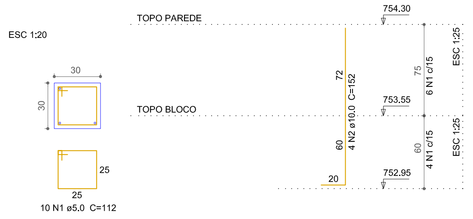
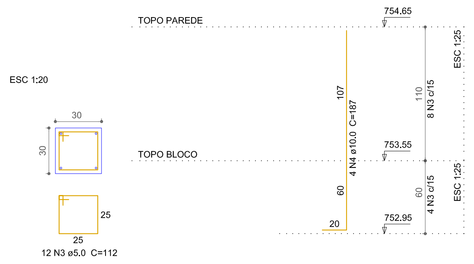
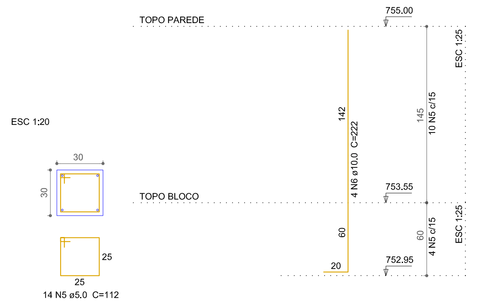
P1



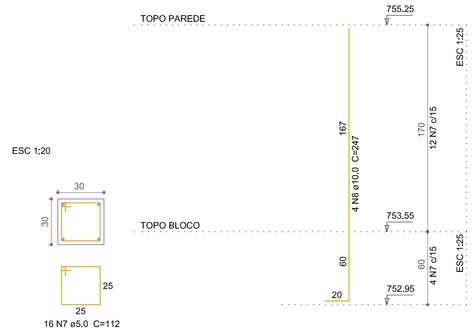
P2



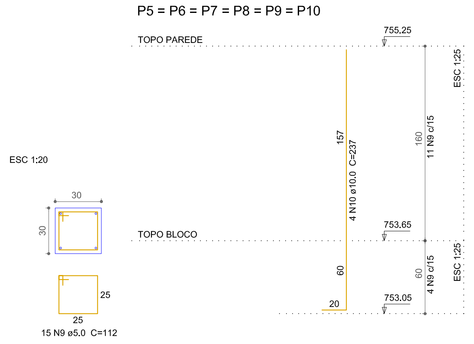
P3



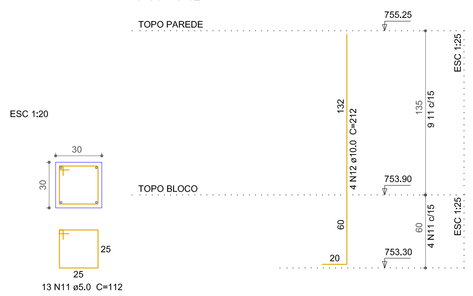
P4



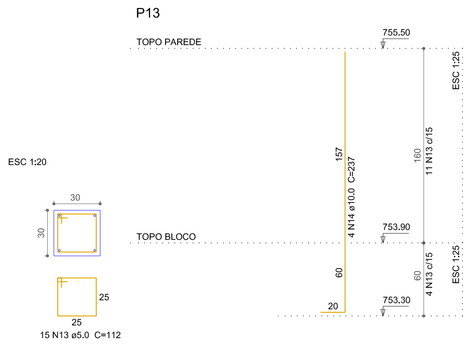
P5 = P6 = P7 = P8 = P9 = P10



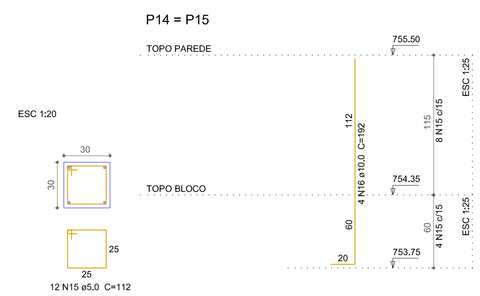
P11 = P12



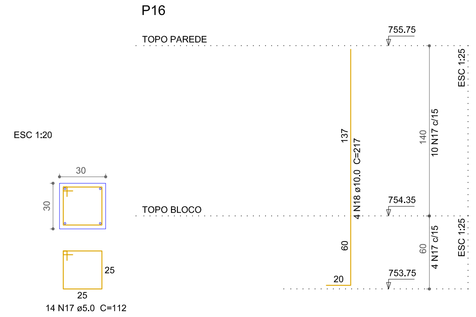
P13



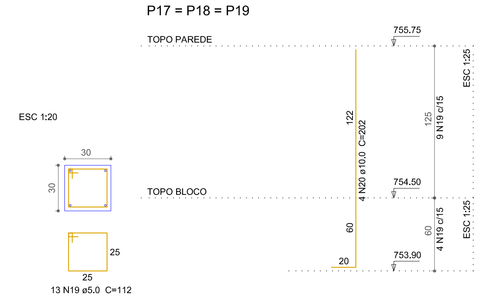
P14 = P15



P16



P17 = P18 = P19



P20

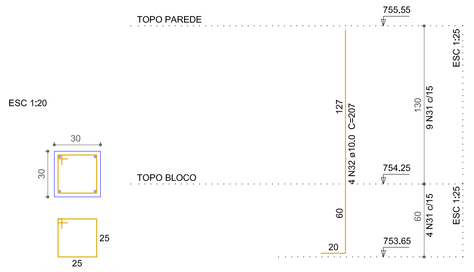
P21

P22 = P23 = P24 = P25 = P26

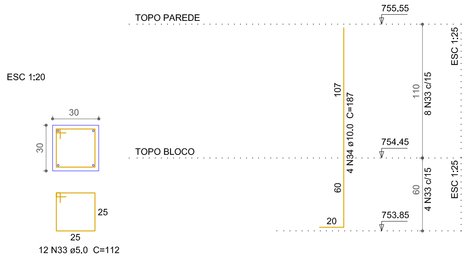
P27 = P28

P29 = P30 = P31

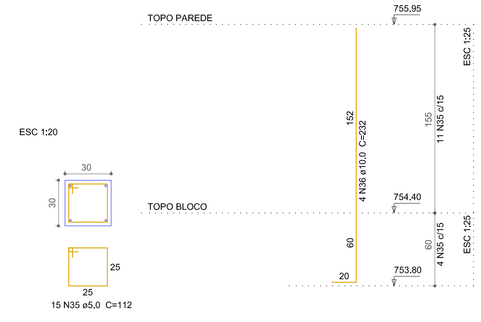
P32



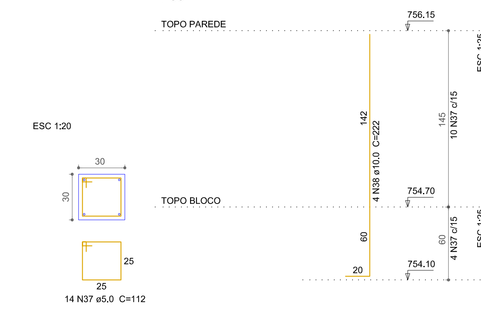
P33 = P34



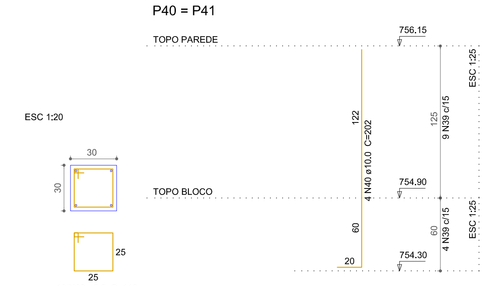
P35 = P36 = P37 = P38



P39



P40 = P41



DETALHAMENTO PILARES

Relação do aço

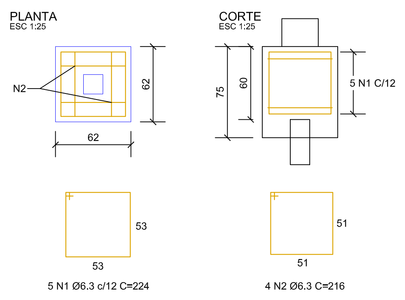
ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
P1	CA60	1	5.0	10	112	1120
	CA50	2	10.0	4	152	608
P2	CA60	3	5.0	12	112	1344
	CA50	4	10.0	4	187	748
P3	CA60	5	5.0	14	112	1568
	CA50	6	10.0	4	222	888
P4	CA60	7	5.0	16	112	1792
	CA50	8	10.0	4	247	988
P5	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P6	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P7	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P8	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P9	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P10	CA60	9	5.0	15	112	1680
	CA50	10	10.0	4	237	948
P11	CA60	11	5.0	13	112	1456
	CA50	12	10.0	4	212	848
P12	CA60	11	5.0	13	112	1456
	CA50	12	10.0	4	212	848
P13	CA60	13	5.0	15	112	1680
	CA50	14	10.0	4	237	948
P14	CA60	15	5.0	12	112	1344
	CA50	16	10.0	4	192	768
P15	CA60	15	5.0	12	112	1344
	CA50	16	10.0	4	192	768
P16	CA60	17	5.0	14	112	1568
	CA50	18	10.0	4	217	868
P17	CA60	19	5.0	13	112	1456
	CA50	20	10.0	4	202	808
P18	CA60	19	5.0	13	112	1456
	CA50	20	10.0	4	202	808
P19	CA60	19	5.0	13	112	1456
	CA50	20	10.0	4	202	808
P20	CA60	21	5.0	11	112	1232
	CA50	22	10.0	4	167	668
P21	CA60	23	5.0	13	112	1456
	CA50	24	10.0	4	202	808
P22	CA60	25	5.0	16	112	1792
	CA50	26	10.0	4	242	968
P23	CA60	25	5.0	16	112	1792
	CA50	26	10.0	4	242	968
P24	CA60	25	5.0	16	112	1792
	CA50	26	10.0	4	242	968
P25	CA60	25	5.0	16	112	1792
	CA50	26	10.0	4	242	968
P26	CA60	25	5.0	16	112	1792
	CA50	26	10.0	4	242	968
P27	CA60	27	5.0	13	112	1456
	CA50	28	10.0	4	207	828
P28	CA60	27	5.0	13	112	1456
	CA50	28	10.0	4	207	828
P29	CA60	29	5.0	11	112	1232
	CA50	30	10.0	4	177	708
P30	CA60	29	5.0	11	112	1232
	CA50	30	10.0	4	177	708
P31	CA60	29	5.0	11	112	1232
	CA50	30	10.0	4	177	708
P32	CA60	31	5.0	13	112	1456
	CA50	32	10.0	4	207	828
P33	CA60	33	5.0	12	112	1344
	CA50	34	10.0	4	187	748
P34	CA60	33	5.0	12	112	1344
	CA50	34	10.0	4	187	748
P35	CA60	35	5.0	15	112	1680
	CA50	36	10.0	4	232	928
P36	CA60	35	5.0	15	112	1680
	CA50	36	10.0	4	232	928
P37	CA60	35	5.0	15	112	1680
	CA50	36	10.0	4	232	928
P38	CA60	35	5.0	15	112	1680
	CA50	36	10.0	4	232	928
P39	CA60	37	5.0	14	112	1568
	CA50	38	10.0	4	222	888
P40	CA60	39	5.0	13	112	1456
	CA50	40	10.0	4	202	808
P41	CA60	39	5.0	13	112	1456
	CA50	40	10.0	4	202	808

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	344.9	234.1
CA60	5.0	627.2	106.2
PESO TOTAL			
CA50	234.1		
CA60	106.2		

Vol. de concreto total (C-30) = 5.02 m³
Área de forma total = 33.48 m²

B1 = B2 = B3 = B4 = B5 = B6 = B7 = B8 = B9 = B10 = B11
B12 = B13 = B14 = B15 = B16 = B17 = B18 = B19 = B20 = B21
B22 = B23 = B24 = B25 = B26 = B27 = B28 = B29 = B30 = B31
B32 = B33 = B34 = B35 = B36 = B37 = B38 = B39 = B40 = B41



DETALHAMENTO BLOCOS

Relação do aço

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
B1	CA50	1	6.3	5	224	1120
	CA50	2	6.3	4	216	864

Resumo do aço

x41

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	813.4	219.2
PESO TOTAL			
CA50	219.2		

Vol. de concreto total (C-30) = 11.82 m³
Área de forma total = 76.26 m²

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engenharia@patobranco.pr.gov.br

PROJETO ESTRUTURAL
PREFEITURA MUNICIPAL DE PATO BRANCO
TERMINAL URBANO - MURO EXTERNO
DETALHAMENTO BLOCOS E PILARES
ALANA PAULA MOLHMANN — ENGENHEIRA CREA/PR 130.470
JORGE EDUARDO CHIOQUETA — ENGENHEIRO CREA/PR 128.426/D

FOLHA 04/05
DATA NOV/2022
ESCALA INDICADA
DESENHO