



PREFEITURA MUNICIPAL DE BOM JESUS DO OESTE / SC

Projeto de Implantação de Pavimentação Asfáltica
Trecho: Bom Jesus do Oeste - Maravilha
Extensão: 6,0 km

PROJETO EXECUTIVO DE ENGENHARIA PARA IMPLANTAÇÃO DE PAVIMENTAÇÃO ASFÁLTICA ENTRE BOM JESUS DO OESTE/SC ATÉ A DIVISA COM O MUNICÍPIO DE MARAVILHA/SC

**VOLUME 4 – NOTAS DE SERVIÇO E CÁLCULO
DE VOLUMES DE TERRAPLANAGEM**

Novembro de 2021

Única Consultores de Engenharia



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1. APRESENTAÇÃO



1.1 Apresentação



1.1. Apresentação

O presente volume é parte integrante do **Projeto Executivo de engenharia para implantação de pavimentação asfáltica entre Bom Jesus do Oeste/SC até a divisa com o Município de Maravilha/SC, com extensão de, aproximadamente, de 6,0 km**, desenvolvido através do **Contrato Administrativo n. 116/2021**, firmado entre a **Prefeitura de Bom Jesus do Oeste** e a empresa **Única Consultores de Engenharia Ltda.**

O Projeto Executivo é constituído pelos seguintes volumes:

- **Volume 1 – Memória Justificativa**, contendo as metodologias, critérios e normas utilizados na elaboração dos estudos e projetos;
- **Volume 2 – Projeto de Execução**, contendo os desenhos relativos ao projeto, detalhes e informações necessárias à execução da obra;
- **Volume 3 – Orçamento**, contendo o orçamento da obra, elaborado em conformidade com a metodologia SICRO;
- **Volume 4 – Notas de Serviço e Cálculo de Volumes de Terraplenagem**, contendo os elementos necessários para a locação da obra, as notas de serviço de terraplenagem e pavimentação e o Cálculo dos Volumes de Terraplenagem;
- **Volume 5 – Cadastro de Desapropriação**, contendo o cadastro das propriedades atingidas, a serem desapropriadas para a implantação do empreendimento, visando auxiliar no processo de desapropriação das mesmas.

O projeto foi elaborado pela Empresa Única Consultores de Engenharia, em conformidade com o Contrato firmado entre esta empresa e a Prefeitura Municipal de Bom Jesus do Oeste, cujos elementos principais estão relacionados a seguir:

Contrato Administrativo N° 99/2021 (Original)

Data da assinatura do contrato original: 05/07/2021

Contrato Administrativo N° 116/2021 (Primeiro Termo Aditivo)

Data da assinatura do Contrato Administrativo N° 116/2021: 12/08/2021

Data da Ordem de Serviço: 05/07/2021

Prazo para Execução dos Serviços: 150 dias

Florianópolis, novembro de 2021

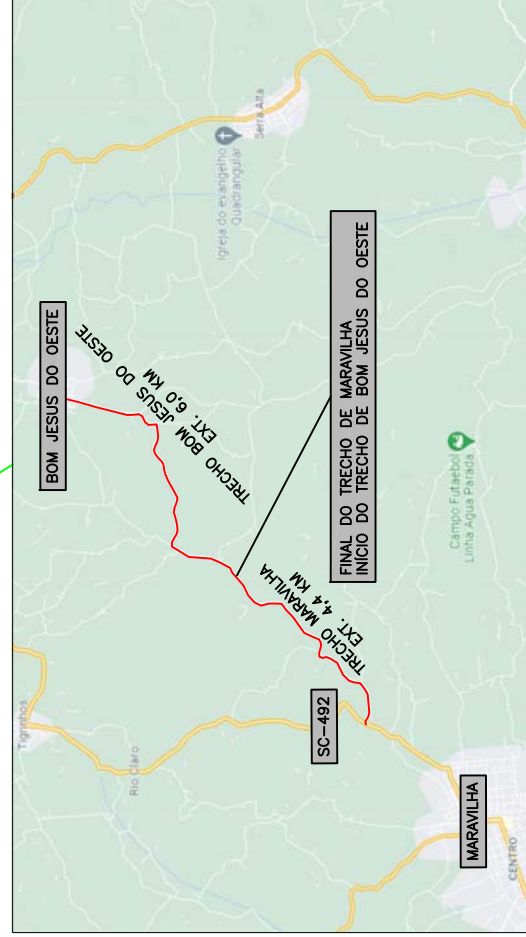
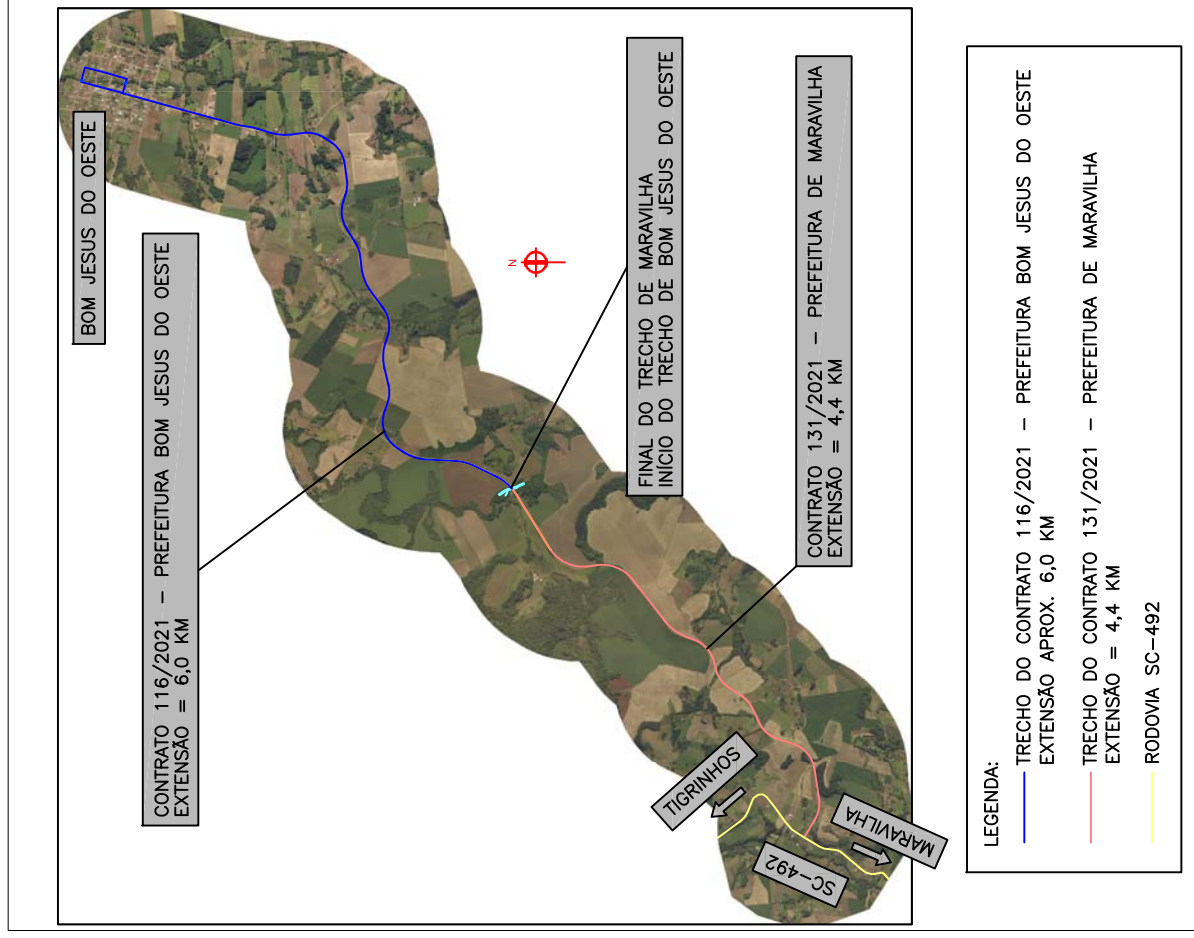


1.2 Mapa de Situação

MAPA DE SITUAÇÃO



MAPA DE LOCALIZAÇÃO





2. NOTAS DE SERVIÇO

Nota de Serviço do Pavimento Acabado

Rodovia Divisa Maravilha/Bom Jesus do Oeste - Trecho Estaca 185+0,00 a 444+0,00

Lado Esquerdo													Eixo							Lado Direito																															
Off-Set			Passeio			Topo Meio Fio		Drenagem				Off-Set do Pavimento				Acostamento		Faixa Adicional			Bordo Pista		Estaca	Pontos Notáveis Horizontal	Pontos Notáveis Vertical	Cota Projeto	Cota Terreno	Cota Vermelha	Bordo Pista			Faixa Adicional			Acostamento			Off-Set do Pavimento				Drenagem		Topo Meio Fio		Passeio			Off-Set		
Afast. (m)	Cota (m)	Alt. (m)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)							Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	
- 6,776	568,285	0,245				- 6,613	568,040	- 2,50	- 6,305	568,047	3/2	- 5,650	568,484	2,50	- 4,150	568,521	2,50	- 3,900	568,527	2,50	185+0,000			568,625	567,650	0,975	3,900	568,722	2,50	4,150	568,729	2,50	5,650	568,766	2,50	6,257	568,361	3/2	6,565	568,369	2,50						7,442	567,785	0,584		
- 6,931	568,959	0,477				- 6,613	568,482	- 2,50	- 6,305	568,490	3/2	- 5,650	568,926	2,50	- 4,150	568,964	2,50	- 3,900	568,970	2,50	185+10,000			569,067	568,234	0,833	3,900	569,165	2,50	4,150	569,171	2,50	5,650	569,209	2,50	6,257	568,804	3/2	6,565	568,811	2,50						7,170	568,409	0,402		
- 6,826	569,313	0,321				- 6,613	568,992	- 2,50	- 6,305	569,000	3/2	- 5,650	569,437	2,50	- 4,150	569,474	2,50	- 3,900	569,480	2,50	186+0,000		EVC	569,578	568,937	0,641	3,900	569,675	2,50	4,150	569,682	2,50	5,650	569,719	2,50	6,257	569,314	3/2	6,565	569,322	2,50						6,883	569,110	0,212		
- 6,786	569,797	0,260				- 6,613	569,537	- 2,50	- 6,305	569,545	3/2	- 5,650	569,981	2,50	- 4,150	570,018	2,50	- 3,900	570,025	2,50	186+10,000			570,122	569,477	0,645	3,900	570,220	2,50	4,150	570,226	2,50	5,650	570,263	2,50	6,257	569,859	3/2	6,565	569,866	2,50						6,757	569,738	0,128		
- 6,784	570,368	0,286				- 6,593	570,082	- 2,50	- 6,285	570,090	3/2	- 5,631	570,526	2,50	- 4,131	570,563	2,50	- 3,881	570,570	2,50	187+0,000		BVC	570,667	569,964	0,703	3,881	570,764	2,50	4,131	570,770	2,50	5,631	570,807	2,50	6,238	570,403	3/2	6,546	570,410	2,50						6,777	570,257	0,153		
- 6,647	570,830	0,200				- 6,513	570,630	- 2,50	- 6,205	570,637	3/2	- 5,551	571,074	2,50	- 4,051	571,111	2,50	- 3,801	571,117	2,50	187+10,000			571,212	570,472	0,740	3,801	571,307	2,50	4,051	571,314	2,50	5,551	571,351	2,50	6,158	570,946	3/2	6,466	570,954	2,50						6,803	570,729	0,225		
- 6,429	571,211					- 6,429	571,211	2,03	- 6,121	571,217	3/2	- 5,471	571,650	2,03	- 3,971	571,680	2,03	- 3,721	571,686	2,03	188+0,000			571,761	571,115	0,646	3,721	571,831	1,88	3,971	571,836	1,88	5,471	571,864	1,88	6,083	571,456	3/2	6,391	571,461	1,88						6,800	571,189	0,272		
- 6,398	571,594	- 0,018				- 6,371	571,612	- 2,30	- 6,063	571,619	3/2	- 5,410	572,054	- 2,30	- 3,910	572,089	- 2,30	- 3,660	572,094	- 2,30	188+7,577		PT	572,179	571,506	0,673	3,660	572,208	0,80	3,910	572,210	0,80	5,410	572,222	0,80	6,033	571,807	3/2	6,341	571,809	0,80						6,738	571,545	- 0,264		
- 6,496	572,141	- 0,149				- 6,273	572,290	- 2,50	- 5,965	572,297	3/2	- 5,311	572,734	- 2,50	- 3,811	572,771	- 2,50	- 3,561	572,777	- 2,50	189+0,000			572,866	572,183	0,683	3,561	572,832	0,97	3,811	572,829	- 0,97	5,311	572,815	- 0,97	5,950	572,388	3/2	6,258	572,385	- 0,97						6,586	572,166	- 0,219		
- 6,323	573,334	- 0,073				- 6,213	573,407	- 2,50	- 5,905	573,415	3/2	- 5,250	573,851	- 2,50	- 3,750	573,889	- 2,50	- 3,500	573,895	- 2,50	190+0,000			573,983	573,282	0,701	3,500	573,895	- 2,50	3,750	573,889	- 2,50	5,250	573,851	- 2,50	5,905	573,415	3/2	6,213	573,407	- 2,50						6,366	573,305	- 0,102		
- 6,518	574,331	- 0,204				- 6,213	574,535	- 2,50	- 5,905	574,542	3/2	- 5,250	574,979	- 2,50	- 3,750	575,016	- 2,50	- 3,500	575,022	- 2,50	191+0,000			575,110	574,266	0,844	3,500	575,022	- 2,50	3,750	575,016	- 2,50	5,250	574,979	- 2,50	5,905	574,542	3/2	6,213	574,535	- 2,50						6,527	574,325	- 0,210		
- 6,253	575,646	- 0,027				- 6,213	575,673	- 2,50	- 5,905	575,681	3/2	- 5,250	576,117	- 2,50	- 3,750	576,155	- 2,50	- 3,500	576,161	- 2,50	192+0,000			576,248	575,324	0,924	3,500	576,161	- 2,50	3,750	576,155	- 2,50	5,250	576,117	- 2,50	5,905	575,681	3/2	6,213	575,673	- 2,50						6,530	575,461	- 0,212		
- 6,283	576,775	- 0,047				- 6,213	576,822	- 2,50	- 5,905	576,830	3/2	- 5,250	577,266	- 2,50	- 3,750	577,304	- 2,50	- 3,500	577,310	- 2,50	193+0,000		EVC	577,397	576,366	1,031	3,500	577,310	- 2,50	3,750	577,304	- 2,50	5,250	577,266	- 2,50	5,905	576,830	3/2	6,213	576,822	- 2,50						6,673	576,515	- 0,307		
- 6,715	577,642	- 0,335				- 6,213	577,977	- 2,50	- 5,905	577,985	3/2	- 5,250	578,421	- 2,50	- 3,750	578,458	- 2,50	- 3,500	578,465	- 2,50	194+0,000			578,552	577,584	0,968	3,500	578,471	- 2,31	3,750	578,466	- 2,31	5,250	578,431	- 2,31	5,903	577,996	3/2	6,211	577,989	- 2,31						6,711	577,655	- 0,334		
- 6,301	579,072	- 0,060				- 6,213	579,132	- 2,50	- 5,905	579,139	3/2	- 5,250	579,576	- 2,50	- 3,750	579,613	- 2,50	- 3,500	579,619	- 2,50	195+0,000			579,707	578,819	0,888	3,500	579,654	- 1,51	3,750	579,650	- 1,51	5,250	579,628	- 1,51	5,895	579,198	3/2	6,203	579,193	- 1,51						6,657	578,890	- 0,303		
- 6,298	580,230	- 0,056				- 6,213	580,286	- 2,50	- 5,905	580,294	3/2	- 5,250	580,730	- 2,50	- 3,750	580,768	- 2,50	- 3,500	580,774	- 2,50	196+0,000			580,862	579,846	0,916	3,500	580,837	- 0,71	3,750	580,835	- 0,71	5,250	580,825	- 0,71	5,887	580,400	3/2	6,195	580,398	- 0,71						6,602	580,126	- 0,272		
- 6,671	581,001	- 0,305				- 6,213	581,306	- 2,50	- 5,905	581,314	3/2	- 5,250	581,750	- 2,50	- 3,750	581,788	- 2,50	- 3,500	581,794	- 2,50	196+17,663		TE	581,881	580,788	1,093	3,500	581,881	-	3,750	581,881	-	5,250	581,881	-	5,880	581,461	3/2	6,188	581,461	-						6,439	581,294	- 0,167		
- 6,704	581,127	- 0,315				- 6,231	581,442	- 2,48	- 5,923	581,450	3/2	- 5,269	581,886	- 2,48	- 3,769	581,923	- 2,48	- 3,519	581,929	- 2,48	197+0,000			582,016	580,922	1,094	3,519	582,020	0,09	3,769	582,020	0,09	5,269	582,021	0,09	5,898	581,602	3/2	6,206	581,602	0,09						6,552	581,372	- 0,230		
- 6,944	581,601	- 0,423				- 6,310	582,024	- 2,38	- 6,002	582,031	3/2	- 5,349	582,467	- 2,38	- 3,849	582,502	- 2,38	- 3,599	582,508	- 2,38	197+10,000			582,594	581,514	1,080	3,599	582,611	0,49	3,849	582,613	0,49	5,349	582,620	0,49	5,974	582,203	3/2	6,282	582,205	0,49						6,572	582,011	- 0,194		
- 7,285	582,008	- 0,598				- 6,389	582,606	- 2,28	- 6,081	582,613	3/2	- 5,429	583,047	- 2,28	- 3,929	583,082	- 2,28	- 3,679	583,087	- 2,28	198+0,000			583,171	582,128	1,043	3,679	583,204	0,89	3,929	583,206	0,89	5,429	583,220	0,89	6,050	582,805	3/2	6,358	582,808	0,89						6,789	582,521	- 0,287		
- 7,375	582,583	- 0,605				- 6,468	583,188	- 2,18	- 6,160	583,194	3/2	- 5,509	583,629	- 2,18	- 4,009	583,662	- 2,18	- 3,759	583,667	- 2,18	198+10,000			583,748	582,715	1,033	3,759	583,797	1,29	4,009	583,800	1,29	5,509	583,820	1,29	6,127	583,408	3/2	6,435	583,412	1,29						6,845	583,146	- 0,266		
- 7,568	583,089	- 0,681				- 6,547	583,770	- 2,08	- 6,239	583,776	3/2	- 5,589	584,210	- 2,08	- 4,089	584,241	- 2,08	- 3,839	584,246	- 2,08	199+0,000			584,326	583,362	1,064	3,838	584,391	1,69	4,088	584,395	1,69	5,588	584,420	1,69	6,203	584,011	3/2	6,511	584,016	1,69						6,993	583,695	- 0,321		
- 7,781	583,433	- 0,783				- 6,607	584,216	- 2,00	- 6,299	584,222	3/2	- 5,650	584,655	- 2,00	- 4,150	584,685	- 2,00	- 3,900	584,690	- 2,00	199+7,663		EC	584,768	583,784	0,984	3,900	584,846	2,00	4,150	584,851	2,00	5,650	584,881	2,00	6,262	584,473	3/2	6,570	584,480	2,00						7,152	584,091	- 0,389		
- 7,771	583,570	- 0,775				- 6,608	584,345	- 2,09	- 6,300	584,351	3/2	- 5,650	584,785	- 2,09	- 4,150	584,816	- 2,09	- 3,900	584,821	- 2,09	199+10,000			584,903	583,897	1,006	3,900	584,985	2,09	4,150	584,990	2,09	5,650	585,021	2,09	6,261	584,614	3/2	6,569	584,621	2,09						7,184	584,211			

Nota de Serviço do Pavimento Acabado

Rodovia Divisa Maravilha/Bom Jesus do Oeste - Trecho Estaca 185+0,00 a 444+0,00

Lado Esquerdo																		Eixo						Lado Direito																													
Off-Set			Passeio			Topo Meio Fio			Drenagem			Off-Set do Pavimento			Acostamento			Faixa Adicional			Bordo Pista			Estaca	Pontos Notáveis Horizontal	Pontos Notáveis Vertical	Cota Projeto	Cota Terreno	Cota Vermelha	Bordo Pista			Faixa Adicional			Acostamento			Off-Set do Pavimento			Drenagem			Topo Meio Fio			Passeio			Off-Set		
Afast. (m)	Cota (m)	Alt. (m)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)							Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)	Afast. (m)	Cota (m)	Incl. (%)
- 6,527	594,491	- 0,242				- 6,165	594,733	2,52	- 5,857	594,725	3/2	- 5,250	595,129	2,52	- 3,750	595,092	2,52	- 3,500	595,085	2,52	230+17,478							594,997	594,644	0,354	3,500	594,909	2,52	3,750	594,902	- 2,52	5,250	594,864	- 2,52	5,905	594,428	3/2	6,213	594,420	- 2,52				8,073	597,210	2,790		
- 6,324	594,679	- 0,081				- 6,203	594,760	2,55	- 5,895	594,752	3/2	- 5,288	595,157	2,55	- 3,788	595,119	2,55	- 3,538	595,112	2,55	231+0,000							595,022	594,688	0,334	3,538	594,932	- 2,55	3,788	594,926	- 2,55	5,288	594,887	- 2,55	5,943	594,451	3/2	6,251	594,443	- 2,55				8,097	597,212	2,769		
						- 6,352	594,870	2,64	- 6,044	594,862	3/2	- 5,438	595,266	2,64	- 3,938	595,226	2,64	- 3,688	595,220	2,64	231+10,000		BVC					595,122	594,864	0,276	3,688	595,025	- 2,64	3,938	595,018	- 2,64	5,438	594,979	- 2,64	6,094	594,541	3/2	6,402	594,533	- 2,64				8,044	596,996	2,463		
- 6,839	594,789	- 0,225				- 6,501	595,014	2,74	- 6,193	595,006	3/2	- 5,588	595,409	2,74	- 4,088	595,368	2,74	- 3,838	595,362	2,74	232+0,000							595,257	595,009	0,248	3,838	595,152	- 2,74	4,088	595,145	- 2,74	5,588	595,104	- 2,74	6,245	594,666	3/2	6,553	594,657	- 2,74				7,734	596,429	1,772		
- 7,437	594,703	- 0,525				- 6,650	595,228	2,83	- 6,454	595,219	3/2	- 5,738	595,622	2,83	- 4,238	595,580	2,83	- 3,988	595,573	2,83	232+10,000							595,460	595,017	0,443	3,988	595,347	- 2,83	4,238	595,340	- 2,83	5,738	595,297	- 2,83	6,396	594,859	3/2	6,704	594,850	- 2,83				7,456	595,978	1,128		
- 8,053	594,572	- 0,861				- 6,762	595,433	2,90	- 6,454	595,424	3/2	- 5,850	595,826	2,90	- 4,350	595,783	2,90	- 4,100	595,775	2,90	232+17,478		EC					595,657	594,909	0,748	4,100	595,538	- 2,90	4,350	595,530	- 2,90	5,850	595,487	- 2,90	6,509	595,048	3/2	6,817	595,039	- 2,90				7,367	595,865	0,826		
- 8,257	594,511	- 0,997				- 6,762	595,508	2,90	- 6,454	595,499	3/2	- 5,850	595,901	2,90	- 4,350	595,858	2,90	- 4,100	595,850	2,90	233+0,000							595,732	594,896	0,836	4,100	595,613	- 2,90	4,350	595,605	- 2,90	5,850	595,562	- 2,90	6,509	595,123	3/2	6,817	595,114	- 2,90				7,286	595,818	0,704		
- 9,533	594,001	- 1,847				- 6,762	595,848	2,90	- 6,454	595,839	3/2	- 5,850	596,242	2,90	- 4,350	596,198	2,90	- 4,100	596,191	2,90	233+10,000							596,072	594,763	1,309	4,100	595,953	- 2,90	4,350	595,946	- 2,90	5,850	595,903	- 2,90	6,509	595,463	3/2	6,817	595,455	- 2,90				6,913	595,599	0,144		
- 9,574	594,383	- 1,875				- 6,762	596,258	2,90	- 6,454	596,249	3/2	- 5,850	596,651	2,90	- 4,350	596,608	2,90	- 4,100	596,600	2,90	234+0,000							596,482	594,945	1,537	4,100	596,363	- 2,90	4,350	596,355	- 2,90	5,850	596,312	- 2,90	6,509	595,873	3/2	6,817	595,864	- 2,90				7,433	595,453	- 0,411		
- 10,404	594,308	- 2,428				- 6,762	596,736	2,90	- 6,454	596,727	3/2	- 5,850	597,129	2,90	- 4,350	597,086	2,90	- 4,100	597,079	2,90	234+10,000							596,960	595,014	1,946	4,100	596,841	- 2,90	4,350	596,834	- 2,90	5,850	596,790	- 2,90	6,509	596,351	3/2	6,817	596,342	- 2,90				7,575	595,836	- 0,506		
- 11,312	594,249	- 3,034				- 6,762	597,283	2,90	- 6,454	597,274	3/2	- 5,850	597,676	2,90	- 4,350	597,633	2,90	- 4,100	597,625	2,90	235+0,000							597,507	595,037	2,470	4,100	597,388	- 2,90	4,350	597,380	- 2,90	5,850	597,337	- 2,90	6,509	596,898	3/2	6,817	596,889	- 2,90				8,202	595,965	- 0,924		
- 12,224	594,257	- 3,641				- 6,762	597,898	2,90	- 6,454	597,889	3/2	- 5,850	598,292	2,90	- 4,350	598,248	2,90	- 4,100	598,241	2,90	235+10,000							598,122	594,991	3,131	4,100	598,003	- 2,90	4,350	597,996	- 2,90	5,850	597,953	- 2,90	6,509	597,513	3/2	6,817	597,505	- 2,90				8,506	596,378	- 1,127		
- 13,302	594,222	- 4,361				- 6,762	598,583	2,90	- 6,454	598,574	3/2	- 5,850	598,976	2,90	- 4,350	598,933	2,90	- 4,100	598,925	2,90	236+0,000							598,807	594,974	3,833	4,100	598,688	- 2,90	4,350	598,680	- 2,90	5,850	598,637	- 2,90	6,509	598,198	3/2	6,817	598,189	- 2,90				8,676	596,950	- 1,239		
- 14,979	593,857	- 5,479				- 6,762	599,336	2,90	- 6,454	599,327	3/2	- 5,850	599,729	2,90	- 4,350	599,686	2,90	- 4,100	599,679	2,90	236+10,000							599,560	597,732	3,828	4,100	599,441	- 2,90	4,350	599,434	- 2,90	5,850	599,390	- 2,90	6,509	598,951	3/2	6,817	598,942	- 2,90				7,842	600,479	1,537		
- 13,716	595,522	- 4,636				- 6,762	600,158	2,90	- 6,454	600,149	3/2	- 5,850	600,551	2,90	- 4,350	600,508	2,90	- 4,100	600,500	2,90	237+0,000							600,382	599,616	0,766	4,100	600,263	- 2,90	4,350	600,255	- 2,90	5,850	600,212	- 2,90	6,509	599,773	3/2	6,817	599,764	- 2,90				9,654	604,020	4,256		
- 11,905	597,619	- 3,429				- 6,762	601,048	2,90	- 6,454	601,039	3/2	- 5,850	601,442	2,90	- 4,350	601,398	2,90	- 4,100	601,391	2,90	237+10,000							601,272	601,531	- 0,259	4,100	601,153	- 2,90	4,350	601,146	- 2,90	5,850	601,103	- 2,90	6,509	600,663	3/2	6,817	600,655	- 2,90				10,101	605,581	4,926		
- 11,516	598,838	- 3,170				- 6,762	602,008	2,90	- 6,454	601,999	3/2	- 5,850	602,401	2,90	- 4,350	602,358	2,90	- 4,100	602,350	2,90	238+0,000							602,232	602,487	- 0,255	4,100	602,113	- 2,90	4,350	602,105	- 2,90	5,850	602,062	- 2,90	6,509	601,623	3/2	6,817	601,614	- 2,90				9,700	605,938	4,324		
- 11,614	599,801	- 3,235				- 6,762	603,036	2,90	- 6,454	603,027	3/2	- 5,850	603,429	2,90	- 4,350	603,386	2,90	- 4,100	603,379	2,90	238+10,000							603,260	603,585	- 0,325	4,100	603,141	- 2,90	4,350	603,134	- 2,90	5,850	603,090	- 2,90	6,509	602,651	3/2	6,817	602,642	- 2,90				9,899	607,265	4,623		
- 7,907	603,369	- 0,764				- 6,762	604,133	2,90	- 6,454	604,124	3/2	- 5,850	604,526	2,90	- 4,350	604,483	2,90	- 4,100	604,475	2,90	239+0,000							604,357	606,734	- 2,377	4,100	604,238	- 2,90	4,350	604,230	- 2,90	5,850	604,187	- 2,90	6,509	603,748	3/2	6,817	603,739	- 2,90				10,453	609,193	5,454		
- 6,990	605,640	- 0,342				- 6,762	605,298	2,90	- 6,454	605,289	3/2	- 5,850	605,692	2,90	- 4,350	605,648	2,90	- 4,100	605,641	2,90	239+10,000							605,522	607,991	- 2,469	4,100	605,403	- 2,90	4,350	605,396	- 2,90	5,850	605,353	- 2,90	6,509	604,913	3/2	6,817	604,905	- 2,90				11,723	612,265	7,360		
- 7,457	607,542	- 1,044				- 6,762	606,948	2,90	- 6,454	606,939	3/2	- 5,850	606,892	2,90	- 4,350	606,848	2,90	- 4,100	606,841	2,90	240+0,000							606,722	609,357	- 2,635	4,100	606,603	- 2,90	4,350	606,596	- 2,90	5,850	606,553	- 2,90	6,509	606,113	3/2	6,817	606,105	- 2,90				11,016	612,404	6,299		
- 7,441	607,762	- 1,019				- 6,762	606,743	2,90	- 6,454	606,734	3/2	- 5,850	607,137	2,90	- 4,350	607,093	2,90	- 4,100	607,086	2,90	240+2,039							606,967	609,588	- 2,621	4,100	606,848	- 2,90	4,350	606,841	- 2,90	5,850	606,797	- 2,90	6,509	606,358	3/2	6,817	606,349	- 2,90				10,912	612,492	6,143		
- 7,512	608,823	- 1,125				- 6,762	607,698	2,90	- 6,454	607,689	3/2	- 5,850	608,092	2,90	- 4,350	608,048	2,90	- 4,100	608,041	2,90	240+10,000		BVC					607,922	611,008	- 3,086	4,100	607,803	- 2,90	4,350	607,796	- 2,90	5,850	607,753	- 2,90	6,509	607,313	3/2	6,817	607,305	- 2,90				10,893	613,419	6,114		
- 8,196	611,033	- 2,151				- 6,762	608,882	2,90	- 6,454	608,873	3/2	- 5,850	609,275	2,90	- 4,350	609,232	2,90	- 4,																																			

Nota de Serviço do Pavimento Acabado

Interseção de Acesso a Modelo - Ramo B - Estaca 0+0,000 a 1+4,221

Lado Esquerdo				Lado Direito																	
Eixo				Faixa Adicional			Acostamento			Off-Set do Pavimento			Passeio			Off-Set					
Estaca	Pontos Notáveis Horizontal	Pontos Notáveis Vertical	Cota Projeto	Cota Terreno	Cota Vermelha	Faixa Adicional		Acostamento		Off-Set do Pavimento		Passeio		Off-Set							
						Afast. (m)	Incl. (%)	Afast. (m)	Incl. (%)	Afast. (m)	Incl. (%)	Afast. (m)	Incl. (%)	Afast. (m)	Incl. (%)	Afast. (m)	Incl. (%)	Cota (m)	Alt. (m)		
- 5,500		BVC	663,513	662,264	1,249	0,250	663,507	2,50	1,750	663,469	2,50	2,405	663,033	3/2	2,750	663,024	2,50	3,581	662,470	-	0,554
- 5,500			663,418	661,887	1,531	0,250	663,412	2,50	1,750	663,374	2,50	2,405	662,938	3/2	2,750	662,929	2,50	3,819	662,217	-	0,712
- 5,500		BVC	663,388	661,803	1,585	0,250	663,382	2,50	1,750	663,344	2,50	2,405	662,908	3/2	2,750	662,899	2,50	3,983	662,077	-	0,822
- 4,803			663,394	661,794	1,600	0,250	663,387	2,50	1,750	663,350	2,50	2,405	662,914	3/2	2,750	662,905	2,50	3,974	662,089	-	0,816
- 2,553			663,394	661,769	1,625	0,250	663,388	2,50	1,750	663,351	2,50	2,405	662,914	3/2	2,750	662,906	2,50	3,926	662,122	-	0,784
- 0,000		EVC	663,358	661,995	1,363	0,250	663,351	2,50	1,750	663,314	2,50	2,405	662,878	3/2	2,750	662,869	2,50	3,718	662,224	-	0,645
		PT	663,294	662,461	0,833	0,250	663,288	2,50	1,750	663,250	2,50	2,405	662,814	3/2	2,750	662,805	2,50	3,174	662,522	-	0,283



3. PLANILHAS DE VOLUMES DE TERRAPLENAGEM

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
185+0,00	0,16	0,77	7,5	92,06	0,770	92,060
185+10,00	0,69	4,16	5,58	65,62	4,930	157,680
186+0,00	0,21	4,45	4,08	48,44	9,380	206,120
186+10,00	0,11	1,61	4,14	41,22	10,990	247,340
187+0,00	0,24	1,74	4,58	43,78	12,730	291,120
187+10,00		1,19	5,61	51,15	13,920	342,270
188+0,00			6,07	58,58	13,920	400,850
188+7,58			6,36	47,2	13,920	448,050
189+0,00			6,84	81,96	13,920	530,010
190+0,00			6,82	136,56	13,920	666,570
191+0,00			8,25	150,72	13,920	817,290
192+0,00			8,09	163,45	13,920	980,740
193+0,00			8,75	168,38	13,920	1.149,120
194+0,00			8,76	175,02	13,920	1.324,140
195+0,00			8	167,53	13,920	1.491,670
196+0,00			8,85	168,43	13,920	1.660,100
196+17,66			7,95	148,35	13,920	1.808,450
197+0,00			7,96	18,58	13,920	1.827,030
197+10,00			7,35	76,52	13,920	1.903,550
198+0,00			8,43	78,89	13,920	1.982,440
198+10,00			9,22	88,27	13,920	2.070,710
199+0,00			9,55	93,82	13,920	2.164,530
199+7,66			10,55	76,97	13,920	2.241,500
199+10,00			10,81	24,96	13,920	2.266,460
200+0,00			12,4	115,97	13,920	2.382,430
200+10,00			14,6	135,02	13,920	2.517,450
201+0,00			15,8	152,07	13,920	2.669,520
201+10,00			15,75	157,79	13,920	2.827,310
202+0,00			15,34	155,52	13,920	2.982,830
202+6,73			13,76	97,89	13,920	3.080,720
202+10,00			12,03	42,22	13,920	3.122,940

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
203+0,00			7,76	98,76	13,920	3.221,700
203+10,00	0,17	0,87	5,02	63,62	14,790	3.285,320
204+0,00	0,9	5,45	3,95	44,59	20,240	3.329,910
204+10,00	1,14	10,33	3,76	38,33	30,570	3.368,240
205+0,00	0,43	7,94	4,59	41,54	38,510	3.409,780
205+5,79		1,25	6,51	32,13	39,760	3.441,910
205+10,00			8,08	30,72	39,760	3.472,630
206+0,00			11,63	98,28	39,760	3.570,910
206+10,00			14,98	133,02	39,760	3.703,930
207+0,00			18,39	166,84	39,760	3.870,770
207+10,00			22,58	204,85	39,760	4.075,620
207+15,79			25,05	137,87	39,760	4.213,490
208+0,00			27,32	110,27	39,760	4.323,760
209+0,00			38,86	661,73	39,760	4.985,490
210+0,00			47,64	864,97	39,760	5.850,460
211+0,00			40,25	878,88	39,760	6.729,340
212+0,00			38,32	785,64	39,760	7.514,980
213+0,00			30,58	689	39,760	8.203,980
214+0,00	2,77	27,67	9,7	402,82	67,430	8.606,800
215+0,00	10,61	133,77	0,06	97,61	201,200	8.704,410
216+0,00	15,1	257,1	0,03	0,9	458,300	8.705,310
217+0,00	18,16	332,6	0,04	0,71	790,900	8.706,020
217+1,40	18,21	25,54	0,04	0,06	816,440	8.706,080
217+10,00	18,13	156,19	0,05	0,36	972,630	8.706,440
218+0,00	20,47	193,01	0,04	0,45	1.165,640	8.706,890
218+10,00	20,55	205,1	0,05	0,49	1.370,740	8.707,380
219+0,00	18,7	195,43	0,51	2,86	1.566,170	8.710,240
219+1,40	18,74	26,29	0,42	0,65	1.592,460	8.710,890
219+10,00	17,96	156,7	0,44	3,72	1.749,160	8.714,610
220+0,00	19,35	185,31	0,52	4,85	1.934,470	8.719,460
220+10,00	19,68	194	0,03	2,76	2.128,470	8.722,220
221+0,00	18,32	188,88	0,03	0,29	2.317,350	8.722,510

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
221+10,00	19,81	189,57	0,02	0,28	2.506,920	8.722,790
222+0,00	20,49	200,5	0,02	0,24	2.707,420	8.723,030
222+10,00	20,21	202,43	0,02	0,25	2.909,850	8.723,280
223+0,00	19,78	198,83	0,03	0,25	3.108,680	8.723,530
223+10,00	17,76	186,59	0,03	0,26	3.295,270	8.723,790
223+11,60	17,49	28,11	0,04	0,05	3.323,380	8.723,840
224+0,00	14,43	133,27	0,05	0,35	3.456,650	8.724,190
224+10,00	10,27	122,62	0,72	3,87	3.579,270	8.728,060
225+0,00	6,07	81,03	3,47	21,22	3.660,300	8.749,280
225+10,00	2,82	43,97	9,12	63,75	3.704,270	8.813,030
226+0,00	0,92	18,45	15,92	126,65	3.722,720	8.939,680
226+10,00	0,07	4,9	21,35	188,42	3.727,620	9.128,100
227+0,00		0,37	25,84	238,65	3.727,990	9.366,750
227+10,00			26,16	262,95	3.727,990	9.629,700
228+0,00			18,96	228,07	3.727,990	9.857,770
228+1,79			17,9	32,92	3.727,990	9.890,690
228+10,00			15,68	139,21	3.727,990	10.029,900
229+0,00			11,74	137,1	3.727,990	10.167,000
229+10,00	0,22	1,11	8,24	99,86	3.729,100	10.266,860
230+0,00	1,18	7,04	5,69	69,65	3.736,140	10.336,510
230+1,79	1,48	2,38	5,23	9,75	3.738,520	10.346,260
230+17,48	5,37	53,73	2,28	58,91	3.792,250	10.405,170
231+0,00	5,8	14,09	1,54	4,82	3.806,340	10.409,990
231+10,00	6,09	59,47	1,03	12,85	3.865,810	10.422,840
232+0,00	4,43	52,09	1,43	12,36	3.917,900	10.435,200
232+10,00	2,67	34,99	3,42	24,46	3.952,890	10.459,660
232+17,48	1,53	15,42	6,22	36,47	3.968,310	10.496,130
233+0,00	0,63	2,72	8,04	17,99	3.971,030	10.514,120
233+10,00		3,06	14,58	114,35	3.974,090	10.628,470
234+0,00			20,56	177,35	3.974,090	10.805,820
234+10,00			28,31	246,44	3.974,090	11.052,260
235+0,00			38,76	338,18	3.974,090	11.390,440

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
235+10,00			51,56	455,37	3.974,090	11.845,810
236+0,00			65,31	589,86	3.974,090	12.435,670
236+10,00	2,04	9,96	44,05	555,56	3.984,050	12.991,230
237+0,00	11,18	64,55	21,87	337,93	4.048,600	13.329,160
237+10,00	18,16	143,47	11,05	169,02	4.192,070	13.498,180
238+0,00	15,13	162,98	9,91	107,79	4.355,050	13.605,970
238+10,00	18,95	166,97	10,94	107,25	4.522,020	13.713,220
239+0,00	38,44	282,63	0,56	59,11	4.804,650	13.772,330
239+10,00	50,08	436,27	0,03	3,02	5.240,920	13.775,350
240+0,00	50,32	495,25	0,03	0,27	5.736,170	13.775,620
240+2,04	50,39	102,68	0,03	0,06	5.838,850	13.775,680
240+10,00	54,86	414,49	0,03	0,22	6.253,340	13.775,900
241+0,00	57,49	556,99	0,03	0,28	6.810,330	13.776,180
241+10,00	54,46	556,61	0,03	0,27	7.366,940	13.776,450
242+0,00	49,04	515,16	0,03	0,26	7.882,100	13.776,710
242+10,00	39,2	438,45	0,03	0,26	8.320,550	13.776,970
243+0,00	31,04	348,59	0,03	0,27	8.669,140	13.777,240
243+10,00	28,33	294,65	0,03	0,26	8.963,790	13.777,500
244+0,00	22,12	250,14	0,03	0,26	9.213,930	13.777,760
244+10,00	13,49	176,1	0,34	1,87	9.390,030	13.779,630
245+0,00	7,41	102,99	1,81	11	9.493,020	13.790,630
245+10,00	5,87	65,31	2,89	24,02	9.558,330	13.814,650
246+0,00	4,78	52,31	5,45	42,67	9.610,640	13.857,320
246+10,00	4,68	46,44	2,58	41,09	9.657,080	13.898,410
247+0,00	4,86	46,87	3,44	30,83	9.703,950	13.929,240
247+6,60	5,15	32,46	4,47	26,79	9.736,410	13.956,030
247+10,00	5,31	17,78	5,61	17,13	9.754,190	13.973,160
248+0,00	3,41	42,98	13,69	98,03	9.797,170	14.071,190
248+10,00	2,11	27,32	12,11	130,2	9.824,490	14.201,390
249+0,00	0,29	12,02	15,3	137,01	9.836,510	14.338,400
249+6,60		0,95	17,41	107,93	9.837,460	14.446,330
250+0,00			18,14	238,16	9.837,460	14.684,490

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
250+19,61			10,96	285,34	9.837,460	14.969,830
251+0,00			10,85	4,24	9.837,460	14.974,070
251+10,00			8,45	96,48	9.837,460	15.070,550
252+0,00	0,11	0,53	2,13	52,87	9.837,990	15.123,420
252+10,00	1,72	9,08	0,36	12,58	9.847,070	15.136,000
252+19,61	5,13	32,68	0,03	1,91	9.879,750	15.137,910
253+0,00	5,29	2,03	0,03	0,01	9.881,780	15.137,920
253+10,00	10,73	79,67	0,03	0,27	9.961,450	15.138,190
254+0,00	16,51	135,7	0,03	0,26	10.097,150	15.138,450
254+10,00	23,13	197,45	0,03	0,26	10.294,600	15.138,710
255+0,00	26,1	244,94	0,03	0,26	10.539,540	15.138,970
255+10,00	27,02	263,89	0,02	0,26	10.803,430	15.139,230
255+12,77	26,78	74,6	0,02	0,07	10.878,030	15.139,300
256+0,00	24,99	185,5	0,03	0,18	11.063,530	15.139,480
256+10,00	16,95	207,8	0,03	0,27	11.271,330	15.139,750
257+0,00	10,72	136,97	0,03	0,31	11.408,300	15.140,060
257+10,00	4,99	77,56	0,42	2,28	11.485,860	15.142,340
258+0,00	3,42	41,34	0,84	6,39	11.527,200	15.148,730
258+5,94	2,26	16,52	1,63	7,43	11.543,720	15.156,160
258+10,00	1,53	7,71	2,35	8,09	11.551,430	15.164,250
259+0,00	1,1	12,89	2,91	26,6	11.564,320	15.190,850
259+10,00	0,64	8,6	4,37	36,69	11.572,920	15.227,540
260+0,00	0,47	5,58	3	36,88	11.578,500	15.264,420
260+5,94	0,75	3,62	3,08	18,06	11.582,120	15.282,480
261+0,00	0,86	11,32	2,98	42,63	11.593,440	15.325,110
262+0,00	1	18,63	2,76	57,38	11.612,070	15.382,490
263+0,00	1,02	20,27	2,73	54,85	11.632,340	15.437,340
264+0,00	0,64	16,61	3,25	59,79	11.648,950	15.497,130
265+0,00	0,06	6,96	3,54	67,87	11.655,910	15.565,000
265+3,78	0,03	0,17	3,91	14,08	11.656,080	15.579,080
265+10,00		0,1	5,01	27,75	11.656,180	15.606,830
266+0,00	0,01	0,05	3,37	41,87	11.656,230	15.648,700

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
266+10,00		0,08	5,3	43,35	11.656,310	15.692,050
267+0,00	0,1	0,52	2,98	41,25	11.656,830	15.733,300
267+3,78	0,08	0,34	2,85	11,02	11.657,170	15.744,320
267+10,00	0,07	0,48	4,77	23,71	11.657,650	15.768,030
268+0,00	0,28	1,79	2,63	36,78	11.659,440	15.804,810
268+10,00	0,47	3,78	2,68	26,41	11.663,220	15.831,220
269+0,00	0,09	2,83	2,84	27,43	11.666,050	15.858,650
269+10,00	0,09	0,91	3,3	30,55	11.666,960	15.889,200
270+0,00	0,27	1,76	2,27	27,79	11.668,720	15.916,990
270+10,00	0,3	2,85	2,86	25,53	11.671,570	15.942,520
271+0,00	0,6	4,53	1,72	22,69	11.676,100	15.965,210
271+10,00	0,53	5,66	2,51	20,97	11.681,760	15.986,180
271+15,21	0,73	3,27	1,53	10,53	11.685,030	15.996,710
272+0,00	1,14	4,49	1,34	6,89	11.689,520	16.003,600
272+10,00	0,32	7,35	2,12	17,21	11.696,870	16.020,810
273+0,00	0,67	4,97	1,32	17,11	11.701,840	16.037,920
273+10,00	0,06	3,66	2,76	20,36	11.705,500	16.058,280
274+0,00		0,3	4,86	38,16	11.705,800	16.096,440
274+10,00			6,43	56,66	11.705,800	16.153,100
275+0,00			5,6	60,36	11.705,800	16.213,460
275+10,00			9,43	75,52	11.705,800	16.288,980
276+0,00			9,76	96,47	11.705,800	16.385,450
276+6,64			11,87	71,79	11.705,800	16.457,240
276+10,00			12,72	41,37	11.705,800	16.498,610
277+0,00			13,04	129,34	11.705,800	16.627,950
277+10,00			13,15	130,96	11.705,800	16.758,910
278+0,00			12,2	126,74	11.705,800	16.885,650
278+6,64			11,67	79,19	11.705,800	16.964,840
278+8,36			11,13	19,61	11.705,800	16.984,450
278+10,00			10,8	18,02	11.705,800	17.002,470
279+0,00			12,33	115,65	11.705,800	17.118,120
279+10,00			12,78	125,56	11.705,800	17.243,680

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
280+0,00			13,79	132,33	11.705,800	17.376,010
280+8,36			14,43	117,47	11.705,800	17.493,480
280+10,00			14,21	23,54	11.705,800	17.517,020
281+0,00			13,78	139,54	11.705,800	17.656,560
281+10,00			12,44	130,83	11.705,800	17.787,390
282+0,00			14,46	134,31	11.705,800	17.921,700
282+10,00			19,09	167,97	11.705,800	18.089,670
283+0,00			23,67	214,88	11.705,800	18.304,550
283+10,00			27,55	257,97	11.705,800	18.562,520
284+0,00			33,18	305,92	11.705,800	18.868,440
284+10,00			34,22	339,08	11.705,800	19.207,520
285+0,00			43,04	387,69	11.705,800	19.595,210
285+10,00			49,49	462,78	11.705,800	20.057,990
285+10,10			49,57	4,88	11.705,800	20.062,870
286+0,00			59,54	539,07	11.705,800	20.601,940
286+10,00			42,57	509,12	11.705,800	21.111,060
287+0,00			40,67	415,04	11.705,800	21.526,100
287+10,00			35,08	377,94	11.705,800	21.904,040
288+0,00			23,29	291,12	11.705,800	22.195,160
288+10,00			14,35	187,49	11.705,800	22.382,650
289+0,00	0,38	1,98	10	121,24	11.707,780	22.503,890
289+10,00	0,47	4,38	8,03	89,92	11.712,160	22.593,810
290+0,00	0,75	6,23	6,29	71,49	11.718,390	22.665,300
290+10,00	1,48	11,41	5,7	59,84	11.729,800	22.725,140
290+11,84	1,3	2,56	5,59	10,38	11.732,360	22.735,520
291+0,00	2,18	14,52	5,33	44,41	11.746,880	22.779,930
291+10,00	2,18	22,12	5,92	55,97	11.769,000	22.835,900
292+0,00	2,7	24,38	6,92	64,19	11.793,380	22.900,090
292+10,00	1,73	22,11	7,5	72,1	11.815,490	22.972,190
292+11,84	1,49	2,96	7,65	13,94	11.818,450	22.986,130
293+0,00	0,73	9,07	8,84	67,29	11.827,520	23.053,420
294+0,00	0,6	13,29	10,41	192,48	11.840,810	23.245,900

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
295+0,00	0,54	11,42	11,42	218,3	11.852,230	23.464,200
296+0,00	1,6	21,45	10,23	216,49	11.873,680	23.680,690
297+0,00	5,52	71,22	5,93	161,58	11.944,900	23.842,270
297+3,46	6,48	20,76	4,85	18,65	11.965,660	23.860,920
297+10,00	6,4	42,12	2,89	25,3	12.007,780	23.886,220
298+0,00	7,06	67,31	1,18	20,34	12.075,090	23.906,560
298+10,00	6,61	68,38	0,86	10,18	12.143,470	23.916,740
299+0,00	5,7	61,55	0,7	7,77	12.205,020	23.924,510
299+10,00	3,83	47,62	0,35	5,22	12.252,640	23.929,730
299+13,46	3,03	11,87	0,34	1,18	12.264,510	23.930,910
300+0,00	1,94	16,26	1,3	5,35	12.280,770	23.936,260
300+10,00	0,22	10,66	4,45	29	12.291,430	23.965,260
301+0,00	0,52	3,63	2,89	37,05	12.295,060	24.002,310
301+10,00	0,29	4,02	4,18	35,65	12.299,080	24.037,960
302+0,00	0,33	3,11	2,85	35,46	12.302,190	24.073,420
302+10,00	0,34	3,35	3,63	32,74	12.305,540	24.106,160
303+0,00	0,36	3,5	3,18	34,38	12.309,040	24.140,540
303+10,00	0,58	4,69	2,7	29,67	12.313,730	24.170,210
304+0,00	0,58	5,77	1,88	23,1	12.319,500	24.193,310
304+10,00	0,68	6,25	2,4	21,59	12.325,750	24.214,900
305+0,00	1,64	11,51	0,86	16,42	12.337,260	24.231,320
305+4,81	1,73	8,12	1,05	4,59	12.345,380	24.235,910
305+10,00	2,01	9,71	1,1	5,57	12.355,090	24.241,480
306+0,00	3,19	25,71	1,4	12,51	12.380,800	24.253,990
306+10,00	1,48	23,1	0,69	10,47	12.403,900	24.264,460
307+0,00	1,64	15,51	0,61	6,48	12.419,410	24.270,940
307+10,00	0,45	10,4	1,2	9,01	12.429,810	24.279,950
308+0,00	0,23	3,36	2,15	16,73	12.433,170	24.296,680
308+10,00	0,98	5,99	2,74	24,44	12.439,160	24.321,120
309+0,00	3,14	20,38	3,7	32,21	12.459,540	24.353,330
309+10,00	3,89	34,77	4,12	39,2	12.494,310	24.392,530
310+0,00	6,64	52,14	3,92	40,39	12.546,450	24.432,920

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
310+10,00	8,34	74,27	4,18	40,75	12.620,720	24.473,670
310+16,16	7,89	50,04	4,2	25,84	12.670,760	24.499,510
311+0,00	7,89	30,28	4,43	16,57	12.701,040	24.516,080
311+10,00	7,11	75,02	4,68	45,55	12.776,060	24.561,630
312+0,00	4,97	60,44	4,49	45,84	12.836,500	24.607,470
312+10,00	3,8	43,86	3,88	41,83	12.880,360	24.649,300
313+0,00	3,66	37,27	3,71	37,93	12.917,630	24.687,230
313+6,16	3,2	21,14	3,59	22,49	12.938,770	24.709,720
314+0,00	1,13	29,97	5,77	64,75	12.968,740	24.774,470
315+0,00		11,27	17,76	235,31	12.980,010	25.009,780
316+0,00			28,36	461,25	12.980,010	25.471,030
317+0,00			30,52	588,77	12.980,010	26.059,800
318+0,00			22,33	528,44	12.980,010	26.588,240
319+0,00	0,9	8,97	3,03	253,62	12.988,980	26.841,860
320+0,00	6,47	73,7	0,74	37,77	13.062,680	26.879,630
321+0,00	14,21	206,85	0,03	7,7	13.269,530	26.887,330
322+0,00	77,94	921,54	0,02	0,47	14.191,070	26.887,800
323+0,00	125,84	2037,8	0,02	0,39	16.228,870	26.888,190
324+0,00	110,09	2359,29	0,03	0,45	18.588,160	26.888,640
325+0,00	53,81	1638,97	0,03	0,53	20.227,130	26.889,170
326+0,00	3,44	572,49	6,06	60,86	20.799,620	26.950,030
327+0,00	3,72	71,66	9,61	156,72	20.871,280	27.106,750
328+0,00		37,23	22,93	325,46	20.908,510	27.432,210
329+0,00			26,47	494,02	20.908,510	27.926,230
330+0,00			32,4	588,68	20.908,510	28.514,910
331+0,00			84,62	1170,22	20.908,510	29.685,130
332+0,00			137,81	2224,36	20.908,510	31.909,490
333+0,00			163,48	3012,95	20.908,510	34.922,440
334+0,00	0,4	4,02	65,38	2288,58	20.912,530	37.211,020
335+0,00	19,3	197,01	0,02	654,03	21.109,540	37.865,050
336+0,00	46,95	662,45	0,03	0,5	21.771,990	37.865,550
337+0,00	52,48	994,22	0,03	0,51	22.766,210	37.866,060

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
338+0,00	52,08	1045,56	0,03	0,52	23.811,770	37.866,580
339+0,00	53,35	1054,29	0,03	0,52	24.866,060	37.867,100
340+0,00	41,63	949,81	0,03	0,52	25.815,870	37.867,620
341+0,00	18,89	605,17	0,03	0,53	26.421,040	37.868,150
342+0,00	0,75	196,38	3,34	33,7	26.617,420	37.901,850
343+0,00		7,52	12,01	153,5	26.624,940	38.055,350
344+0,00	0,08	0,76	8,72	207,29	26.625,700	38.262,640
345+0,00	2,91	29,9	1,82	105,38	26.655,600	38.368,020
346+0,00	14,59	175,09	0,03	18,42	26.830,690	38.386,440
347+0,00	20,84	354,31	0,03	0,52	27.185,000	38.386,960
348+0,00					27.185,000	38.386,960
349+0,00					27.185,000	38.386,960
350+0,00					27.185,000	38.386,960
351+0,00					27.185,000	38.386,960
352+0,00					27.185,000	38.386,960
353+0,00					27.185,000	38.386,960
353+14,08					27.185,000	38.386,960
354+0,00					27.185,000	38.386,960
354+10,00					27.185,000	38.386,960
355+0,00					27.185,000	38.386,960
355+10,00					27.185,000	38.386,960
355+14,08					27.185,000	38.386,960
356+0,00					27.185,000	38.386,960
356+10,00					27.185,000	38.386,960
357+0,00					27.185,000	38.386,960
357+10,00					27.185,000	38.386,960
358+0,00					27.185,000	38.386,960
358+10,00					27.185,000	38.386,960
359+0,00					27.185,000	38.386,960
359+10,00					27.185,000	38.386,960
360+0,00					27.185,000	38.386,960
360+10,00					27.185,000	38.386,960

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
361+0,00					27.185,000	38.386,960
361+10,00					27.185,000	38.386,960
362+0,00					27.185,000	38.386,960
362+10,00					27.185,000	38.386,960
363+0,00					27.185,000	38.386,960
363+10,00					27.185,000	38.386,960
364+0,00					27.185,000	38.386,960
364+10,00					27.185,000	38.386,960
364+16,35					27.185,000	38.386,960
365+0,00					27.185,000	38.386,960
365+10,00					27.185,000	38.386,960
366+0,00					27.185,000	38.386,960
366+10,00					27.185,000	38.386,960
367+0,00					27.185,000	38.386,960
367+10,00					27.185,000	38.386,960
368+0,00					27.185,000	38.386,960
368+10,00	88,98	1036,04	0,03	0,26	28.221,040	38.387,220
369+0,00	57,16	733,91	0,03	0,25	28.954,950	38.387,470
369+10,00	8,98	332,91	3,16	15,59	29.287,860	38.403,060
370+0,00		45,72	26,67	148,1	29.333,580	38.551,160
370+10,00			55,13	409,27	29.333,580	38.960,430
371+0,00			62,98	593,36	29.333,580	39.553,790
371+10,00			68,79	664,18	29.333,580	40.217,970
372+0,00			64,99	676,21	29.333,580	40.894,180
372+10,00			57,73	621,4	29.333,580	41.515,580
373+0,00			68,44	639,42	29.333,580	42.155,000
373+10,00			79,03	746,98	29.333,580	42.901,980
373+18,61			90,45	738,66	29.333,580	43.640,640
374+0,00			91,95	126,34	29.333,580	43.766,980
374+10,00			101,04	972,78	29.333,580	44.739,760
375+0,00			105,57	1038,07	29.333,580	45.777,830
375+10,00			108,71	1071,44	29.333,580	46.849,270

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
375+18,61			113,77	958,32	29.333,580	47.807,590
376+0,00			101,98	149,45	29.333,580	47.957,040
377+0,00			92,03	1940,07	29.333,580	49.897,110
378+0,00			63,74	1557,68	29.333,580	51.454,790
379+0,00			35,86	995,98	29.333,580	52.450,770
380+0,00			32,39	682,49	29.333,580	53.133,260
381+0,00			33,13	655,18	29.333,580	53.788,440
382+0,00			26,68	598,09	29.333,580	54.386,530
383+0,00			16	426,79	29.333,580	54.813,320
383+15,24			11,23	207,52	29.333,580	55.020,840
384+0,00			9,66	49,69	29.333,580	55.070,530
384+10,00	0,01	0,06	6,6	81,28	29.333,640	55.151,810
385+0,00		0,06	4,31	54,53	29.333,700	55.206,340
385+10,00			3,4	38,57	29.333,700	55.244,910
385+15,24	0,14	0,36	3,62	18,41	29.334,060	55.263,320
386+0,00	0,04	0,42	2,32	14,14	29.334,480	55.277,460
386+10,00	0,61	3,23	1,04	16,78	29.337,710	55.294,240
387+0,00	0,25	4,24	2,22	16,42	29.341,950	55.310,660
387+10,00		1,22	4,37	33	29.343,170	55.343,660
388+0,00	0,05	0,23	3,53	39,5	29.343,400	55.383,160
388+10,00		0,23	7,27	54,01	29.343,630	55.437,170
389+0,00			9,97	86,18	29.343,630	55.523,350
389+10,00			15,32	126,37	29.343,630	55.649,720
389+16,80			16,01	106,46	29.343,630	55.756,180
390+0,00			17,18	53,15	29.343,630	55.809,330
390+10,00			20,64	189	29.343,630	55.998,330
391+0,00			18,64	196,29	29.343,630	56.194,620
391+10,00			11,53	150,73	29.343,630	56.345,350
392+0,00			11,41	114,64	29.343,630	56.459,990
392+10,00			10,13	107,81	29.343,630	56.567,800
393+0,00	0,06	0,31	9,08	96,08	29.343,940	56.663,880
393+10,00	0,67	3,73	9,18	91,22	29.347,670	56.755,100

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
393+18,35	1,7	10,06	8,91	75,51	29.357,730	56.830,610
394+0,00	1,73	2,83	8,66	14,48	29.360,560	56.845,090
394+10,00	0,47	11,17	7,5	80,74	29.371,730	56.925,830
395+0,00		2,37	7,44	74,66	29.374,100	57.000,490
395+10,00			7,02	72,26	29.374,100	57.072,750
395+18,35			4,2	46,86	29.374,100	57.119,610
396+0,00			4,35	7,05	29.374,100	57.126,660
397+0,00	0,41	4,07	2,6	69,48	29.378,170	57.196,140
398+0,00	1,79	22	0,5	31,02	29.400,170	57.227,160
398+17,76	6,3	71,89	1,39	16,84	29.472,060	57.244,000
399+0,00	6,03	13,8	1,73	3,49	29.485,860	57.247,490
399+10,00	6,6	62,72	0,5	11,32	29.548,580	57.258,810
400+0,00	7,3	69,1	1,14	8,32	29.617,680	57.267,130
400+10,00	6,26	67,4	2,96	20,79	29.685,080	57.287,920
400+18,13	4,51	43,73	5,48	34,31	29.728,810	57.322,230
401+0,00	4,23	8,19	6,52	11,26	29.737,000	57.333,490
401+10,00	2,91	35,39	12,27	95,27	29.772,390	57.428,760
402+0,00	2,37	26,14	16,24	144,5	29.798,530	57.573,260
402+10,00	1,5	19,13	19,76	182,5	29.817,660	57.755,760
402+18,49	0,86	9,99	20,67	171,58	29.827,650	57.927,340
403+0,00	0,86	1,3	20,75	31,32	29.828,950	57.958,660
404+0,00	0,16	10,21	17,97	387,26	29.839,160	58.345,920
404+15,34		1,25	17,52	272,23	29.840,410	58.618,150
405+0,00			18,52	84	29.840,410	58.702,150
405+10,00			24,13	213,27	29.840,410	58.915,420
406+0,00			21,67	229,02	29.840,410	59.144,440
406+10,00			24,49	230,79	29.840,410	59.375,230
407+0,00			23,9	241,95	29.840,410	59.617,180
407+1,40			23,98	33,56	29.840,410	59.650,740
407+10,00			23,37	203,56	29.840,410	59.854,300
408+0,00			19,3	213,37	29.840,410	60.067,670
408+10,00			18,26	187,81	29.840,410	60.255,480

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
409+0,00			14,33	162,94	29.840,410	60.418,420
409+7,47			11,51	96,44	29.840,410	60.514,860
410+0,00			6,64	113,77	29.840,410	60.628,630
411+0,00	0,57	5,72	2,88	95,25	29.846,130	60.723,880
412+0,00	3,09	36,59	2,44	53,2	29.882,720	60.777,080
413+0,00	5	80,88	2,24	46,81	29.963,600	60.823,890
414+0,00	7,37	123,71	2,3	45,46	30.087,310	60.869,350
415+0,00	10,35	177,16	0,81	31,17	30.264,470	60.900,520
416+0,00	3,91	142,56	1,54	23,52	30.407,030	60.924,040
417+0,00	2,57	64,84	1,3	28,4	30.471,870	60.952,440
418+0,00	0,63	32,05	6,16	74,64	30.503,920	61.027,080
419+0,00	1,5	21,31	7,18	133,48	30.525,230	61.160,560
420+0,00	1,61	31,15	3,74	109,25	30.556,380	61.269,810
421+0,00	2,46	40,74	3,06	67,99	30.597,120	61.337,800
422+0,00	4,13	65,87	3,11	61,64	30.662,990	61.399,440
423+0,00	1,58	57,04	4,78	78,86	30.720,030	61.478,300
424+0,00		15,77	8,41	131,94	30.735,800	61.610,240
425+0,00			9,47	178,81	30.735,800	61.789,050
426+0,00	0,06	0,55	7,65	171,22	30.736,350	61.960,270
427+0,00	1,37	14,26	6,34	139,91	30.750,610	62.100,180
428+0,00	0,97	23,37	20,91	272,45	30.773,980	62.372,630
429+0,00	1,17	21,35	3,22	241,3	30.795,330	62.613,930
430+0,00	2,69	38,55	2,81	60,28	30.833,880	62.674,210
430+15,26	1,57	32,52	2,36	39,43	30.866,400	62.713,640
431+0,00	1,54	7,37	2,48	11,46	30.873,770	62.725,100
432+0,00	0,22	17,58	4,44	69,14	30.891,350	62.794,240
433+0,00	0,02	2,44	5,26	96,98	30.893,790	62.891,220
434+0,00	3,09	31,09	2,44	77,05	30.924,880	62.968,270
435+0,00	1,64	47,31	3,64	60,83	30.972,190	63.029,100
436+0,00	2,57	42,11	2,43	60,68	31.014,300	63.089,780
437+0,00	3,7	62,65	0,15	25,77	31.076,950	63.115,550
438+0,00	4,75	84,52	0,07	2,14	31.161,470	63.117,690

PLANILHA DE CUBAÇÃO - RODOVIA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
439+0,00	3,75	85,07	0,11	1,76	31.246,540	63.119,450
440+0,00	1,65	53,99	0,3	4,12	31.300,530	63.123,570
441+0,00		16,47	2,42	27,19	31.317,000	63.150,760
442+0,00	0,14	1,42	1,01	34,33	31.318,420	63.185,090
443+0,00	3,26	33,99	0,23	12,49	31.352,410	63.197,580
444+0,00	3,05	63,1	1,05	12,82	31.415,510	63.210,400

PLANILHA DE CUBAÇÃO - INTERSEÇÃO MODELO - PISTA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
347+10,00	20,280	-	0,030	-	-	-
348+0,00	17,730	190,070	0,030	0,270	190,070	0,270
348+10,00	17,360	175,460	0,030	0,270	365,530	0,540
349+0,00	20,760	190,620	0,030	0,270	556,150	0,810
349+10,00	24,650	227,060	0,030	0,270	783,210	1,080
350+0,00	26,180	254,150	0,030	0,270	1.037,360	1,350
350+10,00	26,000	260,930	0,030	0,270	1.298,290	1,620
351+0,00	21,040	235,210	0,740	3,820	1.533,500	5,440
351+10,00	16,570	188,050	3,360	20,480	1.721,550	25,920
352+0,00	11,480	140,260	5,870	46,160	1.861,810	72,080
352+10,00	5,780	86,300	9,090	74,800	1.948,110	146,880
353+0,00	4,360	50,700	12,040	105,630	1.998,810	252,510
353+10,00	2,290	33,270	14,840	134,410	2.032,080	386,920
353+14,08	-	4,680	15,600	62,120	2.036,760	449,040
354+0,00	-	-	16,770	95,810	2.036,760	544,850
354+10,00	-	-	23,390	200,840	2.036,760	745,690
355+0,00	-	-	34,770	287,970	2.036,760	1.033,660
355+10,00	-	-	46,280	399,160	2.036,760	1.432,820
355+14,08	-	-	42,650	181,460	2.036,760	1.614,280
356+0,00	-	-	29,790	210,450	2.036,760	1.824,730
356+10,00	-	-	8,810	189,880	2.036,760	2.014,610
357+0,00	10,730	53,270	0,030	43,610	2.090,030	2.058,220
357+10,00	33,380	219,070	0,030	0,260	2.309,100	2.058,480
358+0,00	54,350	435,860	0,030	0,260	2.744,960	2.058,740
358+10,00	77,870	656,980	0,030	0,260	3.401,940	2.059,000
359+0,00	101,030	888,870	0,030	0,260	4.290,810	2.059,260
359+10,00	125,310	1.124,520	0,030	0,260	5.415,330	2.059,520
360+0,00	145,180	1.343,950	0,030	0,260	6.759,280	2.059,780
360+10,00	167,000	1.551,570	0,030	0,260	8.310,850	2.060,040
361+0,00	182,350	1.736,840	0,030	0,260	10.047,690	2.060,300
361+10,00	201,240	1.906,870	0,030	0,260	11.954,560	2.060,560

PLANILHA DE CUBAÇÃO - INTERSEÇÃO MODELO - PISTA

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
362+0,00	217,030	2.078,990	0,030	0,260	14.033,550	2.060,820
362+10,00	232,340	2.233,810	0,030	0,270	16.267,360	2.061,090
363+0,00	233,740	2.317,310	0,030	0,270	18.584,670	2.061,360
363+10,00	235,050	2.331,280	0,030	0,270	20.915,950	2.061,630
364+0,00	228,730	2.306,540	0,030	0,270	23.222,490	2.061,900
364+10,00	222,290	2.243,410	0,030	0,270	25.465,900	2.062,170
364+16,35	219,120	1.394,060	0,030	0,170	26.859,960	2.062,340
365+0,00	217,100	796,590	0,030	0,100	27.656,550	2.062,440
365+10,00	207,430	2.114,080	0,030	0,270	29.770,630	2.062,710
366+0,00	194,010	2.002,980	0,030	0,270	31.773,610	2.062,980
366+10,00	183,700	1.889,530	0,030	0,270	33.663,140	2.063,250
367+0,00	168,930	1.769,750	0,030	0,280	35.432,890	2.063,530
367+10,00	141,200	1.561,970	0,030	0,270	36.994,860	2.063,800
368+0,00	109,310	1.263,030	0,030	0,270	38.257,890	2.064,070
368+10,00	83,390	969,140	0,030	0,270	39.227,030	2.064,340

PLANILHA DE CUBAÇÃO - INTERSEÇÃO MODELO - ACESSO

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
0+15,85	-	-	-	-	-	-
1+0,00	-	-	10,950	22,740	-	22,740
1+5,00	-	-	7,700	46,610	-	69,350
1+10,00	-	-	4,560	30,650	-	100,000
1+15,00	-	0,020	2,550	17,770	0,020	117,770
2+0,00	2,800	7,010	1,180	9,320	7,030	127,090
2+5,00	4,440	18,100	0,540	4,310	25,130	131,400
2+10,00	7,720	30,400	0,050	1,470	55,530	132,870
2+15,00	7,940	39,150	0,030	0,190	94,680	133,060
3+0,00	7,920	39,650	0,030	0,140	134,330	133,200
3+5,00	8,460	40,960	0,030	0,140	175,290	133,340
3+10,00	7,530	39,990	0,030	0,140	215,280	133,480
3+15,00	6,230	34,400	0,030	0,140	249,680	133,620
4+0,00	4,530	26,880	0,030	0,140	276,560	133,760

PLANILHA DE CUBAÇÃO- INTERSEÇÃO MODELO - RAMO A

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
0+0,00	1,730	-	0,020	-	-	-
0+0,00	1,730	-	0,020	-	-	-
0+5,00	0,830	6,110	0,310	0,930	6,110	0,930
0+10,00	0,460	3,020	1,480	5,100	9,130	6,030
0+15,00	0,380	1,940	2,950	12,870	11,070	18,900
1+0,00	0,190	1,300	4,130	20,560	12,370	39,460
1+0,17	0,180	0,030	4,160	0,690	12,400	40,150
1+5,00	0,070	0,550	3,700	21,650	12,950	61,800
1+10,00	0,100	0,380	2,910	18,550	13,330	80,350
1+15,00	0,250	0,790	2,220	14,480	14,120	94,830
2+0,00	0,810	2,470	1,220	9,850	16,590	104,680
2+0,33	0,870	0,280	1,140	0,390	16,870	105,070
2+0,33	0,870	-	1,140	-	16,870	105,070

PLANILHA DE CUBAÇÃO - INTERSEÇÃO MODELO - RAMO B

ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
0+0,00	-	-	9,830	-	-	-
0+0,00	-	-	9,830	-	-	-
0+5,00	-	-	12,680	60,650	-	60,650
0+10,00	-	-	13,760	71,170	-	131,820
0+12,11	-	-	12,450	29,510	-	161,330
0+15,00	-	-	8,180	30,740	-	192,070
1+0,00	-	-	3,950	29,500	-	221,570
1+4,22	-	-	1,660	11,020	-	232,590
1+4,22	-	-	1,660	-	-	232,590

PLANILHA DE CUBAÇÃO - TRAVESSIA URBANA - RUA SÃO JOÃO

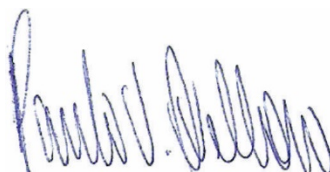
ESTACA	ÁREA CORTE	VOLUME CORTE	ÁREA ATERRO	VOLUME ATERRO	CORTE ACUMULADO	ATERRO ACUMULADO
0+0,00	-	-	-	-	-	-
0+6,19	2,070	6,390	0,540	1,680	6,390	1,680
0+10,00	0,490	4,910	1,540	4,000	11,300	5,680
1+0,00	-	2,450	4,840	31,910	13,750	37,590
1+10,00	-	-	4,440	46,410	13,750	84,000
2+0,00	-	-	3,370	39,030	13,750	123,030
2+10,00	-	0,020	1,370	23,680	13,770	146,710
3+0,00	0,070	0,370	1,100	12,350	14,140	159,060
3+10,00	1,270	6,700	0,870	9,820	20,840	168,880
4+0,00	1,160	12,170	1,050	9,560	33,010	178,440
4+10,00	1,460	13,100	0,690	8,700	46,110	187,140
5+0,00	3,310	23,850	0,220	4,540	69,960	191,680
5+10,00	3,740	35,290	0,040	1,270	105,250	192,950
5+13,07	3,500	11,130	0,040	0,120	116,380	193,070
6+0,00					116,380	193,070
6+2,58					116,380	193,070
6+10,00					116,380	193,070
6+11,24	3,740	4,450	0,010	0,100	120,830	193,170
7+0,00	4,330	35,020	-	0,100	155,850	193,270
7+10,00	4,000	41,650	0,040	0,270	197,500	193,540
8+0,00	3,370	36,840	0,120	0,800	234,340	194,340
8+10,00	3,380	33,750	0,210	1,640	268,090	195,980
9+0,00	4,700	40,370	0,130	1,690	308,460	197,670
9+10,00	4,380	45,380	-	0,640	353,840	198,310
10+0,00	5,780	50,800	-	-	404,640	198,310
10+10,00	5,910	58,460	-	-	463,100	198,310
11+0,00	5,830	58,690	-	0,030	521,790	198,340
11+10,00	3,980	49,010	0,120	0,600	570,800	198,940
11+11,44	3,980	5,710	0,190	0,220	576,510	199,160
11+19,88					576,510	199,160



4. TERMO DE ENCERRAMENTO

5. TERMO DE ENCERRAMENTO

O presente documento, intitulado **Volume 4 – NOTAS DE SERVIÇO E CÁLCULO DE VOLUMES DE TERRAPLANAGEM** é parte integrante do **Projeto Executivo de engenharia para implantação de pavimentação asfáltica entre Bom Jesus do Oeste/SC até a divisa com o Município de Maravilha/SC, com extensão de, aproximadamente, de 6,0 km**, desenvolvido através do **Contrato Administrativo n. 116/2021**, firmado entre a **Prefeitura de Bom Jesus do Oeste** e a empresa **Única Consultores de Engenharia Ltda.**, sendo composto por **42 (quarenta e duas)** páginas, as quais foram numeradas sequencialmente.



Eng.º Paulo Henrique Quiumento Velloso
Coordenador Geral
CREA/SC 082.750-0

Florianópolis, novembro de 2021