82,065	2.047,334	0,000	0,000
24	16,133	554,680	0,000	0,000					
					2,500	75,860	2.123,194	0,000	0,000
25	14,211	568,891	0,000	0,000					
					2,500	65,695	2.188,889	0,000	0,000
26	12,067	580,958	0,000	0,000					
					2,500	57,340	2.246,229	0,000	0,000
27	10,869	591,827	0,000	0,000					
					2,500	56,320	2.302,549	0,000	0,000
28	11,659	603,486	0,000	0,000					
					2,500	66,845	2.369,394	0,000	0,000
29	15,079	618,565	0,000	0,000					
					0,907	28,461	2.397,855	0,000	0,000
29+1,813	16,318	634,883	0,000	0,000					

	Corte	Aterro
Áreas	634,8830 m²	0,000 m²
Volumes	2.397,855 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	8,525	8,525	14,292	14,292						
0+0,044	8,513	17,038	14,379	28,671	0,022	0,375	0,375	0,631	0,631	
					2,478	41,333	41,708	46,031	46,662	
1	8,167	25,205	4,197	32,868						
					2,500	41,115	82,823	11,360	58,022	
2	8,279	33,484	0,347	33,215						
					2,500	46,782	129,605	3,525	61,547	
3	10,434	43,918	1,063	34,278						
					2,500	50,358	179,963	12,333	73,880	
4	9,709	53,627	3,870	38,148						
					2,500	46,490	226,453	29,045	102,925	
5	8,887	62,514	7,748	45,896						
					2,500	41,428	267,881	47,598	150,523	
6	7,684	70,198	11,291	57,187						
					2,500	36,255	304,136	48,890	199,413	
7	6,818	77,016	8,265	65,452						
					2,500	34,277	338,413	20,738	220,151	
8	6,893	83,909	0,030	65,482						
					2,500	34,700	373,113	0,075	220,226	
9	6,987	90,896	0,000	65,482						
					2,500	30,782	403,895	0,552	220,778	
10	5,326	96,222	0,221	65,703						
					2,500	22,683	426,578	3,123	223,901	
11	3,747	99,969	1,028	66,731						
					2,500	16,525	443,103	7,343	231,244	
12	2,863	102,832	1,909	68,640						
					2,158	10,183	453,286	7,066	238,310	
12+4,315	1,857	104,689	1,366	70,006						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

	Corte	Aterro
Áreas	104,6890 m²	70,006 m²
Volumes	453,286 m3	238,310 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	11,976	11,976	0,000	0,000						
1	11,629	23,605	0,000	0,000	2,500	59,013	59,013	0,000	0,000	
2	11,350	34,955	0,000	0,000	2,500	57,447	116,460	0,000	0,000	
3	9,456	44,411	0,000	0,000	2,500	52,015	168,475	0,000	0,000	
4	7,606	52,017	0,000	0,000	2,500	42,655	211,130	0,000	0,000	
5	6,673	58,690	0,000	0,000	2,500	35,697	246,827	0,000	0,000	
6	6,491	65,181	0,000	0,000	2,500	32,910	279,737	0,000	0,000	
7	7,166	72,347	0,000	0,000	2,500	34,142	313,879	0,000	0,000	
8	8,656	81,003	0,000	0,000	2,500	39,555	353,434	0,000	0,000	
9	14,237	95,240	0,000	0,000	2,500	57,233	410,667	0,000	0,000	
9+0,865	2,924	98,164	0,459	0,459	0,433	7,422	418,089	0,199	0,199	
10	17,950	116,114	0,000	0,459	2,068	43,157	461,246	0,949	1,148	
11	20,354	136,468	0,000	0,459	2,500	95,760	557,006	0,000	1,148	
12	21,385	157,853	0,000	0,459	2,500	104,348	661,354	0,000	1,148	
13	21,118	178,971	0,000	0,459	2,500	106,257	767,611	0,000	1,148	
14	20,734	199,705	0,000	0,459	2,500	104,630	872,241	0,000	1,148	

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
14	20,734	199,705	0,000	0,459					
					2,500	102,150	974,391	0,000	1,148
15	20,126	219,831	0,000	0,459					
					2,500	97,920	1.072,311	0,000	1,148
16	19,042	238,873	0,000	0,459					
					2,500	81,750	1.154,061	0,000	1,148
17	13,658	252,531	0,000	0,459					
					0,433	7,740	1.161,801	0,000	1,148
17+0,865	4,239	256,770	0,000	0,459					
					2,068	35,305	1.197,106	0,000	1,148
18	12,837	269,607	0,000	0,459					
					2,500	61,877	1.258,983	0,000	1,148
19	11,914	281,521	0,000	0,459					
					0,812	19,082	1.278,065	0,000	1,148
19+1,623	11,600	293,121	0,000	0,459					

	Corte	Aterro
Áreas	293,1210 m²	0,459 m²
Volumes	1.278,065 m3	1,148 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	9,490	9,490	0,000	0,000						
0+1,065	9,509	18,999	0,000	0,000	0,533	10,117	10,117	0,000	0,000	
					1,968	37,977	48,094	0,000	0,000	
1	9,793	28,792	0,000	0,000						
					2,500	53,093	101,187	0,000	0,000	
2	11,444	40,236	0,000	0,000						
					2,500	56,623	157,810	0,000	0,000	
3	11,205	51,441	0,000	0,000						
					2,500	54,865	212,675	0,000	0,000	
4	10,741	62,182	0,000	0,000						
					0,865	18,403	231,078	0,000	0,000	
4+1,729	10,547	72,729	0,000	0,000						
					1,636	33,886	264,964	0,000	0,000	
5	10,172	82,901	0,000	0,000						
					1,016	24,795	289,759	0,000	0,000	
5+2,032	14,233	97,134	0,000	0,000						
					1,484	41,893	331,652	0,000	0,000	
6	13,997	111,131	0,000	0,000						
					2,500	68,793	400,445	0,000	0,000	
7	13,520	124,651	0,000	0,000						
					2,500	66,720	467,165	0,000	0,000	
8	13,168	137,819	0,000	0,000						
					2,126	55,801	522,966	0,000	0,000	
8+4,252	13,079	150,898	0,000	0,000						
					0,374	9,791	532,757	0,000	0,000	
9	13,099	163,997	0,000	0,000						
					2,500	66,535	599,292	0,000	0,000	
10	13,515	177,512	0,000	0,000						
					2,500	67,618	666,910	0,000	0,000	
11	13,532	191,044	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
11	13,532	191,044	0,000	0,000						
					2,500	68,255	735,165	0,000	0,000	
12	13,770	204,814	0,000	0,000						
					2,500	69,627	804,792	0,000	0,000	
13	14,081	218,895	0,000	0,000						
					2,500	70,645	875,437	0,000	0,000	
14	14,177	233,072	0,000	0,000						
					2,500	70,640	946,077	0,000	0,000	
15	14,079	247,151	0,000	0,000						
					2,500	70,058	1.016,135	0,000	0,000	
16	13,944	261,095	0,000	0,000						
					2,274	62,433	1.078,568	0,000	0,000	
16+4,548	13,511	274,606	0,000	0,000						
					0,226	6,100	1.084,668	0,000	0,000	
17	13,478	288,084	0,000	0,000						
					2,500	67,595	1.152,263	0,000	0,000	
18	13,560	301,644	0,000	0,000						
					2,500	68,635	1.220,898	0,000	0,000	
19	13,894	315,538	0,000	0,000						
					2,500	70,282	1.291,180	0,000	0,000	
20	14,219	329,757	0,000	0,000						
					0,016	0,385	1.291,565	0,000	0,000	
20+0,032	9,870	339,627	0,000	0,000						
					2,484	49,451	1.341,016	0,000	0,000	
21	10,038	349,665	0,000	0,000						
					1,686	33,841	1.374,857	0,000	0,000	
21+3,372	10,034	359,699	0,000	0,000						
					0,814	16,304	1.391,161	0,000	0,000	
22	9,996	369,695	0,000	0,000						
					2,500	49,838	1.440,999	0,000	0,000	
23	9,939	379,634	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	9,939	379,634	0,000	0,000					
					2,500	49,887	1,490,886	0,000	0,000
24	10,016	389,650	0,000	0,000					
					2,500	50,608	1,541,494	0,000	0,000
25	10,227	399,877	0,000	0,000					
					2,500	51,800	1,593,294	0,000	0,000
26	10,493	410,370	0,000	0,000					
					0,025	0,514	1,593,808	0,000	0,000
26+0,049	10,499	420,869	0,000	0,000					
					1,037	21,878	1,615,686	0,000	0,000
26+2,123	10,598	431,467	0,000	0,000					

	Corte	Aterro
Áreas	431,4670 m²	0,000 m²
Volumes	1.615,686 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	8,448	8,448	7,346	7,346					
1	8,998	17,446	0,000	7,346	2,500	43,615	43,615	18,365	18,365
2	9,245	26,691	0,000	7,346	2,500	45,607	89,222	0,000	18,365
3	11,664	38,355	0,000	7,346	2,500	52,272	141,494	0,000	18,365
4	11,512	49,867	0,000	7,346	2,500	57,940	199,434	0,000	18,365
5	10,432	60,299	2,233	9,579	2,500	54,860	254,294	5,583	23,948
6	9,490	69,789	0,740	10,319	2,500	49,805	304,099	7,432	31,380
7	7,282	77,071	0,000	10,319	2,500	41,930	346,029	1,850	33,230
8	10,432	87,503	0,000	10,319	2,500	44,285	390,314	0,000	33,230
9	10,004	97,507	0,000	10,319	2,500	51,090	441,404	0,000	33,230
10	9,317	106,824	0,000	10,319	2,500	48,302	489,706	0,000	33,230
11	8,613	115,437	0,000	10,319	2,500	44,825	534,531	0,000	33,230
12	7,215	122,652	0,000	10,319	2,500	39,570	574,101	0,000	33,230
12+3,226	6,856	129,508	0,000	10,319	1,613	22,697	596,798	0,000	33,230

	Corte	Aterro
Áreas	129,5080 m²	10,319 m²
Volumes	596,798 m3	33,230 m3

Volume: INTERSEÇÃO 2 ROTULA

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	19,783	19,783	0,000	0,000						
1	19,187	38,970	0,000	0,000	2,500	97,425	97,425	0,000	0,000	
2	4,827	43,797	0,552	0,552	2,500	60,035	157,460	1,380	1,380	
3	1,900	45,697	9,671	10,223	2,500	16,818	174,278	25,557	26,937	
4	3,340	49,037	1,120	11,343	2,500	13,100	187,378	26,977	53,914	
5	6,662	55,699	0,000	11,343	2,500	25,005	212,383	2,800	56,714	
6	7,416	63,115	0,000	11,343	2,500	35,195	247,578	0,000	56,714	
6+1,416	6,918	70,033	0,000	11,343	0,708	10,148	257,726	0,000	56,714	
7	6,312	76,345	0,000	11,343	1,792	23,708	281,434	0,000	56,714	
8	7,032	83,377	0,000	11,343	2,500	33,360	314,794	0,000	56,714	
9	8,715	92,092	0,000	11,343	2,500	39,368	354,162	0,000	56,714	
10	12,141	104,233	0,000	11,343	2,500	52,140	406,302	0,000	56,714	
11	15,874	120,107	0,000	11,343	2,500	70,037	476,339	0,000	56,714	
12	19,075	139,182	0,000	11,343	2,500	87,373	563,712	0,000	56,714	
12+2,832	18,016	157,198	0,000	11,343	1,416	52,521	616,233	0,000	56,714	
					1,084	36,807	653,040	0,000	56,714	
13	15,939	173,137	0,000	11,343						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
13	15,939	173,137	0,000	11,343						
					2,500	63,980	717,020	0,000	56,714	
14	9,653	182,790	0,000	11,343						
					2,500	32,612	749,632	0,293	57,007	
15	3,392	186,182	0,117	11,460						
					2,500	12,255	761,887	5,070	62,077	
16	1,510	187,692	1,911	13,371						
					2,500	6,580	768,467	8,693	70,770	
17	1,122	188,814	1,566	14,937						
					2,500	2,857	771,324	14,470	85,240	
18	0,021	188,835	4,222	19,159						
					2,124	0,045	771,369	23,859	109,099	
18+4,248	0,000	188,835	7,011	26,170						
					0,376	0,000	771,369	5,051	114,150	
19	0,000	188,835	6,423	32,593						
					2,500	6,925	778,294	16,148	130,298	
20	2,770	191,605	0,036	32,629						
					2,500	31,523	809,817	0,090	130,388	
21	9,839	201,444	0,000	32,629						
					2,500	54,145	863,962	0,000	130,388	
22	11,819	213,263	0,000	32,629						
					2,500	61,878	925,840	0,000	130,388	
23	12,932	226,195	0,000	32,629						
					2,500	63,502	989,342	0,000	130,388	
24	12,469	238,664	0,000	32,629						
					2,500	79,835	1,069,177	0,000	130,388	
25	19,465	258,129	0,000	32,629						
					0,332	13,030	1,082,207	0,000	130,388	
25+0,664	19,783	277,912	0,000	32,629						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

	Corte	Aterro
Áreas	277,9120 m²	32,629 m²
Volumes	1.082,207 m3	130,388 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	10,052	10,052	0,000	0,000						
0+1,748	10,080	20,132	0,000	0,000	0,874	17,595	17,595	0,000	0,000	
					1,626	32,772	50,367	0,000	0,000	
1	10,075	30,207	0,000	0,000						
					2,500	49,868	100,235	0,000	0,000	
2	9,872	40,079	0,000	0,000						
					2,500	48,558	148,793	0,000	0,000	
3	9,551	49,630	0,000	0,000						
					2,500	46,335	195,128	0,000	0,000	
4	8,983	58,613	0,000	0,000						
					2,031	34,147	229,275	0,000	0,000	
4+4,061	7,834	66,447	0,000	0,000						
					0,470	7,288	236,563	0,000	0,000	
5	7,689	74,136	0,000	0,000						
					2,500	46,940	283,503	0,000	0,000	
6	11,087	85,223	0,000	0,000						
					0,549	12,087	295,590	0,000	0,000	
6+1,098	10,929	96,152	0,000	0,000						
					1,951	41,937	337,527	0,000	0,000	
7	10,566	106,718	0,000	0,000						
					2,500	52,118	389,645	0,000	0,000	
8	10,281	116,999	0,000	0,000						
					2,500	51,308	440,953	0,000	0,000	
9	10,242	127,241	0,000	0,000						
					1,018	21,090	462,043	0,000	0,000	
9+2,036	10,475	137,716	0,000	0,000						
					1,482	31,570	493,613	0,000	0,000	
10	10,827	148,543	0,000	0,000						
					2,500	55,695	549,308	0,000	0,000	
11	11,451	159,994	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
11	11,451	159,994	0,000	0,000						
					2,500	58,918	608,226	0,000	0,000	
12	12,116	172,110	0,000	0,000						
					2,500	62,377	670,603	0,000	0,000	
13	12,835	184,945	0,000	0,000						
					2,500	65,963	736,566	0,000	0,000	
14	13,550	198,495	0,000	0,000						
					2,500	67,387	803,953	0,000	0,000	
15	13,405	211,900	0,000	0,000						
					2,500	65,430	869,383	0,000	0,000	
16	12,767	224,667	0,000	0,000						
					2,500	63,990	933,373	0,000	0,000	
17	12,829	237,496	0,000	0,000						
					1,441	35,696	969,069	0,000	0,000	
17+2,882	11,943	249,439	0,000	0,000						
					1,059	25,182	994,251	0,000	0,000	
18	11,836	261,275	0,000	0,000						
					2,500	60,515	1,054,766	0,000	0,000	
19	12,370	273,645	0,000	0,000						
					2,500	61,617	1,116,383	0,000	0,000	
20	12,277	285,922	0,000	0,000						
					2,500	56,220	1,172,603	0,000	0,000	
21	10,211	296,133	0,000	0,000						
					0,051	1,042	1,173,645	0,000	0,000	
21+0,102	10,223	306,356	0,000	0,000						
					2,449	49,107	1,222,752	0,000	0,000	
22	9,829	316,185	0,000	0,000						
					0,203	3,993	1,226,745	0,000	0,000	
22+0,406	9,839	326,024	0,000	0,000						
					2,297	47,869	1,274,614	0,000	0,000	
23	11,001	337,025	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	11,001	337,025	0,000						
				0,000	2,500	58,008	1.332,622	0,000	0,000
24	12,202	349,227	0,000						
				0,000	2,500	57,700	1.390,322	0,000	0,000
25	10,878	360,105	0,000						
				0,000	2,500	52,728	1.443,050	0,000	0,000
26	10,213	370,318	0,000						
				0,000	0,535	10,916	1.453,966	0,000	0,000
26+1,070	10,190	380,508	0,000						
				0,000	0,532	10,839	1.464,805	0,000	0,000
26+2,134	10,185	390,693	0,000						
				0,000					

	Corte	Aterro
Áreas	390,6930 m²	0,000 m²
Volumes	1.464,805 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	10,155	10,155	0,000	0,000					
					0,029	0,589	0,589	0,000	0,000
0+0,058	10,153	20,308	0,000	0,000					
					2,471	51,461	52,050	0,000	0,000
1	10,673	30,981	0,000	0,000					
					0,199	4,252	56,302	0,000	0,000
1+0,397	10,747	41,728	0,000	0,000					
					0,050	1,074	57,376	0,000	0,000
1+0,497	10,724	52,452	0,000	0,000					
					0,050	1,060	58,436	0,000	0,000
1+0,596	10,700	63,152	0,000	0,000					
					2,202	48,563	106,999	0,000	0,000
2	11,354	74,506	0,000	0,000					
					0,469	10,832	117,831	0,000	0,000
2+0,938	11,741	86,247	0,000	0,000					
					0,072	1,681	119,512	0,000	0,000
2+1,081	11,773	98,020	0,000	0,000					

	Corte	Aterro
Áreas	98,0200 m²	0,000 m²
Volumes	119,512 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	9,490	9,490	0,000	0,000						
0+1,065	9,509	18,999	0,000	0,000	0,533	10,117	10,117	0,000	0,000	
					1,968	37,977	48,094	0,000	0,000	
1	9,793	28,792	0,000	0,000						
					2,500	53,093	101,187	0,000	0,000	
2	11,444	40,236	0,000	0,000						
					2,500	56,623	157,810	0,000	0,000	
3	11,205	51,441	0,000	0,000						
					2,500	54,865	212,675	0,000	0,000	
4	10,741	62,182	0,000	0,000						
					0,865	18,403	231,078	0,000	0,000	
4+1,729	10,547	72,729	0,000	0,000						
					1,636	33,886	264,964	0,000	0,000	
5	10,172	82,901	0,000	0,000						
					1,016	24,795	289,759	0,000	0,000	
5+2,032	14,233	97,134	0,000	0,000						
					1,484	41,893	331,652	0,000	0,000	
6	13,997	111,131	0,000	0,000						
					2,500	68,793	400,445	0,000	0,000	
7	13,520	124,651	0,000	0,000						
					2,500	66,720	467,165	0,000	0,000	
8	13,168	137,819	0,000	0,000						
					2,126	55,801	522,966	0,000	0,000	
8+4,252	13,079	150,898	0,000	0,000						
					0,374	9,791	532,757	0,000	0,000	
9	13,099	163,997	0,000	0,000						
					2,500	66,535	599,292	0,000	0,000	
10	13,515	177,512	0,000	0,000						
					2,500	67,618	666,910	0,000	0,000	
11	13,532	191,044	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
11	13,532	191,044	0,000	0,000						
					2,500	68,255	735,165	0,000	0,000	
12	13,770	204,814	0,000	0,000						
					2,500	69,627	804,792	0,000	0,000	
13	14,081	218,895	0,000	0,000						
					2,500	70,645	875,437	0,000	0,000	
14	14,177	233,072	0,000	0,000						
					2,500	70,640	946,077	0,000	0,000	
15	14,079	247,151	0,000	0,000						
					2,500	70,058	1.016,135	0,000	0,000	
16	13,944	261,095	0,000	0,000						
					2,274	62,433	1.078,568	0,000	0,000	
16+4,548	13,511	274,606	0,000	0,000						
					0,226	6,100	1.084,668	0,000	0,000	
17	13,478	288,084	0,000	0,000						
					2,500	67,595	1.152,263	0,000	0,000	
18	13,560	301,644	0,000	0,000						
					2,500	68,635	1.220,898	0,000	0,000	
19	13,894	315,538	0,000	0,000						
					2,500	70,282	1.291,180	0,000	0,000	
20	14,219	329,757	0,000	0,000						
					0,016	0,385	1.291,565	0,000	0,000	
20+0,032	9,870	339,627	0,000	0,000						
					2,484	49,451	1.341,016	0,000	0,000	
21	10,038	349,665	0,000	0,000						
					1,686	33,841	1.374,857	0,000	0,000	
21+3,372	10,034	359,699	0,000	0,000						
					0,814	16,304	1.391,161	0,000	0,000	
22	9,996	369,695	0,000	0,000						
					2,500	49,838	1.440,999	0,000	0,000	
23	9,939	379,634	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto									
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	9,939	379,634	0,000	0,000					
					2,500	49,887	1,490,886	0,000	0,000
24	10,016	389,650	0,000	0,000					
					2,500	50,608	1,541,494	0,000	0,000
25	10,227	399,877	0,000	0,000					
					2,500	51,800	1,593,294	0,000	0,000
26	10,493	410,370	0,000	0,000					
					0,025	0,514	1,593,808	0,000	0,000
26+0,049	10,499	420,869	0,000	0,000					
					1,037	21,878	1,615,686	0,000	0,000
26+2,123	10,598	431,467	0,000	0,000					

	Corte	Aterro
Áreas	431,4670 m²	0,000 m²
Volumes	1.615,686 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	11,359	11,359	0,000	0,000					
1	11,359	22,718	0,000	0,000	2,500	56,795	56,795	0,000	0,000
1+1,892	11,265	33,983	0,000	0,000	0,946	21,402	78,197	0,000	0,000
1+2,044	11,265	45,248	0,000	0,000	0,076	1,712	79,909	0,000	0,000

	Corte	Aterro
Áreas	45,2480 m²	0,000 m²
Volumes	79,909 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	6,462	6,462	0,000	0,000						
1	6,625	13,087	0,000	0,000	2,500	32,718	32,718	0,000	0,000	
2	6,807	19,894	0,000	0,000	2,500	33,580	66,298	0,000	0,000	
3	6,631	26,525	0,000	0,000	2,500	33,595	99,893	0,000	0,000	
4	6,507	33,032	0,000	0,000	2,500	32,845	132,738	0,000	0,000	
4+3,029	6,649	39,681	0,000	0,000	1,515	19,925	152,663	0,000	0,000	
4+3,660	8,655	48,336	0,000	0,000	0,316	4,828	157,491	0,000	0,000	
5	8,774	57,110	0,000	0,000	0,670	11,677	169,168	0,000	0,000	
6	9,363	66,473	0,000	0,000	2,500	45,343	214,511	0,000	0,000	
7	9,999	76,472	0,000	0,000	2,500	48,405	262,916	0,000	0,000	
8	10,602	87,074	0,000	0,000	2,500	51,502	314,418	0,000	0,000	
8+2,841	10,993	98,067	0,000	0,000	1,421	30,676	345,094	0,000	0,000	
9	11,228	109,295	0,000	0,000	1,080	23,988	369,082	0,000	0,000	
10	11,654	120,949	0,000	0,000	2,500	57,205	426,287	0,000	0,000	
11	11,941	132,890	0,000	0,000	2,500	58,987	485,274	0,000	0,000	
12	12,263	145,153	0,000	0,000	2,500	60,510	545,784	0,000	0,000	

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
12	12,263	145,153	0,000	0,000						
					2,500	64,998	610,782	0,000	0,000	
13	13,736	158,889	0,000	0,000						
					2,500	67,720	678,502	0,000	0,000	
14	13,352	172,241	0,000	0,000						
					2,500	64,400	742,902	0,000	0,000	
15	12,408	184,649	0,000	0,000						
					2,500	60,748	803,650	0,000	0,000	
16	11,891	196,540	0,000	0,000						
					2,345	55,738	859,388	0,000	0,000	
16+4,690	11,878	208,418	0,000	0,000						
					0,155	3,683	863,071	0,000	0,000	
17	11,884	220,302	0,000	0,000						
					2,500	59,447	922,518	0,000	0,000	
18	11,895	232,197	0,000	0,000						
					2,500	59,362	981,880	0,000	0,000	
19	11,850	244,047	0,000	0,000						
					2,500	52,178	1,034,058	0,000	0,000	
20	9,021	253,068	0,000	0,000						
					2,500	46,888	1,080,946	0,000	0,000	
21	9,734	262,802	0,000	0,000						
					0,312	6,092	1,087,038	0,000	0,000	
21+0,624	9,793	272,595	0,000	0,000						
					0,982	19,250	1,106,288	0,000	0,000	
21+2,587	9,820	282,415	0,000	0,000						
					0,405	7,941	1,114,229	0,000	0,000	
21+3,397	9,787	292,202	0,000	0,000						
					0,802	15,670	1,129,899	0,000	0,000	
22	9,764	301,966	0,000	0,000						
					2,500	48,933	1,178,832	0,000	0,000	
23	9,809	311,775	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	9,809	311,775	0,000	0,000					
					2,500	49,797	1.228,629	0,000	0,000
24	10,110	321,885	0,000	0,000					
					2,500	51,818	1.280,447	0,000	0,000
25	10,617	332,502	0,000	0,000					
					2,500	54,390	1.334,837	0,000	0,000
26	11,139	343,641	0,000	0,000					
					0,305	6,801	1.341,638	0,000	0,000
26+0,609	11,195	354,836	0,000	0,000					
					0,134	2,993	1.344,631	0,000	0,000
26+0,876	11,227	366,063	0,000	0,000					

	Corte	Aterro
Áreas	366,0630 m²	0,000 m²
Volumes	1.344,631 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
0	9,632	9,632	0,000	0,000					
0+0,027	9,623	19,255	0,000	0,000	0,014	0,260	0,260	0,000	0,000
					0,987	18,915	19,175	0,000	0,000
1	9,551	28,806	0,000	0,000					
					0,995	18,984	38,159	0,000	0,000
1+1,989	9,538	38,344	0,000	0,000					
					0,003	0,048	38,207	0,000	0,000
1+1,994	9,537	47,881	0,000	0,000					

	Corte	Aterro
Áreas	47,8810 m²	0,000 m²
Volumes	38,207 m3	0,000 m3

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
0	9,490	9,490	0,000	0,000						
0+1,065	9,509	18,999	0,000	0,000	0,533	10,117	10,117	0,000	0,000	
					1,968	37,977	48,094	0,000	0,000	
1	9,793	28,792	0,000	0,000						
					2,500	53,093	101,187	0,000	0,000	
2	11,444	40,236	0,000	0,000						
					2,500	56,623	157,810	0,000	0,000	
3	11,205	51,441	0,000	0,000						
					2,500	54,865	212,675	0,000	0,000	
4	10,741	62,182	0,000	0,000						
					0,865	18,403	231,078	0,000	0,000	
4+1,729	10,547	72,729	0,000	0,000						
					1,636	33,886	264,964	0,000	0,000	
5	10,172	82,901	0,000	0,000						
					1,016	24,795	289,759	0,000	0,000	
5+2,032	14,233	97,134	0,000	0,000						
					1,484	41,893	331,652	0,000	0,000	
6	13,997	111,131	0,000	0,000						
					2,500	68,793	400,445	0,000	0,000	
7	13,520	124,651	0,000	0,000						
					2,500	66,720	467,165	0,000	0,000	
8	13,168	137,819	0,000	0,000						
					2,126	55,801	522,966	0,000	0,000	
8+4,252	13,079	150,898	0,000	0,000						
					0,374	9,791	532,757	0,000	0,000	
9	13,099	163,997	0,000	0,000						
					2,500	66,535	599,292	0,000	0,000	
10	13,515	177,512	0,000	0,000						
					2,500	67,618	666,910	0,000	0,000	
11	13,532	191,044	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto										
Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.	
11	13,532	191,044	0,000	0,000						
					2,500	68,255	735,165	0,000	0,000	
12	13,770	204,814	0,000	0,000						
					2,500	69,627	804,792	0,000	0,000	
13	14,081	218,895	0,000	0,000						
					2,500	70,645	875,437	0,000	0,000	
14	14,177	233,072	0,000	0,000						
					2,500	70,640	946,077	0,000	0,000	
15	14,079	247,151	0,000	0,000						
					2,500	70,058	1.016,135	0,000	0,000	
16	13,944	261,095	0,000	0,000						
					2,274	62,433	1.078,568	0,000	0,000	
16+4,548	13,511	274,606	0,000	0,000						
					0,226	6,100	1.084,668	0,000	0,000	
17	13,478	288,084	0,000	0,000						
					2,500	67,595	1.152,263	0,000	0,000	
18	13,560	301,644	0,000	0,000						
					2,500	68,635	1.220,898	0,000	0,000	
19	13,894	315,538	0,000	0,000						
					2,500	70,282	1.291,180	0,000	0,000	
20	14,219	329,757	0,000	0,000						
					0,016	0,385	1.291,565	0,000	0,000	
20+0,032	9,870	339,627	0,000	0,000						
					2,484	49,451	1.341,016	0,000	0,000	
21	10,038	349,665	0,000	0,000						
					1,686	33,841	1.374,857	0,000	0,000	
21+3,372	10,034	359,699	0,000	0,000						
					0,814	16,304	1.391,161	0,000	0,000	
22	9,996	369,695	0,000	0,000						
					2,500	49,838	1.440,999	0,000	0,000	
23	9,939	379,634	0,000	0,000						

Cálculo de Volume por Comparação de Perfis: Terreno x Projeto

Estaca	Área Corte	Á.C. Acum.	Área Aterro	Á. A. Acum.	Semi-Dis.	Vol.Corte	V.C.Acum.	Vol.Aterro	V.A.Acum.
23	9,939	379,634	0,000	0,000					
					2,500	49,887	1,490,886	0,000	0,000
24	10,016	389,650	0,000	0,000					
					2,500	50,608	1,541,494	0,000	0,000
25	10,227	399,877	0,000	0,000					
					2,500	51,800	1,593,294	0,000	0,000
26	10,493	410,370	0,000	0,000					
					0,025	0,514	1,593,808	0,000	0,000
26+0,049	10,499	420,869	0,000	0,000					
					1,037	21,878	1,615,686	0,000	0,000
26+2,123	10,598	431,467	0,000	0,000					

	Corte	Aterro
Áreas	431,4670 m²	0,000 m²
Volumes	1.615,686 m3	0,000 m3

6 – DISTRIBUIÇÃO DA TERRAPLENAGEM

[illegible]

Escritório Técnico B.E. Schuring
C.N.P.J.: 32 957 169 /0001-20 I.E. 13.166.792-0
Av. XV de Novembro, 489 - 2º Andar- ☎ (065) 3321 9959 CEP 78020-810 E-mail: schuring@terra.com.br
Porto Cuiabá Mato Grosso

TRECHO: Alzira Santana - RODOVIA DOS IMIGRANTES(MT-407)

QUADRO DE DISTRIBUIÇÃO DE MASSA

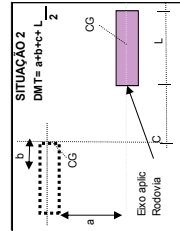
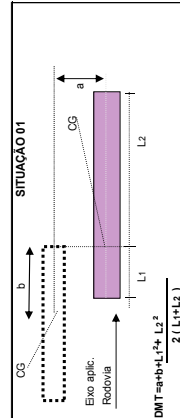
LOCAL: RODOVIA: MT-050 (AV. LEÔNCIO)

EXT.: 4.503KM

[illegible]


RESUMO DA DISTRIBUIÇÃO DE MASSA

	DMT até 50 m	2.675,603	DMT 801a1000	0,000	DMT 1801a2000	3.273,550
	DMT 51a200	0,000	DMT 1001a1200	0,000	DMT 2001a2500	0,000
	DMT 201a400	0,000	DMT 1201a1400	4.630,634	DMT 2500a3000	0,000
	DMT 401a600	3.900,697	DMT 1401a1600	7.172,852	> 5000 (INCLUI MAT. 1º INSER., 2º, SOLO MOLE E REMOÇÃO REVES., BETU.)	0,000
	DMT 601a800	29.529,068	DMT 1601a1800	6.390,390		
			ATERRO 100%apN	2.326,612	REMOÇÃO REVESTIMENTO BETUMINOSO	1.302,574
	REFORÇO DO SUBLEITO				BOTA FORA SUBSTITUIÇÃO DE SOLO MOLE DMT>5,0KM	3.027,771



CORTE	
VOLUME 1º SERVIVEL	= 44.551,085
VOLUME 2º INSERVIVEL	= 13.407,312
SOLO MOLE	= 4.765,131
TOTAL = 62.723,527	

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C.N.P.J.: 32 957 169 /0001-20 I.E. 13.166.792-0
Av. XV de Novembro, 489 - 2º Andar- (065) 3321 9959 CEP 78020-810 E-mail: schuring@terra.com.br

[illegible]

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