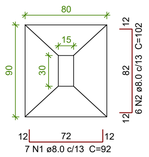
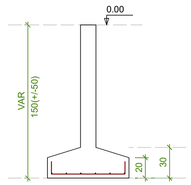
S4

PLANTA
ESC 1:30



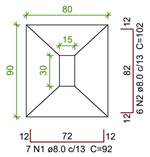
CORTE
ESC 1:30



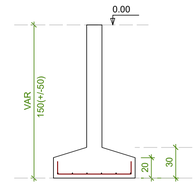
Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

S1=S2=S3=S5=S8

PLANTA
ESC 1:30



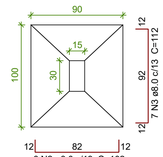
CORTE
ESC 1:30



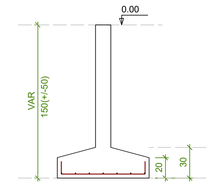
Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

S6=S7

PLANTA
ESC 1:30



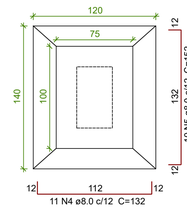
CORTE
ESC 1:30



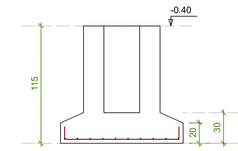
Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

SM16=SM20

PLANTA
ESC 1:30



CORTE
ESC 1:30



Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

Relação do aço

2xCálice PM1	2xCálice PM2	Cálice PM4
2xCálice PM16	5xS1	S4
2xS6	2xSM1	2xSM2
SM4	4xSM12	2xSM16

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	42	92	3864
	2	8.0	52	102	5304
	3	8.0	14	112	1568
	4	8.0	22	132	2904
	5	8.0	20	152	3040
	6	8.0	4	501	2004
	7	8.0	4	526	2104
	8	8.0	32	220	7040
	9	8.0	58	170	9860
	10	8.0	60	142	8520
	11	8.0	55	162	8910
	12	8.0	3	437	1311
	13	8.0	3	452	1356
	14	8.0	26	200	5200
	15	8.0	80	192	15360
	16	8.0	72	212	15264
	17	10.0	16	523	8368
	18	10.0	12	449	5388

Resumo do aço

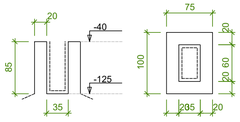
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	PESO + 10 % (kg)
CA50	8.0	936.1	86	406.3
	10.0	137.6	13	93.3

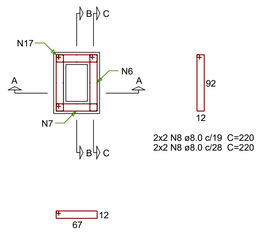
PESO TOTAL (kg)
CA50 499.6

Volume de concreto (C-25) = 14.17 m³
Área de forma = 73.53 m²

Cálice (PM16=PM20)

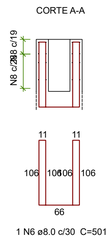
ESC 1:50





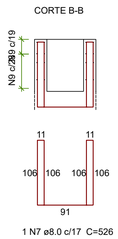
2x2 N8 ø8.0 c/19 C=220
2x2 N8 ø8.0 c/28 C=220

CORTE A-A



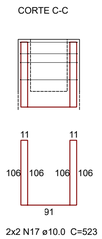
1 N6 ø8.0 c/30 C=501

CORTE B-B



1 N7 ø8.0 c/17 C=526

CORTE C-C

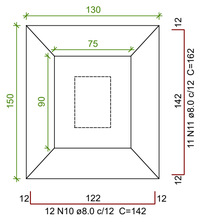


2x2 N17 ø10.0 C=523

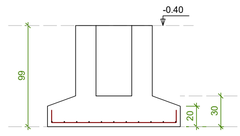
2x2 N9 ø8.0 c/19 C=170
2x2 N9 ø8.0 c/28 C=170

SM4

PLANTA
ESC 1:30



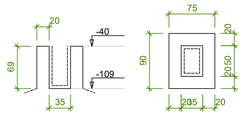
CORTE
ESC 1:30



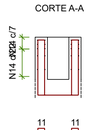
Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

Cálice PM4

ESC 1:50

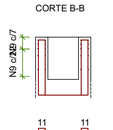


CORTE A-A



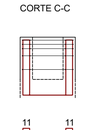
1 N12 ø8.0 c/25 C=437

CORTE B-B

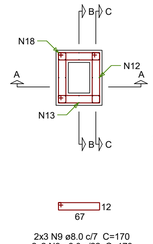


1 N13 ø8.0 c/17 C=452

CORTE C-C



2x2 N18 ø10.0 C=449

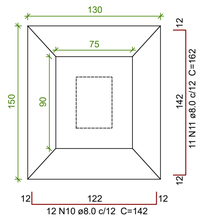


2x3 N14 ø8.0 c/7 C=200
2x2 N14 ø8.0 c/22 C=200

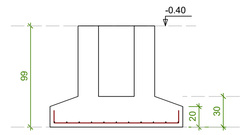
2x3 N9 ø8.0 c/7 C=170
2x2 N9 ø8.0 c/22 C=170

SM2=SM3

PLANTA
ESC 1:30



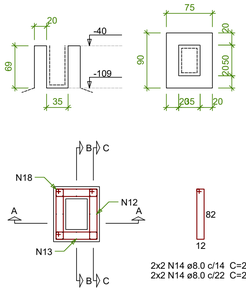
CORTE
ESC 1:30



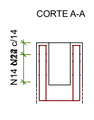
Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

Cálice (PM2=PM3)

ESC 1:50

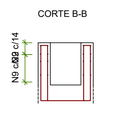


CORTE A-A



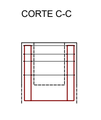
1 N12 ø8.0 c/25 C=437

CORTE B-B



1 N13 ø8.0 c/17 C=452

CORTE C-C



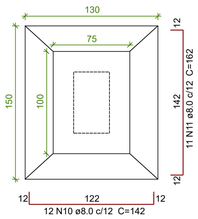
2x2 N18 ø10.0 C=449

2x2 N14 ø8.0 c/14 C=200
2x2 N14 ø8.0 c/22 C=200

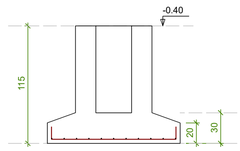
2x2 N9 ø8.0 c/14 C=170
2x2 N9 ø8.0 c/22 C=170

SM1=SM5

PLANTA
ESC 1:30



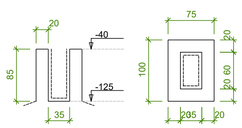
CORTE
ESC 1:30

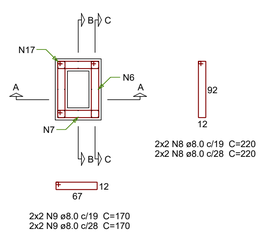


Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

Cálice (PM1=PM5)

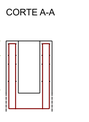
ESC 1:50





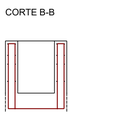
2x2 N8 ø8.0 c/19 C=220
2x2 N8 ø8.0 c/28 C=220

CORTE A-A



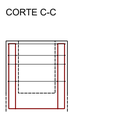
1 N6 ø8.0 c/30 C=501

CORTE B-B



1 N7 ø8.0 c/17 C=526

CORTE C-C

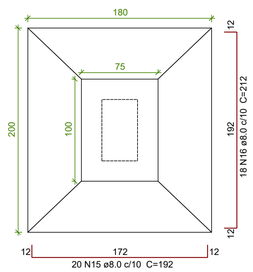


2x2 N17 ø10.0 C=523

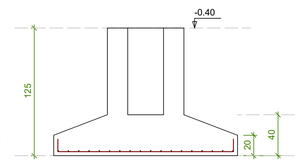
2x2 N9 ø8.0 c/19 C=170
2x2 N9 ø8.0 c/28 C=170

SM8=SM9=SM12=SM13

PLANTA
ESC 1:30



CORTE
ESC 1:30



Solo com capacidade de suporte > 1.40 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1800.00 kgf/m³

CARIMBOS E ANOTAÇÕES:

Engenharia DO PROJETO
ENGENHARIA E CONSTRUÇÕES
ECP ENGENHARIA LTDA - ME | CNPJ: 22.076.288/0001-10 | CREA PR 58554
RUA CAMPO LARGO, 177 - BAIRRO INDUSTRIAL - FRANCISCO BELTRÃO / PR - 46.3057 4411
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CREA PR-144725/D
CREA SC-148171-8

AUTOR DO PROJETO:
EVANDRO CORDEIRO PINTO
ENGENHEIRO CIVIL - CREA PR-144725/D

RESPONSÁVEL TÉCNICO - OBRA:

PROPRIETÁRIO:
MUNICÍPIO DE IPUAÇU
95.993.028/0001-83

TIPO:
PROJETO ESTRUTRAL

OBRA:
GINÁSIO MUNICIPAL

ÁREA:
766,68 M²

PROPRIETÁRIO:
MUNICÍPIO DE IPUAÇU

LOCALIZAÇÃO:
RUA ARISTIDES XAVIER DOS SANTOS / RUA NEORI DOMINGOS RABAIOLI - IPUAÇUÚ SC

REFERENCIA:
ARMAÇÃO DAS FUNDAÇÃO - SAPATAS E CÁLICES

ESCALA: INDICADA
ART Nº: 6426100-6
DESENHO / CAD: E.C.P.
DATA: DEZEMBRO / 2017

PROJETO: 0334
TIPO: ES
FOLHA: 6 / 11