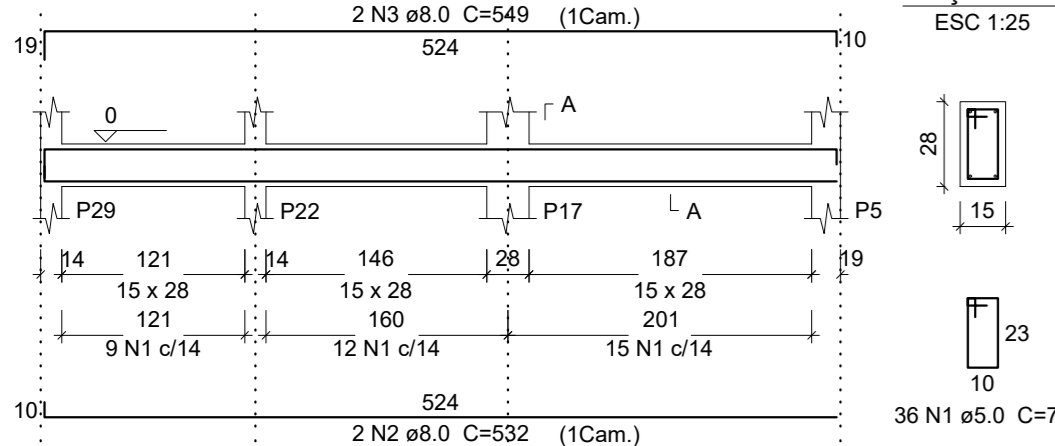
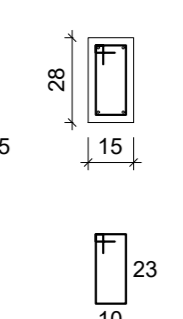


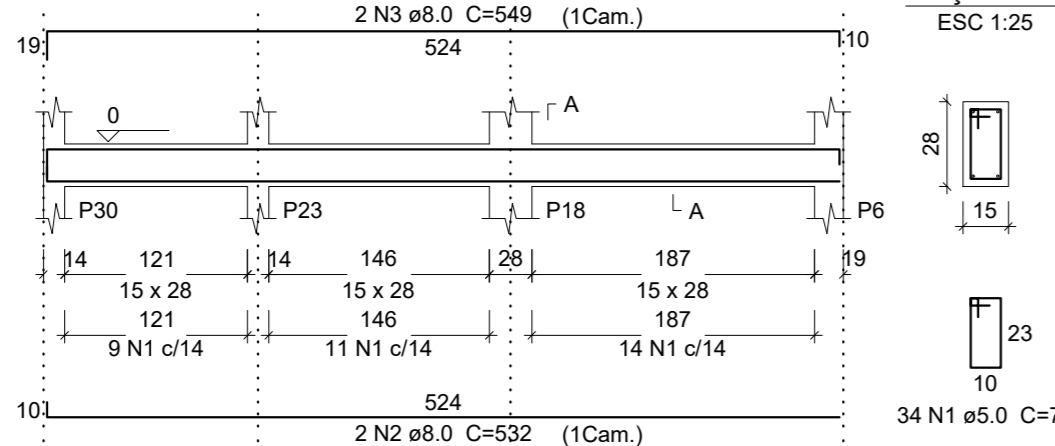
V119
ESC 1:50



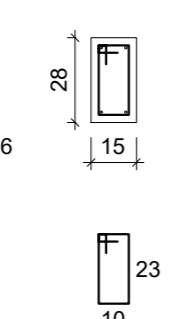
SEÇÃO A-A
ESC 1:25



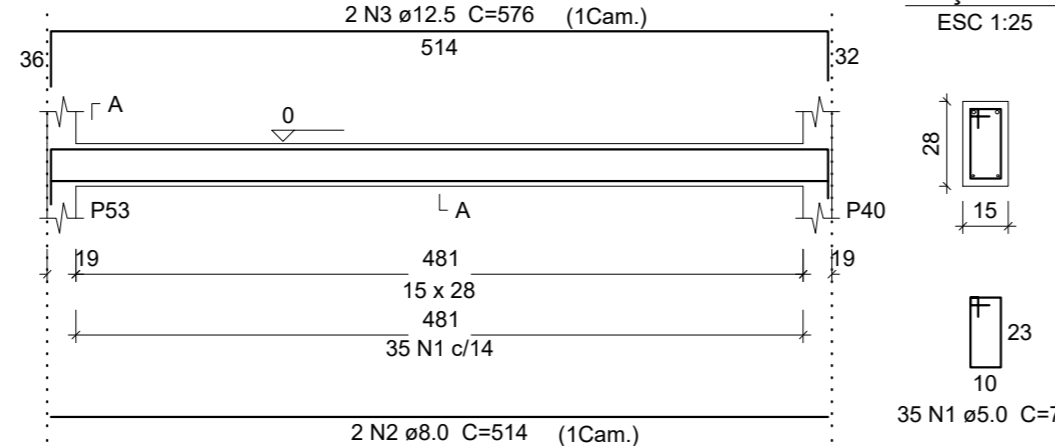
V120
ESC 1:50



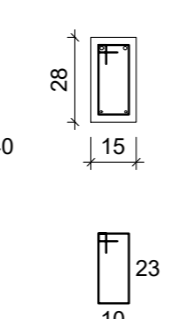
SEÇÃO A-A
ESC 1:25



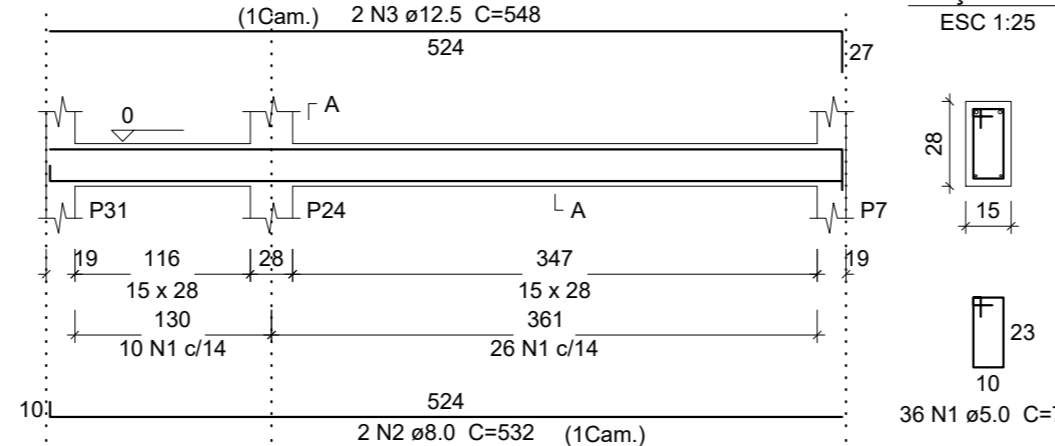
V121
ESC 1:50



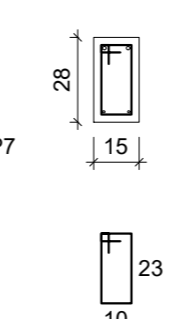
SEÇÃO A-A
ESC 1:25



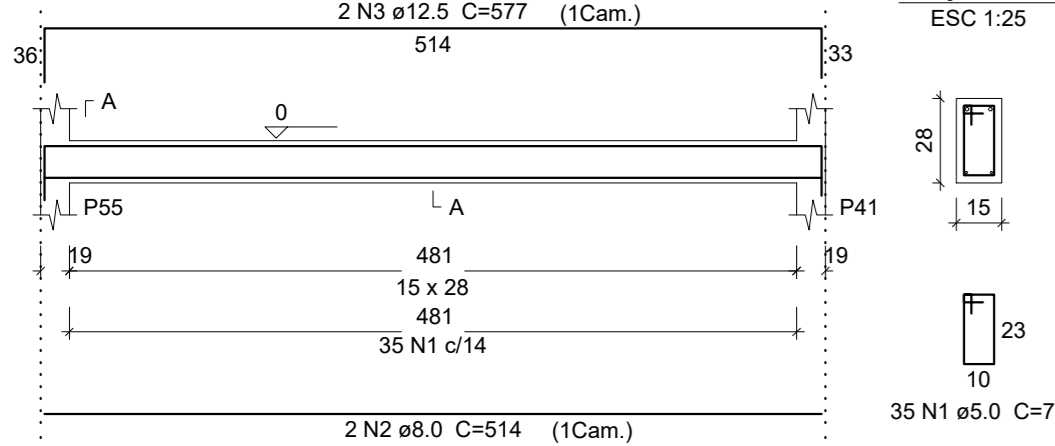
V122
ESC 1:50



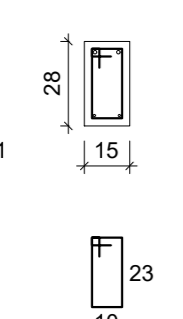
SEÇÃO A-A
ESC 1:25



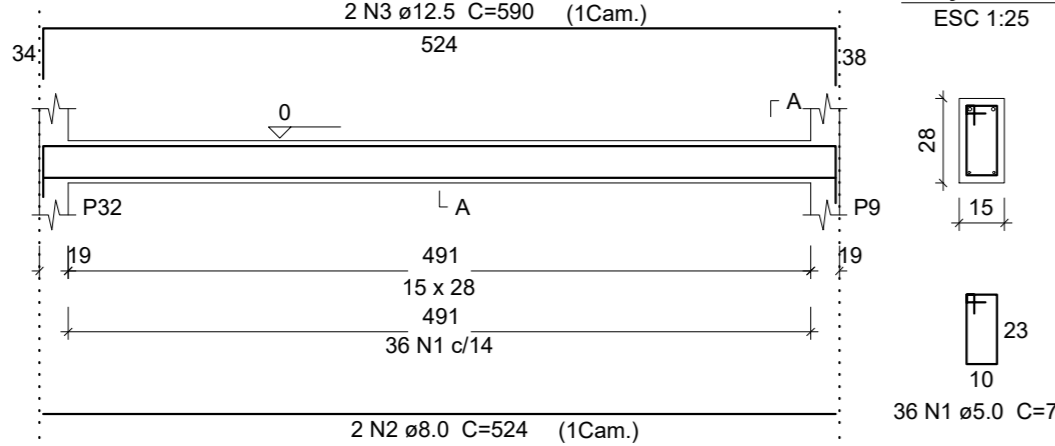
V123
ESC 1:50



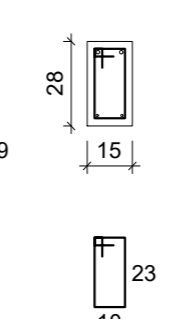
SEÇÃO A-A
ESC 1:25



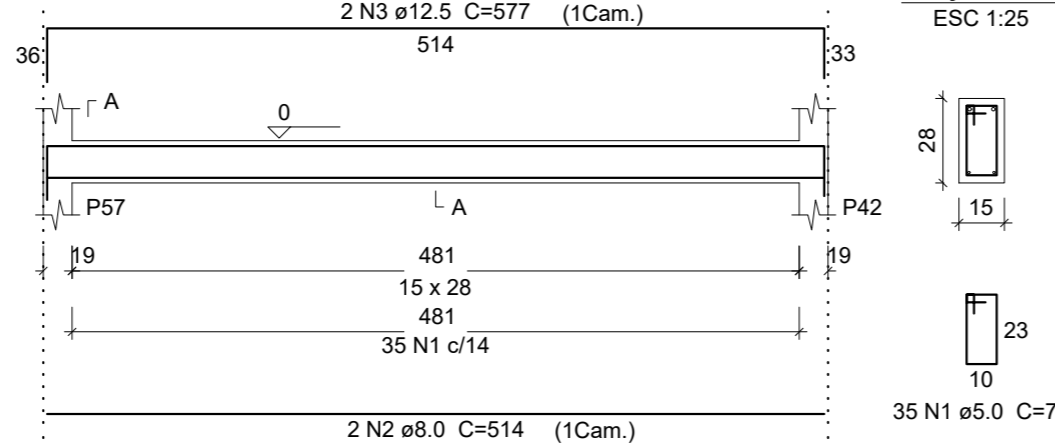
V124
ESC 1:50



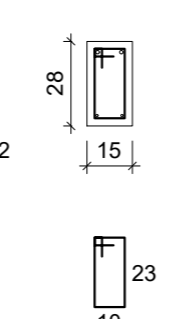
SEÇÃO A-A
ESC 1:25



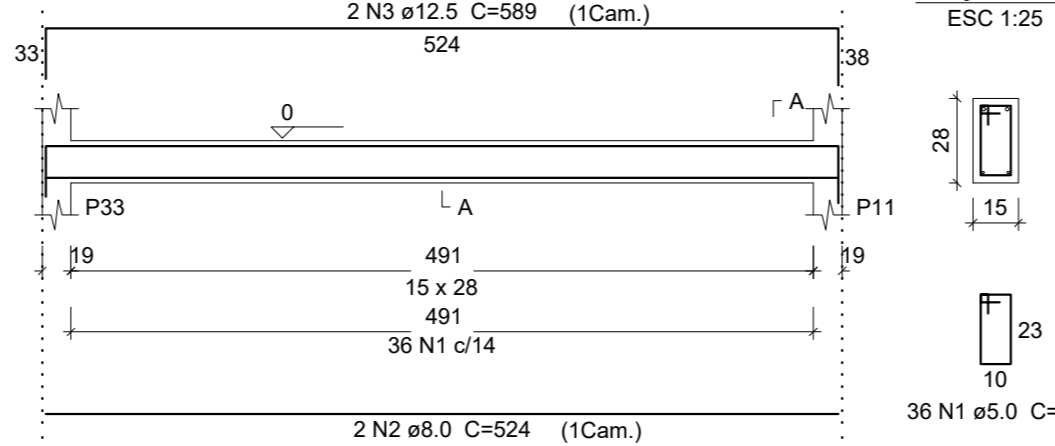
V125
ESC 1:50



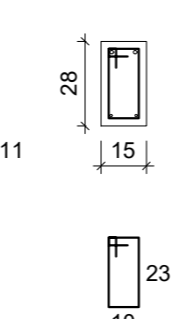
SEÇÃO A-A
ESC 1:25



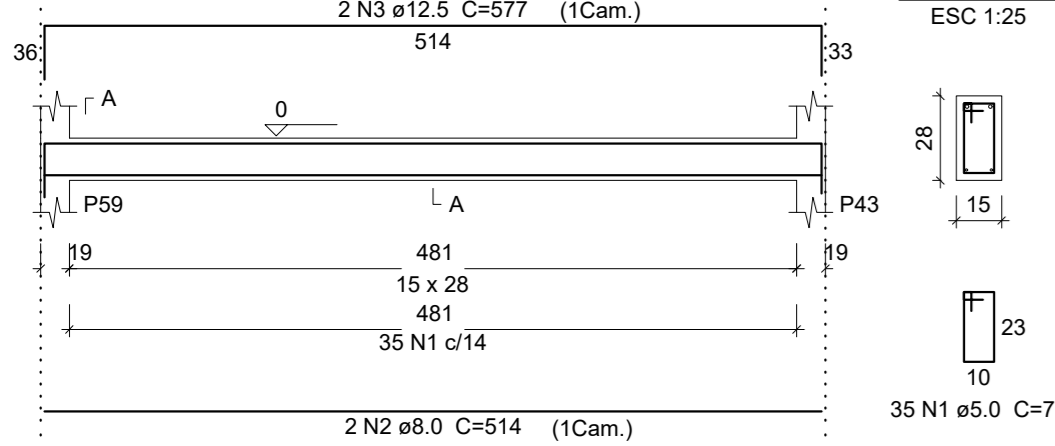
V126
ESC 1:50



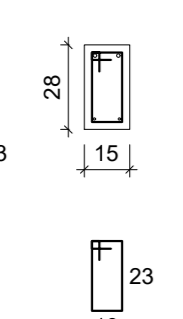
SEÇÃO A-A
ESC 1:25



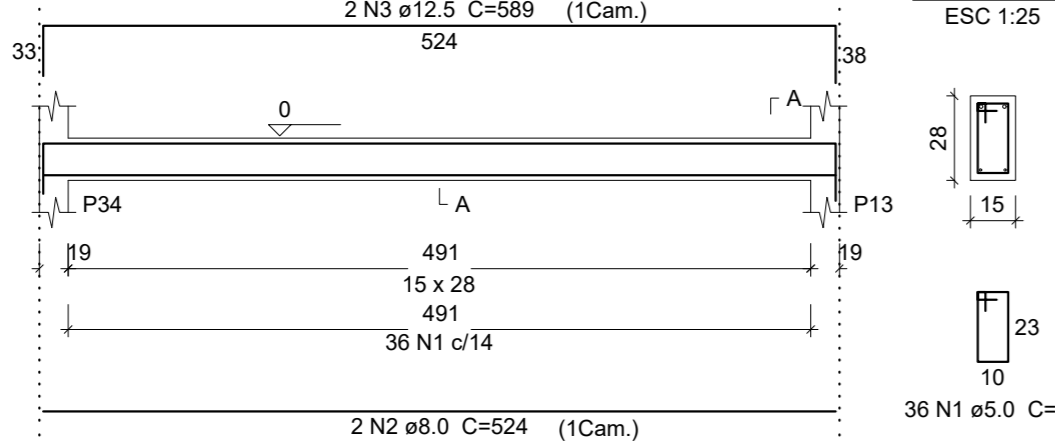
V127
ESC 1:50



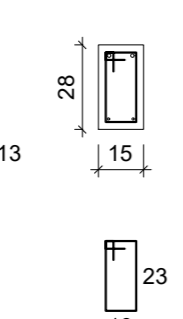
SEÇÃO A-A
ESC 1:25



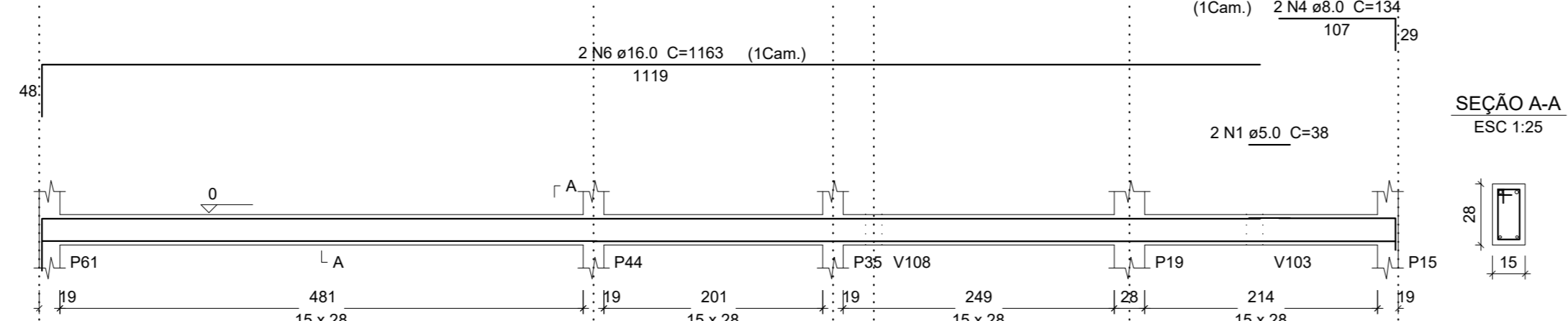
V128
ESC 1:50



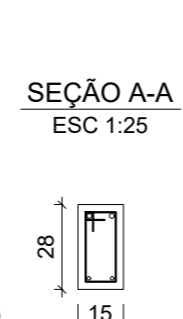
SEÇÃO A-A
ESC 1:25



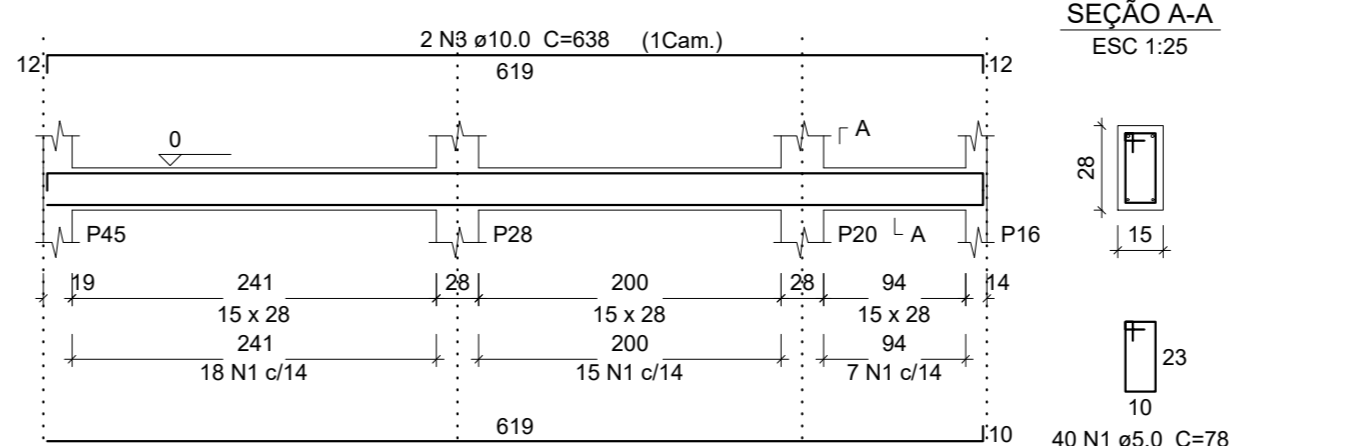
V129
ESC 1:50



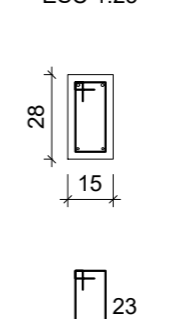
SEÇÃO A-A
ESC 1:25



V130
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

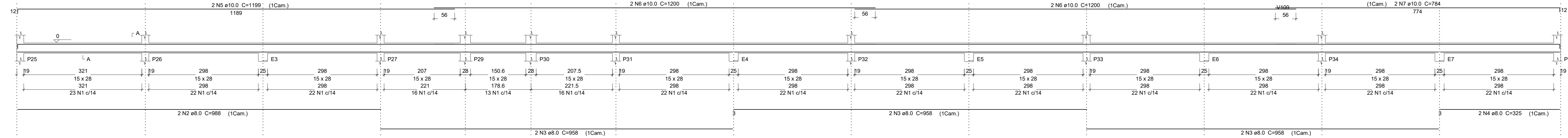
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
V119	CA60	1	5.0	36	78	2808
	CA50	2	8.0	2	532	1064
V120	CA60	3	8.0	2	649	1096
	CA50	1	5.0	34	78	2652
V121	CA60	1	5.0	2	532	1064
	CA50	3	8.0	2	549	1098
V122	CA60	1	5.0	35	78	2730
	CA50	3	12.5	2	578	1152
V123	CA60	1	5.0	36	78	2808
	CA50	2	8.0	2	532	1064
V124	CA60	1	5.0	35	78	2730
	CA50	2	8.0	2	514	1028
V125	CA60	3	12.5	2	577	1154
	CA50	2	8.0	2	524	1048
V126	CA60	1	5.0	35	78	2730
	CA50	3	12.5	2	577	1154
V127	CA60	1	5.0	36	78	2808
	CA50	2	8.0	2	524	1048
V128	CA60	1	5.0	35	78	2730
	CA50	3	12.5	2	589	1178
V129	CA60	1	5.0	38	78	2952
	CA50	4	8.0	2	134	268
V130	CA60	1	5.0	40	78	3120
	CA50	3	10.0	2	627	1254

Resumo do aço

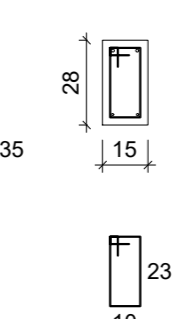
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	155.5	91.7
CA50	10.0	12.8	7.9
CA50	12.5	102.7	98.9
CA50	16.0	23.3	36.7
CA60	5.0	375.2	57.8
PESO TOTAL (kg)			
CA50			205.2
CA60			57.8

Volume de concreto (C-25) = 2.99 m³
Área de forma = 50.97 m²

V109
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

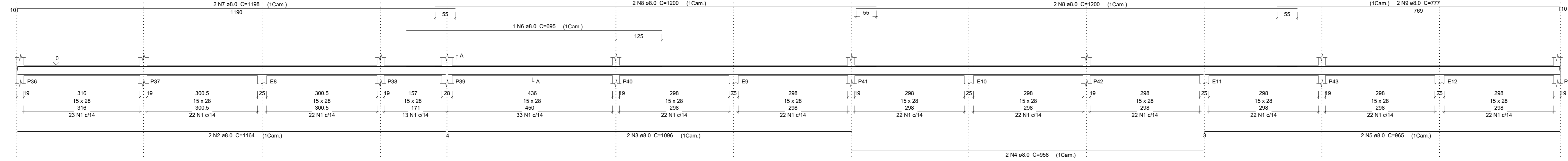
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
V109	CA60	1	5.0	288	78	22464
	CA50	2	8.0	2	988	1976
V110	CA60	3	8.0	6	958	5748
	CA50	4	8.0	2	325	650
V111	CA60	5	10.0	2	1199	2398
	CA50	6	10.0	4	1200	4800
V112	CA60	7	10.0	2	794	1588

Resumo do aço

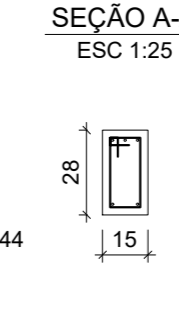
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	83.8	33
CA50	10.0	87.7	54
CA60	5.0	224.7	34.6
PESO TOTAL (kg)			
CA50			87.1
CA60			34.6

Volume de concreto (C-25) = 1.76 m³
Área de forma = 29.81 m²

V110
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

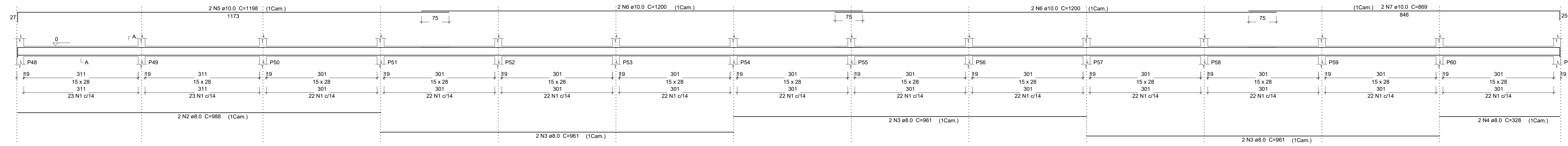
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
V110	CA60	1	5.0	289	78	22542
	CA50	2	8.0	2	1164	2328
V111	CA60	3	8.0	2	1096	2192
	CA50	4	8.0	2	958	1916
V112	CA60	5	8.0	2	965	1930
	CA50	6	8.0	1	695	695
V113	CA60	7	8.0	2	1198	2396
	CA50	8	8.0	4	1200	4800
V114	CA60	9	8.0	2	777	1554

Resumo do aço

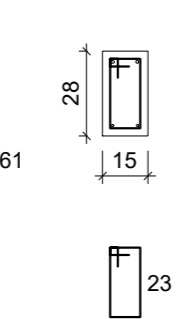
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	178.2	70.3
CA60	5.0	225.5	34.7
PESO TOTAL (kg)			
CA50			70.3
CA60			34.7

Volume de concreto (C-25) = 1.76 m³
Área de forma = 29.81 m²

V113
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

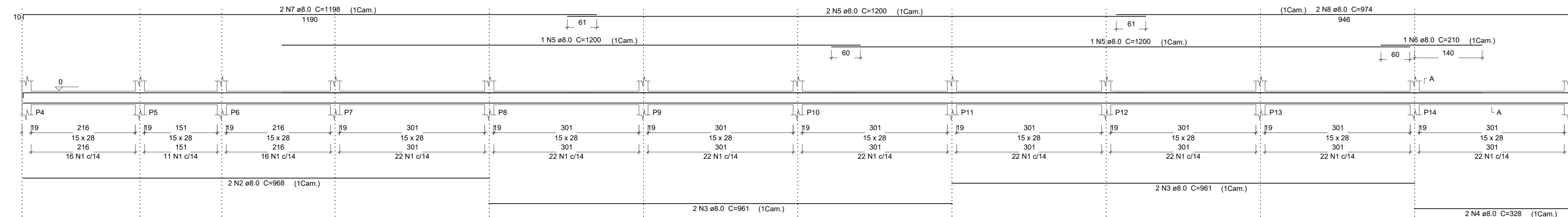
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
V113	CA60	1	5.0	288	78	22464
	CA50	2	8.0	2	988	1976
V114	CA60	3	8.0	6	961	5766
	CA50	4	8.0	2	328	656
V115	CA60	5	10.0	2	1188	2376
	CA50	6	10.0	4	1200	4800
V116	CA60	7	10.0	2	869	1738

Resumo do aço

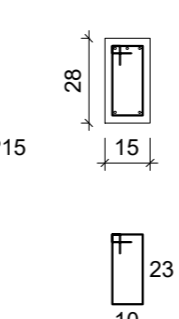
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	157.8	62.3
CA60	5.0	179.9	28.3
PESO TOTAL (kg)			
CA50			62.3
CA60			28.3

Volume de concreto (C-25) = 1.35 m³
Área de forma = 22.85 m²

V102
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

ELEMENTO	AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
V102	CA60	1	5.0	219	78	17062
	CA50	2	8.0	2	988	1976
V103	CA60	3	8.0	4	961	3844
	CA50	4	8.0	2	328	656
V104	CA60	5	8.0	4	1200	4800
	CA50	6	8.0	1	210	210
V105	CA60	7	8.0	2	1188	2376
	CA50	8	8.0	2	674	1348

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	157.8	62.3
CA60	5.0	179.9	28.3
PESO TOTAL (kg)			
CA50			62.3
CA60			28.3

Volume de concreto (C-25) = 1.35 m³
Área de forma = 22.85 m²

Projeto Estrutural Título: **04/08** Folha

UNESPAR - Universidades Estadual do Paraná Proprietário

Rua Hermínio Mills, S/N Localização

2175 Lote **01** Quadra **São Cristóvão** Bairro **União da Vitória - PR** Município

UNESPAR - Universidades Estadual do Paraná CNPJ: 05.012.896/0001-42 Responsável técnico

Engenheiro civil João Artur Casado CREA-PR 95.017/D

Indicada Escala: **Novembro/2019** Data: **(44) 3423-4727 / 9965 5892** casado@projeto.com