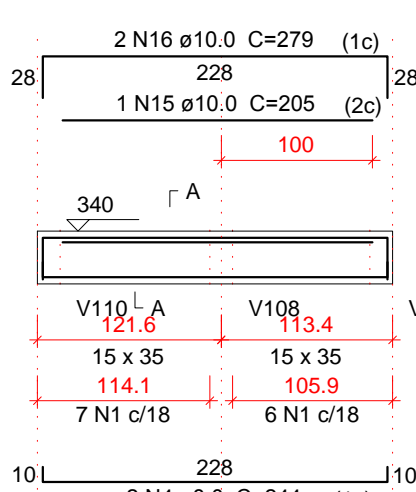
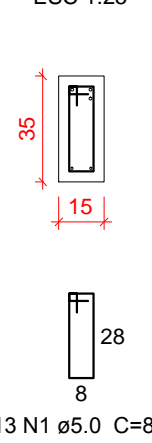


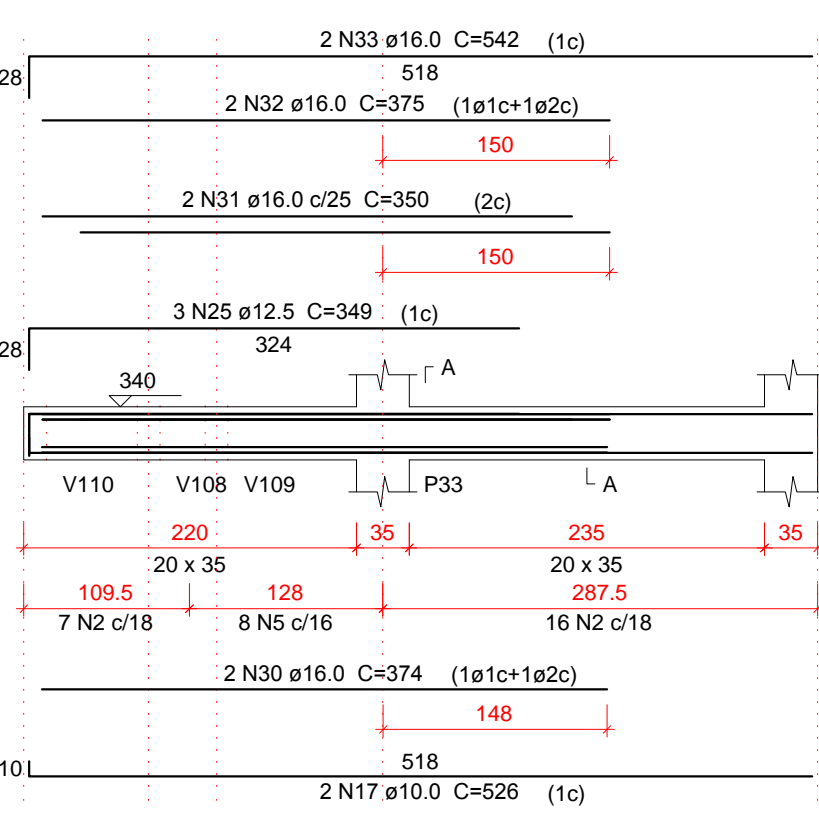
V111
ESC 1:50



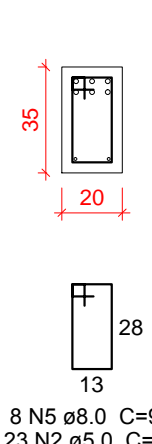
SEÇÃO A-A
ESC 1:25



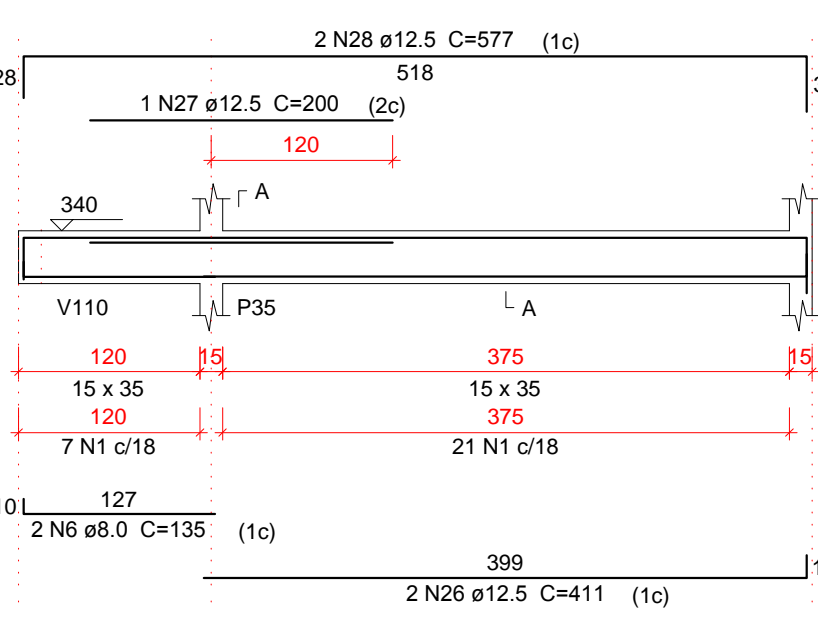
V112
ESC 1:50



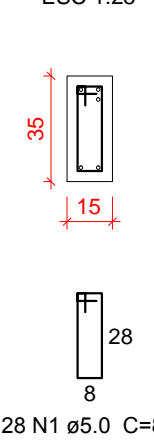
SEÇÃO A-A
ESC 1:25



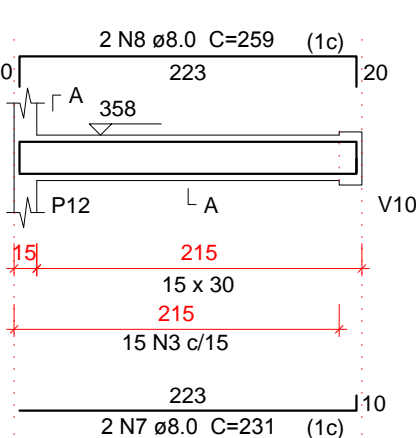
V113
ESC 1:50



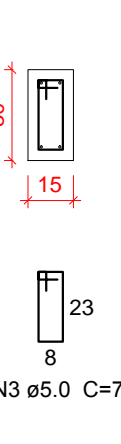
SEÇÃO A-A
ESC 1:25



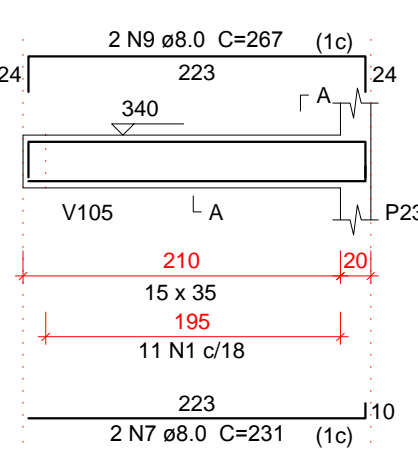
V114
ESC 1:50



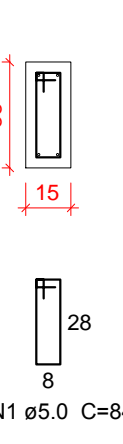
SEÇÃO A-A
ESC 1:25



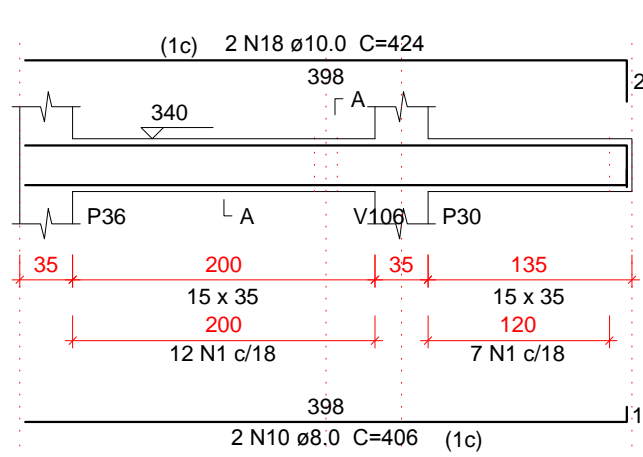
V115
ESC 1:50



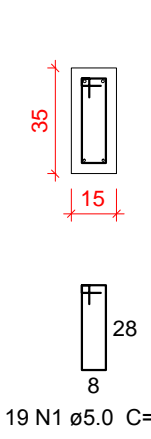
SEÇÃO A-A
ESC 1:25



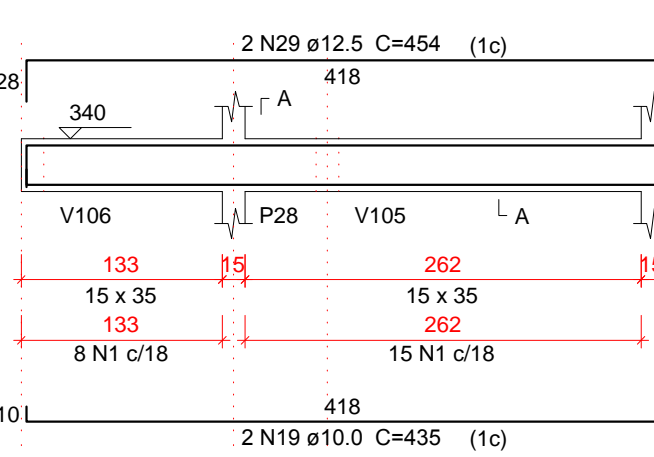
V116
ESC 1:50



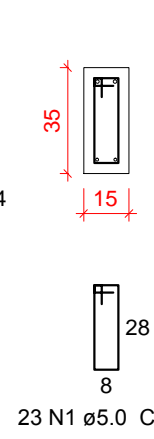
SEÇÃO A-A
ESC 1:25



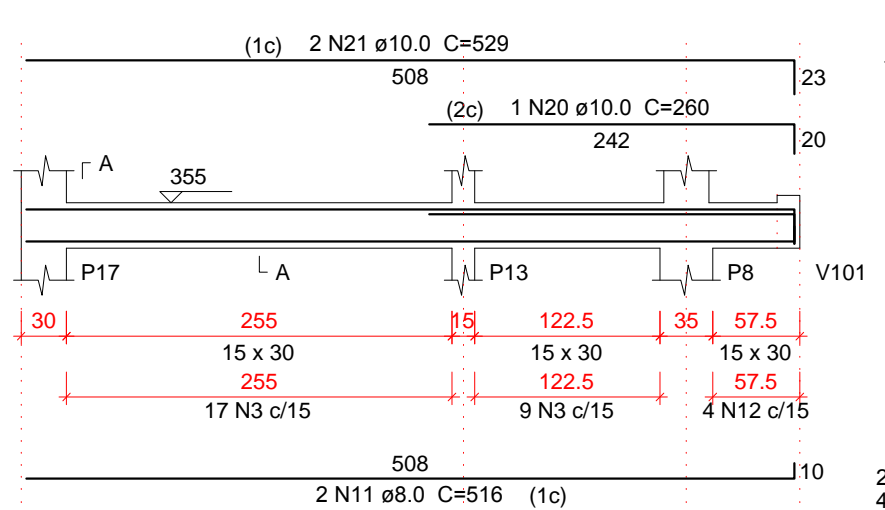
V117
ESC 1:50



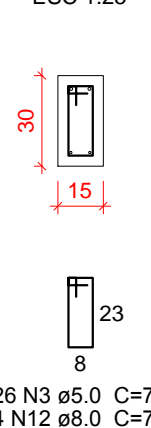
SEÇÃO A-A
ESC 1:25



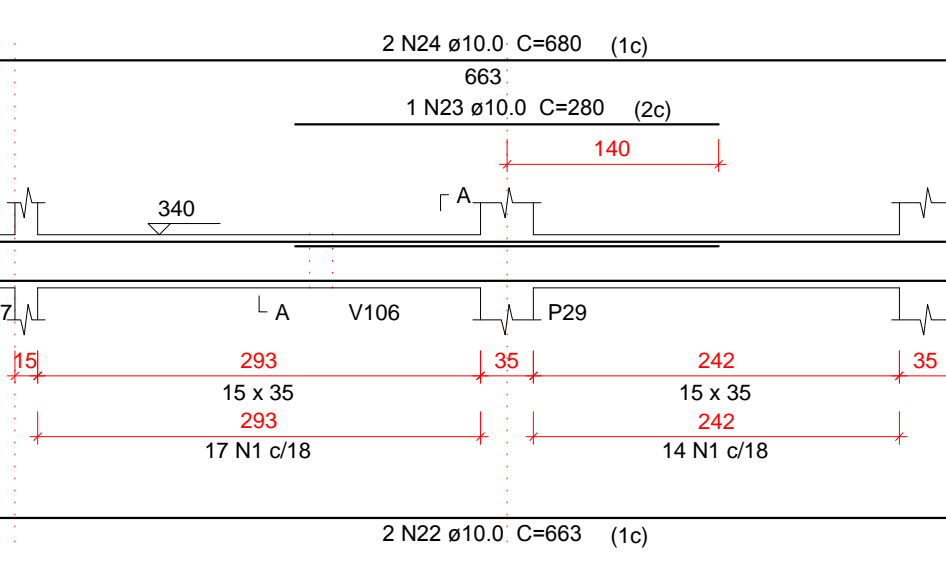
V118
ESC 1:50



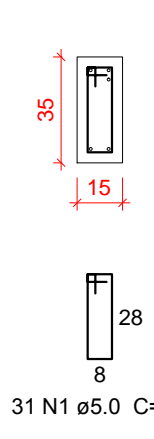
SEÇÃO A-A
ESC 1:25



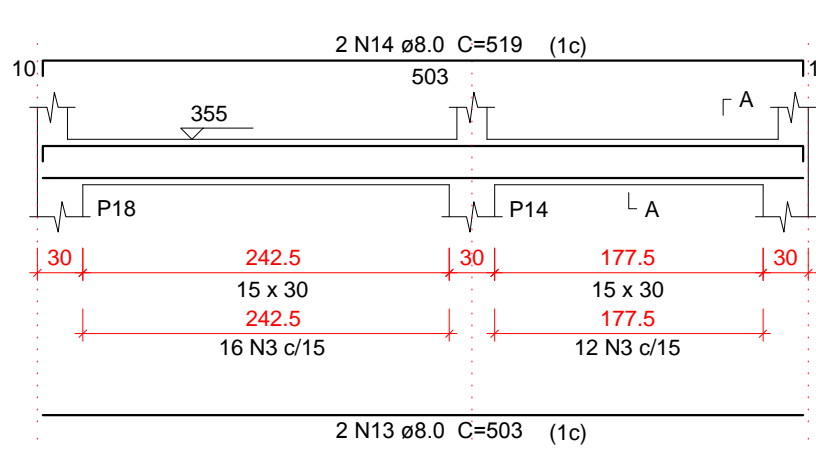
V119
ESC 1:50



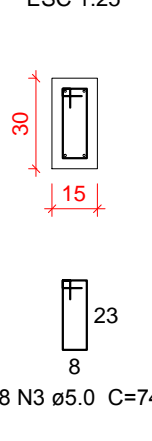
SEÇÃO A-A
ESC 1:25



V120
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V111	1	5.0	125	84	10500
V114	2	5.0	23	84	2162
V117	3	5.0	69	74	5106
V120	4	8.0	2	244	488
	5	8.0	8	94	752
	6	8.0	2	135	270
	7	8.0	4	231	924
	8	8.0	2	259	518
	9	8.0	2	267	534
	10	8.0	2	406	812
	11	8.0	2	516	1032
	12	8.0	4	74	296
	13	8.0	2	503	986
	14	8.0	2	519	1018
	15	10.0	1	205	205
	16	10.0	2	279	558
	17	10.0	2	526	1052
	18	10.0	2	424	848
	19	10.0	2	435	870
	20	10.0	1	260	260
	21	10.0	2	529	1058
	22	10.0	2	663	1326
	23	10.0	1	280	280
	24	10.0	2	680	1360
	25	12.5	3	349	1047
	26	12.5	2	411	822
	27	12.5	1	200	200
	28	12.5	2	577	1154
	29	12.5	2	454	908
	30	16.0	2	374	748
	31	16.0	2	350	700
	32	16.0	2	375	750
	33	16.0	2	542	1084

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	PESO + 10 % (kg)
CA50	8.0	76.3	7	33.1
	10.0	76.2	7	51.7
	12.5	41.4	4	43.8
	16.0	32.9	4	57
CA60	5.0	177.7	-	30.1

PESO TOTAL (kg)	
CA50	185.5
CA60	30.1

Volume de concreto (C-30) = 2.21 m³
Área de forma = 34.8 m²

APROVAÇÕES :

A APROVAÇÃO DO PRESENTE PROJETO PELA PREFEITURA, NÃO RECONHECE A PROPRIEDADE DO IMÓVEL



CLEBER LUIS HAHN
ENGENHEIRO CIVIL - CREA PR 94.8167/D

PROJETO E EXECUÇÃO DE OBRAS DE RECONSTRUÇÃO DE PAVIMENTO DE CIMENTO-PORTA-PORTA

TÍTULO:
PROJETO ESTRUTURAL

OBRA:
Comercial em Alvenaria

PRETENDENTE:
ACIM - Associação Comercial e Empresarial de Mercedes

ENDEREÇO DA OBRA:
Rua Doutor Flores / Lote 07 / Quadra 32 / Centro / Mercedes / PR

REFERÊNCIA:
Armadura de vigas do pavimento PISO

DADOS ESTATÍSTICOS:

VER PROJETO ARQUITETÔNICO

ASSINATURA DO PRETENDENTE:

Associação Comercial e Empresarial de Mercedes
CNPJ: 72.326.620 / 0001 - 88

RESPONSÁVEL PROJETO / DESENHO:

Engº Civil Cleber Luis Hahn
Registro Civil PR - 94.816/D - CPF: 020.404.019-11

RESPONSÁVEL EXECUÇÃO:

DATA:
01 / 2025

PRANCHA:
EST_012