



GOVERNO DO ESTADO DE GOIÁS
SECRETARIA DE INFRAESTRUTURA
AGÊNCIA GOIANA DE TRANSPORTE E OBRAS

PROJETO DE ENGENHARIA PARA
IMPLANTAÇÃO E PAVIMENTAÇÃO ASFÁLTICA

Rodovia : GO-222
Trecho : ENTRONCAMENTO GO-156 / CAPELINHA
Extensão : 21,79 km

VOLUME 3C - NOTAS DE SERVIÇO E CÁLCULO DE VOLUMES

MAIO / 2013



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ELABORAÇÃO:



MAIO / 2013

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1 – INTRODUÇÃO

1.1 – APRESENTAÇÃO

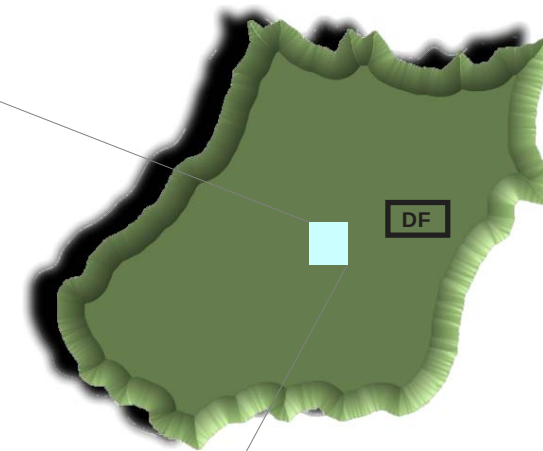
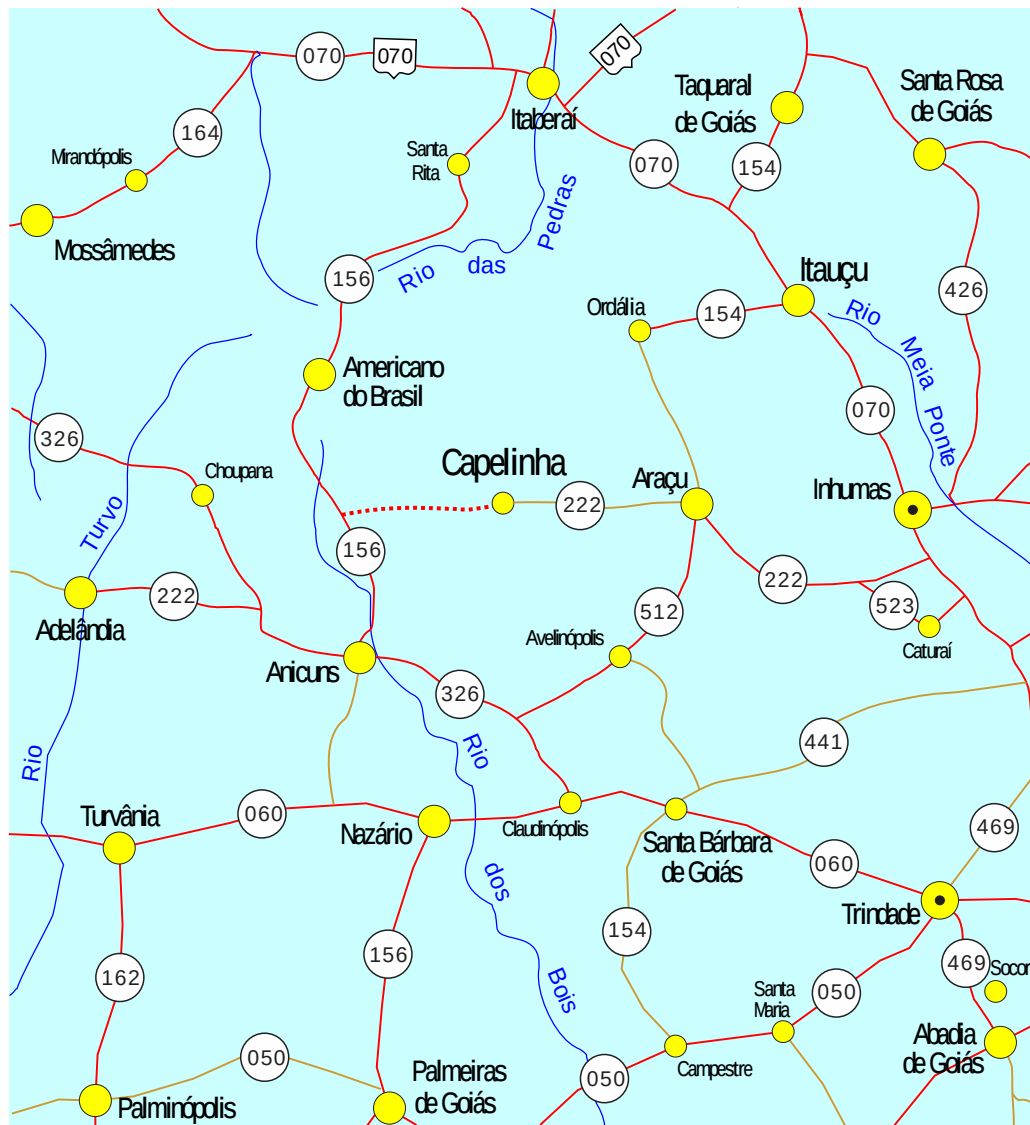
1.1 APRESENTAÇÃO

A empresa **DELANO CAVALCANTI CALIXTO** apresenta à **AGÊNCIA GOIANA DE TRANSPORTES E OBRAS - AGETOP**, o Projeto de Engenharia para Implantação e Pavimentação Asfáltica da Rodovia: GO-222, Trecho: Entroncamento GO-156 / Capelinha, numa extensão total de 21,79 km.

Para tanto, o presente projeto é constituído pelos seguintes Volumes:

- Volume 1 – Relatório do Projeto;
 - Volume 2 – Projeto de Execução;
 - Volume 3A – Estudos Geotécnicos;
 - Volume 3C – Notas de Serviço e Cálculo de Volumes;
 - Volume 4 – Orçamento
-
- **Volume 1 – Relatório do Projeto** – apresentado em formato A-4 contém: Resumo dos Estudos e Projetos realizados, Quadro de Quantidades dos Serviços e Especificações construtivas a serem empregadas nas obras.
 - **Volume 2 – Projeto de Execução** – apresentado em formato A-3, contém: Mapa de Situação, Quadro de Características Técnicas e Operacionais, Quadro Resumo de Quantidades, Listagens e Projetos: Geométrico, Terraplenagem, Pavimentação, Drenagem, Obras de Arte Correntes, Obras de Arte Especiais, Sinalização, Obras Complementares.
 - **Volume 3A – Estudos Geotécnicos** – apresentado em formato A-4, contém os Boletins de Sondagem, Resultados de Ensaios, Folhas de Resumo dos Estudos Estatísticos do Subleito, Empréstimos e Materiais para a Pavimentação.
 - **Volume 3C – Notas de Serviço e Cálculo de Volumes** – apresentado em formato A-4 contém todas as Notas de Serviço e Cálculo de Volumes do trecho, necessários à execução da obra.
 - **Volume 4 – Orçamento** – apresentado em formato A4, contém o custo de todas as obras necessárias à execução do projeto, o resumo dos preços e as composições unitárias.

2 – MAPA DE SITUAÇÃO



3 – NOTAS DE SERVIÇO DE TERRAPLENAGEM

NOTA DE SERVIÇO DE TERRAPLENAGEM																											
RODOVIA: GO-222														TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA										PLATAFORMA: 12,40m			
POSIÇÃO		LADO ESQUERDO										EIXO (m)				LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR,	COTA PROJ,	COTA VERM.	BORDO (m)		%	OFFSET			BERMA		OFFSET			
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					ALT.	DIST.		COTA	%	DIST.	COTA					
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NOTA DE SERVIÇO DE TERRAPLENAGEM		
RODOVIA: GO-222	TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA	PLATAFORMA: 12,40m

ESTACA	POSICÃO	LADO ESQUERDO										EIXO (m)			LADO DIREITO											
	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA	COTA	COTA	BORDO (m)		%	OFFSET			BERMA			OFFSET	
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.		TERR.	PROJ.	VERM.	COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
49							732,499	-9,251	2,034	734,533	-6,200	-3,00	732,925	734,719	-1,794	734,533	6,200	-3,00	2,054	9,280	732,479					
50							732,402	-9,936	2,491	734,893	-6,200	-3,00	733,227	735,079	-1,852	734,893	6,200	-3,00	2,009	9,213	732,884					
51							732,969	-9,518	2,212	735,181	-6,200	-3,00	733,463	735,367	-1,904	735,181	6,200	-3,00	2,401	9,801	732,780					
52							733,356	-9,263	2,042	735,398	-6,200	-3,00	733,710	735,584	-1,874	735,398	6,200	-3,00	2,288	9,631	733,110					
53							733,439	-9,355	2,103	735,542	-6,200	-3,00	733,863	735,728	-1,865	735,542	6,200	-3,00	2,200	9,500	733,342					
54							733,815	-8,900	1,800	735,615	-6,200	-3,00	734,009	735,801	-1,792	735,615	6,200	-3,00	2,214	9,521	733,401					
55							733,953	-8,694	1,663	735,616	-6,200	-3,00	734,155	735,802	-1,647	735,616	6,200	-3,00	2,083	9,324	733,533					
56							733,925	-8,629	1,619	735,544	-6,200	-3,00	734,008	735,730	-1,722	735,544	6,200	-3,00	2,214	9,522	733,330					
57							733,889	-8,469	1,512	735,401	-6,200	-3,00	733,858	735,587	-1,729	735,401	6,200	-3,00	2,236	9,555	733,165					
58							733,834	-8,228	1,352	735,186	-6,200	-3,00	733,798	735,372	-1,574	735,186	6,200	-3,00	2,158	9,437	733,028					
59							733,730	-7,954	1,170	734,900	-6,200	-3,00	733,759	735,086	-1,327	734,900	6,200	-3,00	1,856	8,983	733,044					
60							733,620	-7,582	0,921	734,541	-6,200	-3,00	733,712	734,727	-1,015	734,541	6,200	-3,00	1,457	8,386	733,084					
61							733,221	-7,533	0,889	734,110	-6,200	-3,00	733,451	734,296	-0,845	734,110	6,200	-3,00	1,183	7,975	732,927					
62							732,861	-7,321	0,747	733,608	-6,200	-3,00	733,131	733,794	-0,663	733,608	6,200	-3,00	0,996	7,693	732,612					
63							732,468	-7,048	0,565	733,033	-6,200	-3,00	732,646	733,219	-0,573	733,033	6,200	-3,00	0,826	7,439	732,207					
64							732,028	-6,738	0,359	732,387	-6,200	-3,00	732,154	732,573	-0,419	732,387	6,200	-3,00	0,517	6,976	731,870					
65							731,531	-6,407	0,138	731,669	-6,200	-3,00	731,677	731,855	-0,178	731,669	6,200	-3,00	0,220	6,530	731,449					
66							730,759	-6,380	0,120	730,879	-6,200	-3,00	730,901	731,065	-0,164	730,879	6,200	-3,00	0,188	6,482	730,691					
67							0,000	0,000	730,017	730,017	-6,200	-3,00	730,125	730,203	-0,078	730,017	6,200	-3,00	0,089	6,334	729,928					
68							0,000	0,000	729,083	729,083	-6,200	-3,00	729,349	729,269	0,080	729,083	6,200	-3,00	0,060	6,290	729,023					
69							728,295	-6,391	-0,191	728,104	-6,200	-3,00	728,573	728,290	0,283	728,104	6,200	-3,00	-0,137	6,337	728,241					
70							727,509	-6,586	-0,385	727,124	-6,200	-3,00	727,797	727,310	0,487	727,124	6,200	-3,00	-0,327	6,527	727,451					
71							726,486	-6,542	-0,342	726,144	-6,200	-3,00	726,530	726,330	0,200	726,144	6,200	-3,00	-0,156	6,356	726,300					
72							725,938	-6,974	-0,774	725,164	-6,200	-3,00	725,531	725,350	0,181	725,164	6,200	-3,00	-0,568	6,768	725,732					
73							0,000	0,000	724,184	724,184	-6,200	-3,00	723,858	724,370	-0,512	724,184	6,200	-3,00	0,166	6,449	724,018					
74							723,232	-6,228	-0,028	723,204	-6,200	-3,00	722,970	723,390	-0,420	723,204	6,200	-3,00	0,081	6,321	723,123					
75							720,337	-9,031	1,887	722,224	-6,200	-3,00	722,038	722,410	-0,372	722,224	6,200	-3,00	0,855	7,482	721,369					
76							717,505	-11,866	3,778	721,283	-6,200	-3,00	720,880	721,469	-0,589	721,283	6,200	-3,00	2,413	9,819	718,870					
77							715,455	-13,654	4,969	720,424	-6,200	-3,00	719,702	720,610	-0,908	720,424	6,200	-3,00	4,932	13,598	715,492					
78							715,119	-12,992	4,528	719,647	-6,200	-3,00	718,710	719,833	-1,123	719,647	6,200	-3,00	5,643	14,665	714,004					
79							712,392	-16,040	6,560	718,952	-6,200	-3,00	717,792	719,138	-1,346	718,952	6,200	-3,00	6,385	15,778	712,567					
80							711,575	-16,347	6,765	718,340	-6,200	-3,00	716,977	718,526	-1,549	718,340	6,200	-3,00	5,659	14,688	712,681					
81							711,504	-15,659	6,305	717,809	-6,200	-3,00	716,344	717,995	-1,651	717,809	6,200	-3,00	4,833	13,450	712,976					
82							711,750	-14,617	5,611	717,361	-6,200	-3,00	715,880	717,547	-1,667	717,361	6,200	-3,00	4,414	12,820	712,947					
83							712,220	-13,362	4,775	716,995	-6,200	-3,00	715,394	717,181	-1,787	716,995	6,200	-3,00	3,856	11,985	713,139					
84							713,512	-10,999	3,199	716,711	-6,200	-3,00	714,888	716,897	-2,009	716,711	6,200	-3,00	3,138	10,908	713,573					
85							713,776	-10,377	2,731	716,507	-6,281	-3,00	715,256	716,695	-1,439	716,509	6,200	3,00	2,173	9,460	714,336					
86							713,836	-10,299	2,545	716,381	-6,481	-3,00	715,097	716,575	-1,478	716,539	6,200	-0,58	1,510	8,465	715,029					
86	11,93						713,827	-10,377	2,518	716,345	-6,600	-3,00	715,002	716,543	-1,541	716,617	6,200	1,20	1,542	8,514	715,075					
87							713,823	-10,375	2,517	716,340	-6,600	-3,00	714,933	716,538	-1,605	716,687	6,200	2,40	1,572	8,558	715,115					
88							713,917	-10,301	2,467	716,384	-6,600	-3,00	714,945	716,582	-1,637	716,768	6,200	3,00	1,663	8,695	715,105					
89							714,327	-9,876	2,184	716,511	-6,600	-3,00	715,312	716,709	-1,397	716,895	6,200	3,00	1,585	8,577	715,310					
90							714,565	-9,833	2,155	716,720	-6,600	-3,00	716,825	716,918	-0,093	717,104	6,200	3,00	0,634	7,151	716,470					
91							715,601	-8,715	1,410	717,011	-6,600	-3,00	717,118	717,209	-0,091	717,395	6,200	3,00	1,042	7,763	716,353					
92							716,094	-8,535	1,290	717,384	-6,600	-3,00	717,396	717,582	-0,186	717,768	6,200	3,00	1,113	7,870	716,655					
93							715,199	-10,561	2,640	717,839	-6,600	-3,00	717,660	718,037	-0,377	718,223	6,200	3,00	1,711	8,767	716,512					
94							715,710	-10,542	2,628	718,338	-6,600	-3,00	717,910	718,536	-0,626	718,722	6,200	3,00	2,714	10,272	716,008					
94	16,39						715,025	-12,183	3,722	718,747	-6,600	-3,00	718,105	718,945	-0,840	719,019	6,200	1,20	3,427	11,341	715,592					
95							714,798	-12,624	4,040	718,838	-6,564	-3,00	718,146	719,035	-0,889	719,076	6,200	0,66	3,661	11,691	715,415					
96							713,988	-14,396	5,355	719,343	-6,364	-3,00	718,610	719,534	-0,924	719,389	6,200	-2,34	3,649	11,674	715,740					
97							715,853	-12,191	3,994	719,847	-6,200	-3,00	719,075	720,033	-0,958	719,8										

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM																PLATAFORMA: 12,40m							
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																							

ESTACA	FRAÇÃO (m)	LADO ESQUERDO										EIXO (m)			LADO DIREITO											
		OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET		BERMA			OFFSET		
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
98							717,159	-10,981	3,187	720,346	-6,200	-3,00	719,539	720,532	-0,993	720,346	6,200	-3,00	2,329	9,694	718,017					
99							719,273	-8,559	1,572	720,845	-6,200	-3,00	720,003	721,031	-1,028	720,845	6,200	-3,00	1,063	7,795	719,782					
100							720,320	-7,736	1,024	721,344	-6,200	-3,00	721,039	721,530	-0,491	721,344	6,200	-3,00	0,495	6,942	720,849					
101							721,473	-6,755	0,370	721,843	-6,200	-3,00	722,004	722,029	-0,025	721,843	6,200	-3,00	0,016	6,224	721,827					
102							722,510	-6,368	-0,168	722,342	-6,200	-3,00	722,968	722,528	0,440	722,342	6,200	-3,00	-0,444	6,644	722,786					
103							724,293	-7,651	-1,452	722,841	-6,200	-3,00	723,933	723,027	0,906	722,841	6,200	-3,00	-1,028	7,227	723,869					
104							725,363	-8,223	-2,023	723,340	-6,200	-3,00	724,897	723,526	1,371	723,340	6,200	-3,00	-1,523	7,723	724,863					
105							726,384	-8,745	-2,545	723,839	-6,200	-3,00	725,857	724,025	1,832	723,839	6,200	-3,00	-1,994	8,194	725,833					
106							727,056	-8,918	-2,718	724,338	-6,200	-3,00	726,466	724,524	1,942	724,336	6,267	-3,00	-1,914	8,180	726,250					
107							727,680	-8,906	-2,706	724,974	-6,200	-0,79	727,119	725,023	2,096	724,829	6,467	-3,00	-2,400	8,867	727,229					
107	13,30						728,009	-8,780	-2,580	725,429	-6,200	1,20	727,537	725,355	2,182	725,157	6,600	-3,00	-2,495	9,095	727,652					
108							728,049	-8,590	-2,390	725,659	-6,200	2,21	727,748	725,522	2,226	725,324	6,600	-3,00	-2,525	9,124	727,849					
109							728,173	-8,166	-1,966	726,207	-6,200	3,00	728,390	726,021	2,369	725,823	6,600	-3,00	-2,611	9,211	728,434					
110							728,307	-7,801	-1,601	726,706	-6,200	3,00	729,048	726,520	2,528	726,322	6,600	-3,00	-2,601	9,201	728,923					
111							728,685	-7,680	-1,480	727,205	-6,200	3,00	729,495	727,019	2,476	726,821	6,600	-3,00	-2,545	9,144	729,366					
112							729,098	-7,594	-1,394	727,704	-6,200	3,00	729,932	727,518	2,414	727,320	6,600	-3,00	-2,464	9,064	729,784					
113							729,531	-7,528	-1,328	728,203	-6,200	3,00	730,356	728,017	2,339	727,819	6,600	-3,00	-2,437	9,036	730,256					
114							730,231	-7,728	-1,529	728,702	-6,200	3,00	730,768	728,516	2,252	728,318	6,600	-3,00	-2,529	9,129	730,847					
115							730,948	-7,946	-1,747	729,201	-6,200	3,00	731,168	729,015	2,153	728,817	6,600	-3,00	-3,114	9,714	731,931					
116							731,506	-8,006	-1,806	729,700	-6,200	3,00	731,778	729,514	2,264	729,316	6,600	-3,00	-3,072	9,672	732,388					
117							732,092	-8,093	-1,893	730,199	-6,200	3,00	732,390	730,013	2,377	729,815	6,600	-3,00	-3,100	9,700	732,915					
118							732,850	-8,351	-2,152	730,698	-6,200	3,00	732,986	730,512	2,474	730,314	6,600	-3,00	-2,759	9,358	733,073					
119							733,523	-8,525	-2,326	731,197	-6,200	3,00	733,600	731,011	2,589	730,813	6,600	-3,00	-2,883	9,483	733,696					
120							734,119	-8,623	-2,423	731,696	-6,200	3,00	734,231	731,510	2,721	731,312	6,600	-3,00	-3,398	9,997	734,710					
121							734,543	-8,547	-2,348	732,195	-6,200	3,00	734,694	732,009	2,685	731,811	6,600	-3,00	-3,754	10,353	735,565					
122							734,893	-8,397	-2,197	732,696	-6,200	3,00	735,079	732,510	2,569	732,312	6,600	-3,00	-3,662	10,261	735,974					
122	12,22						734,923	-8,220	-2,020	732,903	-6,200	1,21	735,111	732,828	2,283	732,630	6,600	-3,00	-2,816	9,416	735,446					
123							734,946	-8,106	-1,906	733,040	-6,200	0,03	735,131	733,038	2,093	732,842	6,522	-3,00	-2,236	8,757	735,078					
124							735,014	-7,797	-1,597	733,417	-6,200	-3,00	735,184	733,601	1,583	733,411	6,322	-3,00	-1,687	8,009	735,098					
125							735,008	-7,195	-0,994	734,014	-6,200	-3,00	735,235	734,200	1,035	734,014	6,200	-3,00	-1,311	7,512	735,325					
126							734,916	-6,468	-0,268	734,648	-6,200	-3,00	735,120	734,834	0,286	734,648	6,200	-3,00	-0,561	6,761	735,209					
127							734,783	-7,001	0,534	735,317	-6,200	-3,00	735,004	735,503	-0,499	735,317	6,200	-3,00	0,225	6,537	735,092					
128							734,627	-8,292	1,395	736,022	-6,200	-3,00	734,888	736,208	-1,320	736,022	6,200	-3,00	1,041	7,762	734,981					
129							734,464	-9,647	2,298	736,762	-6,200	-3,00	734,773	736,948	-2,175	736,762	6,200	-3,00	1,586	8,580	735,176					
130							734,381	-10,934	3,157	737,538	-6,200	-3,00	734,656	737,724	-3,068	737,538	6,200	-3,00	2,878	10,517	734,660					
131							734,453	-12,043	3,896	738,349	-6,200	-3,00	735,199	738,535	-3,336	738,349	6,200	-3,00	3,247	11,070	735,102					
132							734,363	-13,447	4,832	739,195	-6,200	-3,00	735,814	739,381	-3,567	739,195	6,200	-3,00	3,681	11,722	735,514					
133							734,935	-13,912	5,142	740,077	-6,200	-3,00	736,394	740,263	-3,869	740,077	6,200	-3,00	4,003	12,205	736,074					
134							735,506	-14,432	5,488	740,994	-6,200	-3,00	736,973	741,180	-4,207	740,994	6,200	-3,00	4,363	12,744	736,631					
135							736,136	-14,915	5,810	741,946	-6,200	-3,00	737,553	742,132	-4,579	741,946	6,200	-3,00	4,760	13,340	737,186					
136							737,473	-14,392	5,461	742,934	-6,200	-3,00	738,883	743,120	-4,237	742,934	6,200	-3,00	4,397	12,796	738,537					
137							738,845	-13,869	5,113	743,958	-6,200	-3,00	740,212	744,144	-3,932	743,958	6,200	-3,00	4,071	12,306	739,887					
138							740,666	-12,725	4,350	745,016	-6,200	-3,00	741,542	745,202	-3,660	745,016	6,200	-3,00	3,539	11,508	741,477					
139							742,059	-12,278	4,051	746,110	-6,200	-3,00	742,872	746,296	-3,424	746,110	6,200	-3,00	3,296	11,144	742,814					
140							743,417	-11,934	3,823	747,240	-6,200	-3,00	744,202	747,426	-3,224	747,240	6,200	-3,00	3,095	10,842	744,145					
141							744,795	-11,614	3,610	748,405	-6,200	-3,00	745,558	748,591	-3,033	748,405	6,200	-3,00	2,907	10,560	745,498					
142							746,170	-11,352	3,435	749,605	-6,200	-3,00	746,913	749,791	-2,878	749,605	6,200	-3,00	2,751	10,326	746,854					
143							747,392	-11,372	3,449	750,841	-6,200	-3,00	748,267	751,027	-2,760	750,841	6,200	-3,00	2,387	9,781	748,454					
144							748,743	-11,250	3,366	752,109	-6,200	-3,00	749,622	752,295	-2,673	752,109	6,200	-3,00	2,304	9,657	749,805					
145							750,																			

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM																PLATAFORMA: 12,40m							
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																							

ESTACA	POSICÃO	LADO ESQUERDO										EIXO (m)			LADO DIREITO											
	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA	COTA	COTA	BORDO (m)		%	OFFSET			BERMA			OFFSET	
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.		TERR.	PROJ.	VERM.	COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
147							752,764	-10,960	3,173	755,937	-6,200	-3,00	753,651	756,123	-2,472	755,937	6,200	-3,00	2,114	9,372	753,823					
148							753,466	-11,821	3,747	757,213	-6,200	-3,00	754,999	757,399	-2,400	757,213	6,200	-3,00	2,420	9,831	754,793					
149							754,947	-11,514	3,542	758,489	-6,200	-3,00	756,339	758,675	-2,336	758,489	6,200	-3,00	2,388	9,783	756,101					
150							756,142	-11,636	3,623	759,765	-6,200	-3,00	757,679	759,951	-2,272	759,765	6,200	-3,00	2,322	9,683	757,443					
151							757,306	-11,804	3,735	761,041	-6,200	-3,00	758,853	761,227	-2,374	761,041	6,200	-3,00	2,415	9,823	758,626					
152							758,514	-11,905	3,803	762,317	-6,200	-3,00	760,027	762,503	-2,476	762,317	6,200	-3,00	2,521	9,982	759,796					
153							759,993	-11,600	3,600	763,593	-6,200	-3,00	761,201	763,779	-2,578	763,593	6,200	-3,00	2,511	9,967	761,082					
154							761,171	-11,747	3,698	764,869	-6,200	-3,00	762,375	765,055	-2,680	764,869	6,200	-3,00	2,603	10,106	762,266					
155							762,344	-11,902	3,801	766,145	-6,200	-3,00	763,550	766,331	-2,781	766,145	6,200	-3,00	2,710	10,266	763,435					
156							763,500	-12,082	3,921	767,421	-6,200	-3,00	764,706	767,607	-2,901	767,421	6,200	-3,00	2,832	10,449	764,589					
157							764,655	-12,264	4,042	768,697	-6,200	-3,00	765,863	768,883	-3,020	768,697	6,200	-3,00	2,958	10,637	765,739					
158							766,326	-11,670	3,647	769,973	-6,200	-3,00	767,019	770,159	-3,140	769,973	6,200	-3,00	2,992	10,689	766,981					
159							767,477	-11,858	3,772	771,249	-6,200	-3,00	768,176	771,435	-3,259	771,249	6,200	-3,00	3,063	10,794	768,186					
160							768,660	-11,998	3,865	772,525	-6,200	-3,00	769,332	772,711	-3,379	772,525	6,200	-3,00	3,179	10,969	769,346					
161							770,047	-11,832	3,754	773,801	-6,200	-3,00	770,715	773,987	-3,272	773,801	6,200	-3,00	3,098	10,847	770,703					
162							771,393	-11,726	3,684	775,077	-6,200	-3,00	772,098	775,263	-3,165	775,077	6,200	-3,00	2,994	10,691	772,083					
163							773,250	-10,894	3,102	776,352	-6,242	-3,00	773,480	776,539	-3,059	776,353	6,200	-3,00	2,960	10,640	773,393					
164							774,634	-10,923	2,988	777,622	-6,442	-3,00	774,863	777,815	-2,952	777,742	6,200	-1,20	2,966	10,650	774,776					
164	15,85						775,730	-10,947	2,898	778,628	-6,600	-3,00	775,959	778,826	-2,867	778,901	6,200	1,20	3,036	10,754	775,865					
165							776,013	-10,920	2,880	778,893	-6,600	-3,00	776,246	779,091	-2,845	779,204	6,200	1,82	3,061	10,791	776,143					
166							777,433	-10,705	2,736	780,169	-6,600	-3,00	777,257	780,367	-3,110	780,553	6,200	3,00	3,586	11,579	776,967					
167							778,567	-10,917	2,878	781,445	-6,600	-3,00	778,293	781,643	-3,350	781,829	6,200	3,00	3,827	11,941	778,002					
168							779,777	-10,974	2,916	782,693	-6,600	-3,00	779,618	782,891	-3,273	783,077	6,200	3,00	3,750	11,824	779,327					
169							781,058	-10,856	2,838	783,896	-6,600	-3,00	780,941	784,094	-3,153	784,280	6,200	3,00	3,424	11,335	780,856					
170							782,370	-10,625	2,683	785,053	-6,600	-3,00	782,276	785,251	-2,975	785,437	6,200	3,00	3,293	11,139	782,144					
171							783,682	-10,323	2,482	786,164	-6,600	-3,00	783,520	786,362	-2,842	786,548	6,200	3,00	3,639	11,659	782,909					
172							785,003	-9,941	2,228	787,231	-6,600	-3,00	784,816	787,429	-2,613	787,615	6,200	3,00	3,769	11,853	783,846					
173							786,330	-9,482	1,921	788,251	-6,600	-3,00	786,163	788,449	-2,286	788,635	6,200	3,00	3,163	10,945	785,472					
174							787,660	-8,949	1,566	789,226	-6,600	-3,00	787,560	789,424	-1,864	789,610	6,200	3,00	2,547	10,021	787,063					
175							788,997	-8,338	1,159	790,156	-6,600	-3,00	789,001	790,354	-1,353	790,540	6,200	3,00	2,528	9,993	788,012					
176							790,372	-7,602	0,668	791,040	-6,600	-3,00	789,957	791,238	-1,281	791,424	6,200	3,00	2,539	10,010	788,885					
177							791,663	-6,925	0,216	791,879	-6,600	-3,00	791,136	792,077	-0,941	792,263	6,200	3,00	1,618	8,628	790,645					
178							792,974	-6,901	-0,301	792,673	-6,600	-3,00	792,552	792,871	-0,319	793,057	6,200	3,00	0,550	7,024	792,507					
179							794,257	-7,436	-0,837	793,420	-6,600	-3,00	793,941	793,618	0,323	793,804	6,200	3,00	-0,311	6,511	794,115					
180							795,505	-7,982	-1,382	794,123	-6,600	-3,00	795,471	794,321	1,150	794,507	6,200	3,00	-1,059	7,260	795,566					
181							795,492	-7,312	-0,712	794,780	-6,600	-3,00	795,464	794,978	0,486	795,164	6,200	3,00	-0,440	6,640	795,604					
182							796,523	-7,732	-1,132	795,391	-6,600	-3,00	795,687	795,589	0,098	795,775	6,200	3,00	0,310	6,665	795,465					
183							797,975	-8,618	-2,018	795,957	-6,600	-3,00	796,154	796,155	-0,001	796,341	6,200	3,00	0,878	7,517	795,463					
184							798,797	-8,920	-2,319	796,478	-6,600	-3,00	796,907	796,676	0,231	796,862	6,200	3,00	1,004	7,705	795,858					
185							799,909	-9,556	-2,956	796,953	-6,600	-3,00	797,642	797,151	0,491	797,337	6,200	3,00	0,721	7,281	796,616					
185	13,46						800,497	-9,850	-3,250	797,247	-6,600	-3,00	799,260	797,445	1,815	797,519	6,200	1,20	0,229	6,544	797,290					
186							798,317	-7,467	-0,933	797,384	-6,535	-3,00	798,212	797,580	0,632	797,594	6,200	0,23	-0,236	6,437	797,830					
187							801,680	-10,240	-3,906	797,774	-6,335	-3,00	799,914	797,964	1,950	797,792	6,200	-2,80	-1,097	7,297	798,889					
188							802,298	-10,382	-4,181	798,117	-6,200	-3,00	801,120	798,303	2,817	798,117	6,200	-3,00	-1,869	8,070	799,986					
189							802,629	-10,419	-4,219	798,410	-6,200	-3,00	801,628	798,596	3,032	798,410	6,200	-3,00	-2,312	8,512	800,722					
190							802,952	-10,495	-4,295	798,657	-6,200	-3,00	802,132	798,843	3,289	798,657	6,200	-3,00	-2,854	9,054	801,511					
191							802,923	-10,263	-4,064	798,859	-6,200	-3,00	802,044	799,045	2,999	798,859	6,200	-3,00	-2,633	8,832	801,492					
192							802,862	-10,026	-3,826	799,036	-6,200	-2,68	801,954	799,202	2,752	799,012	6,342	-3,00	-2,564	8,906	801,576					
193							802,805	-9,671	-3,471	799,334	-6,200	0,34	801,965	799,313	2,652	799,117	6,542	-3,00	-2,546	9,088	801,663					

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM																PLATAFORMA: 12,40m							
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																							

POSICÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA		%	OFFSET		BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET		BERMA		OFFSET				
		COTA	DIST.	COTA	DIST.		ALT.	COTA	DIST.	ALT.					DIST.	COTA		%	DIST.	COTA						
195							802,444	-9,059	-2,859	799,585	-6,200	3,00	801,905	799,399	2,506	799,201	6,600	-3,00	-1,980	8,580	801,181					
196							801,952	-8,592	-2,392	799,560	-6,200	3,00	801,447	799,374	2,073	799,176	6,600	-3,00	-1,565	8,165	800,741					
197							801,377	-8,088	-1,888	799,489	-6,200	3,00	800,962	799,303	1,659	799,105	6,600	-3,00	-1,176	7,776	800,281					
198							800,814	-7,641	-1,441	799,373	-6,200	3,00	800,396	799,187	1,209	798,989	6,600	-3,00	-1,250	7,850	800,239					
199							800,192	-7,181	-0,981	799,211	-6,200	3,00	800,109	799,025	1,084	798,827	6,600	-3,00	-0,941	7,540	799,768					
200							799,651	-6,846	-0,647	799,004	-6,200	3,00	799,810	798,818	0,992	798,620	6,600	-3,00	-1,017	7,617	799,637					
201							799,078	-6,527	-0,327	798,751	-6,200	3,00	799,111	798,565	0,546	798,367	6,600	-3,00	-0,647	7,247	799,014					
202							798,503	-6,285	-0,086	798,417	-6,200	2,42	798,435	798,267	0,168	798,069	6,600	-3,00	-0,322	6,921	798,391					
202	8,15						798,262	-6,255	-0,055	798,207	-6,200	1,20	798,165	798,133	0,032	797,935	6,600	-3,00	-0,202	6,802	798,137					
203							797,904	-6,216	-0,016	797,888	-6,200	-0,58	797,768	797,924	-0,156	797,729	6,481	-3,00	-0,021	6,502	797,750					
204							797,103	-6,568	0,246	797,349	-6,200	-3,00	797,099	797,535	-0,436	797,346	6,281	-3,00	0,263	6,677	797,083					
205							796,437	-6,915	0,477	796,914	-6,200	-3,00	796,429	797,100	-0,671	796,914	6,200	-3,00	0,503	6,955	796,411					
206							795,758	-7,214	0,676	796,434	-6,200	-3,00	795,690	796,620	-0,930	796,434	6,200	-3,00	0,772	7,358	795,662					
207							795,085	-7,435	0,824	795,909	-6,200	-3,00	794,933	796,095	-1,162	795,909	6,200	-3,00	0,929	7,593	794,980					
208							794,442	-7,544	0,896	795,338	-6,200	-3,00	794,200	795,524	-1,324	795,338	6,200	-3,00	1,049	7,773	794,289					
209							793,778	-7,614	0,943	794,721	-6,200	-3,00	793,474	794,907	-1,433	794,721	6,200	-3,00	1,235	8,052	793,486					
210							793,419	-7,161	0,640	794,059	-6,200	-3,00	792,735	794,245	-1,510	794,059	6,200	-3,00	1,318	8,178	792,741					
211							792,678	-7,211	0,674	793,352	-6,200	-3,00	791,948	793,538	-1,590	793,352	6,200	-3,00	1,405	8,307	791,947					
212							791,599	-7,699	1,000	792,599	-6,200	-3,00	791,103	792,785	-1,682	792,599	6,200	-3,00	1,484	8,426	791,115					
213							790,905	-7,543	0,895	791,800	-6,200	-3,00	790,375	791,986	-1,611	791,800	6,200	-3,00	1,594	8,592	790,206					
214							790,098	-7,488	0,859	790,957	-6,200	-3,00	789,588	791,143	-1,555	790,957	6,200	-3,00	1,537	8,505	789,420					
215							789,276	-7,388	0,791	790,067	-6,200	-3,00	788,801	790,253	-1,452	790,067	6,200	-3,00	1,435	8,353	788,632					
216							788,368	-7,347	0,764	789,132	-6,200	-3,00	787,907	789,318	-1,411	789,132	6,200	-3,00	1,394	8,291	787,738					
217							787,260	-7,538	0,892	788,152	-6,200	-3,00	787,056	788,338	-1,282	788,152	6,200	-3,00	1,288	8,133	786,864					
218							786,372	-7,331	0,754	787,126	-6,200	-3,00	786,155	787,312	-1,157	787,126	6,200	-3,00	1,374	8,262	785,752					
219							785,509	-7,019	0,546	786,055	-6,200	-3,00	785,217	786,241	-1,024	786,055	6,200	-3,00	1,157	7,936	784,898					
220							784,551	-6,793	0,395	784,946	-6,200	-3,00	784,328	785,132	-0,804	784,946	6,200	-3,00	0,929	7,593	784,017					
221							783,616	-6,524	0,216	783,832	-6,200	-3,00	783,436	784,018	-0,582	783,832	6,200	-3,00	0,742	7,313	783,090					
222							782,700	-6,228	0,019	782,719	-6,200	-3,00	782,512	782,905	-0,393	782,719	6,200	-3,00	0,620	7,130	782,099					
223							781,790	-6,385	-0,185	781,605	-6,200	-3,00	781,605	781,791	-0,186	781,605	6,200	-3,00	0,459	6,889	781,146					
224							780,892	-6,600	-0,400	780,492	-6,200	-3,00	780,724	780,678	0,046	780,492	6,200	-3,00	0,303	6,654	780,189					
225							779,998	-6,820	-0,620	779,378	-6,200	-3,00	779,822	779,564	0,258	779,378	6,200	-3,00	0,101	6,352	779,277					
226							779,082	-7,017	-0,817	778,265	-6,200	-3,00	778,627	778,451	0,176	778,265	6,200	-3,00	-0,122	6,323	778,387					
227							778,209	-7,258	-1,058	777,151	-6,200	-3,00	777,686	777,337	0,349	777,151	6,200	-3,00	-0,308	6,508	777,459					
228							776,998	-7,161	-0,960	776,038	-6,200	-3,00	776,514	776,224	0,290	776,038	6,200	-3,00	-0,383	6,584	776,421					
229							775,921	-7,197	-0,997	774,924	-6,200	-3,00	775,045	775,110	-0,065	774,924	6,200	-3,00	-0,377	6,577	775,301					
230							774,709	-7,098	-0,899	773,810	-6,200	-3,00	773,850	773,996	-0,146	773,810	6,200	-3,00	-0,301	6,500	774,111					
231							773,228	-6,731	-0,531	772,697	-6,200	-3,00	772,391	772,883	-0,492	772,697	6,200	-3,00	0,033	6,249	772,664					
232							771,815	-6,432	-0,232	771,583	-6,200	-3,00	770,932	771,769	-0,837	771,583	6,200	-3,00	0,411	6,817	771,172					
233							769,997	-6,909	0,473	770,470	-6,200	-3,00	769,502	770,656	-1,154	770,470	6,200	-3,00	0,892	7,538	769,578					
234							768,999	-6,736	0,357	769,356	-6,200	-3,00	767,987	769,542	-1,555	769,356	6,200	-3,00	1,503	8,455	767,853					
235							767,701	-7,012	0,542	768,243	-6,200	-3,00	766,520	768,429	-1,909	768,243	6,200	-3,00	1,884	9,025	766,359					
236							766,535	-7,091	0,594	767,129	-6,200	-3,00	765,035	767,315	-2,280	767,129	6,200	-3,00	2,444	9,866	764,685					
237							764,913	-7,854	1,103	766,016	-6,200	-3,00	763,551	766,202	-2,651	766,016	6,200	-3,00	2,873	10,509	763,143					
238							763,052	-8,976	1,850	764,902	-6,200	-3,00	762,058	765,088	-3,030	764,902	6,200	-3,00	3,288	11,133	761,614					
239							761,394	-9,793	2,395	763,789	-6,200	-3,00	760,563	763,975	-3,412	763,789	6,200	-3,00	3,473	11,408	760,316					
240							759,828	-10,489	2,860	762,688	-6,200	-3,00	759,325	762,874	-3,549	762,688	6,200	-3,00	3,786	11,879	758,902					
241							757,871	-11,906	3,804	761,675	-6,200	-3,00	757,410	761,861	-4,451	761,675	6,200	-3,00	4,995	13,692	756,680					
242							756,264	-12,948	4,498	760,762	-6,200	-3,00	755,745	760,948	-5,203	760,762	6,200	-3,00	5,837	14,955	754,925					
243							754,619	-14,198	5,332	759,951	-6,200	-3,00	753,911	760,137	-6,226	759,951	6,200	-3,00	6,789	16,383	753,162					
244							753,171	-15,302	6,068	759,239	-6,200	-3,00	752,018	759,425	-7,407	759,239	6,200	-3,00	2,030	16,700	752,239	-2,00	19,700	752,179	22,741	750,152

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM														TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA										PLATAFORMA: 12,40m					
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POSIÇÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET		BERMA			OFFSET		
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
245		751,155	-20,320	751,568	-19,700	-2,00	751,628	-16,700	0,410	758,628	-6,200	-3,00	750,121	758,814	-8,693	758,628	6,200	-3,00	3,230	16,700	751,628	-2,00	19,700	751,568	24,547	748,337
246		749,154	-22,557	751,058	-19,700	-2,00	751,118	-16,700	1,900	758,118	-6,200	-3,00	748,189	758,304	-10,115	758,118	6,200	-3,00	4,110	16,700	751,118	-2,00	19,700	751,058	25,859	746,952
247		747,203	-24,869	750,649	-19,700	-2,00	750,709	-16,700	3,450	757,709	-6,200	-3,00	746,252	757,895	-11,643	757,709	6,200	-3,00	5,000	16,700	750,709	-2,00	19,700	750,649	27,207	745,644
248		745,363	-27,164	745,363	-19,700	-2,00	750,400	-16,700	4,980	757,400	-6,200	-3,00	744,861	757,586	-12,725	757,400	6,200	-3,00	5,790	16,700	750,400	-2,00	19,700	750,340	28,380	744,553
249		743,541	-29,585	743,541	-19,700	-2,00	750,191	-16,700	6,590	757,191	-6,200	-3,00	743,719	757,377	-13,658	757,191	6,200	-3,00	6,180	16,700	750,191	-2,00	19,700	750,131	28,966	743,954
250		743,260	-29,845	750,023	-19,700	-2,00	750,083	-16,700	6,760	757,083	-6,200	-3,00	743,114	757,269	-14,155	757,083	6,200	-3,00	6,490	16,700	750,083	-2,00	19,700	750,083	29,431	743,535
251		743,347	-29,703	750,016	-19,700	-2,00	750,076	-16,700	6,670	757,076	-6,200	-3,00	743,038	757,262	-14,224	757,076	6,200	-3,00	6,100	16,700	750,076	-2,00	19,700	750,016	28,844	743,920
252		744,795	-27,670	750,109	-19,700	-2,00	750,169	-16,700	5,310	757,169	-6,200	-3,00	744,315	757,355	-13,040	757,169	6,200	-3,00	5,090	16,700	750,169	-2,00	19,700	750,109	27,334	745,019
253		746,535	-25,351	750,302	-19,700	-2,00	750,362	-16,700	3,770	757,362	-6,200	-3,00	747,232	757,548	-10,316	757,362	6,200	-3,00	3,430	16,700	750,362	-2,00	19,700	750,302	24,844	746,873
254		748,955	-22,162	750,596	-19,700	-2,00	750,656	-16,700	1,640	757,656	-6,200	-3,00	749,944	757,842	-7,898	757,656	6,200	-3,00	0,370	16,700	750,656	-2,00	19,700	750,596	20,253	750,228
255							751,734	-15,676	6,317	758,051	-6,200	-3,00	752,317	758,237	-5,920	758,051	6,200	-3,00	5,185	13,978	752,866					
256							753,117	-14,344	5,429	758,546	-6,200	-3,00	753,605	758,732	-5,127	758,546	6,200	-3,00	4,392	12,789	754,154					
257							754,468	-13,211	4,674	759,142	-6,200	-3,00	754,893	759,328	-4,435	759,142	6,200	-3,00	3,721	11,781	755,421					
258							755,776	-12,295	4,063	759,839	-6,200	-3,00	756,182	760,025	-3,843	759,839	6,200	-3,00	3,280	11,120	756,559					
259							756,227	-12,812	4,409	760,636	-6,200	-3,00	757,759	760,822	-3,063	760,636	6,200	-3,00	2,493	9,938	758,143					
260							757,175	-12,737	4,358	761,533	-6,200	-3,00	759,397	761,719	-2,322	761,533	6,200	-3,00	1,834	8,951	759,699					
261							758,191	-12,710	4,340	762,531	-6,200	-3,00	759,667	762,717	-3,050	762,531	6,200	-3,00	1,782	8,874	760,749					
262							760,162	-11,402	3,468	763,630	-6,200	-3,00	761,132	763,816	-2,684	763,630	6,200	-3,00	1,373	8,260	762,257					
263							763,306	-8,640	1,518	764,824	-6,364	-3,00	764,071	765,015	-0,944	764,869	6,200	-2,35	0,743	7,314	764,126					
264							764,979	-8,256	1,128	766,107	-6,564	-3,00	765,398	766,304	-0,906	766,344	6,200	0,65	0,883	7,525	765,461					
264	3,64						765,282	-8,191	1,061	766,343	-6,600	-3,00	765,640	766,541	-0,901	766,615	6,200	1,19	0,901	7,552	765,714					
265							766,370	-8,157	1,039	767,409	-6,600	-3,00	766,716	767,607	-0,891	767,793	6,200	3,00	0,978	7,667	766,815					
266							767,464	-8,472	1,248	768,712	-6,600	-3,00	767,784	768,910	-1,126	769,096	6,200	3,00	1,509	8,463	767,587					
267							768,533	-8,823	1,482	770,015	-6,600	-3,00	768,855	770,213	-1,358	770,399	6,200	3,00	1,693	8,739	768,706					
268							769,954	-8,646	1,364	771,318	-6,600	-3,00	769,929	771,516	-1,587	771,702	6,200	3,00	2,030	9,245	769,672					
269							771,555	-8,193	1,062	772,617	-6,600	-3,00	771,018	772,815	-1,797	773,001	6,200	3,00	1,382	8,273	771,619					
270							772,404	-8,786	1,458	773,862	-6,600	-3,00	772,082	774,060	-1,978	774,246	6,200	3,00	1,467	8,400	772,779					
271							773,962	-8,214	1,076	775,038	-6,600	-3,00	773,445	775,236	-1,791	775,422	6,200	3,00	1,272	8,108	774,150					
272							775,090	-8,183	1,056	776,146	-6,600	-3,00	774,803	776,344	-1,541	776,530	6,200	3,00	1,009	7,714	775,521					
273							775,180	-9,607	2,005	777,185	-6,600	-3,00	776,224	777,383	-1,159	777,569	6,200	3,00	0,887	7,530	776,682					
274							776,517	-9,057	1,638	778,155	-6,600	-3,00	777,544	778,353	-0,809	778,520	6,200	2,69	0,538	7,008	777,982					
274	9,98						777,182	-8,748	1,432	778,614	-6,600	-3,00	778,192	778,812	-0,620	778,886	6,200	1,19	0,276	6,614	778,610					
275							777,858	-8,302	1,202	779,060	-6,500	-3,00	778,837	779,255	-0,418	779,236	6,200	-0,31	779,236	0,000	0,000					
276							779,299	-7,199	0,599	779,898	-6,300	-3,00	780,257	780,087	0,170	779,901	6,200	-3,00	-0,780	6,980	780,681					
277							781,242	-6,776	-0,576	780,666	-6,200	-3,00	781,658	780,852	0,806	780,666	6,200	-3,00	-0,969	7,169	781,635					
278							782,731	-7,569	-1,370	781,361	-6,200	-3,00	782,771	781,547	1,224	781,361	6,200	-3,00	-1,223	7,422	782,584					
279							783,327	-7,539	-1,339	781,988	-6,200	-3,00	783,261	782,174	1,087	781,988	6,200	-3,00	-1,068	7,267	783,056					
280							783,927	-7,580	-1,381	782,546	-6,200	-3,00	783,749	782,732	1,017	782,546	6,200	-3,00	-0,969	7,169	783,515					
281							784,055	-7,220	-1,019	783,036	-6,200	-3,00	783,896	783,222	0,674	783,036	6,200	-3,00	-0,640	6,840	783,676					
282							784,190	-6,933	-0,733	783,457	-6,200	-3,00	784,042	783,643	0,399	783,457	6,200	-3,00	-0,375	6,575	783,832					
283							784,947	-7,338	-1,138	783,809	-6,200	-3,00	784,188	783,995	0,193	783,809	6,200	-3,00	-0,227	6,427	784,036					
284							785,101	-7,208	-1,008	784,093	-6,200	-3,00	784,335	784,279	0,056	784,093	6,200	-3,00	-0,090	6,291	784,183					
285							785,245	-7,138	-0,938	784,307	-6,200	-3,00	784,481	784,493	-0,012	784,307	6,200	-3,00	-0,015	6,214	784,322					
286							785,156	-6,903	-0,702	784,454	-6,200	-3,00	784,392	784,640	-0,248	784,454	6,200	-3,00	0,223	6,534	784,231					
285							785,062	-6,731	-0,531	784,531	-6,200	-3,00	784,302	784,717	-0,415	784,531	6,200	-3,00	0,367	6,750	784,164					
288							785,095	-6,755	-0,555	784,540	-6,200	-3,00	784,212	784,726	-0,514	784,540	6,200									

NOTA DE SERVIÇO DE TERRAPLENAGEM																										
RODOVIA: GO-222										TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA										PLATAFORMA: 12,40m						
POSICÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)			COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)			OFFSET			BERMA		OFFSET		
		COTA	DIST.	COTA	DIST.		%	COTA	DIST.	ALT.	COTA					DIST.	%		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
294							782,645	-6,958	0,505	783,150	-6,200	-3,00	781,800	783,336	-1,536	783,150	6,200	-3,00	0,998	7,698	782,152					
295							782,097	-7,071	0,581	782,678	-6,200	-3,00	781,242	782,864	-1,622	782,678	6,200	-3,00	1,093	7,841	781,585					
296							781,491	-7,171	0,647	782,138	-6,200	-3,00	780,627	782,324	-1,697	782,138	6,200	-3,00	1,173	7,959	780,965					
297							780,882	-7,170	0,647	781,529	-6,200	-3,00	780,012	781,715	-1,703	781,525	6,305	-3,00	1,179	8,075	780,346					
298							780,470	-7,030	0,553	781,023	-6,200	-0,23	779,392	781,037	-1,645	780,841	6,505	-3,00	1,019	8,035	779,822					
298	9,45						780,198	-7,053	0,569	780,767	-6,200	1,21	779,100	780,692	-1,592	780,494	6,600	-3,00	0,962	8,043	779,532					
299							779,872	-7,085	0,590	780,462	-6,200	2,77	778,773	780,290	-1,517	780,092	6,600	-3,00	0,875	7,913	779,217					
300							779,123	-7,006	0,538	779,661	-6,200	3,00	778,146	779,475	-1,329	779,277	6,600	-3,00	0,685	7,626	778,592					
301							778,623	-6,430	0,154	778,777	-6,200	3,00	777,540	778,591	-1,051	778,393	6,600	-3,00	0,315	7,072	778,078					
302							777,903	-6,260	-0,060	777,843	-6,200	3,00	776,925	777,657	-0,732	777,459	6,600	-3,00	-0,059	6,659	777,518					
303							776,291	-7,125	0,617	776,908	-6,200	3,00	776,322	776,722	-0,400	776,524	6,600	-3,00	0,463	7,294	776,061					
304							775,883	-6,334	0,089	775,972	-6,200	3,00	775,679	775,786	-0,107	775,588	6,600	-3,00	0,193	6,890	775,395					
305							775,243	-6,406	-0,206	775,037	-6,200	3,00	775,003	774,851	0,152	774,653	6,600	-3,00	-0,082	6,682	774,735					
306							774,273	-6,372	-0,172	774,101	-6,200	3,00	774,135	773,915	0,220	773,717	6,600	-3,00	-0,191	6,791	773,908					
307							773,386	-6,420	-0,220	773,166	-6,200	3,00	773,256	772,980	0,276	772,782	6,600	-3,00	-0,260	6,861	773,042					
308							772,487	-6,457	-0,257	772,230	-6,200	3,00	772,364	772,044	0,320	771,846	6,600	-3,00	-0,312	6,912	772,158					
309							771,577	-6,482	-0,282	771,295	-6,200	3,00	771,462	771,109	0,353	770,911	6,600	-3,00	-0,344	6,944	771,255					
310							770,656	-6,497	-0,296	770,360	-6,200	3,00	770,549	770,174	0,375	769,976	6,600	-3,00	-0,359	6,959	770,335					
311							769,693	-6,469	-0,269	769,424	-6,200	3,00	769,594	769,238	0,356	769,040	6,600	-3,00	-0,365	6,965	769,405					
312							768,719	-6,430	-0,230	768,489	-6,200	3,00	768,629	768,303	0,326	768,105	6,600	-3,00	-0,353	6,954	768,458					
313							767,219	-6,701	0,334	767,553	-6,200	3,00	767,663	767,367	0,296	767,169	6,600	-3,00	-0,229	6,829	767,398					
314							766,447	-6,457	0,171	766,618	-6,200	3,00	766,682	766,432	0,250	766,234	6,600	-3,00	-0,177	6,778	766,411					
315							765,775	-6,293	-0,093	765,682	-6,200	3,00	765,691	765,496	0,195	765,298	6,600	-3,00	-0,102	6,702	765,400					
316							763,687	-7,789	1,060	764,747	-6,200	3,00	764,266	764,561	-0,295	764,363	6,600	-3,00	0,358	7,136	764,005					
317							762,111	-8,750	1,700	763,811	-6,200	3,00	762,839	763,625	-0,786	763,427	6,600	-3,00	0,851	7,876	762,576					
318							762,520	-6,734	0,356	762,876	-6,200	3,00	761,558	762,690	-1,132	762,492	6,600	-3,00	0,168	6,852	762,324					
319							761,125	-7,423	0,815	761,940	-6,200	3,00	760,062	761,755	-1,693	761,556	6,600	-3,00	0,721	7,681	760,835					
320							759,580	-8,235	1,357	760,937	-6,200	1,90	758,531	760,819	-2,288	760,621	6,600	-3,00	1,298	8,547	759,323					
320	4,69						759,203	-8,409	1,472	760,675	-6,200	1,20	758,104	760,601	-2,497	760,403	6,600	-3,00	1,489	8,833	758,914					
321							757,978	-8,994	1,862	759,840	-6,200	-1,10	756,731	759,908	-3,177	759,715	6,447	-3,00	2,211	9,763	757,504					
322							756,378	-9,927	2,485	758,863	-6,200	-3,00	754,939	759,049	-4,110	758,861	6,247	-3,00	3,201	11,050	755,660					
323							752,975	-13,820	5,079	758,054	-6,200	-3,00	753,140	758,240	-5,100	758,054	6,200	-3,00	5,358	14,237	752,696					
324							751,262	-15,253	6,035	757,297	-6,200	-3,00	751,343	757,483	-6,140	757,297	6,200	-3,00	6,508	15,962	750,789					
325		749,249	-20,123	749,531	-19,700	-2,00	749,591	-16,700	0,280	756,591	-6,200	-3,00	749,550	756,777	-7,227	756,591	6,200	-3,00	0,490	16,700	749,591	-2,00	19,700	749,531	20,432	749,043
326		746,442	-23,342	748,936	-19,700	-2,00	748,936	-16,700	2,430	755,936	-6,200	-3,00	746,739	756,122	-9,383	755,936	6,200	-3,00	2,390	16,700	748,936	-2,00	19,700	748,876	23,287	746,484
327		743,633	-26,657	748,332	-19,700	-2,00	748,332	-16,700	4,640	755,332	-6,200	-3,00	743,927	755,518	-11,591	755,332	6,200	-3,00	4,930	16,700	748,332	-2,00	19,700	748,272	27,090	743,345
328		740,928	-29,886	747,718	-19,700	-2,00	747,778	-16,700	6,790	754,778	-6,200	-3,00	740,712	754,964	-14,252	754,778	6,200	-3,00	5,450	16,700	747,778	-2,00	19,700	747,718	27,869	742,273
329		741,854	-27,744	747,276	-19,700	-2,00	747,276	-16,700	5,360	754,276	-6,200	-3,00	740,522	754,462	-13,940	754,276	6,200	-3,00	4,710	16,700	747,276	-2,00	19,700	747,216	26,759	742,510
330		742,804	-25,642	746,766	-19,700	-2,00	746,826	-16,700	3,960	753,826	-6,200	-3,00	742,134	754,012	-11,878	753,824	6,247	-3,00	4,010	16,747	746,824	-2,00	19,747	746,764	25,762	742,754
331		743,468	-24,223	746,554	-19,700	-2,00	746,544	-16,700	3,020	753,544	-6,200	-1,10	742,817	753,612	-10,795	753,418	6,447	-3,00	3,350	16,947	746,418	-2,00	19,947	746,358	24,972	743,008
331	15,34	744,198	-22,935	746,354	-19,700	-2,00	746,414	-16,700	2,160	753,414	-6,200	1,19	743,427	753,340	-9,913	753,142	6,600	-3,00	2,590	17,100	746,142	-2,00	20,100	746,082	23,981	743,495
332		744,457	-22,496	746,321	-19,700	-2,00	746,381	-16,700	1,860	753,381	-6,200	1,90	743,759	753,263	-9,504	753,065	6,600	-3,00	2,180	17,100	746,065	-2,00	20,100	746,005	23,367	743,827
333		754,447	-20,666	746,091	-19,700	-2,00	746,151	-16,700	0,640	753,151	-6,200	3,00	744,472	753,108	-8,636	752,767	6,600	-3,00	0,500	17,100	745,767	-2,00	20,100	745,707	20,855	745,204
334							746,694	-15,516	6,211	752,905	-6,200	3,00	746,614	752,719	-6,105	752,521	6,600	-3,00	5,925	15,488	746,596					
335							747,915	-13,392	4,794	752,709	-6,200	3,00	747,744	752,523	-4,779	752,325	6,600	-3								

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM															PLATAFORMA: 12,40m						
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																					

ESTACA	FRAÇÃO (m)	LADO ESQUERDO										EIXO (m)			LADO DIREITO												
		OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET			BERMA			OFFSET		
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA	
342							751,141	-8,468	1,512	752,653	-6,200	3,00	751,268	752,467	-1,199	752,269	6,600	-3,00	0,862	7,892	751,407						
343							750,844	-9,030	1,887	752,731	-6,200	3,00	751,000	752,545	-1,545	752,347	6,600	-3,00	1,164	8,345	751,183						
344							750,327	-9,922	2,482	752,809	-6,200	3,00	750,546	752,623	-2,077	752,425	6,600	-3,00	1,661	9,091	750,764						
345							749,933	-10,630	2,954	752,887	-6,200	3,00	750,204	752,701	-2,497	752,503	6,600	-3,00	2,054	9,680	750,449						
346							749,634	-11,196	3,331	752,965	-6,200	3,00	749,916	752,779	-2,863	752,581	6,600	-3,00	2,412	10,217	750,169						
347							749,350	-11,738	3,692	753,042	-6,200	3,00	749,642	752,856	-3,214	752,658	6,600	-3,00	2,755	10,733	749,903						
347	17,86						749,260	-11,810	3,740	753,000	-6,200	1,20	749,519	752,926	-3,407	752,728	6,600	-3,00	2,939	11,009	749,789						
348							749,264	-11,787	3,725	752,989	-6,200	0,89	749,511	752,934	-3,423	752,737	6,579	-3,00	2,956	11,012	749,781						
349							749,303	-11,567	3,578	752,881	-6,200	-2,11	749,437	753,012	-3,575	752,821	6,379	-3,00	3,111	11,045	749,710						
350							749,329	-11,563	3,575	752,904	-6,200	-3,00	749,362	753,090	-3,728	752,904	6,200	-3,00	3,264	11,097	749,640						
351							749,350	-11,648	3,632	752,982	-6,200	-3,00	749,288	753,168	-3,880	752,982	6,200	-3,00	3,408	11,313	749,574						
352							749,371	-11,733	3,689	753,060	-6,200	-3,00	749,214	753,246	-4,032	753,060	6,200	-3,00	3,553	11,529	749,507						
353							749,392	-11,819	3,746	753,138	-6,200	-3,00	749,139	753,324	-4,185	753,138	6,200	-3,00	3,697	11,745	749,441						
354							749,413	-11,904	3,803	753,216	-6,200	-3,00	749,065	753,402	-4,337	753,216	6,200	-3,00	3,841	11,961	749,375						
355							749,434	-11,989	3,860	753,294	-6,200	-3,00	749,045	753,480	-4,435	753,294	6,200	-3,00	3,985	12,177	749,309						
356							749,455	-12,074	3,917	753,372	-6,200	-3,00	749,145	753,558	-4,413	753,372	6,200	-3,00	4,167	12,450	749,205						
357							749,476	-12,160	3,973	753,449	-6,200	-3,00	749,244	753,635	-4,391	753,449	6,200	-3,00	4,277	12,616	749,172						
358							749,497	-12,245	4,030	753,527	-6,200	-3,00	749,344	753,713	-4,369	753,527	6,200	-3,00	4,251	12,577	749,276						
359							749,518	-12,331	4,088	753,606	-6,200	-3,00	749,443	753,792	-4,349	753,606	6,200	-3,00	4,226	12,538	749,380						
360							749,538	-12,445	4,163	753,701	-6,200	-3,00	749,543	753,887	-4,344	753,701	6,200	-3,00	4,160	12,440	749,541						
361							749,691	-12,395	4,130	753,821	-6,200	-3,00	749,764	754,007	-4,243	753,821	6,200	-3,00	3,923	12,085	749,898						
362							750,386	-11,570	3,580	753,966	-6,200	-3,00	750,307	754,152	-3,845	753,966	6,200	-3,00	3,739	11,807	750,227						
363							751,097	-10,756	3,037	754,134	-6,200	-3,00	751,024	754,320	-3,296	754,134	6,200	-3,00	3,185	10,977	750,949						
364							751,851	-9,914	2,476	754,327	-6,200	-3,00	751,778	754,513	-2,735	754,327	6,200	-3,00	2,623	10,135	751,704						
365							752,618	-9,089	1,926	754,544	-6,200	-3,00	752,551	754,730	-2,179	754,544	6,200	-3,00	2,061	9,291	752,483						
366							753,386	-8,300	1,400	754,786	-6,200	-3,00	753,325	754,972	-1,647	754,786	6,200	-3,00	1,523	8,485	753,263						
367							754,153	-7,548	0,899	755,052	-6,200	-3,00	754,098	755,238	-1,140	755,052	6,200	-3,00	1,011	7,716	754,041						
368							754,921	-6,831	0,421	755,342	-6,200	-3,00	754,871	755,528	-0,657	755,342	6,200	-3,00	0,522	6,983	754,820						
369							755,690	-6,234	-0,034	755,656	-6,200	-3,00	755,644	755,842	-0,198	755,656	6,200	-3,00	0,058	6,286	755,598						
370							756,467	-6,690	-0,490	755,977	-6,200	-3,00	756,418	756,163	0,255	755,977	6,200	-3,00	-0,392	6,592	756,369						
371							757,243	-7,145	-0,945	756,298	-6,200	-3,00	757,191	756,484	0,707	756,298	6,200	-3,00	-0,841	7,041	757,139						
372							757,998	-7,578	-1,379	756,619	-6,200	-3,00	757,922	756,805	1,117	756,619	6,200	-3,00	-1,229	7,429	757,848						
373							758,688	-7,947	-1,747	756,941	-6,200	-3,00	758,609	757,127	1,482	756,941	6,200	-3,00	-1,590	7,790	758,531						
374							759,296	-8,234	-2,034	757,262	-6,200	-3,00	759,294	757,448	1,846	757,262	6,200	-3,00	-1,951	8,152	759,213						
375							759,789	-8,406	-2,206	757,583	-6,200	-3,00	759,787	757,769	2,018	757,583	6,200	-3,00	-2,237	8,437	759,820						
376							760,282	-8,578	-2,378	757,904	-6,200	-3,00	760,315	758,090	2,225	757,904	6,200	-3,00	-2,469	8,669	760,373						
377							760,809	-8,783	-2,584	758,225	-6,200	-3,00	760,867	758,411	2,456	758,225	6,200	-3,00	-2,701	8,901	760,926						
378							761,359	-9,012	-2,812	758,547	-6,200	-3,00	761,419	758,733	2,686	758,547	6,200	-3,00	-2,933	9,133	761,480						
379							761,909	-9,241	-3,041	758,868	-6,200	-3,00	761,971	759,054	2,917	758,868	6,200	-3,00	-3,165	9,365	762,033						
380							762,700	-9,711	-3,511	759,189	-6,200	-3,00	762,612	759,375	3,237	759,189	6,200	-3,00	-3,397	9,597	762,586						
381							763,546	-10,235	-4,036	759,510	-6,200	-3,00	763,452	759,696	3,756	759,510	6,200	-3,00	-3,780	9,980	763,290						
382							764,391	-10,759	-4,560	759,831	-6,200	-3,00	764,292	760,017	4,275	759,831	6,200	-3,00	-4,146	10,345	763,977						
383							765,236	-11,283	-5,083	760,153	-6,200	-3,00	765,001	760,339	4,662	760,153	6,200	-3,00	-4,510	10,711	764,663						
384							766,072	-11,798	-5,598	760,474	-6,200	-3,00	765,699	760,660	5,039	760,474	6,200	-3,00	-4,876	11,076	765,350						
385							766,773	-12,178	-5,978	760,795	-6,200	-3,00	766,398	760,981	5,417	760,795	6,200	-3,00	-5,242	11,442	766,037						
386							767,311	-12,395	-6,195	761,116	-6,200	-3,00	767,041	761,302	5,739	761,116	6,200	-3,00	-5,607	11,807	766,723						
387							767,849	-12,611	-6,412	761,437	-6,200	-3,00	767,573	761,623	5,950	761,437	6,200	-3,00	-5,873	12,073	767,310						
388							768,368	-12,810	-6,609	761,759	-6,200	-3,00	768,041	761,945	6,096	761,759	6,200	-3,00	-5,969	12,169	767,728						
389							768,777	-12,898	-6,697	762,080	-6,200	-3,00	768,448	762,266	6,182	762,080	6,200	-3,00	-5,972	12,173	768,052						
390																											

RODOVIA: GO-222 NOTA DE SERVIÇO DE TERRAPLENAGEM TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA PLATAFORMA: 12,40m																								
ESTACA	FRAÇÃO (m)	LADO ESQUERDO										EIXO (m)			BORDO (m)			LADO DIREITO						
		OFFSET		BERMA		OFFSET			BORDO (m)		%	COTA	COTA	COTA	BORDO (m)		%	OFFSET		BERMA		OFFSET		
		COTA	DIST.	COTA	DIST.		COTA	DIST.	ALT.	COTA	DIST.	TERR.	PROJ.	VERM.	COTA	DIST.	ALT.	DIST.	DIST.	COTA	DIST.	COTA	DIST.	COTA
392							768,712	-11,868	-5,669	763,043	-6,200	-3,00	769,173	763,229	5,944	763,043	6,200	-3,00	-6,028	12,228	769,071			
393							768,307	-11,142	-4,942	763,365	-6,200	-3,00	768,724	763,551	5,173	763,365	6,200	-3,00	-5,812	12,013	769,177			
394							767,886	-10,400	-4,200	763,686	-6,200	-3,00	768,275	763,872	4,403	763,686	6,200	-3,00	-5,013	11,213	768,699			
395							767,465	-9,658	-3,458	764,007	-6,200	-3,00	767,827	764,193	3,634	764,007	6,200	-3,00	-4,213	10,413	768,220			
396							767,044	-8,916	-2,716	764,328	-6,200	-3,00	767,378	764,514	2,864	764,328	6,200	-3,00	-3,413	9,613	767,741			
397							766,623	-8,174	-1,974	764,649	-6,200	-3,00	766,930	764,835	2,095	764,649	6,200	-3,00	-2,613	8,813	767,262			
398							766,203	-7,432	-1,232	764,971	-6,200	-3,00	766,481	765,157	1,324	764,971	6,200	-3,00	-1,812	8,013	766,783			
399							765,782	-6,690	-0,490	765,292	-6,200	-3,00	766,032	765,478	0,554	765,292	6,200	-3,00	-1,013	7,213	766,305			
400							765,336	-6,615	0,277	765,613	-6,200	-3,00	765,584	765,799	-0,215	765,613	6,200	-3,00	-0,213	6,413	765,826			
401							764,843	-7,836	1,091	765,934	-6,200	-3,00	765,135	766,120	-0,985	765,934	6,200	-3,00	0,535	7,002	765,399			
402							764,351	-9,057	1,904	766,255	-6,200	-3,00	764,687	766,441	-1,754	766,255	6,200	-3,00	1,263	8,095	764,992			
403							763,858	-10,278	2,718	766,576	-6,200	-3,00	764,238	766,762	-2,524	766,576	6,200	-3,00	2,008	9,213	764,568			
404							763,365	-11,499	3,533	766,898	-6,200	-3,00	763,789	767,084	-3,295	766,898	6,200	-3,00	2,757	10,335	764,141			
405							762,872	-12,720	4,347	767,219	-6,200	-3,00	763,341	767,405	-4,064	767,219	6,200	-3,00	3,504	11,456	763,715			
406							762,379	-13,941	5,161	767,540	-6,200	-3,00	762,892	767,726	-4,834	767,540	6,200	-3,00	4,252	12,578	763,288			
407							761,887	-15,162	5,974	767,861	-6,200	-3,00	762,444	768,047	-5,603	767,861	6,200	-3,00	5,000	13,700	762,861			
408							761,394	-16,383	6,788	768,182	-6,200	-3,00	761,995	768,368	-6,373	768,182	6,200	-3,00	5,748	14,822	762,434			
409		760,788	-20,683	761,444	-19,700	-2,00	761,504	-16,700	0,660	768,504	-6,200	-3,00	761,546	768,690	-7,144	768,504	6,200	-3,00	6,500	15,949	762,004			
410		760,295	-21,904	761,765	-19,700	-2,00	761,825	-16,700	1,470	768,825	-6,200	-3,00	761,098	769,011	-7,913	768,825	6,200	-3,00	6,558	16,037	762,267			
411		759,802	-23,125	762,086	-19,700	-2,00	762,146	-16,700	2,280	769,146	-6,200	-3,00	761,278	769,332	-8,054	769,146	6,200	-3,00	6,594	16,090	762,552			
412		760,027	-23,270	762,407	-19,700	-2,00	762,467	-16,700	2,380	769,467	-6,200	-3,00	761,423	769,653	-8,230	769,467	6,200	-3,00	6,471	15,907	762,996			
413		760,349	-23,269	762,728	-19,700	-2,00	762,788	-16,700	2,380	769,788	-6,200	-3,00	761,440	769,974	-8,534	769,788	6,200	-3,00	5,919	15,079	763,869			
414		760,671	-23,268	763,050	-19,700	-2,00	763,110	-16,700	2,380	770,110	-6,200	-3,00	761,491	770,296	-8,805	770,110	6,200	-3,00	5,319	14,178	764,791			
415		761,587	-22,375	763,371	-19,700	-2,00	763,431	-16,700	1,780	770,431	-6,200	-3,00	762,950	770,617	-7,667	770,431	6,200	-3,00	4,718	13,277	765,713			
416		762,582	-21,364	763,692	-19,700	-2,00	763,752	-16,700	1,110	770,752	-6,200	-3,00	764,118	770,938	-6,820	770,752	6,200	-3,00	4,219	12,529	766,533			
417		763,539	-20,412	764,013	-19,700	-2,00	764,073	-16,700	0,470	771,073	-6,200	-3,00	765,288	771,259	-5,971	771,073	6,200	-3,00	3,971	12,157	767,102			
418							764,749	-16,169	6,645	771,394	-6,200	-3,00	766,457	771,580	-5,123	771,394	6,200	-3,00	3,723	11,786	767,671			
419							766,078	-14,656	5,638	771,716	-6,200	-3,00	767,386	771,902	-4,516	771,716	6,200	-3,00	3,477	11,414	768,239			
420							766,951	-13,829	5,086	772,037	-6,200	-3,00	768,111	772,223	-4,112	772,037	6,200	-3,00	3,025	10,737	769,012			
421							767,734	-13,136	4,624	772,358	-6,200	-3,00	768,837	772,544	-3,707	772,358	6,200	-3,00	2,666	10,198	769,692			
422							768,543	-12,405	4,136	772,679	-6,200	-3,00	769,564	772,865	-3,301	772,679	6,200	-3,00	2,306	9,660	770,373			
423							769,323	-11,716	3,677	773,000	-6,200	-3,00	770,298	773,186	-2,888	773,000	6,200	-3,00	1,944	9,117	771,056			
424							770,089	-11,050	3,233	773,322	-6,200	-3,00	770,984	773,508	-2,524	773,322	6,200	-3,00	1,647	8,670	771,675			
425							770,787	-10,483	2,856	773,643	-6,200	-3,00	771,622	773,829	-2,207	773,643	6,200	-3,00	1,364	8,246	772,279			
426							771,665	-9,648	2,299	773,964	-6,200	-3,00	772,425	774,150	-1,725	773,964	6,200	-3,00	1,037	7,756	772,927			
427							772,378	-9,030	1,887	774,265	-6,200	-3,00	773,027	774,451	-1,424	774,265	6,200	-3,00	0,815	7,422	773,450			
428							772,924	-8,587	1,591	774,515	-6,200	-3,00	773,437	774,701	-1,264	774,515	6,200	-3,00	0,665	7,198	773,850			
429							773,284	-8,349	1,432	774,716	-6,200	-3,00	773,804	774,902	-1,098	774,716	6,200	-3,00	0,485	6,927	774,231			
430							773,631	-8,054	1,236	774,867	-6,200	-3,00	774,133	775,053	-0,920	774,867	6,200	-3,00	0,318	6,678	774,549			
431							773,950	-7,726	1,018	774,968	-6,200	-3,00	774,431	775,154	-0,723	774,968	6,200	-3,00	0,144	6,416	774,824			
432							774,296	-7,284	0,723	775,019	-6,200	-3,00	774,730	775,205	-0,475	775,019	6,200	-3,00	-0,054	6,255	775,073			
433							774,647	-6,759	0,373	775,020	-6,200	-3,00	775,027	775,206	-0,179	775,020	6,200	-3,00	-0,351	6,552	775,371			
434							774,915	-6,282	0,055	774,970	-6,200	-3,00	775,192	775,156	0,036	774,970	6,200	-3,00	-0,517	6,717	775,487			
435							775,099	-6,428	-0,228	774,871	-6,200	-3,00	775,382	775,057	0,325	774,871	6,200	-3,00	-0,820	7,020	775,691			
436							774,992	-6,470	-0,270	774,722	-6,200	-3,00	775,296	774,908	0,388	774,721	6,233	-3,00	-0,906	7,139	775,627			
437							774,742	-6,313	-0,114	774,628	-6,200	-1,31	775,039	774,709	0,330	774,516	6,433	-3,00	-0,866	7,299	775,382			
437	16,67						774,617	-6,238	-0,038	774,579	-6,200	1,20	774,824	774,505	0,319	774,307	6,600	-3,00	-0,868	7,468	775,175			
438							774,624	-6,259	-0,059	774,565	-6,200	1,69	774,781	774,460	0,321	774,262	6,600	-3,00	-0,871	7,471	775,133			
439							774,475	-6,328	-0,128	774,347	-6,200	3,00	774,534	774,161	0,373	773,963	6,600	-3,00	-0,926	7,527	774,889			
440							773,554	-6,865	0,443	773,997	-6,200	3,00	773,777	773,811	-0,034	773,613	6,600	-3,00	-1,022	7,622	774,635			
441							773,261	-6,706	0,337	773,598	-6,200	3,00	773,545	773,412	0,133	773,214	6,600	-3,00	-0,726	7,326	773,940			

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM																PLATAFORMA: 12,40m							
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																							

POSIÇÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET			BERMA			OFFSET	
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
442							773,035	-6,371	0,114	773,149	-6,200	3,00	773,331	772,963	0,368	772,765	6,600	-3,00	-0,830	7,430	773,595					
443							772,653	-6,243	-0,003	772,650	-6,200	3,00	772,870	772,464	0,406	772,266	6,600	-3,00	-0,813	7,413	773,079					
444							772,135	-6,227	-0,027	772,108	-6,200	3,00	772,314	771,922	0,392	771,724	6,600	-3,00	-0,739	7,339	772,463					
445							771,557	-6,248	0,003	771,560	-6,200	3,00	771,739	771,374	0,365	771,176	6,600	-3,00	-0,704	7,304	771,880					
446							770,796	-6,523	0,216	771,012	-6,200	3,00	770,986	770,826	0,160	770,628	6,600	-3,00	-0,502	7,102	771,130					
447							770,129	-6,703	0,335	770,464	-6,200	3,00	770,243	770,278	-0,035	770,080	6,600	-3,00	-0,236	6,836	770,316					
448							769,403	-6,969	0,513	769,916	-6,200	3,00	769,512	769,730	-0,218	769,532	6,600	-3,00	0,077	6,716	769,455					
449							768,666	-7,253	0,702	769,368	-6,200	3,00	768,786	769,182	-0,396	768,984	6,600	-3,00	0,253	6,980	768,731					
450							767,937	-7,525	0,884	768,821	-6,200	3,00	768,065	768,635	-0,570	768,437	6,600	-3,00	0,430	7,244	768,007					
451							767,208	-7,798	1,065	768,273	-6,200	3,00	767,349	768,087	-0,738	767,889	6,600	-3,00	0,569	7,453	767,320					
452							766,553	-7,958	1,172	767,725	-6,200	3,00	766,637	767,539	-0,902	767,341	6,600	-3,00	0,592	7,488	766,749					
453							765,702	-8,413	1,475	767,177	-6,200	3,00	766,052	766,991	-0,939	766,793	6,600	-3,00	0,652	7,578	766,141					
454							765,385	-8,066	1,244	766,629	-6,200	3,00	765,521	766,443	-0,922	766,245	6,600	-3,00	0,636	7,554	765,609					
455							764,876	-7,990	1,193	766,069	-6,200	2,81	765,001	765,895	-0,894	765,697	6,600	-3,00	0,611	7,517	765,086					
455	10,65						764,522	-7,935	1,156	765,678	-6,200	1,20	764,646	765,604	-0,958	765,406	6,600	-3,00	0,670	7,605	764,736					
456							764,212	-7,884	1,123	765,335	-6,200	-0,21	764,336	765,348	-1,012	765,152	6,506	-3,00	0,727	7,598	764,425					
457							763,550	-7,796	1,064	764,614	-6,200	-3,00	763,672	764,800	-1,128	764,611	6,306	-3,00	0,848	7,579	763,763					
458							762,848	-8,027	1,218	764,066	-6,200	-3,00	763,008	764,252	-1,244	764,066	6,200	-3,00	0,339	6,708	763,727					
459							762,179	-8,209	1,339	763,518	-6,200	-3,00	762,343	763,704	-1,361	763,518	6,200	-3,00	0,394	6,791	763,124					
460							761,598	-8,259	1,372	762,970	-6,200	-3,00	761,678	763,156	-1,478	762,970	6,200	-3,00	0,508	6,962	762,462					
461							761,119	-8,155	1,303	762,422	-6,200	-3,00	761,184	762,608	-1,424	762,422	6,200	-3,00	0,452	6,879	761,970					
462							760,576	-8,148	1,299	761,875	-6,200	-3,00	760,691	762,061	-1,370	761,875	6,200	-3,00	0,859	7,488	761,016					
463							760,073	-8,081	1,254	761,327	-6,200	-3,00	760,152	761,513	-1,361	761,327	6,200	-3,00	1,005	7,707	760,322					
464							759,650	-7,894	1,129	760,779	-6,200	-3,00	759,604	760,965	-1,361	760,779	6,200	-3,00	0,967	7,650	759,812					
465							759,077	-7,930	1,154	760,231	-6,200	-3,00	759,073	760,417	-1,344	760,231	6,200	-3,00	0,977	7,666	759,254					
466							758,229	-8,382	1,454	759,683	-6,200	-3,00	758,063	759,869	-1,806	759,683	6,200	-3,00	1,464	8,396	758,219					
467							757,634	-8,452	1,501	759,135	-6,200	-3,00	757,681	759,321	-1,640	759,135	6,200	-3,00	1,215	8,024	757,920					
468							757,422	-7,948	1,166	758,588	-6,200	-3,00	757,531	758,774	-1,243	758,588	6,200	-3,00	0,985	7,678	757,603					
469							756,907	-7,899	1,133	758,040	-6,200	-3,00	757,011	758,226	-1,215	758,040	6,200	-3,00	0,957	7,635	757,083					
470							756,388	-7,849	1,099	757,487	-6,200	-3,00	756,492	757,673	-1,181	757,487	6,200	-3,00	0,928	7,592	756,559					
471							755,867	-7,736	1,025	756,892	-6,200	-3,00	755,971	757,078	-1,107	756,892	6,200	-3,00	0,858	7,486	756,034					
472							755,346	-7,550	0,900	756,246	-6,200	-3,00	755,451	756,432	-0,981	756,246	6,200	-3,00	0,726	7,290	755,520					
473							754,804	-7,321	0,747	755,551	-6,200	-3,00	754,930	755,737	-0,807	755,551	6,200	-3,00	0,611	7,116	754,940					
474							754,280	-6,988	0,526	754,806	-6,200	-3,00	754,409	754,992	-0,583	754,806	6,200	-3,00	0,393	6,789	754,413					
475							753,752	-6,588	0,258	754,010	-6,200	-3,00	753,888	754,196	-0,308	754,010	6,200	-3,00	0,111	6,367	753,899					
476							753,049	-6,532	0,111	753,160	-6,366	-3,00	753,164	753,351	-0,187	753,208	6,200	-2,31	753,208	0,000	0,000					
477							752,351	-6,658	-0,092	752,259	-6,566	-3,00	752,470	752,456	0,014	752,499	6,200	-0,69	752,499	0,000	0,000					
477	3,37						752,255	-6,753	-0,153	752,102	-6,600	-3,00	752,365	752,300	0,065	752,374	6,200	1,20	-0,017	6,217	752,391					
478							751,898	-7,185	-0,586	751,312	-6,600	-3,00	751,816	751,510	0,306	751,696	6,200	3,00	-0,181	6,381	751,877					
479							751,276	-7,559	-0,959	750,317	-6,600	-3,00	751,111	750,515	0,596	750,701	6,200	3,00	-0,472	6,672	751,173					
480							750,685	-8,014	-1,413	749,272	-6,600	-3,00	750,394	749,470	0,924	749,656	6,200	3,00	-0,809	7,010	750,465					
481							749,595	-8,019	-1,419	748,176	-6,600	-3,00	749,326	748,374	0,952	748,560	6,200	3,00	-0,795	6,995	749,355					
482							748,588	-8,157	-1,557	747,031	-6,600	-3,00	748,252	747,229	1,023	747,415	6,200	3,00	-0,786	6,986	748,201					
483							747,700	-8,464	-1,864	745,836	-6,600	-3,00	747,351	746,034	1,317	746,220	6,200	3,00	-0,947	7,147	747,167					
484							747,130	-9,140	-2,540	744,590	-6,600	-3,00	746,772	744,788	1,984	744,974	6,200	3,00	-1,569	7,769	746,543					
485							746,392	-9,697	-3,097	743,295	-6,600	-3,00	746,210	743,493	2,717	743,679	6,200	3,00	-2,295	8,495	745,974					
486							745,566	-10,216	-3,616	741,950	-6,600	-3,00	745,185	742,148	3,037	742,334	6,200	3,00	-2,609	8,809	744,943					
487							744,644	-10,687	-4,087	740,557	-6,600	-3,00	744,174	740,755	3,419	740,941	6,200	3,00	-2,957	9,158	743,898					
488							743,685	-11,134	-4,534	739,151	-6,600	-3,00	743,177	739,349	3,828	739,535	6,200	3,00	-3,343	9,543	742,878					
489							742,751	-11,606	-5,006</																	

NOTA DE SERVIÇO DE TERRAPLENAGEM																											
RODOVIA: GO-222														TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA										PLATAFORMA: 12,40m			
POSICÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO												
ESTACA	FRAÇÃO (m)	OFFSET		BERMA		%	OFFSET		BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET		BERMA		OFFSET					
		COTA	DIST.	COTA	DIST.		COTA	DIST.	COTA	DIST.					ALT.	DIST.		COTA	%	DIST.	COTA	DIST.	COTA				
491							741,498	-13,165	-6,564	734,934	-6,600	-3,00	741,105	735,132	5,973	735,318	6,200	3,00	-5,835	12,035	741,153						
492		740,789	-16,921	740,468	-16,600	2,00	740,528	-13,600	-0,320	733,528	-6,600	-3,00	740,395	733,726	6,669	733,912	6,200	3,00	-6,457	12,657	740,369						
493		740,008	-17,546	736,062	-16,600	2,00	739,122	-13,600	-0,950	732,122	-6,600	-3,00	739,431	732,320	7,111	732,506	6,200	3,00	-6,871	13,071	739,377						
494		738,812	-17,756	737,656	-16,600	2,00	737,716	-13,600	-1,160	730,716	-6,600	-3,00	738,590	730,914	7,676	731,100	6,200	3,00	-0,370	13,200	738,100	2,00	16,200	738,040	16,569	738,400	
495		738,307	-18,656	736,250	-16,600	2,00	736,310	-13,600	-2,060	729,310	-6,600	-3,00	737,744	729,508	8,236	729,694	6,200	3,00	-0,870	13,200	736,694	2,00	16,200	736,634	17,067	737,502	
496		737,891	-19,647	734,845	-16,600	2,00	734,905	-13,600	-3,050	727,905	-6,600	-3,00	736,886	728,103	8,783	728,289	6,200	3,00	-1,580	13,200	735,289	2,00	16,200	735,229	17,781	736,810	
497		736,864	-20,025	733,439	-16,600	2,00	733,499	-13,600	-3,420	726,499	-6,600	-3,00	735,879	726,697	9,182	726,883	6,200	3,00	-1,990	13,200	733,883	2,00	16,200	733,823	18,195	735,818	
498		735,841	-20,407	732,033	-16,600	2,00	732,093	-13,600	-3,810	725,093	-6,600	-3,00	734,825	725,291	9,534	725,477	6,200	3,00	-2,300	13,200	732,477	2,00	16,200	732,417	18,501	734,719	
499		734,823	-20,796	730,627	-16,600	2,00	730,687	-13,600	-4,200	723,687	-6,600	-3,00	733,761	723,885	9,876	724,071	6,200	3,00	-2,620	13,200	731,071	2,00	16,200	731,011	18,821	733,632	
500		733,826	-21,204	729,222	-16,600	2,00	729,282	-13,600	-4,600	722,282	-6,600	-3,00	732,686	722,480	10,206	722,666	6,200	3,00	-2,950	13,200	729,666	2,00	16,200	729,606	19,154	732,560	
501		732,916	-21,700	727,816	-16,600	2,00	727,876	-13,600	-5,100	720,876	-6,600	-3,00	731,516	721,074	10,442	721,260	6,200	3,00	-3,350	13,200	728,260	2,00	16,200	728,200	19,548	731,548	
502		731,873	-22,063	726,410	-16,600	2,00	726,470	-13,600	-5,460	719,470	-6,600	-3,00	729,716	719,668	10,048	719,854	6,200	3,00	-4,240	13,200	726,854	2,00	16,200	726,794	20,440	731,034	
503		730,163	-21,758	725,004	-16,600	2,00	725,064	-13,600	-5,160	718,064	-6,600	-3,00	727,922	718,262	9,660	718,448	6,200	3,00	-3,980	13,200	725,448	2,00	16,200	725,388	20,170	729,365	
504		728,388	-21,390	723,598	-16,600	2,00	723,658	-13,600	-4,790	716,658	-6,600	-3,00	726,078	716,856	9,222	716,978	6,200	2,00	-3,810	13,200	723,978	2,00	16,200	723,918	20,008	727,727	
504	5,09	727,919	-21,279	723,241	-16,600	2,00	723,301	-13,600	-4,680	716,301	-6,600	-3,00	725,596	716,499	9,097	716,573	6,200	1,20	-3,860	13,200	723,573	2,00	16,200	723,513	20,056	727,369	
505		726,488	-20,725	722,214	-16,600	2,00	722,274	-13,451	-4,270	715,274	-6,451	-2,99	724,182	715,467	8,715	715,403	6,200	-1,03	-4,070	13,200	722,403	2,00	16,200	722,343	20,275	726,417	
506		722,998	-18,327	720,922	-16,600	2,00	720,982	-13,251	-2,080	713,982	-6,251	-3,01	722,484	714,170	8,314	713,984	6,200	-3,00	-4,550	13,200	720,984	2,00	16,200	720,924	20,752	725,476	
507		721,444	-17,916	719,728	-16,600	2,00	719,788	-13,200	-1,720	712,788	-6,200	-3,00	720,768	712,974	7,794	712,788	6,200	-3,00	-4,830	13,200	719,788	2,00	16,200	719,728	21,034	724,562	
508		719,643	-17,210	718,633	-16,600	2,00	718,693	-13,200	-1,010	711,693	-6,200	-3,00	719,023	711,879	7,144	711,693	6,200	-3,00	-4,210	13,200	718,693	2,00	16,200	718,633	20,413	722,846	
509							717,694	-13,194	-6,994	710,700	-6,200	-3,00	717,310	710,886	6,424	710,700	6,200	-3,00	-3,550	13,200	717,700	2,00	16,200	717,640	19,752	721,192	
510							715,954	-12,345	-6,146	709,808	-6,200	-3,00	715,595	709,994	5,601	709,808	6,200	-3,00	-2,800	13,200	716,808	2,00	16,200	716,748	19,002	719,550	
511							714,500	-11,682	-5,482	709,018	-6,200	-3,00	714,163	709,204	4,959	709,018	6,200	-3,00	-2,330	13,200	716,018	2,00	16,200	715,958	18,527	718,285	
512							713,479	-11,350	-5,150	708,329	-6,200	-3,00	713,114	708,515	4,599	708,329	6,200	-3,00	-6,386	12,586	714,715						
513							712,605	-11,063	-4,863	707,742	-6,200	-3,00	712,230	707,928	4,302	707,742	6,200	-3,00	-5,648	11,848	713,390						
514							711,572	-10,516	-4,316	707,256	-6,200	-3,00	711,295	707,442	3,853	707,256	6,200	-3,00	-4,841	11,041	712,097						
515							709,964	-9,292	-3,092	706,872	-6,200	-3,00	710,198	707,058	3,140	706,872	6,200	-3,00	-4,283	10,483	711,155						
516							708,655	-8,267	-2,066	706,589	-6,200	-3,00	708,915	706,775	2,140	706,589	6,200	-3,00	-3,389	9,590	709,978						
517							707,838	-7,631	-1,431	706,407	-6,200	-3,00	707,973	706,593	1,380	706,407	6,200	-3,00	-1,305	7,505	707,712						
518							707,198	-7,071	-0,871	706,327	-6,200	-3,00	707,406	706,513	0,893	706,327	6,200	-3,00	-0,877	7,077	707,204						
519							706,925	-6,806	-0,606	706,319	-6,200	-3,00	707,066	706,505	0,561	706,319	6,200	-3,00	-0,575	6,775	706,894						
520							700,504	-14,917	5,811	706,315	-6,200	-3,00	706,827	706,501	0,326	706,315	6,200	-3,00	0,450	16,700	699,315	-2,00	19,700	699,255	20,375	698,805	
521							699,592	-16,278	6,719	706,311	-6,200	-3,00	706,909	706,497	0,412	706,311	6,200	-3,00	1,320	16,700	699,311	-2,00	19,700	699,251	21,682	697,930	
522		699,245	-19,703	699,247	-19,700	-2,00	699,307	-16,700	0,060	706,307	-6,200	-3,00	706,888	706,493	0,395	706,307	6,200	-3,00	0,923	7,583	705,384						
523		698,428	-20,922	699,242	-19,700	-2,00	699,302	-16,700	0,810	706,302	-6,200	-3,00	706,178	706,488	-0,310	706,302	6,200	-3,00	0,640	16,700	699,302	-2,00	19,700	699,242	20,664	698,600	
524		698,822	-20,330	699,242	-19,700	-2,00	699,302	-16,700	0,420	706,302	-6,200	-3,00	705,462	706,488	-1,026	706,302	6,200	-3,00	0,150	16,700	699,302	-2,00	19,700	699,242	19,924	699,092	
525							699,445	-16,506	6,871	706,316	-6,200	-3,00	704,750	706,502	-1,752	706,316	6,200	-3,00	6,688	16,231	699,628						
526							699,986	-15,741	6,360	706,346	-6,200	-3,00	704,240	706,532	-2,292	706,346	6,200	-3,00	6,226	15,540	700,120						
527							700,525	-15,002	5,868	706,393	-6,200	-3,00	703,816	706,579	-2,763	706,393	6,200	-3,00	5,783	14,874	700,610						
528							701,065	-14,287																			

RODOVIA: GO-222		NOTA DE SERVIÇO DE TERRAPLENAGEM																		PLATAFORMA: 12,40m					
		TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																							

ESTACA	FRAÇÃO (m)	LADO ESQUERDO										EIXO (m)			LADO DIREITO										
		OFFSET		BERMA		OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET			BERMA		OFFSET		
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
541							710,010	-7,614	-1,266	708,744	-6,349	-3,00	710,488	708,935	1,553	708,775	6,200	-2,58	-2,244	8,443	711,019				
542							711,049	-8,570	-2,021	709,028	-6,549	-3,00	711,581	709,224	2,357	709,251	6,200	0,44	-2,777	8,977	712,028				
542	5,13						711,322	-8,819	-2,219	709,103	-6,600	-3,00	711,861	709,301	2,560	709,376	6,200	1,20	-2,788	8,988	712,164				
543							712,147	-9,415	-2,815	709,332	-6,600	-3,00	712,606	709,530	3,076	709,716	6,200	3,00	-3,421	9,621	713,137				
544							713,335	-10,280	-3,680	709,655	-6,600	-3,00	713,856	709,853	4,003	710,039	6,200	3,00	-4,351	10,551	714,390				
545							714,116	-10,723	-4,123	709,993	-6,600	-3,00	714,740	710,191	4,549	710,377	6,200	3,00	-5,030	11,230	715,407				
546							714,805	-11,058	-4,458	710,347	-6,600	-3,00	715,451	710,545	4,906	710,731	6,200	3,00	-5,398	11,598	716,129				
547							715,332	-11,213	-4,614	710,718	-6,600	-3,00	716,004	710,916	5,088	711,102	6,200	3,00	-5,610	11,810	716,712				
548							715,681	-11,176	-4,576	711,105	-6,600	-3,00	716,402	711,303	5,099	711,489	6,200	3,00	-5,681	11,881	717,170				
548	14,90						715,783	-10,986	-4,385	711,398	-6,600	-3,00	716,504	711,596	4,908	711,670	6,200	1,20	-5,609	11,809	717,279				
549							715,848	-10,898	-4,349	711,499	-6,549	-3,01	716,564	711,696	4,868	711,723	6,200	0,44	-5,616	11,816	717,339				
550							715,803	-10,254	-3,905	711,898	-6,349	-2,99	716,515	712,088	4,427	711,929	6,200	-2,56	-5,390	11,590	717,319				
551							715,656	-9,561	-3,361	712,295	-6,200	-3,00	716,376	712,481	3,895	712,295	6,200	-3,00	-4,919	11,119	717,214				
552							715,577	-9,089	-2,890	712,687	-6,200	-3,00	716,292	712,873	3,419	712,687	6,200	-3,00	-4,445	10,645	717,132				
553							715,451	-8,571	-2,371	713,080	-6,200	-3,00	716,152	713,266	2,886	713,080	6,200	-3,00	-3,898	10,098	716,978				
554							715,331	-8,058	-1,859	713,472	-6,200	-3,00	716,010	713,658	2,352	713,472	6,200	-3,00	-3,342	9,541	716,814				
555							715,208	-7,544	-1,343	713,865	-6,200	-3,00	715,804	714,051	1,753	713,865	6,200	-3,00	-2,637	8,837	716,502				
556							714,632	-6,575	-0,375	714,257	-6,200	-3,00	715,284	714,443	0,841	714,257	6,200	-3,00	-1,715	7,914	715,972				
557							713,731	-7,578	0,919	714,650	-6,200	-3,00	714,555	714,836	-0,281	714,650	6,200	-3,00	-0,507	6,707	715,157				
558							712,882	-9,441	2,161	715,043	-6,200	-3,00	713,930	715,229	-1,299	715,043	6,200	-3,00	0,378	6,766	714,665				
559							712,207	-11,042	3,228	715,435	-6,200	-3,00	713,454	715,621	-2,167	715,435	6,200	-3,00	1,143	7,915	714,292				
560							711,547	-12,621	4,281	715,828	-6,200	-3,00	712,977	716,014	-3,037	715,828	6,200	-3,00	1,893	9,039	713,935				
561							711,099	-13,883	5,121	716,220	-6,200	-3,00	712,605	716,406	-3,801	716,220	6,200	-3,00	2,009	9,213	714,211				
562							712,020	-13,089	4,593	716,613	-6,200	-3,00	713,270	716,799	-3,529	716,613	6,200	-3,00	1,701	8,750	714,912				
563							712,995	-12,215	4,010	717,005	-6,200	-3,00	714,112	717,191	-3,079	717,005	6,200	-3,00	1,213	8,019	715,792				
564							714,573	-10,435	2,824	717,397	-6,200	-3,00	714,860	717,583	-2,723	717,397	6,200	-3,00	2,388	9,783	715,009				
565							716,232	-8,529	1,552	717,784	-6,200	-3,00	715,703	717,970	-2,267	717,784	6,200	-3,00	1,587	8,580	716,197				
566							716,813	-8,230	1,353	718,166	-6,200	-3,00	716,959	718,352	-1,393	718,166	6,200	-3,00	1,062	7,792	717,104				
567							718,098	-6,868	0,445	718,543	-6,200	-3,00	718,218	718,729	-0,511	718,543	6,200	-3,00	0,249	6,574	718,294				
568							718,529	-6,778	0,385	718,914	-6,200	-3,00	718,671	719,100	-0,429	718,914	6,200	-3,00	0,087	6,331	718,827				
569							720,184	-7,103	-0,903	719,281	-6,200	-3,00	720,069	719,467	0,602	719,281	6,200	-3,00	-1,083	7,283	720,364				
570							721,013	-7,571	-1,371	719,642	-6,200	-3,00	720,899	719,828	1,071	719,642	6,200	-3,00	-1,609	7,809	721,251				
571							721,469	-7,671	-1,471	719,998	-6,200	-3,00	721,522	720,184	1,338	719,998	6,200	-3,00	-2,049	8,249	722,047				
572							722,078	-7,929	-1,729	720,349	-6,200	-3,00	722,145	720,535	1,610	720,349	6,200	-3,00	-2,322	8,522	722,671				
573							722,559	-8,064	-1,864	720,695	-6,200	-3,00	722,639	720,881	1,758	720,695	6,200	-3,00	-2,485	8,685	723,180				
574							722,865	-8,030	-1,830	721,035	-6,200	-3,00	723,019	721,221	1,798	721,035	6,200	-3,00	-2,480	8,680	723,515				
575							723,230	-8,059	-1,859	721,371	-6,200	-3,00	723,401	721,557	1,844	721,371	6,200	-3,00	-2,521	8,722	723,892				
576							723,384	-7,883	-1,683	721,701	-6,200	-3,00	723,641	721,887	1,754	721,701	6,200	-3,00	-2,285	8,485	723,986				
577							723,573	-7,868	-1,551	722,022	-6,318	-3,01	723,882	722,212	1,670	722,022	6,200	-3,00	-2,157	8,357	724,183				
578							723,808	-7,990	-1,472	722,336	-6,518	-3,01	724,124	722,532	1,592	722,530	6,200	-0,03	-1,879	8,079	724,409				
578	8,17						723,904	-8,041	-1,441	722,463	-6,600	-3,00	724,222	722,661	1,561	722,735	6,200	1,20	-1,767	7,966	724,502				
579							723,964	-7,916	-1,315	722,649	-6,600	-3,00	724,238	722,847	1,391	723,031	6,200	2,97	-1,544	7,744	724,575				
580							724,062	-7,704	-1,104	722,958	-6,600	-3,00	724,228	723,156	1,072	723,342	6,200	3,00	-0,945	7,145	724,287				
581							723,412	-6,749	-0,149	723,263	-6,600	-3,00	723,604	723,461	0,143	723,647	6,200	3,00	0,133	6,398	723,514				
582							723,058	-7,356	0,504	723,562	-6,600	-3,00	723,209	723,760	-0,551	723,946	6,200	3,00	0,951	7,626	722,995				
583							722,971	-7,927	0,885	723,856	-6,600	-3,00	722,612	724,054	-1,442	724,240	6,200	3,00	1,297	8,146	722,943				
584							722,135	-9,615	2,010	724,145	-6,600	-3,00	721,933	724,343	-2,410	724,506	6,200	2,63	2,166	9,449	722,340				
584	9,60						721,328	-11,030	2,954	724,282	-6,600	-3,00	721,685	724,480	-2,795	724,554	6,200	1,19	2,593	10,090	721,961				
585							720,380	-12,574	4,052	724,432	-6,496	-2,99	721,418	724,626	-3,208	724,604	6,200	-0,35	3,060	10,790	721,544				
586							719,920	-13,491	4,796	724,716	-6,296	-3,00	720,291	724,905	-4,614	724,719	6,200	-3,00	4,335	12,703	720,384				
587							718,611	-15,772	6,381	724,992	-6,200	-3,00	718,901	725,178	-6,277	724,992	6,200	-3,00	5,777	14,866	719,215				

RODOVIA: GO-222 NOTA DE SERVIÇO DE TERRAPLENAGEM TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA PLATAFORMA: 12,40m																								
ESTACA	FRAÇÃO (m)	LADO ESQUERDO										EIXO (m)			BORDO (m)			%	LADO DIREITO					
		OFFSET		BERMA		OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	COTA	DIST.	%	OFFSET		BERMA		OFFSET		COTA
		COTA	DIST.	COTA	DIST.	ALT.	COTA	DIST.	ALT.	COTA	DIST.	COTA	PROJ.	VERM.	COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	
588							718,788	-15,909	6,473	725,261	-6,200	-3,00	719,671	725,447	-5,776	725,261	6,200	-3,00	4,941	13,612	720,320			
589							720,485	-13,758	5,039	725,524	-6,200	-3,00	721,223	725,710	-4,487	725,524	6,200	-3,00	3,791	11,886	721,733			
590							721,988	-11,891	3,793	725,781	-6,200	-3,00	722,727	725,967	-3,240	725,781	6,200	-3,00	2,635	10,153	723,146			
591							723,104	-10,596	2,930	726,034	-6,200	-3,00	723,585	726,220	-2,635	726,034	6,200	-3,00	2,126	9,389	723,908			
592							724,013	-9,604	2,269	726,282	-6,200	-3,00	724,439	726,468	-2,029	726,282	6,200	-3,00	1,550	8,525	724,732			
593							724,785	-8,809	1,739	726,524	-6,200	-3,00	725,220	726,710	-1,490	726,524	6,200	-3,00	1,060	7,791	725,464			
594							725,381	-8,270	1,380	726,761	-6,200	-3,00	725,904	726,947	-1,043	726,761	6,200	-3,00	0,698	7,248	726,063			
595							726,093	-7,551	0,900	726,993	-6,200	-3,00	726,589	727,179	-0,590	726,993	6,200	-3,00	0,261	6,593	726,732			
596							726,616	-7,106	0,604	727,220	-6,200	-3,00	726,981	727,406	-0,425	727,220	6,200	-3,00	-0,027	6,227	727,247			
597							727,040	-6,803	0,402	727,442	-6,200	-3,00	727,372	727,628	-0,256	727,442	6,200	-3,00	-0,204	6,404	727,646			
598							727,377	-6,622	0,281	727,658	-6,200	-3,00	727,685	727,844	-0,159	727,658	6,200	-3,00	-0,293	6,492	727,951			
599							727,575	-6,642	0,295	727,870	-6,200	-3,00	727,902	728,056	-0,154	727,870	6,200	-3,00	-0,302	6,503	728,172			
600							727,868	-6,511	0,208	728,076	-6,200	-3,00	728,107	728,262	-0,155	728,076	6,200	-3,00	-0,357	6,557	728,433			
601							728,124	-6,430	0,153	728,277	-6,200	-3,00	728,359	728,463	-0,104	728,277	6,200	-3,00	-0,406	6,606	728,683			
602							728,269	-6,506	0,204	728,473	-6,200	-3,00	728,612	728,659	-0,047	728,473	6,200	-3,00	-0,423	6,623	728,896			
603							728,434	-6,544	0,230	728,664	-6,200	-3,00	728,865	728,850	0,015	728,664	6,200	-3,00	-0,358	6,558	729,022			
604							728,634	-6,522	0,215	728,849	-6,200	-3,00	729,144	729,035	0,109	728,849	6,200	-3,00	-0,391	6,591	729,240			
605							728,933	-6,345	0,096	729,029	-6,200	-3,00	729,426	729,215	0,211	729,029	6,200	-3,00	-0,480	6,680	729,509			
606							729,014	-6,485	0,191	729,205	-6,200	-3,00	729,380	729,391	-0,011	729,205	6,200	-3,00	-0,374	6,575	729,579			
607							729,052	-6,684	0,323	729,375	-6,200	-3,00	729,351	729,561	-0,210	729,375	6,200	-3,00	-0,247	6,447	729,622			
608							729,058	-6,922	0,481	729,539	-6,200	-3,00	729,371	729,725	-0,354	729,539	6,200	-3,00	-0,181	6,381	729,720			
609							729,198	-6,953	0,502	729,700	-6,200	-3,00	729,463	729,886	-0,423	729,700	6,200	-3,00	-0,176	6,376	729,876			
610							729,284	-7,064	0,575	729,859	-6,200	-3,00	729,551	730,045	-0,494	729,859	6,200	-3,00	-0,106	6,305	729,965			
611							729,352	-7,201	0,667	730,019	-6,200	-3,00	729,552	730,205	-0,653	730,019	6,200	-3,00	0,173	6,459	729,846			
612							729,381	-7,397	0,798	730,179	-6,200	-3,00	729,571	730,365	-0,794	730,179	6,200	-3,00	0,371	6,756	729,808			
613							729,219	-7,879	1,119	730,338	-6,200	-3,00	729,534	730,524	-0,990	730,338	6,200	-3,00	0,475	6,913	729,863			
614							729,145	-8,229	1,353	730,498	-6,200	-3,00	729,550	730,684	-1,134	730,498	6,200	-3,00	0,617	7,125	729,881			
615							729,202	-8,383	1,455	730,657	-6,200	-3,00	729,565	730,843	-1,278	730,657	6,200	-3,00	0,760	7,340	729,897			
616							729,124	-8,719	1,680	730,804	-6,200	-3,00	729,499	730,990	-1,491	730,804	6,200	-3,00	0,958	7,637	729,846			
617							729,037	-9,022	1,881	730,918	-6,200	-3,00	729,434	731,104	-1,670	730,918	6,200	-3,00	1,124	7,886	729,794			
618							729,196	-8,908	1,805	731,001	-6,200	-3,00	729,367	731,187	-1,820	731,001	6,200	-3,00	1,301	8,151	729,700			
619							729,337	-8,772	1,714	731,051	-6,200	-3,00	729,724	731,237	-1,513	731,051	6,200	-3,00	1,028	7,742	730,023			
620							729,477	-8,589	1,593	731,070	-6,200	-3,00	730,089	731,256	-1,167	731,070	6,200	-3,00	1,262	8,092	729,808			
621							729,246	-8,915	1,810	731,056	-6,200	-3,00	729,653	731,242	-1,589	731,056	6,200	-3,00	1,283	8,125	729,773			
622							729,608	-8,306	1,403	731,011	-6,200	-3,00	730,031	731,197	-1,166	731,011	6,200	-3,00	1,295	8,143	729,716			
623							729,666	-8,101	1,268	730,934	-6,200	-3,00	730,165	731,120	-0,955	730,934	6,200	-3,00	1,040	7,760	729,894			
624							729,871	-7,631	0,954	730,825	-6,200	-3,00	730,400	731,011	-0,611	730,825	6,200	-3,00	0,742	7,313	730,083			
625							730,145	-7,008	0,539	730,684	-6,200	-3,00	730,106	730,870	-0,764	730,684	6,200	-3,00	0,111	6,366	730,573			
626							730,163	-6,721	0,348	730,511	-6,200	-3,00	730,387	730,697	-0,310	730,511	6,200	-3,00	-0,242	6,442	730,753			
627							730,174	-6,397	0,132	730,306	-6,200	-3,00	730,669	730,492	0,177	730,306	6,200	-3,00	-0,625	6,826	730,931			
628							730,317	-6,449	-0,248	730,069	-6,200	-3,00	730,885	730,255	0,630	730,069	6,200	-3,00	-1,023	7,223	731,092			
629							730,527	-6,927	-0,727	729,800	-6,200	-3,00	731,022	729,986	1,036	729,800	6,200	-3,00	-1,340	7,540	731,140			
630							730,515	-7,216	-1,016	729,499	-6,200	-3,00	731,157	729,685	1,472	729,499	6,200	-3,00	-1,689	7,889	731,188			
631							730,883	-7,917	-1,717	729,166	-6,200	-3,00	731,072	729,352	1,720	729,166	6,200	-3,00	-2,070	8,270	731,236			
632							730,788	-8,186	-1,987	728,801	-6,200	-3,00	730,985	728,987	1,998	728,801	6,200	-3,00	-2,367	8,566	731,168			
633							730,573	-8,368	-2,168	728,405	-6,200	-3,00	730,709	728,591	2,118	728,405	6,200	-3,00	-2,442	8,643	730,847			
634							730,238	-8,462	-2,262	727,976	-6,200	-3,00	730,363	728,162	2,201	727,976	6,200	-3,00	-2,525	8,725	730,501			
635							729,881	-8,566	-2,365	727,516	-6,200	-3,00	730,016	727,702	2,314	727,516	6,200	-3,00	-2,624	8,824	730,140			
636							729,240	-8,417	-2,217	727,023	-6,200	-3,00	729,431	727,209	2,222	727,023	6,200	-3,00	-2,516	8,716	729,539			
637							728,594	-8,295	-2,095	726,499	-6,200	-3,00	728,737	726,685	2,052	726,499	6,200	-3,00	-2,318	8,518	728,817			
638							727,847	-8,105	-1,905	725,942	-6,200	-3,00	727,807	726,128	1,679	725,942	6,200	-3,00	-1,897	8,096	727,839			

NOTA DE SERVIÇO DE TERRAPLENAGEM																										
RODOVIA: GO-222										TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA										PLATAFORMA: 12,40m						
POSIÇÃO		LADO ESQUERDO										EIXO (m)			LADO DIREITO											
ESTACA	FRAÇÃO (m)	OFFSET		BERMA		%	OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET		BERMA		OFFSET			
		COTA	DIST.	COTA	DIST.		COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA		
639							726,949	-7,795	-1,595	725,354	-6,200	-3,00	726,915	725,540	1,375	725,354	6,200	-3,00	-1,601	7,801	726,955					
640							726,055	-7,501	-1,300	724,755	-6,200	-3,00	726,024	724,941	1,083	724,755	6,200	-3,00	-1,322	7,523	726,077					
641							724,437	-6,482	-0,282	724,155	-6,200	-3,00	724,690	724,341	0,349	724,155	6,200	-3,00	-0,618	6,818	724,773					
642							722,393	-7,943	1,162	723,555	-6,200	-3,00	723,356	723,741	-0,385	723,555	6,200	-3,00	0,122	6,383	723,433					
643							721,112	-8,966	1,844	722,956	-6,200	-3,00	722,021	723,142	-1,121	722,956	6,200	-3,00	0,844	7,465	722,112					
644							719,831	-9,988	2,525	722,356	-6,200	-3,00	720,687	722,542	-1,855	722,356	6,200	-3,00	1,565	8,548	720,791					
645							718,549	-11,011	3,207	721,756	-6,200	-3,00	719,352	721,942	-2,590	721,756	6,200	-3,00	2,287	9,630	719,469					
646							717,456	-11,865	3,776	721,232	-6,200	-3,00	718,223	721,418	-3,195	721,232	6,200	-3,00	2,917	10,575	718,315					
647							716,610	-12,573	4,249	720,859	-6,200	-3,00	717,096	721,045	-3,949	720,856	6,299	-3,00	3,671	11,805	717,185					
648		713,788	-17,495	713,803	-16,728	-2,00	713,803	-16,700	0,020	720,803	-6,200	-0,31	715,976	720,822	-4,846	720,627	6,499	-3,00	0,230	16,999	713,627	-2,00	19,999	713,567	20,343	713,338
648	10,08	712,789	-21,234	713,782	-19,744	-2,00	713,841	-16,700	0,990	720,841	-6,200	1,19	715,408	720,767	-5,359	720,569	6,600	-3,00	0,630	17,100	713,569	-2,00	20,100	713,509	21,047	712,878
649		712,698	-21,501	713,859	-19,759	-2,00	713,917	-16,700	1,180	720,917	-6,200	2,69	714,847	720,750	-5,903	720,552	6,600	-3,00	1,030	17,100	713,552	-2,00	20,100	713,493	21,640	712,466
650		712,766	-21,550	713,957	-19,763	-2,00	714,015	-16,700	1,230	721,015	-6,200	3,00	713,925	720,829	-6,904	720,631	6,600	-3,00	1,110	17,100	713,631	-2,00	20,100	713,572	21,760	712,465
651		713,875	-20,231	714,187	-19,763	-2,00	714,245	-16,700	0,310	721,245	-6,200	3,00	714,312	721,059	-6,747	720,861	6,600	-3,00	0,070	17,100	713,861	-2,00	20,100	713,801	20,203	713,733
652							716,306	-14,180	5,320	721,626	-6,200	3,00	715,747	721,440	-5,693	721,242	6,600	-3,00	4,959	14,038	716,283					
653							718,230	-12,091	3,927	722,157	-6,200	3,00	717,215	721,971	-4,756	721,773	6,600	-3,00	3,264	11,496	718,509					
653	16,08						719,790	-10,388	2,793	722,583	-6,200	1,21	718,799	722,508	-3,709	722,310	6,600	-3,00	2,716	10,675	719,594					
654							720,224	-9,901	2,468	722,692	-6,200	0,61	719,213	722,654	-3,441	722,457	6,561	-3,00	2,611	10,478	719,846					
655							722,394	-7,618	0,945	723,339	-6,200	-2,39	721,321	723,487	-2,166	723,296	6,361	-3,00	1,560	8,701	721,736					
656							723,791	-6,828	0,419	724,210	-6,200	-3,00	722,557	724,396	-1,839	724,210	6,200	-3,00	0,933	7,599	723,277					
657							725,014	-6,356	0,104	725,118	-6,200	-3,00	723,785	725,304	-1,519	725,118	6,200	-3,00	0,698	7,247	724,420					
658							724,931	-7,844	1,096	726,027	-6,200	-3,00	725,013	726,213	-1,200	726,027	6,200	-3,00	-0,042	6,242	726,069					
659							726,099	-7,454	0,836	726,935	-6,200	-3,00	726,241	727,121	-0,880	726,935	6,200	-3,00	-0,365	6,565	727,300					
660							727,330	-6,972	0,514	727,844	-6,200	-3,00	727,468	728,030	-0,562	727,844	6,200	-3,00	-0,683	6,883	728,527					
661							728,350	-6,804	0,403	728,753	-6,200	-3,00	728,479	728,939	-0,460	728,753	6,200	-3,00	-0,786	6,986	729,539					
662							729,361	-6,651	0,300	729,661	-6,200	-3,00	729,490	729,847	-0,357	729,661	6,200	-3,00	-0,899	7,098	730,560					
663							730,689	-6,319	-0,119	730,570	-6,200	-3,00	730,646	730,756	-0,110	730,570	6,200	-3,00	-1,120	7,320	731,690					
664							731,782	-6,504	-0,304	731,478	-6,200	-3,00	731,657	731,664	-0,007	731,478	6,200	-3,00	-1,069	7,269	732,547					
665							732,879	-6,706	-0,506	732,373	-6,200	-3,00	732,521	732,559	-0,038	732,373	6,200	-3,00	-1,048	7,248	733,421					
666							733,426	-6,408	-0,207	733,219	-6,200	-3,00	733,101	733,405	-0,304	733,219	6,200	-3,00	-1,030	7,230	734,249					
667							733,860	-6,605	0,149	734,009	-6,383	-2,99	733,606	734,200	-0,594	734,073	6,200	-2,05	-0,823	7,023	734,896					
668							734,250	-7,330	0,498	734,748	-6,583	-2,99	734,070	734,945	-0,875	735,004	6,200	0,95	0,004	6,206	735,000					
668	1,69						734,302	-7,359	0,506	734,808	-6,600	-3,00	734,125	735,006	-0,881	735,080	6,200	1,19	0,006	6,210	735,074					
669							734,867	-7,463	0,575	735,442	-6,600	-3,00	734,736	735,640	-0,904	735,826	6,200	3,00	0,032	6,248	735,794					
670							735,500	-7,481	0,587	736,087	-6,600	-3,00	735,395	736,285	-0,890	736,471	6,200	3,00	0,070	6,305	736,401					
671							735,903	-7,767	0,778	736,681	-6,600	-3,00	735,983	736,879	-0,896	737,065	6,200	3,00	0,512	6,969	736,553					
672							736,324	-7,951	0,901	737,225	-6,600	-3,00	736,486	737,423	-0,937	737,609	6,200	3,00	0,832	7,449	736,777					
673							736,873	-7,869	0,846	737,719	-6,600	-3,00	736,699	737,917	-1,218	738,103	6,200	3,00	0,228	6,542	737,875					
674							737,245	-7,976	0,917	738,162	-6,600	-3,00	737,073	738,360	-1,287	738,546	6,200	3,00	0,220	6,531	738,326					
675							737,535	-8,130	1,021	738,556	-6,600	-3,00	737,458	738,754	-1,296	738,940	6,200	3,00	0,470	6,904	738,470					
676							738,015	-7,926	0,883	738,898	-6,600	-3,00	737,868	739,096	-1,228	739,282	6,200	3,00	0,164	6,446	739,118					
677							738,415	-7,764	0,776	739,191	-6,600	-3,00	738,252	739,389	-1,137	739,575	6,200	3,00	0,077	6,316	739,498					
678							738,903	-7,396	0,530	739,433	-6,600	-3,00	738,614	739,631	-1,017	739,817	6,200	3,00	0,292	6,639	739,525					
679							739,307	-7,078	0,319	739,626	-6,600	-3,00	739,801	739,824	-0,023	740,010	6,200	3,00	0,804	7,405	739,206					
680							739,499	-7,003	0,268	739,767	-6,600	-3,00	739,979	739,965	0,014	740,151	6,200	3,00	0,698	7,247	739,453					
681							739,948	-6,689	-0,089	739,859	-6,600	-3,00	740													

NOTA DE SERVIÇO DE TERRAPLENAGEM																										
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																PLATAFORMA: 12,40m				
POSIÇÃO		LADO ESQUERDO											EIXO (m)			LADO DIREITO										
ESTACA	FRAÇÃO (m)	OFFSET		BERMA			OFFSET			BORDO (m)		%	COTA TERR.	COTA PROJ.	COTA VERM.	BORDO (m)		%	OFFSET			BERMA			OFFSET	
		COTA	DIST.	COTA	DIST.	%	COTA	DIST.	ALT.	COTA	DIST.					COTA	DIST.		ALT.	DIST.	COTA	%	DIST.	COTA	DIST.	COTA
687							740,507	-7,741	-1,141	739,366	-6,600	-3,00	740,492	739,564	0,928	739,750	6,200	3,00	-1,664	7,864	741,414					
688							740,267	-7,698	-1,098	739,169	-6,600	-3,00	740,366	739,367	0,999	739,553	6,200	3,00	-1,735	7,935	741,288					
689							740,194	-7,822	-1,222	738,972	-6,600	-3,00	740,226	739,170	1,056	739,356	6,200	3,00	-1,797	7,997	741,153					
690							740,101	-7,927	-1,327	738,774	-6,600	-3,00	740,068	738,972	1,096	739,158	6,200	3,00	-1,817	8,017	740,975					
690	16,60						739,999	-7,989	-1,389	738,610	-6,600	-3,00	739,609	738,808	0,801	738,883	6,200	1,21	-1,668	7,868	740,551					
691							739,980	-7,876	-1,399	738,581	-6,477	-3,00	739,514	738,775	0,739	738,818	6,200	0,69	-1,678	7,878	740,496					
691	18,64						739,120	-6,915	-0,715	738,405	-6,200	-3,00	738,217	738,591	-0,374	738,460	6,200	-2,11	-1,268	7,468	739,728					

4 – CÁLCULO DO VOLUME

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			
POSICÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
0		5,77	0,00	5,77	0,00	10,00	58	0	0	0	0	0	0	72	100	94	130	230	173	225	230	173	225
1		0,78	0,55	6,55	0,55	20,00	16	13	17	100	0	130	0	0	145	0	189	261	258	336	491	431	560
2		5,98	0,00	12,53	0,55	20,00	120	0	0	0	0	0	0	144	225	187	293	488	369	479	980	800	1.040
3		24,82	0,00	37,35	0,55	20,00	496	0	0	0	0	0	0	338	313	439	407	1.148	651	847	2.127	1.451	1.886
4		17,4	0,00	54,75	0,55	20,00	348	0	0	0	0	0	0	485	372	630	484	1.205	857	1.114	3.332	2.308	3.001
5		28,75	0,00	83,50	0,55	20,00	575	0	0	0	0	0	0	539	438	700	569	1.552	977	1.270	4.884	3.285	4.270
6		33,94	0,00	117,44	0,55	20,00	679	0	0	0	0	0	0	625	840	812	1.092	2.144	1.465	1.904	7.027	4.750	6.174
7		37,22	0,00	154,66	0,55	20,00	744	0	0	0	0	0	0	682	976	886	1.268	2.402	1.657	2.154	9.429	6.407	8.329
8		39,16	0,00	193,82	0,55	20,00	783	0	0	0	0	0	0	1.056	762	1.373	991	2.602	1.819	2.364	12.031	8.225	10.693
9		39,66	0,00	233,48	0,55	20,00	793	0	0	0	0	0	0	1.039	797	1.351	1.036	2.629	1.836	2.387	14.660	10.062	13.080
10		36,5	0,00	269,98	0,55	20,00	730	0	0	0	0	0	0	1.002	749	1.302	974	2.481	1.751	2.276	17.141	11.812	15.356
11		32,91	0,00	302,89	0,55	20,00	658	0	0	0	0	0	0	520	681	676	885	1.859	1.201	1.561	19.000	13.013	16.917
12		28,92	0,00	331,81	0,55	20,00	578	0	0	0	0	0	0	467	604	607	785	1.649	1.071	1.392	20.649	14.084	18.309
13		26,24	0,00	358,05	0,55	20,00	525	0	0	0	0	0	0	427	537	555	698	1.488	964	1.253	22.138	15.048	19.562
14		22,5	0,00	380,55	0,55	20,00	450	0	0	0	0	0	0	380	476	494	619	1.306	856	1.113	23.444	15.904	20.675
15		18,85	0,00	399,40	0,55	20,00	377	0	0	0	0	0	0	336	418	436	544	1.131	754	980	24.575	16.658	21.655
16		15,29	0,00	414,69	0,55	20,00	306	0	0	0	0	0	0	292	363	380	472	961	655	852	25.536	17.313	22.507
17		11,85	0,00	426,54	0,55	20,00	237	0	0	0	0	0	0	252	311	327	404	799	562	731	26.336	17.876	23.238
18		9,22	0,00	435,76	0,55	20,00	184	0	0	0	0	0	0	239	283	311	368	707	522	679	27.042	18.398	23.917
19		5,96	0,00	441,72	0,55	20,00	119	0	0	0	0	0	0	201	236	261	307	556	437	568	27.599	18.835	24.486
20		2,83	0,02	444,55	0,57	20,00	57	0	1	0	0	0	0	165	191	215	248	413	357	464	28.011	19.192	24.949
21		2,23	0,16	446,78	0,73	20,00	45	4	5	0	0	0	0	157	179	204	232	380	340	442	28.392	19.531	25.391
22		1,77	0,43	448,55	1,16	20,00	35	10	13	0	0	0	0	149	169	194	219	353	328	427	28.745	19.860	25.817
23		1,11	0,09	449,66	1,25	20,00	22	2	3	0	0	0	0	132	148	172	192	302	282	366	29.047	20.141	26.184
24		0,41	0,48	450,07	1,73	6,05	2	3	5	0	0	0	0	31	44	40	57	78	79	102	29.125	20.220	26.286
24	12,09	0,57	1,13	450,64	2,86	10,00	6	14	18	51	0	66	0	0	78	0	101	135	142	185	29.259	20.362	26.471
25		0,27	3,67	450,91	6,53	3,96	1	17	23	22	0	29	0	0	28	0	36	51	67	87	29.310	20.430	26.559
26		0,11	4,61	451,02	11,14	20,00	2	111	144	116	0	151	0	0	128	0	167	246	355	461	29.556	20.784	27.020
27		0,05	4,89	451,07	16,03	20,00	1	117	153	117	0	152	0	0	121	0	157	239	355	462	29.795	21.140	27.482
28		0,04	6,25	451,11	22,28	20,00	1	150	195	115	0	150	0	0	119	0	155	235	384	499	30.030	21.524	27.981
29		0	7,39	451,11	29,67	20,00	0	177	231	115	110	150	143	0	0	0	0	225	402	523	30.255	21.926	28.504
30		0	7,32	451,11	36,99	20,00	0	176	228	112	111	146	144	0	0	0	0	223	399	518	30.478	22.325	29.022
31		0	6,66	451,11	43,65	20,00	0	160	208	111	121	144	157	0	0	0	0	232	392	509	30.710	22.717	29.532
32		0	6,05	451,11	49,70	20,00	0	145	189	111	120	144	156	0	0	0	0	231	376	489	30.941	23.093	30.021
33		0	5,72	451,11	55,42	20,00	0	137	178	110	120	143	156	0	0	0	0	230	367	477	31.171	23.460	30.498
34		0	5,68	451,11	61,10	20,00	0	136	177	110	120	143	156	0	0	0	0	230	366	476	31.401	23.826	30.974
35		0	5,70	451,11	66,80	3,55	0	24	32	19	20	25	26	0	0	0	0	39	63	82	31.440	23.890	31.057
35	7,09	0	5,93	451,11	72,73	10,00	0	71	93	53	56	69	73	0	0	0	0	109	180	234	31.549	24.070	31.291
36		0	6,37	451,11	79,10	6,46	0	49	64	34	37	44	48	0	0	0	0	71	120	156	31.620	24.190	31.447
37		0	5,98	451,11	85,08	20,00	0	144	187	102	115	133	150	0	0	0	0	217	361	469	31.837	24.551	31.916
38		0	6,07	451,11	91,15	20,00	0	146	189	105	116	137	151	0	0	0	0	221	367	477	32.058	24.917	32.393
39		0	6,24	451,11	97,39	20,00	0	150	195	109	122	142	159	0	0	0	0	231	381	495	32.289	25.298	32.888
40		0	8,31	451,11	105,70	20,00	0	199	259	121	121	157	157	0	0	0	0	242	441	574	32.531	25.740	33.461
41		0	11,55	451,11	117,25	20,00	0	277	360	127	127	165	165	0	0	0	0	254	531	691	32.785	26.271	34.152
42		0	14,87	451,11	132,12	20,00	0	357	464	132	133	172	173	0	0	0	0	265	622	808	33.050	26.893	34.960
43		0	16,35	451,11	148,47	20,00	0	392	510	118	145	153	189	0	0	0	0	263	655	852	33.313	27.548	35.813
44		0	19,01	451,11	167,48	20,00	0	456	593	121	150	157	195	0	0	0	0	271	727	945	33.584	28.275	36.758

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					
ESTACA	FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
		SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
45		0	20,26	451,11	187,74	20,00	0	486	632	123	150	160	195	0	0	0	0	273	759	987	33.857	29.035	37.745
46		0	19,87	451,11	207,61	20,00	0	477	620	131	126	170	164	0	0	0	0	257	734	954	34.114	29.768	38.699
47		0	21,80	451,11	229,41	20,00	0	523	680	130	130	169	169	0	0	0	0	260	783	1.018	34.374	30.552	39.717
48		0	25,41	451,11	254,82	20,00	0	610	793	139	140	181	182	0	0	0	0	279	889	1.155	34.653	31.440	40.873
49		0	27,63	451,11	282,45	20,00	0	663	862	148	148	192	192	0	0	0	0	296	959	1.247	34.949	32.400	42.119
50		0	29,44	451,11	311,89	20,00	0	707	919	158	147	205	191	0	0	0	0	305	1.012	1.315	35.254	33.411	43.435
51		0	29,42	451,11	341,31	20,00	0	706	918	152	156	198	203	0	0	0	0	308	1.014	1.318	35.562	34.425	44.753
52		0	28,55	451,11	369,86	20,00	0	685	891	148	154	192	200	0	0	0	0	302	987	1.283	35.864	35.412	46.036
53		0	28,45	451,11	398,31	20,00	0	683	888	149	152	194	198	0	0	0	0	301	984	1.279	36.165	36.396	47.315
54		0	27,84	451,11	426,15	20,00	0	668	869	142	152	185	198	0	0	0	0	294	962	1.251	36.459	37.358	48.566
55		0	25,29	451,11	451,44	20,00	0	607	789	139	149	181	194	0	0	0	0	288	895	1.163	36.747	38.253	49.729
56		0	26,18	451,11	477,62	20,00	0	628	817	138	152	179	198	0	0	0	0	290	918	1.194	37.037	39.172	50.923
57		0	25,60	451,11	503,22	20,00	0	614	799	135	152	176	198	0	0	0	0	287	901	1.172	37.324	40.073	52.095
58		0	23,54	451,11	526,76	20,00	0	565	734	131	150	170	195	0	0	0	0	281	846	1.100	37.605	40.919	53.195
59		0	19,52	451,11	546,28	20,00	0	468	609	127	143	165	186	0	0	0	0	270	738	960	37.875	41.658	54.155
60		0	14,54	451,11	560,82	20,00	0	349	454	121	134	157	174	0	0	0	0	255	604	785	38.130	42.261	54.940
61		0	11,56	451,11	572,38	20,00	0	277	361	120	127	156	165	0	0	0	0	247	524	682	38.377	42.786	55.622
62		0	8,89	451,11	581,27	20,00	0	213	277	117	123	152	160	0	0	0	0	240	453	589	38.617	43.239	56.211
63		0	8,17	451,11	589,44	20,00	0	196	255	112	119	146	155	0	0	0	0	231	427	555	38.848	43.666	56.766
64		0	4,66	451,11	594,10	20,00	0	112	145	107	111	139	144	0	0	0	0	218	330	429	39.066	43.996	57.195
65		0	1,57	451,11	595,67	20,00	0	38	49	102	104	133	135	0	0	0	0	206	244	317	39.272	44.240	57.512
66		0	1,35	451,11	597,02	20,00	0	32	42	102	103	133	134	0	0	0	0	205	237	309	39.477	44.477	57.820
67		0,08	0,37	451,19	597,39	20,00	2	9	12	0	101	0	131	0	0	0	0	103	110	143	39.580	44.587	57.963
68		0,57	0,04	451,76	597,43	20,00	11	1	1	0	100	0	130	0	0	0	0	111	101	131	39.691	44.688	58.095
69		3,06	0,00	454,82	597,43	20,00	61	0	0	0	0	0	0	127	119	165	154	307	245	319	39.998	44.934	58.414
70		5,69	0,00	460,51	597,43	20,00	114	0	0	0	0	0	0	156	147	203	191	417	303	394	40.415	45.237	58.808
71		3,58	0,00	464,09	597,43	20,00	72	0	0	0	0	0	0	149	122	194	158	343	271	352	40.757	45.508	59.160
72		3,74	0,00	467,83	597,43	20,00	75	0	0	0	0	0	0	220	185	285	241	480	405	526	41.237	45.912	59.686
73		0	5,38	467,83	602,81	20,00	0	129	168	0	103	0	134	0	0	0	0	103	232	302	41.340	46.145	59.988
74		0	3,77	467,83	606,58	20,00	0	90	118	0	101	0	131	103	0	134	0	204	295	383	41.544	46.439	60.371
75		0	7,07	467,83	613,65	20,00	0	170	221	144	119	187	155	0	0	0	0	263	433	562	41.807	46.872	60.933
76		0	15,12	467,83	628,77	20,00	0	363	472	189	157	246	204	0	0	0	0	346	709	922	42.153	47.581	61.855
77		0	32,94	467,83	661,71	20,00	0	791	1.028	218	217	283	282	0	0	0	0	435	1.226	1.593	42.588	48.806	63.448
78		0	37,65	467,83	699,36	20,00	0	904	1.175	207	234	269	304	0	0	0	0	441	1.345	1.748	43.029	50.151	65.196
79		0	45,39	467,83	744,75	20,00	0	1.089	1.416	256	252	333	328	0	0	0	0	508	1.597	2.077	43.537	51.748	67.273
80		0	47,84	467,83	792,59	20,00	0	1.148	1.493	261	235	339	306	0	0	0	0	496	1.644	2.137	44.033	53.392	69.410
81		0	49,26	467,83	841,85	20,00	0	1.182	1.537	250	215	325	280	0	0	0	0	465	1.647	2.141	44.498	55.040	71.552
82		0	48,93	467,83	890,78	20,00	0	1.174	1.527	233	205	303	267	0	0	0	0	438	1.612	2.096	44.936	56.652	73.648
83		0	43,39	467,83	934,17	20,00	0	1.041	1.354	213	191	277	248	0	0	0	0	404	1.445	1.879	45.340	58.097	75.527
84		0	37,05	467,83	971,22	20,00	0	889	1.156	175	174	228	226	0	0	0	0	349	1.238	1.610	45.689	59.336	77.136
85		0	28,52	467,83	999,74	20,00	0	684	890	166	151	216	196	0	0	0	0	317	1.001	1.302	46.006	60.337	78.438
86		0	24,32	467,83	1.024,06	5,97	0	174	226	49	40	64	52	0	0	0	0	89	263	342	46.095	60.600	78.780
86	11,93	0	25,23	467,83	1.049,29	10,00	0	303	394	83	68	108	88	0	0	0	0	151	454	590	46.246	61.054	79.370
87		0	26,22	467,83	1.075,51	4,04	0	127	165	33	27	43	35	0	0	0	0	60	187	243	46.306	61.241	79.613
88		0	26,64	467,83	1.102,15	20,00	0	639	831	164	139	213	181	0	0	0	0	303	942	1.225	46.609	62.183	80.838
89		0	22,74	467,83	1.124,89	20,00	0	546	709	158	137	205	178	0	0	0	0	295	841	1.093	46.904	63.024	81.931
90		0	4,55	467,83	1.129,44	20,00	0	109	142	157	114	204	148	0	0	0	0	271	380	494	47.175	63.404	82.425

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					
POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
91		0	5,10	467,83	1.134,54	20,00	0	122	159	139	124	181	161	0	0	0	0	263	385	501	47.438	63.790	82.926
92		0	8,21	467,83	1.142,75	20,00	0	197	256	136	125	177	163	0	0	0	0	261	458	595	47.699	64.248	83.522
93		0	11,71	467,83	1.154,46	20,00	0	281	365	168	140	218	182	0	0	0	0	308	589	766	48.007	64.837	84.288
94		0	19,56	467,83	1.174,02	8,20	0	192	250	69	67	90	87	0	0	0	0	136	328	427	48.143	65.165	84.714
94	16,39	0	27,04	467,83	1.201,06	10,00	0	324	422	97	90	126	117	0	0	0	0	187	511	665	48.330	65.676	85.379
95		0	28,84	467,83	1.229,90	1,81	0	62	81	18	16	23	21	0	0	0	0	34	96	125	48.364	65.773	85.505
96		0	28,00	467,83	1.257,90	20,00	0	672	874	230	186	299	242	0	0	0	0	416	1.088	1.414	48.780	66.861	86.919
97		0	24,25	467,83	1.282,15	20,00	0	582	757	195	158	254	205	0	0	0	0	353	935	1.216	49.133	67.796	88.135
98		0	22,17	467,83	1.304,32	20,00	0	532	692	175	155	228	202	0	0	0	0	330	862	1.121	49.463	68.658	89.255
99		0	14,90	467,83	1.319,22	20,00	0	358	465	136	124	177	161	0	0	0	0	260	618	803	49.723	69.276	90.058
100		0	7,06	467,83	1.326,28	20,00	0	169	220	123	111	160	144	0	0	0	0	234	403	524	49.957	69.679	90.583
101		0,02	0,61	467,85	1.326,89	20,00	0	15	19	108	99	140	129	0	0	0	0	207	222	288	50.164	69.901	90.871
102		5,38	0,00	473,23	1.326,89	20,00	108	0	0	0	0	0	0	123	165	160	215	396	289	375	50.560	70.189	91.246
103		13,45	0,00	486,68	1.326,89	20,00	269	0	0	0	0	0	0	345	264	448	343	878	609	791	51.438	70.798	92.037
104		20,88	0,00	507,56	1.326,89	20,00	418	0	0	0	0	0	0	464	359	604	466	1.241	823	1.070	52.679	71.621	93.107
105		28,2	0,00	535,76	1.326,89	20,00	564	0	0	0	0	0	0	585	458	761	595	1.607	1.043	1.356	54.286	72.664	94.463
106		31,44	0,00	567,20	1.326,89	20,00	629	0	0	0	0	0	0	627	444	816	577	1.700	1.071	1.393	55.986	73.736	95.856
107		34,12	0,00	601,32	1.326,89	6,65	227	0	0	0	0	0	0	208	189	270	245	623	396	515	56.609	74.132	96.371
107	13,30	35,34	0,00	636,66	1.326,89	10,00	353	0	0	0	0	0	0	297	300	386	390	950	596	775	57.559	74.728	97.147
108		35,85	0,00	672,51	1.326,89	3,35	120	0	0	0	0	0	0	92	102	119	132	314	193	251	57.873	74.922	97.398
109		36,68	0,00	709,19	1.326,89	20,00	734	0	0	0	0	0	0	452	628	587	817	1.814	1.080	1.404	59.687	76.002	98.802
110		35,73	0,00	744,92	1.326,89	20,00	715	0	0	0	0	0	0	375	626	487	814	1.715	1.000	1.301	61.402	77.002	100.103
111		34,14	0,00	779,06	1.326,89	20,00	683	0	0	0	0	0	0	350	612	455	795	1.645	962	1.251	63.046	77.964	101.354
112		32,16	0,00	811,22	1.326,89	20,00	643	0	0	0	0	0	0	333	592	433	769	1.568	925	1.202	64.614	78.889	102.556
113		31,12	0,00	842,34	1.326,89	20,00	622	0	0	0	0	0	0	320	585	417	760	1.528	905	1.177	66.142	79.795	103.733
114		31,34	0,00	873,68	1.326,89	20,00	627	0	0	0	0	0	0	360	608	468	790	1.595	968	1.258	67.737	80.762	104.991
115		33,28	0,00	906,96	1.326,89	20,00	666	0	0	0	0	0	0	405	760	526	989	1.831	1.165	1.515	69.568	81.928	106.506
116		34,27	0,00	941,23	1.326,89	20,00	685	0	0	0	0	0	0	417	749	542	974	1.852	1.166	1.516	71.419	83.094	108.022
117		35,82	0,00	977,05	1.326,89	20,00	716	0	0	0	0	0	0	436	757	567	984	1.909	1.192	1.550	73.328	84.286	109.572
118		37,75	0,00	1.014,80	1.326,89	20,00	755	0	0	0	0	0	0	493	666	641	866	1.914	1.159	1.507	75.242	85.445	111.079
119		40,02	0,00	1.054,82	1.326,89	20,00	800	0	0	0	0	0	0	533	699	693	908	2.032	1.232	1.601	77.274	86.677	112.680
120		43,1	0,00	1.097,92	1.326,89	20,00	862	0	0	0	0	0	0	556	839	723	1.091	2.257	1.395	1.814	79.531	88.072	114.494
121		42,33	0,00	1.140,25	1.326,89	20,00	847	0	0	0	0	0	0	538	943	700	1.226	2.328	1.481	1.925	81.859	89.553	116.419
122		39,62	0,00	1.179,87	1.326,89	6,11	242	0	0	0	0	0	0	154	280	200	364	676	434	564	82.535	89.987	116.983
122	12,22	34,8	0,00	1.214,67	1.326,89	10,00	348	0	0	0	0	0	0	232	340	301	443	920	572	744	83.455	90.559	117.727
123		31,65	0,00	1.246,32	1.326,89	3,89	123	0	0	0	0	0	0	85	103	111	134	312	189	245	83.767	90.748	117.972
124		23,73	0,00	1.270,05	1.326,89	20,00	475	0	0	0	0	0	0	374	398	486	518	1.247	772	1.004	85.014	91.520	118.976
125		15,13	0,00	1.285,18	1.326,89	20,00	303	0	0	0	0	0	0	258	317	336	412	878	575	748	85.891	92.095	119.724
126		4,66	0,00	1.289,84	1.326,89	20,00	93	0	0	0	0	0	0	138	184	180	239	415	322	419	86.307	92.417	120.143
127		0	5,51	1.289,84	1.332,40	20,00	0	132	172	112	104	146	135	0	0	0	0	216	348	453	86.523	92.766	120.595
128		0	17,65	1.289,84	1.350,05	20,00	0	424	551	132	124	172	161	0	0	0	0	256	680	883	86.779	93.445	121.479
129		0	32,40	1.289,84	1.382,45	20,00	0	778	1.011	154	137	200	178	0	0	0	0	291	1.069	1.389	87.070	94.514	122.868
130		0	50,04	1.289,84	1.432,49	20,00	0	1.201	1.561	174	168	226	218	0	0	0	0	342	1.543	2.006	87.412	96.057	124.874
131		0	56,80	1.289,84	1.489,29	20,00	0	1.363	1.772	192	177	250	230	0	0	0	0	369	1.732	2.252	87.781	97.789	127.126
132		0	67,56	1.289,84	1.556,85	20,00	0	1.621	2.108	215	187	280	243	0	0	0	0	402	2.023	2.630	88.183	99.812	129.756
133		0	75,33	1.289,84	1.632,18	20,00	0	1.808	2.350	222	195	289	254	0	0	0	0	417	2.225	2.892	88.600	102.037	132.649
134		0	84,34	1.289,84	1.716,52	20,00	0	2.024	2.631	230	203	299	264	0	0	0	0	433	2.457	3.194	89.033	104.495	135.843

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					

ESTACA	POSICÃO FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	CORTE	VOLUME SIMPLES (m³)		VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
		SIMPLES		ACUMULADA				CORTE	ATERRO	EM CORTE		EM ATERRO				CORTE	ATERRO		CORTE	ATERRO			
		CORTE	ATERRO	CORTE	ATERRO					CORTE/ATERRO	TRANSP.	CORTE/ATERRO	TRANSP.	CORTE/ATERRO	TRANSP.		COMP.	TRANSP.		COMP.	TRANSP.		
135		0	94,27	1.289,84	1.810,79	20,00	0	2.262	2.941	238	213	309	277	0	0	0	0	451	2.713	3.528	89.484	107.208	139.370
136		0	84,82	1.289,84	1.895,61	20,00	0	2.036	2.646	230	204	299	265	0	0	0	0	434	2.470	3.211	89.918	109.678	142.581
137		0	76,51	1.289,84	1.972,12	20,00	0	1.836	2.387	221	196	287	255	0	0	0	0	417	2.253	2.929	90.335	111.931	145.510
138		0	65,31	1.289,84	2.037,43	20,00	0	1.567	2.038	203	184	264	239	0	0	0	0	387	1.954	2.541	90.722	113.885	148.051
139		0	59,37	1.289,84	2.096,80	20,00	0	1.425	1.852	196	178	255	231	0	0	0	0	374	1.799	2.339	91.096	115.684	150.390
140		0	54,73	1.289,84	2.151,53	20,00	0	1.314	1.708	190	173	247	225	0	0	0	0	363	1.677	2.179	91.459	117.361	152.569
141		0	50,50	1.289,84	2.202,03	20,00	0	1.212	1.576	185	168	241	218	0	0	0	0	353	1.565	2.035	91.812	118.926	154.603
142		0	47,11	1.289,84	2.249,14	20,00	0	1.131	1.470	181	165	235	215	0	0	0	0	346	1.477	1.920	92.158	120.402	156.523
143		0	46,68	1.289,84	2.295,82	20,00	0	1.120	1.456	181	156	235	203	0	0	0	0	337	1.457	1.895	92.495	121.860	158.418
144		0	44,89	1.289,84	2.340,71	20,00	0	1.077	1.401	180	154	234	200	0	0	0	0	334	1.411	1.835	92.829	123.271	160.252
145		0	43,26	1.289,84	2.383,97	20,00	0	1.038	1.350	178	152	231	198	0	0	0	0	330	1.368	1.779	93.159	124.639	162.031
146		0	45,03	1.289,84	2.429,00	20,00	0	1.081	1.405	176	151	229	196	0	0	0	0	327	1.408	1.830	93.486	126.047	163.861
147		0	43,73	1.289,84	2.472,73	20,00	0	1.050	1.364	175	149	228	194	0	0	0	0	324	1.374	1.786	93.810	127.421	165.647
148		0	44,46	1.289,84	2.517,19	20,00	0	1.067	1.387	189	157	246	204	0	0	0	0	346	1.413	1.837	94.156	128.834	167.484
149		0	42,83	1.289,84	2.560,02	20,00	0	1.028	1.336	184	156	239	203	0	0	0	0	340	1.368	1.778	94.496	130.202	169.262
150		0	40,54	1.289,84	2.600,56	20,00	0	973	1.265	186	154	242	200	0	0	0	0	340	1.313	1.707	94.836	131.514	170.969
151		0	42,53	1.289,84	2.643,09	20,00	0	1.021	1.327	188	157	244	204	0	0	0	0	345	1.366	1.775	95.181	132.880	172.744
152		0	44,57	1.289,84	2.687,66	20,00	0	1.070	1.391	190	159	247	207	0	0	0	0	349	1.419	1.844	95.530	134.299	174.589
153		0	45,86	1.289,84	2.733,52	20,00	0	1.101	1.431	185	159	241	207	0	0	0	0	344	1.445	1.878	95.874	135.744	176.467
154		0	48,03	1.289,84	2.781,55	20,00	0	1.153	1.499	187	161	243	209	0	0	0	0	348	1.501	1.951	96.222	137.244	178.418
155		0	50,26	1.289,84	2.831,81	20,00	0	1.206	1.568	190	164	247	213	0	0	0	0	354	1.560	2.028	96.576	138.804	180.446
156		0	52,91	1.289,84	2.884,72	20,00	0	1.270	1.651	193	167	251	217	0	0	0	0	360	1.630	2.119	96.936	140.434	182.565
157		0	55,62	1.289,84	2.940,34	20,00	0	1.335	1.735	196	170	255	221	0	0	0	0	366	1.701	2.211	97.302	142.135	184.776
158		0	55,64	1.289,84	2.995,98	20,00	0	1.335	1.736	186	171	242	222	0	0	0	0	357	1.692	2.200	97.659	143.828	186.976
159		0	58,27	1.289,84	3.054,25	20,00	0	1.398	1.818	189	172	246	224	0	0	0	0	361	1.759	2.287	98.020	145.587	189.263
160		0	60,86	1.289,84	3.115,11	20,00	0	1.461	1.899	191	175	248	228	0	0	0	0	366	1.827	2.375	98.386	147.414	191.638
161		0	58,56	1.289,84	3.173,67	20,00	0	1.405	1.827	189	173	246	225	0	0	0	0	362	1.767	2.298	98.748	149.181	193.935
162		0	56,24	1.289,84	3.229,91	20,00	0	1.350	1.755	187	171	243	222	0	0	0	0	358	1.708	2.220	99.106	150.889	196.156
163		0	51,27	1.289,84	3.281,18	20,00	0	1.230	1.600	174	170	226	221	0	0	0	0	344	1.574	2.047	99.450	152.463	198.202
164		0	50,39	1.289,84	3.331,57	7,93	0	479	623	69	67	90	87	0	0	0	0	136	615	800	99.586	153.079	199.002
164	15,85	0	50,19	1.289,84	3.381,76	10,00	0	602	783	87	86	113	112	0	0	0	0	173	775	1.008	99.759	153.854	200.010
165		0	50,11	1.289,84	3.431,87	2,08	0	125	162	18	17	23	22	0	0	0	0	35	160	208	99.794	154.014	200.218
166		0	56,76	1.289,84	3.488,63	20,00	0	1.362	1.771	171	185	222	241	0	0	0	0	356	1.718	2.234	100.150	155.732	202.451
167		0	62,12	1.289,84	3.550,75	20,00	0	1.491	1.938	174	191	226	248	0	0	0	0	365	1.856	2.413	100.515	157.588	204.864
168		0	60,64	1.289,84	3.611,39	20,00	0	1.455	1.892	175	189	228	246	0	0	0	0	364	1.819	2.365	100.879	159.407	207.229
169		0	56,29	1.289,84	3.667,68	20,00	0	1.351	1.756	173	181	225	235	0	0	0	0	354	1.705	2.216	101.233	161.112	209.446
170		0	52,76	1.289,84	3.720,44	20,00	0	1.266	1.646	170	178	221	231	0	0	0	0	348	1.614	2.099	101.581	162.726	211.544
171		0	52,63	1.289,84	3.773,07	20,00	0	1.263	1.642	165	186	215	242	0	0	0	0	351	1.614	2.098	101.932	164.340	213.643
172		0	48,66	1.289,84	3.821,73	20,00	0	1.168	1.518	159	189	207	246	0	0	0	0	348	1.516	1.971	102.280	165.856	215.613
173		0	39,70	1.289,84	3.861,43	20,00	0	953	1.239	151	175	196	228	0	0	0	0	326	1.279	1.662	102.606	167.135	217.276
174		0	31,30	1.289,84	3.892,73	20,00	0	751	977	143	160	186	208	0	0	0	0	303	1.054	1.370	102.909	168.189	218.646
175		0	26,17	1.289,84	3.918,90	20,00	0	628	817	133	159	173	207	0	0	0	0	292	920	1.196	103.201	169.109	219.842
176		0	22,36	1.289,84	3.941,26	20,00	0	537	698	121	160	157	208	0	0	0	0	281	818	1.063	103.482	169.927	220.905
177		0	13,36	1.289,84	3.954,62	20,00	0	321	417	110	138	143	179	0	0	0	0	248	569	739	103.730	170.496	221.644
178		0,56	4,20	1.290,40	3.958,82	20,00	11	101	131	0	112	0	146	152	0	198	0	275	365	474	104.005	170.860	222.118
179		6,31	0,00	1.296,71	3.958,82	20,00	126	0	0	0	0	0	0	243	145	316	188	514	388	505	104.519	171.249	222.623
180		17,15	0,00	1.313,86	3.958,82	20,00	343	0	0	0	0	0	0	348	270	453	351	961	618	804	105.481	171.867	223.427

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			
POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
181		7,48	0,00	1.321,34	3.958,82	20,00	150	0	0	0	0	0	0	221	165	287	214	535	386	502	106.016	172.253	223.928
182		9,7	3,46	1.331,04	3.962,28	20,00	194	83	108	0	106	0	138	299	0	388	0	599	488	634	106.615	172.740	224.562
183		11,53	5,35	1.342,57	3.967,63	20,00	231	128	167	0	120	0	156	486	0	631	0	836	734	954	107.451	173.474	225.517
184		13,41	5,32	1.355,98	3.972,95	20,00	268	128	166	0	123	0	160	556	0	723	0	948	807	1.049	108.399	174.282	226.566
185		16,98	4,28	1.372,96	3.977,23	6,73	114	35	45	0	39	0	51	242	0	314	0	395	315	410	108.793	174.597	226.976
185	13,46	23,15	0,40	1.396,11	3.977,63	10,00	232	5	6	0	52	0	68	399	0	519	0	682	456	592	109.476	175.052	227.568
186		8,7	0,00	1.404,81	3.977,63	3,27	28	0	0	0	0	0	0	42	22	55	28	93	64	83	109.568	175.117	227.652
187		32,91	0,00	1.437,72	3.977,63	20,00	658	0	0	0	0	0	0	964	277	1.253	360	1.899	1.241	1.613	111.467	176.357	229.264
188		45,53	0,00	1.483,25	3.977,63	20,00	911	0	0	0	0	0	0	1.034	431	1.345	560	2.376	1.465	1.905	113.843	177.822	231.169
189		49,63	0,00	1.532,88	3.977,63	20,00	993	0	0	0	0	0	0	1.046	530	1.360	689	2.568	1.576	2.048	116.411	179.398	233.217
190		54,24	0,00	1.587,12	3.977,63	20,00	1.085	0	0	0	0	0	0	1.069	662	1.390	860	2.816	1.731	2.250	119.227	181.129	235.468
191		49,99	0,00	1.637,11	3.977,63	20,00	1.000	0	0	0	0	0	0	998	606	1.298	788	2.605	1.605	2.086	121.832	182.734	237.554
192		46,74	0,00	1.683,85	3.977,63	20,00	935	0	0	0	0	0	0	928	599	1.206	779	2.462	1.527	1.985	124.293	184.261	239.539
193		44,13	0,00	1.727,98	3.977,63	2,91	128	0	0	0	0	0	0	120	88	156	115	337	208	271	124.630	184.469	239.810
193	5,81	43,41	0,00	1.771,39	3.977,63	10,00	434	0	0	0	0	0	0	401	303	521	394	1.138	704	916	125.768	185.173	240.725
194		41,58	0,00	1.812,97	3.977,63	7,10	295	0	0	0	0	0	0	267	212	347	275	774	479	622	126.542	185.652	241.347
195		36,39	0,00	1.849,36	3.977,63	20,00	728	0	0	0	0	0	0	663	477	862	620	1.868	1.140	1.482	128.410	186.792	242.829
196		29	0,00	1.878,36	3.977,63	20,00	580	0	0	0	0	0	0	549	386	713	502	1.515	935	1.215	129.924	187.726	244.044
197		22,17	0,00	1.900,53	3.977,63	20,00	443	0	0	0	0	0	0	435	307	565	399	1.186	742	965	131.110	188.469	245.009
198		17,9	0,00	1.918,43	3.977,63	20,00	358	0	0	0	0	0	0	342	322	445	418	1.022	664	864	132.132	189.133	245.873
199		13,31	0,00	1.931,74	3.977,63	20,00	266	0	0	0	0	0	0	256	263	333	341	785	518	674	132.917	189.651	246.547
200		11,77	0,00	1.943,51	3.977,63	20,00	235	0	0	0	0	0	0	198	277	258	360	710	475	617	133.627	190.126	247.164
201		6,21	0,00	1.949,72	3.977,63	20,00	124	0	0	0	0	0	0	147	210	191	273	481	357	464	134.108	190.483	247.628
202		1,89	0,10	1.951,61	3.977,73	4,08	8	0	1	0	0	0	0	23	32	29	41	62	55	71	134.170	190.538	247.699
202	8,15	0,82	0,37	1.952,43	3.978,10	10,00	8	4	6	0	0	0	0	53	68	70	89	130	126	164	134.300	190.664	247.863
203		0,02	1,32	1.952,45	3.979,42	5,93	0	9	12	0	0	0	0	30	32	39	41	62	71	92	134.362	190.735	247.955
204		0	4,23	1.952,45	3.983,65	20,00	0	102	132	105	106	137	138	0	0	0	0	211	313	406	134.573	191.047	248.362
205		0	7,89	1.952,45	3.991,54	20,00	0	189	246	110	111	143	144	0	0	0	0	221	410	533	134.794	191.458	248.895
206		0	11,58	1.952,45	4.003,12	20,00	0	278	361	115	117	150	152	0	0	0	0	232	510	663	135.026	191.968	249.558
207		0	14,11	1.952,45	4.017,23	20,00	0	339	440	118	121	153	157	0	0	0	0	239	578	751	135.265	192.545	250.309
208		0	16,23	1.952,45	4.033,46	20,00	0	390	506	120	124	156	161	0	0	0	0	244	634	824	135.509	193.179	251.133
209		0	17,75	1.952,45	4.051,21	20,00	0	426	554	121	128	157	166	0	0	0	0	249	675	878	135.758	193.854	252.010
210		0	18,57	1.952,45	4.069,78	20,00	0	446	579	114	130	148	169	0	0	0	0	244	690	897	136.002	194.544	252.907
211		0	19,74	1.952,45	4.089,52	20,00	0	474	616	115	132	150	172	0	0	0	0	247	721	937	136.249	195.264	253.844
212		0	21,33	1.952,45	4.110,85	20,00	0	512	665	123	134	160	174	0	0	0	0	257	769	1.000	136.506	196.033	254.843
213		0	22,63	1.952,45	4.133,48	20,00	0	543	706	120	137	156	178	0	0	0	0	257	800	1.040	136.763	196.833	255.883
214		0	21,72	1.952,45	4.155,20	20,00	0	521	678	119	136	155	177	0	0	0	0	255	776	1.009	137.018	197.610	256.893
215		0	20,10	1.952,45	4.175,30	20,00	0	482	627	118	133	153	173	0	0	0	0	251	733	953	137.269	198.343	257.846
216		0	19,46	1.952,45	4.194,76	20,00	0	467	607	117	132	152	172	0	0	0	0	249	716	931	137.518	199.059	258.777
217		0	17,29	1.952,45	4.212,05	20,00	0	415	539	120	130	156	169	0	0	0	0	250	665	864	137.768	199.724	259.641
218		0	15,35	1.952,45	4.227,40	20,00	0	368	479	117	132	152	172	0	0	0	0	249	617	803	138.017	200.341	260.444
219		0	13,32	1.952,45	4.240,72	20,00	0	320	416	112	126	146	164	0	0	0	0	238	558	725	138.255	200.899	261.169
220		0	10,15	1.952,45	4.250,87	20,00	0	244	317	108	121	140	157	0	0	0	0	229	473	614	138.484	201.372	261.783
221		0	7,05	1.952,45	4.257,92	20,00	0	169	220	104	117	135	152	0	0	0	0	221	390	507	138.705	201.762	262.291
222		0	4,52	1.952,45	4.262,44	20,00	0	108	141	99	114	129	148	0	0	0	0	213	321	418	138.918	202.083	262.708
223		0,25	2,55	1.952,70	4.264,99	20,00	5	61	80	0	110	0	143	126	0	164	0	241	297	386	139.159	202.380	263.095
224		1,14	0,87	1.953,84	4.265,86	20,00	23	21	27	0	106	0	138	158	0	206	0	287	285	371	139.446	202.666	263.465

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					

ESTACA	POSICÃO FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	CORTE	VOLUME SIMPLES (m³)		VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
		SIMPLES		ACUMULADA				CORTE	ATERRO	EM CORTE		EM ATERRO				CORTE	ATERRO		CORTE	ATERRO			
		CORTE	ATERRO	CORTE	ATERRO					CORTE/ATERRO	TRANSP.	CORTE/ATERRO	TRANSP.	CORTE/ATERRO	TRANSP.		COMP.	TRANSP.		COMP.	TRANSP.		
225		3,11	0,09	1.956,95	4.265,95	20,00	62	2	3	0	101	0	131	194	0	252	0	357	297	386	139.803	202.963	263.851
226		3,62	0,00	1.960,57	4.265,95	20,00	72	0	0	0	0	0	0	227	117	295	152	416	344	447	140.219	203.306	264.298
227		6,12	0,00	1.966,69	4.265,95	20,00	122	0	0	0	0	0	0	270	144	351	187	536	414	538	140.755	203.720	264.836
228		6,91	0,00	1.973,60	4.265,95	20,00	138	0	0	0	0	0	0	252	156	328	203	546	408	530	141.301	204.128	265.366
229		4,83	0,69	1.978,43	4.266,64	20,00	97	17	22	0	0	0	0	259	155	336	201	510	430	559	141.811	204.558	265.925
230		4,07	1,02	1.982,50	4.267,66	20,00	81	24	32	0	0	0	0	241	143	314	186	466	409	531	142.277	204.967	266.457
231		1,18	2,78	1.983,68	4.270,44	20,00	24	67	87	0	99	0	129	179	0	233	0	302	345	448	142.578	205.312	266.905
232		0,23	6,40	1.983,91	4.276,84	20,00	5	154	200	0	109	0	142	133	0	173	0	246	395	514	142.825	205.707	267.419
233		0	13,57	1.983,91	4.290,41	20,00	0	326	423	110	120	143	156	0	0	0	0	230	556	722	143.055	206.263	268.141
234		0	18,77	1.983,91	4.309,18	20,00	0	450	586	107	135	139	176	0	0	0	0	242	692	900	143.297	206.955	269.042
235		0	24,27	1.983,91	4.333,45	20,00	0	582	757	112	144	146	187	0	0	0	0	256	838	1.090	143.553	207.794	270.132
236		0	30,78	1.983,91	4.364,23	20,00	0	739	960	113	157	147	204	0	0	0	0	270	1.009	1.311	143.823	208.802	271.443
237		0	38,18	1.983,91	4.402,41	20,00	0	916	1.191	125	168	163	218	0	0	0	0	293	1.209	1.572	144.116	210.012	273.015
238		0	46,27	1.983,91	4.448,68	20,00	0	1.110	1.444	143	178	186	231	0	0	0	0	321	1.431	1.861	144.437	211.443	274.876
239		0	54,83	1.983,91	4.503,51	20,00	0	1.316	1.711	156	182	203	237	0	0	0	0	338	1.654	2.150	144.775	213.097	277.026
240		0	64,97	1.983,91	4.568,48	20,00	0	1.559	2.027	167	190	217	247	0	0	0	0	357	1.916	2.491	145.132	215.013	279.517
241		0	83,32	1.983,91	4.651,80	20,00	0	2.000	2.600	190	219	247	285	0	0	0	0	409	2.409	3.131	145.541	217.422	282.649
242		0	103,30	1.983,91	4.755,10	20,00	0	2.479	3.223	207	239	269	311	0	0	0	0	446	2.925	3.803	145.987	220.347	286.451
243		0	130,23	1.983,91	4.885,33	20,00	0	3.126	4.063	227	262	295	341	0	0	0	0	489	3.615	4.699	146.476	223.962	291.150
244		0	177,72	1.983,91	5.063,05	20,00	0	4.265	5.545	244	363	317	472	0	0	0	0	607	4.872	6.334	147.083	228.834	297.484
245		0	234,42	1.983,91	5.297,47	20,00	0	5.626	7.314	325	392	423	510	0	0	0	0	717	6.343	8.246	147.800	235.177	305.730
246		0	292,13	1.983,91	5.589,60	20,00	0	7.011	9.114	360	413	468	537	0	0	0	0	773	7.784	10.119	148.573	242.961	315.850
247		0	361,26	1.983,91	5.950,86	20,00	0	8.670	11.271	397	435	516	566	0	0	0	0	832	9.502	12.353	149.405	252.463	328.202
248		0	421,55	1.983,91	6.372,41	20,00	0	10.117	13.152	434	454	564	590	0	0	0	0	888	11.005	14.307	150.293	263.469	342.509
249		0	483,83	1.983,91	6.856,24	20,00	0	11.612	15.095	473	463	615	602	0	0	0	0	936	12.548	16.312	151.229	276.017	358.822
250		0	515,09	1.983,91	7.371,33	20,00	0	12.362	16.071	477	470	620	611	0	0	0	0	947	13.309	17.302	152.176	289.326	376.123
251		0	503,03	1.983,91	7.874,36	20,00	0	12.073	15.695	475	461	618	599	0	0	0	0	936	13.009	16.911	153.112	302.334	393.035
252		0	428,25	1.983,91	8.302,61	20,00	0	10.278	13.361	442	437	575	568	0	0	0	0	879	11.157	14.504	153.991	313.491	407.539
253		0	305,89	1.983,91	8.608,50	20,00	0	7.341	9.544	405	397	527	516	0	0	0	0	802	8.143	10.586	154.793	321.635	418.125
254		0	194,63	1.983,91	8.803,13	20,00	0	4.671	6.072	354	324	460	421	0	0	0	0	678	5.349	6.954	155.471	326.984	425.079
255		0	120,77	1.983,91	8.923,90	20,00	0	2.898	3.768	250	223	325	290	0	0	0	0	473	3.371	4.383	155.944	330.355	429.462
256		0	98,06	1.983,91	9.021,96	20,00	0	2.353	3.059	229	204	298	265	0	0	0	0	433	2.786	3.622	156.377	333.142	433.084
257		0	80,05	1.983,91	9.102,01	20,00	0	1.921	2.498	211	188	274	244	0	0	0	0	399	2.320	3.016	156.776	335.462	436.101
258		0	66,27	1.983,91	9.168,28	20,00	0	1.590	2.068	196	177	255	230	0	0	0	0	373	1.963	2.553	157.149	337.426	438.653
259		0	53,07	1.983,91	9.221,35	20,00	0	1.274	1.656	204	159	265	207	0	0	0	0	363	1.637	2.128	157.512	339.062	440.781
260		0	41,58	1.983,91	9.262,93	20,00	0	998	1.297	203	143	264	186	0	0	0	0	346	1.344	1.747	157.858	340.406	442.528
261		0	51,54	1.983,91	9.314,47	20,00	0	1.237	1.608	203	141	264	183	0	0	0	0	344	1.581	2.055	158.202	341.987	444.583
262		0	40,02	1.983,91	9.354,49	20,00	0	960	1.249	182	132	237	172	0	0	0	0	314	1.274	1.657	158.516	343.262	446.240
263		0	13,00	1.983,91	9.367,49	20,00	0	312	406	138	117	179	152	0	0	0	0	255	567	737	158.771	343.829	446.977
264		0	13,31	1.983,91	9.380,80	1,82	0	29	38	12	10	16	13	0	0	0	0	22	51	66	158.793	343.880	447.044
264	3,64	0	13,45	1.983,91	9.394,25	10,00	0	161	210	65	60	85	78	0	0	0	0	125	286	372	158.918	344.166	447.416
265		0	13,93	1.983,91	9.408,18	8,18	0	137	178	53	50	69	65	0	0	0	0	103	240	312	159.021	344.406	447.727
266		0	17,15	1.983,91	9.425,33	20,00	0	412	535	135	135	176	176	0	0	0	0	270	682	886	159.291	345.087	448.614
267		0	21,46	1.983,91	9.446,79	20,00	0	515	670	141	139	183	181	0	0	0	0	280	795	1.034	159.571	345.882	449.647
268		0	25,13	1.983,91	9.471,92	20,00	0	603	784	138	147	179	191	0	0	0	0	285	888	1.155	159.856	346.771	450.802
269		0	26,38	1.983,91	9.498,30	20,00	0	633	823	131	132	170	172	0	0	0	0	263	896	1.165	160.119	347.667	451.967
270		0	27,83	1.983,91	9.526,13	20,00	0	668	868	140	134	182	174	0	0	0	0	274	942	1.224	160.393	348.609	453.191

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			

POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
271		0	25,11	1.983,91	9.551,24	20,00	0	603	783	131	129	170	168	0	0	0	0	260	863	1.121	160.653	349.471	454.313
272		0	20,93	1.983,91	9.572,17	20,00	0	502	653	130	123	169	160	0	0	0	0	253	755	982	160.906	350.227	455.294
273		0	20,93	1.983,91	9.593,10	20,00	0	502	653	153	120	199	156	0	0	0	0	273	775	1.008	161.179	351.002	456.302
274		0	15,34	1.983,91	9.608,44	4,99	0	92	119	36	27	47	35	0	0	0	0	63	155	201	161.242	351.157	456.504
274	9,98	0	12,22	1.983,91	9.620,66	10,00	0	147	191	69	52	90	68	0	0	0	0	121	268	348	161.363	351.424	456.852
275		0	8,94	1.983,91	9.629,60	5,01	0	54	70	33	0	43	0	0	0	0	0	33	87	113	161.396	351.511	456.964
276		3,15	2,94	1.987,06	9.632,54	20,00	63	71	92	115	0	150	0	0	221	0	287	399	406	528	161.794	351.917	457.492
277		9,53	0,00	1.996,59	9.632,54	20,00	191	0	0	0	0	0	0	186	254	242	330	631	440	572	162.425	352.357	458.065
278		17,53	0,00	2.014,12	9.632,54	20,00	351	0	0	0	0	0	0	328	300	427	390	979	629	817	163.405	352.986	458.882
279		15,57	0,00	2.029,69	9.632,54	20,00	311	0	0	0	0	0	0	323	271	419	353	905	594	772	164.310	353.580	459.654
280		14,72	0,00	2.044,41	9.632,54	20,00	294	0	0	0	0	0	0	331	254	430	330	879	584	760	165.189	354.164	460.414
281		9,83	0,00	2.054,24	9.632,54	20,00	197	0	0	0	0	0	0	263	197	341	256	656	460	598	165.845	354.624	461.011
282		6,06	0,00	2.060,30	9.632,54	20,00	121	0	0	0	0	0	0	213	155	276	201	488	367	477	166.333	354.991	461.488
283		5,17	0,00	2.065,47	9.632,54	20,00	103	0	0	0	0	0	0	284	132	370	172	520	416	541	166.853	355.408	462.030
284		3,31	0,00	2.068,78	9.632,54	20,00	66	0	0	0	0	0	0	261	112	339	146	439	373	484	167.292	355.780	462.514
285		2,37	0,02	2.071,15	9.632,56	20,00	47	0	1	0	0	0	0	248	101	323	132	397	350	455	167.689	356.130	462.969
286		1,07	1,86	2.072,22	9.634,42	20,00	21	45	58	0	104	0	135	207	0	270	0	333	356	463	168.021	356.486	463.432
287		0,56	3,59	2.072,78	9.638,01	20,00	11	86	112	0	108	0	140	179	0	233	0	298	373	485	168.320	356.859	463.917
288		0,55	3,91	2.073,33	9.641,92	20,00	11	94	122	0	102	0	133	183	0	238	0	296	379	493	168.616	357.238	464.410
289		0,48	4,16	2.073,81	9.646,08	20,00	10	100	130	0	103	0	134	177	0	231	0	290	380	494	168.906	357.619	464.904
290		0,5	4,15	2.074,31	9.650,23	20,00	10	100	129	0	102	0	133	179	0	233	0	291	380	495	169.197	357.999	465.399
291		0,01	7,44	2.074,32	9.657,67	20,00	0	179	232	0	112	0	146	110	0	143	0	222	401	521	169.419	358.400	465.920
292		0	11,40	2.074,32	9.669,07	20,00	0	274	356	103	120	134	156	0	0	0	0	223	497	646	169.642	358.896	466.565
293		0	13,77	2.074,32	9.682,84	20,00	0	330	430	108	119	140	155	0	0	0	0	227	557	725	169.869	359.454	467.290
294		0	16,00	2.074,32	9.698,84	20,00	0	384	499	111	123	144	160	0	0	0	0	234	618	803	170.103	360.072	468.093
295		0	17,30	2.074,32	9.716,14	20,00	0	415	540	113	125	147	163	0	0	0	0	238	653	849	170.341	360.725	468.943
296		0	18,41	2.074,32	9.734,55	20,00	0	442	574	114	127	148	165	0	0	0	0	241	683	888	170.582	361.408	469.830
297		0	18,63	2.074,32	9.753,18	20,00	0	447	581	114	129	148	168	0	0	0	0	243	690	897	170.825	362.098	470.728
298		0	17,70	2.074,32	9.770,88	4,73	0	100	130	26	30	34	39	0	0	0	0	56	156	203	170.881	362.254	470.931
298	9,45	0	17,22	2.074,32	9.788,10	10,00	0	207	269	56	64	73	83	0	0	0	0	120	327	425	171.001	362.581	471.355
299		0	16,60	2.074,32	9.804,70	5,28	0	105	137	29	33	38	43	0	0	0	0	62	167	217	171.063	362.748	471.573
300		0	14,24	2.074,32	9.818,94	20,00	0	342	444	112	122	146	159	0	0	0	0	234	576	748	171.297	363.324	472.321
301		0	9,46	2.074,32	9.828,40	20,00	0	227	295	102	113	133	147	0	0	0	0	215	442	575	171.512	363.766	472.896
302		0,07	5,56	2.074,39	9.833,96	20,00	1	133	173	0	0	0	0	108	114	140	149	223	356	462	171.736	364.121	473.358
303		0	5,54	2.074,39	9.839,50	20,00	0	133	173	114	116	148	151	0	0	0	0	230	363	472	171.966	364.484	473.830
304		0	1,46	2.074,39	9.840,96	20,00	0	35	46	101	110	131	143	0	0	0	0	211	246	320	172.177	364.730	474.150
305		1,91	0,00	2.076,30	9.840,96	20,00	38	0	0	0	0	0	0	129	118	168	153	285	247	321	172.462	364.977	474.470
306		2,67	0,00	2.078,97	9.840,96	20,00	53	0	0	0	0	0	0	124	135	161	175	312	258	336	172.773	365.236	474.806
307		3,46	0,00	2.082,43	9.840,96	20,00	69	0	0	0	0	0	0	131	145	170	189	346	276	359	173.119	365.512	475.166
308		4,05	0,00	2.086,48	9.840,96	20,00	81	0	0	0	0	0	0	137	154	177	200	371	290	377	173.490	365.802	475.543
309		4,55	0,00	2.091,03	9.840,96	20,00	91	0	0	0	0	0	0	140	159	182	207	390	299	389	173.880	366.101	475.932
310		4,66	0,00	2.095,69	9.840,96	20,00	93	0	0	0	0	0	0	142	161	185	210	397	304	395	174.277	366.405	476.327
311		4,5	0,00	2.100,19	9.840,96	20,00	90	0	0	0	0	0	0	138	162	180	211	391	301	391	174.668	366.706	476.718
312		4,16	0,00	2.104,35	9.840,96	20,00	83	0	0	0	0	0	0	132	160	172	208	376	293	381	175.044	366.999	477.098
313		3,25	0,15	2.107,60	9.841,11	20,00	65	4	5	107	0	139	0	0	141	0	183	313	251	326	175.356	367.250	477.425
314		2,7	0,05	2.110,30	9.841,16	20,00	54	1	2	103	0	134	0	0	132	0	172	289	237	308	175.646	367.486	477.732
315		1,9	0,00	2.112,20	9.841,16	20,00	38	0	0	0	0	0	0	112	121	146	157	271	233	303	175.917	367.720	478.036

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					
POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
316		0	5,10	2.112,20	9.846,26	20,00	0	122	159	124	114	161	148	0	0	0	0	238	360	469	176.155	368.080	478.504
317		0	13,28	2.112,20	9.859,54	20,00	0	319	414	140	126	182	164	0	0	0	0	266	585	760	176.421	368.665	479.264
318		0	10,03	2.112,20	9.869,57	20,00	0	241	313	107	109	139	142	0	0	0	0	216	457	594	176.637	369.122	479.858
319		0	17,33	2.112,20	9.886,90	20,00	0	416	541	118	122	153	159	0	0	0	0	240	656	853	176.877	369.777	480.711
320		0	25,37	2.112,20	9.912,27	2,35	0	71	93	15	16	20	21	0	0	0	0	31	102	133	176.908	369.880	480.844
320	4,69	0	28,52	2.112,20	9.940,79	10,00	0	342	445	67	70	87	91	0	0	0	0	137	479	623	177.045	370.359	481.467
321		0	39,66	2.112,20	9.980,45	7,66	0	364	474	55	59	72	77	0	0	0	0	114	478	622	177.159	370.837	482.089
322		0	56,93	2.112,20	10.037,38	20,00	0	1.366	1.776	158	176	205	229	0	0	0	0	334	1.700	2.210	177.493	372.538	484.299
323		0	109,46	2.112,20	10.146,84	20,00	0	2.627	3.415	221	227	287	295	0	0	0	0	448	3.075	3.998	177.941	375.613	488.297
324		0	140,90	2.112,20	10.287,74	20,00	0	3.382	4.396	244	255	317	332	0	0	0	0	499	3.881	5.045	178.440	379.493	493.341
325		0	180,26	2.112,20	10.468,00	20,00	0	4.326	5.624	321	326	417	424	0	0	0	0	647	4.973	6.465	179.087	384.467	499.807
326		0	272,11	2.112,20	10.740,11	20,00	0	6.531	8.490	373	372	485	484	0	0	0	0	745	7.276	9.458	179.832	391.742	509.265
327		0	378,04	2.112,20	11.118,15	20,00	0	9.073	11.795	426	433	554	563	0	0	0	0	859	9.932	12.912	180.691	401.674	522.176
328		0	529,54	2.112,20	11.647,69	20,00	0	12.709	16.522	478	445	621	579	0	0	0	0	923	13.632	17.722	181.614	415.306	539.898
329		0	469,09	2.112,20	12.116,78	20,00	0	11.258	14.636	443	428	576	556	0	0	0	0	871	12.129	15.768	182.485	427.435	555.666
330		0	373,98	2.112,20	12.490,76	20,00	0	8.976	11.668	410	412	533	536	0	0	0	0	822	9.798	12.737	183.307	437.233	568.403
331		0	326,28	2.112,20	12.817,04	7,67	0	3.003	3.904	148	153	192	199	0	0	0	0	301	3.304	4.295	183.608	440.537	572.698
331	15,34	0	287,07	2.112,20	13.104,11	10,00	0	3.445	4.478	183	191	238	248	0	0	0	0	374	3.819	4.964	183.982	444.356	577.663
332		0	268,84	2.112,20	13.372,95	2,33	0	752	977	41	43	53	56	0	0	0	0	84	836	1.086	184.066	445.191	578.749
333		0	194,47	2.112,20	13.567,42	20,00	0	4.667	6.067	330	333	429	433	0	0	0	0	663	5.330	6.929	184.729	450.522	585.678
334		0	134,21	2.112,20	13.701,63	20,00	0	3.221	4.187	248	247	322	321	0	0	0	0	495	3.716	4.831	185.224	454.238	590.509
335		0	94,97	2.112,20	13.796,60	20,00	0	2.279	2.963	214	216	278	281	0	0	0	0	430	2.709	3.522	185.654	456.947	594.031
336		0	69,73	2.112,20	13.866,33	20,00	0	1.674	2.176	190	194	247	252	0	0	0	0	384	2.058	2.675	186.038	459.005	596.706
337		0	49,01	2.112,20	13.915,34	20,00	0	1.176	1.529	167	172	217	224	0	0	0	0	339	1.515	1.970	186.377	460.520	598.676
338		0	31,94	2.112,20	13.947,28	20,00	0	767	997	147	152	191	198	0	0	0	0	299	1.066	1.385	186.676	461.585	600.061
339		0	18,83	2.112,20	13.966,11	20,00	0	452	587	131	134	170	174	0	0	0	0	265	717	932	186.941	462.302	600.993
340		0	17,01	2.112,20	13.983,12	20,00	0	408	531	128	128	166	166	0	0	0	0	256	664	864	187.197	462.967	601.856
341		0	16,83	2.112,20	13.999,95	20,00	0	404	525	131	127	170	165	0	0	0	0	258	662	860	187.455	463.628	602.717
342		0	17,51	2.112,20	14.017,46	20,00	0	420	546	135	126	176	164	0	0	0	0	261	681	886	187.716	464.310	603.603
343		0	23,32	2.112,20	14.040,78	20,00	0	560	728	144	133	187	173	0	0	0	0	277	837	1.088	187.993	465.146	604.690
344		0	33,17	2.112,20	14.073,95	20,00	0	796	1.035	158	145	205	189	0	0	0	0	303	1.099	1.429	188.296	466.245	606.119
345		0	41,61	2.112,20	14.115,56	20,00	0	999	1.298	170	154	221	200	0	0	0	0	324	1.323	1.719	188.620	467.568	607.839
346		0	49,28	2.112,20	14.164,84	20,00	0	1.183	1.538	179	163	233	212	0	0	0	0	342	1.525	1.982	188.962	469.093	609.821
347		0	57,02	2.112,20	14.221,86	8,93	0	611	794	83	76	108	99	0	0	0	0	159	770	1.001	189.121	469.863	610.822
347	17,86	0	60,23	2.112,20	14.282,09	10,00	0	723	940	94	88	122	114	0	0	0	0	182	905	1.176	189.303	470.768	611.998
348		0	60,33	2.112,20	14.342,42	1,07	0	77	101	10	9	13	12	0	0	0	0	19	96	125	189.322	470.864	612.123
349		0	61,14	2.112,20	14.403,56	20,00	0	1.467	1.908	185	176	241	229	0	0	0	0	361	1.828	2.377	189.683	472.692	614.500
350		0	63,04	2.112,20	14.466,60	20,00	0	1.513	1.967	185	177	241	230	0	0	0	0	362	1.875	2.437	190.045	474.567	616.938
351		0	65,80	2.112,20	14.532,40	20,00	0	1.579	2.053	186	181	242	235	0	0	0	0	367	1.946	2.530	190.412	476.514	619.468
352		0	68,41	2.112,20	14.600,81	20,00	0	1.642	2.134	187	184	243	239	0	0	0	0	371	2.013	2.617	190.783	478.526	622.084
353		0	70,86	2.112,20	14.671,67	20,00	0	1.701	2.211	189	187	246	243	0	0	0	0	376	2.077	2.700	191.159	480.603	624.784
354		0	73,16	2.112,20	14.744,83	20,00	0	1.756	2.283	190	191	247	248	0	0	0	0	381	2.137	2.778	191.540	482.740	627.562
355		0	75,29	2.112,20	14.820,12	20,00	0	1.807	2.349	191	194	248	252	0	0	0	0	385	2.192	2.850	191.925	484.932	630.411
356		0	77,11	2.112,20	14.897,23	20,00	0	1.851	2.406	193	199	251	259	0	0	0	0	392	2.243	2.915	192.317	487.175	633.327
357		0	77,54	2.112,20	14.974,77	20,00	0	1.861	2.419	194	201	252	261	0	0	0	0	395	2.256	2.933	192.712	489.430	636.260
358		0	77,69	2.112,20	15.052,46	20,00	0	1.865	2.424	195	201	254	261	0	0	0	0	396	2.261	2.939	193.108	491.691	639.198
359		0	77,93	2.112,20	15.130,39	20,00	0	1.870	2.431	197	200	256	260	0	0	0	0	397	2.267	2.948	193.505	493.958	642.146

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA																PLATAFORMA: 12,40m	

ESTACA	POSICÃO FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	CORTE	VOLUME SIMPLES (m³)		VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)			
		SIMPLES		ACUMULADA				CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO				COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
360		0	78,53	2.112,20	15.208,92	20,00	0	1.885	2.450	199	199	259	259	0	0	0	0	398	2.283	2.968	193.903	496.241	645.113	
361		0	76,11	2.112,20	15.285,03	20,00	0	1.827	2.375	198	193	257	251	0	0	0	0	391	2.218	2.883	194.294	498.459	647.996	
362		0	66,61	2.112,20	15.351,64	20,00	0	1.599	2.078	185	188	241	244	0	0	0	0	373	1.972	2.563	194.667	500.430	650.559	
363		0	54,25	2.112,20	15.405,89	20,00	0	1.302	1.693	172	175	224	228	0	0	0	0	347	1.649	2.144	195.014	502.079	652.703	
364		0	42,52	2.112,20	15.448,41	20,00	0	1.020	1.327	158	162	205	211	0	0	0	0	320	1.340	1.743	195.334	503.420	654.446	
365		0	31,83	2.112,20	15.480,24	20,00	0	764	993	145	148	189	192	0	0	0	0	293	1.057	1.374	195.627	504.477	655.820	
366		0	22,48	2.112,20	15.502,72	20,00	0	540	701	132	135	172	176	0	0	0	0	267	807	1.048	195.894	505.283	656.868	
367		0	14,35	2.112,20	15.517,07	20,00	0	344	448	120	123	156	160	0	0	0	0	243	587	764	196.137	505.871	657.632	
368		0	7,33	2.112,20	15.524,40	20,00	0	176	229	109	111	142	144	0	0	0	0	220	396	515	196.357	506.267	658.147	
369		0,02	1,32	2.112,22	15.525,72	20,00	0	32	41	0	100	0	130	104	0	135	0	204	236	306	196.562	506.502	658.453	
370		4,5	0,00	2.116,72	15.525,72	20,00	90	0	0	0	0	0	0	173	157	224	204	420	330	429	196.981	506.832	658.882	
371		10,71	0,00	2.127,43	15.525,72	20,00	214	0	0	0	0	0	0	249	231	324	300	695	480	625	197.676	507.312	659.506	
372		16,7	0,00	2.144,13	15.525,72	20,00	334	0	0	0	0	0	0	330	301	429	392	966	632	821	198.642	507.944	660.327	
373		22,31	0,00	2.166,44	15.525,72	20,00	446	0	0	0	0	0	0	405	372	526	484	1.223	777	1.010	199.865	508.721	661.338	
374		27,85	0,00	2.194,29	15.525,72	20,00	557	0	0	0	0	0	0	467	449	607	583	1.472	915	1.190	201.337	509.637	662.528	
375		31,12	0,00	2.225,41	15.525,72	20,00	622	0	0	0	0	0	0	505	512	657	666	1.640	1.018	1.323	202.978	510.654	663.851	
376		34,6	0,00	2.260,01	15.525,72	20,00	692	0	0	0	0	0	0	545	567	709	737	1.804	1.112	1.446	204.782	511.766	665.296	
377		38,58	0,00	2.298,59	15.525,72	20,00	772	0	0	0	0	0	0	594	623	773	810	1.989	1.218	1.583	206.771	512.984	666.879	
378		42,71	0,00	2.341,30	15.525,72	20,00	854	0	0	0	0	0	0	651	682	846	886	2.187	1.333	1.733	208.958	514.317	668.612	
379		46,95	0,00	2.388,25	15.525,72	20,00	939	0	0	0	0	0	0	710	743	923	965	2.392	1.453	1.888	211.349	515.770	670.500	
380		53,13	0,00	2.441,38	15.525,72	20,00	1.063	0	0	0	0	0	0	837	806	1.088	1.047	2.705	1.643	2.136	214.055	517.412	672.636	
381		63,15	0,00	2.504,53	15.525,72	20,00	1.263	0	0	0	0	0	0	990	914	1.287	1.188	3.167	1.904	2.475	217.222	519.316	675.111	
382		72,95	0,00	2.577,48	15.525,72	20,00	1.459	0	0	0	0	0	0	1.153	1.023	1.499	1.330	3.636	2.177	2.830	220.858	521.493	677.941	
383		82,26	0,00	2.659,74	15.525,72	20,00	1.645	0	0	0	0	0	0	1.328	1.138	1.726	1.479	4.110	2.465	3.205	224.968	523.958	681.146	
384		91,08	0,00	2.750,82	15.525,72	20,00	1.822	0	0	0	0	0	0	1.510	1.257	1.963	1.635	4.589	2.767	3.597	229.557	526.725	684.743	
385		99,84	0,00	2.850,66	15.525,72	20,00	1.997	0	0	0	0	0	0	1.651	1.383	2.146	1.797	5.030	3.034	3.944	234.587	529.759	688.686	
386		107,29	0,00	2.957,95	15.525,72	20,00	2.146	0	0	0	0	0	0	1.734	1.513	2.254	1.967	5.393	3.247	4.221	239.980	533.006	692.907	
387		112,66	0,00	3.070,61	15.525,72	20,00	2.253	0	0	0	0	0	0	1.819	1.611	2.365	2.095	5.683	3.430	4.459	245.663	536.436	697.367	
388		116,32	0,00	3.186,93	15.525,72	20,00	2.326	0	0	0	0	0	0	1.898	1.647	2.468	2.142	5.872	3.546	4.609	251.535	539.982	701.976	
389		118,13	0,00	3.305,06	15.525,72	20,00	2.363	0	0	0	0	0	0	1.934	1.649	2.514	2.143	5.945	3.583	4.657	257.480	543.564	706.634	
390		119,31	0,00	3.424,37	15.525,72	20,00	2.386	0	0	0	0	0	0	1.970	1.650	2.561	2.145	6.006	3.620	4.706	263.487	547.184	711.340	
391		118,59	0,00	3.542,96	15.525,72	20,00	2.372	0	0	0	0	0	0	1.809	1.659	2.352	2.156	5.840	3.468	4.508	269.326	550.652	715.848	
392		110,3	0,00	3.653,26	15.525,72	20,00	2.206	0	0	0	0	0	0	1.535	1.670	1.996	2.171	5.411	3.205	4.167	274.738	553.858	720.015	
393		94,22	0,00	3.747,48	15.525,72	20,00	1.884	0	0	0	0	0	0	1.280	1.589	1.663	2.065	4.753	2.868	3.729	279.490	556.726	723.744	
394		76,99	0,00	3.824,47	15.525,72	20,00	1.540	0	0	0	0	0	0	1.040	1.304	1.352	1.695	3.883	2.344	3.047	283.374	559.069	726.790	
395		60,95	0,00	3.885,42	15.525,72	20,00	1.219	0	0	0	0	0	0	822	1.044	1.069	1.357	3.085	1.866	2.426	286.459	560.936	729.217	
396		46,09	0,00	3.931,51	15.525,72	20,00	922	0	0	0	0	0	0	627	810	815	1.053	2.359	1.437	1.868	288.818	562.373	731.085	
397		32,43	0,00	3.963,94	15.525,72	20,00	649	0	0	0	0	0	0	453	602	590	782	1.704	1.055	1.372	290.522	563.428	732.456	
398		19,94	0,00	3.983,88	15.525,72	20,00	399	0	0	0	0	0	0	302	419	393	544	1.119	721	937	291.641	564.149	733.393	
399		8,65	0,00	3.992,53	15.525,72	20,00	173	0	0	0	0	0	0	173	262	224	340	607	434	564	292.248	564.583	733.958	
400		0,33	1,88	3.992,86	15.527,60	20,00	7	45	59	105	0	137	0	0	130	0	169	242	280	364	292.490	564.863	734.322	
401		0	12,13	3.992,86	15.539,73	20,00	0	291	378	125	112	163	146	0	0	0	0	237	528	687	292.727	565.391	735.008	
402		0	24,44	3.992,86	15.564,17	20,00	0	587	763	144	129	187	168	0	0	0	0	273	860	1.117	293.000	566.250	736.126	
403		0	38,55	3.992,86	15.602,72	20,00	0	925	1.203	164	147	213	191	0	0	0	0	311	1.236	1.607	293.311	567.487	737.733	
404		0	54,48	3.992,86	15.657,20	20,00	0	1.308	1.700	183	165	238	215	0	0	0	0	348	1.656	2.152	293.659	569.142	739.885	
405		0	72,23	3.992,86	15.729,43	20,00	0	1.734	2.254	203	183	264	238	0	0	0	0	386	2.120	2.755	294.045	571.262	742.640	
406		0	91,81	3.992,86	15.821,24	20,00	0	2.203	2.864	223	201	290	261	0	0	0	0	424	2.627	3.416	294.469	573.889	746.056	

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					

POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
407		0	113,21	3.992,86	15.934,45	20,00	0	2.717	3.532	242	219	315	285	0	0	0	0	461	3.178	4.131	294.930	577.067	750.187
408		0	136,44	3.992,86	16.070,89	20,00	0	3.275	4.257	262	237	341	308	0	0	0	0	499	3.774	4.906	295.429	580.841	755.093
409		0	163,65	3.992,86	16.234,54	20,00	0	3.928	5.106	267	255	347	332	0	0	0	0	522	4.450	5.784	295.951	585.290	760.877
410		0	187,84	3.992,86	16.422,38	20,00	0	4.508	5.861	267	256	347	333	0	0	0	0	523	5.031	6.541	296.474	590.321	767.418
411		0	198,86	3.992,86	16.621,24	20,00	0	4.773	6.204	267	257	347	334	0	0	0	0	524	5.297	6.886	296.998	595.618	774.304
412		0	199,94	3.992,86	16.821,18	20,00	0	4.799	6.238	267	254	347	330	0	0	0	0	521	5.320	6.915	297.519	600.938	781.219
413		0	199,68	3.992,86	17.020,86	20,00	0	4.792	6.230	267	241	347	313	0	0	0	0	508	5.300	6.890	298.027	606.238	788.109
414		0	196,03	3.992,86	17.216,89	20,00	0	4.705	6.116	267	226	347	294	0	0	0	0	493	5.198	6.757	298.520	611.436	794.866
415		0	172,77	3.992,86	17.389,66	20,00	0	4.146	5.390	267	212	347	276	0	0	0	0	479	4.625	6.013	298.999	616.061	800.880
416		0	145,94	3.992,86	17.535,60	20,00	0	3.503	4.553	267	200	347	260	0	0	0	0	467	3.970	5.160	299.466	620.031	806.040
417		0	120,91	3.992,86	17.656,51	20,00	0	2.902	3.772	267	194	347	252	0	0	0	0	461	3.363	4.372	299.927	623.394	810.412
418		0	99,82	3.992,86	17.756,33	20,00	0	2.396	3.114	258	188	335	244	0	0	0	0	446	2.842	3.694	300.373	626.235	814.106
419		0	83,32	3.992,86	17.839,65	20,00	0	2.000	2.600	234	182	304	237	0	0	0	0	416	2.416	3.140	300.789	628.651	817.246
420		0	72,66	3.992,86	17.912,31	20,00	0	1.744	2.267	221	171	287	222	0	0	0	0	392	2.136	2.777	301.181	630.787	820.023
421		0	63,62	3.992,86	17.975,93	20,00	0	1.527	1.985	210	163	273	212	0	0	0	0	373	1.900	2.470	301.554	632.687	822.493
422		0	55,39	3.992,86	18.031,32	20,00	0	1.329	1.728	198	154	257	200	0	0	0	0	352	1.681	2.186	301.906	634.368	824.678
423		0	46,73	3.992,86	18.078,05	20,00	0	1.122	1.458	187	145	243	189	0	0	0	0	332	1.454	1.890	302.238	635.822	826.568
424		0	39,28	3.992,86	18.117,33	20,00	0	943	1.226	176	138	229	179	0	0	0	0	314	1.257	1.634	302.552	637.078	828.202
425		0	33,15	3.992,86	18.150,48	20,00	0	796	1.034	167	131	217	170	0	0	0	0	298	1.094	1.422	302.850	638.172	829.623
426		0	24,61	3.992,86	18.175,09	20,00	0	591	768	154	124	200	161	0	0	0	0	278	869	1.129	303.128	639.041	830.753
427		0	19,45	3.992,86	18.194,54	20,00	0	467	607	144	118	187	153	0	0	0	0	262	729	947	303.390	639.769	831.700
428		0	16,62	3.992,86	18.211,16	20,00	0	399	519	137	115	178	150	0	0	0	0	252	651	846	303.642	640.420	832.546
429		0	14,05	3.992,86	18.225,21	20,00	0	337	438	133	110	173	143	0	0	0	0	243	580	754	303.885	641.000	833.301
430		0	11,38	3.992,86	18.236,59	20,00	0	273	355	128	106	166	138	0	0	0	0	234	507	659	304.119	641.508	833.960
431		0	8,53	3.992,86	18.245,12	20,00	0	205	266	123	102	160	133	0	0	0	0	225	430	559	304.344	641.937	834.518
432		0,02	5,19	3.992,88	18.250,31	20,00	0	125	162	116	0	151	0	0	107	0	139	223	347	452	304.567	642.285	834.970
433		0,73	1,85	3.993,61	18.252,16	20,00	15	44	58	108	0	140	0	0	151	0	196	273	303	394	304.840	642.588	835.364
434		1,81	0,10	3.995,42	18.252,26	20,00	36	2	3	100	0	130	0	0	177	0	230	313	279	363	305.154	642.867	835.727
435		5,53	0,00	4.000,95	18.252,26	20,00	111	0	0	0	0	0	0	132	227	172	296	470	360	467	305.624	643.227	836.195
436		6,43	0,00	4.007,38	18.252,26	20,00	129	0	0	0	0	0	0	138	244	180	317	511	382	497	306.134	643.609	836.691
437		5,47	0,00	4.012,85	18.252,26	8,34	46	0	0	0	0	0	0	48	101	63	132	195	149	194	306.329	643.758	836.886
437	16,67	5,03	0,00	4.017,88	18.252,26	10,00	50	0	0	0	0	0	0	52	125	68	162	227	177	230	306.557	643.935	837.116
438		5,03	0,00	4.022,91	18.252,26	1,67	8	0	0	0	0	0	0	9	21	12	27	38	30	39	306.595	643.965	837.154
439		5,93	0,03	4.028,84	18.252,29	20,00	119	1	1	0	0	0	0	117	260	153	338	496	378	491	307.091	644.343	837.646
440		5,12	1,57	4.033,96	18.253,86	20,00	102	38	49	109	0	142	0	0	278	0	361	489	424	552	307.580	644.767	838.197
441		3,45	0,84	4.037,41	18.254,70	20,00	69	20	26	107	0	139	0	0	224	0	291	400	351	456	307.979	645.118	838.653
442		5,14	0,09	4.042,55	18.254,79	20,00	103	2	3	101	0	131	0	0	242	0	315	446	345	449	308.425	645.463	839.102
443		5,52	0,00	4.048,07	18.254,79	20,00	110	0	0	0	0	0	0	100	239	130	311	450	339	441	308.875	645.803	839.544
444		5,29	0,00	4.053,36	18.254,79	20,00	106	0	0	0	0	0	0	103	226	134	294	435	329	428	309.310	646.132	839.971
445		4,86	0,00	4.058,22	18.254,79	20,00	97	0	0	99	0	129	0	0	220	0	286	416	319	414	309.726	646.450	840.386
446		2,5	0,40	4.060,72	18.255,19	20,00	50	10	12	104	0	135	0	0	185	0	240	339	299	388	310.065	646.749	840.774
447		0,67	1,24	4.061,39	18.256,43	20,00	13	30	39	107	0	139	0	0	142	0	184	262	278	362	310.327	647.027	841.136
448		0	3,38	4.061,39	18.259,81	20,00	0	81	105	111	107	144	139	0	0	0	0	218	299	389	310.545	647.326	841.524
449		0	5,87	4.061,39	18.265,68	20,00	0	141	183	116	111	151	144	0	0	0	0	227	368	478	310.772	647.694	842.003
450		0	8,43	4.061,39	18.274,11	20,00	0	202	263	120	115	156	150	0	0	0	0	235	437	569	311.007	648.132	842.571
451		0	10,85	4.061,39	18.284,96	20,00	0	260	339	124	119	161	155	0	0	0	0	243	503	654	311.250	648.635	843.226
452		0	12,60	4.061,39	18.297,56	20,00	0	302	393	127	119	165	155	0	0	0	0	246	548	713	311.496	649.183	843.939

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			

POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE		EM ATERRO				CORTE	ATERRO		CORTE	ATERRO			
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO			TRANSP.			COMP.	TRANSP.		
453		0	13,44	4.061,39	18.311,00	20,00	0	323	419	134	121	174	157	0	0	0	0	255	578	751	311.751	649.761	844.689
454		0	13,24	4.061,39	18.324,24	20,00	0	318	413	129	120	168	156	0	0	0	0	249	567	737	312.000	650.328	845.426
455		0	12,76	4.061,39	18.337,00	5,33	0	82	106	34	32	44	42	0	0	0	0	66	148	192	312.066	650.475	845.618
455	10,65	0	13,23	4.061,39	18.350,23	10,00	0	159	206	63	60	82	78	0	0	0	0	123	282	366	312.189	650.757	845.984
456		0	13,59	4.061,39	18.363,82	4,68	0	76	99	29	28	38	36	0	0	0	0	57	133	173	312.246	650.890	846.157
457		0	14,38	4.061,39	18.378,20	20,00	0	345	449	124	121	161	157	0	0	0	0	245	590	767	312.491	651.480	846.925
458		0	15,73	4.061,39	18.393,93	20,00	0	378	491	128	107	166	139	0	0	0	0	235	613	796	312.726	652.093	847.721
459		0	17,35	4.061,39	18.411,28	20,00	0	416	541	131	108	170	140	0	0	0	0	239	655	852	312.965	652.748	848.573
460		0	18,98	4.061,39	18.430,26	20,00	0	456	592	132	111	172	144	0	0	0	0	243	699	908	313.208	653.447	849.481
461		0	17,25	4.061,39	18.447,51	20,00	0	414	538	130	110	169	143	0	0	0	0	240	654	850	313.448	654.101	850.331
462		0	16,57	4.061,39	18.464,08	20,00	0	398	517	130	119	169	155	0	0	0	0	249	647	841	313.697	654.748	851.172
463		0	17,13	4.061,39	18.481,21	20,00	0	411	534	129	123	168	160	0	0	0	0	252	663	862	313.949	655.411	852.034
464		0	17,16	4.061,39	18.498,37	20,00	0	412	535	126	122	164	159	0	0	0	0	248	660	858	314.197	656.071	852.892
465		0	17,28	4.061,39	18.515,65	20,00	0	415	539	126	122	164	159	0	0	0	0	248	663	862	314.445	656.733	853.753
466		0	24,72	4.061,39	18.540,37	20,00	0	593	771	134	134	174	174	0	0	0	0	268	861	1.120	314.713	657.595	854.873
467		0	22,52	4.061,39	18.562,89	20,00	0	540	703	135	128	176	166	0	0	0	0	263	803	1.045	314.976	658.398	855.917
468		0	16,71	4.061,39	18.579,60	20,00	0	401	521	127	122	165	159	0	0	0	0	249	650	845	315.225	659.048	856.762
469		0	16,24	4.061,39	18.595,84	20,00	0	390	507	126	122	164	159	0	0	0	0	248	638	829	315.473	659.686	857.592
470		0	15,73	4.061,39	18.611,57	20,00	0	378	491	125	121	163	157	0	0	0	0	246	624	811	315.719	660.309	858.402
471		0	14,59	4.061,39	18.626,16	20,00	0	350	455	123	119	160	155	0	0	0	0	242	592	770	315.961	660.901	859.172
472		0	12,70	4.061,39	18.638,86	20,00	0	305	396	120	116	156	151	0	0	0	0	236	541	703	316.197	661.442	859.875
473		0	10,33	4.061,39	18.649,19	20,00	0	248	322	117	113	152	147	0	0	0	0	230	478	621	316.427	661.920	860.496
474		0	7,17	4.061,39	18.656,36	20,00	0	172	224	111	108	144	140	0	0	0	0	219	391	508	316.646	662.311	861.005
475		0	3,52	4.061,39	18.659,88	20,00	0	84	110	105	101	137	131	0	0	0	0	206	290	378	316.852	662.602	861.382
476		0	1,83	4.061,39	18.661,71	20,00	0	44	57	104	0	135	0	0	0	0	0	104	148	192	316.956	662.750	861.575
477		0,39	0,09	4.061,78	18.661,80	1,69	1	0	0	0	0	0	0	10	0	13	0	11	10	13	316.966	662.760	861.588
477	3,37	0,95	0,00	4.062,73	18.661,80	10,00	10	0	0	0	0	0	0	64	51	84	66	125	115	150	317.091	662.875	861.738
478		4,53	0,00	4.067,26	18.661,80	8,32	38	0	0	0	0	0	0	83	52	108	68	173	135	175	317.264	663.010	861.913
479		8,75	0,00	4.076,01	18.661,80	20,00	175	0	0	0	0	0	0	266	170	346	221	611	436	566	317.874	663.446	862.479
480		13,91	0,00	4.089,92	18.661,80	20,00	278	0	0	0	0	0	0	355	226	461	293	858	580	754	318.733	664.026	863.234
481		14,08	0,00	4.104,00	18.661,80	20,00	282	0	0	0	0	0	0	356	223	463	290	861	579	753	319.593	664.605	863.986
482		15,12	0,00	4.119,12	18.661,80	20,00	302	0	0	0	0	0	0	385	222	500	288	909	606	788	320.502	665.211	864.774
483		19,47	0,00	4.138,59	18.661,80	20,00	389	0	0	0	0	0	0	451	250	586	325	1.090	701	911	321.592	665.912	865.685
484		30,21	0,00	4.168,80	18.661,80	20,00	604	0	0	0	0	0	0	611	368	794	479	1.583	979	1.272	323.175	666.890	866.957
485		43,33	0,00	4.212,13	18.661,80	20,00	867	0	0	0	0	0	0	756	526	983	684	2.148	1.282	1.666	325.323	668.172	868.623
486		49,61	0,00	4.261,74	18.661,80	20,00	992	0	0	0	0	0	0	902	601	1.173	781	2.495	1.503	1.954	327.818	669.675	870.577
487		57,09	0,00	4.318,83	18.661,80	20,00	1.142	0	0	0	0	0	0	1.045	688	1.358	895	2.874	1.733	2.252	330.693	671.407	872.830
488		65,55	0,00	4.384,38	18.661,80	20,00	1.311	0	0	0	0	0	0	1.188	791	1.544	1.028	3.290	1.979	2.572	333.982	673.386	875.402
489		76,29	0,00	4.460,67	18.661,80	20,00	1.526	0	0	0	0	0	0	1.348	941	1.752	1.224	3.815	2.289	2.976	337.797	675.675	878.378
490		100,98	0,00	4.561,65	18.661,80	20,00	2.020	0	0	0	0	0	0	1.731	1.323	2.251	1.720	5.074	3.054	3.971	342.871	678.729	882.348
491		134,31	0,00	4.695,96	18.661,80	20,00	2.686	0	0	0	0	0	0	1.939	1.597	2.521	2.076	6.222	3.536	4.597	349.093	682.265	886.945
492		143,03	0,00	4.838,99	18.661,80	20,00	2.861	0	0	0	0	0	0	379	1.837	493	2.388	5.077	2.216	2.881	354.170	684.481	889.826
493		149,87	0,00	4.988,86	18.661,80	20,00	2.997	0	0	0	0	0	0	614	2.005	798	2.607	5.617	2.619	3.405	359.787	687.101	893.231
494		164,54	0,00	5.153,40	18.661,80	20,00	3.291	0	0	0	0	0	0	696	388	905	504	4.375	1.084	1.409	364.161	688.185	894.640
495		185,81	0,00	5.339,21	18.661,80	20,00	3.716	0	0	0	0	0	0	1.067	570	1.387	741	5.353	1.637	2.128	369.515	689.822	896.768
496		213,57	0,00	5.552,78	18.661,80	20,00	4.271	0	0	0	0	0	0	1.513	846	1.967	1.100	6.631	2.359	3.067	376.145	692.181	899.835
497		227,72	0,00	5.780,50	18.661,80	20,00	4.554	0	0	0	0	0	0	1.690	1.015	2.197	1.320	7.260	2.705	3.517	383.405	694.886	903.352

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					
POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
498		240,98	0,00	6.021,48	18.661,80	20,00	4.820	0	0	0	0	0	0	1.882	1.147	2.446	1.491	7.848	3.029	3.937	391.253	697.915	907.290
499		255,22	0,00	6.276,70	18.661,80	20,00	5.104	0	0	0	0	0	0	2.080	1.287	2.703	1.674	8.471	3.367	4.377	399.724	701.282	911.667
500		270,59	0,00	6.547,29	18.661,80	20,00	5.412	0	0	0	0	0	0	2.290	1.437	2.977	1.868	9.138	3.727	4.845	408.863	705.009	916.511
501		282,49	0,00	6.829,78	18.661,80	20,00	5.650	0	0	0	0	0	0	-2.561	1.622	-3.329	2.109	4.712	-938	-1.220	413.575	704.070	915.292
502		281,54	0,00	7.111,32	18.661,80	20,00	5.631	0	0	0	0	0	0	2.762	2.060	3.591	2.678	10.453	4.823	6.269	424.028	708.893	921.561
503		266	0,00	7.377,32	18.661,80	20,00	5.320	0	0	0	0	0	0	2.594	1.928	3.372	2.507	9.842	4.522	5.878	433.870	713.415	927.439
504		252,29	0,00	7.629,61	18.661,80	2,55	642	0	0	0	0	0	0	304	235	396	305	1.181	539	701	435.051	713.954	928.140
504	5,09	249,69	0,00	7.879,30	18.661,80	10,00	2.497	0	0	0	0	0	0	1.166	935	1.516	1.215	4.598	2.101	2.731	439.648	716.055	930.871
505		240,66	0,00	8.119,96	18.661,80	7,46	1.794	0	0	0	0	0	0	783	736	1.018	957	3.314	1.519	1.975	442.962	717.574	932.846
506		233,62	0,00	8.353,58	18.661,80	20,00	4.672	0	0	0	0	0	0	1.056	2.220	1.372	2.887	7.948	3.276	4.259	450.911	720.850	937.105
507		226,19	0,00	8.579,77	18.661,80	20,00	4.524	0	0	0	0	0	0	903	2.368	1.174	3.079	7.795	3.271	4.253	458.706	724.122	941.358
508		201,93	0,00	8.781,70	18.661,80	20,00	4.039	0	0	0	0	0	0	623	2.045	810	2.659	6.707	2.668	3.469	465.413	726.790	944.827
509		172,86	0,00	8.954,56	18.661,80	20,00	3.457	0	0	0	0	0	0	2.057	1.718	2.674	2.234	7.232	3.775	4.908	472.645	730.565	949.735
510		145,1	0,00	9.099,66	18.661,80	20,00	2.902	0	0	0	0	0	0	1.715	1.368	2.229	1.779	5.985	3.083	4.008	478.630	733.648	953.743
511		118,34	0,00	9.218,00	18.661,80	20,00	2.367	0	0	0	0	0	0	1.468	1.160	1.908	1.508	4.994	2.628	3.416	483.624	736.276	957.158
512		86,13	0,00	9.304,13	18.661,80	20,00	1.723	0	0	0	0	0	0	1.351	1.809	1.756	2.352	4.882	3.160	4.107	488.507	739.435	961.266
513		77,55	0,00	9.381,68	18.661,80	20,00	1.551	0	0	0	0	0	0	1.253	1.528	1.629	1.986	4.332	2.781	3.615	492.838	742.216	964.881
514		66,32	0,00	9.448,00	18.661,80	20,00	1.326	0	0	0	0	0	0	1.076	1.246	1.399	1.619	3.648	2.322	3.018	496.487	744.538	967.899
515		52,67	0,00	9.500,67	18.661,80	20,00	1.053	0	0	0	0	0	0	723	1.066	940	1.385	2.842	1.789	2.326	499.329	746.327	970.225
516		33,64	0,00	9.534,31	18.661,80	20,00	673	0	0	0	0	0	0	474	803	616	1.044	1.950	1.277	1.661	501.279	747.604	971.885
517		19,48	0,00	9.553,79	18.661,80	20,00	390	0	0	0	0	0	0	340	316	443	411	1.046	656	853	502.325	748.261	972.739
518		12,78	0,00	9.566,57	18.661,80	20,00	256	0	0	0	0	0	0	236	237	307	309	729	474	616	503.054	748.734	973.354
519		8,03	0,00	9.574,60	18.661,80	20,00	161	0	0	0	0	0	0	191	186	249	242	538	378	491	503.593	749.112	973.845
520		3,31	57,45	9.577,91	18.719,25	20,00	66	1.379	1.792	238	326	309	424	0	0	0	0	630	1.943	2.526	504.223	751.055	976.371
521		3,8	80,54	9.581,71	18.799,79	20,00	76	1.933	2.513	260	346	338	450	0	0	0	0	682	2.539	3.301	504.905	753.594	979.672
522		3,75	19,91	9.585,46	18.819,70	20,00	75	478	621	315	121	410	157	0	0	0	0	511	914	1.188	505.416	754.507	980.860
523		0	39,87	9.585,46	18.859,57	20,00	0	957	1.244	334	330	434	429	0	0	0	0	664	1.621	2.107	506.080	756.128	982.967
524		0	46,54	9.585,46	18.906,11	20,00	0	1.117	1.452	325	318	423	413	0	0	0	0	643	1.760	2.288	506.723	757.888	985.255
525		0	54,92	9.585,46	18.961,03	20,00	0	1.318	1.714	264	259	343	337	0	0	0	0	523	1.841	2.393	507.246	759.729	987.648
526		0	58,43	9.585,46	19.019,46	20,00	0	1.402	1.823	251	248	326	322	0	0	0	0	499	1.901	2.472	507.745	761.631	990.120
527		0	63,77	9.585,46	19.083,23	20,00	0	1.530	1.990	240	237	312	308	0	0	0	0	477	2.007	2.610	508.222	763.638	992.730
528		0	67,76	9.585,46	19.150,99	20,00	0	1.626	2.114	228	227	296	295	0	0	0	0	455	2.081	2.706	508.677	765.719	995.435
529		0	70,90	9.585,46	19.221,89	20,00	0	1.702	2.212	217	211	282	274	0	0	0	0	428	2.130	2.768	509.105	767.849	998.204
530		0	75,90	9.585,46	19.297,79	20,00	0	1.822	2.368	207	208	269	270	0	0	0	0	415	2.237	2.908	509.520	770.086	1.001.111
531		0	74,38	9.585,46	19.372,17	20,00	0	1.785	2.321	202	200	263	260	0	0	0	0	402	2.187	2.843	509.922	772.273	1.003.955
532		0	73,23	9.585,46	19.445,40	20,00	0	1.758	2.285	206	194	268	252	0	0	0	0	400	2.158	2.805	510.322	774.430	1.006.759
533		0	73,81	9.585,46	19.519,21	20,00	0	1.771	2.303	215	187	280	243	0	0	0	0	402	2.173	2.825	510.724	776.604	1.009.585
534		0	71,94	9.585,46	19.591,15	20,00	0	1.727	2.245	214	168	278	218	0	0	0	0	382	2.109	2.741	511.106	778.712	1.012.326
535		0	60,11	9.585,46	19.651,26	20,00	0	1.443	1.875	199	161	259	209	0	0	0	0	360	1.803	2.343	511.466	780.515	1.014.669
536		0	41,48	9.585,46	19.692,74	20,00	0	996	1.294	176	142	229	185	0	0	0	0	318	1.314	1.708	511.784	781.828	1.016.377
537		0	25,38	9.585,46	19.718,12	20,00	0	609	792	152	124	198	161	0	0	0	0	276	885	1.151	512.060	782.714	1.017.528
538		0	11,70	9.585,46	19.729,82	20,00	0	281	365	129	106	168	138	0	0	0	0	235	516	671	512.295	783.229	1.018.198
539		1,37	1,39	9.586,83	19.731,21	20,00	27	33	43	107	0	139	0	0	179	0	233	314	320	416	512.609	783.549	1.018.614
540		11,31	0,00	9.598,14	19.731,21	20,00	226	0	0	0	0	0	0	174	334	226	435	735	508	661	513.343	784.058	1.019.275
541		23,75	0,00	9.621,89	19.731,21	20,00	475	0	0	0	0	0	0	315	514	409	668	1.304	829	1.077	514.647	784.886	1.020.352
542		36,07	0,00	9.657,96	19.731,21	2,57	93	0	0	0	0	0	0	62	82	81	107	237	144	188	514.884	785.030	1.020.540
542	5,13	37,8	0,00	9.695,76	19.731,21	10,00	378	0	0	0	0	0	0	266	322	346	419	967	589	765	515.851	785.619	1.021.305

CÁLCULO DE VOLUME																						
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m		

POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
543		49,34	0,00	9.745,10	19.731,21	7,44	367	0	0	0	0	0	0	253	302	329	393	922	555	721	516.772	786.174	1.022.026
544		67,48	0,00	9.812,58	19.731,21	20,00	1.350	0	0	0	0	0	0	921	1.087	1.197	1.413	3.358	2.008	2.610	520.130	788.182	1.024.637
545		79,25	0,00	9.891,83	19.731,21	20,00	1.585	0	0	0	0	0	0	1.056	1.309	1.373	1.702	3.950	2.365	3.075	524.080	790.547	1.027.712
546		87,18	0,00	9.979,01	19.731,21	20,00	1.744	0	0	0	0	0	0	1.163	1.438	1.512	1.869	4.344	2.601	3.381	528.424	793.148	1.031.092
547		91,35	0,00	10.070,36	19.731,21	20,00	1.827	0	0	0	0	0	0	1.214	1.514	1.578	1.968	4.555	2.728	3.547	532.980	795.876	1.034.639
548		91,67	0,00	10.162,03	19.731,21	7,45	683	0	0	0	0	0	0	448	574	582	746	1.704	1.021	1.328	534.684	796.897	1.035.967
548	14,90	88,19	0,00	10.250,22	19.731,21	10,00	882	0	0	0	0	0	0	570	757	741	984	2.208	1.326	1.724	536.892	798.224	1.037.691
549		87,42	0,00	10.337,64	19.731,21	2,55	223	0	0	0	0	0	0	143	193	186	251	559	336	437	537.451	798.560	1.038.128
550		78,27	0,00	10.415,91	19.731,21	20,00	1.565	0	0	0	0	0	0	965	1.435	1.254	1.865	3.965	2.400	3.120	541.417	800.960	1.041.248
551		66,71	0,00	10.482,62	19.731,21	20,00	1.334	0	0	0	0	0	0	796	1.272	1.034	1.653	3.402	2.067	2.688	544.818	803.028	1.043.936
552		57,15	0,00	10.539,77	19.731,21	20,00	1.143	0	0	0	0	0	0	671	1.117	872	1.452	2.930	1.787	2.324	547.749	804.815	1.046.259
553		46,96	0,00	10.586,73	19.731,21	20,00	939	0	0	0	0	0	0	544	949	707	1.233	2.432	1.492	1.940	550.180	806.307	1.048.200
554		37,29	0,00	10.624,02	19.731,21	20,00	746	0	0	0	0	0	0	429	790	557	1.027	1.965	1.219	1.585	552.145	807.526	1.049.784
555		27,07	0,00	10.651,09	19.731,21	20,00	541	0	0	0	0	0	0	323	607	420	790	1.472	931	1.210	553.617	808.457	1.050.994
556		12,71	0,00	10.663,80	19.731,21	20,00	254	0	0	0	0	0	0	155	398	201	517	807	553	718	554.424	809.010	1.051.713
557		1	4,14	10.664,80	19.735,35	20,00	20	99	129	121	0	157	0	0	175	0	228	316	396	514	554.740	809.405	1.052.227
558		0	18,12	10.664,80	19.753,47	20,00	0	435	565	151	108	196	140	0	0	0	0	259	694	902	554.999	810.099	1.053.129
559		0	33,84	10.664,80	19.787,31	20,00	0	812	1.056	176	126	229	164	0	0	0	0	302	1.114	1.448	555.301	811.213	1.054.577
560		0	51,64	10.664,80	19.838,95	20,00	0	1.239	1.611	201	144	261	187	0	0	0	0	345	1.584	2.060	555.646	812.798	1.056.637
561		0	63,92	10.664,80	19.902,87	20,00	0	1.534	1.994	222	147	289	191	0	0	0	0	369	1.903	2.474	556.015	814.701	1.059.111
562		0	57,12	10.664,80	19.959,99	20,00	0	1.371	1.782	209	140	272	182	0	0	0	0	349	1.720	2.236	556.364	816.421	1.061.347
563		0	47,64	10.664,80	20.007,63	20,00	0	1.143	1.486	195	128	254	166	0	0	0	0	323	1.466	1.906	556.687	817.887	1.063.253
564		0	42,82	10.664,80	20.050,45	20,00	0	1.028	1.336	166	156	216	203	0	0	0	0	322	1.350	1.755	557.009	819.237	1.065.008
565		0	32,90	10.664,80	20.083,35	20,00	0	790	1.026	136	137	177	178	0	0	0	0	273	1.063	1.381	557.282	820.299	1.066.389
566		0	18,57	10.664,80	20.101,92	20,00	0	446	579	131	124	170	161	0	0	0	0	255	701	911	557.537	821.000	1.067.300
567		0	5,56	10.664,80	20.107,48	20,00	0	133	173	109	105	142	137	0	0	0	0	214	347	452	557.751	821.347	1.067.752
568		0	4,08	10.664,80	20.111,56	20,00	0	98	127	108	101	140	131	0	0	0	0	209	307	399	557.960	821.654	1.068.151
569		10,37	0,00	10.675,17	20.111,56	20,00	207	0	0	0	0	0	0	242	274	315	357	724	516	671	558.684	822.171	1.068.822
570		17,43	0,00	10.692,60	20.111,56	20,00	349	0	0	0	0	0	0	329	376	427	489	1.054	705	916	559.737	822.876	1.069.738
571		21,99	0,00	10.714,59	20.111,56	20,00	440	0	0	0	0	0	0	348	470	453	611	1.258	818	1.064	560.996	823.694	1.070.802
572		26,24	0,00	10.740,83	20.111,56	20,00	525	0	0	0	0	0	0	401	532	521	692	1.458	933	1.213	562.454	824.627	1.072.015
573		28,67	0,00	10.769,50	20.111,56	20,00	573	0	0	0	0	0	0	430	571	559	742	1.574	1.000	1.300	564.027	825.627	1.073.316
574		28,81	0,00	10.798,31	20.111,56	20,00	576	0	0	0	0	0	0	422	569	549	740	1.568	992	1.289	565.595	826.619	1.074.605
575		29,55	0,00	10.827,86	20.111,56	20,00	591	0	0	0	0	0	0	429	579	557	753	1.599	1.008	1.310	567.194	827.627	1.075.915
576		27,11	0,00	10.854,97	20.111,56	20,00	542	0	0	0	0	0	0	391	524	509	681	1.457	915	1.189	568.651	828.542	1.077.105
577		25,64	0,00	10.880,61	20.111,56	20,00	513	0	0	0	0	0	0	370	494	481	643	1.377	864	1.123	570.028	829.406	1.078.228
578		23,74	0,00	10.904,35	20.111,56	4,09	97	0	0	0	0	0	0	74	88	96	115	260	163	211	570.288	829.569	1.078.439
578	8,17	22,99	0,00	10.927,34	20.111,56	10,00	230	0	0	0	0	0	0	180	204	234	266	615	385	500	570.902	829.954	1.078.940
579		19,62	0,00	10.946,96	20.111,56	5,92	116	0	0	0	0	0	0	99	107	129	140	322	206	268	571.225	830.160	1.079.208
580		14,57	0,00	10.961,53	20.111,56	20,00	291	0	0	0	0	0	0	293	249	381	324	834	543	706	572.059	830.703	1.079.913
581		0	4,52	10.961,53	20.116,08	20,00	0	108	141	0	102	0	133	128	0	167	0	230	339	440	572.289	831.041	1.080.354
582		0	9,38	10.961,53	20.125,46	20,00	0	225	293	117	122	152	159	0	0	0	0	239	464	603	572.528	831.505	1.080.957
583		0	19,08	10.961,53	20.144,54	20,00	0	458	595	126	130	164	169	0	0	0	0	256	714	928	572.784	832.219	1.081.885
584		0	38,56	10.961,53	20.183,10	4,80	0	222	289	36	36	47	47	0	0	0	0	72	294	382	572.856	832.513	1.082.267
584	9,60	0	49,25	10.961,53	20.232,35	10,00	0	591	768	88	80	114	104	0	0	0	0	168	759	987	573.024	833.272	1.083.254
585		0	59,69	10.961,53	20.292,04	5,20	0	372	484	52	44	68	57	0	0	0	0	96	468	609	573.120	833.741	1.083.863
586		0	91,20	10.961,53	20.383,24	20,00	0	2.189	2.845	215	203	280	264	0	0	0	0	418	2.607	3.389	573.538	836.348	1.087.252

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			

ESTACA	POSICÃO FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
		SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
587		0	132,89	10.961,53	20.516,13	20,00	0	3.189	4.146	252	237	328	308	0	0	0	0	489	3.678	4.782	574.027	840.026	1.092.034
588		0	119,54	10.961,53	20.635,67	20,00	0	2.869	3.730	254	217	330	282	0	0	0	0	471	3.340	4.342	574.498	843.366	1.096.376
589		0	83,92	10.961,53	20.719,59	20,00	0	2.014	2.618	220	190	286	247	0	0	0	0	410	2.424	3.151	574.908	845.790	1.099.527
590		0	54,92	10.961,53	20.774,51	20,00	0	1.318	1.714	190	162	247	211	0	0	0	0	352	1.670	2.171	575.260	847.460	1.101.698
591		0	41,27	10.961,53	20.815,78	20,00	0	990	1.288	169	150	220	195	0	0	0	0	319	1.309	1.702	575.579	848.770	1.103.400
592		0	29,66	10.961,53	20.845,44	20,00	0	712	925	153	136	199	177	0	0	0	0	289	1.001	1.301	575.868	849.770	1.104.702
593		0	20,76	10.961,53	20.866,20	20,00	0	498	648	140	124	182	161	0	0	0	0	264	762	991	576.132	850.533	1.105.692
594		0	14,17	10.961,53	20.880,37	20,00	0	340	442	132	115	172	150	0	0	0	0	247	587	763	576.379	851.120	1.106.456
595		0	7,62	10.961,53	20.887,99	20,00	0	183	238	120	105	156	137	0	0	0	0	225	408	530	576.604	851.528	1.106.986
596		0	4,50	10.961,53	20.892,49	20,00	0	108	140	113	0	147	0	0	103	0	134	216	324	421	576.820	851.852	1.107.407
597		0,28	2,45	10.961,81	20.894,94	20,00	6	59	76	108	0	140	0	0	129	0	167	242	295	384	577.062	852.147	1.107.791
598		0,59	1,48	10.962,40	20.896,42	20,00	12	36	46	105	0	137	0	0	142	0	184	259	282	367	577.321	852.429	1.108.158
599		0,63	1,50	10.963,03	20.897,92	20,00	13	36	47	106	0	138	0	0	143	0	186	262	285	371	577.583	852.715	1.108.529
600		0,78	1,27	10.963,81	20.899,19	20,00	16	30	40	104	0	135	0	0	152	0	197	271	286	372	577.854	853.001	1.108.901
601		1,02	0,86	10.964,83	20.900,05	20,00	20	21	27	102	0	133	0	0	159	0	207	282	282	367	578.136	853.283	1.109.268
602		1,26	0,64	10.966,09	20.900,69	20,00	25	15	20	104	0	135	0	0	162	0	211	291	281	366	578.427	853.564	1.109.634
603		1,15	0,60	10.967,24	20.901,29	20,00	23	14	19	104	0	135	0	0	152	0	197	279	270	351	578.706	853.835	1.109.985
604		1,77	0,40	10.969,01	20.901,69	20,00	35	10	12	104	0	135	0	0	157	0	204	296	271	352	579.003	854.105	1.110.337
605		2,71	0,08	10.971,72	20.901,77	20,00	54	2	2	101	0	131	0	0	171	0	222	326	274	356	579.329	854.379	1.110.693
606		1,06	0,75	10.972,78	20.902,52	20,00	21	18	23	103	0	134	0	0	154	0	201	279	275	358	579.607	854.655	1.111.051
607		0,42	1,96	10.973,20	20.904,48	20,00	8	47	61	106	0	138	0	0	135	0	176	249	288	374	579.857	854.943	1.111.425
608		0,22	3,36	10.973,42	20.907,84	20,00	4	81	105	110	0	143	0	0	125	0	163	240	316	411	580.096	855.258	1.111.836
609		0,15	3,93	10.973,57	20.911,77	20,00	3	94	123	111	0	144	0	0	124	0	162	238	330	429	580.335	855.588	1.112.265
610		0,06	4,73	10.973,63	20.916,50	20,00	1	114	148	113	0	147	0	0	114	0	149	228	341	443	580.563	855.929	1.112.708
611		0	6,90	10.973,63	20.923,40	20,00	0	166	215	115	103	150	134	0	0	0	0	218	384	499	580.781	856.313	1.113.206
612		0	9,13	10.973,63	20.932,53	20,00	0	219	285	118	108	153	140	0	0	0	0	226	445	579	581.007	856.758	1.113.785
613		0	12,17	10.973,63	20.944,70	20,00	0	292	380	126	110	164	143	0	0	0	0	236	528	687	581.243	857.286	1.114.471
614		0	14,70	10.973,63	20.959,40	20,00	0	353	459	131	114	170	148	0	0	0	0	245	598	777	581.488	857.884	1.115.249
615		0	16,95	10.973,63	20.976,35	20,00	0	407	529	134	117	174	152	0	0	0	0	251	658	855	581.739	858.541	1.116.104
616		0	20,02	10.973,63	20.996,37	20,00	0	480	625	139	122	181	159	0	0	0	0	261	741	964	582.000	859.283	1.117.068
617		0	23,03	10.973,63	21.019,40	20,00	0	553	719	144	126	187	164	0	0	0	0	270	823	1.070	582.270	860.106	1.118.137
618		0	24,87	10.973,63	21.044,27	20,00	0	597	776	142	130	185	169	0	0	0	0	272	869	1.130	582.542	860.974	1.119.267
619		0	20,48	10.973,63	21.064,75	20,00	0	492	639	140	123	182	160	0	0	0	0	263	755	981	582.805	861.729	1.120.248
620		0	22,46	10.973,63	21.087,21	20,00	0	539	701	137	129	178	168	0	0	0	0	266	805	1.047	583.071	862.534	1.121.294
621		0	22,15	10.973,63	21.109,36	20,00	0	532	691	142	130	185	169	0	0	0	0	272	804	1.045	583.343	863.338	1.122.339
622		0	16,06	10.973,63	21.125,42	20,00	0	385	501	132	130	172	169	0	0	0	0	262	647	842	583.605	863.985	1.123.181
623		0	14,37	10.973,63	21.139,79	20,00	0	345	448	129	124	168	161	0	0	0	0	253	598	777	583.858	864.583	1.123.958
624		0	10,97	10.973,63	21.150,76	20,00	0	263	342	122	117	159	152	0	0	0	0	239	502	653	584.097	865.085	1.124.611
625		0	6,77	10.973,63	21.157,53	20,00	0	162	211	112	101	146	131	0	0	0	0	213	375	488	584.310	865.461	1.125.099
626		0,42	2,71	10.974,05	21.160,24	20,00	8	65	85	107	0	139	0	0	134	0	175	250	306	398	584.560	865.767	1.125.497
627		2,74	0,59	10.976,79	21.160,83	20,00	55	14	18	102	0	133	0	0	195	0	253	351	311	404	584.911	866.078	1.125.901
628		7,81	0,00	10.984,60	21.160,83	20,00	156	0	0	0	0	0	0	135	263	176	342	555	399	518	585.466	866.476	1.126.419
629		14,45	0,00	10.999,05	21.160,83	20,00	289	0	0	0	0	0	0	212	323	275	420	823	534	695	586.289	867.010	1.127.114
630		21,1	0,00	11.020,15	21.160,83	20,00	422	0	0	0	0	0	0	262	393	341	511	1.077	655	851	587.366	867.665	1.127.965
631		26,07	0,00	11.046,22	21.160,83	20,00	521	0	0	0	0	0	0	399	475	518	617	1.395	873	1.135	588.761	868.538	1.129.100
632		30,65	0,00	11.076,87	21.160,83	20,00	613	0	0	0	0	0	0	456	543	593	705	1.612	999	1.299	590.372	869.537	1.130.399
633		32,76	0,00	11.109,63	21.160,83	20,00	655	0	0	0	0	0	0	497	560	646	729	1.712	1.057	1.374	592.085	870.594	1.131.773

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA														PLATAFORMA: 12,40m			

ESTACA	POSICÃO FRAÇÃO (m)	ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)			
		SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO		
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.				
634		34,15	0,00	11.143,78	21.160,83	20,00	683	0	0	0	0	0	0	0	518	580	674	754	1.781	1.098	1.428	593.866	871.693	1.133.201
635		36,04	0,00	11.179,82	21.160,83	20,00	721	0	0	0	0	0	0	0	542	604	705	786	1.867	1.146	1.490	595.734	872.839	1.134.691
636		34,39	0,00	11.214,21	21.160,83	20,00	688	0	0	0	0	0	0	0	508	578	660	751	1.774	1.086	1.412	597.507	873.925	1.136.103
637		31,62	0,00	11.245,83	21.160,83	20,00	632	0	0	0	0	0	0	0	480	531	624	691	1.644	1.011	1.315	599.151	874.937	1.137.418
638		25,62	0,00	11.271,45	21.160,83	20,00	512	0	0	0	0	0	0	0	438	437	570	568	1.388	875	1.138	600.539	875.812	1.138.556
639		20,87	0,00	11.292,32	21.160,83	20,00	417	0	0	0	0	0	0	0	373	375	485	487	1.165	748	972	601.704	876.560	1.139.528
640		16,51	0,00	11.308,83	21.160,83	20,00	330	0	0	0	0	0	0	0	315	319	410	415	965	634	825	602.669	877.194	1.140.353
641		6,25	0,00	11.315,08	21.160,83	20,00	125	0	0	0	0	0	0	0	140	193	182	251	459	334	434	603.127	877.528	1.140.786
642		0	3,58	11.315,08	21.164,41	20,00	0	86	112	127	102	165	133	0	0	0	0	229	315	409	603.356	877.843	1.141.196	
643		0	15,11	11.315,08	21.179,52	20,00	0	363	471	143	119	186	155	0	0	0	0	262	625	812	603.618	878.467	1.142.008	
644		0	27,92	11.315,08	21.207,44	20,00	0	670	871	159	136	207	177	0	0	0	0	295	965	1.255	603.913	879.433	1.143.262	
645		0	42,10	11.315,08	21.249,54	20,00	0	1.010	1.314	176	154	229	200	0	0	0	0	330	1.340	1.743	604.243	880.773	1.145.005	
646		0	56,03	11.315,08	21.305,57	20,00	0	1.345	1.748	189	169	246	220	0	0	0	0	358	1.703	2.214	604.601	882.476	1.147.218	
647		0	75,11	11.315,08	21.380,68	20,00	0	1.803	2.343	201	188	261	244	0	0	0	0	389	2.192	2.849	604.990	884.667	1.150.067	
648		0	151,73	11.315,08	21.532,41	5,04	0	918	1.193	70	82	91	107	0	0	0	0	152	1.070	1.391	605.142	885.737	1.151.458	
648	10,08	0	180,09	11.315,08	21.712,50	10,00	0	2.161	2.809	169	168	220	218	0	0	0	0	337	2.498	3.248	605.479	888.235	1.154.706	
649		0	205,28	11.315,08	21.917,78	4,96	0	1.222	1.588	85	85	111	111	0	0	0	0	170	1.392	1.809	605.649	889.627	1.156.515	
650		0	263,79	11.315,08	22.181,57	20,00	0	6.331	8.230	344	348	447	452	0	0	0	0	692	7.023	9.130	606.341	896.650	1.165.645	
651		0	166,40	11.315,08	22.347,97	20,00	0	3.994	5.192	323	323	420	420	0	0	0	0	646	4.640	6.031	606.987	901.289	1.171.676	
652		0	113,74	11.315,08	22.461,71	20,00	0	2.730	3.549	226	224	294	291	0	0	0	0	450	3.180	4.134	607.437	904.469	1.175.810	
653		0	79,18	11.315,08	22.540,89	8,04	0	764	993	77	73	100	95	0	0	0	0	150	914	1.188	607.587	905.383	1.176.998	
653	16,08	0	56,67	11.315,08	22.597,56	10,00	0	680	884	83	85	108	111	0	0	0	0	168	848	1.102	607.755	906.231	1.178.100	
654		0	51,66	11.315,08	22.649,22	1,96	0	122	158	15	16	20	21	0	0	0	0	31	153	198	607.786	906.384	1.178.299	
655		0	28,52	11.315,08	22.677,74	20,00	0	684	890	121	139	157	181	0	0	0	0	260	944	1.228	608.046	907.328	1.179.527	
656		0	20,83	11.315,08	22.698,57	20,00	0	500	650	109	121	142	157	0	0	0	0	230	730	949	608.276	908.058	1.180.475	
657		0	16,55	11.315,08	22.715,12	20,00	0	397	516	101	115	131	150	0	0	0	0	216	613	797	608.492	908.671	1.181.273	
658		0,02	12,26	11.315,10	22.727,38	20,00	0	294	383	125	0	163	0	0	105	0	137	231	524	682	608.723	909.196	1.181.954	
659		0,72	8,63	11.315,82	22.736,01	20,00	14	207	269	119	0	155	0	0	153	0	199	286	479	623	609.009	909.675	1.182.577	
660		1,7	5,18	11.317,52	22.741,19	20,00	34	124	162	111	0	144	0	0	204	0	265	349	439	571	609.358	910.114	1.183.148	
661		2,09	4,12	11.319,61	22.745,31	20,00	42	99	129	108	0	140	0	0	222	0	288	371	428	557	609.730	910.543	1.183.705	
662		2,52	3,11	11.322,13	22.748,42	20,00	50	75	97	106	0	138	0	0	241	0	314	398	422	548	610.127	910.964	1.184.254	
663		3,36	0,58	11.325,49	22.749,00	20,00	67	14	18	0	0	0	0	0	116	281	151	365	464	411	610.592	911.376	1.184.788	
664		3,48	0,03	11.328,97	22.749,03	20,00	70	1	1	0	0	0	0	144	272	187	353	485	416	541	611.077	911.792	1.185.329	
665		3,89	0,18	11.332,86	22.749,21	20,00	78	4	6	0	0	0	0	175	268	228	348	521	447	582	611.597	912.239	1.185.911	
666		2,41	1,36	11.335,27	22.750,57	20,00	48	33	42	0	0	0	0	129	265	168	344	442	426	554	612.039	912.665	1.186.465	
667		0,63	4,33	11.335,90	22.754,90	20,00	13	104	135	105	0	137	0	0	228	0	296	346	437	568	612.385	913.102	1.187.033	
668		0	8,55	11.335,90	22.763,45	0,85	0	9	11	4	4	5	5	0	0	0	0	8	17	22	612.393	913.119	1.187.055	
668	1,69	0	8,66	11.335,90	22.772,11	10,00	0	104	135	58	49	75	64	0	0	0	0	107	211	274	612.500	913.330	1.187.329	
669		0	9,35	11.335,90	22.781,46	9,16	0	103	134	54	45	70	59	0	0	0	0	99	202	262	612.599	913.532	1.187.591	
670		0	9,34	11.335,90	22.790,80	20,00	0	224	291	119	100	155	130	0	0	0	0	219	443	576	612.818	913.975	1.188.167	
671		0	11,50	11.335,90	22.802,30	20,00	0	276	359	124	111	161	144	0	0	0	0	235	511	664	613.053	914.486	1.188.831	
672		0	12,83	11.335,90	22.815,13	20,00	0	308	400	127	119	165	155	0	0	0	0	246	554	720	613.299	915.040	1.189.552	
673		0	12,36	11.335,90	22.827,49	20,00	0	297	386	125	104	163	135	0	0	0	0	229	526	683	613.528	915.565	1.190.235	
674		0	12,94	11.335,90	22.840,43	20,00	0	311	404	127	104	165	135	0	0	0	0	231	542	704	613.759	916.107	1.190.939	
675		0	14,23	11.335,90	22.854,66	20,00	0	342	444	130	110	169	143	0	0	0	0	240	582	756	613.999	916.688	1.191.695	
676		0	12,73	11.335,90	22.867,39	20,00	0	306	397	126	103	164	134	0	0	0	0	229	535	695	614.228	917.223	1.192.390	
677		0	11,12	11.335,90	22.878,51	20,00	0	267	347	124	101	161	131	0	0	0	0	225	492	639	614.453	917.715	1.193.029	

CÁLCULO DE VOLUME																							
RODOVIA: GO-222						TRECHO: ENTRONCAMENTO GO-156 / CAPELINHA												PLATAFORMA: 12,40m					

POSIÇÃO		ÁREA (m²)				DISTÂNCIA (m)	VOLUME SIMPLES (m³)			VOLUME DE CONTRIBUIÇÃO (m³)								VOLUME TOTAL (m³)			VOLUME ACUMULADO (m³)		
ESTACA	FRAÇÃO (m)	SIMPLES		ACUMULADA			CORTE	ATERRO		EM CORTE				EM ATERRO				CORTE	ATERRO		CORTE	ATERRO	
		CORTE	ATERRO	CORTE	ATERRO			COMP.	TRANSP.	CORTE/ATERRO		TRANSP.		CORTE/ATERRO		TRANSP.			COMP.	TRANSP.		COMP.	TRANSP.
678		0	9,47	11.335,90	22.887,98	20,00	0	227	295	118	106	153	138	0	0	0	0	224	451	587	614.677	918.166	1.193.616
679		0	5,69	11.335,90	22.893,67	20,00	0	137	178	113	118	147	153	0	0	0	0	231	368	478	614.908	918.534	1.194.094
680		0,25	2,65	11.336,15	22.896,32	20,00	5	64	83	112	115	146	150	0	0	0	0	232	291	378	615.140	918.824	1.194.471
681		1,33	0,82	11.337,48	22.897,14	20,00	27	20	26	0	109	0	142	119	0	155	0	255	248	322	615.394	919.072	1.194.793
682		3,62	0,70	11.341,10	22.897,84	20,00	72	17	22	0	0	0	0	182	102	237	132	356	301	391	615.751	919.373	1.195.184
683		10,78	0,00	11.351,88	22.897,84	20,00	216	0	0	0	0	0	0	284	332	369	431	831	616	801	616.582	919.988	1.195.985
684		14,95	0,00	11.366,83	22.897,84	20,00	299	0	0	0	0	0	0	244	387	318	504	931	632	821	617.513	920.620	1.196.806
685		12,57	0,00	11.379,40	22.897,84	20,00	251	0	0	0	0	0	0	273	352	355	458	877	626	813	618.390	921.246	1.197.620
686		14,32	0,00	11.393,72	22.897,84	20,00	286	0	0	0	0	0	0	287	364	373	474	938	651	847	619.328	921.897	1.198.467
687		17,33	0,00	11.411,05	22.897,84	20,00	347	0	0	0	0	0	0	301	388	391	504	1.035	688	894	620.363	922.585	1.199.361
688		18,04	0,00	11.429,09	22.897,84	20,00	361	0	0	0	0	0	0	292	402	380	523	1.055	695	903	621.418	923.280	1.200.264
689		18,48	0,00	11.447,57	22.897,84	20,00	370	0	0	0	0	0	0	316	415	411	540	1.101	732	951	622.519	924.012	1.201.215
690		18,73	0,00	11.466,30	22.897,84	8,30	155	0	0	0	0	0	0	140	174	182	226	470	314	408	622.989	924.326	1.201.623
690	16,60	15,79	0,00	11.482,09	22.897,84	10,00	158	0	0	0	0	0	0	175	194	227	252	527	369	480	623.516	924.695	1.202.103
691		14,89	0,00	11.496,98	22.897,84	1,70	25	0	0	0	0	0	0	29	33	38	43	88	63	81	623.604	924.757	1.202.185
691	18,64	8,41	0,34	11.505,39	22.898,18	10,00	84	4	5	0	0	0	0	105	154	136	201	343	263	342	623.947	925.021	1.202.527

5 – DISTRIBUIÇÃO DE MASSAS

DISTRIBUIÇÃO DE MASSAS

Ref.	Est.	Serviço			CLC e CLA		Origem 1				Origem 2				Origem 3				Empréstimo		
		Aterro	CL	Corte	DT	M	C	V	DT	M	C	V	DT	M	C	V	DT	M	V	DT	M
1	0		20.141	8.906	0,48	9.668															
2	24	13.913	10.533		0,88	9.269	C0	8.906	0,68	6.056				0				0	5.008	10,14	50.776
3	68		1.325	332	0,10	133															
4	73	15.061	8.928		0,60	5.357	C68	332	0,35	116				0				0	14.729	9,44	139.040
5	103		22.517	13.626	0,50	11.258															
6	128	60.745	17.698		1,04	18.406	C103	13.626	0,77	10.492	C180	3.510	0,77	2.703				0	43.609	7,90	344.509
7	180		19.804	10.368	0,50	9.902															
8	205	6.858	4.859		0,40	1.943	C180	6.858	0,45	3.086				0				0			0
9	225		2.586	532	0,14	362															
10	232	127.433	19.518		0,92	17.956	C225	532	0,53	282				0				0	126.901	5,94	753.791
11	278		4.213	1.681	0,18	758															
12	287	4.112	4.488		0,38	1.705	C278	1.681	0,28	471				0				0	2.431	5,38	13.079
13	306		2.989	751	0,22	658															
14	317	118.138	20.644		1,08	22.296	C306	751	0,65	488	C478	74.272	2,04	151.514				0	43.115	4,08	175.909
15	371		58.080	37.517	0,60	34.848															
16	401	65.413	12.592		0,68	8.563	C371	37.517	0,64	24.011				0				0	27.896	2,80	78.108
17	435		4.161	1.063	0,26	1.082															
18	448	9.110	6.891		0,60	4.135	C435	1.063	0,43	457				0				0	8.047	1,94	15.610
19	478		86.362	99.693	0,86	74.271															
20	521	25.421	9.016		0,40	3.606	C478	25.421	0,63	16.015				0				0			0
21	541		25.461	16.355	0,34	8.657															
22	558	9.108	3.536		0,24	849	C541	9.108	0,29	2.641				0				0			0
23	570		9.048	5.051	0,24	2.172															
24	582	16.503	6.077		0,42	2.552	C582	5.051	0,33	1.667	C541	7.246	0,62	4.493				0	4.206	9,56	40.214
25	603		1.372	100	0,10	137															
26	608	6.160	4.953		0,40	1.981	C603	100	0,25	25				0				0	6.060	10,06	60.965
27	628		11.761	6.806	0,30	3.528															
28	643	26.437	7.000		0,42	2.940	C628	6.806	0,36	2.450				0				0	19.630	10,78	211.613
29	664		1.701	211	0,08	136															
30	668	3.058	3.101		0,28	868	C664	211	0,18	38	C682	2.611	0,24	627				0	236	11,14	2.634
31	682		6.196	2.611	0,20	1.239															
32	692																				
Total do Trecho		507.470	417.550	205.603	261.236	117.964	68.296	87.639	159.337	0	0	301.868	1.886.250								
		925.021		623.153	0,63	0,58	1,82	0,00	6,25												
Volume total - VT:		925.021 m³				Momento total - MT:				2.375.118	m³ * km		Distância média de transporte - DMT:				2,57	km			

CL - Compensação Lateral

CLC - Compensação Lateral em Corte

CLA - Compensação Lateral em Aterro

C - Origem de Escavação

V - Volume escavado

DT - Distância de Transporte

M - Momento de Transporte