Contratante: DMAE – Departamento Municipal de Água e Esgoto
Obra: Serviços de levantamentos topográficos e acompanhamento de obras.
Concorrência: 18.10.000000187-7

DEMANDA 52

FELIX DA CUNHA E MARQUES DO HERVAL – REDES DE ESGOTO

Engenharia Ltda.

JULHO / 2021

Engenharia Ltda.

À
DMAE – Departamento Municipal de Água e Esgoto
Gerência de Projetos de Obras
A/C Sr. Giordano da Silva Jobim

A DW – Engenharia está entregando o serviço referente a concorrência 18.10.000000187-7, correspondente a:
DEMANDA 52 – FELIX DA CUNHA E MARQUES DO HERVAL – REDES DE ESGOTO.

Estamos à disposição para eventuais esclarecimentos adicionais, caso necessário.

Atenciosamente,

Porto Alegre, 31 de Julho de 2021.

_____
Daniel Galvani da Costa – CREA/RS 191691

LEVANTAMENTO PLANIALTIMÉTRICO

LEGENDAS

MURO ALVENARIA	REGISTRO ÁGUA
MURO GRADIL	POÇO DE VISITA - CALÇADA
MEIO FIO	POÇO DE VISITA - RUA
CICLOVIA	CAIXA CLOCAL
ALINHAMENTO PREDIAL	BOCA DE LOBO
REDE PLUVIAL EXIST	CAIXA TAMPA CONCRETO
REDE CLOCAL EXIST	CAIXA CLOACAL PASSEIO
GALERIA	ARMÁRIO TELEFONE
ADUTORA	CAIXA TELEFONE
TUBULAÇÃO GÁS	

CONSTRUÇÃO DE ALVENARIA	TIPOS DE PAVIMENTO
COTAS SOLEIRAS	BASALTO — BA
CAIXA TELEFONE	LAGE GRES — LG
GRELHA	PISO CONCRETO — CO
HIDRANTE	CONCRETO BETUMINOSO — CBUQ
CAIXA INCÊNDIO	TERRENO NATURAL — TN
POSTE DE MADEIRA	CONCRETO INTERTRAVADO — PAVS
POSTE DE CONCRETO	LAJOTA CONCRETO — LJCO
POSTE DE FERRO	LAJOTA CERÂMICA — LJCE
LUMINÁRIA	

NUMERAÇÃO PREDIAL — N°	PARQUÍMETRO
ÁRVORE VEGETAÇÃO	LIXEIRA
CAIXA TELEFONE	OBRA DE ARTE
PARADA ÔNIBUS	GRADIL
	BANCO DE PRAÇA

OBSERVAÇÕES:

Altimetria: Vinculado ao pino V6000, altitude= 11,828m
Transporte da altitude, por meio de GPS RTK

Planimetria: Sistema de Coordenadas TM-POA
Vinculado a Rede de Referência Municipal
Poligonal vinculada com GPS RTK

CONTRATADA: Engenharia Ltda.
Rua Diário de Notícias, Nº 200 sala 2103 - CEP 90010-080 - POA / RS — Fone: (51) 3022-0477

CLIENTE	DMAE - DEPARTAMENTO MUNICIPAL DE ÁGUA E ESGOSTO
OBRA	SERVIÇOS DE LEVANTAMENTOS TOPOGRÁFICOS E ACOMPANHAMENTO DE OBRAS
LOCALIZAÇÃO	PORTO ALEGRE - FELIX DA CUNHA E MARQUES DO HERVAL — DATA: 31/07/2021
ASSUNTO	DEMANDA 52 - FELIX DA CUNHA E MARQUES DO HERVAL – REDES DE ESGOTO — ESCALA: 1:250
TITULO DO DOCUMENTO	LEVANTAMENTO PLANIALTIMETRICO — FOLHA: 01 /01
RESP. TÉCNICO	ENG. WOLNEY MOREIRA DA COSTA - CREA 7626 ENG. DANIEL GALVANI DA COSTA - CREA 191691

A0 (1188 x 841 mm)

COORDENADAS GEODÉSICAS

V6000

Monografia

COORDENADAS GEODÉSICAS
Latitude 30°1’6.14914"S
Longitude 51°12’15.50792"O
Altitude elipsoidal: 16.8187m

PROJEÇÕES CARTOGRÁFICAS
TM-POA
N 1677848.7432m
E 280290.8149m
UTM
N 6679160.999m
E 480298.600m

V6001

Monografia

COORDENADAS GEODÉSICAS
Latitude °1’5.45522"S
Longitude 51°12’19.30526"O
Altitude elipsoidal: 16.7832m

PROJEÇÕES CARTOGRÁFICAS
TM-POA
N 1677869.9285m
E 280189.0201m
UTM
N 6679182.176m
E 480196.845m

RELAÇÃO DOS PONTOS LEVANTADOS

RELAÇÃO DOS PONTOS LEVANTADO				
P. Visado	Descrição	Coord. E(X)	Coord. N(Y)	Cota Z
1	A1	280473,388	1677883,252	8,556
2	A2	280491,82	1677647,193	11,069
3	A3	280511,1953	1677596,199	14,047
4	A4	280498,7105	1677512,726	22,031
5	A5	280511,927	1677514,642	21,858
6	A6	280449,0473	1677494,552	22,808
7	A7	280358,2054	1677496,893	26,629
8	A8	280334,6056	1677542,585	30,847
9	ALP	280513,2256	1677645,552	10,403
10	ALP	280490,8307	1677526,931	22,237
11	ALP	280521,0528	1677524,589	21,349
12	ALP	280529,7099	1677517,031	21,614
13	ALP	280518,3449	1677499,153	22,846
14	ALP	280516,7025	1677497,292	23,163
15	ALP	280517,1404	1677489,471	23,864
16	ALP	280499,3112	1677492,985	23,38
17	ALP	280497,7326	1677497,434	22,998
18	ALP	280491,4041	1677518,595	22,206
19	ALP	280369,8656	1677488,222	25,508
20	ALP	280362,1452	1677472,432	26,219
21	ALP	280348,6378	1677484,566	27,15
22	ALP	280354,4033	1677496,637	26,816
23	ALP	280354,1711	1677498,99	26,941
24	ALP	280371,4947	1677506,263	25,589
25	ALP	280369,4977	1677507,537	26,062
26	ALP	280304,7122	1677553,352	33,017
27	ALP	280317,6486	1677564,103	32,572
28	ALP	280321,8649	1677559,467	32,292
29	ALP	280487,3862	1677644,961	11,306
30	ALP	280489,4497	1677643,041	11,198
31	ARV	280504,8367	1677625,151	11,212
32	ARV	280505,1203	1677616,908	11,409
33	ARV	280495,815	1677606,284	12,387
34	ARV	280496,3443	1677599,018	12,552
35	ARV	280496,6947	1677590,312	14,132
36	ARV	280497,292	1677582,965	14,891
37	ARV	280497,8209	1677575,153	15,648
38	ARV	280498,2453	1677567,891	17,041
39	ARV	280499,1447	1677551,554	18,728
40	ARV	280499,5175	1677543,693	19,259
41	ARV	280514,4981	1677563,85	16,574
42	ARV	280513,9768	1677580,253	14,775
43	ARV	280513,2089	1677586,823	14,127
44	ARV	280512,8566	1677594,052	13,698
45	ARV	280501,1835	1677517,828	22,077
46	ARV	280500,9552	1677522,538	21,945
47	ARV	280473,5361	1677509,594	22,886
48	ARV	280515,3744	1677544,763	19,83

49	ARV	280516,3693	1677536,909	20,616
50	ARV	280516,7518	1677529,678	21,474
51	ARV	280515,0463	1677554,752	19,774
52	ARV	280487,1388	1677510,356	23,377
53	ARV	280479,0224	1677499,523	24,391
54	ARV	280374,1108	1677492,3	25,821
55	ARV	280405,5504	1677504,773	23,304
56	ARV	280376,764	1677502,82	25,047
57	ARV	280362,1284	1677510,622	28,611
58	ARV	280357,8884	1677515,71	28,984
59	ARV	280354,1431	1677519,217	28,254
60	ARV	280353,0579	1677504,954	27,781
61	ARV	280350,0275	1677508,259	28,267
62	ARV	280343,7312	1677515,505	28,958
63	ARV	280356,4542	1677492,738	26,331
64	ARV	280328,8027	1677532,553	31,046
65	ARV	280494,4692	1677621,834	12,889
66	ARV	280494,0569	1677629,154	11,597
67	ARV	280493,9249	1677636,883	11,689
68	ARV	280492,9683	1677644,954	12,01
69	ARV	280507,5393	1677650,043	11,574
70	ATL	280443,2318	1677493,892	22,732
71	BL	280511,2207	1677601,921	13,286
72	BL	280498,213	1677501,821	22,334
73	BL	280421,8316	1677496,303	22,02
74	BL	280420,4755	1677496,197	22,122
75	BL	280407,1008	1677495,252	22,181
76	BL	280406,1297	1677495,167	22,17
77	BL	280412,1991	1677504,598	21,869
78	BL	280413,5372	1677504,717	21,907
79	BL	280414,5682	1677504,734	21,922
80	BL	280415,5963	1677504,844	21,979
81	BL	280365,8098	1677489,774	25,272
82	BL	280365,365	1677506,577	26,084
83	BL	280402,6345	1677503,887	21,939
84	BL	280502,9605	1677642,814	10,434
85	BL	280493,5206	1677646,726	10,857
86	BL	280487,841	1677649,835	10,992
87	CL	280496,2506	1677564,425	17,229
88	CL	280497,7274	1677544,765	18,984
89	CL	280323,009	1677535,448	31,303
90	CX	280493,8041	1677633,302	11,103
91	CX	280513,6066	1677599,158	13,89
92	CX	280514,0387	1677591,596	14,625
93	CX	280493,6764	1677619,548	11,721
94	CX	280495,8265	1677597,783	13,742
95	CX	280495,6736	1677595,415	14,002
96	CX	280505,1407	1677626,392	11,309
97	CX	280510,6146	1677601,749	13,453
98	CX	280481,5486	1677511,594	22,401
99	CX	280497,5265	1677512,698	22,092
100	CX	280458,5587	1677497,636	22,776

101	CX	280411,9252	1677493,132	22,417
102	CX	280414,7204	1677494,732	22,349
103	CX	280476,5991	1677499,347	22,765
104	CX	280463,7436	1677497,469	22,803
105	CX	280462,486	1677498,027	22,762
106	CX	280455,0425	1677508,815	22,597
107	CX	280371,1952	1677505,675	25,597
108	CX	280347,1817	1677528,83	29,135
109	CX	280347,936	1677527,949	29,013
110	CX	280337,4615	1677520,953	29,386
111	CX	280337,7578	1677520,079	29,318
112	CX	280333,7767	1677525,026	29,855
113	CX	280346,6461	1677510,378	28,107
114	CX	280320,7547	1677540,146	31,59
115	CX	280324,4853	1677535,847	31,161
116	CX	280322,8897	1677537,536	31,357
117	CX	280328,8614	1677548,657	31,481
118	CXGAS	280356,1163	1677496,672	26,71
119	DIV	280493,5485	1677583,595	15,299
120	DIV	280492,479	1677598,395	13,824
121	DIV	280491,9811	1677605,047	13,039
122	DIV	280514,7372	1677620,582	11,912
123	DIV	280491,0589	1677618,921	11,644
124	DIV	280493,5635	1677583,67	15,271
125	DIV	280494,5231	1677570,259	16,589
126	DIV	280463,2335	1677516,524	22,933
127	DIV	280463,5185	1677512,595	22,778
128	DIV	280423,4288	1677492,664	22,384
129	DIV	280434,8741	1677493,031	22,642
130	DIV	280444,0667	1677493,752	22,747
131	DIV	280452,9022	1677494,382	22,898
132	DIV	280462,7938	1677495,21	22,899
133	DIV	280472,9465	1677495,993	22,908
134	DIV	280450,1066	1677511,477	22,685
135	DIV	280410,6264	1677508,709	22,317
136	DIV	280396,7435	1677507,657	22,53
137	DIV	280425,1872	1677509,821	22,424
138	DIV	280412,4024	1677492,1	22,401
139	DIV	280393,8555	1677490,978	22,718
140	DIV	280393,5127	1677490,01	22,768
141	DIV	280384,3543	1677489,386	23,496
142	DIV	280373,6345	1677506,065	25,24
143	DIV	280364,3085	1677513,489	26,988
144	DIV	280348,8151	1677530,628	29,193
145	DIV	280329,8995	1677525,907	30,193
146	DIV	280346,9631	1677506,582	28,056
147	DIV	280323,0525	1677533,454	31,202
148	DIV	280322,7413	1677533,191	31,264
149	DIV	280329,0525	1677552,627	31,673
150	DIV	280337,0425	1677543,782	30,679
151	DIV	280491,0457	1677618,636	11,774
152	DIV	280468,2225	1677643,898	12,197

153	GAS	280510,2365	1677620,987	11,844
154	GAS	280467,8871	1677496,859	22,889
155	GAS	280449,7239	1677509,413	22,605
156	GAS	280367,4604	1677487,967	25,494
157	GAS	280373,3168	1677505,197	25,201
158	GAS	280321,2238	1677538,957	31,556
159	GAS	280510,531	1677644,797	10,53
160	GAS	280512,1728	1677648,441	9,861
161	GAS	280502,9988	1677647,149	10,446
162	GAS	280493,7579	1677645,889	10,83
163	GRE	280358,8816	1677499,664	26,408
164	IC	280509,1363	1677605,333	12,902
165	IC	280508,1002	1677605,202	12,945
166	IC	280504,8746	1677627,591	11,2
167	IC	280513,2303	1677499,538	22,921
168	IC	280334,3544	1677524,576	29,77
169	MF	280514,0705	1677566,798	16,893
170	MF	280507,4396	1677586,272	15,194
171	MF	280507,5077	1677585,201	15,305
172	MF	280506,7287	1677585,151	15,338
173	MF	280498,4305	1677574,574	16,112
174	MF	280495,2418	1677622,691	11,445
175	MF	280511,8597	1677601,866	13,479
176	MF	280505,4172	1677603,894	13,12
177	MF	280506,6373	1677598,751	13,951
178	MF	280502,1254	1677515,233	21,715
179	MF	280510,6422	1677525,207	21,088
180	MF	280517,327	1677517,201	21,593
181	MF	280498,651	1677501,851	22,47
182	MF	280503,2515	1677498,559	22,861
183	MF	280512,6771	1677491,561	23,546
184	MF	280498,0869	1677510,693	22,044
185	MF	280517,1281	1677503,184	22,457
186	MF	280517,3369	1677517,145	21,46
187	MF	280518,3093	1677517,644	21,51
188	MF	280524,2964	1677512,616	21,644
189	MF	280523,9316	1677511,533	21,655
190	MF	280520,8004	1677511,385	21,761
191	MF	280517,5029	1677514,525	21,646
192	MF	280522,7563	1677503,558	22,123
193	MF	280516,083	1677503,143	22,506
194	MF	280358,9841	1677499,014	26,376
195	MF	280358,9331	1677496,431	26,491
196	MF	280370,967	1677492,687	24,95
197	MF	280364,8624	1677488,044	25,567
198	MF	280360,6425	1677479,233	25,86
199	MF	280374,1012	1677501,864	24,803
200	MF	280371,7551	1677501,697	25,169
201	MF	280369,0961	1677502,896	25,549
202	MF	280360,0266	1677512,406	26,934
203	MF	280350,0572	1677509,214	27,495
204	MF	280342,5361	1677531,852	29,41

205	MF	280367,8127	1677503,745	25,759
206	MF	280355,882	1677490,003	26,612
207	MF	280308,6227	1677555,308	32,651
208	MF	280324,313	1677551,932	31,623
209	MF	280468,4772	1677648,727	11,8
210	MF	280475,4828	1677657,1	11,323
211	MF	280488,8804	1677657,943	10,829
212	MF	280492,5095	1677663,299	10,508
213	MF	280501,5775	1677663,274	10,119
214	MF	280500,8312	1677673,073	10,214
215	MF	280506,4125	1677659,454	9,698
216	MF	280511,9077	1677659,799	9,399
217	MF	280507,2465	1677650,557	9,968
218	MF	280502,7418	1677645,731	10,352
219	MF	280493,7579	1677645,889	10,83
220	MF	280494,894	1677628,156	10,997
221	PAQ	280386,0623	1677493,234	23,269
222	PC	280513,9734	1677574,571	15,562
223	PC	280512,8661	1677592,205	13,774
224	PC	280496,8954	1677593,749	15,071
225	PC	280504,5445	1677625,84	14,519
226	PC	280497,8267	1677511,493	23,435
227	PC	280463,1973	1677498,467	22,013
228	PC	280468,2839	1677509,158	23,892
229	PC	280446,4443	1677507,344	22,757
230	PC	280444,2634	1677497,314	22,198
231	PC	280411,6036	1677505,128	23,471
232	PC	280391,3533	1677503,508	22,326
233	PC	280370,5618	1677502,655	24,606
234	PC	280354,4934	1677503,294	25,997
235	PC	280346,8886	1677527,576	27,928
236	PC	280325,1839	1677536,49	31,978
237	PC	280493,9975	1677631,257	11,87
238	PC	280494,6059	1677619,754	15,841
239	PF	280515,3577	1677551,654	18,664
240	PF	280517,0272	1677526,371	21,52
241	PF	280512,809	1677496,546	24,516
242	PIL	280518,3417	1677516,784	21,737
243	PIL	280522,4119	1677513,293	21,838
244	PLA	280507,1911	1677583,281	14,174
245	PQ	280500,6574	1677534,552	19,975
246	PV	280503,3041	1677558,611	17,77
247	PV	280495,7967	1677582,59	15,477
248	PV	280494,6893	1677585,931	15,069
249	PV	280493,1234	1677604,168	13,14
250	PV	280500,0116	1677606,997	12,958
251	PV	280498,666	1677540,37	19,381
252	PV	280496,2969	1677540,3	19,376
253	PV	280497,1181	1677527,604	20,64
254	PV	280507,0311	1677508,326	22,414
255	PV	280501,3075	1677499,825	22,78
256	PV	280500,0493	1677509,963	22,076

257	PV	280499,4208	1677513,151	21,975
258	PV	280410,5791	1677505,874	22,098
259	PV	280409,9336	1677500,073	22,391
260	PV	280407,7372	1677495,798	22,22
261	PV	280406,896	1677503,186	22,056
262	PV	280458,3418	1677504,135	22,715
263	PV	280456,211	1677506,921	22,576
264	PV	280447,9197	1677510,417	22,684
265	PV	280402,3733	1677506,04	22,362
266	PV	280357,2351	1677498,958	26,713
267	PV	280361,9855	1677498,288	26,509
268	PV	280368,3757	1677488,448	25,439
269	PV	280366,0999	1677492,532	25,686
270	PV	280375,835	1677504,132	24,845
271	PV	280330,5926	1677528,64	30,307
272	PV	280325,7754	1677543,484	31,694
273	PV	280497,1498	1677654,696	10,729
274	PV	280504,5573	1677647,703	10,364
275	PV	280491,3245	1677644,008	11,131
276	PV	280490,288	1677647,238	11,077
277	PV	280492,3713	1677628,407	11,267
278	PV	280497,4143	1677641,276	11,014
279	PV	280503,538	1677647,336	10,428
280	PVG	280515,7784	1677499,775	22,893
281	PVG	280515,4389	1677497,761	23,05
282	PVG	280521,8304	1677501,008	22,377
283	PVG	280343,5935	1677512,107	28,454
284	PVG	280340,7807	1677514,856	28,828
285	RG	280514,7425	1677501,129	22,787
286	SEM	280501,7721	1677514,797	21,784
287	SEM	280519,773	1677503,058	23,105
288	SEM	280499,5649	1677501,717	22,79
289	SEM	280491,285	1677648,394	12,441
290	T1	280496,36	1677512,071	22,124
291	T1	280479,8306	1677511,51	22,42
292	T1	280476,6399	1677510,692	22,471
293	T1	280515,5432	1677500,801	22,819
294	T1	280456,0755	1677497,353	22,771
295	T1	280457,8474	1677497,15	22,789
296	T1	280462,4014	1677497,224	22,821
297	T1	280367,622	1677487,528	25,492
298	T1	280337,9668	1677521,333	29,301
299	T1	280504,707	1677644,822	10,486
300	T3	280507,7041	1677585,662	15,253
301	T3	280500,0661	1677585,646	15,166
302	T3	280500,1502	1677584,5	15,284
303	T3	280499,4589	1677564,803	17,045
304	T3	280495,7294	1677596,468	13,784
305	T3	280498,7347	1677514,297	21,994
306	T3	281088,937	1677446,306	-96,95
307	T3	280504,8307	1677514,277	21,892
308	T3	280502,6061	1677516,021	21,587

309	T3	280498,6698	1677516,977	21,731
310	T3	280511,4382	1677511,063	22,17
311	T3	280513,4145	1677511,369	22,113
312	T3	280498,6888	1677516,992	21,734
313	T3	280511,6568	1677531,184	20,367
314	T3	280497,8573	1677503,492	22,462
315	T3	280436,6858	1677498,999	22,519
316	T3	280405,8773	1677497,2	22,412
317	T3	280365,5913	1677494,262	25,978
318	T3	280368,9864	1677494,346	25,462
319	T3	280490,6102	1677642,312	11,147
320	T3	280490,6252	1677638,59	11,161
321	T3	280502,4857	1677649,449	10,439
322	T3	280504,5032	1677650,172	10,186