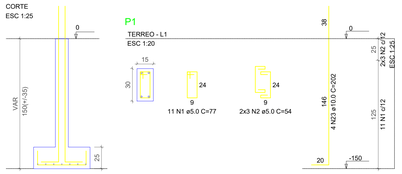
S1

PLANTA
ESC 1:25

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25

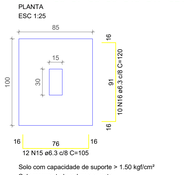


P1

TERREO - L1
ESC 1:20

S2=S4=S5=S7=S8=S9=S15=S17=S21=S35

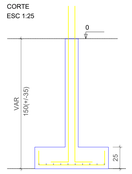
PLANTA
ESC 1:25



12 N15 ø6.3 c/8 C=105

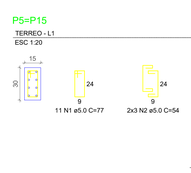
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



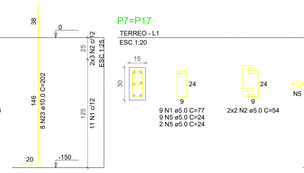
P5=P15

TERREO - L1
ESC 1:20



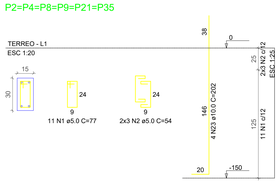
P7=P17

TERREO - L1
ESC 1:20



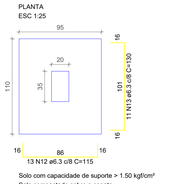
P2=P4=P8=P9=P21=P35

TERREO - L1
ESC 1:20



S3

PLANTA
ESC 1:25



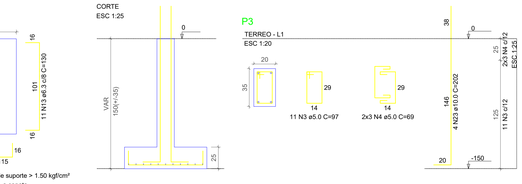
13 N12 ø6.3 c/8 C=115

Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25

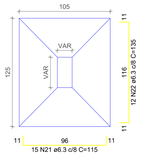
P3

TERREO - L1
ESC 1:20



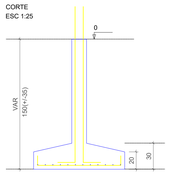
S13=S20=S26=S33

PLANTA
ESC 1:25



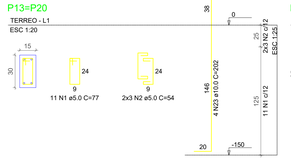
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



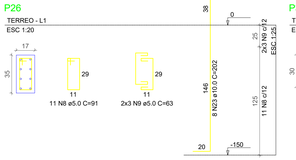
P13=P20

TERREO - L1
ESC 1:20



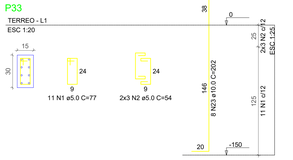
P26

TERREO - L1
ESC 1:20



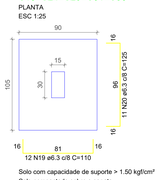
P33

TERREO - L1
ESC 1:20



S18=S24=S29=S31=S36

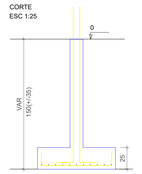
PLANTA
ESC 1:25



12 N19 ø6.3 c/8 C=110

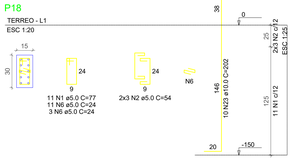
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



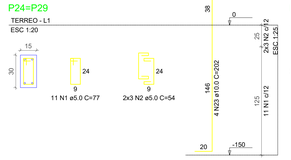
P18

TERREO - L1
ESC 1:20



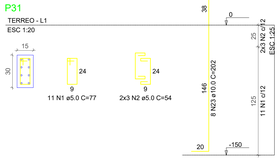
P24=P29

TERREO - L1
ESC 1:20



P31

TERREO - L1
ESC 1:20



RELAÇÃO DO AÇO

P1	6xP2	P3	
2xP5	6xP6	2xP7	
4xP10	2xP13	P16	
P18	P23	2xP24	
P25	P26	P28	
P30	P31	P33	
P36	P37	S1	
S3	6xS11	10xS15	
9xS22	5xS24	4xS26	
S30			

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	366	77	28182
	2	5.0	196	54	10584
	3	5.0	11	97	1067
	4	5.0	8	558	4464
	5	5.0	35	24	840
	6	5.0	43	24	1032
	7	5.0	14	26	364
	8	5.0	22	91	2002
	9	5.0	12	63	756
CA50	10	6.3	9	85	765
	11	6.3	17	95	1615
	12	6.3	67	115	7705
	13	6.3	11	130	1430
	14	6.3	66	100	6600
	15	6.3	129	105	13545
	16	6.3	100	120	12000
	17	6.3	126	110	13860
	18	6.3	108	125	13500
	19	6.3	60	110	6600
	20	6.3	55	125	6875
	21	6.3	60	115	6900
	22	6.3	48	135	6480
	23	10.0	172	202	34744
	24	12.5	22	210	4620

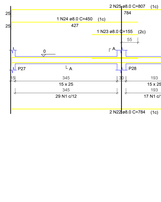
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	6.3	978.8	82	12 m	239.5
	10.0	347.4	29	12 m	214.2
	12.5	46.2	4	12 m	44.5
CA60	5.0	401.7	-	rolo (170 kg)	69.6
PESO TOTAL (kg)					
CA50	498.2				
CA60	69.6				

Volume de concreto (C-25) = 11.33 m³
Área de forma = 83.99 m²

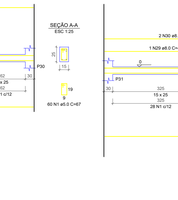
S6=S12=S14=S16=S22=S25=S27=S34=S37

PLANTA
ESC 1:25



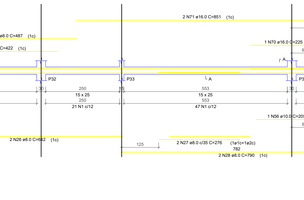
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



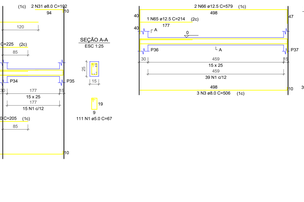
P16

TERREO - L1
ESC 1:20



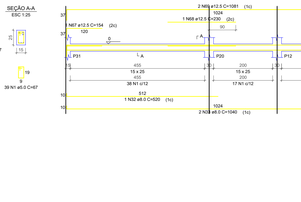
P6=P12=P14=P22=P27=P34

TERREO - L1
ESC 1:20



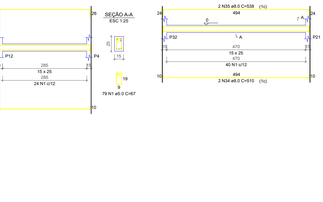
P25

TERREO - L1
ESC 1:20



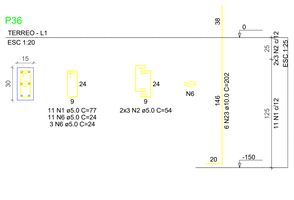
P37

TERREO - L1
ESC 1:20



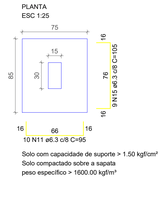
P36

TERREO - L1
ESC 1:20



S30

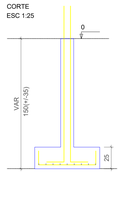
PLANTA
ESC 1:25



10 N11 ø6.3 c/8 C=95

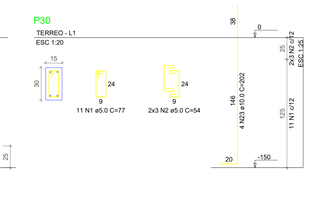
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



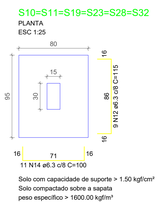
P30

TERREO - L1
ESC 1:20



S10=S11=S19=S23=S28=S32

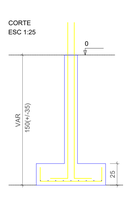
PLANTA
ESC 1:25



11 N14 ø6.3 c/8 C=100

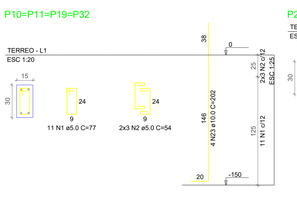
Solo com capacidade de suporte > 1.50 kgf/cm²
Solo compactado sobre a sapata
peso especifico > 1600.00 kgf/m³

CORTE
ESC 1:25



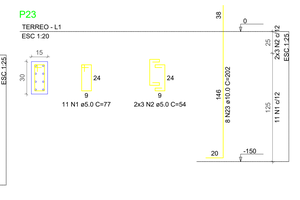
P10=P11=P19=P32

TERREO - L1
ESC 1:20



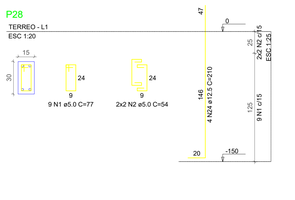
P23

TERREO - L1
ESC 1:20



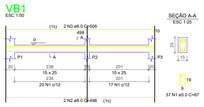
P28

TERREO - L1
ESC 1:20



VB1

ESC 1:50

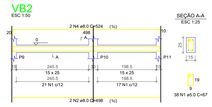


SEÇÃO A-A
ESC 1:25

37 N1 ø5.0 C=67

VB2

ESC 1:50

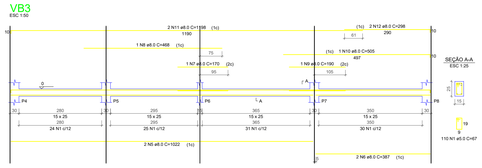


SEÇÃO A-A
ESC 1:25

38 N1 ø5.0 C=67

VB3

ESC 1:50

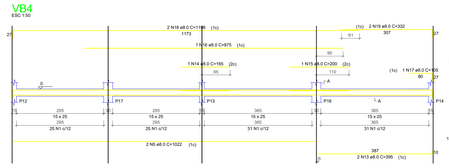


SEÇÃO A-A
ESC 1:25

110 N1 ø6.0 C=67

VB4

ESC 1:50

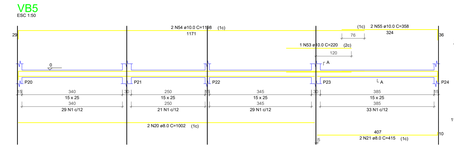


SEÇÃO A-A
ESC 1:25

112 N1 ø5.0 C=67

VB5

ESC 1:50



SEÇÃO A-A
ESC 1:25

112 N1 ø5.0 C=67

RELAÇÃO DO AÇO

VB1	VB2	VB3	
VB4	VB5	VB6	
VB7	VB8	VB9	
VB10	VB11	VB12	
VB13	VB14	VB15	
VB16	VB17		

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1089	67	73633
CA50	2	6.3	4	1065	4260
	3	8.0	5	506	2530
	4	8.0	2	534	1068
	5	8.0	2	522	1044
	6	8.0	2	387	774
	7	8.0	1	170	170
	8	8.0	1	190	190
	9	8.0	1	190	190
	10	8.0	1	505	505
	11	8.0	2	1098	2196
	12	8.0	2	298	596
	13	8.0	2	395	790
	14	8.0	2	185	370
	15	8.0	1	220	220
	16	8.0	1	675	675
	17	8.0	2	106	212
	18	8.0	2	1186	2372
	19	8.0	2	332	664
	20	8.0	2	1358	2716
	21	8.0	2	415	830
	22	8.0	2	784	1568
	23	8.0	2	1171	2342
	24	8.0	1	400	400
	25	8.0	2	807	1614
	26	8.0	2	1186	2372
	27	8.0	2	276	552
	28	8.0	2	790	1580
	29	8.0	2	1171	2342
	30	8.0	2	497	994
	31	8.0	2	102	204
	32	8.0	2	1358	2716
	33	8.0	2	1040	2080
	34	8.0	2	510	1020
	35	8.0	2	1358	2716
	36	8.0	1	187	187
	37	8.0	2	494	988
	38	8.0	2	1358	2716
	39	8.0	3	502	1506
	40	8.0	3	324	1944
	41	8.0	2	1358	2716
	42	8.0	2	1024	2048
	43	8.0	2	1084	2168
	44	8.0	2	1358	2716
	45	8.0	2	202	404
	46	8.0	2	220	440
	47	8.0	2	1358	2716
	48	8.0	2	227	454
	49	8.0	1	850	850
	50	8.0	2	1358	2716
	51	10.0	1	1123	1123
	52	8.0	2	181	362
	53	10.0	2	1121	2242
	54	10.0	2	1198	2396
	55	10.0	2	1358	2716
	56	10.0	2	1358	2716
	57	10.0	1	137	137
	58	10.0	2	392	784
	59	10.0	2	1358	2716
	60	10.0	1	190	190
	61	10.0	2	1062	2124
	62	10.0	2	1358	2716
	63	10.0	2	1358	2716
	64	10.0	2	204	408
	65	10.0	2	1358	2716
	66	10.0	2	1358	2716
	67	12.5	1	154	154
	68	12.5	2	1358	2716
	69	12.5	2	1081	2162
	70	16.0	1	225	225
	71	16.0	1	851	851

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	6.3	947.9	86	12 m	216.2
	8.0	1198.3	7	12 m	37.7
	10.0	39.2	4	12 m	30.4
	12.5	19.3	2	12 m	30.4
CA60	16.0	736.3	-	rolo (170 kg)	113.5
PESO TOTAL (kg)					
CA50	348.1				
CA60	113.5				

Volume de concreto (C-25) = 5.42 m³
Área de forma = 93.89 m²

VB6

ESC 1:50

SEÇÃO A-A
ESC 1:25

60 N1 ø5.0 C=67

VB7

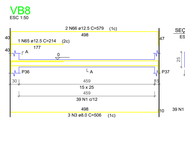
ESC 1:50

SEÇÃO A-A
ESC 1:25

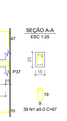
111 N1 ø5.0 C=67

VB8

ESC 1:50



SEÇÃO A-A
ESC 1:25

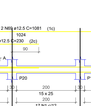


39 N1 ø5.0 C=67

VB9

ESC 1:50

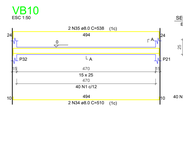
SEÇÃO A-A
ESC 1:25



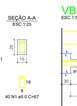
79 N1 ø5.0 C=67

VB10

ESC 1:50



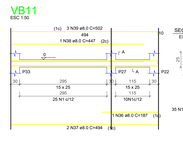
SEÇÃO A-A
ESC 1:25



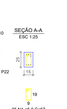
40 N1 ø5.0 C=67

VB11

ESC 1:50



SEÇÃO A-A
ESC 1:25



35 N1 ø5.0 C=67

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	6.3	347.5	32	12 m	85.8
	8.0	1198.3	7	12 m	37.7
	10.0	790.3	-	12 m	113.5
PESO TOTAL (kg)					
CA50	345.1				
CA60	113.5				

Volume de concreto (C-25) = 5.42 m³
Área de forma = 93.89 m²

APROVAÇÃO:

PROJETO: ESTRUTURAL

PRANCHA: 02/05

DADOS DA OBRA:
PROPRIETÁRIO:
FUNDO MUNICIPAL DE SAÚDE DE PARANÃ TOCANTINS

END. DA OBRA:
Av. L Quadra 107 Lotes 4 e 5, PARANÃ-TO

OBRA:
AMPLIAÇÃO HOSPITAL TIA JUNIETA, PARANÃ - TO

CONTEUDO DA PRANCHA:
DETALHES DAS SAPATAS E VIGAS BALDRAMES

ESCALA:
INDICADA

QUADRO DE ÁREAS m²:
Conforme projeto arquitetônico

ENG. CIVIL JEFFERSON JAIME CASSOLI
CREA SP 506.140.52-70/D
JF PROJETOS & ASSESSORIA LTDA

FUNDO MUNICIPAL DE SAÚDE DE PARANÃ TOCANTINS
CNPJ: 13.108.698/0001-05

JF Projetos & Assessoria LTDA

PREFEITURA DE PARANÃ

DESENHO: PHELIPE

DATA: 11/2019