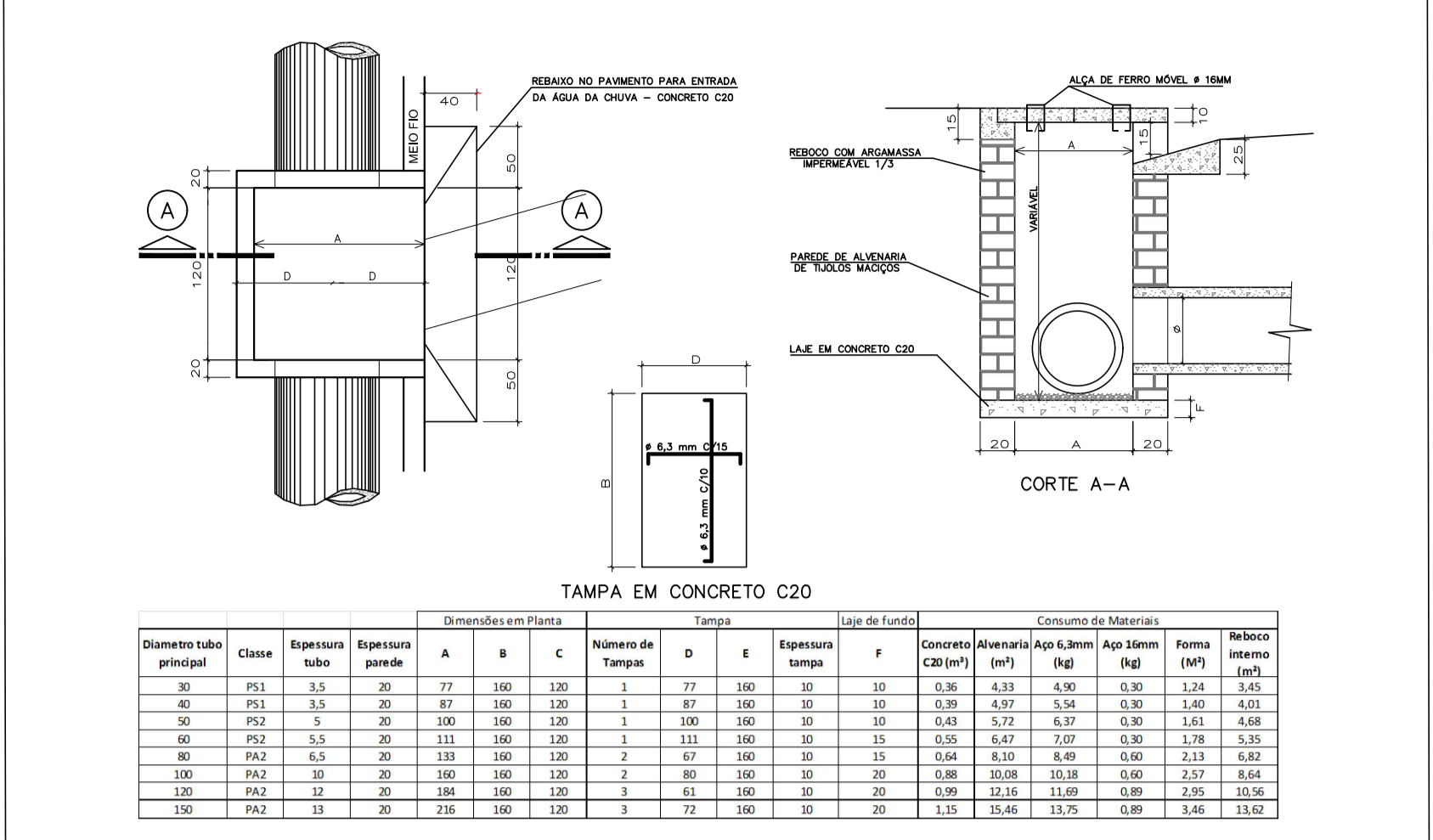


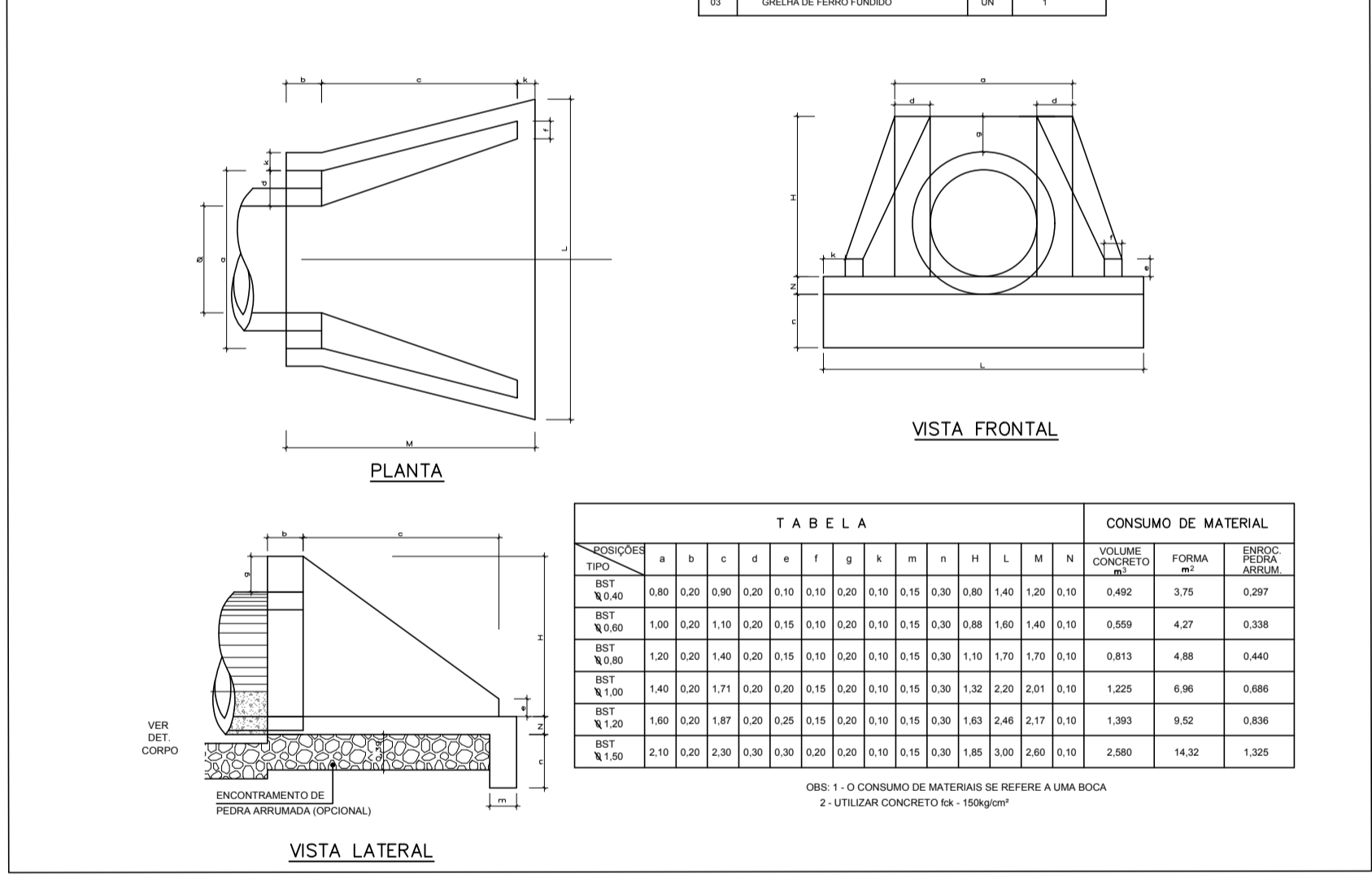
ESTACAS	0+0,000	0+5,00	0+10,00	0+15,00	1+5,00	1+10,00	1+15,00	2+5,00	3+5,00	3+10,00	3+15,00	4	4+5,00	4+10,00	4+15,00	4+20,00	4+25,00	4+30,00	4+35,00	4+40,00	4+45,00	4+50,00	4+55,00	4+60,00	4+65,00	4+70,00	4+75,00	4+80,00	4+85,00	4+90,00	4+95,00	5	5+5,00	5+10,00	5+15,00	5+20,00	5+25,00	5+30,00	5+35,00	5+40,00	5+45,00	5+50,00	5+55,00	5+60,00	5+65,00	5+70,00	5+75,00	5+80,00	5+85,00	5+90,00	5+95,00	6	6+5,00	6+10,00	6+15,00	6+20,00	6+25,00	6+30,00	6+35,00	6+40,00	6+45,00	6+50,00	6+55,00	6+60,00	6+65,00	6+70,00	6+75,00	6+80,00	6+85,00	6+90,00	6+95,00	7	7+5,00	7+10,00	7+15,00	7+20,00	7+25,00	7+30,00	7+35,00	7+40,00	7+45,00	7+50,00	7+55,00	7+60,00	7+65,00	7+70,00	7+75,00	7+80,00	7+85,00	7+90,00	7+95,00	8	8+5,00	8+10,00	8+15,00	8+20,00	8+25,00	8+30,00	8+35,00	8+40,00	8+45,00	8+50,00	8+55,00	8+60,00	8+65,00	8+70,00	8+75,00	8+80,00	8+85,00	8+90,00	8+95,00	9	9+5,00	9+10,00	9+15,00	9+20,00	9+25,00	9+30,00	9+35,00	9+40,00	9+45,00	9+50,00	9+55,00	9+60,00	9+65,00	9+70,00	9+75,00	9+80,00	9+85,00	9+90,00	9+95,00	10	10+5,00	10+10,00	10+15,00	10+20,00	10+25,00	10+30,00	10+35,00	10+40,00	10+45,00	10+50,00	10+55,00	10+60,00	10+65,00	10+70,00	10+75,00	10+80,00	10+85,00	10+90,00	10+95,00	11																																																																																						
COTAS TERRENO	50,410	50,972	51,416	51,744	51,815	51,556	51,591	52,255	52,680	53,014	53,475	54,084	54,423	54,532	55,197	55,827	56,271	56,593	56,874	57,154	57,429	57,652	57,869	58,078	58,278	58,469	58,651	58,824	58,988	59,143	59,289	59,426	59,555	59,676	59,789	59,894	59,991	60,080	60,161	60,235	60,302	60,362	60,415	60,462	60,503	60,538	60,567	60,591	60,610	60,624	60,633	60,638	60,639	60,636	60,629	60,613	60,587	60,552	60,508	60,456	60,396	60,328	60,254	60,175	60,092	60,005	59,914	59,819	59,721	59,620	59,516	59,409	59,300	59,188	59,073	58,955	58,834	58,710	58,583	58,453	58,320	58,184	58,045	57,903	57,758	57,611	57,461	57,308	57,152	56,993	56,831	56,665	56,505	56,342	56,176	56,007	55,845	55,678	55,506	55,330	55,151	54,968	54,782	54,593	54,401	54,206	54,008	53,807	53,603	53,396	53,186	52,972	52,755	52,534	52,309	52,081	51,850	51,616	51,379	51,139	50,895	50,648	50,398	50,145	49,888	49,627	49,362	49,093	48,820	48,543	48,262	47,977	47,688	47,395	47,098	46,797	46,492	46,184	45,873	45,559	45,242	44,922	44,599	44,273	43,944	43,612	43,277	42,939	42,598	42,254	41,907	41,557	41,204	40,848	40,489	40,127	39,762	39,394	39,023	38,649	38,272	37,892	37,509	37,123	36,734	36,342	35,947	35,549	35,148	34,744	34,337	33,927	33,514	33,098	32,679	32,257	31,832	31,404	30,973	30,539	30,102	29,662	29,212	28,759	28,303	27,844	27,382	26,917	26,449	25,978	25,504	25,027	24,547	24,064	23,578	23,089	22,597	22,102	21,604	21,103	20,600	20,094	19,585	19,073	18,558	18,041	17,521	16,998	16,472	15,943	15,411	14,876	14,339	13,799	13,256	12,710	12,161	11,609	11,054	10,496	9,935	9,371	8,804	8,234	7,661	7,085	6,506	5,924	5,339	4,751	4,160	3,566	2,969	2,369	1,766	1,160	5,51	0
COTAS PROJETO	50,395	50,972	51,416	51,744	51,815	51,556	51,591	52,255	52,680	53,014	53,475	54,084	54,423	54,532	55,197	55,827	56,271	56,593	56,874	57,154	57,429	57,652	57,869	58,078	58,278	58,469	58,651	58,824	58,988	59,143	59,289	59,426	59,555	59,676	59,789	59,894	59,991	60,080	60,161	60,235	60,302	60,362	60,415	60,462	60,503	60,538	60,567	60,591	60,610	60,624	60,633	60,638	60,639	60,636	60,629	60,613	60,587	60,552	60,508	60,456	60,396	60,328	60,254	60,175	60,092	60,005	59,914	59,819	59,721	59,620	59,516	59,409	59,300	59,188	59,073	58,955	58,834	58,710	58,583	58,453	58,320	58,184	58,045	57,903	57,758	57,611	57,461	57,308	57,152	56,993	56,831	56,665	56,505	56,342	56,176	56,007	55,845	55,678	55,506	55,330	55,151	54,968	54,782	54,593	54,401	54,206	54,008	53,807	53,603	53,396	53,186	52,972	52,755	52,534	52,309	52,081	51,850	51,616	51,379	51,139	50,895	50,648	50,398	50,145	49,888	49,627	49,362	49,093	48,820	48,543	48,262	47,977	47,688	47,395	47,098	46,797	46,492	46,184	45,873	45,559	45,242	44,922	44,599	44,273	43,944	43,612	43,277	42,939	42,598	42,254	41,907	41,557	41,204	40,848	40,489	40,127	39,762	39,394	39,023	38,649	38,272	37,892	37,509	37,123	36,734	36,342	35,947	35,549	35,148	34,744	34,337	33,927	33,514	33,098	32,679	32,257	31,832	31,404	30,973	30,539	30,102	29,662	29,212	28,759	28,303	27,844	27,382	26,917	26,449	25,978	25,504	25,027	24,547	24,064	23,578	23,089	22,597	22,102	21,604	21,103	20,600	20,094	19,585	19,073	18,558	18,041	17,521	16,998	16,472	15,943	15,411	14,876	14,339	13,799	13,256	12,710	12,161	11,609	11,054	10,496	9,935	9,371	8,804	8,234	7,661	7,085	6,506	5,924	5,339	4,751	4,160	3,566	2,969	2,369	1,766	1,160	5,51	0

TUBO	DN (m)	COMPRIMENTO (m)	DECLIVIDADE (%)
BSTC DN 0,40M CONCRETO - EST. 220,54	0,40	32	11,31%
BSTC DN 0,40M CONCRETO - EST. 189,88	0,40	30	10,45%
BSTC DN 0,40M CONCRETO - EST. 161,50	0,40	36	9,60%
BSTC DN 0,40M CONCRETO - EST. 125,54	0,40	26	8,78%
BSTC DN 0,40M CONCRETO - EST. 98,96	0,40	18	9,06%
BSTC DN 0,40M CONCRETO - EST. 80,17	0,40	30	8,60%
BSTC DN 0,40M CONCRETO - EST. 50,71	0,40	43	7,20%
BSTC DN 0,40M CONCRETO - EST. 6,67	0,40	7	5,00%
BSTC DN 0,40M CONCRETO - EST. 220,87	0,40	4	0,98%
BSTC DN 0,40M CONCRETO - EST. 193,16	0,40	5	9,16%
BSTC DN 0,40M CONCRETO - EST. 164,27	0,40	5	6,05%
BSTC DN 0,40M CONCRETO - EST. 129,00	0,40	5	5,83%
BSTC DN 0,40M CONCRETO - EST. 101,50	0,40	4	4,88%
BSTC DN 0,40M CONCRETO - EST. 51,37	0,40	4	1,33%
BSTC DN 0,40M CONCRETO - EST. 8,39	0,40	5	2,11%

### DETALHES CONSTRUTIVOS



Diâmetro tubo principal	Classe	Espessura tubo	Espessura parede	Dimensões em Plana			Número de Tampas	Tampa		Laje de Fundo		Consumo de Materiais				
				A	B	C		D	E	Epessura Tampa	F	Concreto C20 (m³)	Alvenaria (m³)	App 10mm (kg)	Ferro (kg)	Relação Estima (kg/m³)
30	PS1	3,5	20	77	100	120	1	77	100	10	0,39	4,31	4,90	0,30	2,24	3,05
40	PS1	3,5	20	87	100	120	1	87	100	10	0,39	4,97	5,54	0,30	1,40	4,01
50	PS2	5	20	100	100	120	1	100	100	10	0,43	5,72	6,37	0,30	1,63	4,68
60	PS2	5,5	20	111	100	120	1	111	100	10	0,50	6,47	7,07	0,30	1,78	5,32
80	PA2	6,5	20	131	100	120	2	67	100	10	0,64	8,10	8,49	0,60	2,13	6,82
100	PA2	8	20	149	100	120	2	80	100	10	0,80	9,88	10,58	0,60	2,57	8,64
120	PA2	10	20	164	100	120	3	65	100	10	0,99	12,16	13,09	0,89	2,95	10,56
150	PA2	13	20	226	100	120	3	72	100	10	2,0	15,46	17,75	0,89	3,46	13,62



NOME	COTAS	PROFUNDIDADE (m)
CS - EST. 220,54	CT=70,48 CF=69,17	1,50
CX-2 - EST. 220,87	CT=70,34 CF=69,24	1,10
CX-2 - EST. 193,16	CT=66,88 CF=65,38	1,12
CS - EST. 189,88	CT=66,88 CF=65,38	1,49
CX-2 - EST. 164,27	CT=66,88 CF=65,38	1,10
CS - EST. 161,50	CT=63,59 CF=62,27	1,32
CX-2 - EST. 129,00	CT=60,23 CF=59,13	1,10
CS - EST. 125,54	CT=60,08 CF=58,77	1,29
CX-2 - EST. 101,50	CT=57,79 CF=56,69	1,10
CS - EST. 98,96	CT=57,59 CF=56,46	1,13
CS - EST. 80,17	CT=55,92 CF=54,77	1,15
CX-2 - EST. 51,37	CT=53,39 CF=52,29	1,10
CS - EST. 50,71	CT=53,34 CF=52,00	1,44
CX-2 - EST. 6,39	CT=50,29 CF=49,19	1,10
CS - EST. 6,67	CT=50,20 CF=49,17	1,42
BOCA DE BUEIRO - EST. 3,01	CT=49,38 CF=???	0,50

#### LEGENDA

- POSTE EXISTENTE
- CADASTRO
- CERCA DE ARAME
- DRENAGEM EXISTENTE
- MEIO-FIO 13X15X30X100cm
- CORTE
- ATERRO
- PAVIMENTO PROJETADO EM LAJOTAS SEXTAVADAS
- BORDOS EXISTENTES
- EIXO DA PISTA DE TRÁFEGO
- GREIDE DE TERRAPLENAGEM
- DESLOCAMENTO/DEMOLIÇÃO
- CS - CAIXA COLETORA SIMPLES
- CX-2 - CAIXA COLETORA COM GRELHA DE FERRO TIPO II
- BSTC - BUEIRO SIMPLES DE 40cm
- BOCA DE BUEIRO

## PROJETO DE DRENAGEM

MUNICÍPIO: PAULO LOPES - SC

OBRA: RUA SANTIAGO JUVENAL

PROJETO: APROVAÇÃO DA PREFEITURA

CONTEÚDO: PROJETO DE DRENAGEM PLUVIAL, PLANTA BAIXA E PERFIL

REVISÃO: VERSÃO INICIAL

DATA: JUN/2020

FRANCHA: ÚNICA

VINICIUS FELLER  
Engenheiro Civil  
CREA/SC 147.982-3

ASSOCIAÇÃO DOS MUNICÍPIOS DA REGIÃO DA GRANDE FLORIANÓPOLIS "GRANFPOLIS" ASSESSORIA DE ENGENHARIA E ARQUITETURA