

RESUMO DE SERVIÇOS		
DESCRIÇÃO	QUANTIDADE	UNID.
Escavação de valas de drenagem	3.529,26	m³
Reaterro com apiloamento	1.553,33	m³
Reaterro sem apiloamento	1.035,58	m³
Corpo de BSTC 40 PS1	275,02	m
Corpo de BSTC 60 PS1	454,67	m
Corpo de BSTC 80 PA1	506,35	m
Corpo de BSTC 100 PA1	209,65	m
Corpo de BTCC 3x4	30,30	m
Boca de BTCC	2,00	m
Corpo de BSTC 150 PA1	0,00	m
Dissipador de energia para BSTC <100	2,00	ud
Boca de Lobo Simples	84,00	ud
Boca de Lobo Dupla	8,00	ud
Caixa de ligação e passagem	5,00	ud
Poço de visita	18,00	ud

PAVIMENTAÇÃO - RUA 27 DE DEZEMBRO - CAMPO MOURÃO
MEMÓRIA DE CALCULO DE VOLUMES

LOCAL	VÉRTICE		L (m)	COTA DA RUA		DN (m)	COTA DO POÇO	
	Mont.	Jus.		Mont.	Jus.		Mont.	Jus.
TRECHO-01	CL-01	PV-01	64,19	605,790	606,770	0,40	604,688	604,240
TRECHO-02	PV-01	PV-02	8,27	606,770	605,910	0,40	604,240	603,312
TRECHO-03	PV-02	CL-04	48,20	605,910	605,060	0,60	603,312	602,915
TRECHO-23	CL-04	PV-03	8,46	605,060	604,020	0,60	602,915	602,417
TRECHO-04	PV-03	PV-04	60,90	604,020	602,940	0,60	602,417	601,155
TRECHO-05	PV-04	PV-05	85,86	602,940	600,350	0,60	601,155	597,955
TRECHO-06	PV-05	CL-05	101,40	600,350	597,580	0,60	597,955	596,210
TRECHO-24	CL-05	PV-06	64,95	597,580	595,080	0,60	596,210	594,343
TRECHO-07	PV-06	PV-07	84,90	595,080	592,150	0,60	594,343	590,748
TRECHO-08	PV-07	PV-08	51,26	592,150	590,900	0,80	590,748	588,011
TRECHO-09	PV-08	PV-09	64,97	590,900	586,240	0,80	588,011	584,935
TRECHO-10	PV-09	CL-02	48,30	586,240	585,210	0,80	584,935	582,780
TRECHO-11	CL-02	PV-10	81,70	585,210	583,320	0,80	582,780	579,763
TRECHO-12	PV-10	CL-03	42,38	583,320	578,820	0,80	579,763	575,765
TRECHO-13	CL-03	PV-11	19,96	578,820	573,420	0,80	575,765	570,516
TRECHO-14	PV-11	PV-12	66,85	573,420	569,840	0,80	570,516	565,982
TRECHO-15	PV-12	PV-13	15,16	569,840	564,880	0,80	565,982	561,811
TRECHO-16	PV-13	PV-14	83,31	564,880	560,880	0,80	561,811	559,564
TRECHO-17	PV-14	PV-15	11,00	560,880	558,530	0,80	559,564	554,082
TRECHO-18	PV-15	PV-16	21,46	558,530	551,530	0,80	554,082	549,359
TRECHO-19	PV-16	PV-17	65,00	551,530	550,450	1,00	549,359	547,936
TRECHO-20	PV-17	PV-18	65,03	550,450	549,970	1,00	547,936	546,435
TRECHO-21	PV-18	DISS-01	79,62	549,970	547,850	1,00	546,435	543,809
R-81	BLD-05	BLD-06	71,73	554,280	554,080	0,40	552,806	552,631
R-82 e R-83	BLD-06	BLD-08	69,40	554,080	553,750	0,40	552,631	552,450
TRECHO-22	BLD-08	DISS-02	61,43	553,750	552,950	0,40	552,450	551,500

Profundidade Montante (m)	Profundidade Jusante (m)	Média Profundidade (m)	Escavação (m³)	Reaterro Apilado (m³)	Reaterro sem Apiloamento (m³)
1,10	2,53	1,82	69,941	31,090	20,730
2,53	2,60	2,56	12,723	6,240	4,160
2,60	2,14	2,37	102,876	47,200	31,470
2,14	1,60	1,87	14,269	6,020	4,010
1,60	1,79	1,69	92,848	37,360	24,910
1,79	2,39	2,09	161,503	71,020	47,350
2,39	1,37	1,88	171,797	72,520	48,350
1,37	0,74	1,05	61,582	17,380	11,590
0,74	1,40	1,07	81,720	23,450	15,630
1,40	2,89	2,15	131,974	55,050	36,700
2,89	1,31	2,10	163,491	67,500	45,000
1,31	2,43	1,87	108,240	42,200	28,130
2,43	3,56	2,99	293,483	137,610	91,740
3,56	3,06	3,31	168,130	80,920	53,950
3,06	2,90	2,98	71,365	33,420	22,280
2,90	3,86	3,38	271,224	131,250	87,500
3,86	3,07	3,46	63,008	30,670	20,450
3,07	1,32	2,19	219,189	92,280	61,520
1,32	4,45	2,88	38,042	17,650	11,770
4,45	2,17	3,31	85,226	41,030	27,360
2,17	2,51	2,34	228,394	92,960	61,970
2,51	3,54	3,02	295,025	132,910	88,610
3,54	4,04	3,79	452,401	217,440	144,960
1,47	1,45	1,46	62,900	25,580	17,060
1,45	1,30	1,37	57,234	22,580	15,050
1,30	1,45	1,38	50,680	20,000	13,330
TOTAL →			3.529,264	1.553,330	1.035,580

TABELA DE TUBOS DA REDE PROJETADA					
TUBO	DN (m)	COMPRIMENTO (m)	DECLIVIDADE (%)	ESTRUTURA MONTANTE	ESTRUTURA JUSANTE
R-01	0,40	8,27	1.00%	BLS-01	BLS-02
R-02	0,40	2,25	2.00%	BLS-02	BLS-03
R-03	0,40	9,10	1.00%	BLS-03	PV-01
R-04	0,40	9,17	1.00%	BLS-04	PV-01
R-05	0,40	8,42	1.02%	BLS-05	BLS-06
R-06	0,40	2,10	2.12%	BLS-06	BLS-07
R-07	0,40	4,72	0.95%	BLS-07	PV-02
R-08	0,40	5,21	2.68%	BLS-08	PV-02
R-09	0,40	8,47	0.99%	BLS-09	BLS-10
R-10	0,40	2,04	2.14%	BLS-10	BLS-11
R-11	0,40	4,24	1.74%	BLS-11	PV-03
R-12	0,40	4,75	1.48%	BLS-12	PV-03
R-13	0,40	8,32	1.00%	BLS-13	BLS-14
R-14	0,40	2,20	2.00%	BLS-14	BLS-15
R-15	0,40	9,32	1.00%	BLS-15	PV-04
R-16	0,40	9,28	1.00%	BLS-16	PV-04
R-17	0,40	8,40	0.98%	BLS-17	BLS-18
R-18	0,40	2,10	2.12%	BLS-18	BLS-19
R-19	0,40	5,99	1.54%	BLS-19	PV-05
R-20	0,40	5,15	1.63%	BLS-20	PV-05
R-21	0,40	8,44	0.99%	BLS-21	BLS-22
R-22	0,40	2,08	2.14%	BLS-22	BLS-23
R-23	0,40	4,37	3.11%	BLS-23	PV-06
R-24	0,40	4,52	2.16%	BLS-24	PV-06
R-25	0,40	8,24	1.00%	BLS-25	BLS-26
R-26	0,40	2,18	2.00%	BLS-26	BLS-27
R-27	0,40	8,68	2.00%	BLS-27	PV-07
R-28	0,40	9,10	2.00%	BLS-28	PV-07
R-29	0,40	8,36	1.00%	BLS-29	BLS-30
R-30	0,40	2,19	2.00%	BLS-30	BLS-31
R-31	0,40	7,06	1.00%	BLS-31	PV-08
R-32	0,40	5,65	1.00%	BLS-32	PV-08
R-33	0,40	8,29	1.00%	BLS-33	BLS-34
R-34	0,40	2,26	2.00%	BLS-34	BLS-35
R-35	0,40	6,51	2.00%	BLS-35	PV-09
R-36	0,40	5,31	2.00%	BLS-36	PV-09
R-37	0,40	8,24	2.00%	BLS-37	BLS-38
R-38	0,40	2,22	1.00%	BLS-38	BLS-39
R-39	0,40	5,11	1.00%	BLS-39	CL-02
R-40	0,40	3,79	0.97%	BLS-40	CL-02
R-41	0,40	8,27	1.00%	BLS-41	BLS-42
R-42	0,40	2,22	2.00%	BLS-42	BLS-43
R-43	0,40	6,22	2.00%	BLS-43	PV-10
R-44	0,40	6,12	2.00%	BLS-44	PV-10
R-45	0,40	8,28	1.00%	BLS-45	BLS-46
R-46	0,40	2,24	2.00%	BLS-46	BLS-47
R-47	0,40	5,29	2.00%	BLS-47	CL-03
R-48	0,40	4,57	2.02%	BLS-48	CL-03
R-49	0,40	8,28	1.00%	BLS-49	BLS-50
R-50	0,40	2,23	2.00%	BLS-50	BLS-51
R-51	0,40	5,49	2.00%	BLS-51	PV-11
R-52	0,40	5,20	1.89%	BLS-52	PV-11
R-53	0,40	8,27	1.00%	BLS-53	BLS-54
R-54	0,40	2,25	2.00%	BLS-54	BLS-55
R-55	0,40	9,75	1.17%	BLS-55	PV-12
R-56	0,40	9,15	1.13%	BLS-56	PV-12
R-57	0,40	8,28	1.00%	BLS-57	BLS-58
R-58	0,40	2,24	2.00%	BLS-58	BLS-59
R-59	0,40	5,13	2.00%	BLS-59	PV-13
R-60	0,40	4,71	1.82%	BLS-60	PV-13
R-61	0,40	8,28	1.00%	BLS-61	BLS-62
R-62	0,40	2,27	2.00%	BLS-62	BLS-63
R-63	0,40	10,11	2.00%	BLS-63	PV-14
R-64	0,40	10,30	2.00%	BLS-64	PV-14
R-65	0,40	8,31	1.00%	BLS-65	BLS-66
R-66	0,40	2,26	1.00%	BLS-66	BLS-67
R-67	0,40	6,73	2.00%	BLS-67	PV-15

TABELA DE TUBOS DA REDE PROJETADA					
TUBO	DN (m)	COMPRIMENTO (m)	DECLIVIDADE (%)	ESTRUTURA MONTANTE	ESTRUTURA JUSANTE
R-68	0,40	6,44	2.00%	BLS-68	PV-15
R-69	0,40	8,52	1.64%	BLS-69	BLS-70
R-70	0,40	2,17	2.00%	BLS-70	BLS-71
R-71	0,40	5,14	2.00%	BLS-71	PV-16
R-72	0,40	5,54	2.00%	BLS-72	PV-16
R-73	0,40	8,29	1.00%	BLS-73	BLS-74
R-74	0,40	2,23	1.00%	BLS-74	BLS-75
R-75	0,40	5,55	1.00%	BLS-75	PV-17
R-76	0,40	5,94	1.00%	BLS-76	PV-17
R-77	0,40	9,21	1.00%	BLD-01	BLD-02
R-78	0,40	11,66	1.00%	BLD-02	BLD-03
R-79	0,40	8,82	1.00%	BLD-03	PV-18
R-80	0,40	8,97	1.00%	BLD-04	PV-18
R-81	0,40	8,76	2.00%	BLD-05	BLD-06
R-82	0,40	1,53	1.80%	BLD-06	BLD-07
R-83	0,40	9,16	1.80%	BLD-07	BLD-08
R-84	0,40	8,41	1.00%	BLS-77	BLS-78
R-85	0,40	1,96	2.00%	BLS-78	BLS-79
R-86	0,40	4,91	2.00%	BLS-79	CL-04
R-87	0,40	5,26	0.95%	BLS-80	CL-04
R-88	0,40	8,36	0.99%	BLS-81	BLS-82
R-89	0,40	2,10	1.80%	BLS-82	BLS-83
R-90	0,40	5,30	2.06%	BLS-83	CL-05
R-91	0,40	5,29	0.86%	BLS-84	CL-05
TRECHO-1	0,40	34,77	1.00%	CL-01	PV-01
TRECHO-2	0,40	55,38	1.50%	PV-01	PV-02
TRECHO-3	0,60	55,06	0.72%	PV-02	CL-04
TRECHO-4	0,60	69,55	1.18%	PV-03	PV-04
TRECHO-5	0,60	60,07	4.83%	PV-04	PV-05
TRECHO-6	0,60	63,74	2.70%	PV-05	CL-05
TRECHO-7	0,60	63,48	5.19%	PV-06	PV-07
TRECHO-8	0,80	82,33	1.16%	PV-07	PV-08
TRECHO-9	0,80	82,15	3.50%	PV-08	PV-09
TRECHO-10	0,80	60,19	3.50%	PV-09	CL-02
TRECHO-11	0,80	42,84	2.69%	CL-02	PV-10
TRECHO-12	0,80	58,37	3.50%	PV-10	CL-03
TRECHO-13	0,80	70,00	4.92%	CL-03	PV-11
TRECHO-14	0,80	52,24	5.59%	PV-11	PV-12
TRECHO-15	0,80	58,28	4.77%	PV-12	PV-13
TRECHO-16	0,80	58,00	3.50%	PV-13	PV-14
TRECHO-17	0,80	78,84	3.77%	PV-14	PV-15
TRECHO-18	0,80	60,00	6.77%	PV-15	PV-16
TRECHO-19	1,00	60,00	2.20%	PV-16	PV-17
TRECHO-20	1,00	60,00	1.26%	PV-17	PV-18
TRECHO-21	1,00	41,49	1.31%	PV-18	DISS-01
TRECHO-22	0,40	12,64	3.56%	BLD-08	DISS-02
TRECHO-23	0,60	67,35	0.59%	CL-04	PV-03
TRECHO-24	0,60	61,01	2.70%	CL-05	PV-06

TABELA DE ESTRUTURAS DA REDE PROJETADA					
NOME	COTA TERRENO	COTA FUNDO	PROFUNDIDADE (m)	COORDENADAS	
BLD-01	549,780	548,313	1,47	N: 7338298,574	E: 356685,516
BLD-02	549,840	548,220	1,62	N: 7338294,808	E: 356677,102
BLD-03	549,860	548,104	1,76	N: 7338304,450	E: 356670,542
BLD-04	549,860	548,560	1,3	N: 7338301,112	E: 356662,249
BLD-05	554,280	552,806	1,47	N: 7338380,865	E: 356623,143
BLD-06	554,080	552,631	1,45	N: 7338384,530	E: 356631,106
BLD-07	554,210	552,615	1,6	N: 7338385,022	E: 356632,561
BLD-08	553,750	552,450	1,3	N: 7338387,375	E: 356641,423
BLS-01	607,420	606,121	1,3	N: 7337123,687	E: 357260,468
BLS-02	607,440	605,192	2,25	N: 7337120,517	E: 357252,822
BLS-03	606,460	605,147	1,31	N: 7337119,673	E: 357250,736
BLS-04	606,460	605,140	1,32	N: 7337116,222	E: 357243,204
BLS-05	607,050	605,266	1,78	N: 7337178,953	E: 357233,489
BLS-06	607,050	604,177	2,87	N: 7337175,481	E: 357225,818
BLS-07	605,860	604,132	1,73	N: 7337174,547	E: 357223,931
BLS-08	605,860	604,123	1,74	N: 7337170,650	E: 357216,507
BLS-09	604,830	603,853	0,97	N: 7337289,408	E: 357179,360
BLS-10	604,980	602,961	2,02	N: 7337286,157	E: 357171,534
BLS-11	603,960	602,918	1,04	N: 7337285,335	E: 357169,667
BLS-12	603,960	602,907	1,05	N: 7337281,663	E: 357162,097
BLS-13	603,670	602,369	1,3	N: 7337346,845	E: 357151,185
BLS-14	603,680	601,732	1,94	N: 7337342,851	E: 357143,886
BLS-15	603,000	601,688	1,31	N: 7337341,826	E: 357141,935
BLS-16	603,000	601,622	1,38	N: 7337338,019	E: 357134,566
BLS-17	601,140	598,920	2,22	N: 7337404,510	E: 357122,988
BLS-18	601,150	598,191	2,96	N: 7337400,661	E: 357115,514
BLS-19	600,430	598,147	2,29	N: 7337399,676	E: 357113,658
BLS-20	600,410	598,139	2,27	N: 7337396,429	E: 357105,908
BLS-21	595,920	595,421	0,5	N: 7337518,484	E: 357067,179
BLS-22	595,840	594,624	1,21	N: 7337514,845	E: 357059,556
BLS-23	595,080	594,578	0,5	N: 7337513,932	E: 357057,684
BLS-24	595,040	594,540	0,5	N: 7337510,182	E: 357050,185
BLS-25	593,250	591,946	1,3	N: 7337569,913	E: 357041,840
BLS-26	593,250	591,146	2,1	N: 7337566,171	E: 357034,489
BLS-27	592,410	591,022	1,39	N: 7337565,186	E: 357032,540
BLS-28	592,410	591,030	1,38	N: 7337561,524	E: 357025,084
BLS-29	592,010	590,712	1,3	N: 7337645,247	E: 357005,019
BLS-30	591,970	589,643	2,33	N: 7337642,414	E: 356997,147
BLS-31	590,910	589,599	1,31	N: 7337641,580	E: 356995,114
BLS-32	590,900	589,601	1,3	N: 7337638,458	E: 356987,451
BLS-33	587,320	586,018	1,3	N: 7337719,926	E: 356968,427
BLS-34	587,300	585,142	2,15	N: 7337716,652	E: 356960,806
BLS-35	586,410	585,066	1,34	N: 7337715,889	E: 356958,677
BLS-36	586,370	585,042	1,33	N: 7337712,754	E: 356950,995
BLS-37	586,110	583,883	2,22	N: 7337776,519	E: 356940,653
BLS-38	585,170	583,718	1,45	N: 7337772,912	E: 356933,237
BLS-39	585,170	583,696	1,48	N: 7337772,003	E: 356931,205
BLS-40	585,010	583,682	1,33	N: 7337769,472	E: 356923,227
BLS-41	584,340	583,044	1,3	N: 7337812,844	E: 356922,867
BLS-42	584,310	582,307	2	N: 7337809,613	E: 356915,248
BLS-43	583,570	582,149	1,42	N: 7337808,670	E: 356913,234
BLS-44	583,620	582,147	1,48	N: 7337804,446	E: 356906,116
BLS-45	579,700	578,396	1,3	N: 7337866,071	E: 356896,804
BLS-46	579,640	577,704	1,93	N: 7337863,100	E: 356889,072
BLS-47	578,970	577,626	1,34	N: 7337862,200	E: 356887,011
BLS-48	578,920	577,612	1,31	N: 7337859,125	E: 356879,294
BLS-49	574,200	572,900	1,3	N: 7337928,998	E: 356866,018
BLS-50	574,200	572,345	1,86	N: 7337925,353	E: 356858,577
BLS-51	573,610	572,228	1,38	N: 7337924,521	E: 356856,498
BLS-52	573,570	572,217	1,35	N: 7337921,290	E: 356848,842
BLS-53	570,500	569,205	1,3	N: 7337971,311	E: 356845,297
BLS-54	570,490	568,704	1,79	N: 7337967,819	E: 356837,799
BLS-55	569,970	568,231	1,74	N: 7337966,859	E: 356835,755
BLS-56	569,950	568,327	1,62	N: 7337963,591	E: 356828,140
BLS-57	565,500	564,199	1,3	N: 7338028,631	E: 356817,224
BLS-58	565,480	563,764	1,71	N: 7338025,232	E: 356809,668
BLS-59	565,030	563,685	1,34	N: 7338024,301	E: 356807,626

TABELA DE ESTRUTURAS DA REDE PROJETADA					
NOME	COTA TERRENO	COTA FUNDO	PROFUNDIDADE (m)	COORDENADAS	
BLS-60	564,970	563,668	1,3	N: 7338021,347	E: 356799,847
BLS-61	561,480	560,184	1,3	N: 7338074,981	E: 356794,517
BLS-62	561,460	559,930	1,53	N: 7338071,680	E: 356786,916
BLS-63	561,190	559,766	1,43	N: 7338070,773	E: 356784,835
BLS-64	561,220	559,789	1,43	N: 7338067,040	E: 356777,468
BLS-65	558,810	557,511	1,3	N: 7338148,781	E: 356758,343
BLS-66	558,740	557,428	1,32	N: 7338145,992	E: 356750,513
BLS-67	558,840	557,361	1,48	N: 7338145,132	E: 356748,418
BLS-68	558,820	557,355	1,46	N: 7338141,824	E: 356740,868
BLS-69	552,030	550,729	1,3	N: 7338203,933	E: 356731,395
BLS-70	551,890	550,433	1,46	N: 7338201,738	E: 356723,160
BLS-71	551,700	550,337	1,36	N: 7338200,917	E: 356721,143
BLS-72	551,720	550,345	1,38	N: 7338197,009	E: 356713,814
BLS-73	550,120	548,818	1,3	N: 7338258,445	E: 356704,661
BLS-74	550,110	548,735	1,38	N: 7338255,054	E: 356697,093
BLS-75	550,420	548,713	1,7	N: 7338254,073	E: 356695,086
BLS-76	550,420	549,115	1,3	N: 7338250,516	E: 356687,599
BLS-77	606,090	604,794	1,3	N: 7337226,940	E: 357209,748
BLS-78	606,230	603,919	2,31	N: 7337224,165	E: 357201,810
BLS-79	605,180	603,712	1,47	N: 7337223,778	E: 357199,883
BLS-80	605,180	603,703	1,48	N: 7337220,126	E: 357192,181
BLS-81	598,380	597,093	1,29	N: 7337462,303	E: 357094,648
BLS-82	598,380	596,536	1,84	N: 7337458,656	E: 357087,116
BLS-83	597,620	596,320	1,3	N: 7337457,692	E: 357085,243
BLS-84	597,630	596,304	1,33	N: 7337453,715	E: 357077,827
CL-01	605,790	604,688	1,1	N: 7337093,216	E: 357256,871
CL-02	585,210	582,780	2,43	N: 7337771,969	E: 356926,089
CL-03	578,820	575,765	3,06	N: 7337862,965	E: 356881,772
CL-04	605,060	602,915	2,14	N: 7337224,555	E: 357195,034
CL-05	597,580	596,210	1,37	N: 7337458,543	E: 357080,003
DISS-01	547,850	543,809	4,04	N: 7338349,845	E: 356675,128
DISS-02	552,950	551,500	1,450	N: 7338390,234	E: 356653,744
PV-01	606,770	604,240	2,53	N: 7337125,382	E: 357243,645
PV-02	605,910	603,312	2,59	N: 7337175,095	E: 357219,234
PV-03	604,020	602,417	1,61	N: 7337285,053	E: 357165,430
PV-04	602,940	601,155	1,79	N: 7337347,305	E: 357134,394
PV-05	600,350	597,955	2,39	N: 7337401,201	E: 357107,857
PV-06	595,080	594,343	0,74	N: 7337513,424	E: 357053,344
PV-07	592,150	590,748	1,4	N: 7337570,604	E: 357025,755
PV-08	590,900	588,011	2,89	N: 7337644,017	E: 356988,483
PV-09	586,240	584,935	1,3	N: 7337717,858	E: 356952,468
PV-10	583,320	579,763	3,56	N: 7337810,456	E: 356907,270
PV-11	573,420	570,516	2,9	N: 7337925,936	E: 356851,194
PV-12	569,840	565,982	3,86	N: 7337972,742	E: 356827,976
PV-13	564,880	561,811	3,07	N: 7338025,197	E: 356802,572
PV-14	560,880	559,564	1,32	N: 7338077,336	E: 356777,145
PV-15	558,530	554,082	4,44	N: 7338148,094	E: 356742,365
PV-16	551,530	549,359	2,18	N: 7338202,050	E: 356716,122
PV-17	550,450	547,936	2,51	N: 7338256,006	E: 356689,878
PV-18	549,970	546,435	3,53	N: 7338309,971	E: 356663,652