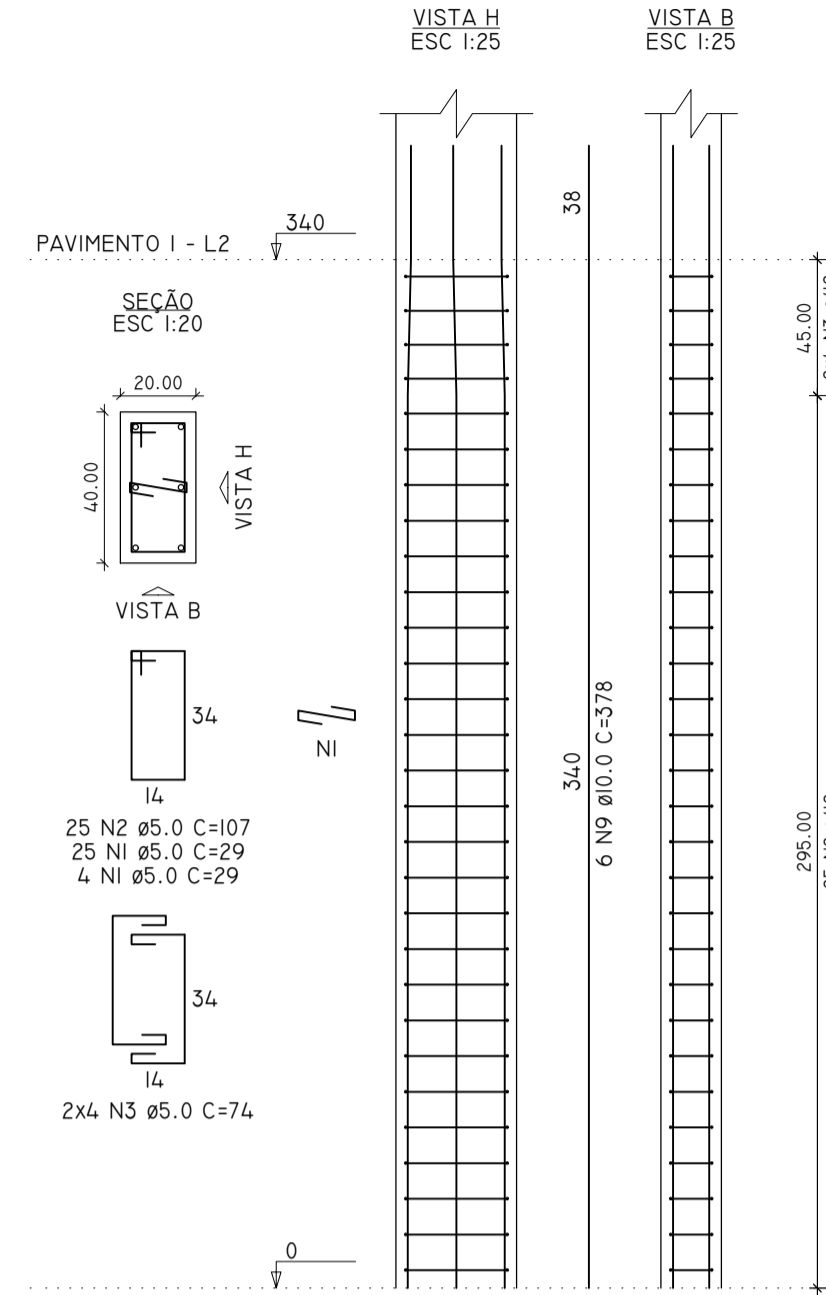
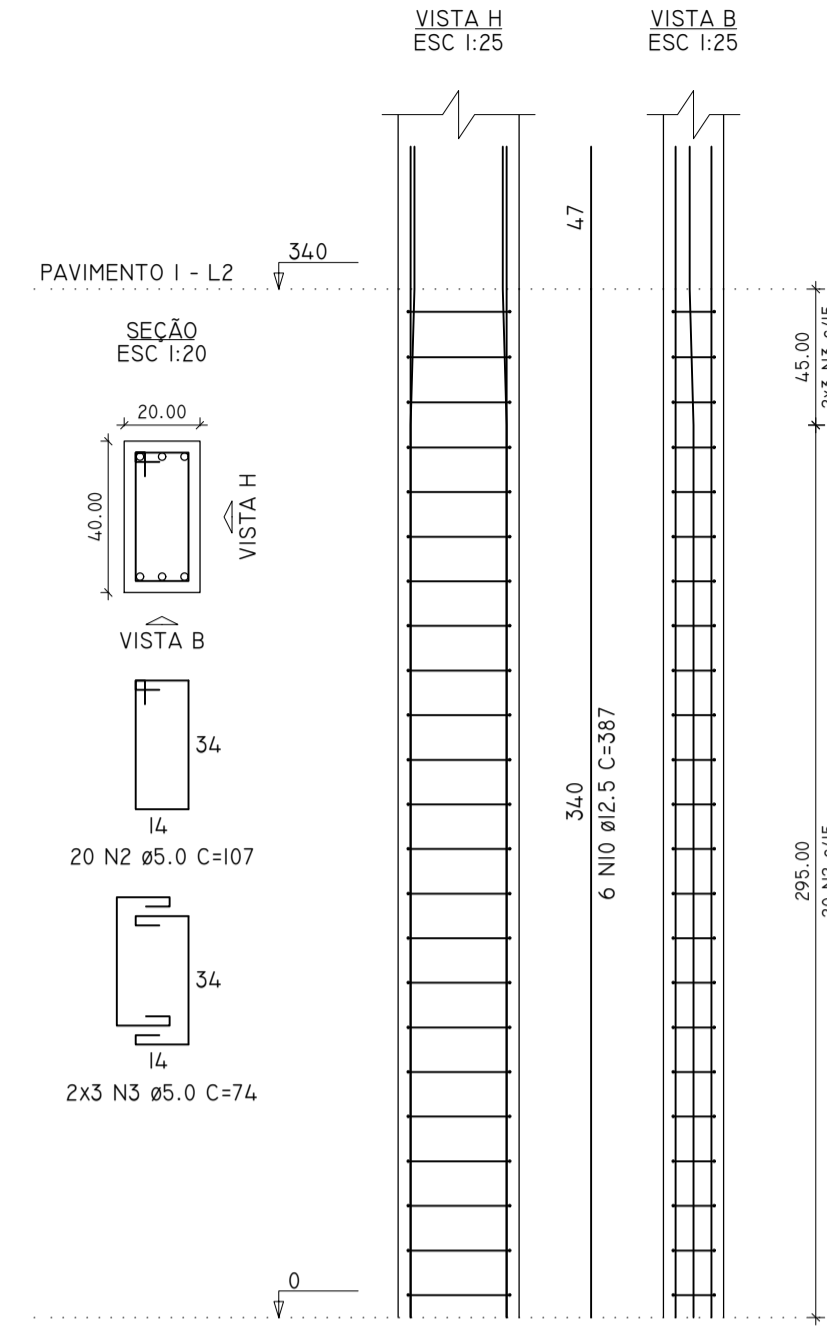


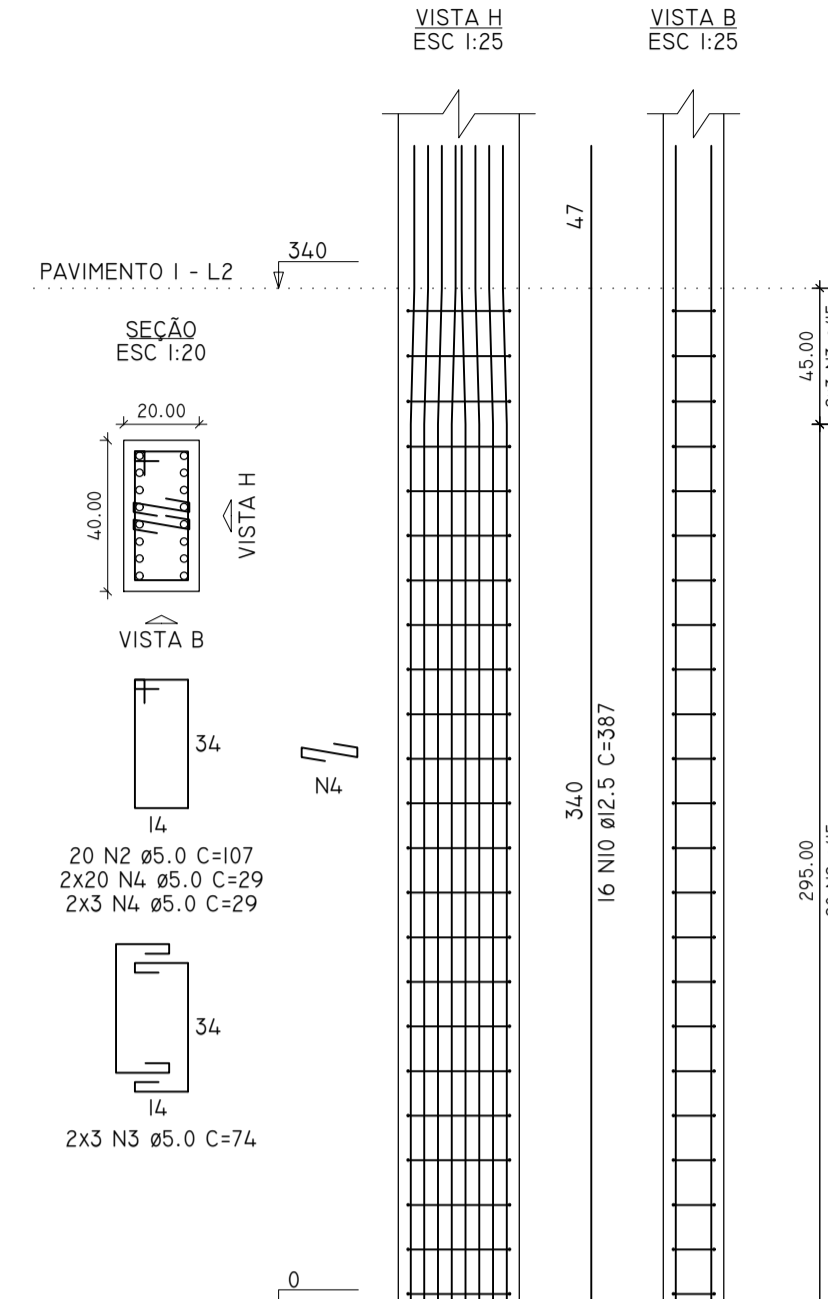
P1=P3=P4=P6=P7=P9=P21=P22=
=P27=P28=P40=P42=P43=P45=
=P46=P48



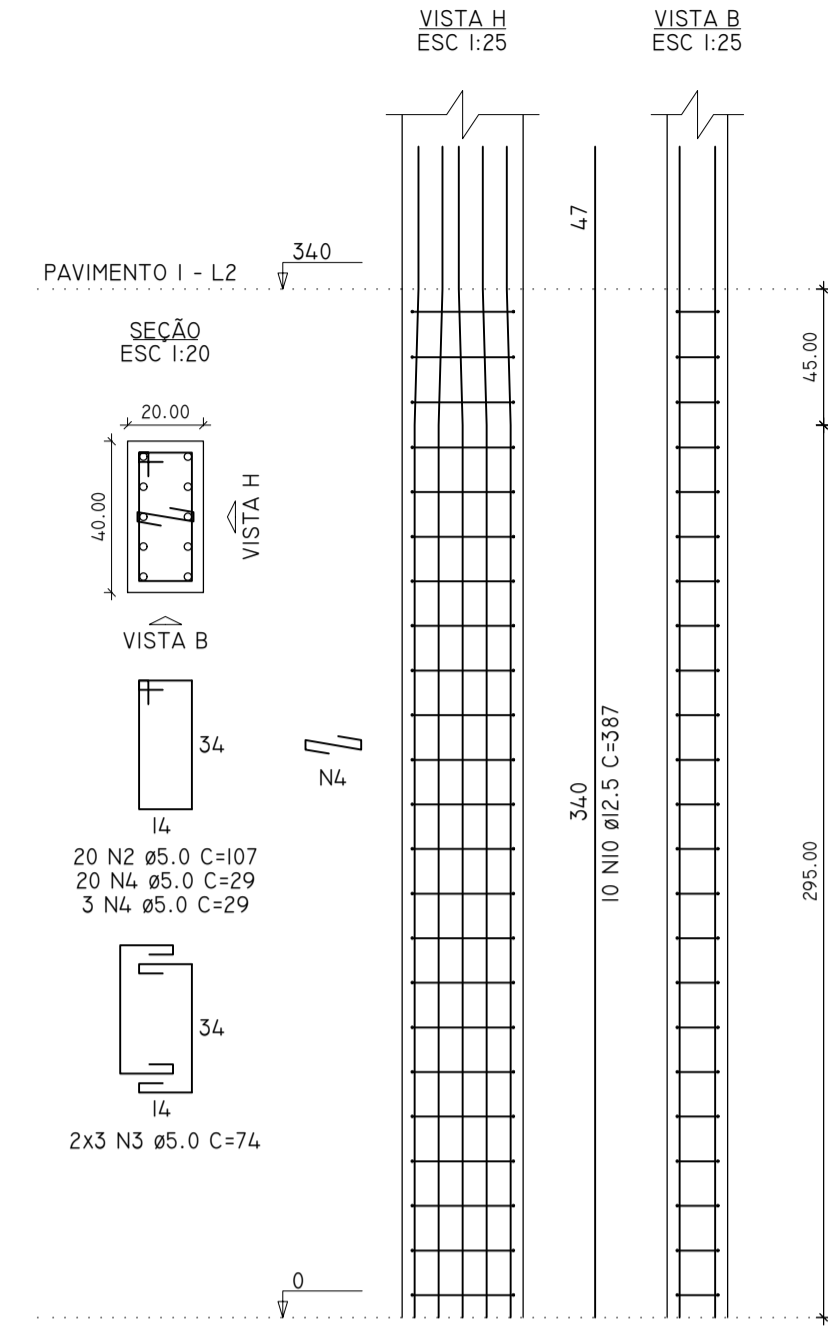
P2=P5=P8=P41=P44



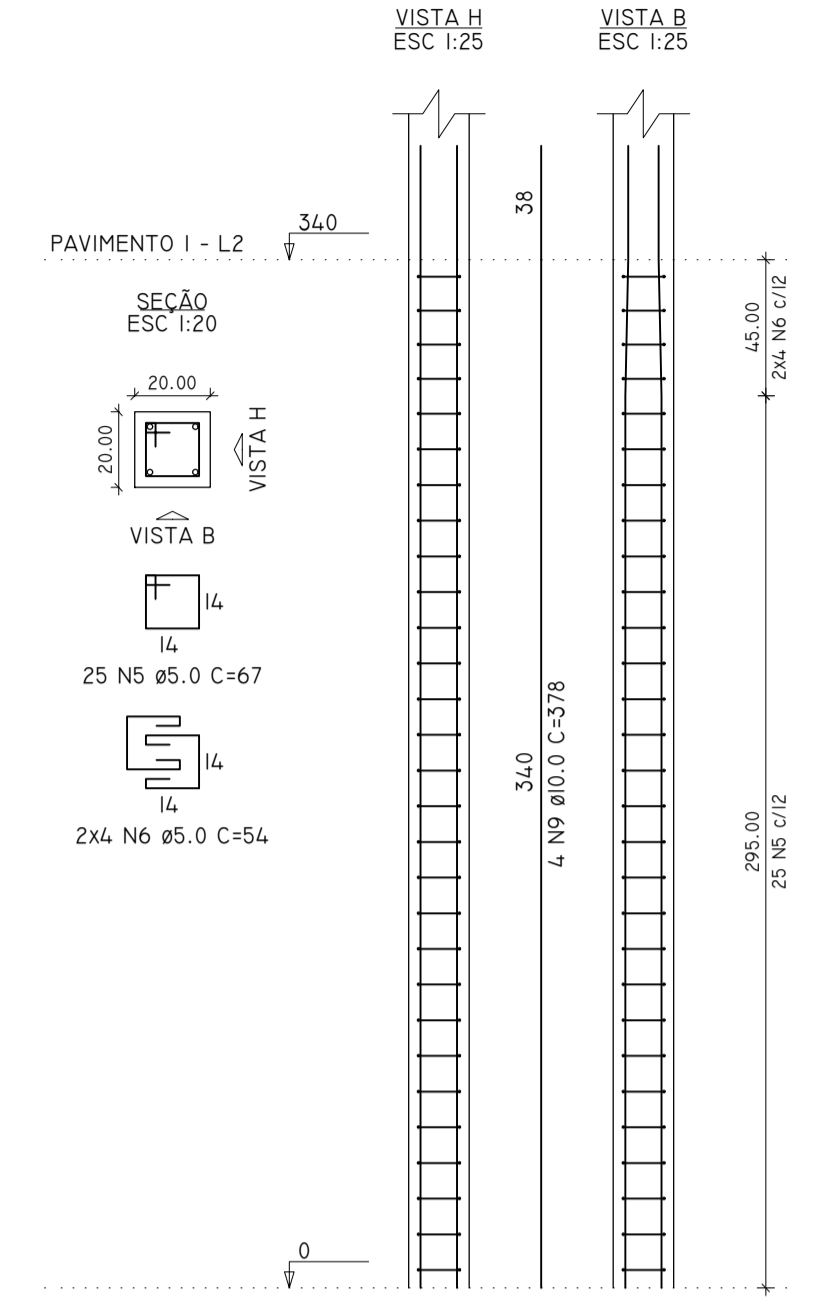
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=P39



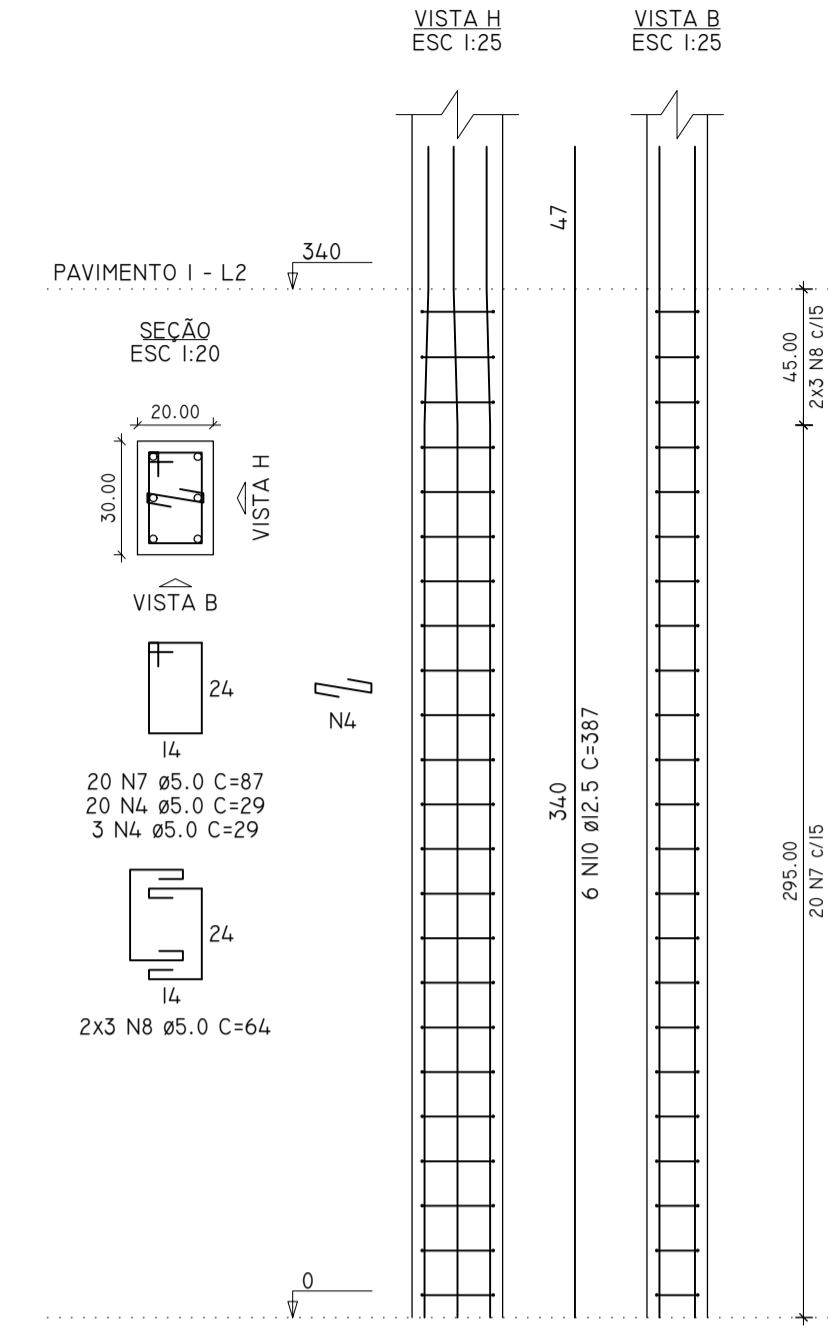
P13=P14=P35=P36



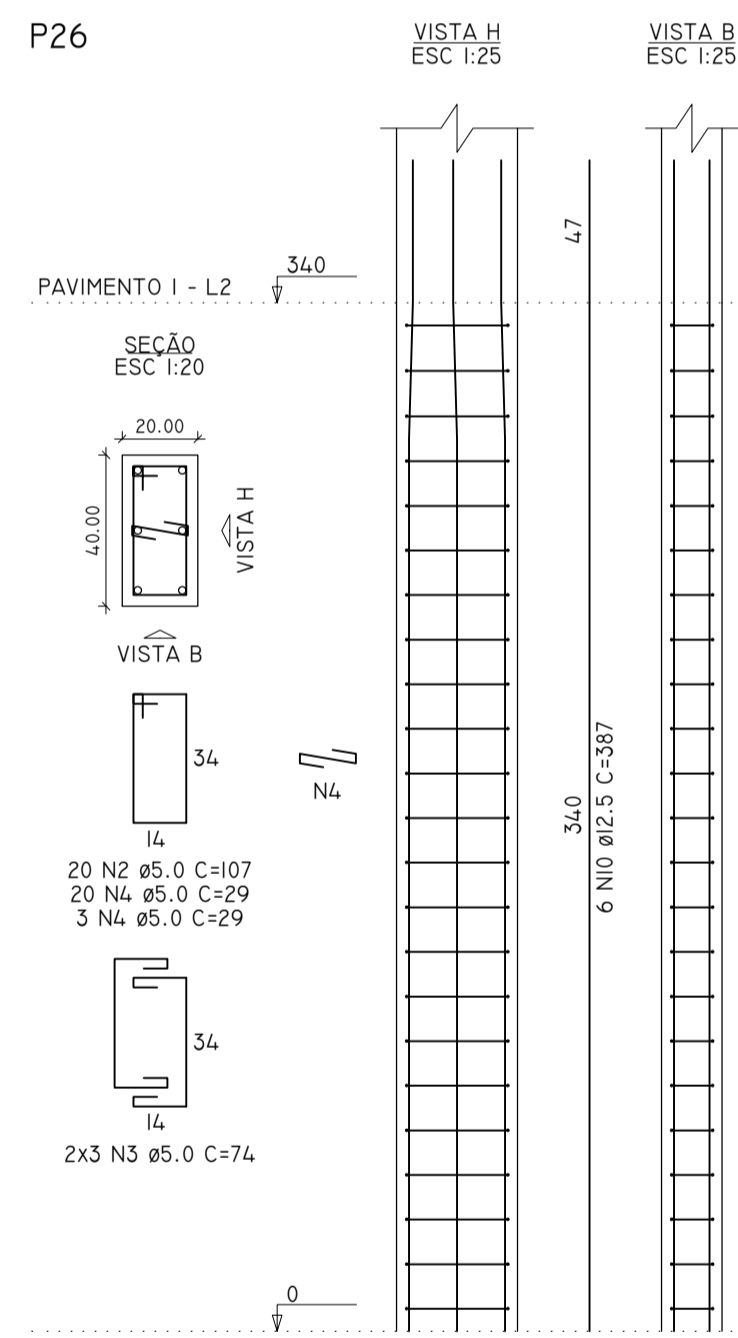
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=P31=P33



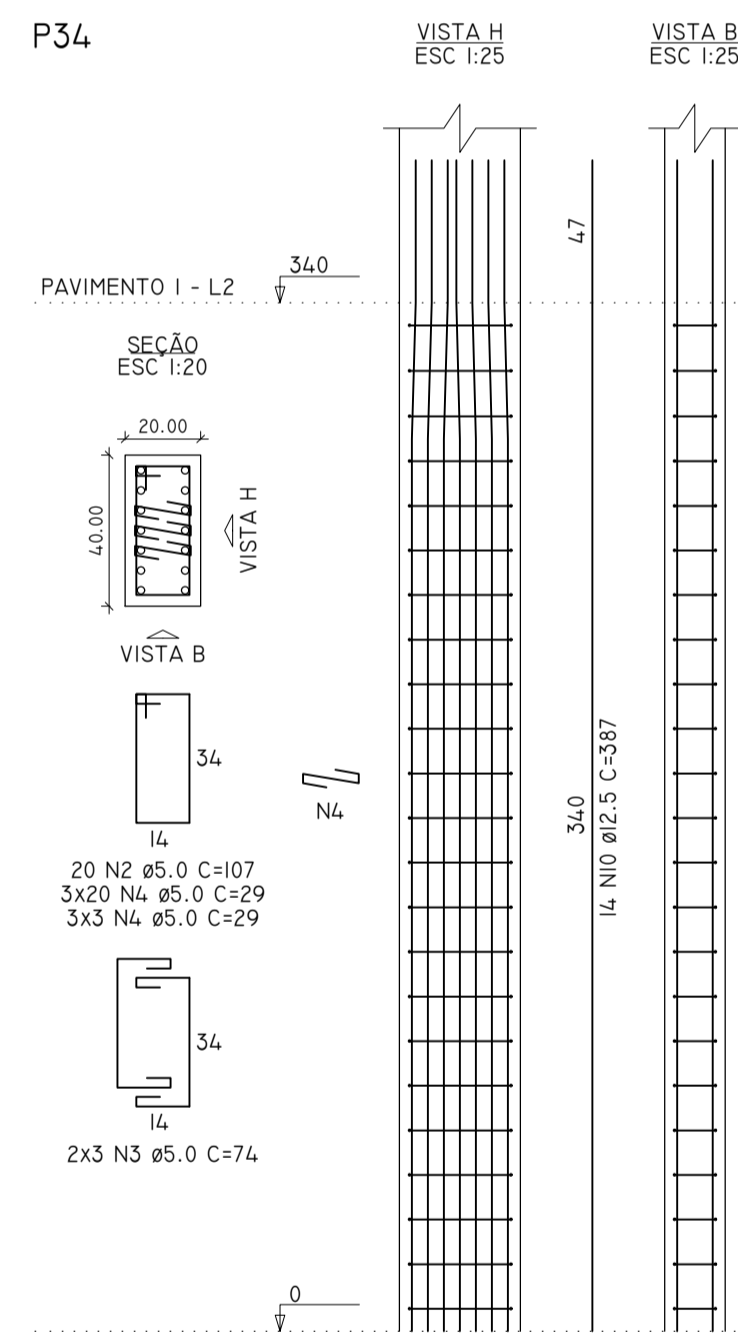
P17=P20=P23=P29=P32



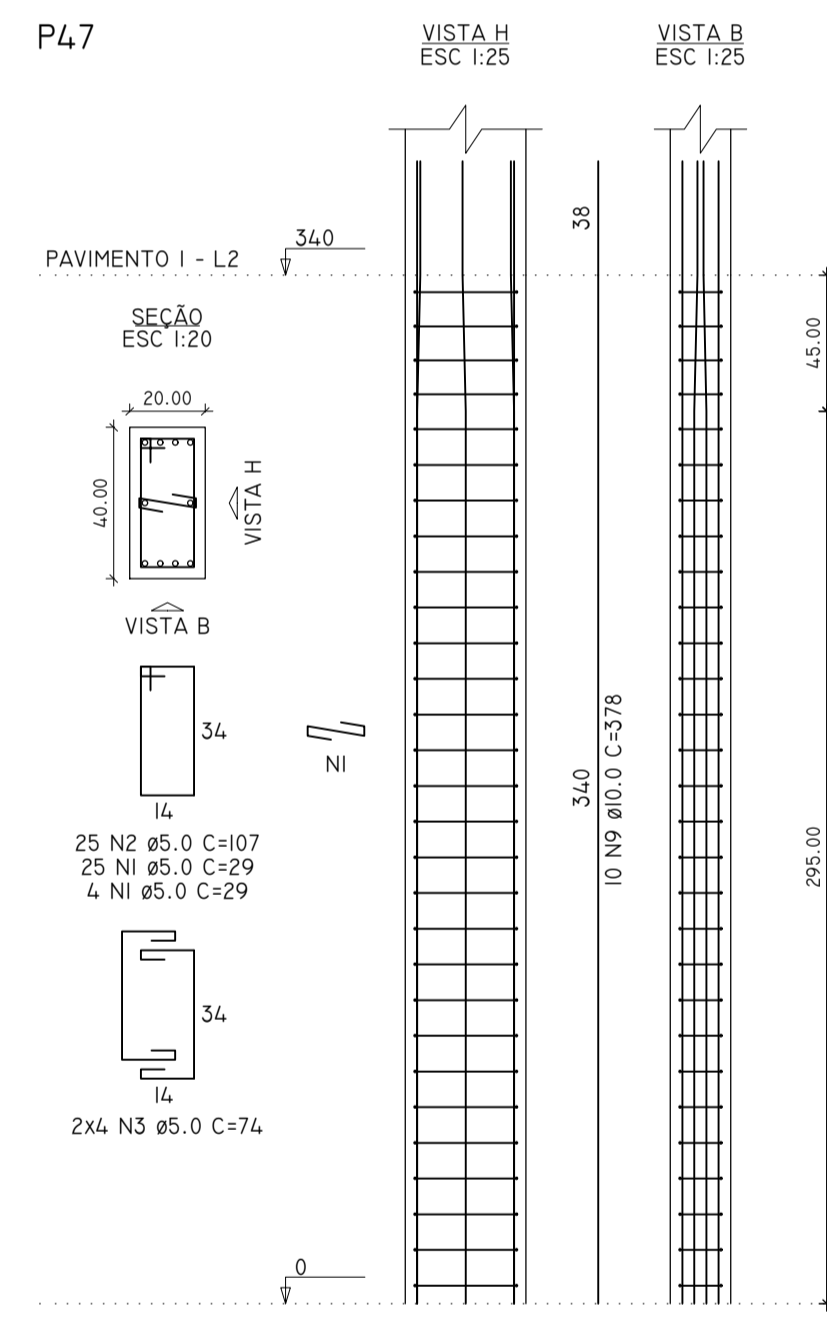
P26



P34



P47



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	493	29	14297
	2	5.0	785	107	83995
	3	5.0	244	74	18056
	4	5.0	621	29	18009
	5	5.0	200	67	13400
	6	5.0	64	54	3456
	7	5.0	100	87	8700
	8	5.0	30	64	1920
	9	10.0	138	378	52164
	10	12.5	232	387	89784

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (BARRAS)	UNIT	PESO + 10% (kg)
CA50	10.0	521.6	48	12 M	353.8
CA60	12.5	897.8	83	12 M	951.4
	5.0	1618.3	149	12 M	274.4
PESO TOTAL (kg)					
CA50		1305.2			
CA60		274.4			

VOLUME DE CONCRETO (C-30) = 11.63 M³
ÁREA DE FORMA = 181.56 M²

PROPRIETÁRIO	CONSTRUÇÃO
FUNDAÇÃO UNIVERSIDADE FEDERAL	GLOBAL SERVIÇOS LTDA.
PROJETO	RESP. TÉCNICO
ENG. CIVIL GERVÂNIO MACHADO CREA 060905555-5 - DICE VISTO 1066/AP	

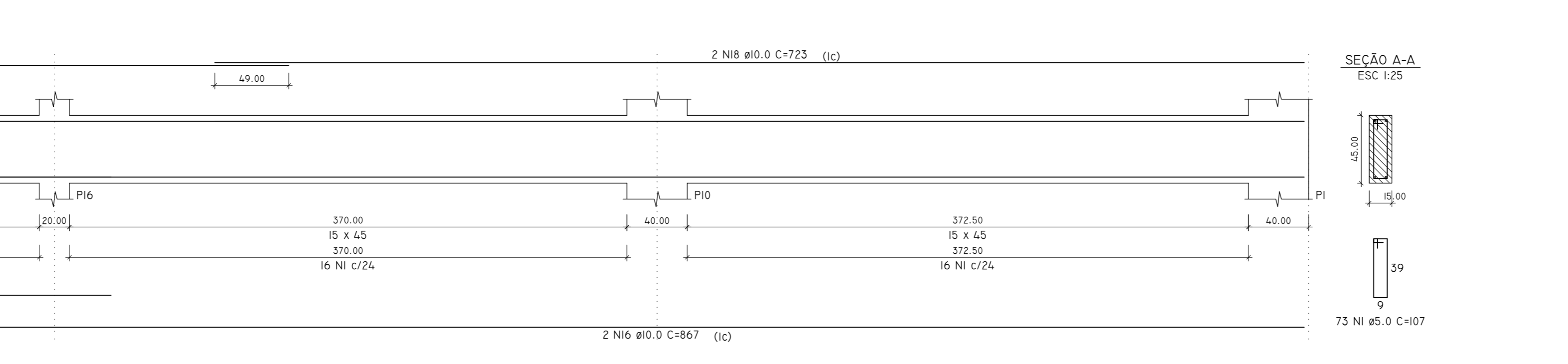
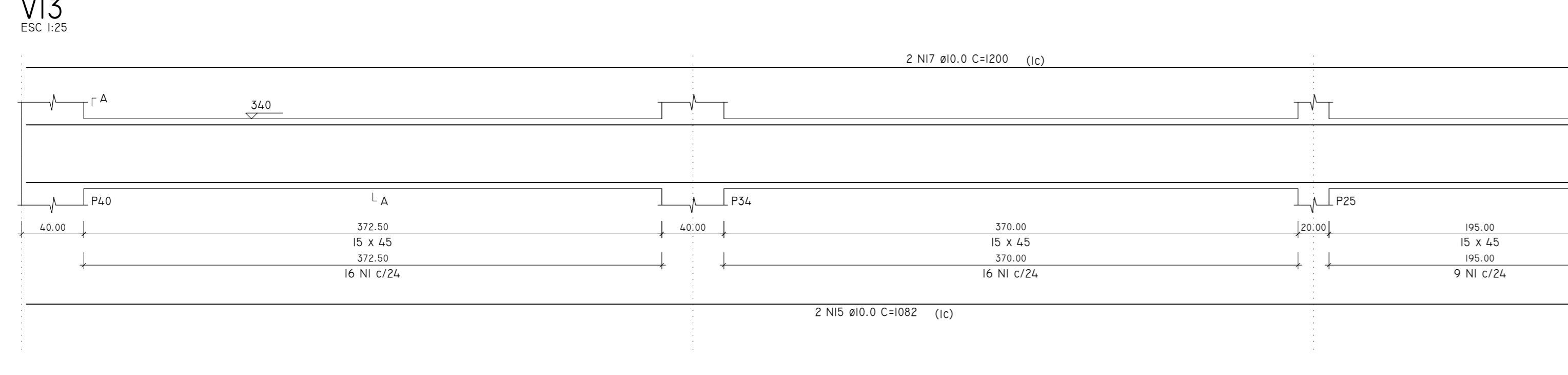
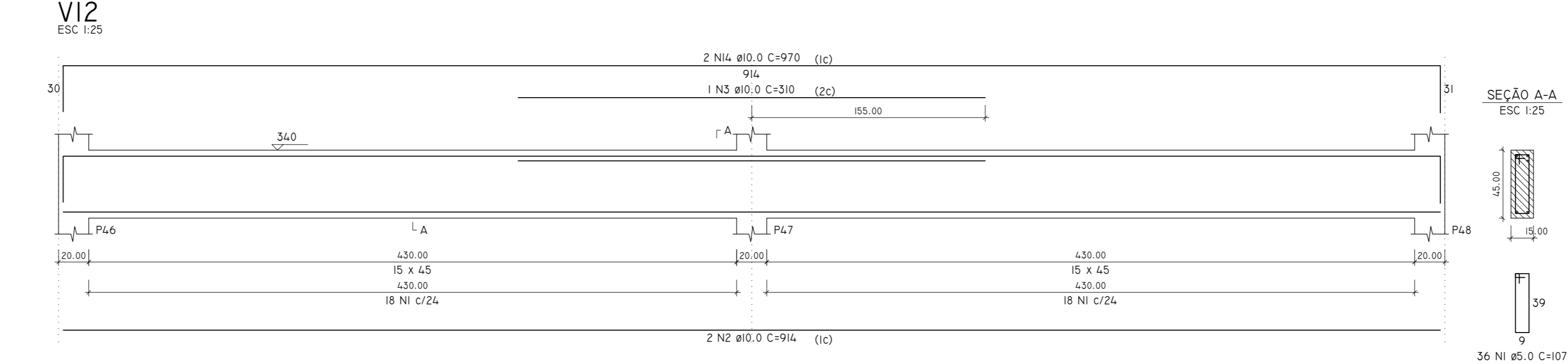
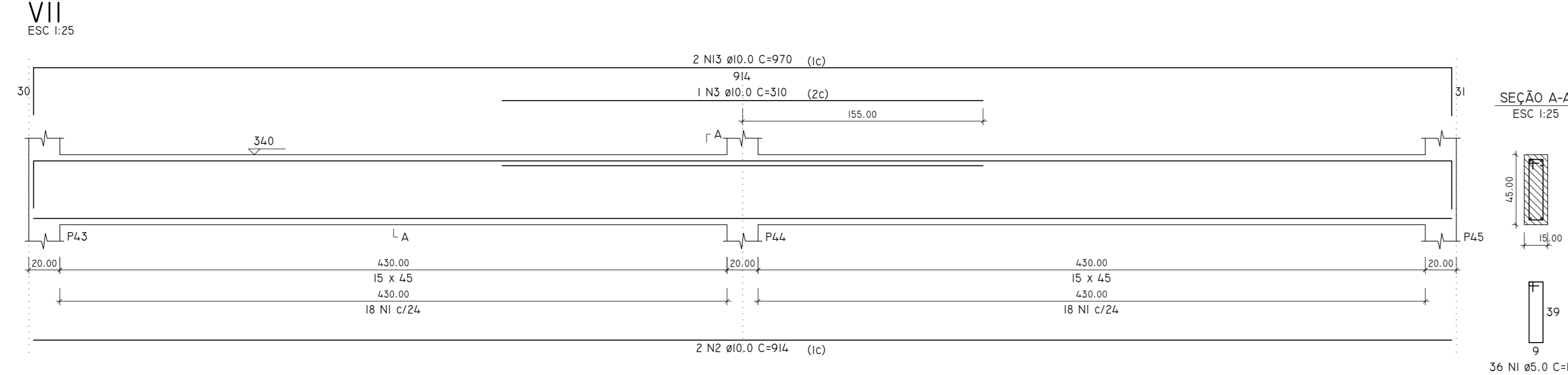
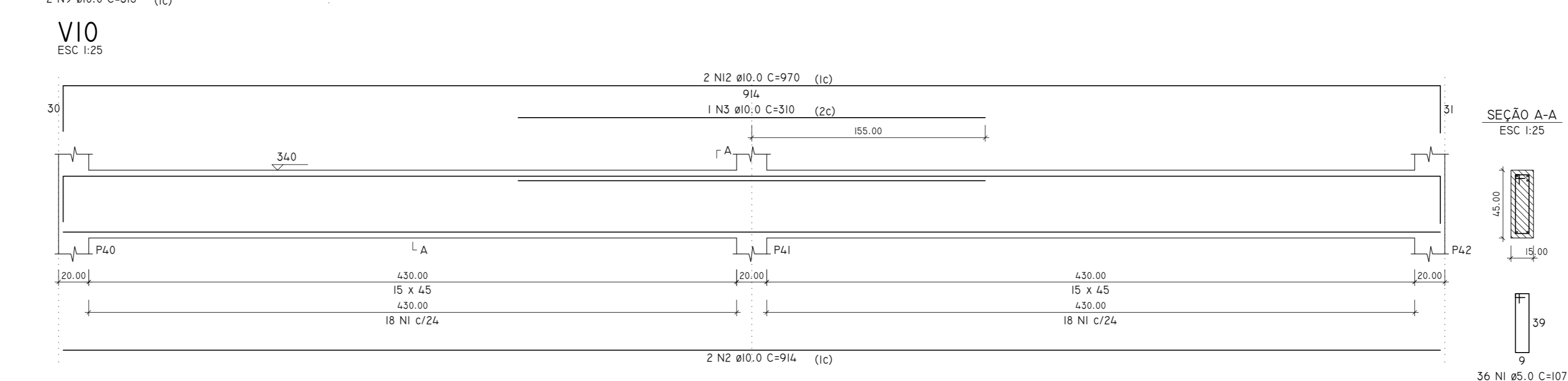
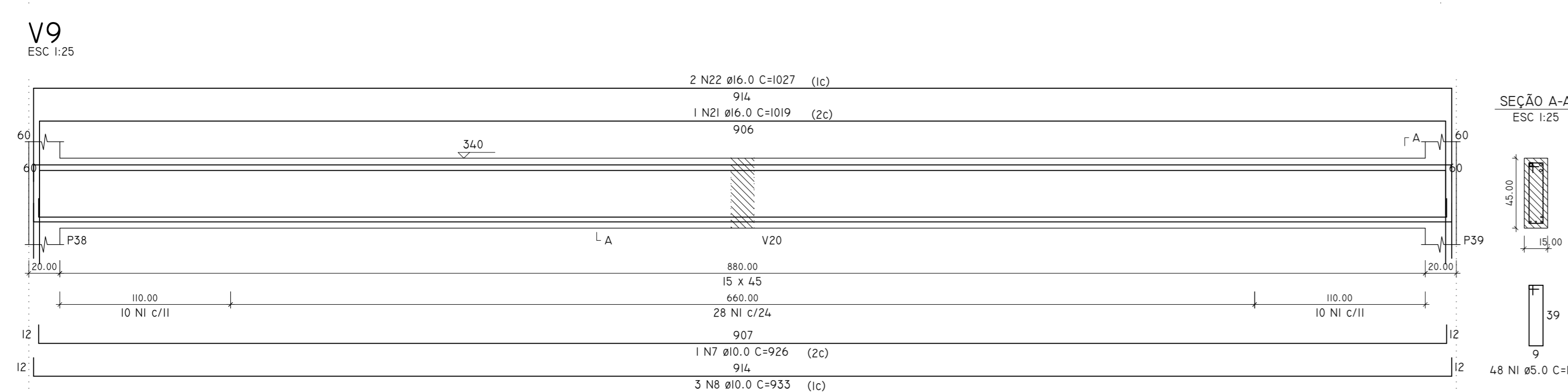
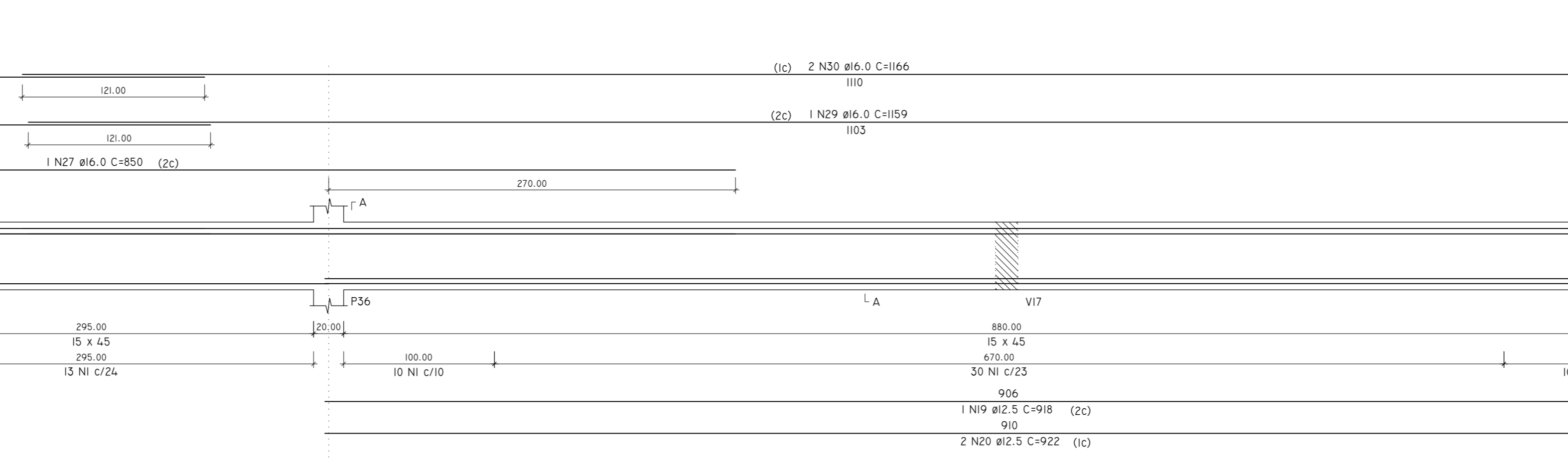
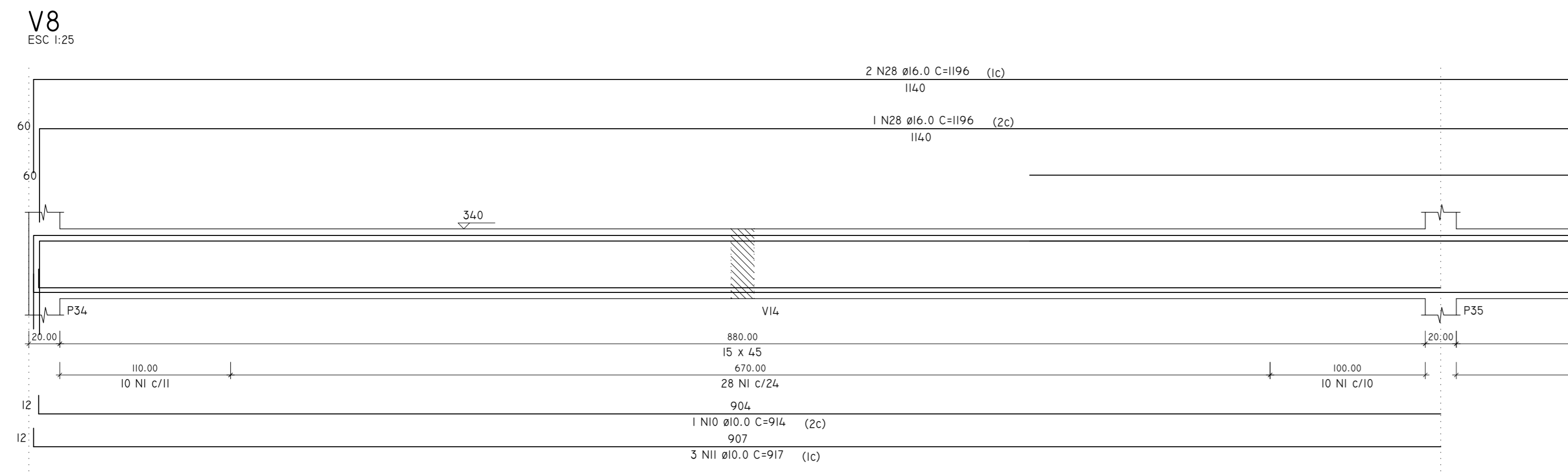
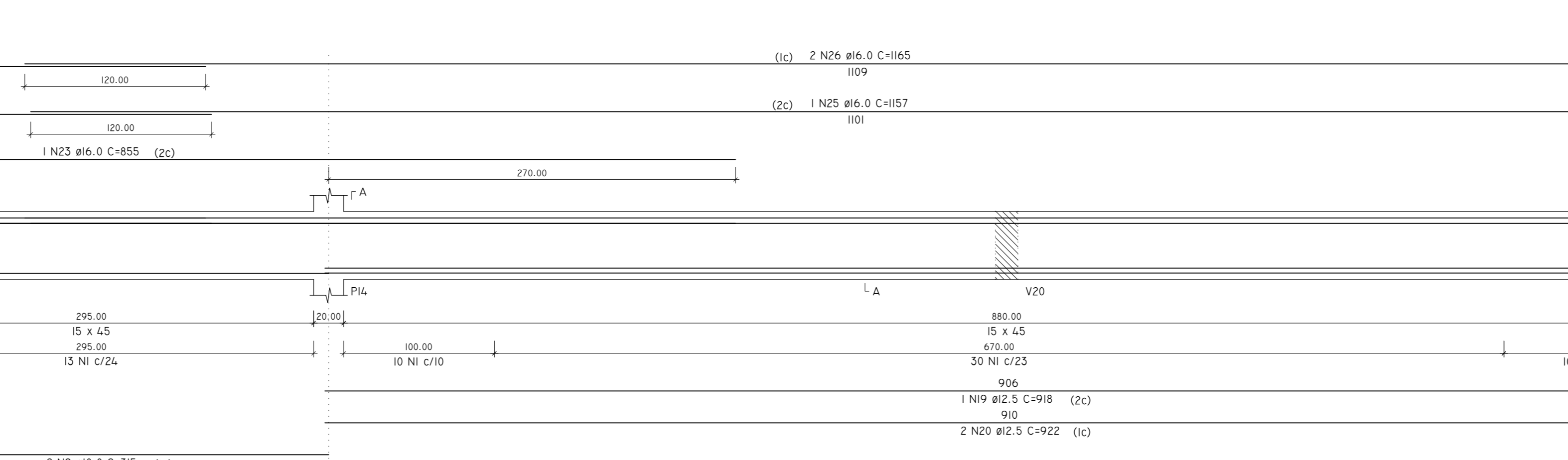
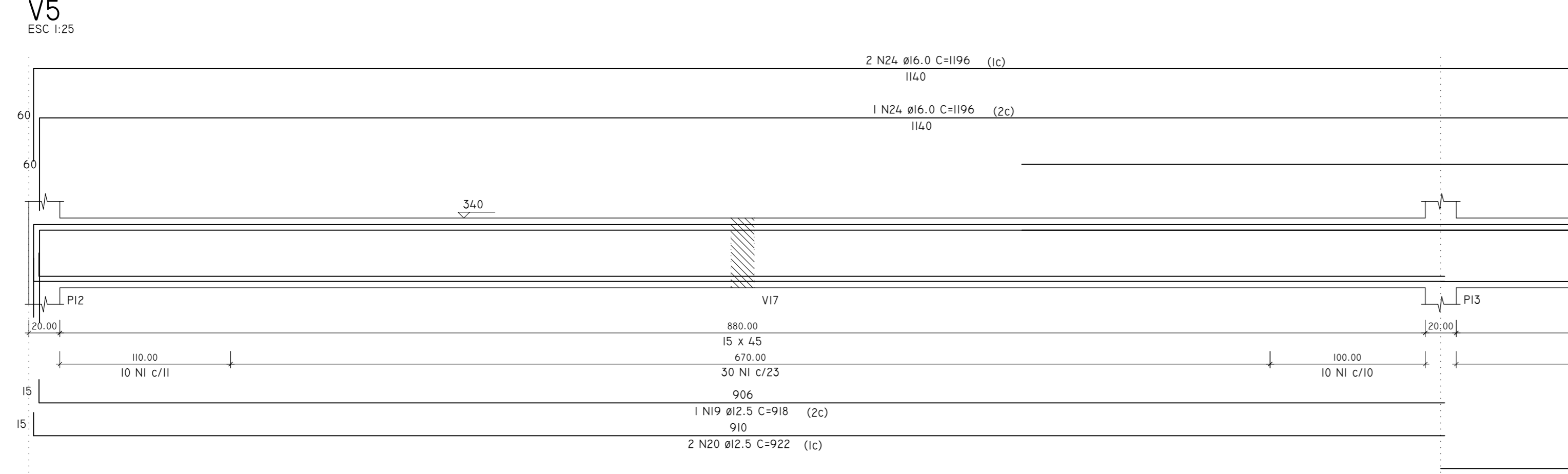
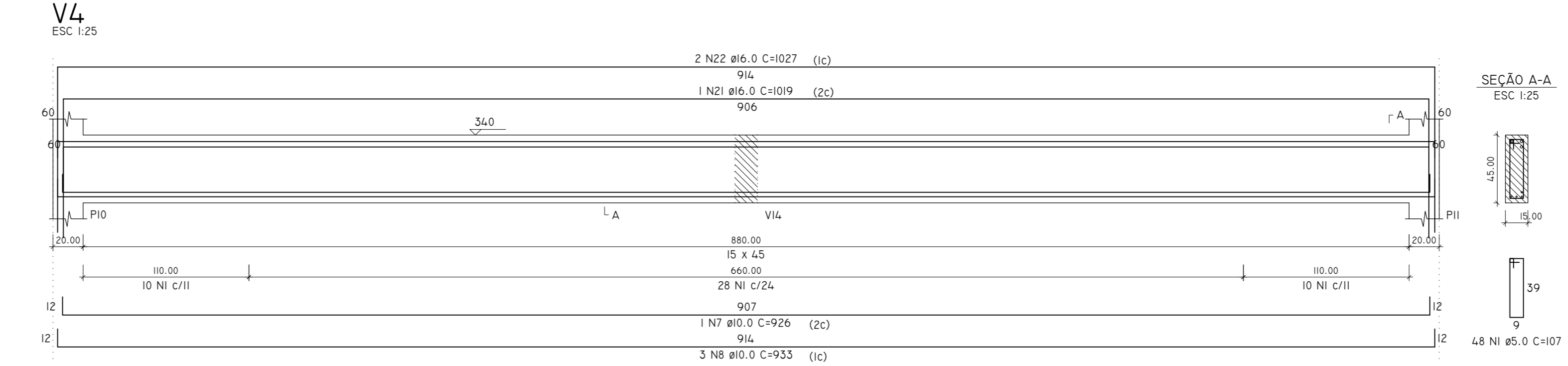
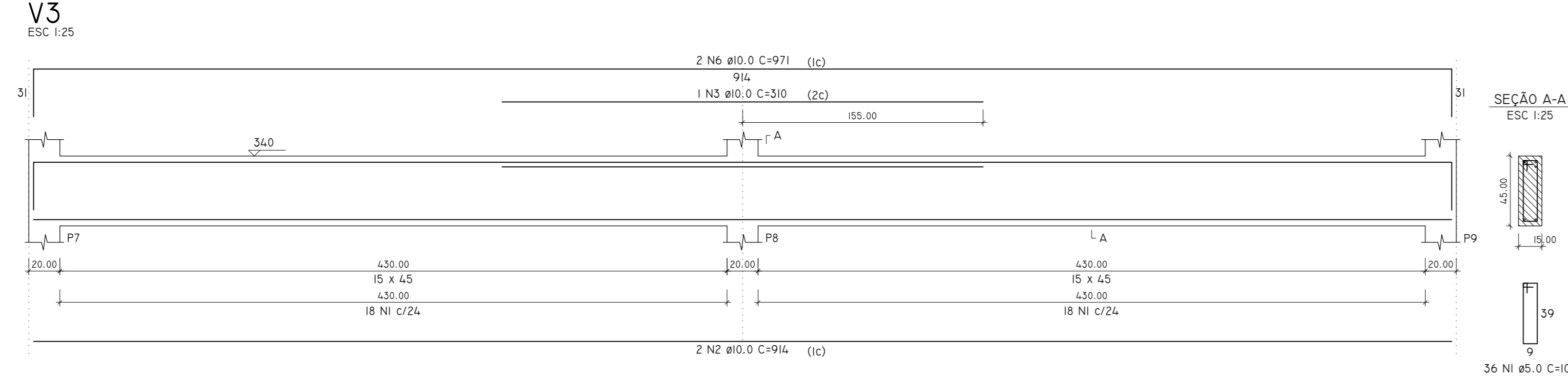
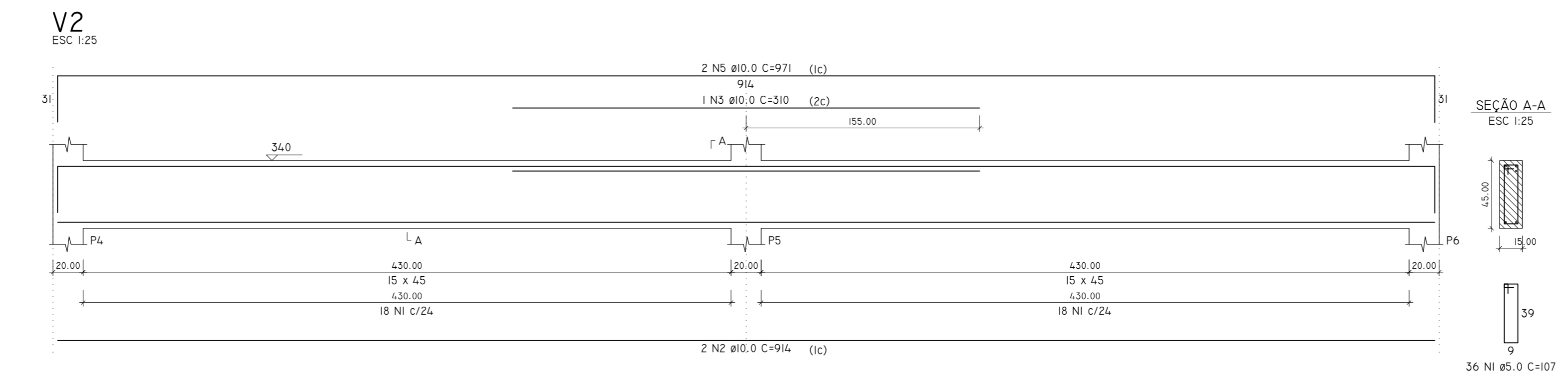
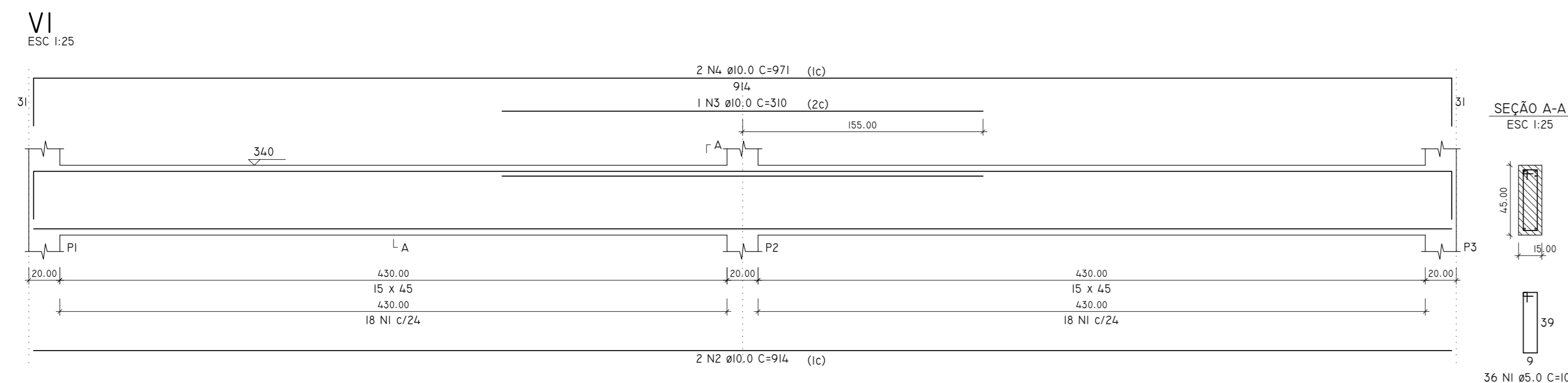
GLOBAL SERVIÇOS LTDA.

BLOCO B - UNIFAP - CAMPUS OIAPOQUE/AP

PROJETO ESTRUTURAL: RODOVIA BR-156, 3051 - BAIRRO UNIVERSIDADE - OIAPOQUE/AP

PROJETO INICIAL: 00 INDICADA MAR/2018

EST 06-25



RELAÇÃO DO AÇO

ACAO	N	DIAM (mm)	QUANT	CLAVT (cm)	C TOTAL (cm)
CASO	1	5.0	609	107	65963
CASO	2	10.0	2	914	1828
CASO	3	10.0	2	310	620
CASO	4	10.0	2	911	1822
CASO	5	10.0	2	911	1822
CASO	6	10.0	2	911	1822
CASO	7	10.0	2	911	1822
CASO	8	10.0	2	911	1822
CASO	9	10.0	2	911	1822
CASO	10	10.0	2	911	1822
CASO	11	10.0	2	911	1822
CASO	12	10.0	2	911	1822
CASO	13	10.0	2	911	1822
CASO	14	10.0	2	911	1822
CASO	15	10.0	2	911	1822
CASO	16	10.0	2	911	1822
CASO	17	10.0	2	911	1822
CASO	18	10.0	2	911	1822
CASO	19	10.0	2	911	1822
CASO	20	10.0	2	911	1822
CASO	21	10.0	2	911	1822
CASO	22	10.0	2	911	1822
CASO	23	10.0	2	911	1822
CASO	24	10.0	2	911	1822
CASO	25	10.0	2	911	1822
CASO	26	10.0	2	911	1822
CASO	27	10.0	2	911	1822
CASO	28	10.0	2	911	1822
CASO	29	10.0	2	911	1822
CASO	30	10.0	2	911	1822

RESUMO DO AÇO

ACAO	DIAM (mm)	C TOTAL (M)	QUANT + 10% (BARRAS)	CLAVT (cm)	PESO + 10% (kg)
CASO	10.0	445.9	41	12 H	302.4
CASO	12.5	82.9	8	12 H	81.8
CASO	16.0	220.0	21	12 H	358.2
CASO	5.0	620.0	60	12 H	110.5
PESO TOTAL (kg)					772.3
CASO					772.3
CASO					110.5

VOLUME DE CONCRETO (C-30) = 9.12 m³
ÁREA DE FORMA = 161.86 m²

PROPRIETARIO: FUNDAÇÃO UNIVERSIDADE FEDERAL

CONSTRUTORA: GLOBAL SERVIÇOS LTDA

PROJETO: RESP. TÉCNICO

ING. CIVIL GERVÂNIO MACHADO
CREA: 0680888-1/RS - INSCRIÇÃO: 11870-1/RS

GLOBAL SERVIÇOS LTDA

BLOCO B - UNIFAP - CAMPUS OIAPOQUE/AP

PROJETO ESTRUTURAL: RODOVIA BR-156, 3081 - BARRIO UNIVERSIDADE - OIAPOQUE/AP

VIGAS - PAVIMENTO 01 - 01.03

PROJETO INICIAL

CLIENTE: GLOBAL SERVIÇOS LTDA

PROJETO: BLOCO B - UNIFAP - CAMPUS OIAPOQUE/AP

PROJETO ESTRUTURAL: RODOVIA BR-156, 3081 - BARRIO UNIVERSIDADE - OIAPOQUE/AP

VIGAS - PAVIMENTO 01 - 01.03

ING. CIVIL GERVÂNIO MACHADO
CREA: 0680888-1/RS - INSCRIÇÃO: 11870-1/RS

ING. CIVIL GERVÂNIO MACHADO
CREA: 0680888-1/RS - INSCRIÇÃO: 11870-1/RS

PROJETO INICIAL

00 INDICADA MAR/2018

EST 08-25

