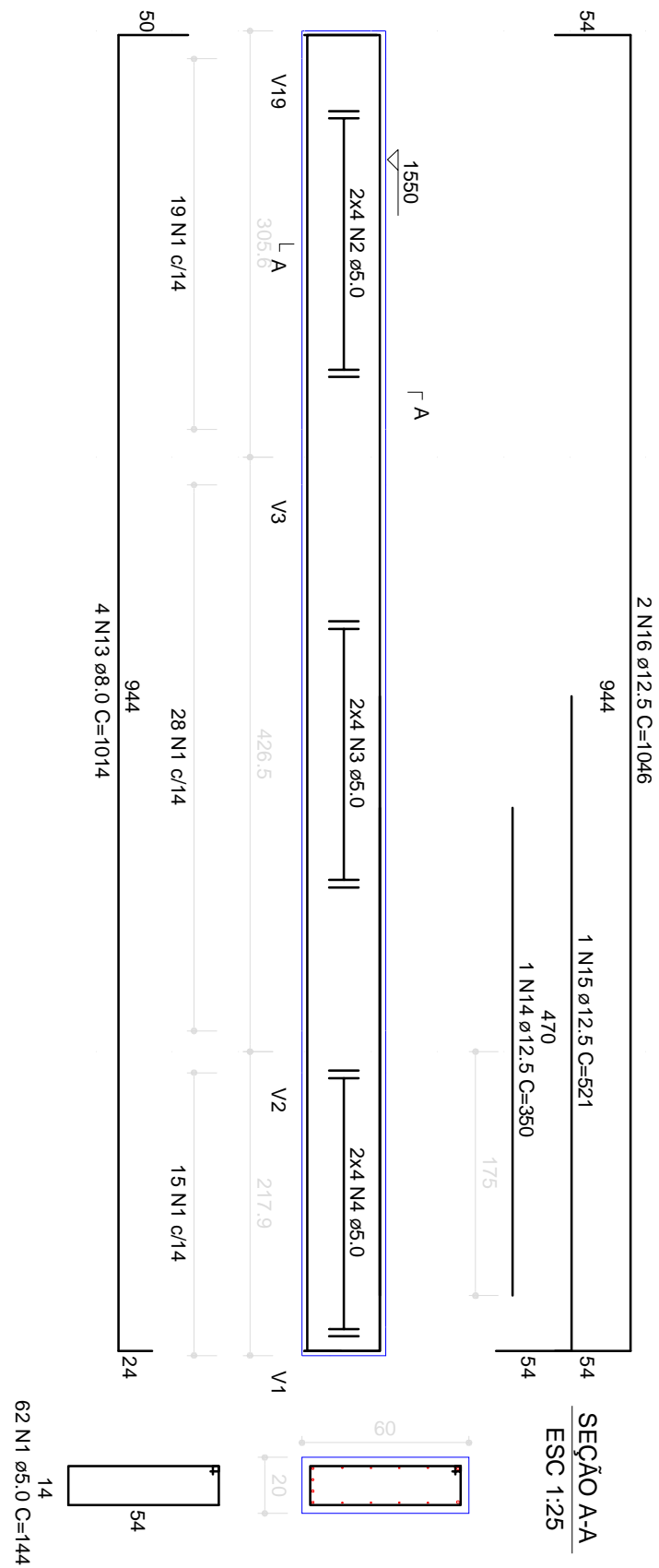
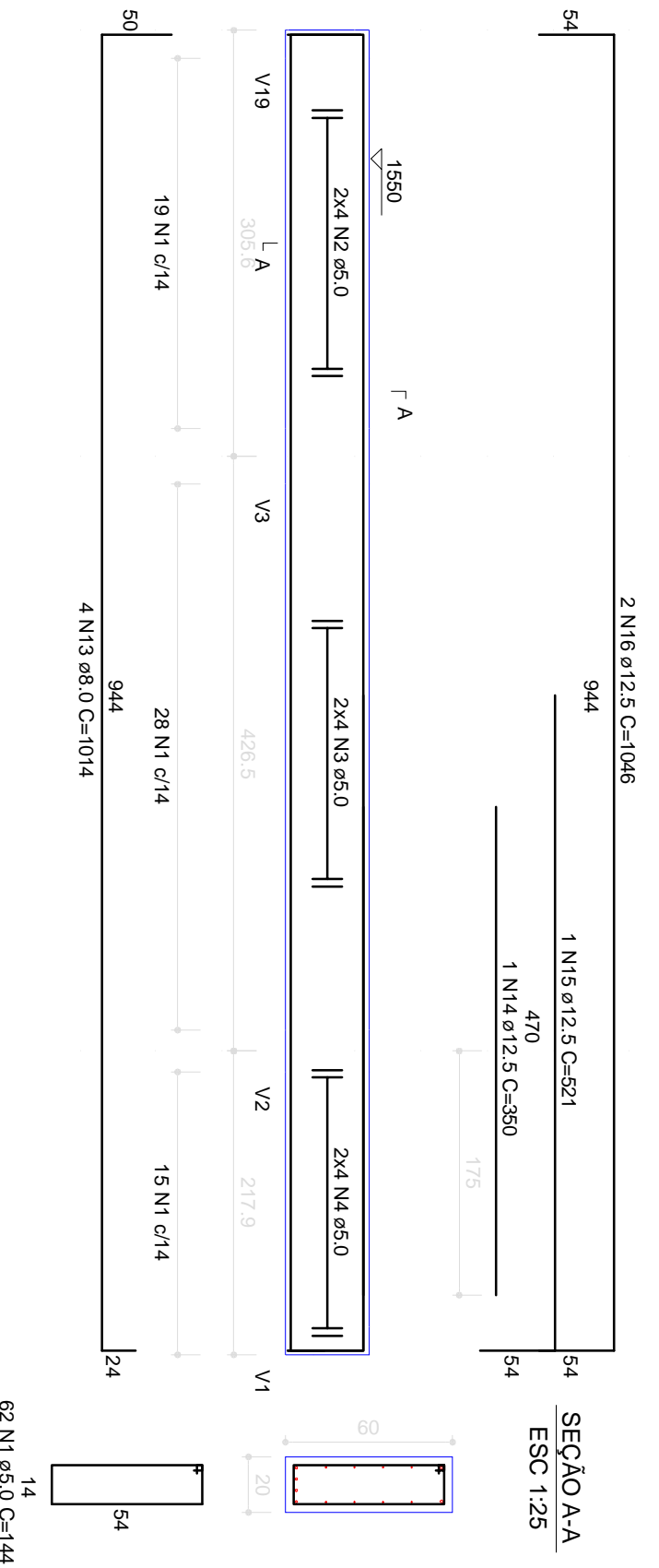


V20



V21



RELAÇÃO DO AÇO

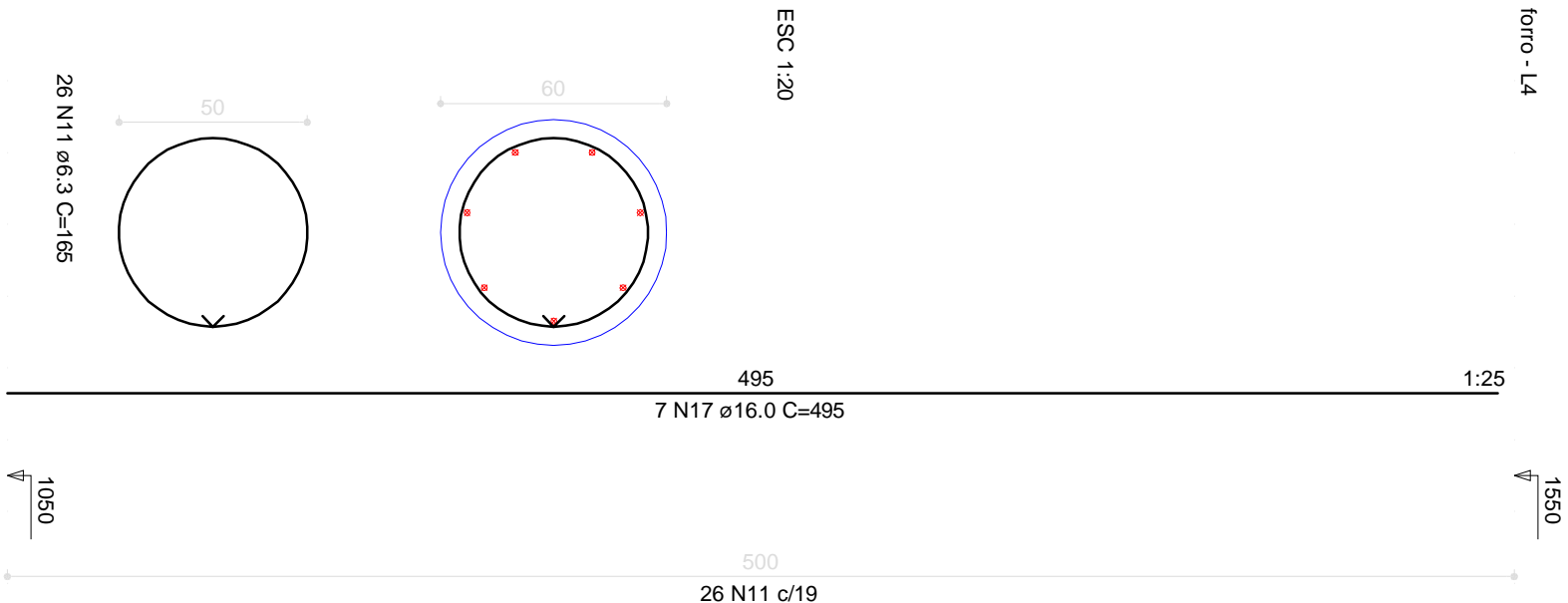
Negativos		2xP7		2xP9		V20		V21	
2xP13		2xP7		2xP9		V20		V21	
AÇO	N	DIAM	Q	UNIT	C.TOTAL	AÇO	N	DIAM	Q
60	1	5.0	124	5144	17356	60	1	5.0	124
	2	5.0	16	corr	4886		2	5.0	16
	3	6.3	16	corr	6832		3	6.3	16
	5	6.3	25	corr	2450		5	6.3	25
50	6	6.3	4	VAR	1448	50	6	6.3	4
	7	6.3	10	VAR	1448		7	6.3	10
	8	6.3	3	VAR	417		8	6.3	3
	10	6.3	3	VAR	417		10	6.3	3
	12	6.3	10	VAR	1448		12	6.3	10
	13	8.0	8	1014	8112		13	8.0	8
	14	12.5	2	520	1042		14	12.5	2
	16	12.5	4	1046	4184		16	12.5	4
	17	16.0	72	495	35440		17	16.0	72

RESUMO DO AÇO

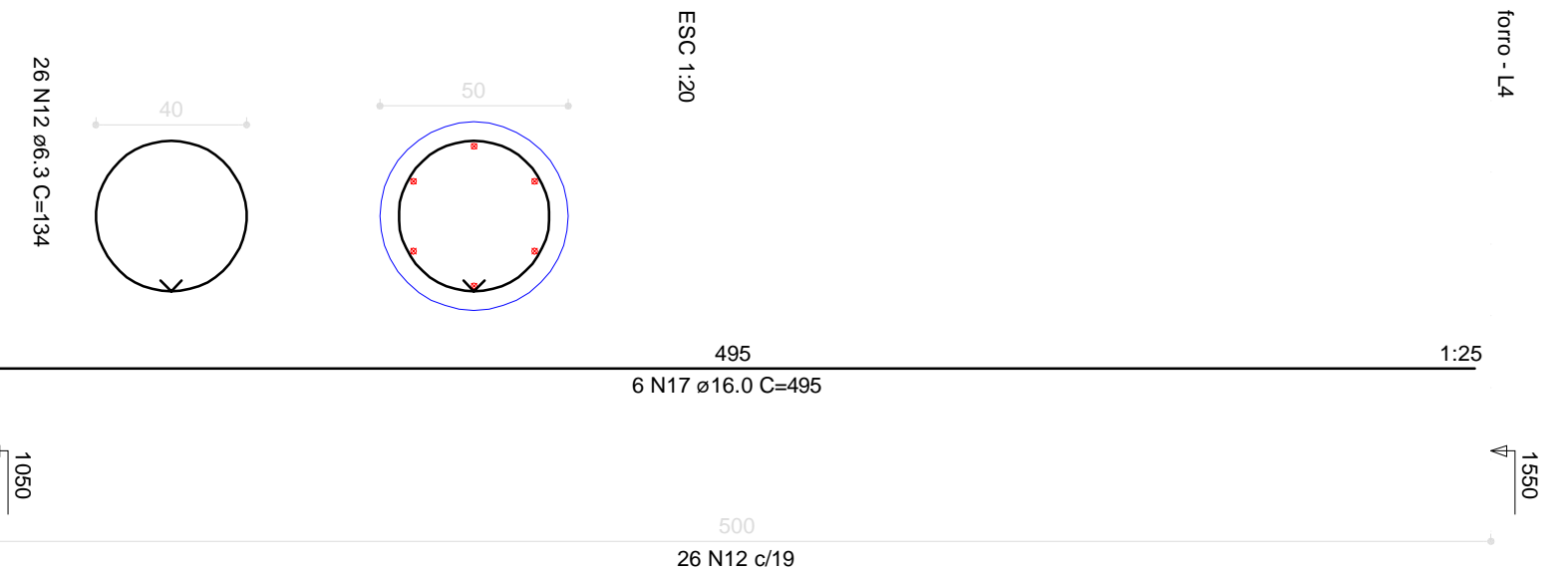
AÇO	DIAM	C.TOTAL	PESO+10%
CA50	8.3	388.5	83.2
CA50	12.5	53.3	62.8
CA60	16.0	331.3	619.4
PESO TOTAL			56.1
CA50	800.7		
CA60	56.1		

Volume de concreto total = 9.90 m³
Área de forma total = 80.01 m²
tck = 30.18 kg/cm²

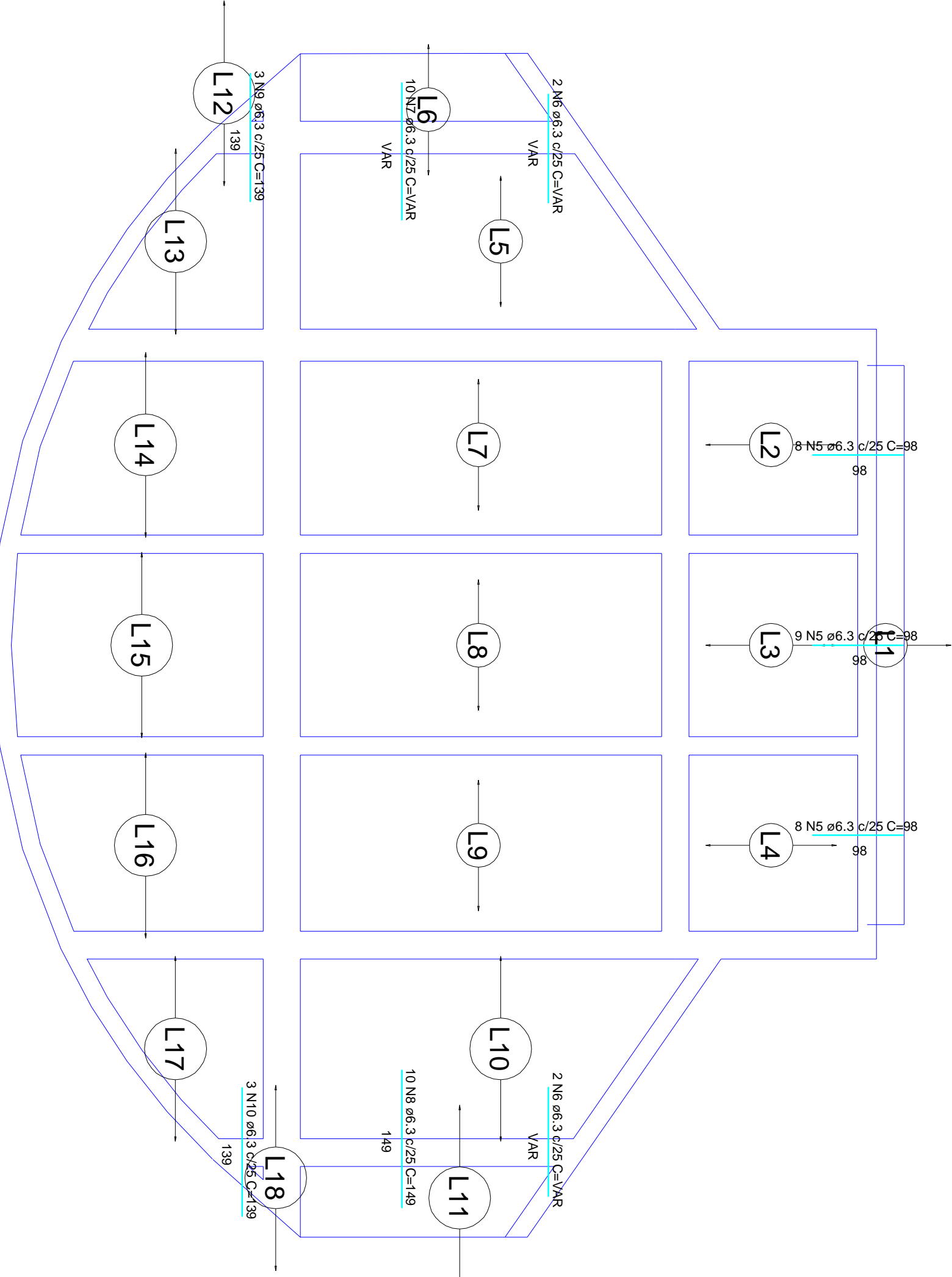
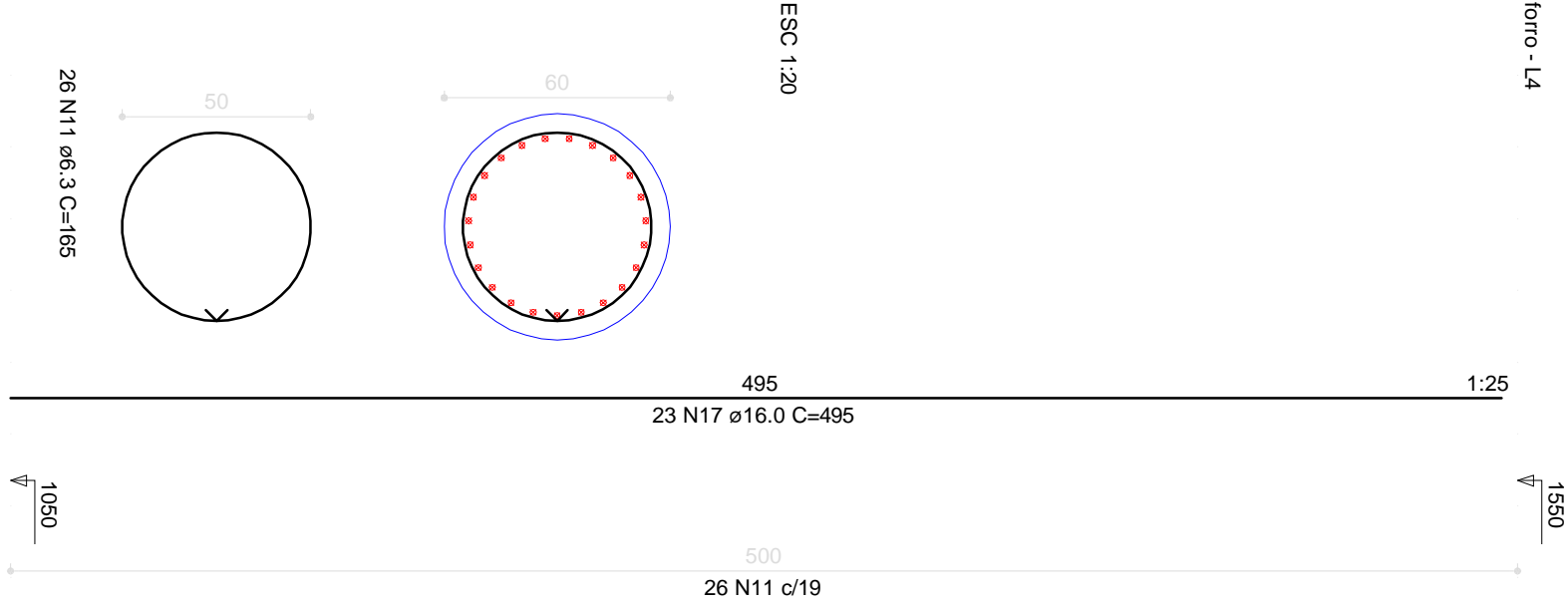
P7=P8



P9=P12



P13=P16



Ferragem Negativa

TÍTULO: FERRAGEM NECG LAJE, VIGAS PILARES FORRO	
OBRA:	BLOCO CENTRAL
LOCAL:	FRANCA SP
CLIENTE:	UNIFACEF
ENG.	VIRGINIO H. V. REIS
CREA:	0600706662
ESCALA:	
INDICAÇÃO:	
DATA:	NOV 2012