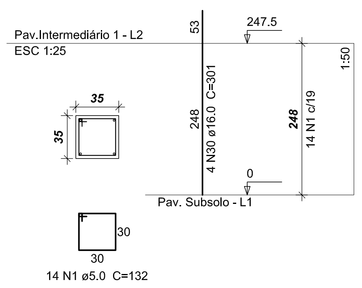
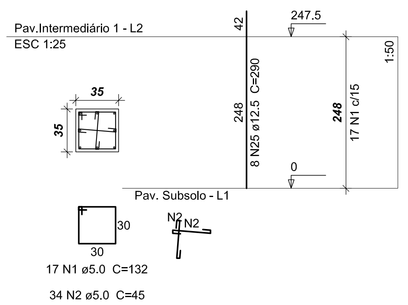
P100=P101=P104=P105
=P106=P109=P115=P138
=P148=P154=P164=P180
=P199=P207=P208



14 N1 ø5.0 C=132

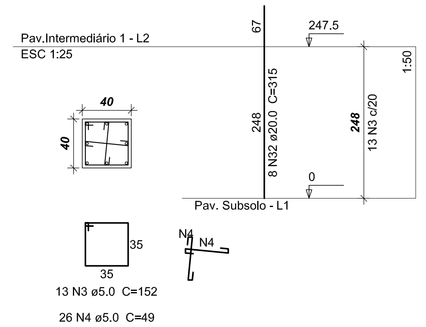
P102=P103=P132=P158=P174



17 N1 ø5.0 C=132

34 N2 ø5.0 C=45

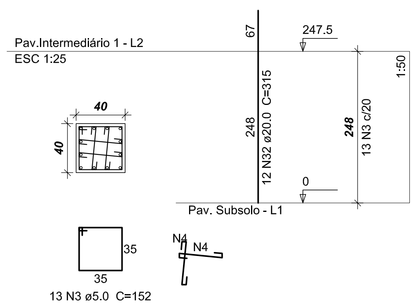
P110=P113=P152



13 N3 ø5.0 C=152

26 N4 ø5.0 C=49

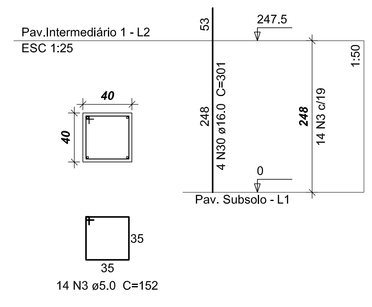
P111=P112=P133=P134=P135=P136=P149=P150
=P151=P159=P161=P162=P178



13 N3 ø5.0 C=152

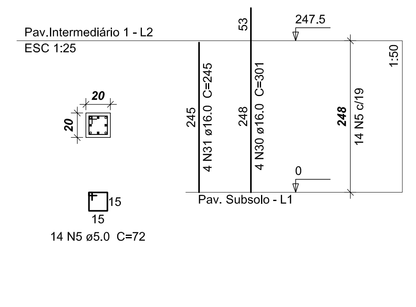
52 N4 ø5.0 C=49

P114



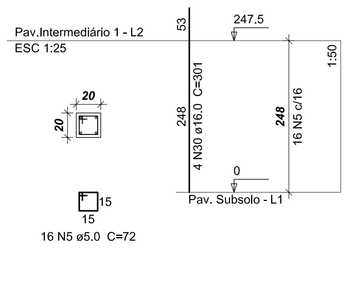
14 N3 ø5.0 C=152

P118=P128



14 N5 ø5.0 C=72

P68



16 N5 ø5.0 C=72

Relação do aço

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	354	132	46728
	2	5.0	170	45	7650
	3	5.0	313	152	47576
	4	5.0	806	49	39494
	5	5.0	655	72	47160
	6	5.0	102	50	5100
	7	5.0	504	112	56448
	8	5.0	1715	40	68600
	9	5.0	84	40	3360
	10	5.0	56	50	2800
	11	5.0	28	45	1260
	12	5.0	189	112	21168
	13	5.0	189	30	5670
	14	5.0	527	222	116994
	15	5.0	21	80	1680
	16	5.0	14	242	3388
CA50	17	6.3	26	152	3952
	18	6.3	25	72	1800
	19	10.0	92	281	25852
	20	10.0	28	245	6860
	21	10.0	8	121	968
	22	10.0	16	183	2928
	23	10.0	4	67	268
	24	10.0	4	59	236
	25	12.5	498	290	144420
	26	12.5	20	245	4900
	27	12.5	72	281	20232
	28	12.5	8	121	968
	29	12.5	8	183	1464
	30	16.0	124	301	37324
	31	16.0	20	245	4900
	32	20.0	212	315	66780
	33	25.0	24	331	7944

Resumo do aço

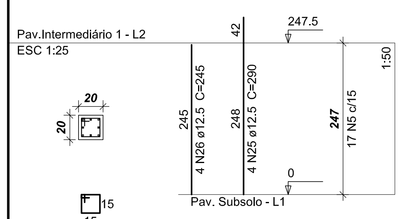
AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	6.3	57.6	14.1
	10.0	371.2	228.8
	12.5	1719.9	1656.8
	16.0	422.3	666.4
	20.0	667.8	1646.9
	25.0	79.5	306.1
CA60	5.0	4750.8	732.3
PESO TOTAL			
CA50	4519.1		
CA60	732.3		

Vol. de concreto total (C-30) = 58.53 m³

Área de forma total = 668.33 m²

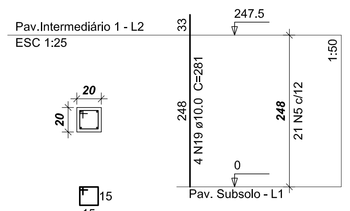
A FERRAGEM DOS PILARES DO MURO DE ARRIMO (PA) ESTÃO QUANTIFICADOS NA PRANCHA 06 - ESPERA DOS PILARES -
VOLUME DE CONCRETO E ÁREA DE FORMA INCLUIDO NESTA PRANCHA

P120=P122=P124=P126



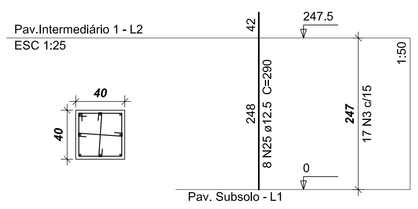
17 N5 ø5.0 C=72

P13=P16=P20=P21
=P26=P28=P32=P34=P36
=P38=P41=P43=P55=P56
=P74=P76=P77=P80 =P87



21 N5 ø5.0 C=72

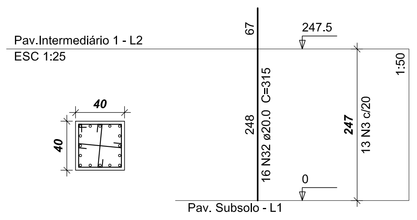
P137=P153=P163



17 N3 ø5.0 C=152

34 N6 ø5.0 C=50

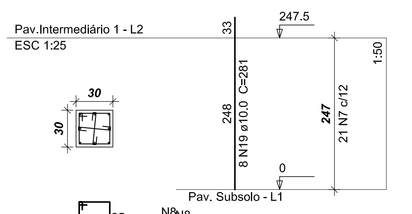
P160=P175



13 N3 ø5.0 C=152

26 N4 ø5.0 C=49

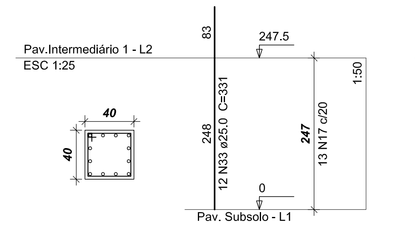
P172



21 N7 ø5.0 C=112

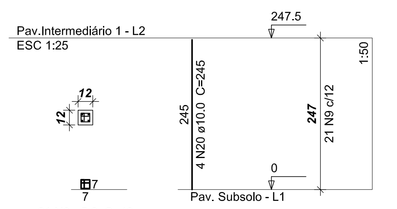
42 N8 ø5.0 C=40

P176=P177



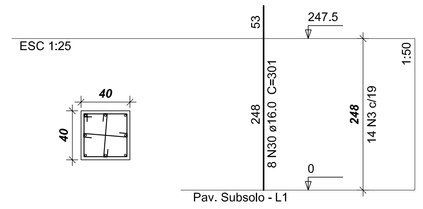
13 N17 ø6.3 C=152

P185=P188=P192=P195



21 N9 ø5.0 C=40

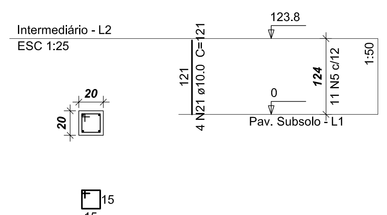
P179



14 N3 ø5.0 C=152

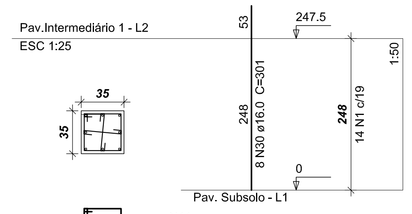
28 N10 ø5.0 C=50

P2=P3



11 N5 ø5.0 C=72

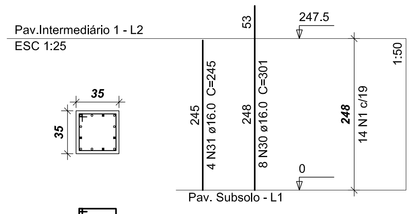
P200



14 N1 ø5.0 C=132

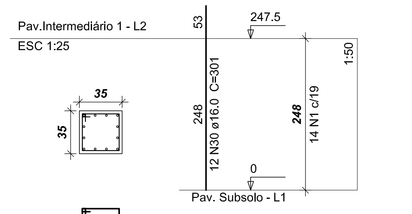
28 N11 ø5.0 C=45

P202



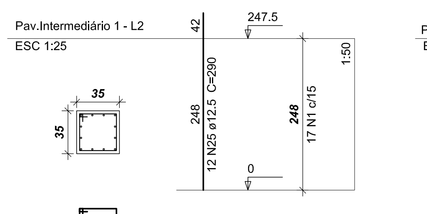
14 N1 ø5.0 C=132

P204



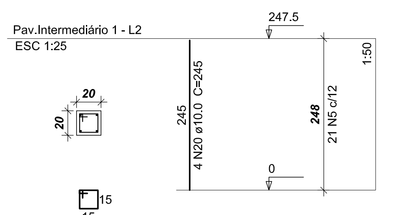
14 N1 ø5.0 C=132

P205



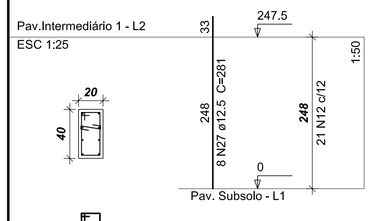
17 N1 ø5.0 C=132

P30=P54=P83



21 N5 ø5.0 C=72

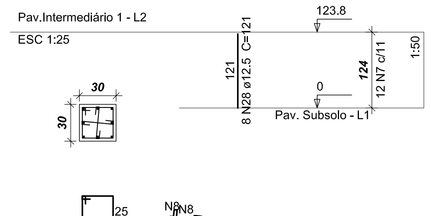
P4=P8=P19=P24=P39=P44
=P139=P155=P157



21 N12 ø5.0 C=112

21 N13 ø5.0 C=30

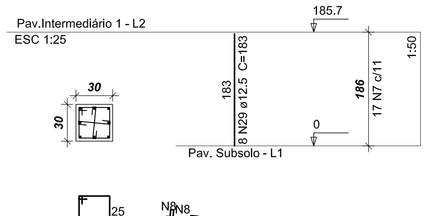
P46



12 N7 ø5.0 C=112

24 N8 ø5.0 C=40

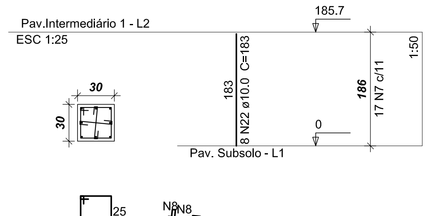
P47



17 N7 ø5.0 C=112

34 N8 ø5.0 C=40

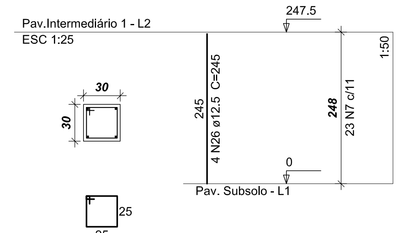
P48



17 N7 ø5.0 C=112

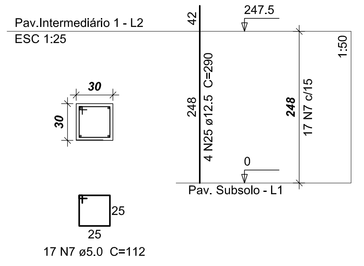
34 N8 ø5.0 C=40

P49



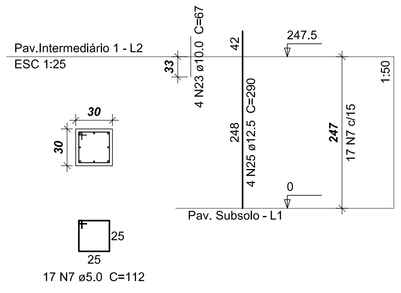
23 N7 ø5.0 C=112

P50=P51=P117=P119=P121=P123=P125=P127
=P129=P141=P142=P143=P144=P145=P146=P147
=P166=P167=P168=P169=P170=P171



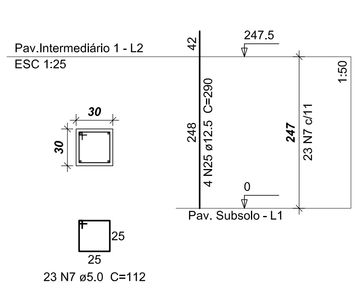
17 N7 ø5.0 C=112

P52



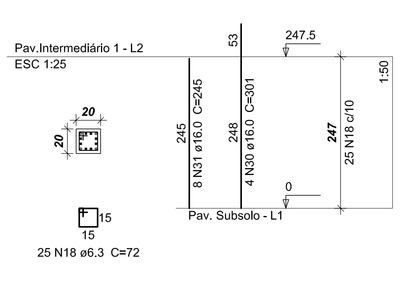
17 N7 ø5.0 C=112

P53



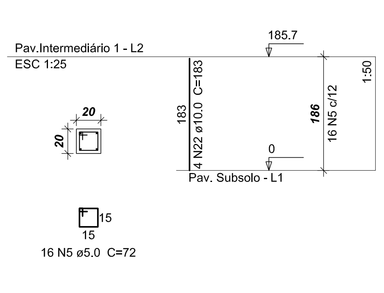
23 N7 ø5.0 C=112

P69



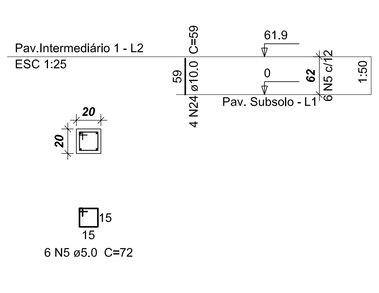
25 N18 ø6.3 C=72

P7=P9



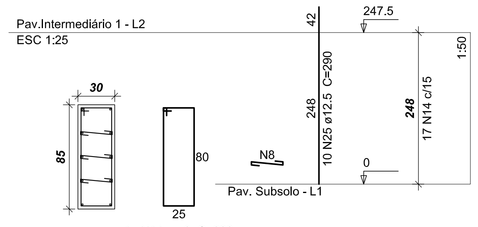
16 N5 ø5.0 C=72

P70



6 N5 ø5.0 C=72

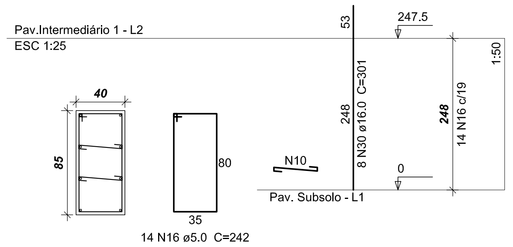
P71=P72=P73=P75=P78=P79=P82=P85=P88=P89
=P90=P91=P93=P95=P97=P183=P184=P186=P187
=P189=P190=P191=P193=P194=P196=P197=P198
=P201=P203=P206=P209



17 N14 ø5.0 C=222

51 N8 ø5.0 C=40

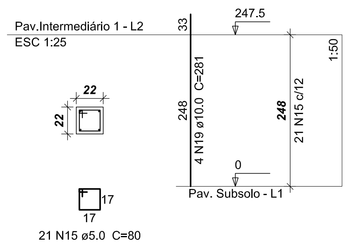
P99



14 N16 ø5.0 C=242

28 N10 ø5.0 C=50

P81



21 N15 ø5.0 C=80

AS BUILT PROJETOS
Rua Jovino do Rosário, 1564 – Boa Vista
CEP 82560-435 – Curitiba – Paraná

OBRA: GALPÃO DE ENGENHARIA – TEÓFILO OTONI
PROPRIETÁRIO: UNIVERSIDADE DOS VALES DO JEQUITINHONHA E MUCURI – UFVJM
ENDEREÇO: AVENIDA DR. LUIS BOALI PORTO SALMAN, S/Nº – BAIRRO IPIRANGA – TEÓFILO OTONI/MG

PROJETO ESTRUTURAL

REFERÊNCIA: FERRAGEM DOS PILARES: NO PAVIMENTO SUBSOLO

PRANCHA: EST 13/20

ARQUIVO:

DESENHO: CARLOS

DATA: 27/09/2012

ESCALA: INDICADA

AUTOR DO PROJETO: ENG. CIVIL CARLOS HENRIQUE DE S. GONÇALVES CREA: 7.982-D/PR