Segundo piso
Desenho de vigas
Concreto: C25, con.desfav.
Aço: CA-50-A e CA-60-B
Escala vigas: 1:50
Escala seções: 1:20

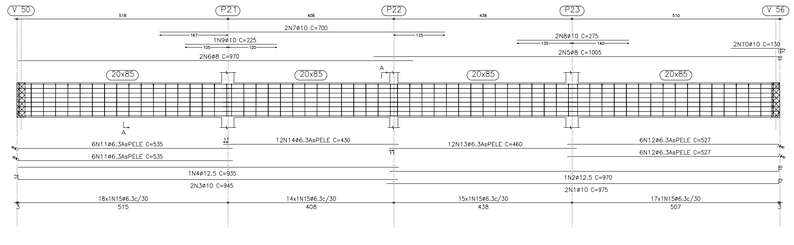
Resumo Aço Segundo piso Vigas		Comp. total (m)	Peso+10% (kg)	Total
CA-50-A	ø6.3	7886.0	2145	
	ø8	1703.3	735	
	ø10	3875.7	2677	
	ø12.5	952.3	1028	
	ø16	107.9	186	6771
CA-60-B	ø4.2	8.5	1	
	ø5	2810.2	485	486
Total				7257

Vol. de concreto total (C-25) = 108,77 m³
Área de forma total = 824,30 m²

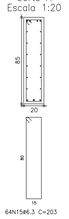
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V 7	1	ø12.5	2	15	870	15	900	1800	17.7	
	2	ø12.5	1		540		540	540	5.3	
	3	ø10	1		370		370	370	2.3	
	4	ø10	2		183	12	195	390	2.4	
	5	ø10	3	12	878		890	2670	16.8	
	6	ø8	2		215	10	225	450	1.8	
	7	ø10	2		250		250	500	3.1	
	8	ø10	2		115		115	230	1.4	
	9	ø4.2	2		370		370	740		0.8
	10	ø10	38				150	5700	35.8	
	11	ø5	10				100	1000		1.6
							Total+10%		95.3	2.6
V8	1	ø12.5	3		570		570	1710	16.8	
	2	ø12.5	3		555		555	1665	16.3	
	3	ø16	2	19	546		565	1130	17.7	
	4	ø16	1		535		535	535	8.4	
	5	ø10	2		273	12	285	570	3.6	
	6	ø10	3	12	1073		1085	3255	20.4	
	7	ø10	3		318	12	330	990	6.2	
	8	ø16	2		320		320	640	10.0	
	9	ø10	2		220		220	440	2.8	
	10	ø12.5	2		195		195	390	3.8	
	11	ø10	59				140	8260	51.9	
	12	ø5	17				130	2210		3.5
							Total+10%		173.7	3.9
V6	1	ø10	2		1050		1050	2100	13.2	
	2	ø12.5	2		810		810	1620	15.9	
	3	ø12.5	2		570		570	1140	11.2	
	4	ø10	2		555		555	1110	7.0	
	5	ø12.5	1		550		550	550	5.4	
	6	ø10	4	12	533		545	1090	6.8	
	7	ø10	1		525		525	525	3.3	
	8	ø12.5	1		320		320	640	6.3	
	9	ø12.5	1		290		290	290	2.8	
	10	ø10	1		190		190	380	2.4	
	11	ø10	1		285		285	285	1.8	
	12	ø10	2		288	12	300	600	3.8	
	13	ø10	1		280		280	280	1.8	
	14	ø10	1		275		275	275	1.7	
	15	ø10	1		270		270	270	1.7	
	16	ø8	4		1095		1095	4380	17.2	
	17	ø8	2	10	1055		1065	2130	8.4	
	18	ø8	2		805	10	815	1630	6.4	
	19	ø10	2		205		205	410	2.6	
	20	ø10	4		200		200	800	5.0	
	21	ø10	2		195		195	390	2.4	
	22	ø10	2		190		190	380	2.4	
	23	ø10	2		185		185	370	2.3	
	24	ø10	2		180		180	360	2.3	
	25	ø10	2		175		175	350	2.2	
	26	ø10	4		170		170	680	4.3	
	27	ø10	4		155		155	620	3.9	
	28	ø10	4		140		140	560	3.5	
	29	ø10	4	12	68		80	320	2.0	
	30	ø5	116				130	15080		23.7
	31	ø6.3	124				133	16492	40.8	
							Total+10%		209.2	26.1
V 15	1	ø12.5	2	15	744	15	774	1548	15.2	
	2	ø16	1		510		510	510	8.0	
	3	ø8	2	13	744	13	770	1540	6.0	
	4	ø12.5	2		210	15	210	420	4.1	
	5	ø10	3	12	188		200	600	3.8	
	6	ø12.5	1		170	15	185	185	1.8	
	7	ø10	2	12	168		180	360	2.3	
	8	ø5	44				130	5720		9.0
							Total+10%		45.3	9.9
V 53	1	ø10	2	12	700	12	724	1448	9.1	
	2	ø10	1		480		480	480	3.0	
	3	ø8	2		512	13	525	1050	4.1	
	4	ø10	12		288		300	900	5.7	
	5	ø10	2		160		160	320	2.0	
	6	ø10	2		118	12	130	260	1.6	
	7	ø5	38				130	4940		7.8
							Total+10%		28.1	8.6

Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V1	1	ø10	2		1033	12	1045	2090	13.1	
	2	ø12.5	1		1025		1025	1025	10.1	
	3	ø12.5	1		1020		1020	1020	10.0	
	4	ø10	2		785		785	1570	9.9	
	5	ø10	2		535		535	1070	6.7	
	6	ø10	2		290		290	580	5.7	
	7	ø10	2		290		290	580	3.6	
	8	ø12.5	2		285		285	570	5.6	
	9	ø10	2	12	283		295	590	3.7	
	10	ø12.5	1		275		275	275	2.7	
	11	ø10	7		275		275	1925	12.1	
	12	ø12.5	2		215		215	430	4.2	
	13	ø10	1		215		215	215	1.4	
	14	ø10	4		790		790	3160	19.8	
	15	ø10	3		540		540	1620	10.2	
	16	ø8	2		325		325	650	2.6	
	17	ø10	21		290		290	6090	38.2	
	18	ø8	2		285		285	570	2.2	
	19	ø10	3	12	283		295	885	5.6	
	20	ø10	3		278	12	290	870	5.5	
	21	ø10	2		610		610	1220	7.7	
	22	ø10	14		110		110	1540	9.7	
	23	ø10	2	12	73		85	170	1.1	
	24	ø10	2		68	12	80	160	1.0	
	25	ø6.3	156		275		275	42900	106.1	
	26	ø6.3	24		270		270	6480	16.0	
	27	ø6.3	125				203	25375	62.7	
	28	ø10	67				210	14070	88.4	
							Total+10%		512.2	
V 2	1	ø12.5	1		737		737	737	7.2	
	2	ø10	2	12	737	12	761	1522	9.6	
	3	ø10	3	12	528		540	1620	10.2	
	4	ø8	2		245	10	255	510	2.0	
	5	ø10	4	12	63		75	300	1.9	
	6	ø6.3	12		275		275	3300	8.2	
	7	ø6.3	12	8	269		277	3324	8.2	
	8	ø6.3	12		242	8	250	3000	7.4	
	9	ø6.3	34				203	6902	17.1	
							Total+10%		79.0	
V3	1	ø10	2		963	12	975	1950	12.2	
	2	ø12.5	1		950	15	965	970	9.5	
	3	ø10	2	12	933		945	1890	11.9	
	4	ø12.5	1		935		935	935	9.2	
	5	ø8	2		995	10	1005	2010	7.9	
	6	ø8	2		970		970	1940	7.6	
	7	ø10	2		700		700	1400	8.8	
	8	ø10	2		275		275	550	3.5	
	9	ø10	1		225		225	225	1.4	
	10	ø10	2		118	12	130	260	1.6	
	11	ø6.3	12	8	527		535	6420	15.9	
	12	ø6.3	12		519	8	527	6324	15.6	
	13	ø6.3	12		460		460	5520	13.6	
	14	ø6.3	12		430		430	5160	12.8	
	15	ø6.3	64				203	12992	32.1	
							Total+10%		180.0	
V5	1	ø10	2		978	12	990	1980	12.4	
	2	ø10	2	12	953		965	1930	12.1	
	3	ø10	1		720		720	720	4.5	
	4	ø12.5	1		635		635	635	6.2	
	5	ø12.5	1		620		620	620	6.1	
	6	ø8	2		995	10	1005	2010	7.9	
	7	ø8	2		970		970	1940	7.6	
	8	ø12.5	2		270		270	540	5.3	
	9	ø10	2		250		250	500	3.1	
	10	ø10	2		190		190	380	2.4	
	11	ø10	2		150		150	300	1.9	
	12	ø10	2		143	12	155	310	1.9	
	13	ø6.3	27				133	3591	8.9	
	14	ø5	71				130	9230		14.5
							Total+10%		88.3	16.0
V 5	1	ø10	2	12	865	12	889	1778	11.2	
	2	ø10	1		530		530	530	3.3	
	3	ø10	2	12	243	12	255	510	3.2	
	4	ø8	2	10	1077		1087	2174	8.5	
	5	ø10	2		275		275	550	3.5	
	6	ø10	1		175		175	175	1.1	
	7	ø10	2		150		150	300	1.9	
	8	ø10	2	12	118		130	260	1.6	
	9	ø5	35				140	4900		7.7
	10	ø5	13				100	1300		2.0
							Total+10%		37.7	10.7
V2	1	ø12.5	1		1025		1025	1025	10.1	
	2	ø12.5	2		555		555	1110	10.9	
	3	ø10	2	12	528		540	1080	6.8	
	4	ø10	2		283	12	295	590	3.7	
	5	ø12.5	1		275		275	275	2.7	
	6	ø10	3	12	1033		1045	3135	19.7	
	7	ø10	3		283	12	295	885	5.6	
	8	ø10	2		340		340	680	4.3	
	9	ø10	1		245		245	245	1.5	
	10	ø10	2		170		170	340	2.1	
	11	ø10	2	12	123		135	270	1.7	
	12	ø10	2		68	12	80	160	1.0	
	13	ø6.3	12		525		525	6300	15.6	
	14	ø6.3	12		500		500	6240	15.4	
	15	ø6.3	12		270		270	3240	8.0	
	16	ø6.3	46				203	9338	23.1	
	17	ø10	21				210	4410	27.7	
							Total+10%		175.9	
							ø4.2:	0.0		0.9
							ø5:	0.0		76.9
							ø6.3:	470.3		0.0
							ø8:	99.3		0.0
							ø10:	755.7		0.0
							ø12.5:	250.9		0.0
							ø16:	48.5		0.0
							Total:	1624.7		77.8

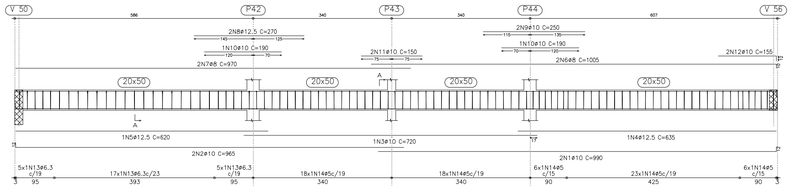
V3
Escala 1:50



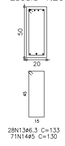
Corte A
Escala 1:20



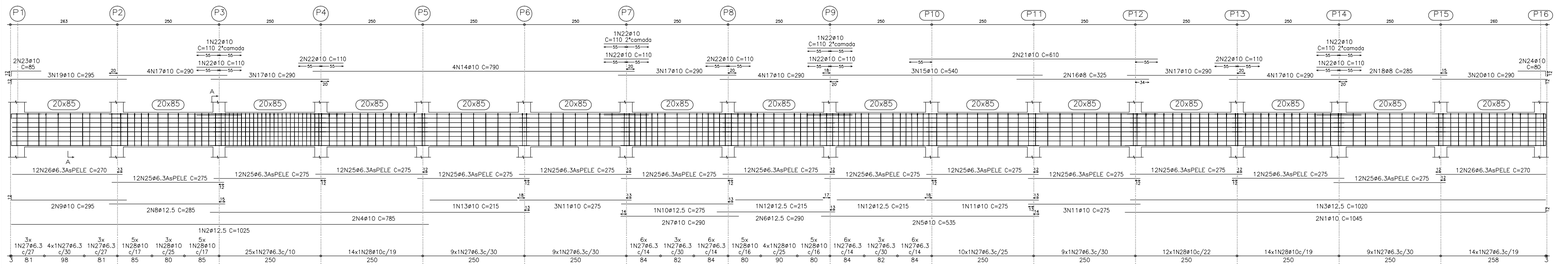
V5
Escala 1:50



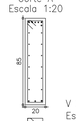
Corte A
Escala 1:20



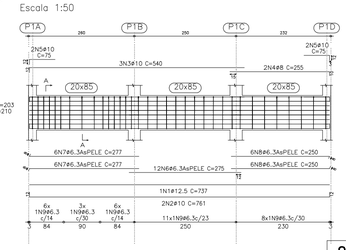
V1
Escala 1:50



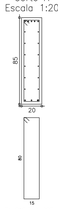
Corte A
Escala 1:20



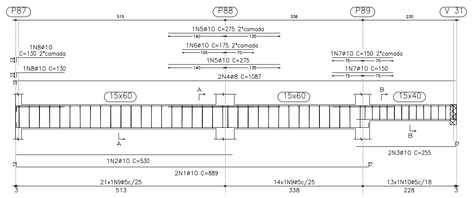
V 2
Escala 1:50



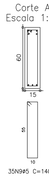
Corte A
Escala 1:20



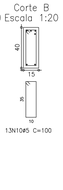
V 5
Escala 1:50



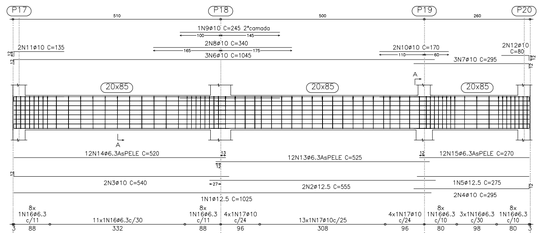
Corte A
Escala 1:20



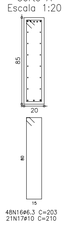
Corte B
Escala 1:20



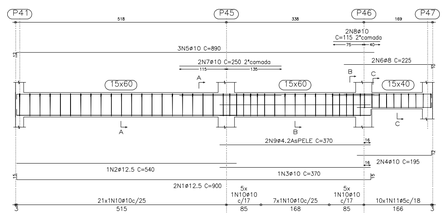
V2
Escala 1:50



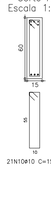
Corte A
Escala 1:20



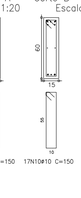
V 7
Escala 1:50



Corte A
Escala 1:20

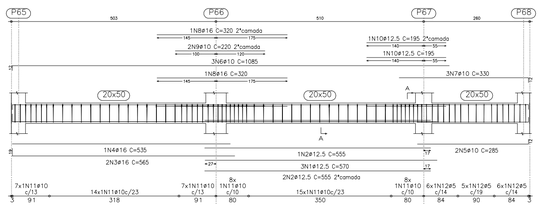


Corte B
Escala 1:20

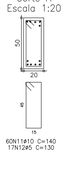


Corte C
Escala 1:20

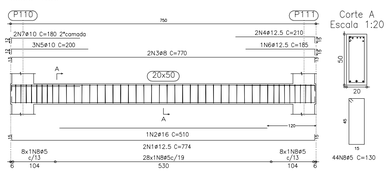
V8
Escala 1:50



Corte A
Escala 1:20

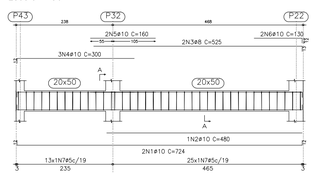


V 15
Escala 1:50

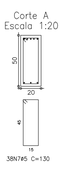


Corte A
Escala 1:20

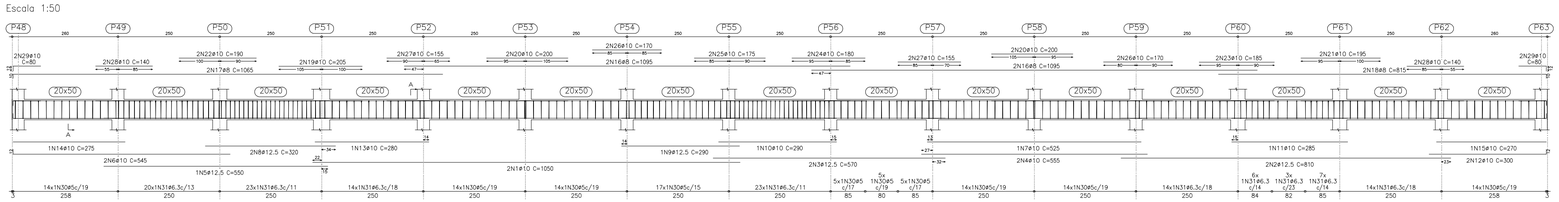
V 53
Escala 1:50



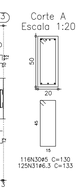
Corte A
Escala 1:20



V6
Escala 1:50



Corte A
Escala 1:20



OBSERVAÇÕES

. Medidas das cotas em cm (exceto onde indicado)
. Verificar medidas na obra
. Molhar as formas antes da concretagem
. Usar espaçadores para garantir recobrimento do aço
. Nas armações negativas das lajes – usar "caranguejos"
. Cura minima = 7 dias
. Descimbramento(formas) = mínimo de 28 dias
. Todas as peças de concreto em contato com o solo devem ser executadas sobre lastro de concreto magro c/ e=5cm
. Em caso de dúvidas, contactar o Calculista

Classe de Agresiv.: C II	Ec(5600 fck):	Agreg. Graudo:	Brita 01
CONCRETO(Fck): 25 MPa	AÇO: CA 50	SLUMP (mm):	100+-10
Fator A/C (max.):< 0.60	FORMAS: C. Res.	ADITIVO:	

N°	DATA	DESCRIÇÃO	VISTO

QUADRO DE REVISÕES

FASE: PROJETO EXECUTIVO DE ESTRUTURAL

PAVILHÃO DE SALAS DE AULA II
CAMPUS UNAÍ-JANAUBA
RODOVIA MG 367, KM 565, Nº 5000 - ALTO DA JACUBA - DIAMANTINA/MG

UFVJM

PROPRIETÁRIO: UNIVERSIDADE FEDERAL DOS VALES DO JEQUITINHONHA E MUCURI — CNPJ: 16.888.315/0001-57

TÍTULO: ARMAÇÃO DE VIGAS - SEGUNDO PISO - 01

AUTOR PROJETO ARQUITETÔNICO / RT:
ALESSANDRO DE OLIVEIRA ALVES
RT: ENG. CIVIL: ALESSANDRO DE OLIVEIRA ALVES – CREA: 107.372–D/MG
RT PROJ. ESTRUTURAL: ALESSANDRO DE OLIVEIRA ALVES
FONES: (38) 3532-1207 / 8823-8024

VERSÃO:	DATA:	AUTOCAD:	FOLHA:
VERSÃO 1	16.10.2012		26

ARQUIVO: PAVILHÃO DE AULAS(FA2-FTB-12101(2 PAVTOS) - EST