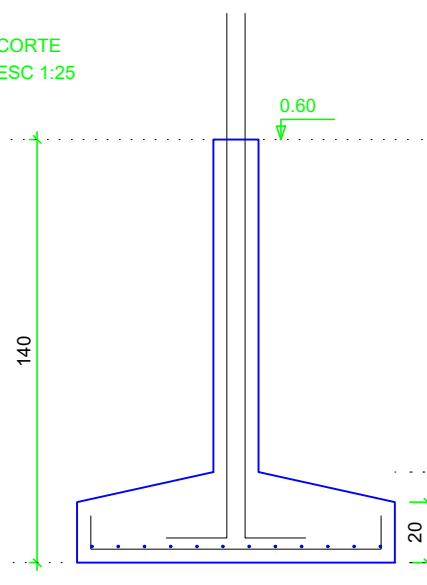
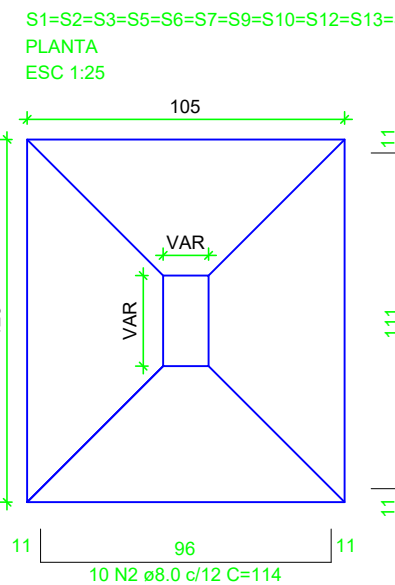
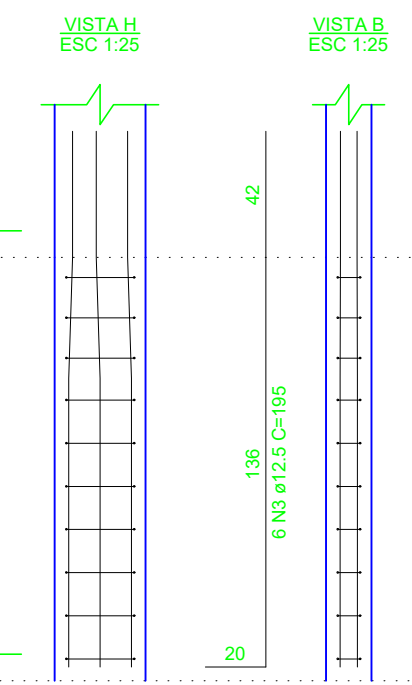
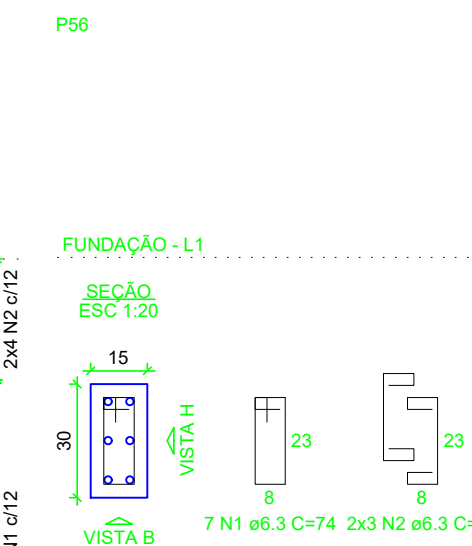
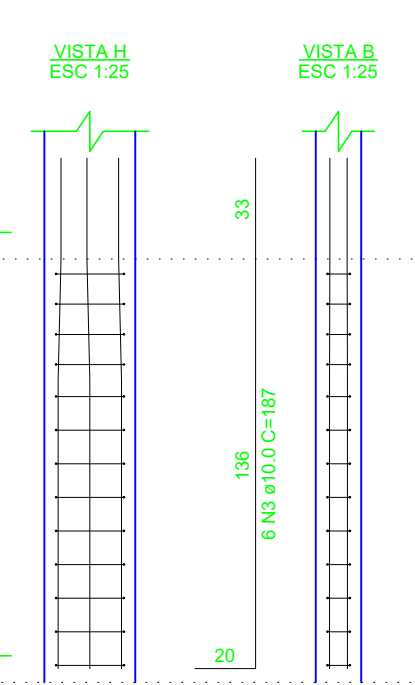
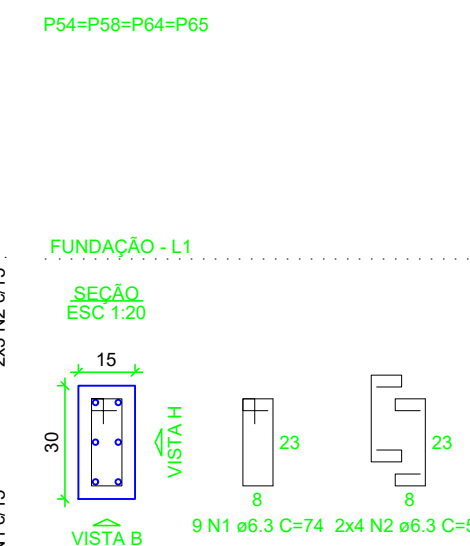
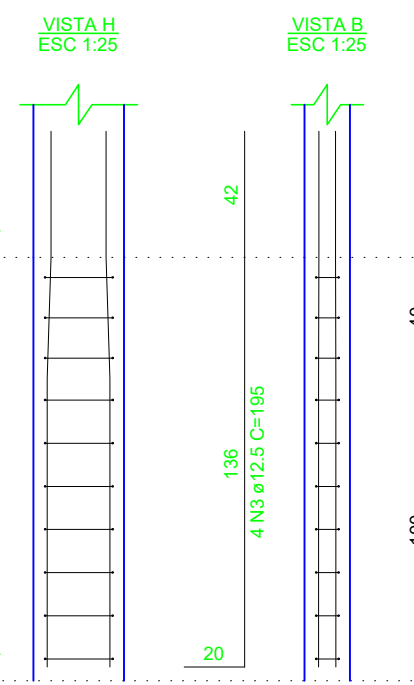
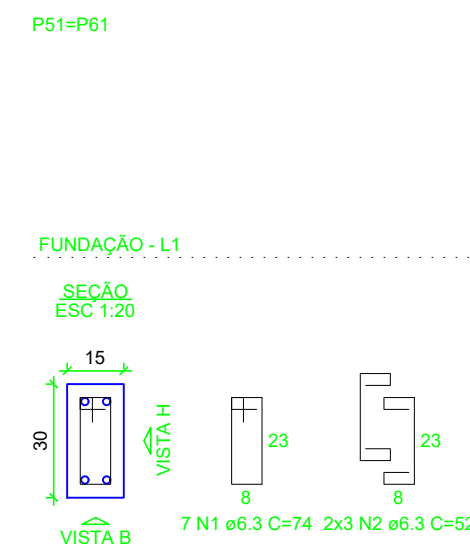
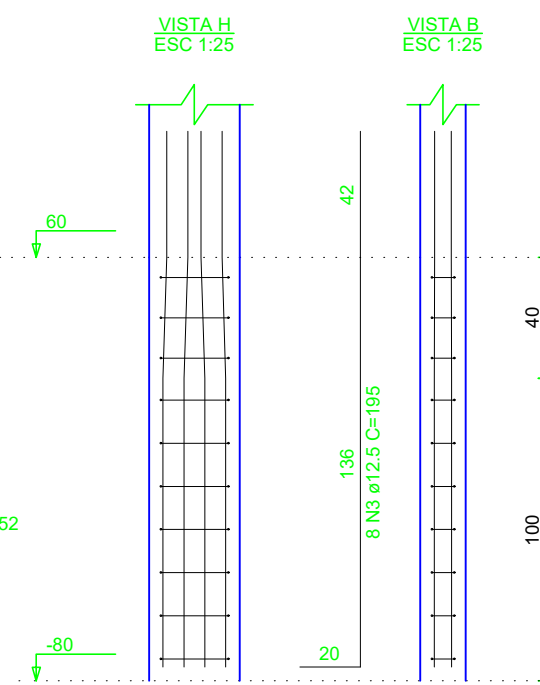
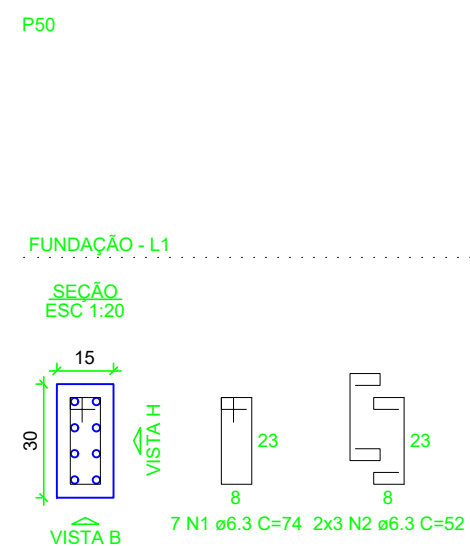
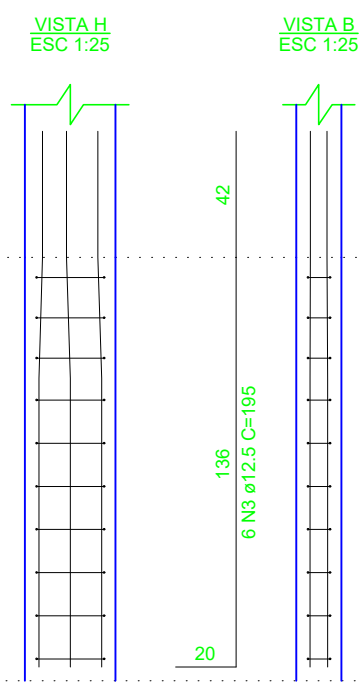
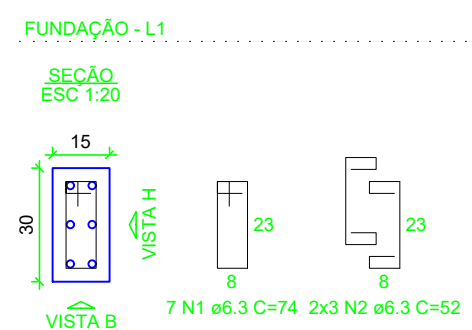


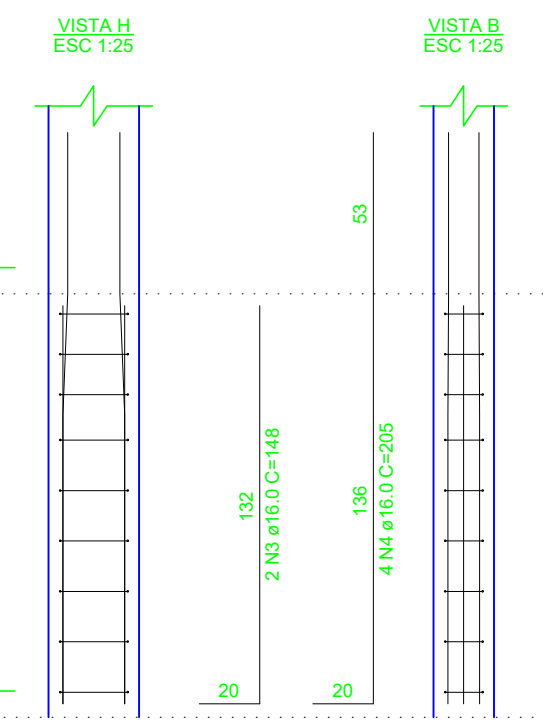
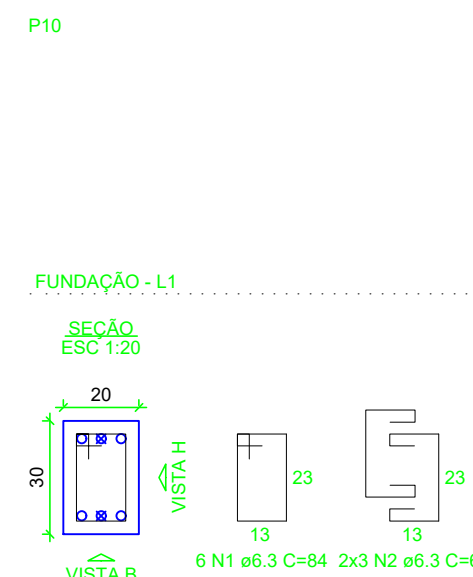
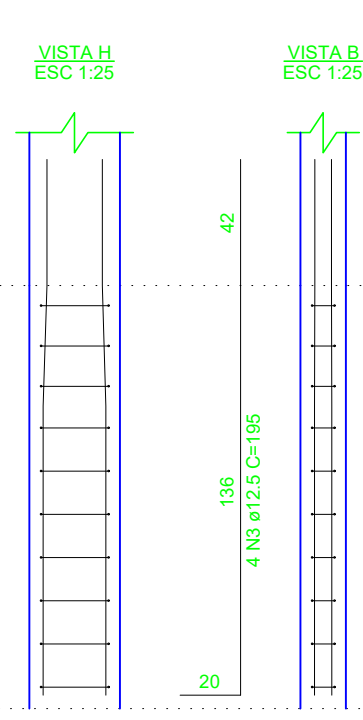
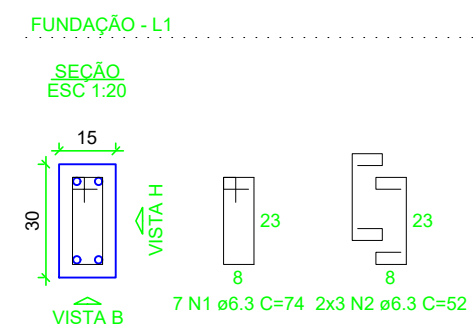
RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
6xP16	CA50	1	6.3	60	64	3840
	CA50	2	6.3	36	47	1692
	CA50	3	10.0	24	187	4488
	CA50	1	6.3	198	14	14652
22xP22	CA50	2	6.3	176	52	9152
	CA50	3	10.0	88	187	16456
	CA50	2	6.3	12	52	624
	CA50	1	6.3	21	74	1554
3xP41	CA50	2	6.3	18	52	936
	CA50	3	10.0	88	187	16456
	CA50	2	6.3	14	74	1036
	CA50	1	6.3	14	74	1036
2xP49	CA50	1	6.3	7	74	518
	CA50	2	6.3	7	74	518
	CA50	3	12.5	8	195	1560
	CA50	1	6.3	14	74	1036
P50	CA50	3	12.5	12	195	2340
	CA50	2	6.3	7	74	518
	CA50	1	6.3	14	74	1036
	CA50	3	12.5	8	195	1560
2xP51	CA50	3	12.5	8	195	1560
	CA50	2	6.3	12	52	624
	CA50	1	6.3	14	74	1036
	CA50	3	12.5	8	195	1560
4xP54	CA50	1	6.3	36	74	2664
	CA50	2	6.3	32	52	1664
	CA50	3	10.0	24	187	4488
	CA50	1	6.3	7	74	518
P56	CA50	2	6.3	6	52	312
	CA50	3	12.5	6	195	1170
	CA50	1	8.0	246	74	18204
41xS22	CA50	2	8.0	246	69	21894

RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA50	6.3	411.3	38	12 m	110.7
	8.0	401	37	12 m	174
	10.0	254.3	24	12 m	172.5
	12.5	66.3	7	12 m	70.3
	16.0	36.9	4	12 m	64.1
PESO TOTAL (kg)					
CA50		591.6			
Volume de concreto (C-30) = 6.47 m³					
Área de forma = 76.45 m²					

P49=P63



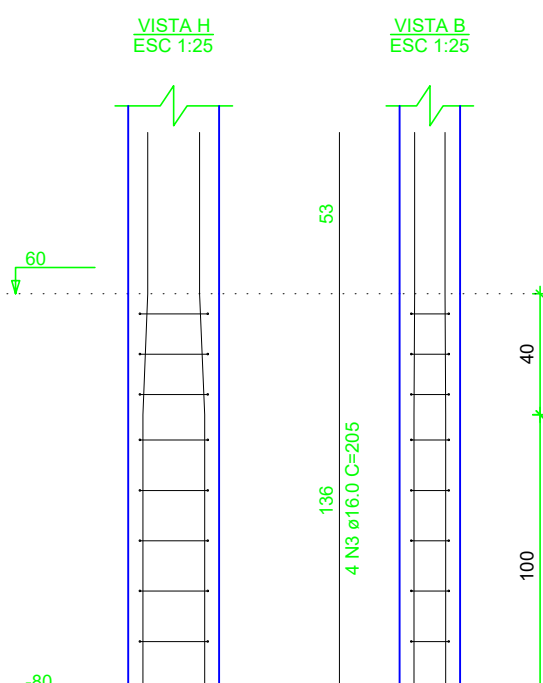
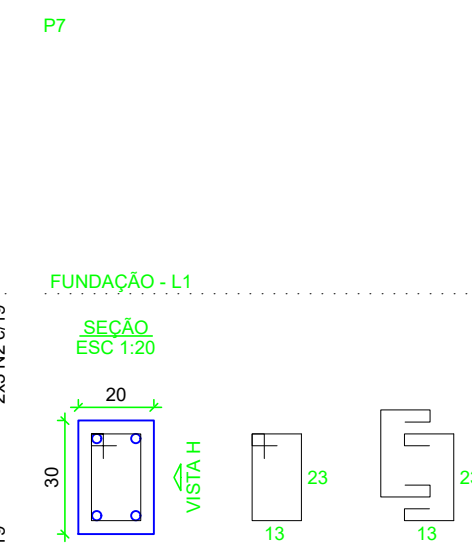
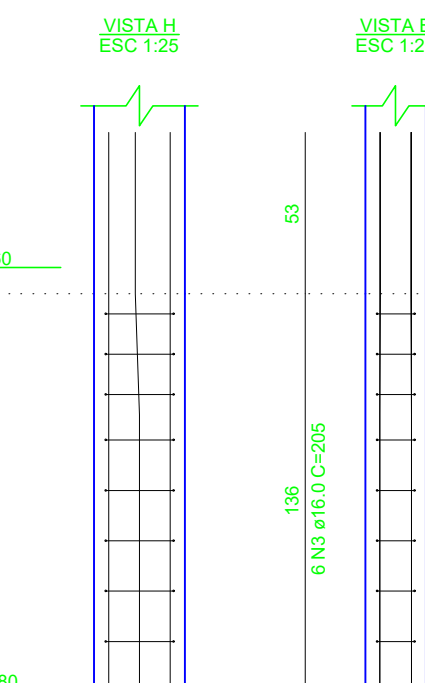
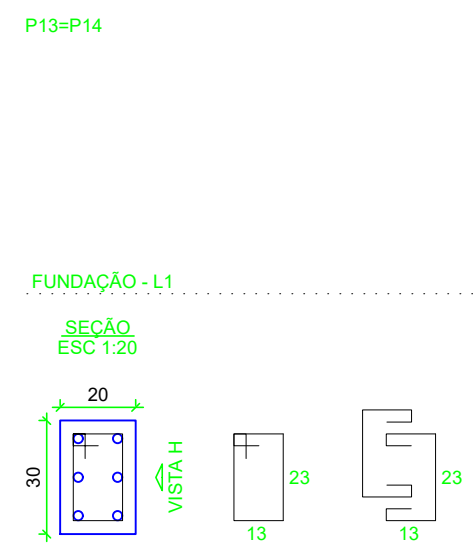
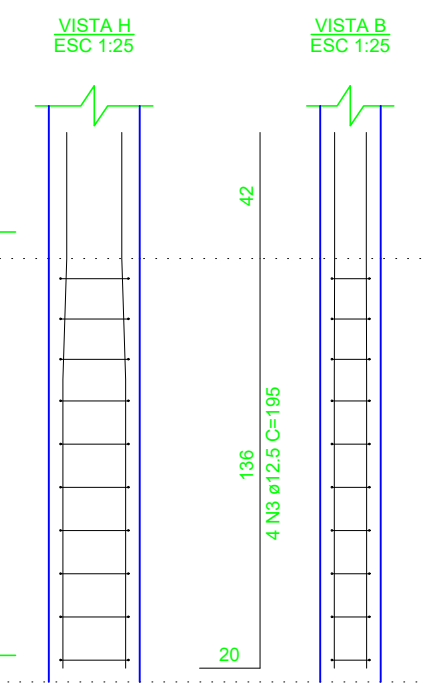
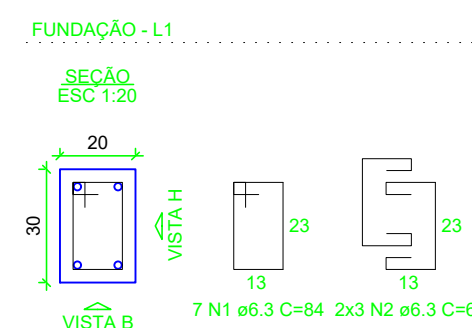
P1=P2=P3=P5=P9



RELAÇÃO DO AÇO					
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)
5xP1	CA50	1	6.3	35	74
	CA50	2	6.3	30	52
	CA50	3	12.5	20	195
	CA50	1	6.3	14	84
2xP6	CA50	2	6.3	12	62
	CA50	3	12.5	8	185
	CA50	2	6.3	6	84
	CA50	1	6.3	6	62
P7	CA50	3	12.5	4	205
	CA50	2	6.3	6	84
	CA50	1	6.3	6	62
	CA50	3	12.5	4	205
P10	CA50	3	12.5	4	205
	CA50	2	6.3	6	84
	CA50	1	6.3	6	62
	CA50	3	12.5	4	205
2xP13	CA50	1	6.3	12	84
	CA50	2	6.3	12	62
	CA50	3	12.5	2	148
	CA50	1	6.3	6	62
11xS1	CA50	1	6.3	132	130
	CA50	2	8.0	110	114
	CA50	3	12.5	205	2460
	CA50	1	6.3	132	130

RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	267.3	25	72
	8.0	125.4	12	54.4
	12.5	54.6	6	57.9
	16.0	44	5	76.3
PESO TOTAL (kg)				
CA50		260.6		
Volume de concreto (C-30) = 4.16 m³				
Área de forma = 24.60 m²				

P6=P12



 INSTITUTO FEDERAL Baiano		 JRC ENGENHARIA PROJETOS E CONSULTORIA		FOLHA: <b>05/13</b> A1		
<b>PROJETO ESTRUTURAL</b>						
OBRAS: AMPLIAÇÃO DO INSTITUTO FEDERAL DE EDUCAÇÃO, CIENCIA E TECNOLOGIA BAIANO DE GUANAMBI						
LOCAL:	PERÍMETRO IRRIGADO DE CERAMIA, ZONA RURAL, GUANAMBI - BA			ÁREAS:		
PROP.:	INSTITUTO FEDERAL DE EDUCAÇÃO, CIENCIA E TECNOLOGIA BAIANO CAMPUS GUANAMBI-BA			- REFORMA: 511,75m² - AMPLIADA: 471,04m² - PASSEIO E RAMPA: 188,70m² - PÁTIO DE MANOBRAS: 381,25m²		
CONTEÚDO:	SAPATAS E TÓCOS DE PILARES					
RESP. TÉCN. PROJETO:	José Carlos Lellis Reis Engº Civil - CREA 05/1190		PROPRIETÁRIO:			
CONTRATO	2018NER00351		ESCALA:	INDICADA		
DATA:	SETEMBRO/2019					