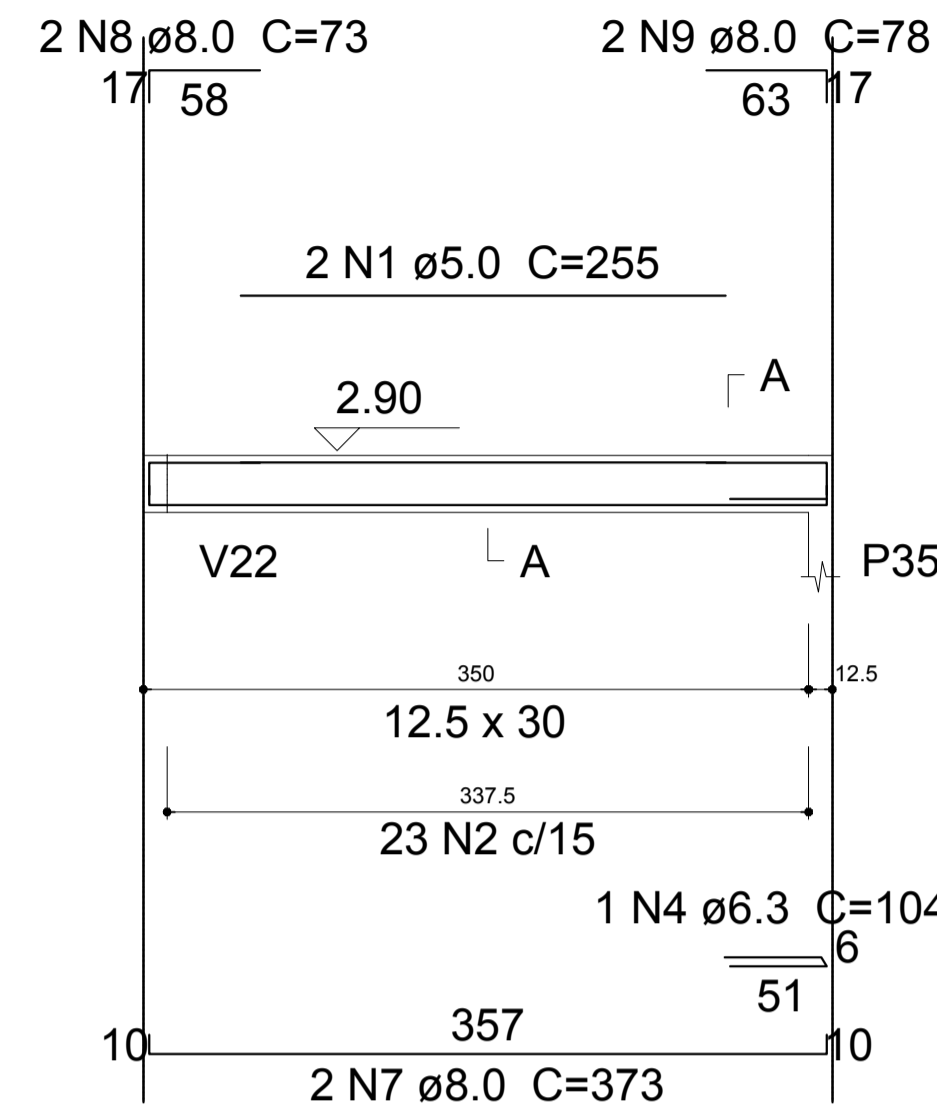


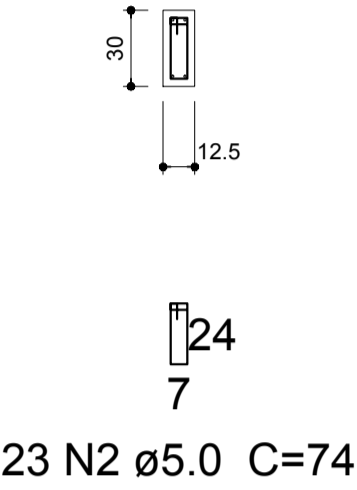
V11

ESC 1:40



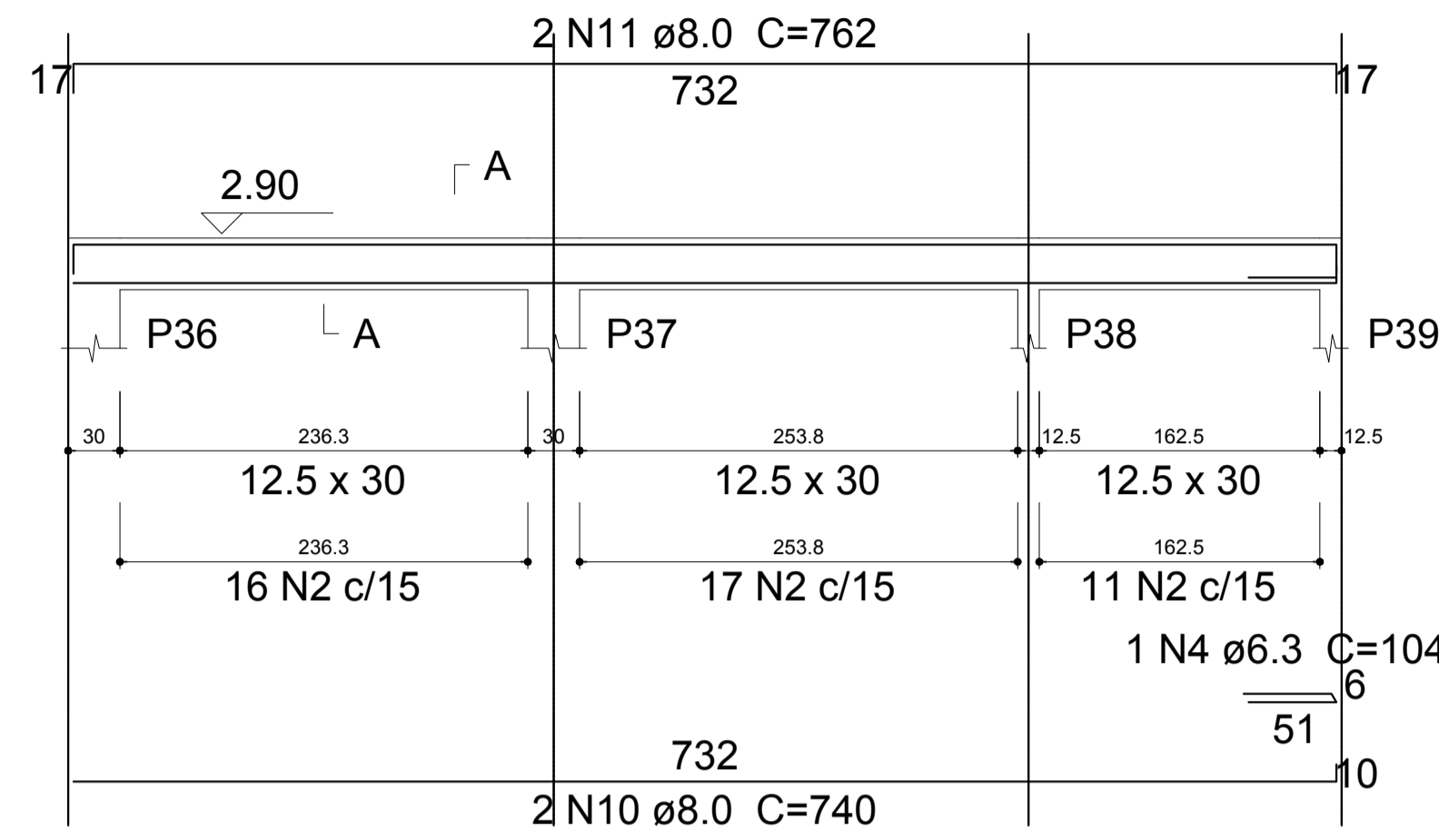
SEÇÃO A-A

ESC 1:30



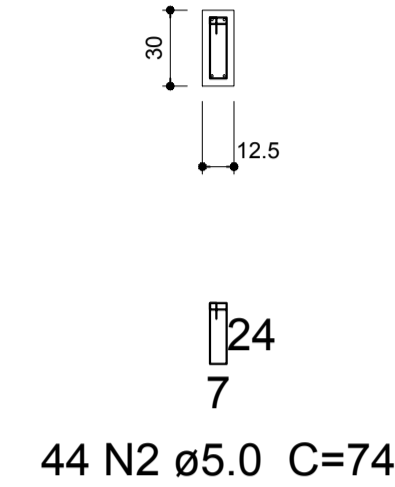
V12

ESC 1:40



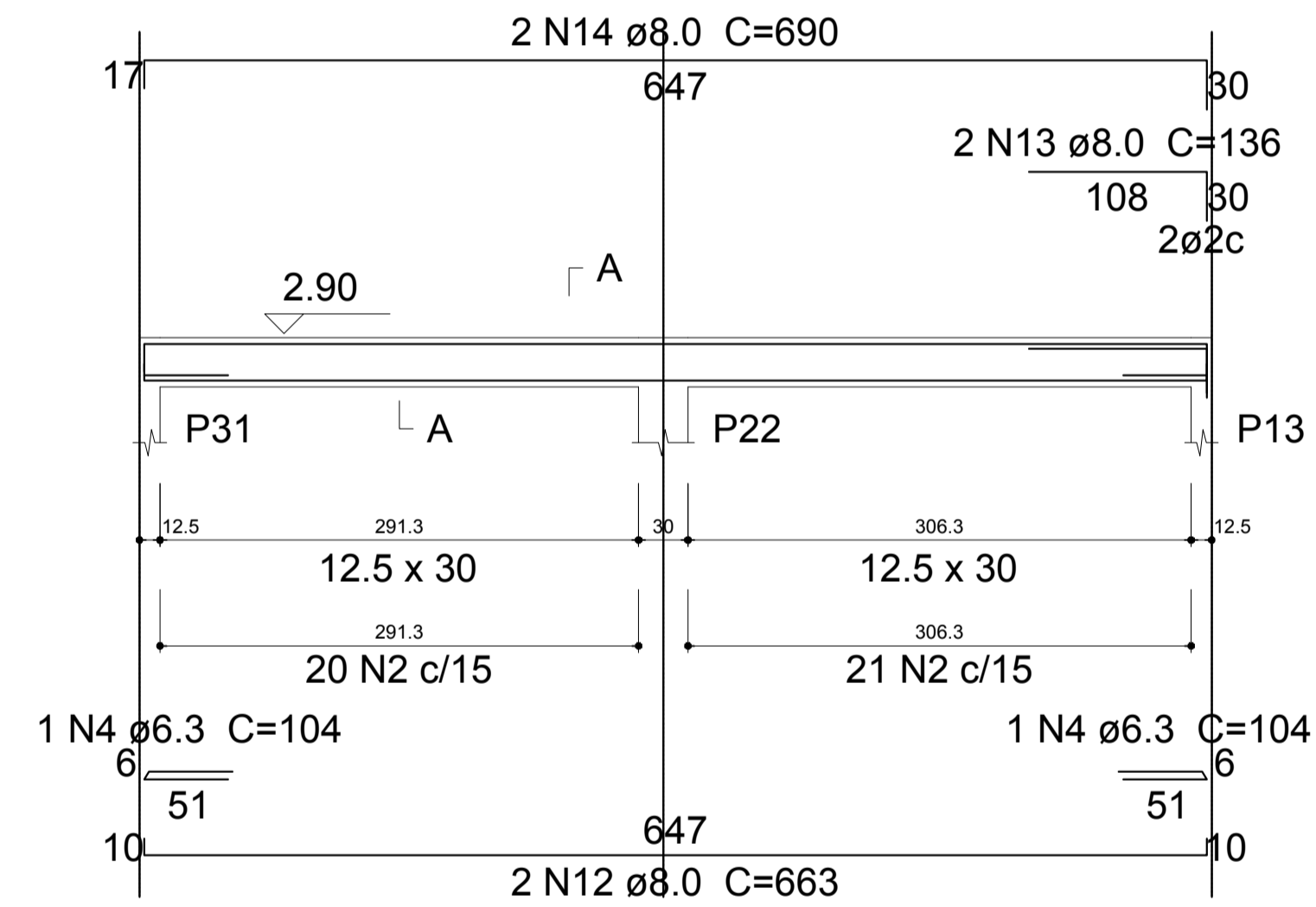
SEÇÃO A-A

ESC 1:30



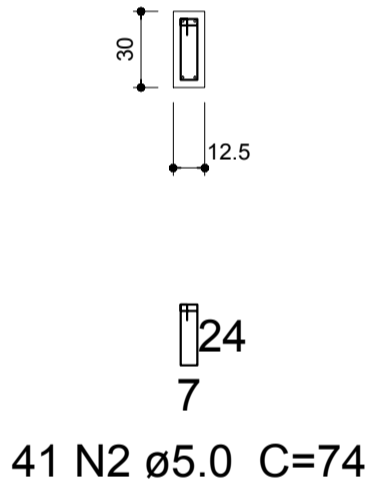
V13

ESC 1:40



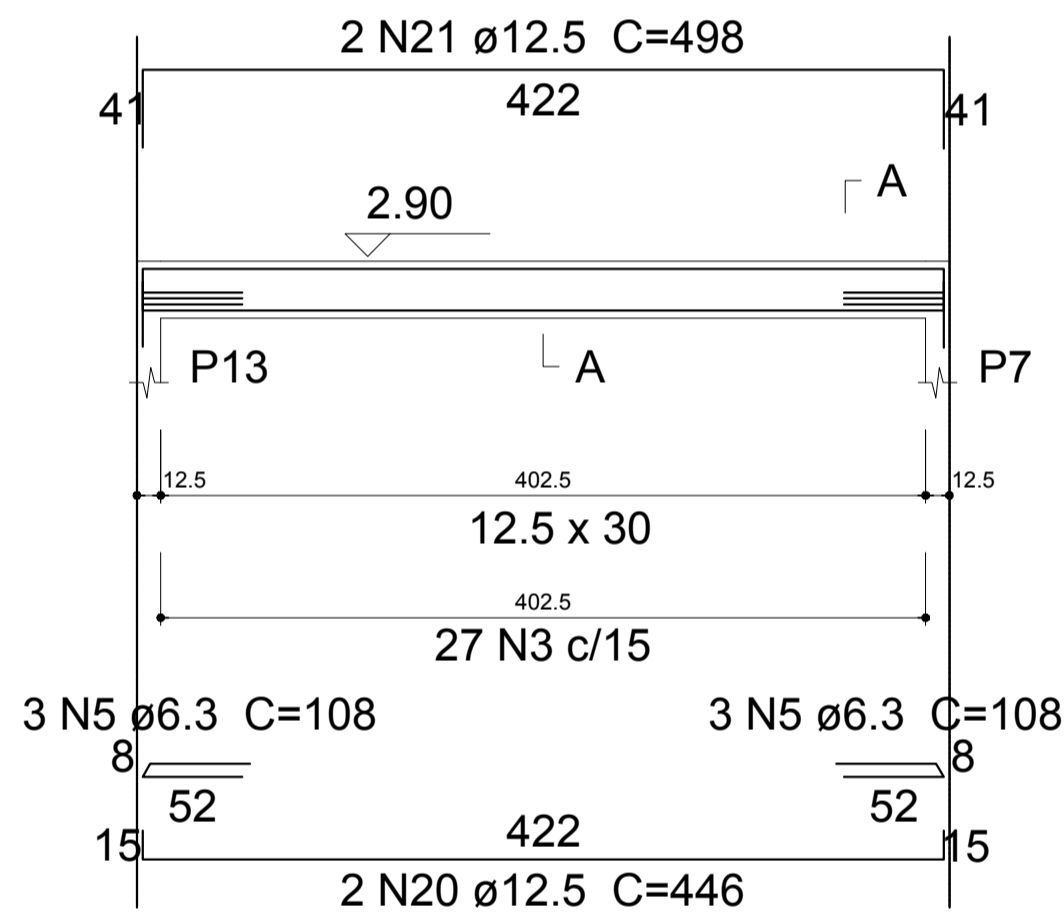
SEÇÃO A-A

ESC 1:30



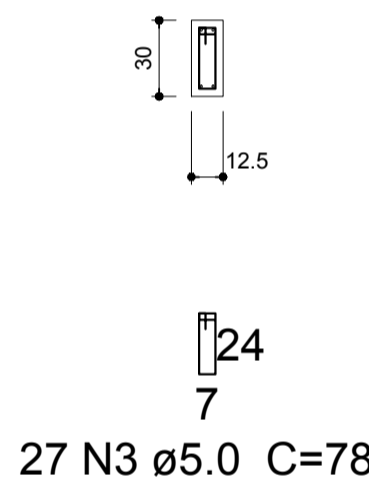
V14

ESC 1:40



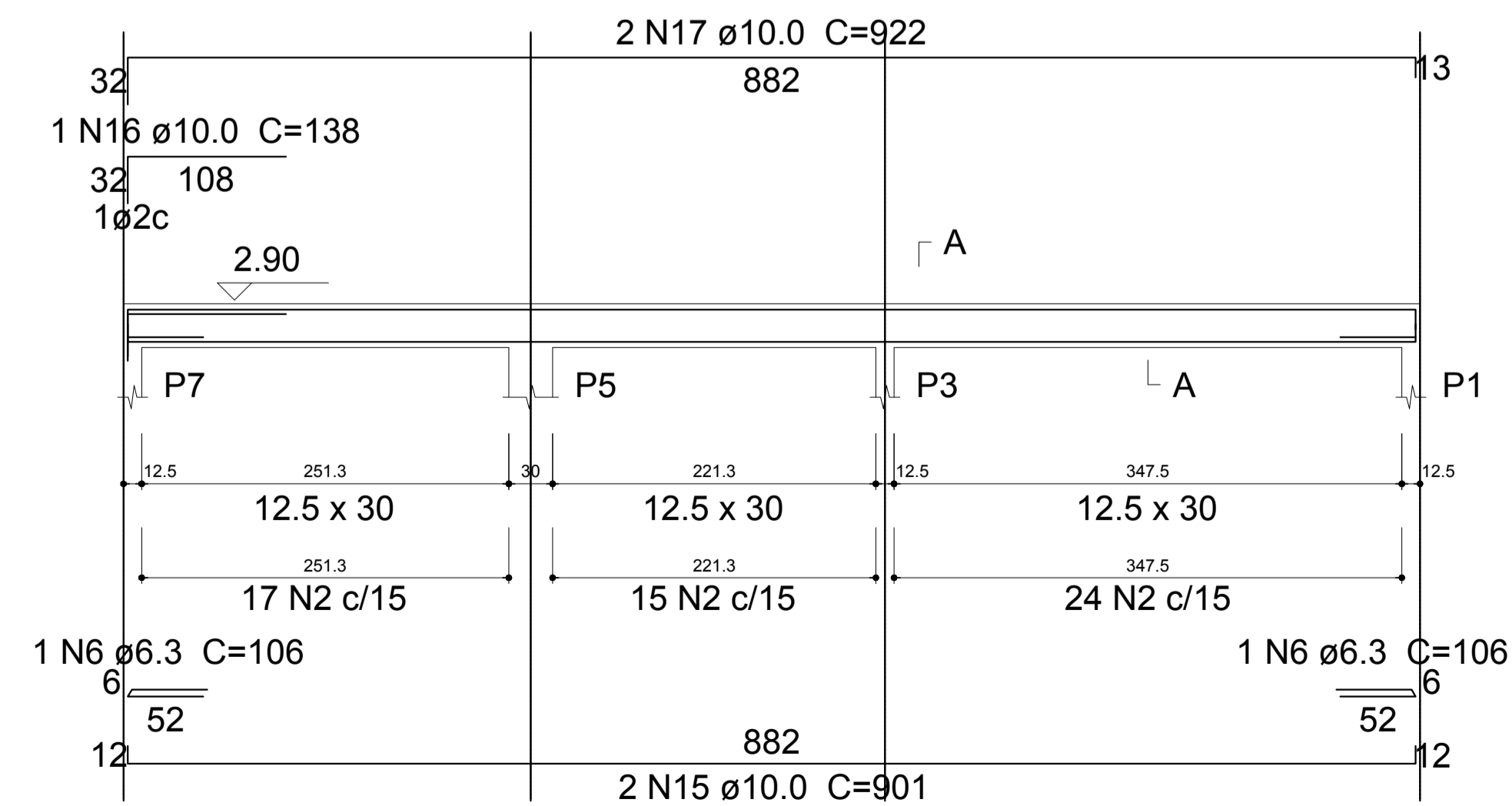
SEÇÃO A-A

ESC 1:30



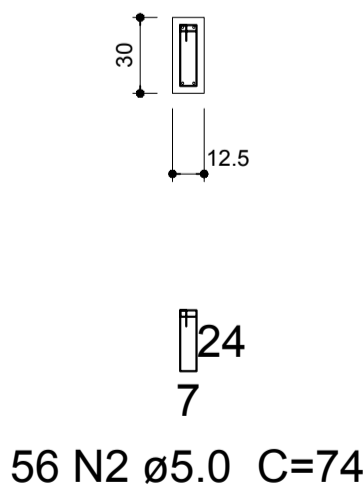
V15

ESC 1:40



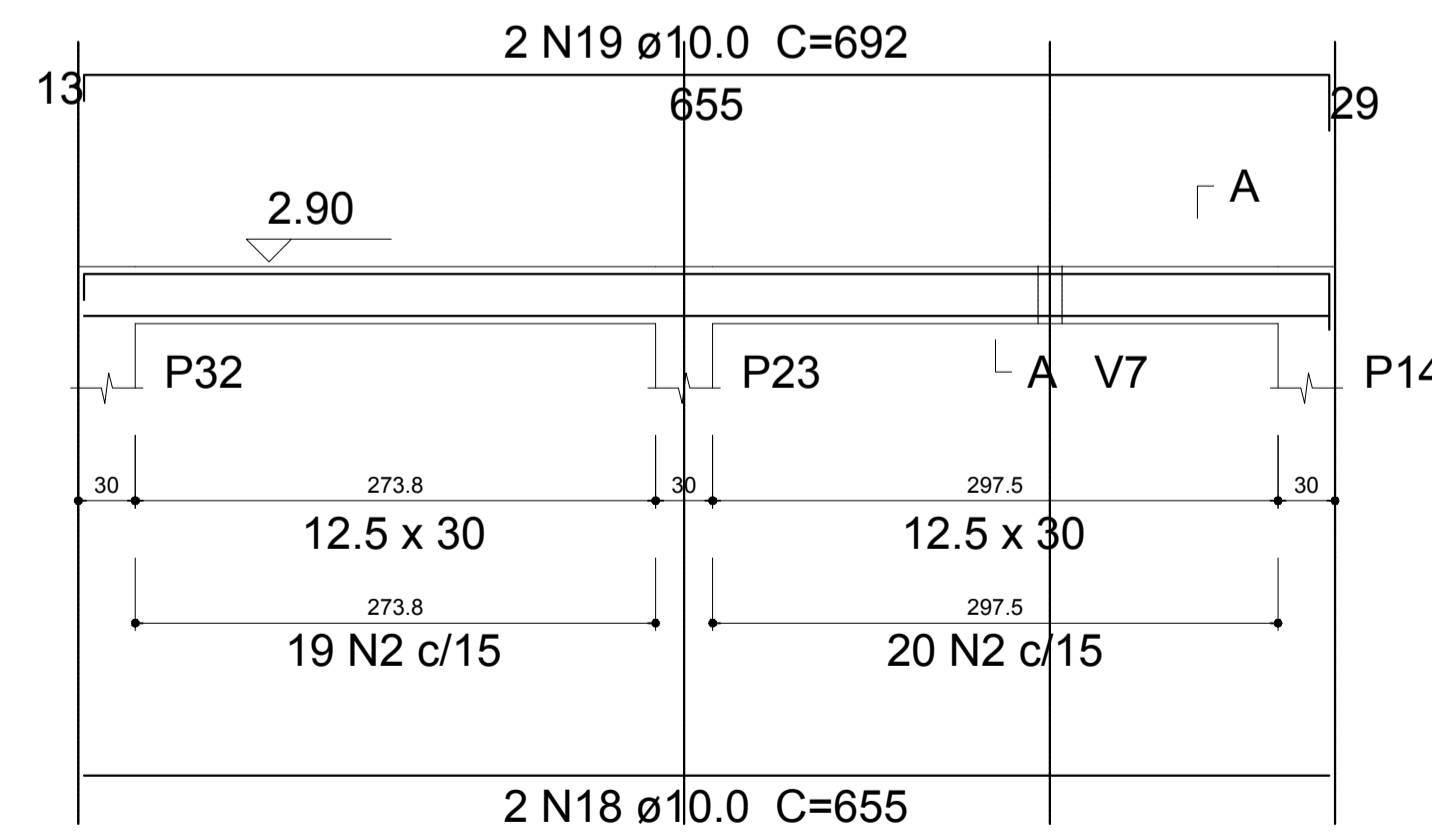
SEÇÃO A-A

ESC 1:30



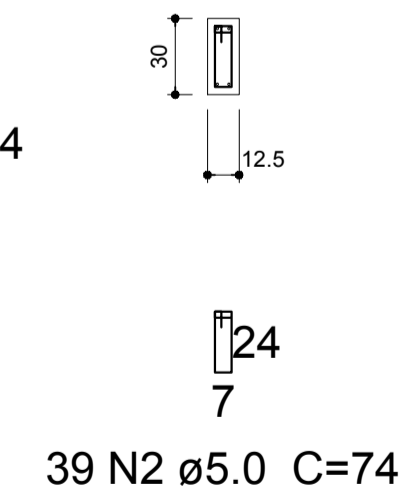
V16

ESC 1:40



SEÇÃO A-A

ESC 1:30




Relação do aço

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	255	510
	2	5.0	203	74	15022
	3	5.0	27	74	1998
CA50	4	6.3	4	104	416
	5	6.3	6	108	648
	6	6.3	2	106	212
	7	8.0	2	373	746
	8	8.0	2	73	146
	9	8.0	2	78	156
	10	8.0	2	740	1480
	11	8.0	2	762	1524
	12	8.0	2	663	1326
	13	8.0	2	136	272
	14	8.0	2	690	1380
	15	10.0	2	901	1802
	16	10.0	1	138	138
	17	10.0	2	922	1844
	18	10.0	2	655	1310
	19	10.0	2	692	1384
	20	12.5	2	446	892
	21	12.5	2	498	996

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	12.8	3.4
	8.0	70.3	30.5
	10.0	64.8	43.9
	12.5	18.9	20
CA60	5.0	176.4	29.9
PESO TOTAL			
CA50		97.9	
CA60		29.9	

Vol. de concreto total (C-25) = 1.43 m³
Área de forma total = 27.14 m²

 PREFEITURA MUNICIPAL DE PARANAGUÁ ADMINISTRAÇÃO DR. EDISON DE OLIVEIRA KERSTEN SECRETARIA MUNICIPAL DE OBRAS PÚBLICAS					
TÍTULO					
PROJETO DE ESTRUTURA DE CONCRETO ARMADO					
OBRA					
REFORMA E AMPLIAÇÃO CMEI - ZULEIDE PINTO ROSA					
CONTEÚDO					
- VIGAS - COBERTURA					
PROPRIETÁRIO			AUTOR DO PROJETO		
PREFEITURA MUNICIPAL DE PARANAGUÁ			DEBORA TEMPORÃO DE AGUIAR RAMOS		
CNPJ: 36.017.458/0001-15			CREA: PR-25647D		
DATA	Julho/2016	ESCALA	indicada	DESENHO	Debora
		ÁREA AMPL.	163,95m²	PRANCHAS	12/15
		ÁREA TOTAL	399,63m²		