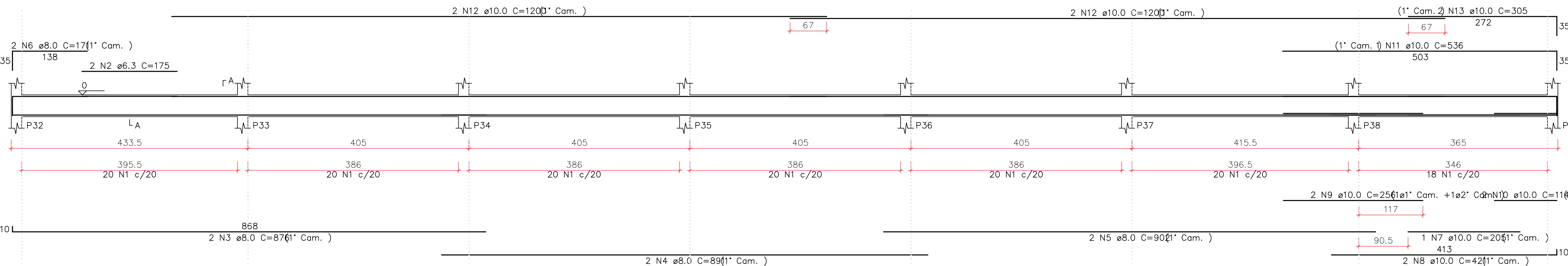
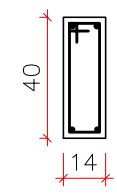


VB11
Escala 1:50

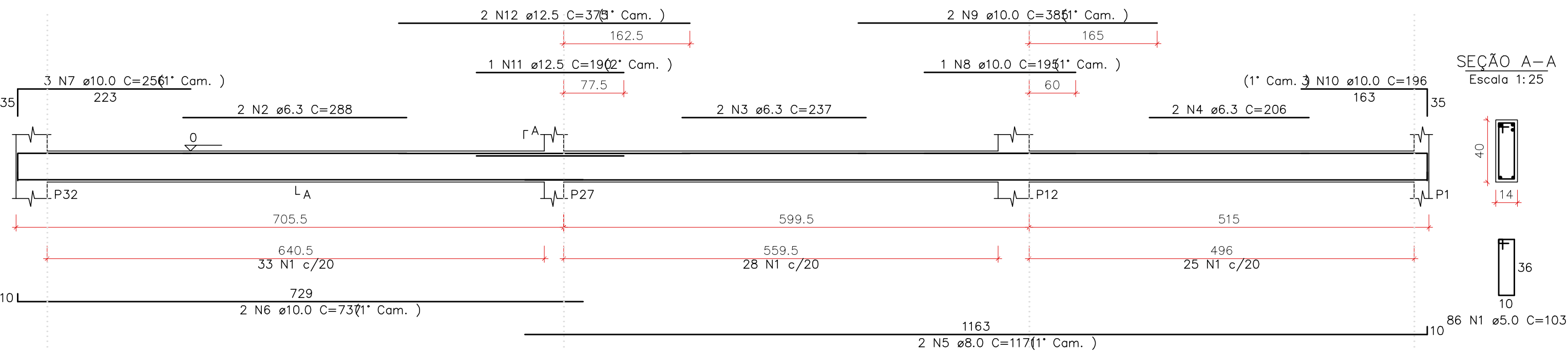


SEÇÃO A-A
Escala 1:25

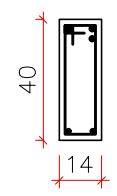


138 N1 ø5.0 C=103

VB12
Escala 1:50

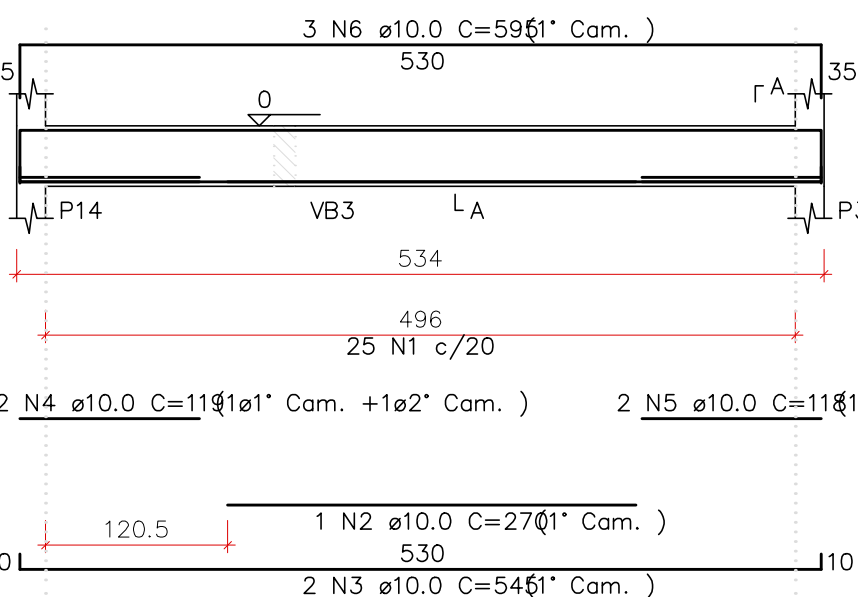


SEÇÃO A-A
Escala 1:25

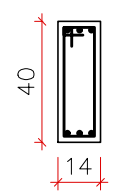


86 N1 ø5.0 C=103

VB13
Escala 1:50

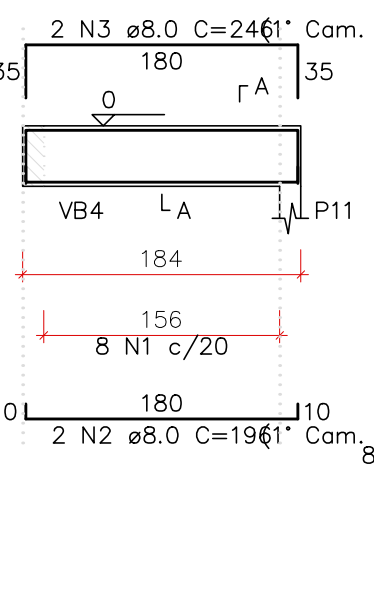


SEÇÃO A-A
Escala 1:25

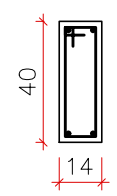


25 N1 ø5.0 C=103

VB14
Escala 1:50

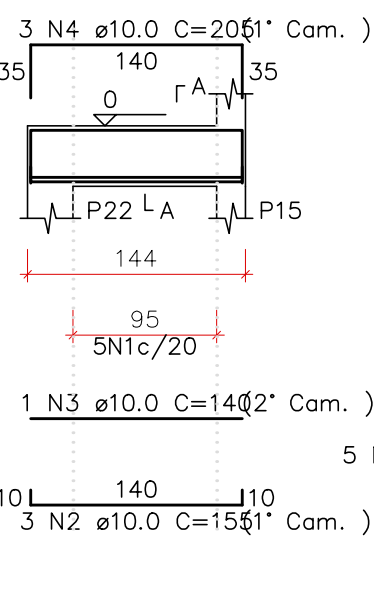


SEÇÃO A-A
Escala 1:25

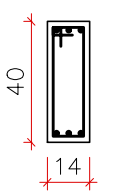


8 N1 ø5.0 C=103

VB15
Escala 1:50

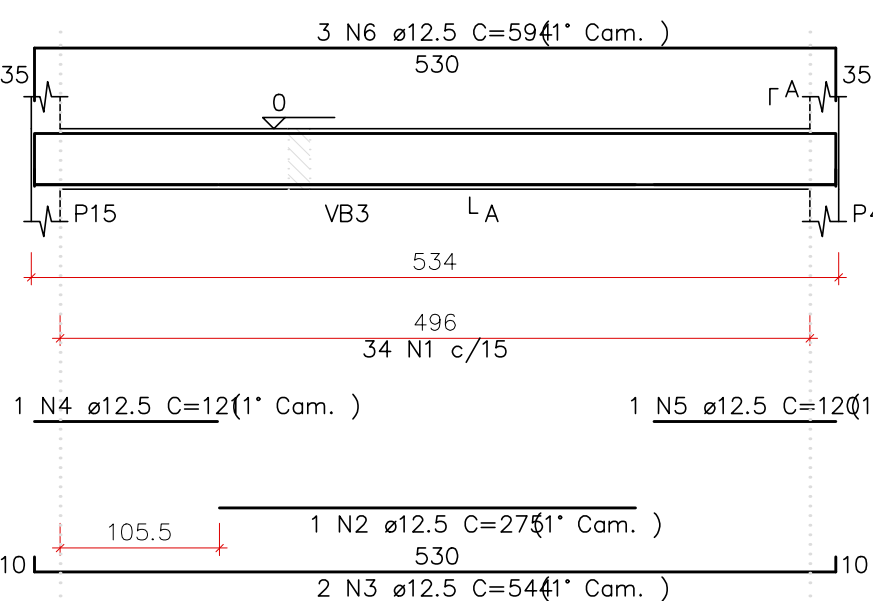


SEÇÃO A-A
Escala 1:25

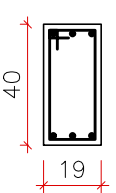


5 N1 ø5.0 C=103

VB16
Escala 1:50

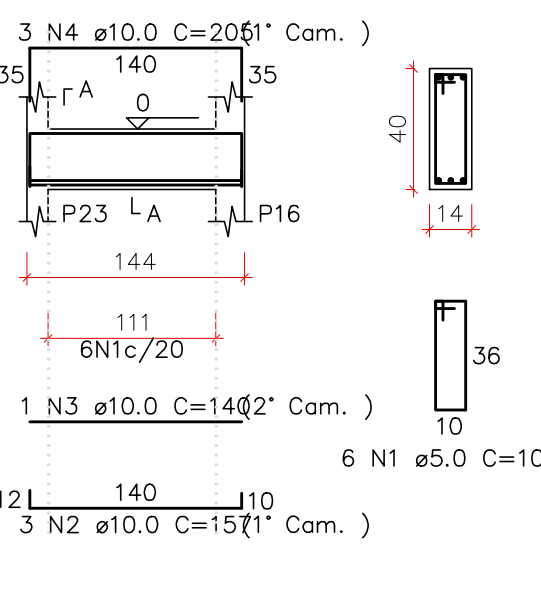


SEÇÃO A-A
Escala 1:25

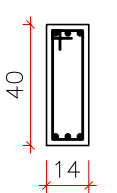


34 N1 ø5.0 C=113

VB17
Escala 1:50

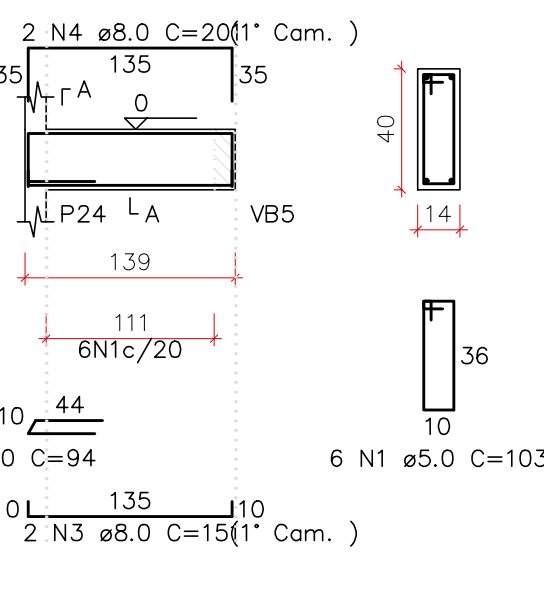


SEÇÃO A-A
Escala 1:25

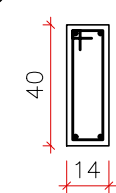


6 N1 ø5.0 C=103

VB18
Escala 1:50

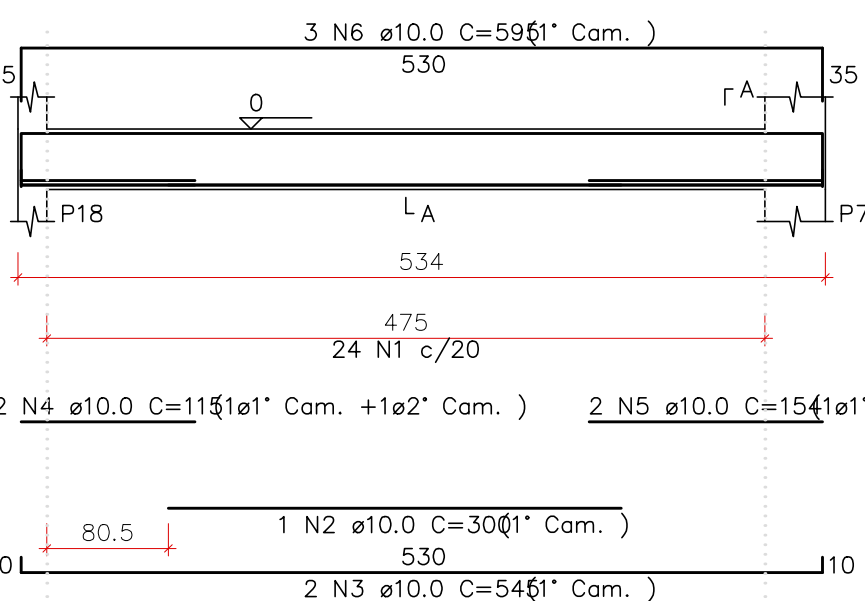


SEÇÃO A-A
Escala 1:25

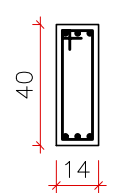


6 N1 ø5.0 C=103

VB19
Escala 1:50

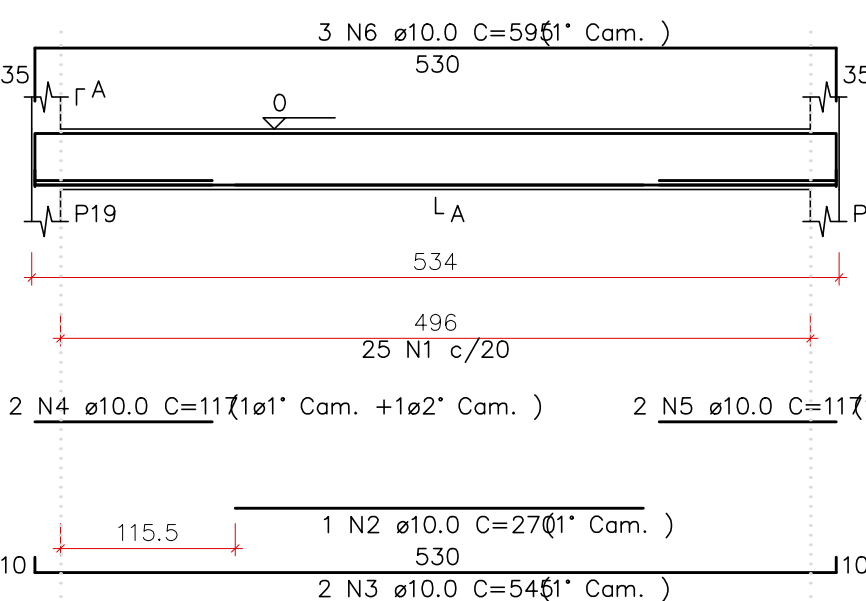


SEÇÃO A-A
Escala 1:25

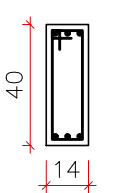


24 N1 ø5.0 C=103

VB20
Escala 1:50



SEÇÃO A-A
Escala 1:25



25 N1 ø5.0 C=103

RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
VB11	CA60	1	5.0	103	14214	14214
	CA50	2	6.3	138	350	350
	CA50	3	8.0	2	1752	1752
	CA50	4	8.0	2	891	891
	CA50	5	8.0	2	902	1804
	CA50	6	8.0	2	171	342
	CA50	7	10.0	2	205	205
	CA50	8	10.0	2	421	842
	CA50	9	10.0	2	256	512
	CA50	10	10.0	2	114	228
	CA50	11	10.0	1	536	536
	CA50	12	10.0	4	1200	4800
VB12	CA50	13	10.0	2	305	610
	CA60	1	5.0	103	8858	8858
	CA50	2	6.3	86	288	576
	CA50	3	6.3	2	237	474
	CA50	4	6.3	2	206	412
	CA50	5	8.0	2	1171	2342
	CA50	6	10.0	2	737	1474
	CA50	7	10.0	2	256	512
	CA50	8	10.0	1	195	195
	CA50	9	10.0	1	385	385
	CA50	10	10.0	3	196	588
	CA50	11	12.5	1	190	190
VB13	CA50	12	12.5	1	375	750
	CA60	1	5.0	25	103	2575
	CA50	2	10.0	1	270	270
	CA50	3	10.0	2	545	1090
	CA50	4	10.0	1	119	238
	CA50	5	10.0	1	118	236
	CA50	6	10.0	3	595	1785
	CA60	1	5.0	103	824	824
	CA50	2	8.0	1	196	392
	CA50	3	8.0	2	246	492
	CA60	1	5.0	103	465	465
	CA50	2	10.0	1	155	310
VB15	CA50	3	10.0	1	140	140
	CA50	4	10.0	3	205	615
	CA60	1	5.0	34	113	3842
	CA50	2	12.5	1	275	275
	CA50	3	12.5	2	644	1288
	CA50	4	12.5	1	121	121
	CA50	5	10.0	1	359	359
	CA60	1	5.0	6	157	942
	CA50	2	10.0	3	584	1752
	CA60	1	5.0	103	618	618
	CA50	2	10.0	1	157	314
	CA50	3	10.0	1	140	140
VB17	CA50	4	10.0	1	205	410
	CA60	1	5.0	6	103	618
	CA60	2	5.0	1	94	94
	CA50	3	8.0	2	302	604
	CA50	4	8.0	2	201	402
	CA60	1	5.0	24	103	2472
	CA50	2	10.0	1	300	300
	CA50	3	10.0	2	545	1090
	CA50	4	10.0	1	115	230
	CA50	5	10.0	1	154	308
	CA60	1	5.0	25	595	1785
	CA50	2	10.0	1	270	540
VB20	CA50	3	10.0	2	545	1090
	CA50	4	10.0	1	117	234
	CA50	5	10.0	1	117	234
	CA50	6	10.0	3	595	1785

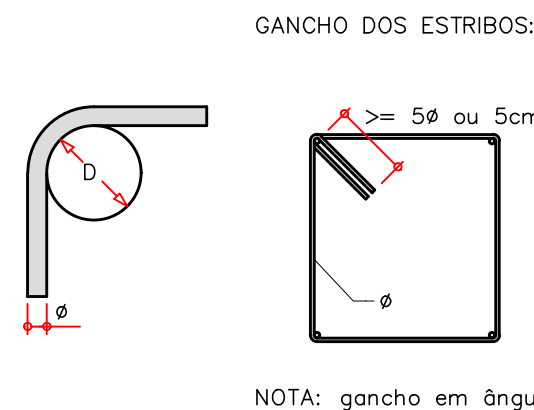
RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	PESO + 0% (kg)
CA50	6.3	18.1	2	4.4
CA50	8.0	96.1	9	37.9
CA50	10.0	249.2	21	153.6
CA60	5.0	43.3	4	41.7
CA60	5.0	372.1	32	57.3
PESO TOTAL (kg)				
CA50	237.7			
CA60	57.3			
Volume de concreto (C-25) = 3.93 m³				
Área de forma = 64.63 m²				

MATERIAIS E COBRIMENTOS

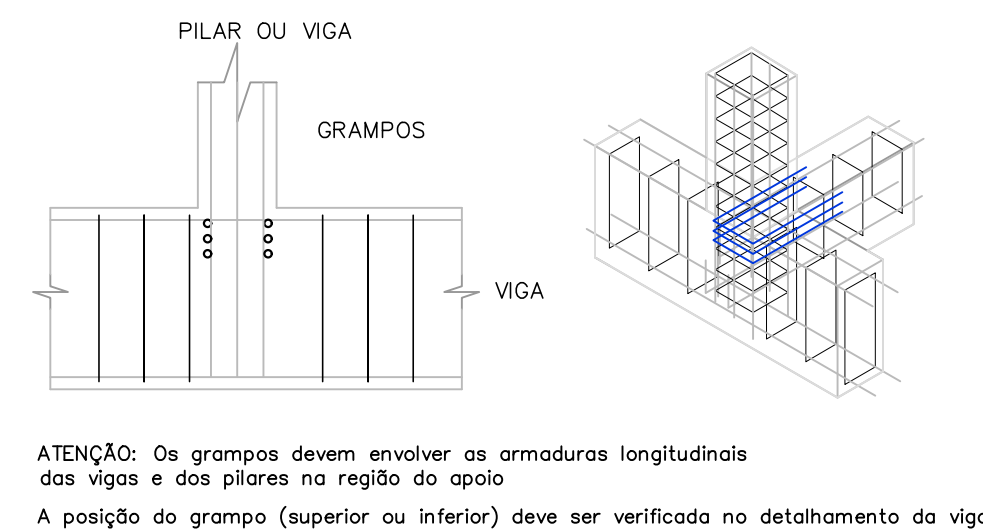
- CONCRETO
- RESISTÊNCIA CARACTERÍSTICA MÍNIMA: 25,0 MPa
 - SLUMP DE 10 +/- 2 PARA AS ESTRUTURAS EM GERAL;
- AÇO
- RESISTÊNCIA CARACTERÍSTICA MÍNIMA DE ESCOAMENTO – CA-50-A: 500,0 MPa;
 - RESISTÊNCIA CARACTERÍSTICA MÍNIMA DE ESCOAMENTO – CA-60-B: 600,0 MPa.
- CLASSE DE AGRESSIVIDADE AMBIENTAL CONSIDERADA: CATEGORIA II (MODERADA)
- BLOCOS DE COROAMENTO: 4,0 cm;
 - VIGAS BALDRAME: 2,5 cm;
 - DEMAIS VIGAS: 2,5 cm;
 - ESCADAS: 2,5 cm;
 - PILARES: 2,5 cm;
- LAJES:
- ARMADURA NEGATIVA: 2,0 cm;
 - ARMADURA POSITIVA: 2,0 cm.

DETALHE DE DOBRAS SEM ESCALA

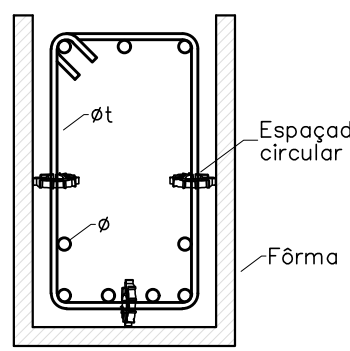
DIÂMETRO MÍNIMO DOS PINOS DE DOBRAMENTO DAS BARRAS:			
ESTRIBOS		BARRAS DE TRAÇÃO	
ø (mm)	D (mm)	ø (mm)	D (mm)
5,0	15,0	5,0	30,0
6,3	18,9	6,3	31,5
8,0	24,0	8,0	40,0
10,0	30,0	10,0	50,0
12,5	62,5	12,5	62,5
16,0	80,0	16,0	80,0
>= 20,0	8xø	>= 20,0	8xø



GRAMPOS DE ANCORAÇÃO SEM ESCALA



ESPAÇADORES NAS VIGAS SEM ESCALA



REV. 00	30/06/23	EMIÇÃO INICIAL	DAC
REVISÃO	DATA	DESCRIÇÃO	RESP.:
CLIENTE			
		COORDENAÇÃO ALÓISIO CAETANO FERREIRA	
		RESPONSÁVEL TÉCNICO E AUTOR	
Rua Cel. Joaquim Francisco, 341, Bairro Varginha – Itajubá / MG CEP: 37501-052 Tel: (35) 3623-8846 www.dacengenharia.com.br		ENG. CIVIL FLÁVIA BARBOSA CREA MG-187.842/D	
EMPREENHIMENTO			
CONSTRUÇÃO DO CRAS BAIRRO SÃO GERALDO			
ENDEREÇO RUA JOÃO PAULO VIDAL, B. SÃO GERALDO POUSO ALEGRE – MINAS GERAIS		DISCIPLINA ESTRUTURAL	
ASSUNTO PROJETO ESTRUTURAL EM CONCRETO ARMADO MÓDULO 2 DETALHAMENTO DAS VIGAS BALDRAME		FASE DO PROJETO EXECUTIVO	
FOLHA Nº 37/52			
DATA INICIAL	ESCALA	REVISÃO	ARQUIVO
30/06/2023	INDICADA	ROO	DAC-PMPA-CRAS-SG-PE-EST-ROO.DWG