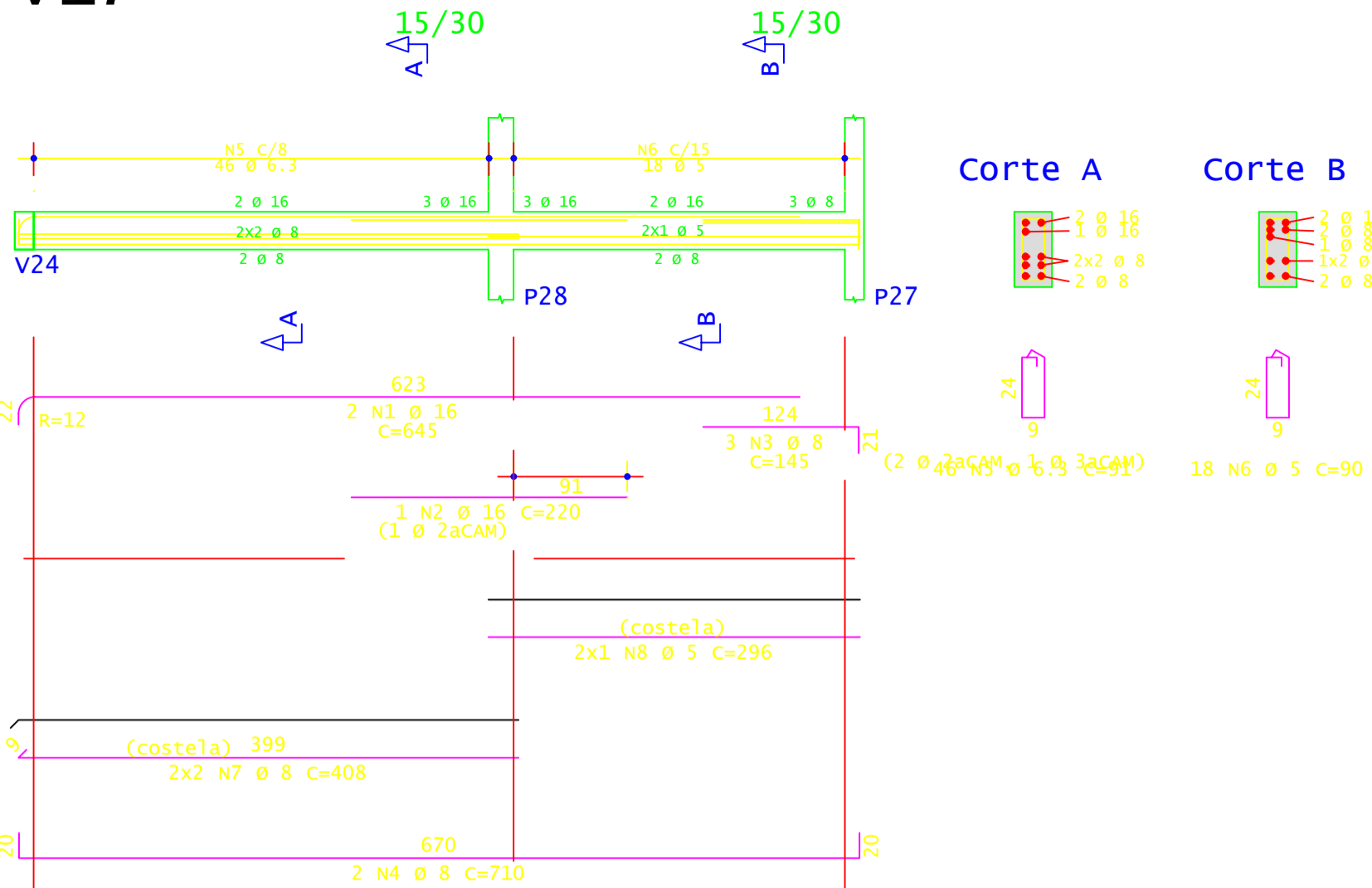
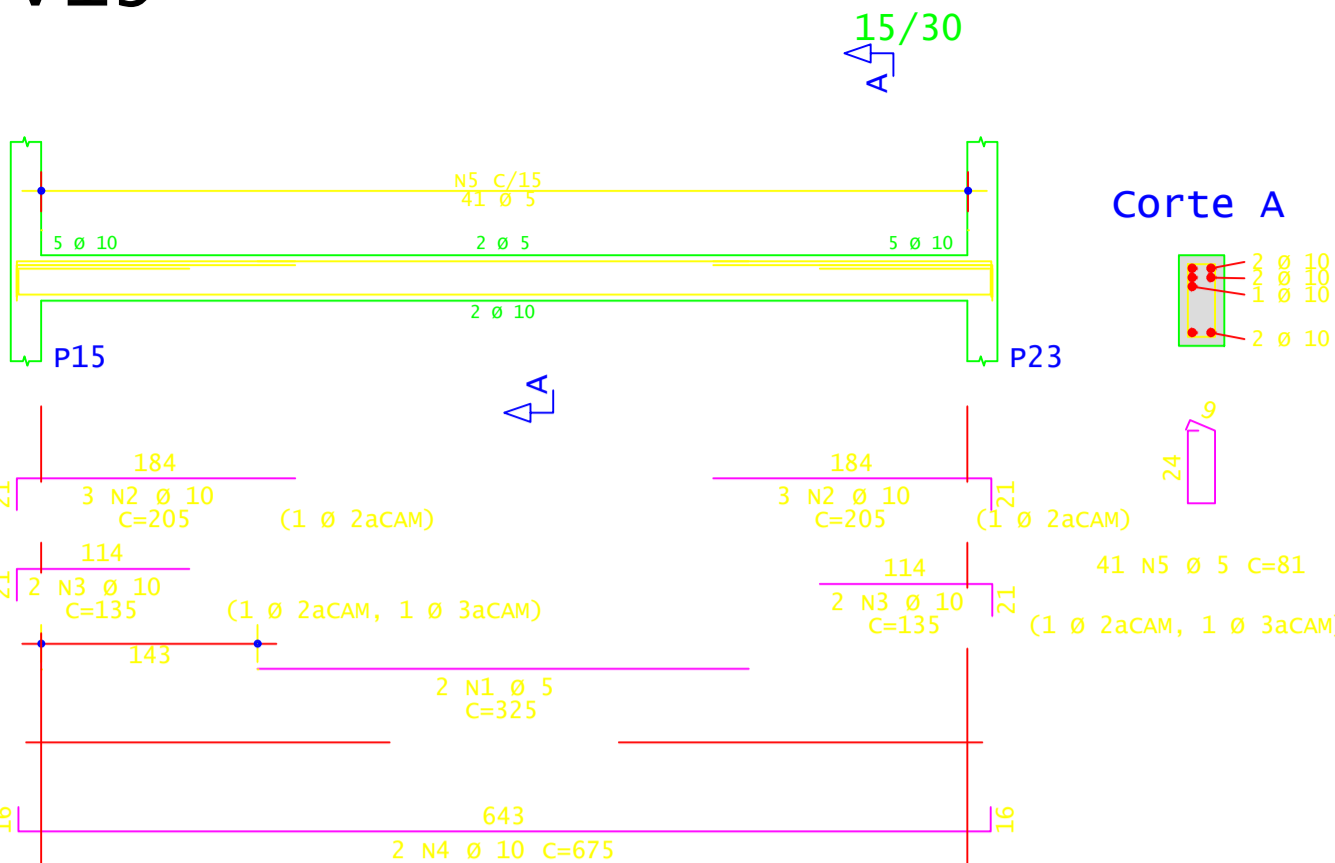


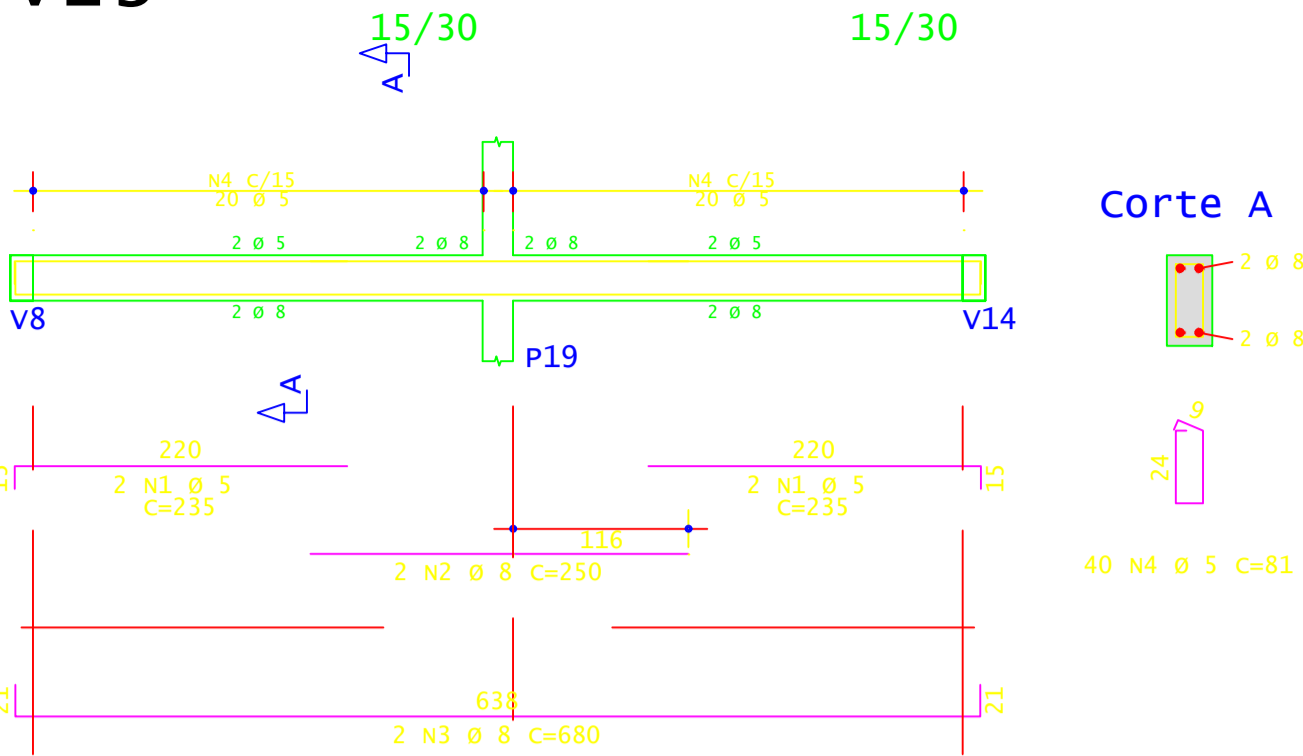
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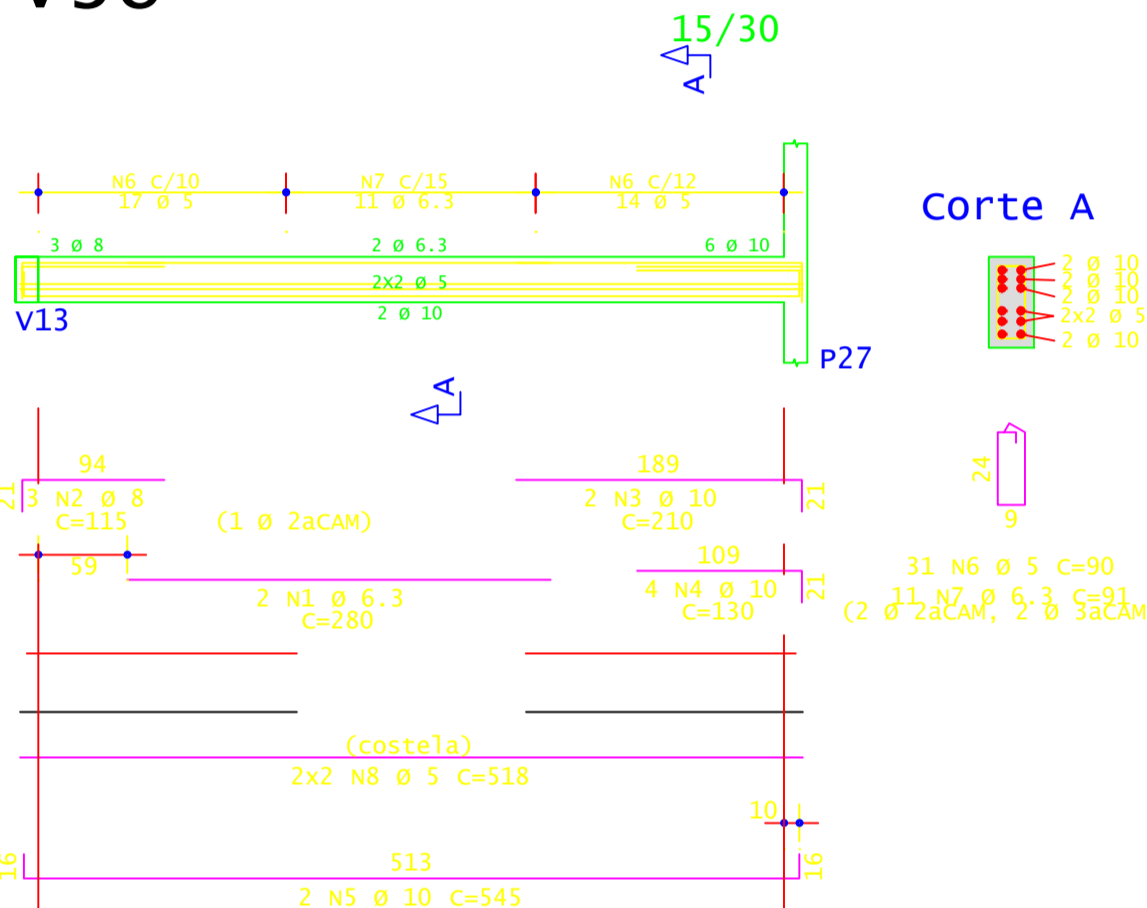
v19



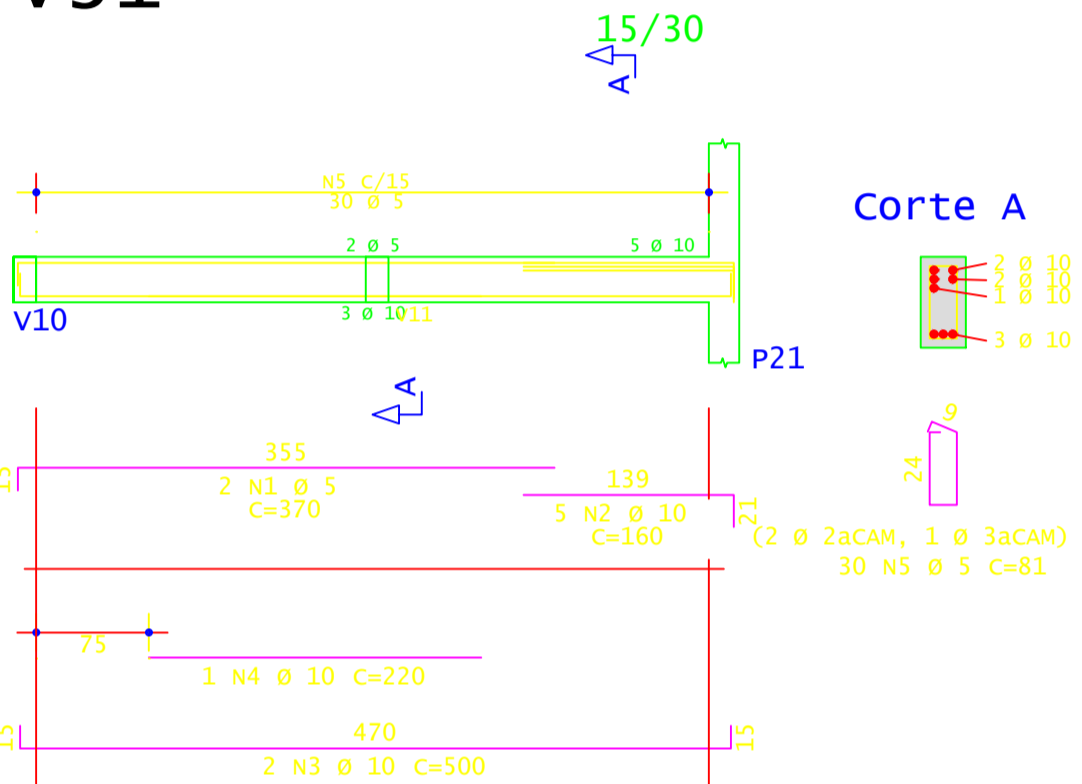
v23



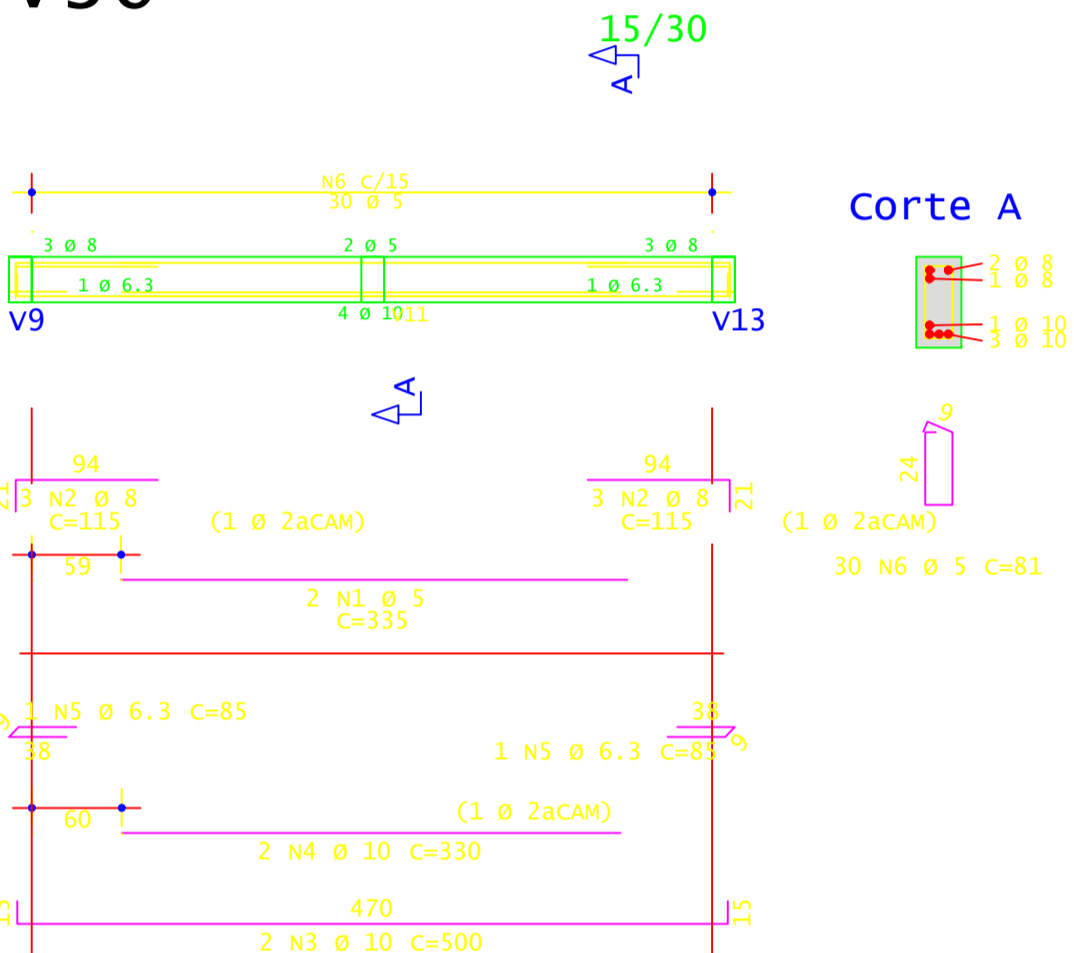
v38



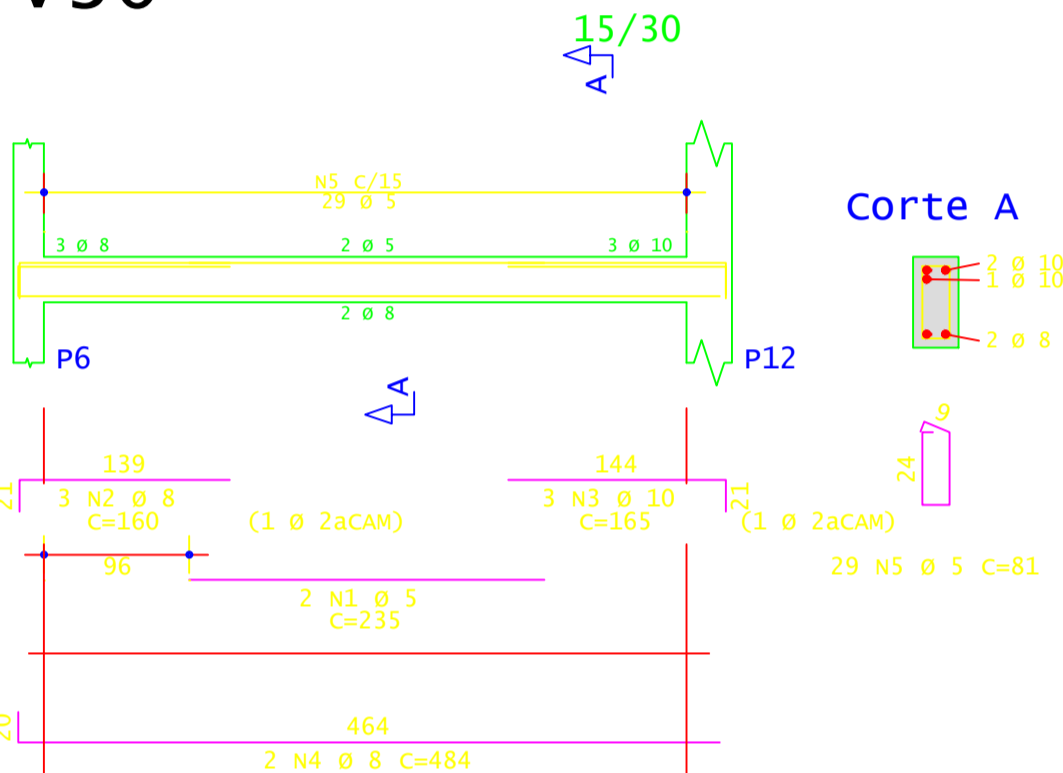
v31



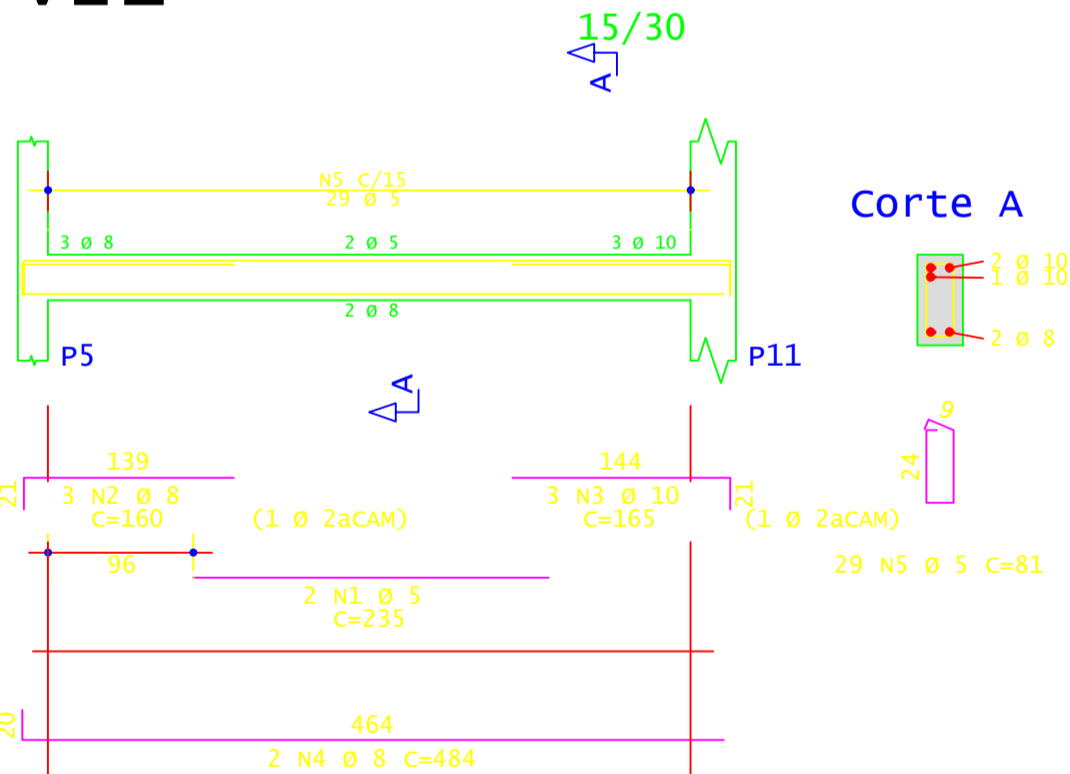
v36



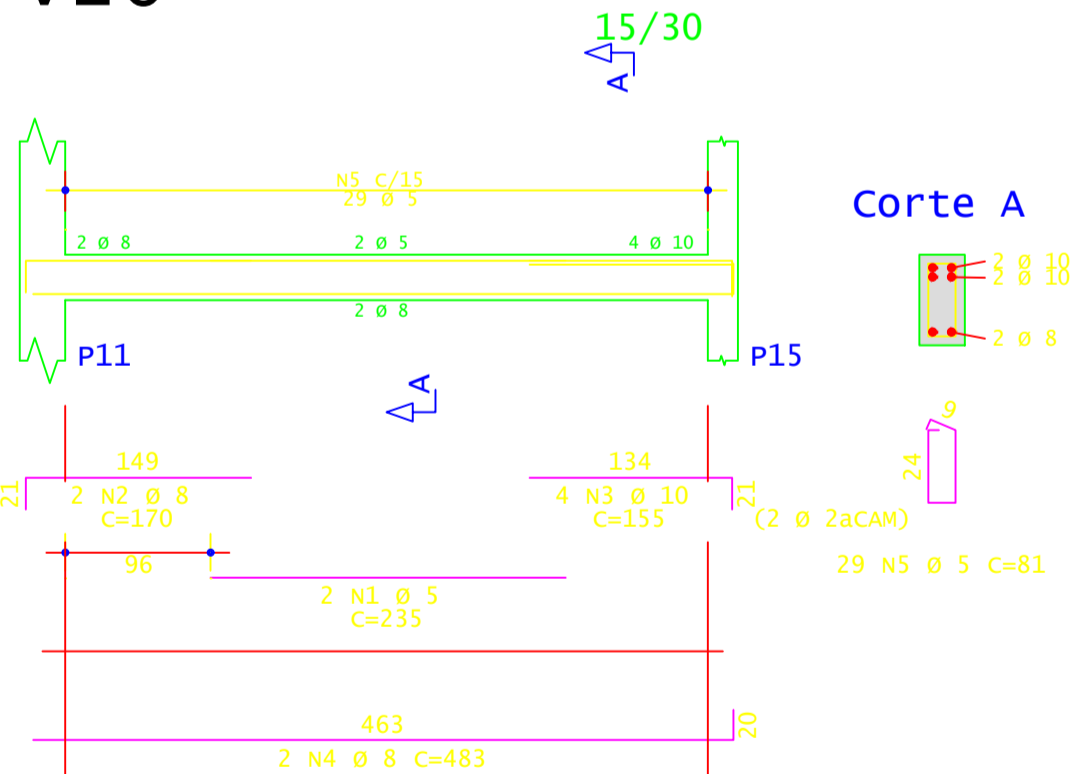
v30



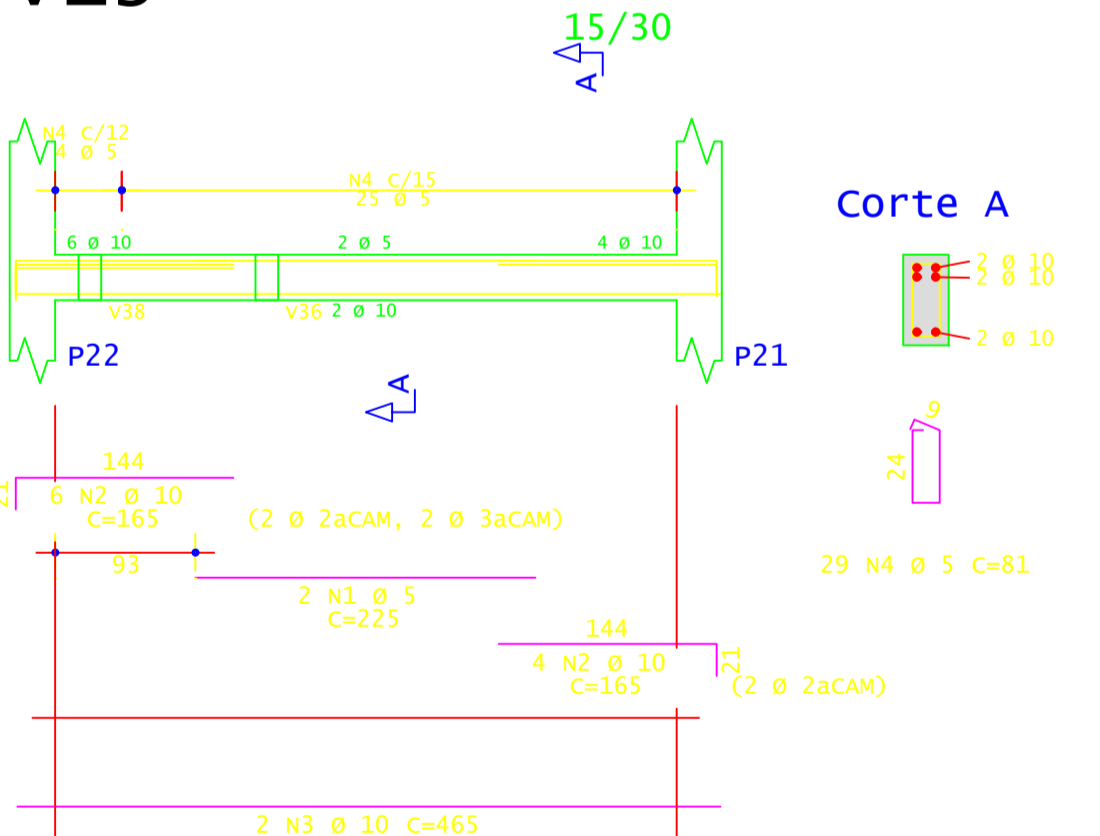
v21



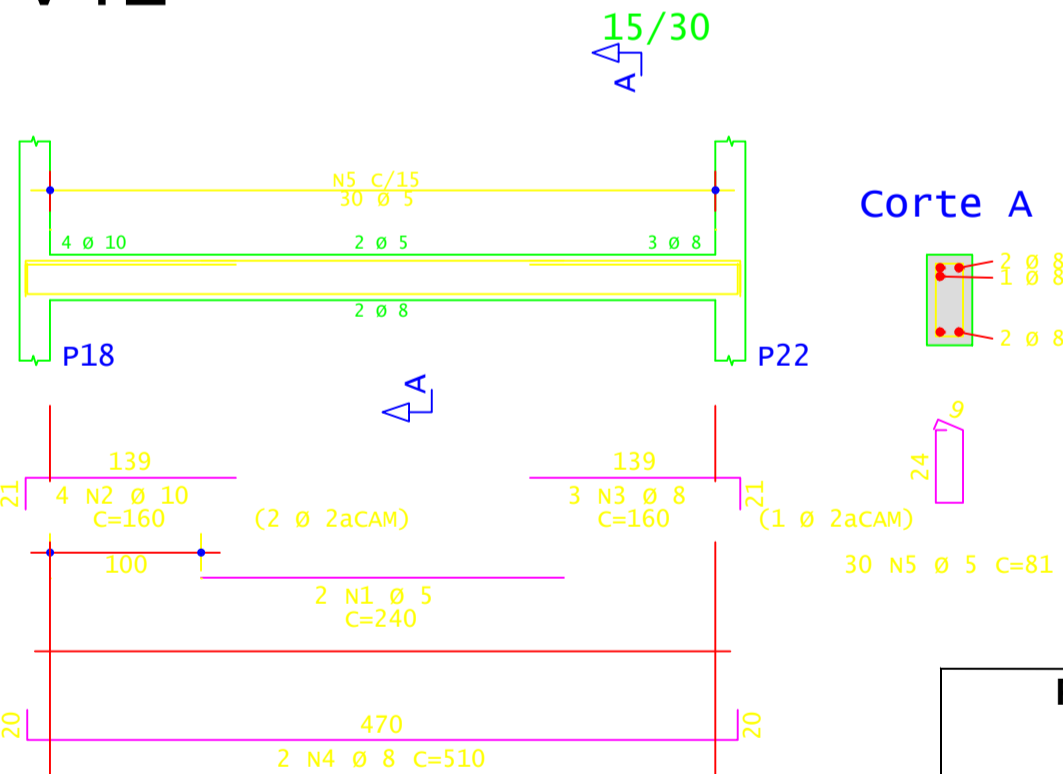
v20



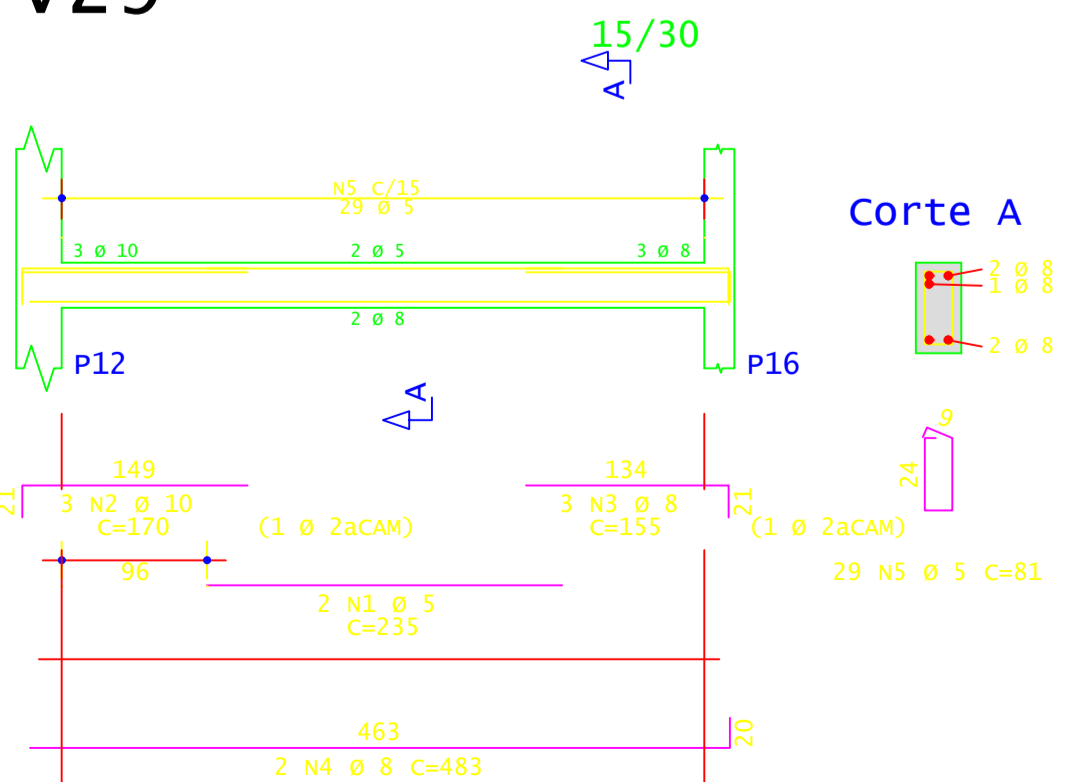
v13



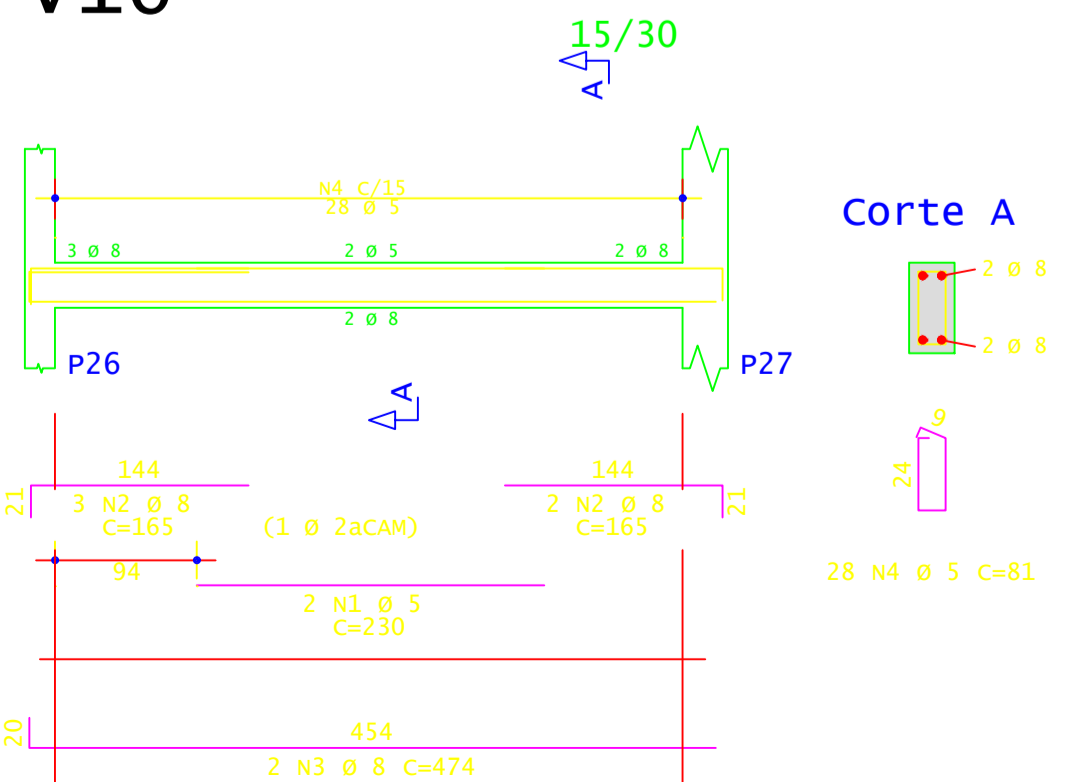
v41



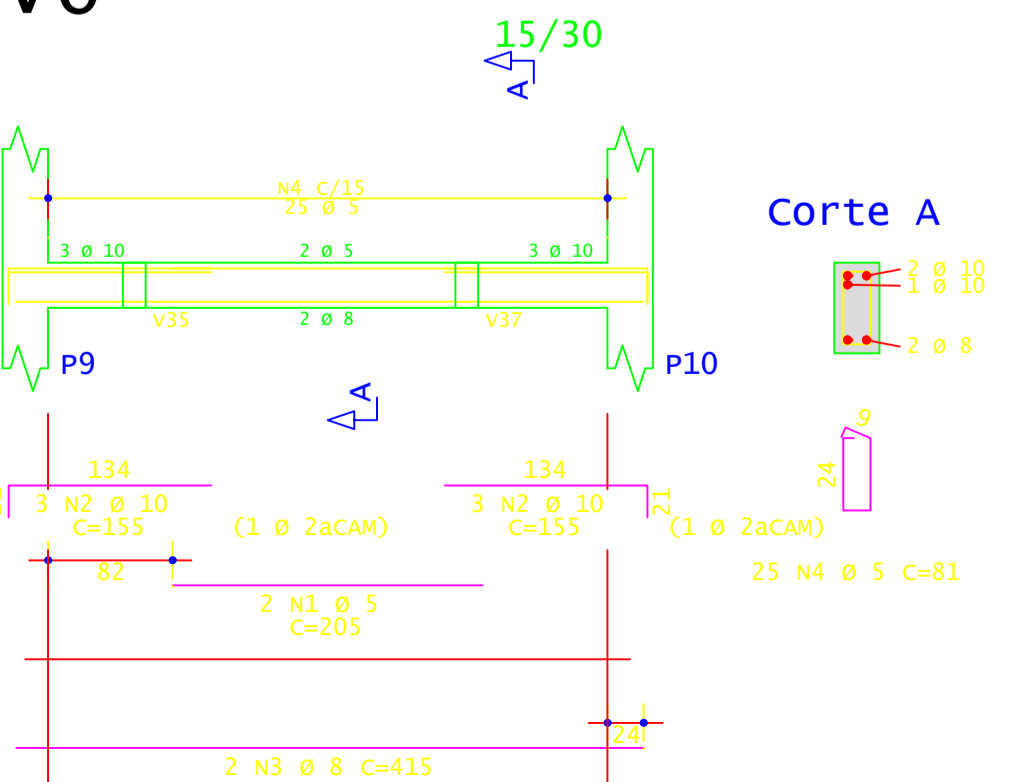
v29



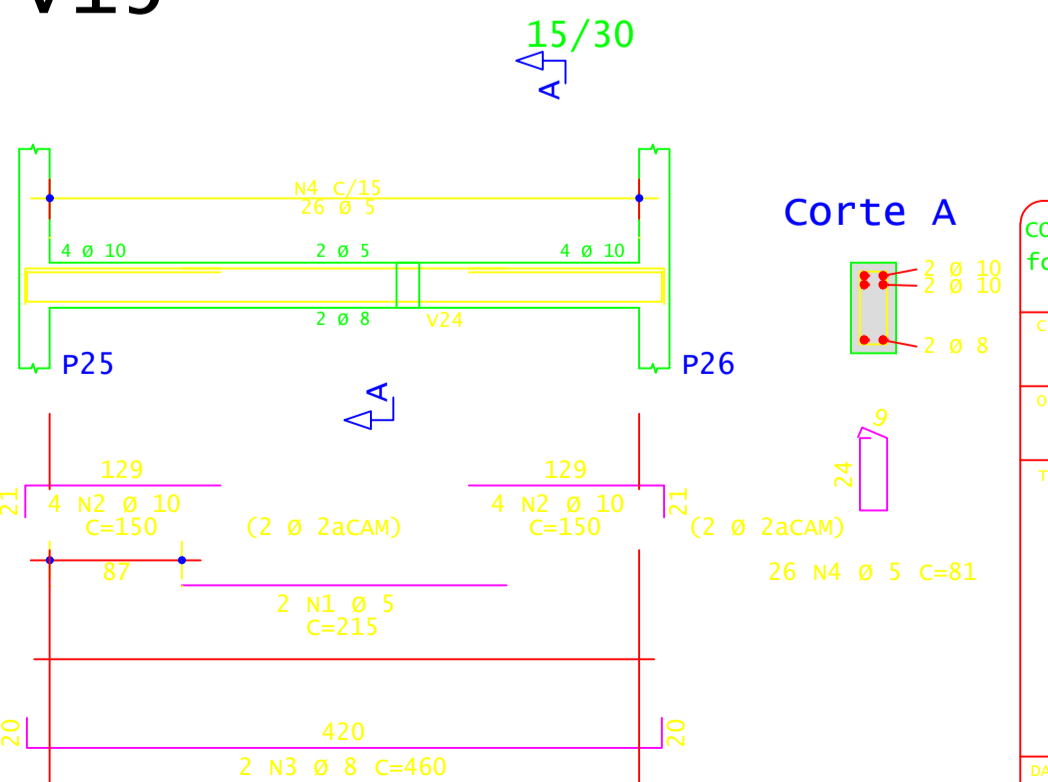
v16



v6



v15



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO		
				UNIT (cm)	TOTAL (cm)	
V6	60A	1	5	2	205	410
	50A	2	10	6	155	930
	50A	3	8	2	415	830
	60A	4	5	25	81	2025
V13	60A	1	5	2	225	450
	50A	2	10	10	165	1650
	50A	3	10	2	465	930
	60A	4	5	29	81	2349
V15	60A	1	5	2	215	430
	50A	2	10	8	150	1200
	50A	3	8	2	460	920
	60A	4	5	26	81	2106
V16	60A	1	5	2	230	460
	50A	2	8	5	165	825
	50A	3	8	2	474	948
	60A	4	5	28	81	2268
V17	50A	1	16	2	645	1290
	50A	2	16	1	220	220
	50A	3	8	3	145	435
	50A	4	8	2	710	1420
	50A	5	6.3	46	91	4186
	60A	6	5	18	90	1620
	50A	7	8	4	408	1632
	60A	8	5	2	296	592
V19	60A	1	5	2	325	650
	50A	2	10	6	205	1230
	50A	3	10	4	135	540
	50A	4	10	2	675	1350
V20	60A	5	5	41	81	3321
	60A	1	5	2	235	470
	50A	2	8	2	170	340
	50A	3	10	4	155	620
V21	50A	4	8	2	483	966
	60A	5	5	29	81	2349
	60A	1	5	2	235	470
	50A	2	8	3	160	480
V23	50A	3	10	3	165	495
	50A	4	8	2	484	968
	60A	5	5	29	81	2349
	60A	1	5	4	235	940
V29	50A	2	8	2	250	500
	50A	3	8	2	680	1360
	60A	4	5	40	81	3240
	60A	1	5	2	235	470
V30	50A	2	10	3	170	510
	50A	3	8	3	155	465
	50A	4	8	2	483	966
	60A	5	5	29	81	2349
V31	60A	1	5	2	235	470
	50A	2	8	3	160	480
	50A	3	10	3	165	495
	50A	4	8	2	484	968
V36	60A	5	5	29	81	2349
	60A	1	5	2	370	740
	50A	2	10	5	160	800
	50A	3	10	2	500	1000
V38	50A	4	10	1	220	220
	60A	5	5	30	81	2430
	60A	1	5	2	335	670
	50A	2	8	6	115	690
V41	50A	3	10	2	500	1000
	50A	4	10	2	330	660
	50A	5	6.3	2	85	170
	60A	6	5	30	81	2430
	50A	1	6.3	2	280	560
	50A	2	8	3	115	345
	50A	3	10	2	210	420
	50A	4	10	4	130	520
V41	50A	5	10	2	545	1090
	60A	6	5	31	90	2790
	50A	7	6.3	11	91	1001
	60A	8	5	4	518	2072
	60A	1	5	2	240	480
	50A	2	10	4	160	640
	50A	3	8	3	160	480
	50A	4	8	2	510	1020
V41	60A	5	5	30	81	2430

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	462	71
50A	6.3	59	14
50A	8	170	67
50A	10	163	101
50A	16	15	24
Peso Total 60A =			71 kg
Peso Total 50A =			206 kg
CONSUMO TOTAL DE CONCRETO			
Volume Total =			6.7 m³
CONSUMO TOTAL DE FÔRMAS			
Área Total =			111.0 m²

Prefeitura Municipal de Benjamin Constant
Secretaria Municipal de Obras e Urbanismo

APROVADO

O projeto está em conformidade com as leis municipais e normas da ABNT.

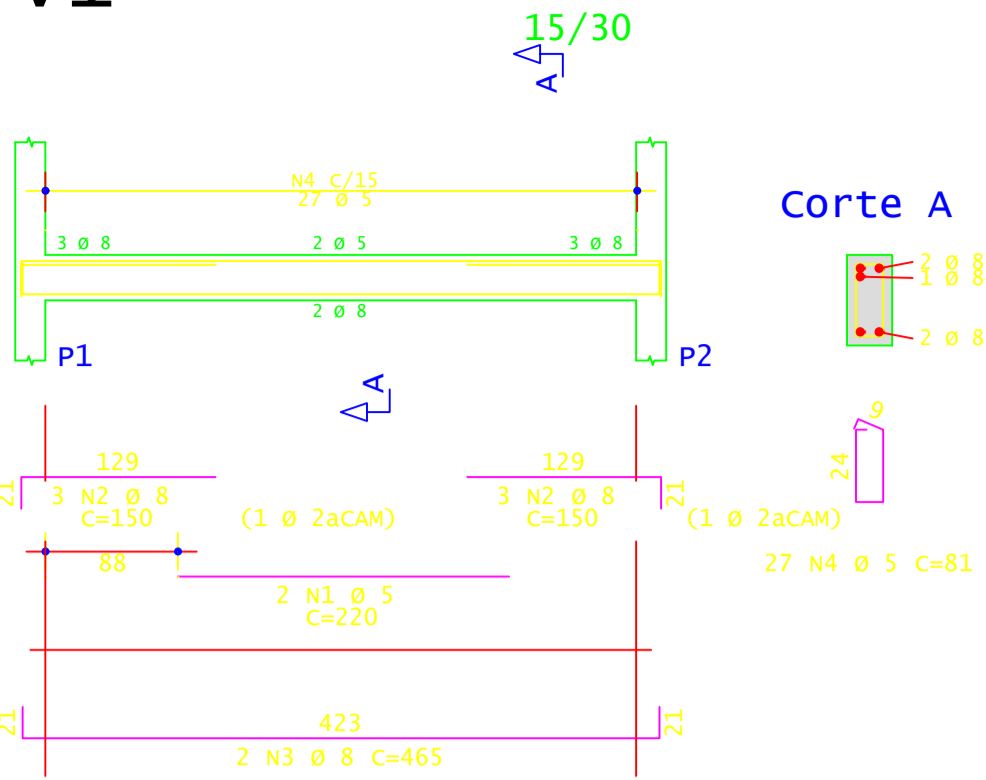
Data: 12/06/2020

João Lúcio Galvão Gonçalves
Engenheiro Civil Mecânico
CREA - 6755-D

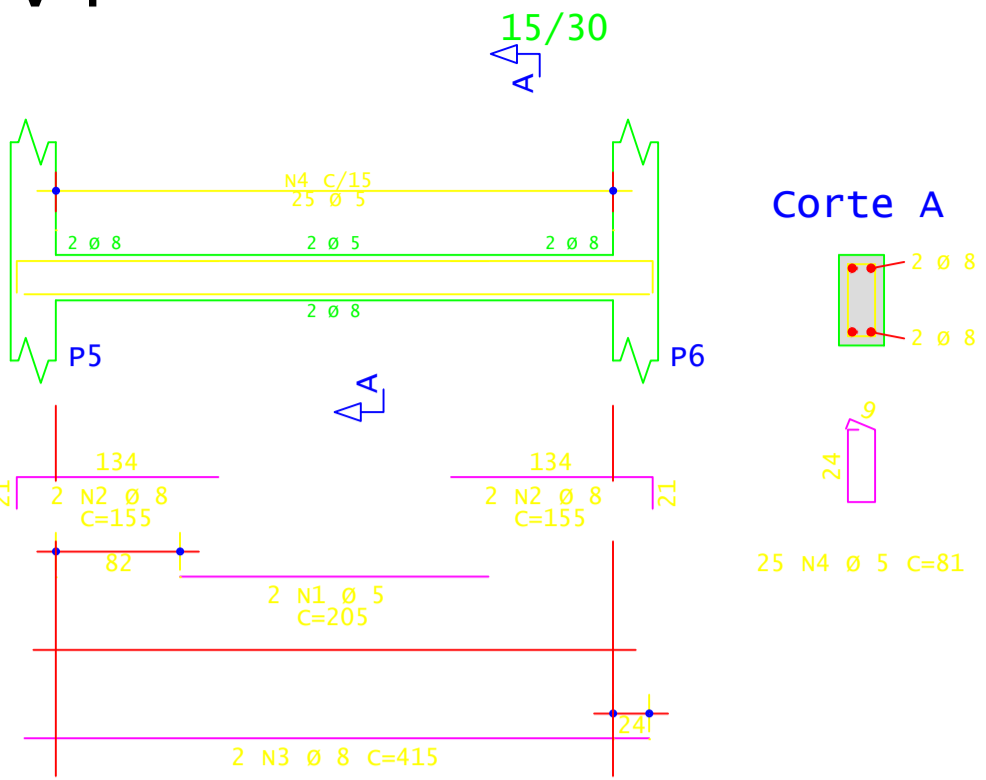
Elias James Araújo do Carmo
Secretário Municipal de Obras e Urbanismo

CONCRETO fck = 20 MPa	0001
CLIENTE	DIS. N.º
OBRA CREAS	006
TÍTULO ARMAÇÃO VIGAS TERREO	REV. N.º
v6 / v13 / v15 / v16 / v17 v19 / v20 / v21 / v23 v29 / v30 / v31 / v36 v38 / v41	01
DATA: 03/05/2020	ESCALA: 1:50
DESENHO: CRE-TER-VIG-006-R01	COORD.:
ENG.º	

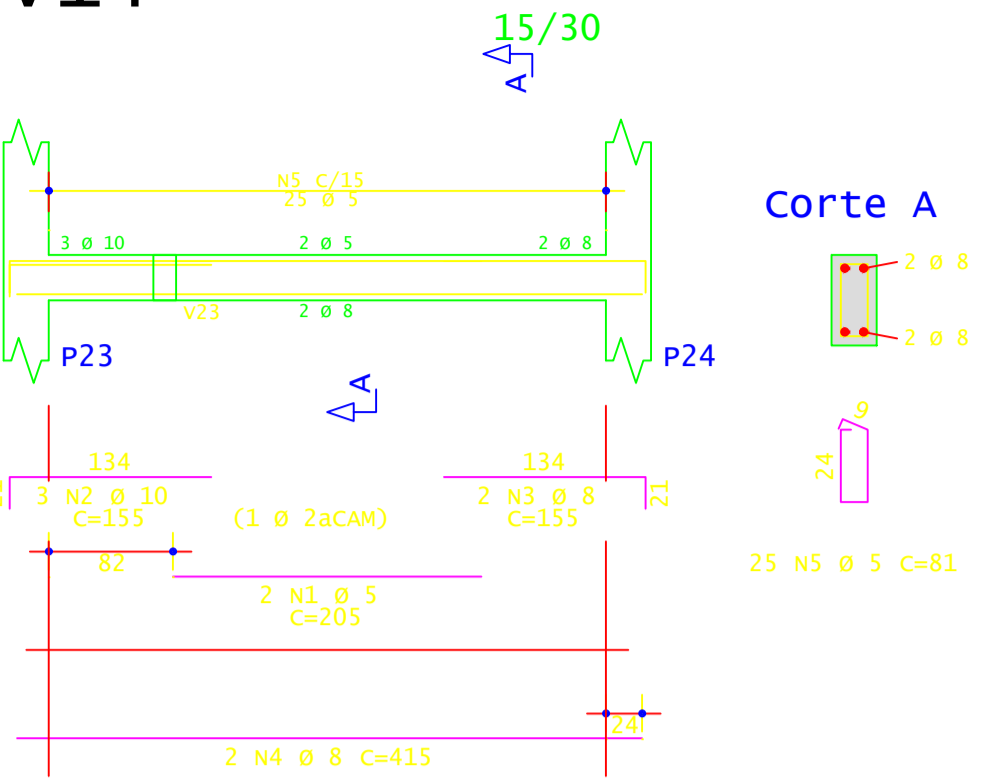
v1



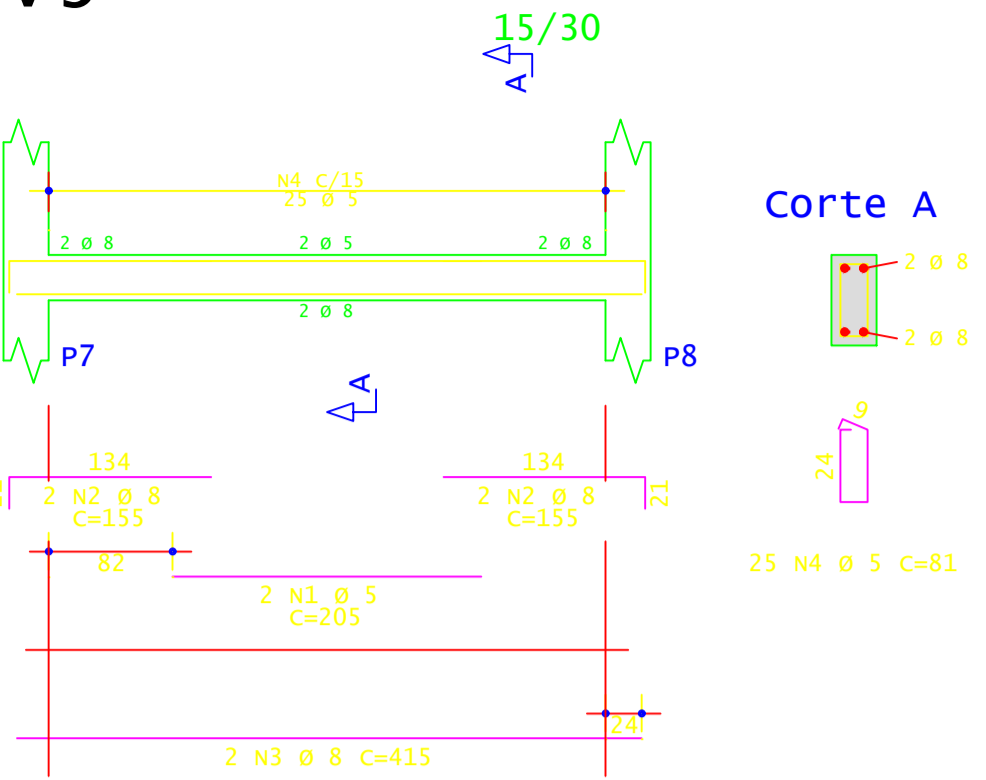
v4



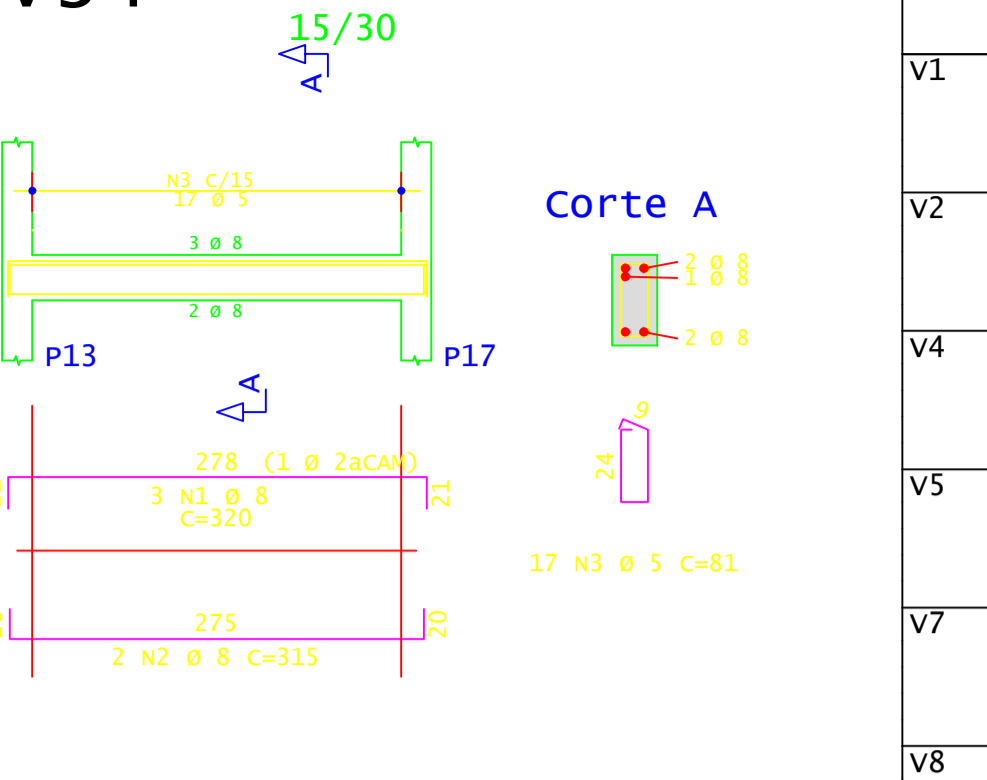
v14



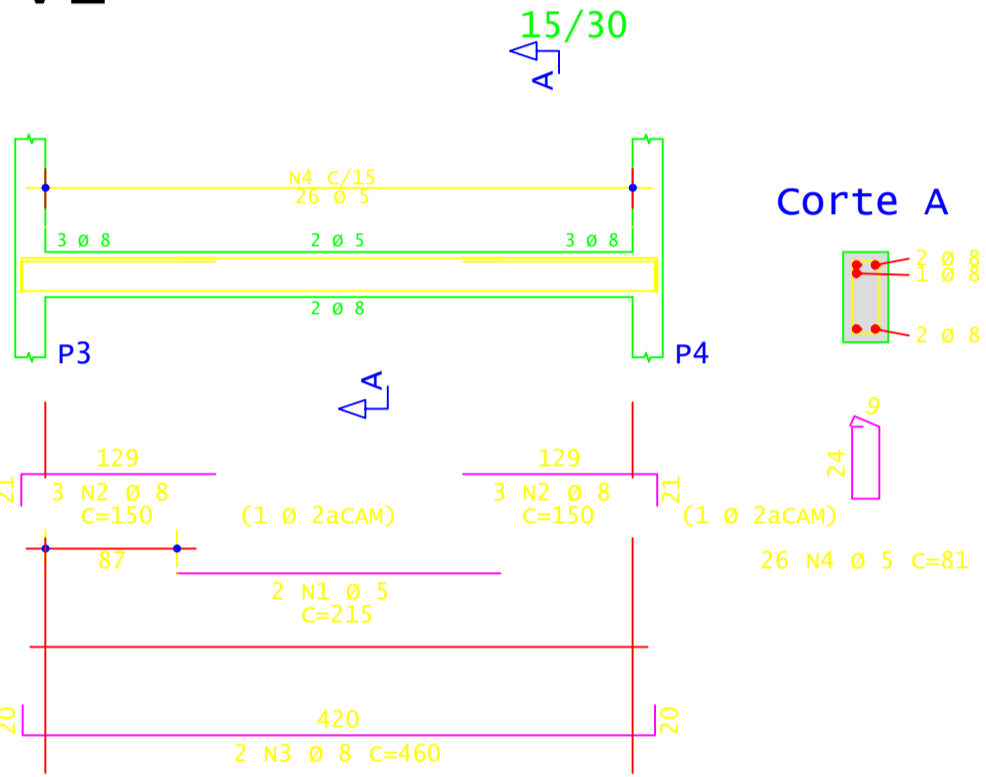
v5



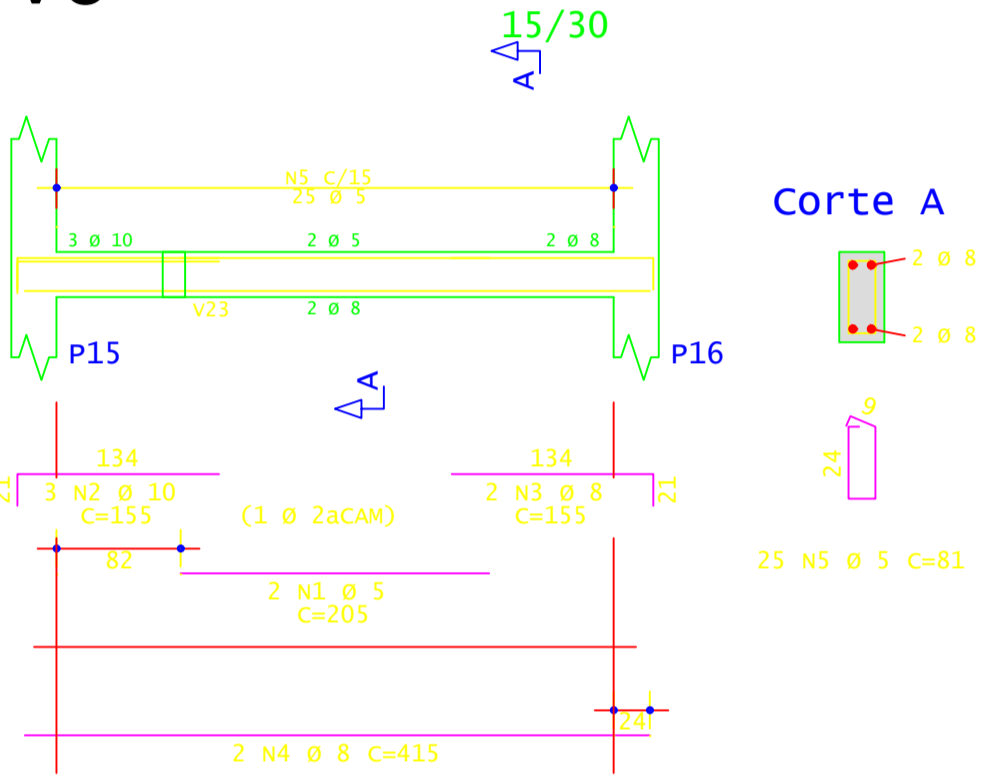
v34



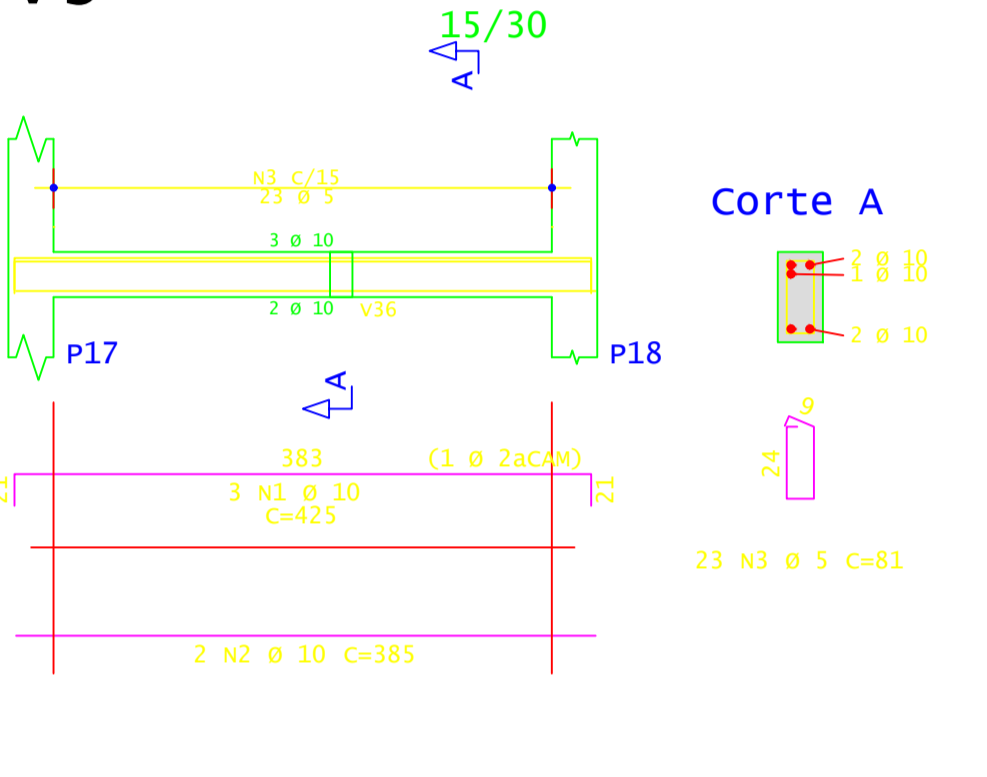
v2



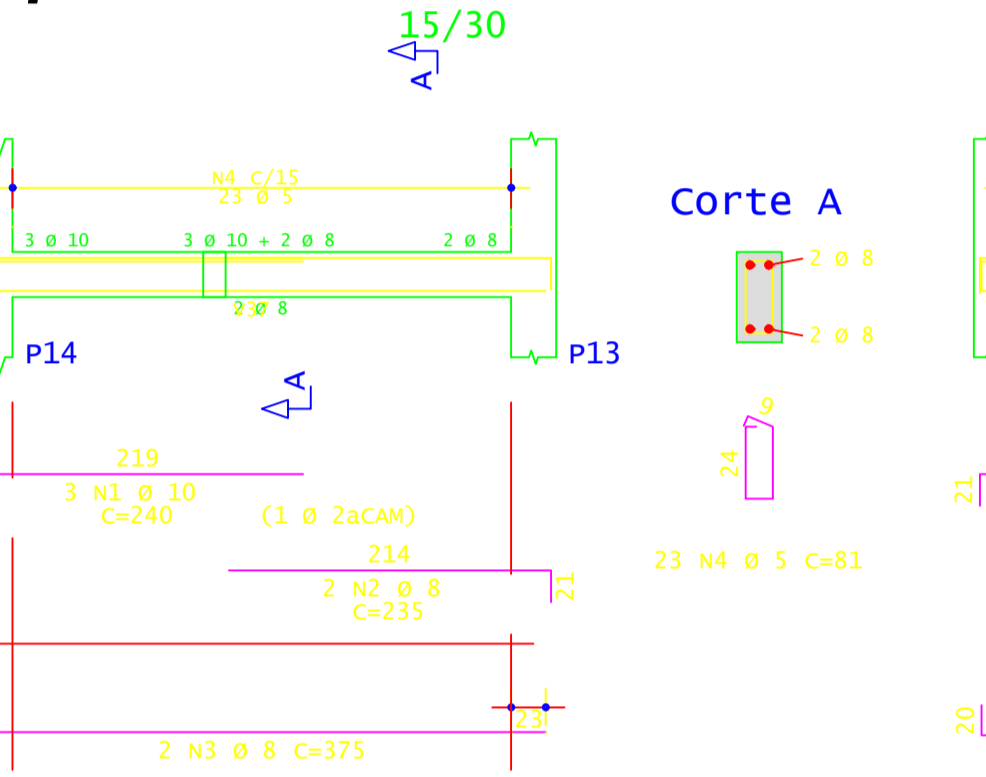
v8



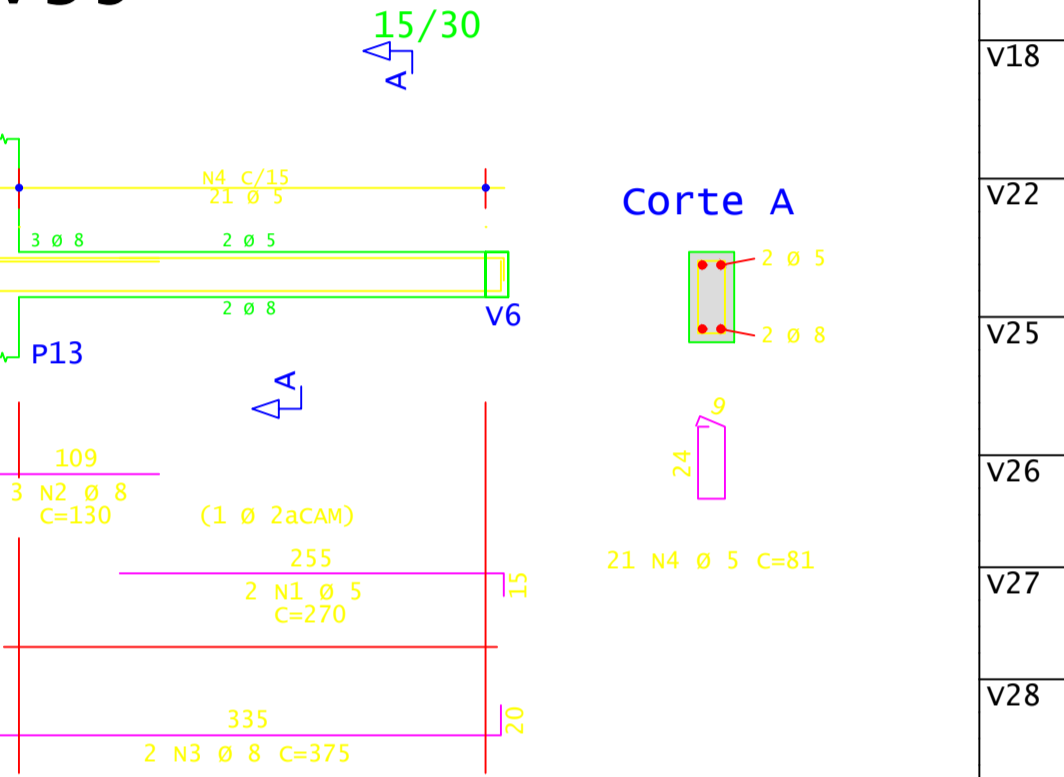
v9



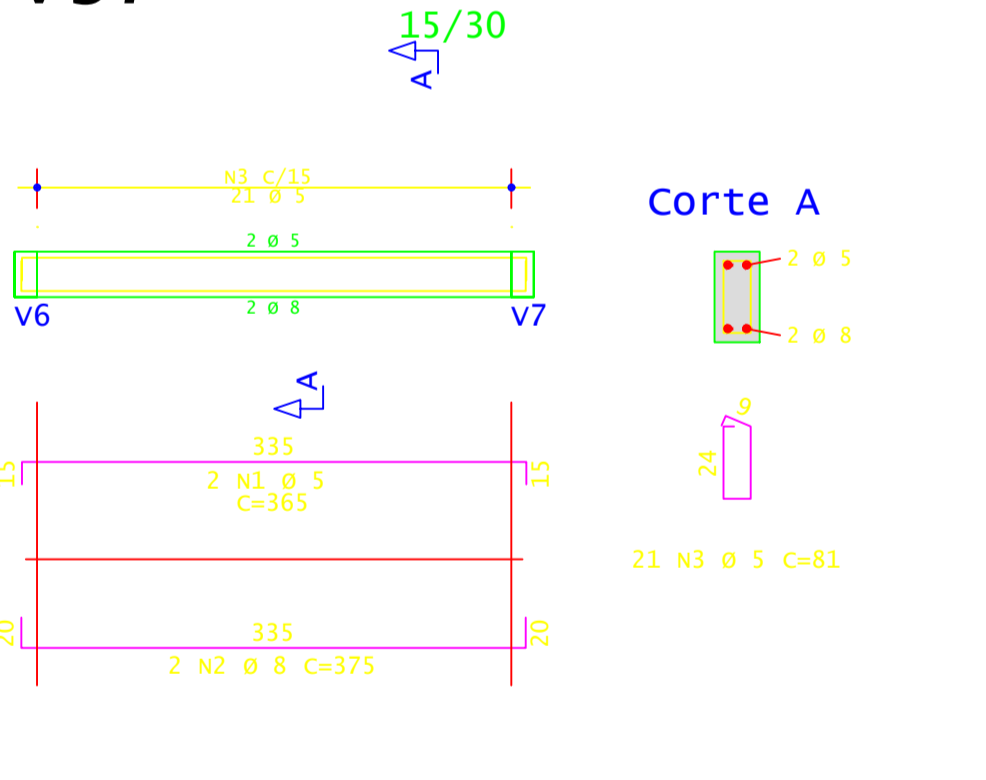
v7



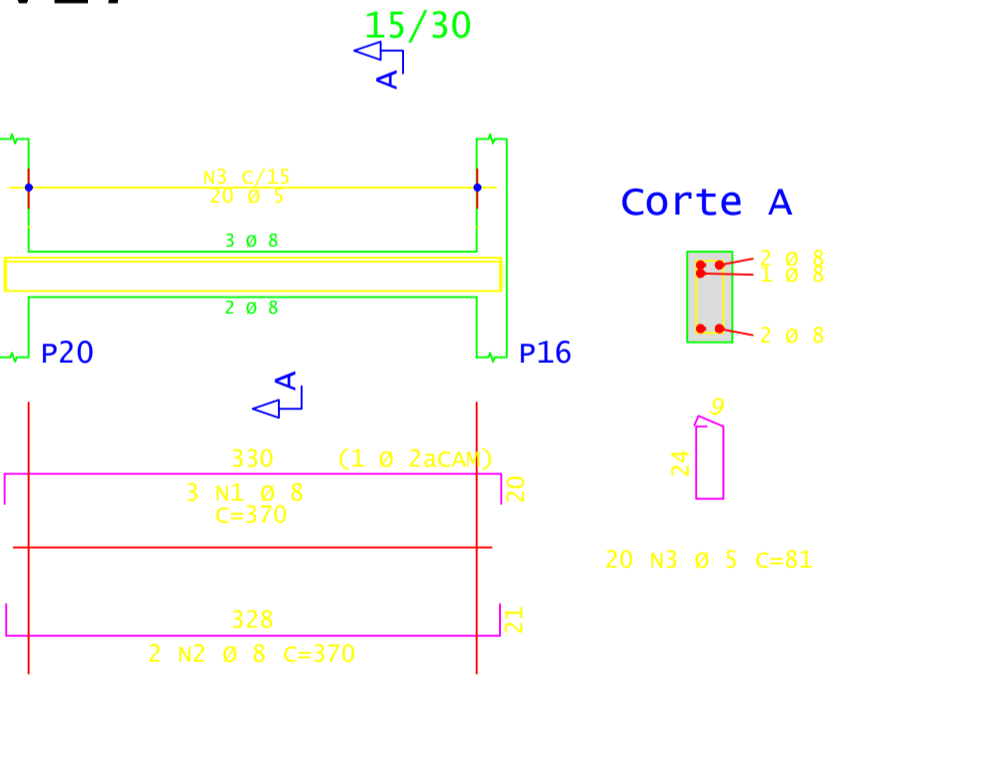
v35



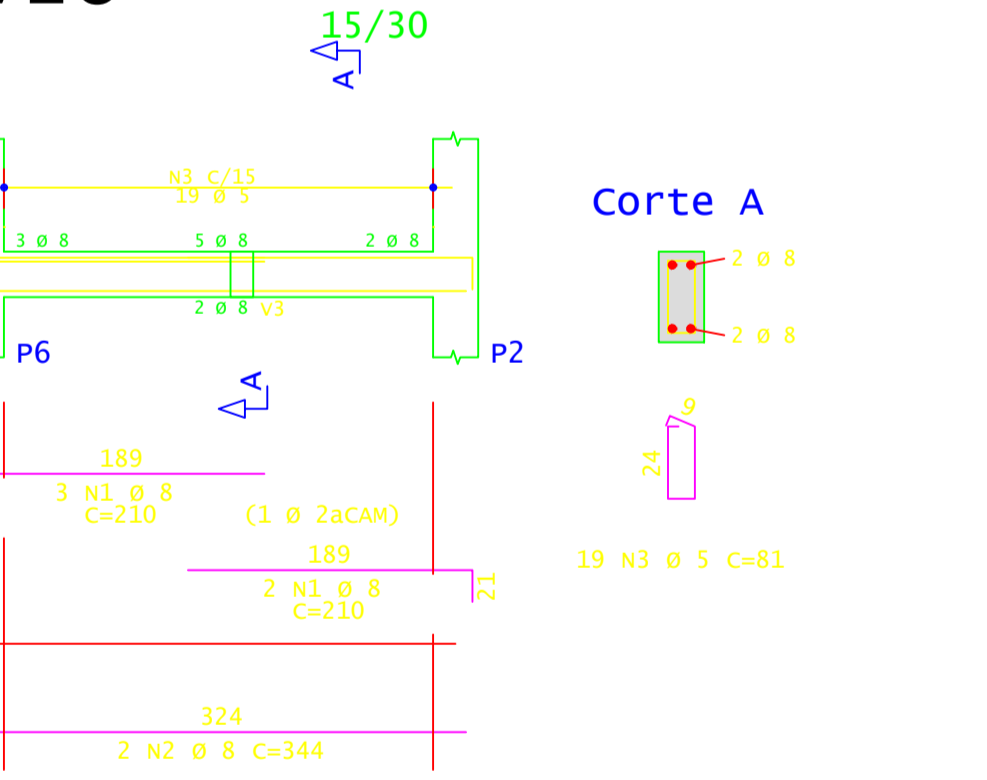
v37



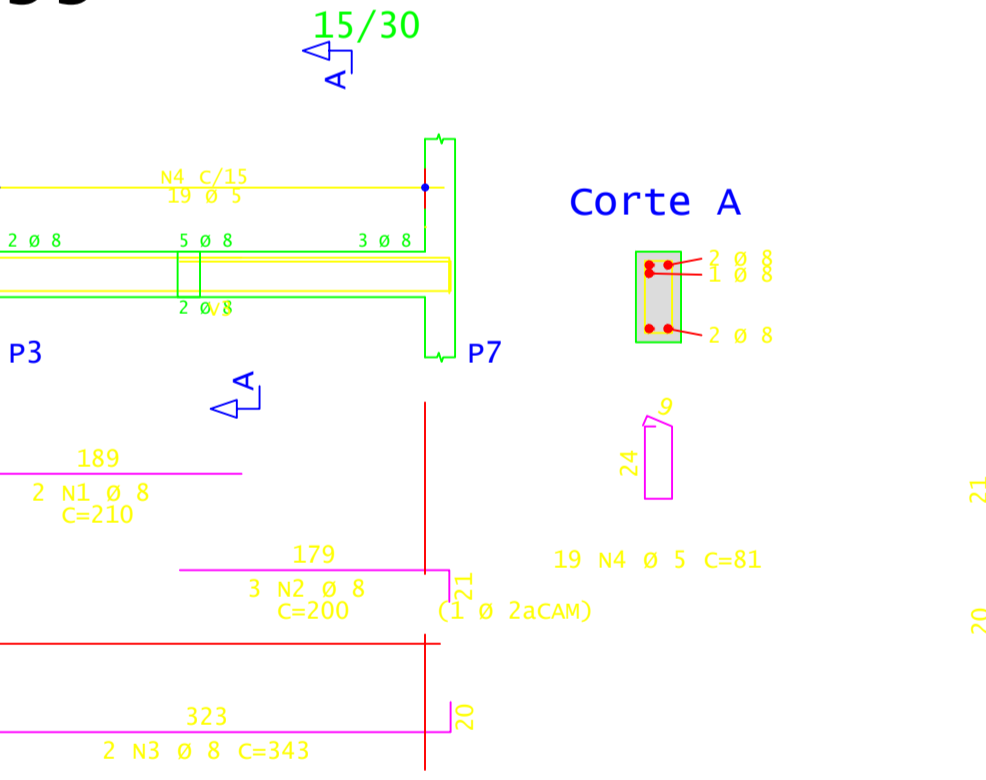
v27



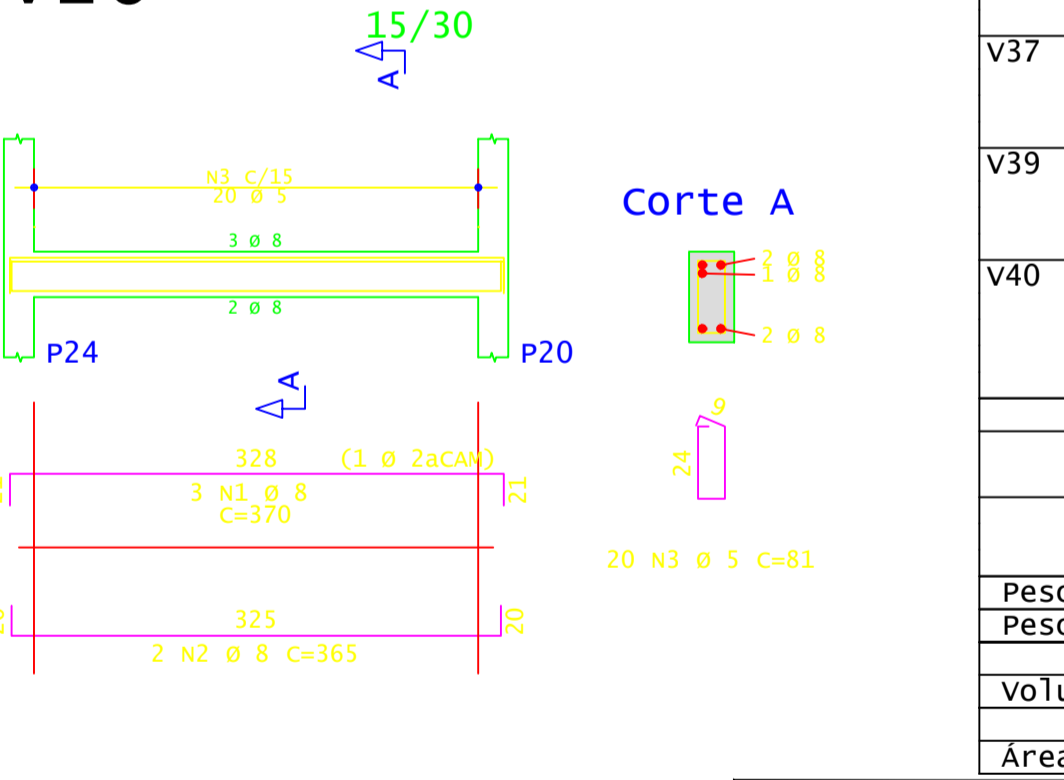
v28



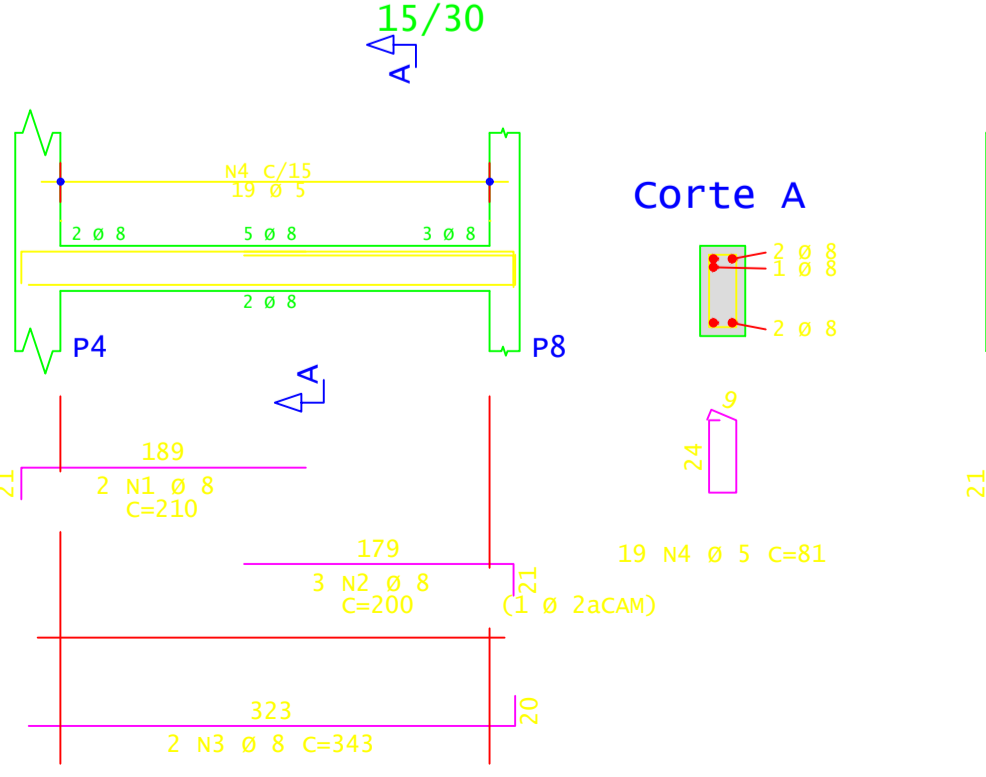
v33



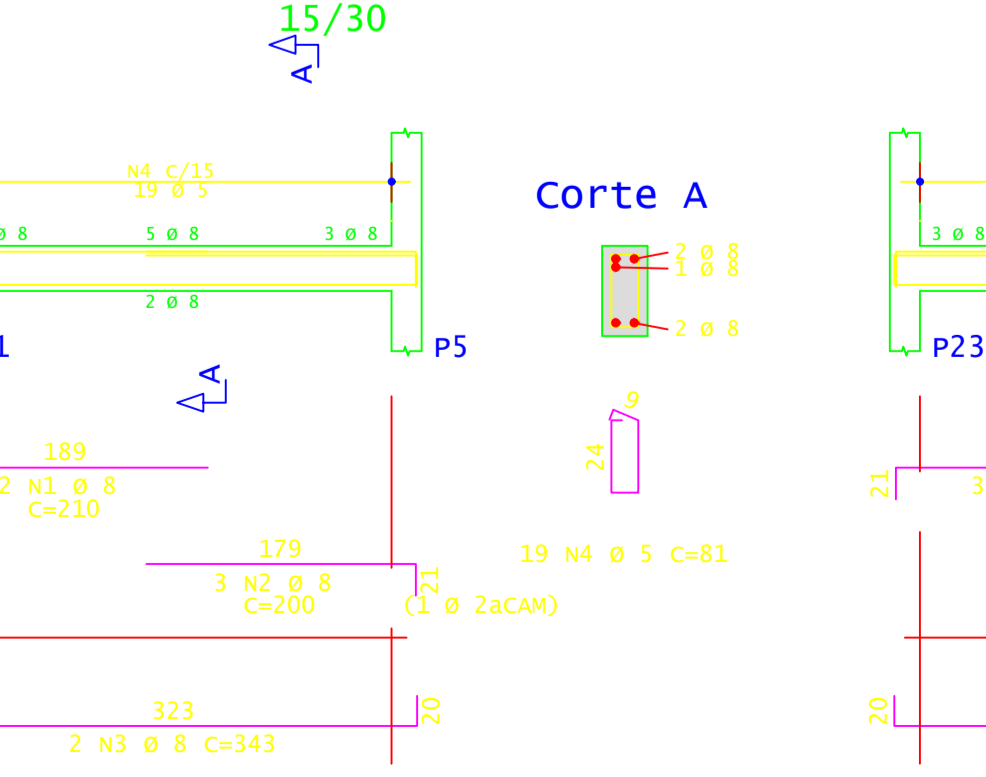
v26



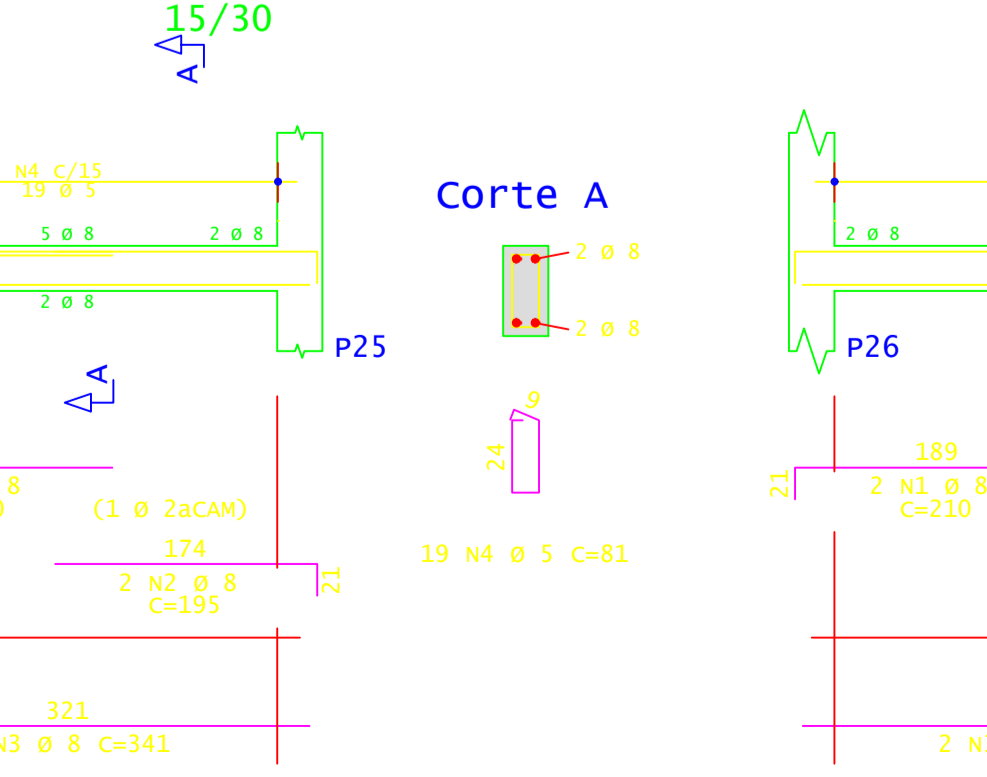
v40



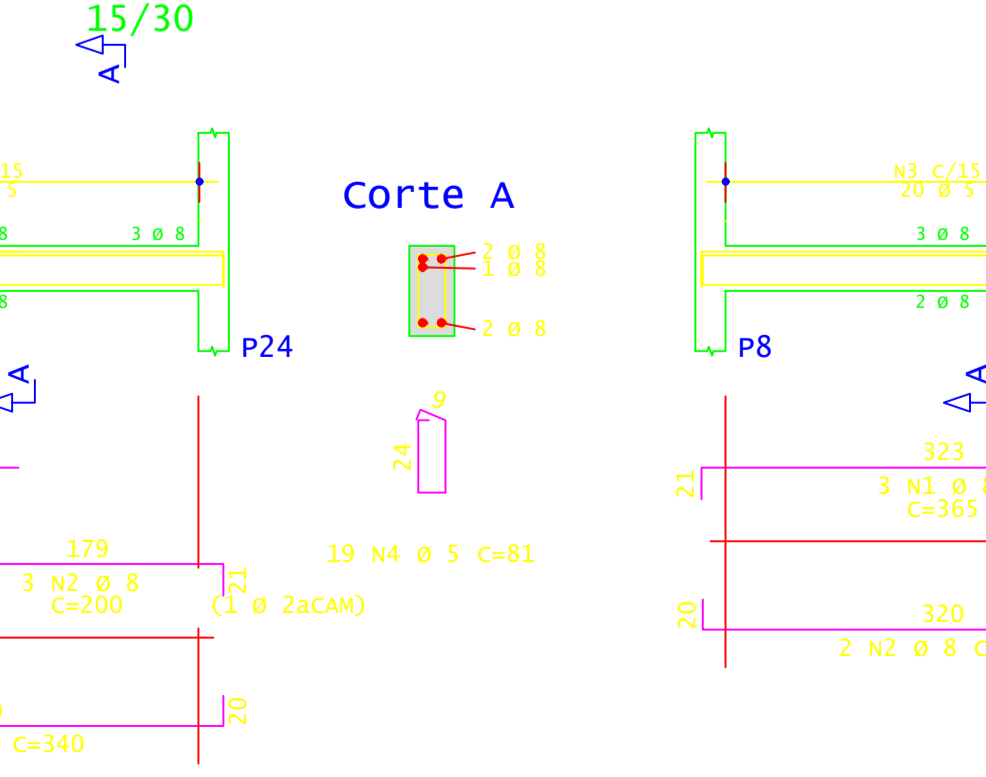
v22



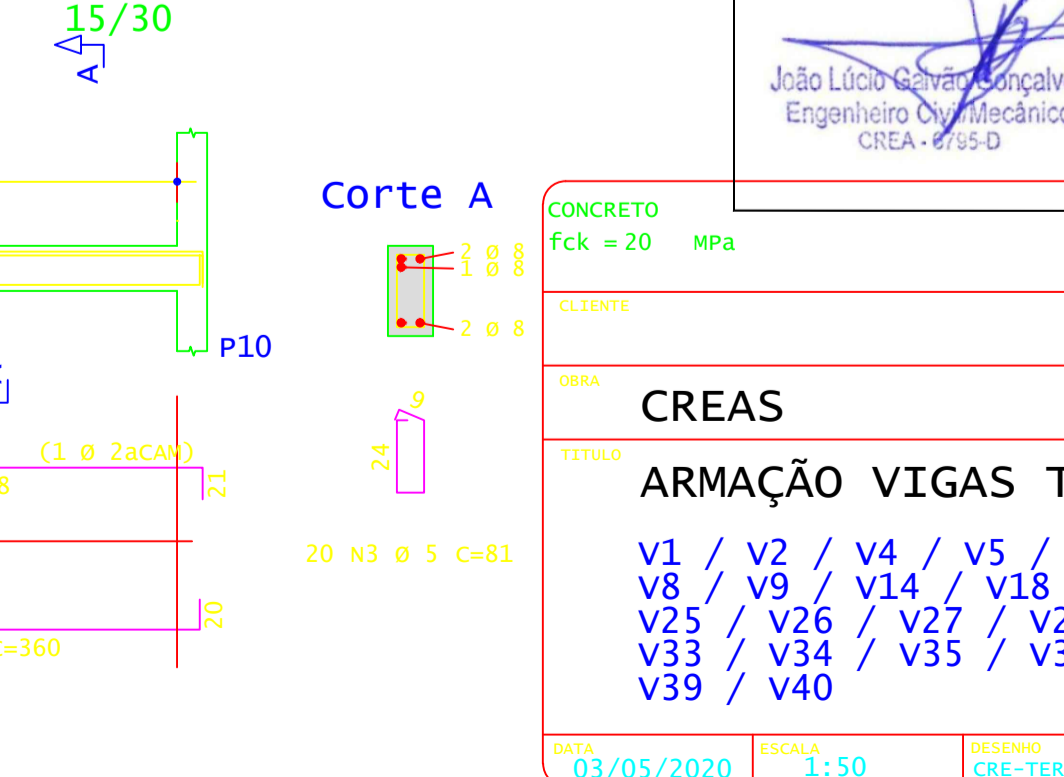
v18



v25



v39



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO		
				UNIT (cm)	TOTAL (cm)	
V1	60A	1	5	2	220	440
	50A	2	8	6	150	900
	50A	3	8	2	465	930
	60A	4	5	27	81	2187
V2	60A	1	5	2	215	430
	50A	2	8	6	150	900
	50A	3	8	2	460	920
	60A	4	5	26	81	2106
V4	60A	1	5	2	205	410
	50A	2	8	4	155	620
	50A	3	8	2	415	830
	60A	4	5	25	81	2025
V5	60A	1	5	2	205	410
	50A	2	8	4	155	620
	50A	3	8	2	415	830
	60A	4	5	25	81	2025
V7	50A	1	10	3	240	720
	50A	2	8	2	235	470
	50A	3	8	2	375	750
	60A	4	5	23	81	1863
V8	60A	1	5	2	205	410
	50A	2	10	3	155	465
	50A	3	8	2	155	310
	50A	4	8	2	415	830
60A	5	5	25	81	2025	
V9	50A	1	10	3	425	1275
	50A	2	10	2	385	770
	60A	3	5	23	81	1863
	V14	60A	1	5	2	205
50A		2	10	3	155	465
50A		3	8	2	155	310
50A		4	8	2	415	830
60A	5	5	25	81	2025	
V18	50A	1	8	3	210	630
	50A	2	8	2	195	390
	50A	3	8	2	341	682
	60A	4	5	19	81	1539
V22	50A	1	8	2	210	420
	50A	2	8	3	200	600
	50A	3	8	2	343	686
	60A	4	5	19	81	1539
V25	50A	1	8	2	210	420
	50A	2	8	3	200	600
	50A	3	8	2	340	680
	60A	4	5	19	81	1539
V26	50A	1	8	3	370	1110
	50A	2	8	3	365	730
	60A	3	5	20	81	1620
	V27	50A	1	8	3	370
50A		2	8	3	370	740
60A		3	5	20	81	1620
V28		50A	1	8	5	210
	50A	2	8	2	344	688
	60A	3	5	19	81	1539
	V33	50A	1	8	2	210
50A		2	8	3	200	600
50A		3	8	2	343	686
60A		4	5	19	81	1539
V34	50A	1	8	3	320	960
	50A	2	8	3	315	630
	60A	3	5	17	81	1377
	V35	60A	1	5	2	270
50A		2	8	3	130	390
50A		3	8	2	375	750
60A		4	5	21	81	1701
V37	60A	1	5	2	365	730
	50A	2	8	2	375	750
	60A	3	5	21	81	1701
	V39	50A	1	8	3	365
50A		2	8	2	360	720
60A		3	5	20	81	1620
V40		50A	1	8	2	210
	50A	2	8	3	200	600
	50A	3	8	2	343	686
	60A	4	5	19	81	1539
RESUMO DE AÇO						
AÇO	BIT (mm)	COMPR (m)		PESO (kg)		
60A	5	388		60		
50A	8	293		116		
50A	10	37		23		
Peso Total		60A =		60 kg		
Peso Total		50A =		139 kg		
CONSUMO TOTAL DE CONCRETO						
Volume Total		=		6.7 m³		
CONSUMO TOTAL DE FÓRMAS						
Área Total		=		111.0 m²		

Prefeitura Municipal de Benjamin Constant
Secretaria Municipal de Obras e Urbanismo

APROVADO

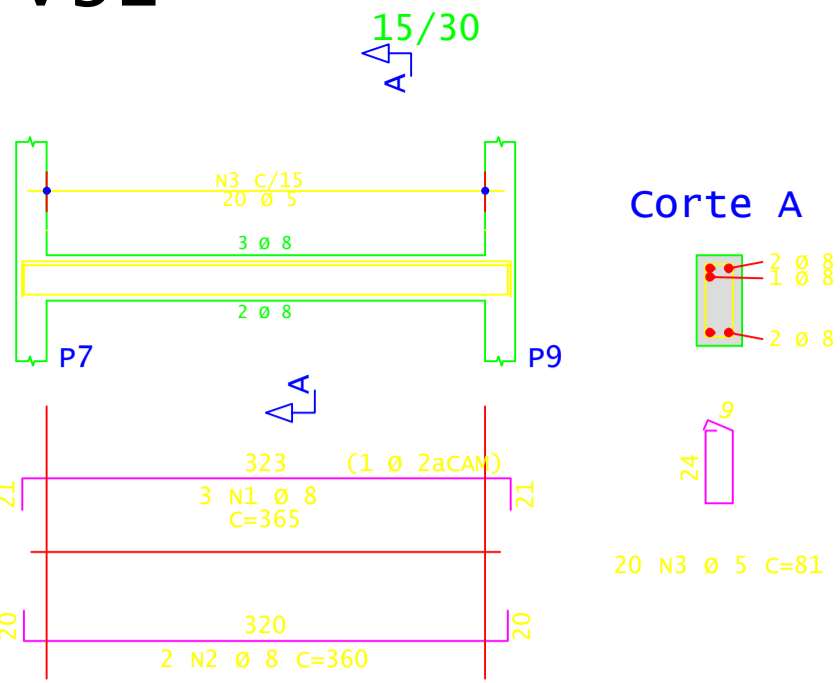
O projeto está em conformidade com as leis municipais e normas da ABNT.
Data: 12/06/2020

João Lúcio Carvalho Gonçalves
Engenheiro Civil, Mecânico
CREA - 0755-D

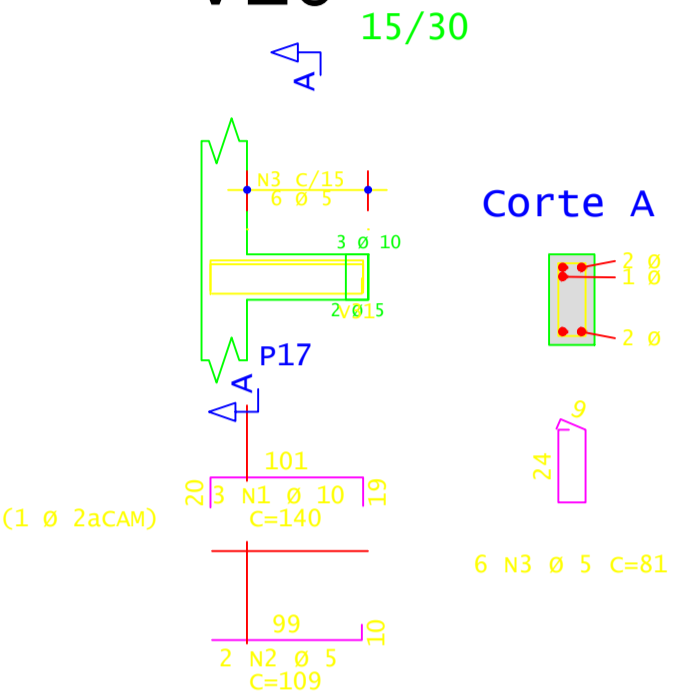
Elias James Araújo do Carmo
Secretário Municipal de Obras e Urbanismo

CONCRETO fck = 20 MPa	0001
CLIENTE	007
OBRA CREAS	
TÍTULO ARMAÇÃO VIGAS TERREO	
V1 / V2 / V4 / V5 / V7 V8 / V9 / V14 / V18 / V22 V25 / V26 / V27 / V28 V33 / V34 / V35 / V37 V39 / V40	01
DATA 03/05/2020	ENG.º
ESCALA 1:50	
DESENHO CRE-TER-VIG-07-R01	
COORD.	

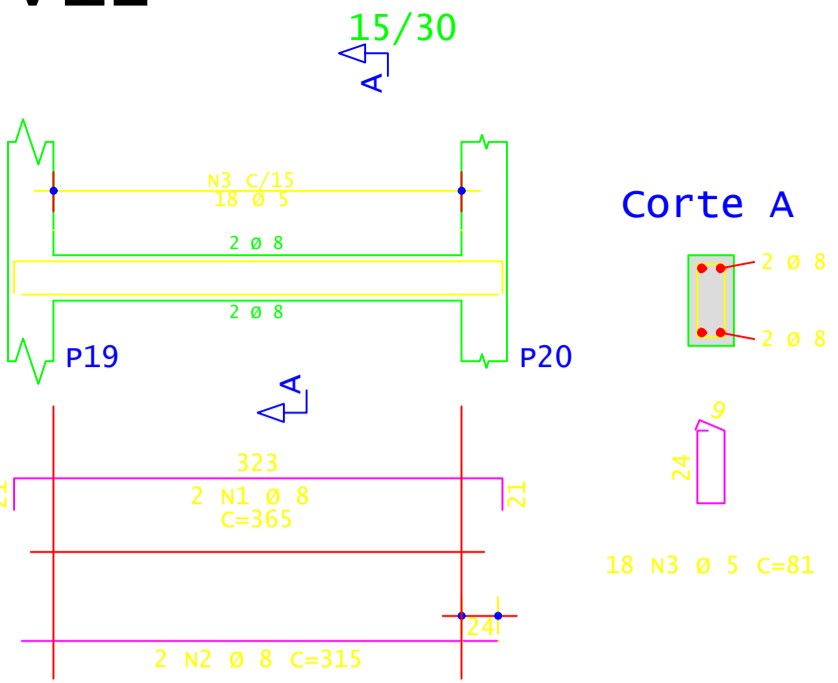
v32



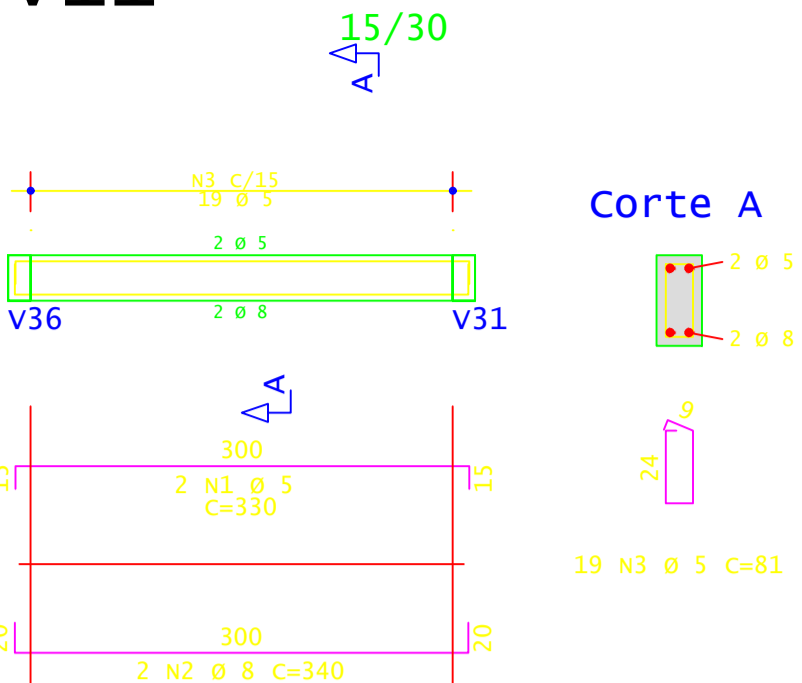
v10



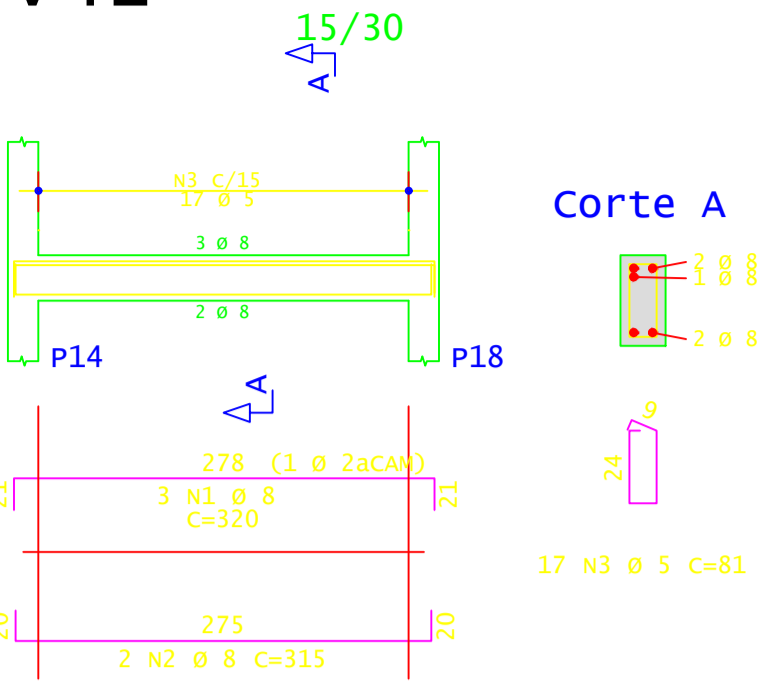
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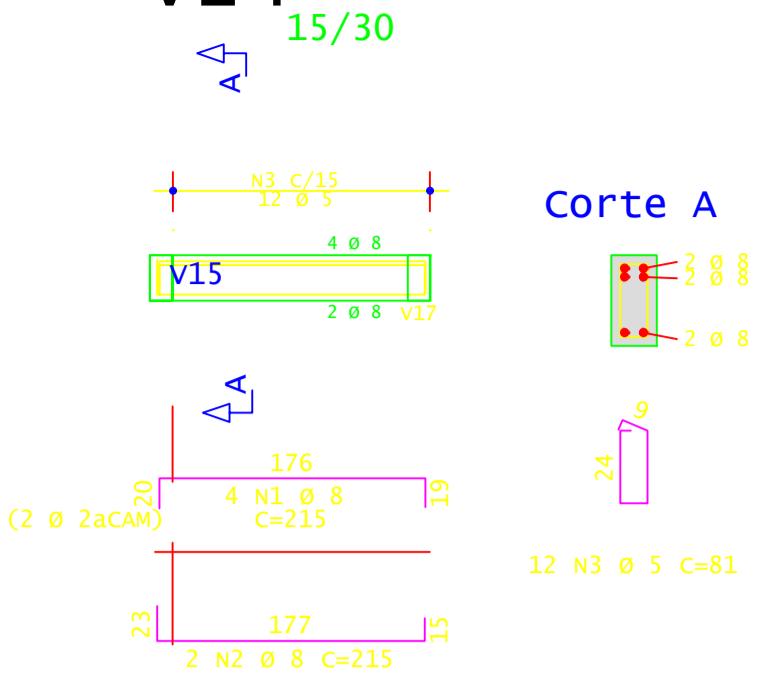
v11



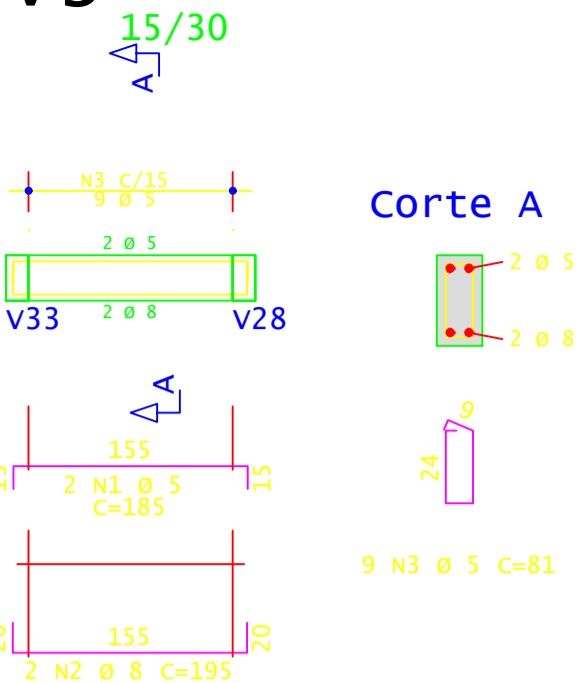
v42



v24



v3



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO		
				UNIT (cm)	TOTAL (cm)	
V3	60A	1	5	2	185	370
	50A	2	8	2	195	390
	60A	3	5	9	81	729
V10	50A	1	10	3	140	420
	60A	2	5	2	109	218
	60A	3	5	6	81	486
V11	60A	1	5	2	330	660
	50A	2	8	2	340	680
	60A	3	5	19	81	1539
V12	50A	1	8	2	365	730
	50A	2	8	2	315	630
	60A	3	5	18	81	1458
V24	50A	1	8	4	215	860
	50A	2	8	2	215	430
	60A	3	5	12	81	972
V32	50A	1	8	3	365	1095
	50A	2	8	2	360	720
	60A	3	5	20	81	1620
V42	50A	1	8	3	320	960
	50A	2	8	2	315	630
	60A	3	5	17	81	1377

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	94	15
50A	8	71	28
50A	10	4	3
Peso Total	60A =		15 kg
Peso Total	50A =		31 kg

CONSUMO TOTAL DE CONCRETO		
Volume Total	=	6.7 m³

CONSUMO TOTAL DE FÔRMAS		
Área Total	=	111.0 m²

Prefeitura Municipal de Benjamin Constant

Secretaria Municipal de Obras e Urbanismo

APROVADO

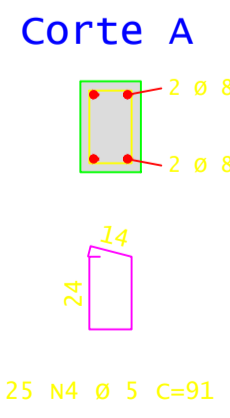
O projeto está em conformidade com as leis municipais e normas da ABNT.

Data: 12/06/2020

João Lúcio Silva Gonçalves
Engenheiro Civil Mecânico
CREA - 0795-D

Elias James Araújo do Carmo
Secretário Municipal de Obras e Urbanismo

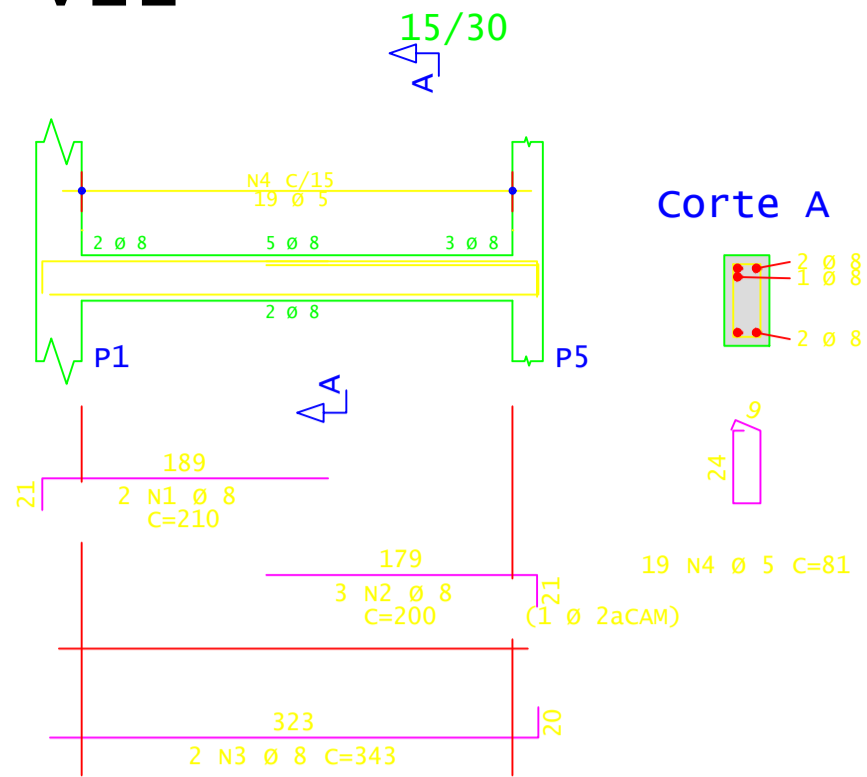
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CLIENTE				DES. N.º
OBRA CREAS				008
TÍTULO ARMAÇÃO VIGAS TERREO				
v3 / v10 / v11 / v12 / v24 v32 / v42				REV. N.º
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DATA 03/05/2020	ESCALA 1:50	DESENHO CRE-TER-VIG-008-R01	COORD.	ENG. Nº



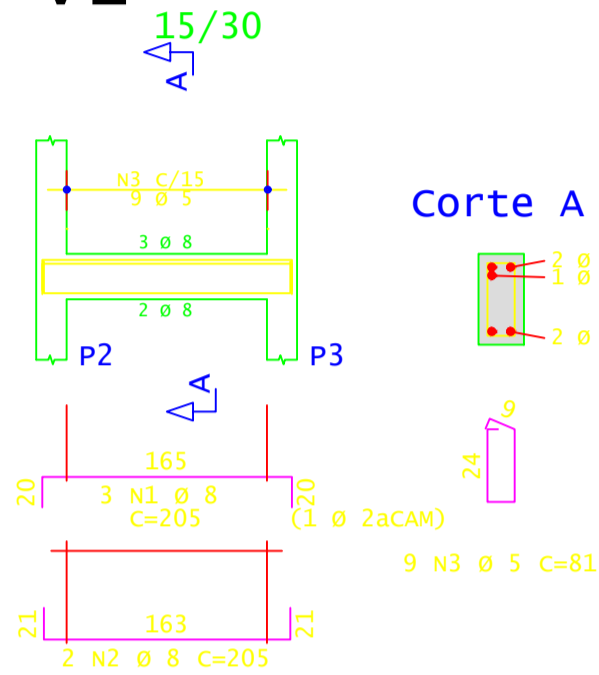
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CLIENTE			DES. N.º	
OBRA CREAS			009	
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v5 / v6 / v13 / v15 / v16 v17 / v18 / v20 / v21 v29 / v30 / v32 / v36 v38 / v41 / v42			01	
DATA 03/05/2020	ESCALA 1:50	DESENHO CRE-MEZ-VIG-009-R01	COORD.	ENG.º

AÇO		POS	BIT (mm)		QUANT	COMPRIMENTO UNIT (cm) TOTAL (cm)		
V1	60A	1	5		2	245	490	
	50A	2	8		3	120	360	
	50A	3	8		3	150	450	
	50A	4	8		2	465	930	
	60A	5	5		27	81	2187	
V3	60A	1	5		2	245	490	
	50A	2	8		3	150	450	
	50A	3	8		3	120	360	
	50A	4	8		2	460	920	
	60A	5	5		26	91	2366	
V4	60A	1	5		2	205	410	
	50A	2	8		4	115	620	
	50A	3	8		2	415	830	
	60A	4	5		25	91	2275	
	V8	50A	1	8		2	425	850
50A		2	8		2	375	750	
60A		3	5		23	105	2415	
50A		4	6.3		2	385	770	
V9		60A	1	5		2	205	410
	50A	2	8		4	155	620	
	50A	3	8		2	415	830	
	60A	4	5		25	91	2275	
	V10	50A	1	10		3	250	750
50A		2	8		2	220	440	
50A		3	8		2	375	750	
60A		4	5		23	105	2415	
50A		5	6.3		2	385	770	
V12	50A	1	8		2	365	730	
	50A	2	8		2	315	630	
	60A	3	5		18	91	1638	
	V19	50A	1	8		5	210	1050
		50A	2	8		2	341	682
60A		3	5		19	91	1729	
V23		60A	1	5		2	240	480
		50A	2	8		3	150	450
	50A	3	8		2	370	740	
	60A	4	5		20	91	1820	
	V24	60A	1	5		2	235	470
50A		2	8		3	150	450	
50A		3	8		2	365	730	
60A		4	5		20	91	1820	
V25		50A	1	8		3	220	660
	50A	2	8		2	220	440	
	60A	3	5		12	91	1092	
	V26	50A	1	8		3	200	600
		50A	2	8		2	210	420
50A		3	8		2	341	682	
60A		4	5		19	91	1729	
V27		50A	1	8		3	370	1110
	50A	2	8		2	365	730	
	60A	3	5		20	91	1820	
	V28	50A	1	8		3	370	1110
		50A	2	8		2	370	740
60A		3	5		20	91	1820	
V31		50A	1	8		2	210	420
		50A	2	8		3	200	600
	50A	3	8		2	343	686	
	60A	4	5		19	81	1539	
	V33	50A	1	8		3	365	1095
50A		2	8		2	360	720	
60A		3	5		20	91	1820	
V34		50A	1	8		2	210	420
		50A	2	8		3	200	600
	50A	3	8		2	343	686	
	60A	4	5		19	91	1729	
	V37	60A	1	5		2	370	740
50A		2	8		2	380	760	
60A		3	5		21	91	1911	
V39		50A	1	8		3	365	1095
		50A	2	8		2	360	720
	60A	3	5		20	91	1820	
	V40	50A	1	8		2	210	420
		50A	2	8		3	200	600
50A		3	8		2	343	686	
60A		4	5		19	91	1729	
RESUMO DE AÇO								
AÇO	BIT (mm)	COMPR (m)			PESO (kg)			
	60A	5	414			64		
	50A	6.3	15			4		
	50A	8	306			121		
	50A	10	8			5		
Peso Total		60A =			64 kg			
Peso Total		50A =			129 kg			
CONSUMO TOTAL DE CONCRETO								
Volume Total		=			7.9 m³			
CONSUMO TOTAL DE FÓRMAS								
Área Total		=			107.6 m²			

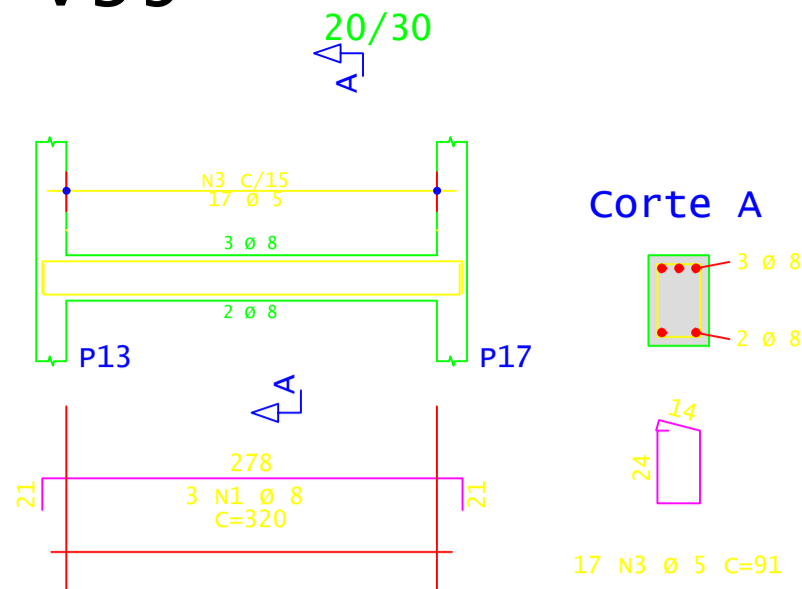
v22



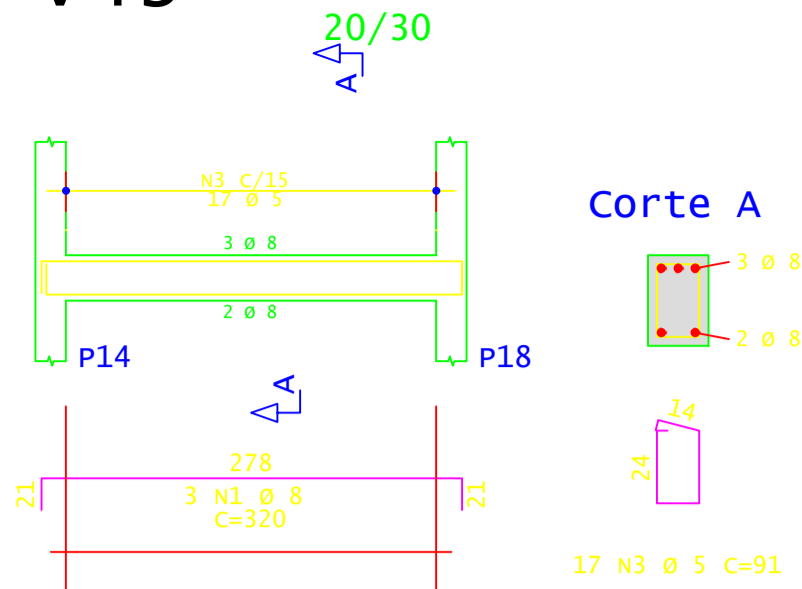
v2



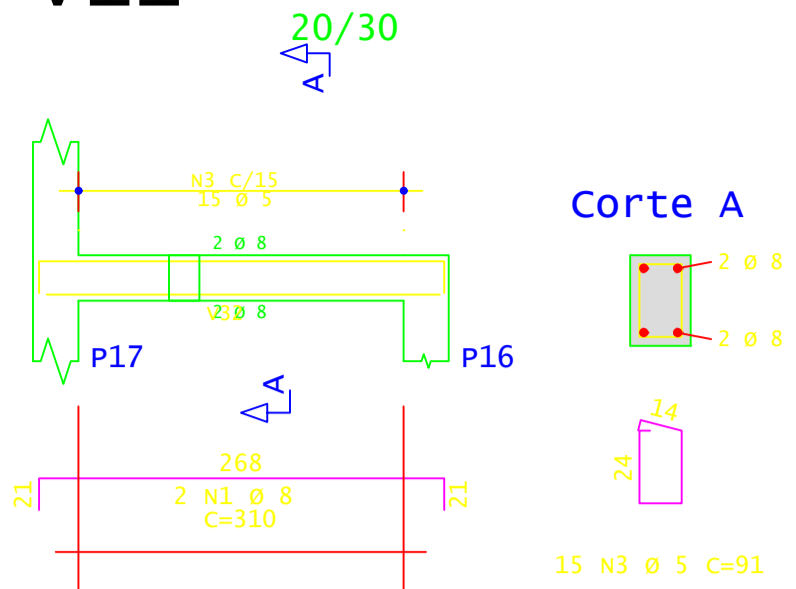
v35



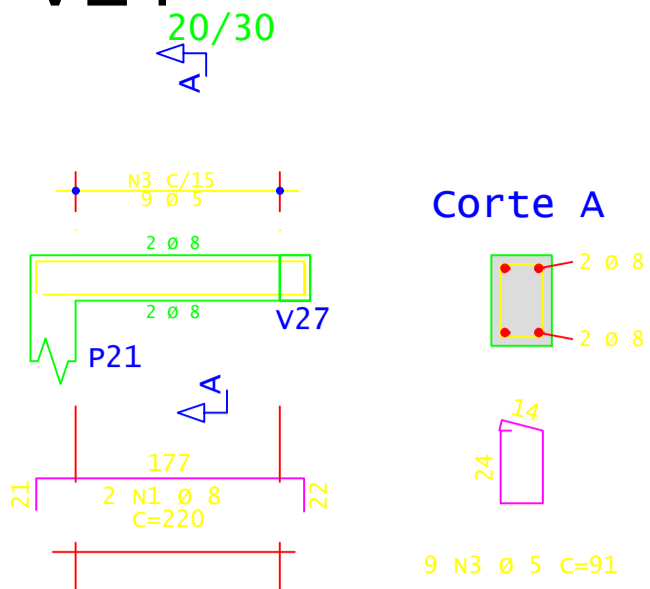
v43



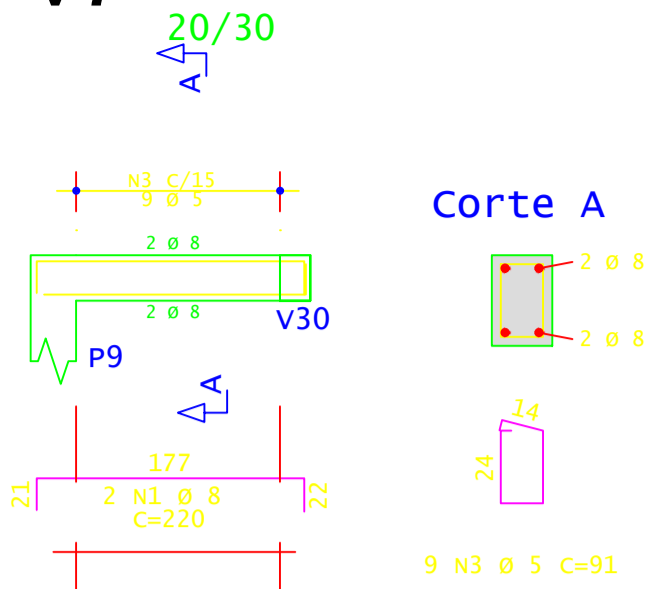
v11



v14



v7



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V2	50A	1	8	205	615
	50A	2	8	205	410
	60A	3	9	81	729
V7	50A	1	8	220	440
	50A	2	8	193	386
	60A	3	9	91	819
V11	50A	1	8	2	620
	50A	2	8	2	920
	60A	3	5	15	1365
V14	50A	1	8	2	440
	50A	2	8	2	386
	60A	3	5	9	819
V22	50A	1	8	2	420
	50A	2	8	3	600
	50A	3	8	2	686
V35	50A	1	8	3	960
	50A	2	8	2	630
	60A	3	5	17	1547
V43	50A	1	8	3	960
	50A	2	8	3	630
	60A	3	5	17	1547

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	84	13
50A	8	87	34
Peso Total		60A =	13 kg
Peso Total		50A =	34 kg

CONSUMO TOTAL DE CONCRETO	
Volume Total	= 7.9 m³

CONSUMO TOTAL DE FÔRMAS	
Área Total	= 107.6 m²

Prefeitura Municipal de Benjamin Constant

Secretaria Municipal de Obras e Urbanismo

APROVADO

O projeto está em conformidade com as leis municipais e normas da ABNT.

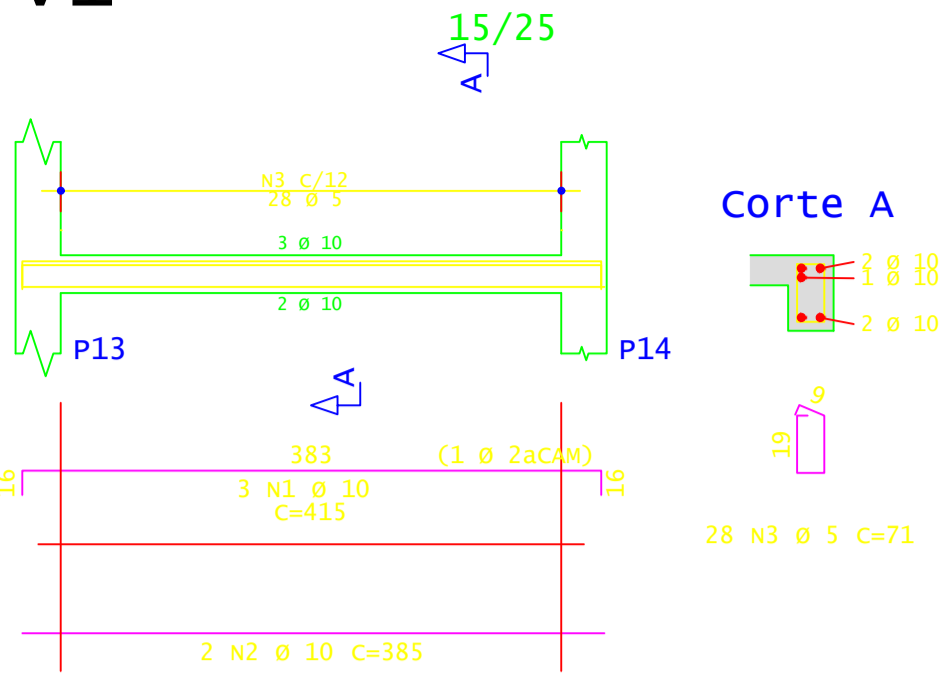
Data: 12/06/2020

João Lúcio Sávio Gonçalves
Engenheiro Civil/Mecânico
CREA-0765-D

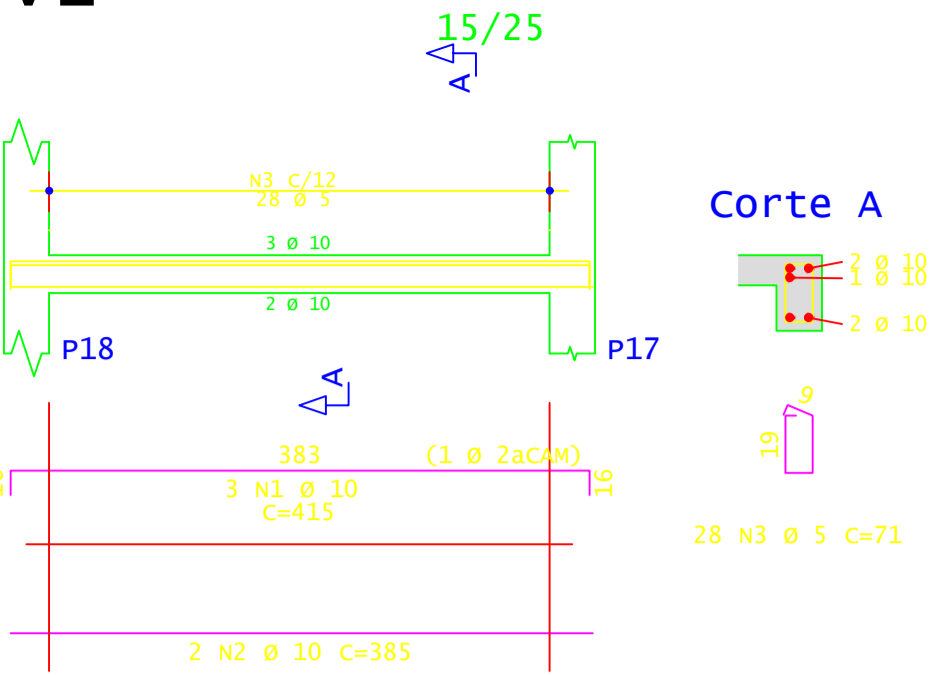
Elias James Araújo do Carmo
Secretário Municipal de Obras e Urbanismo

CONCRETO fck = 20 MPa	OBRA N.º 0001
CLIENTE	DES. N.º 011
OBRA CREAS	REV. N.º 01
TÍTULO ARMAÇÃO VIGAS MEZANINO	ENG.º
V2 / V7 / V11 / V14 / V22 V35 / V43	
DATA 03/05/2020	ESCALA 1:50
DESENHO CRE-MEZ-VTG-011-R01	COORD.

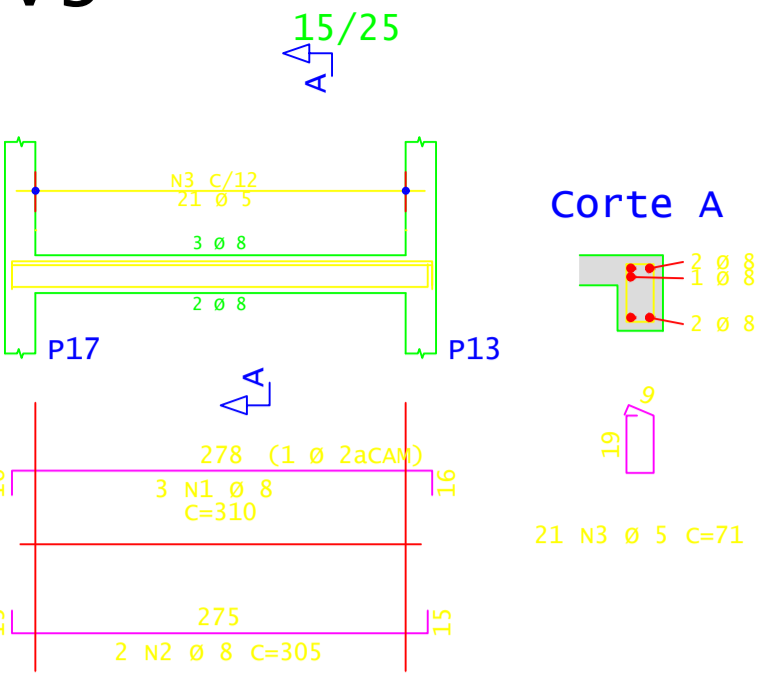
v1



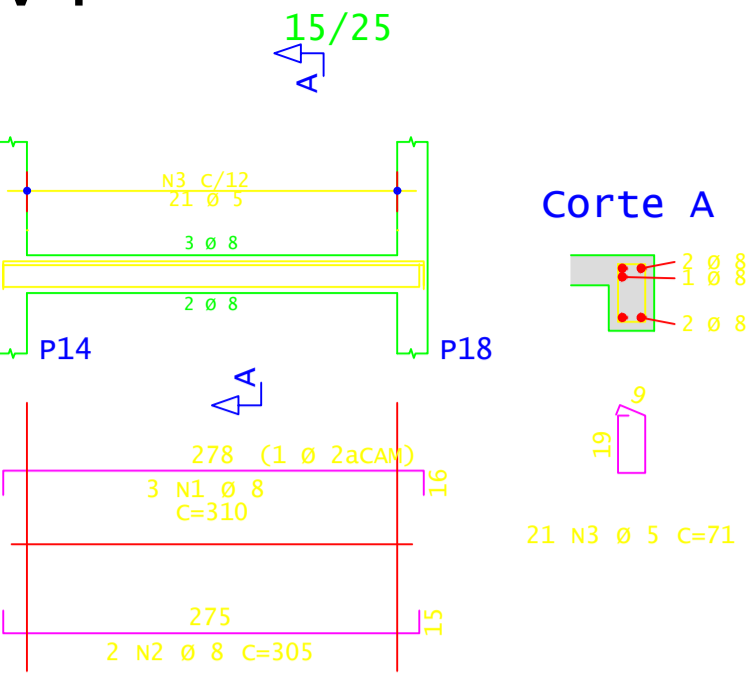
v2



v3



v4



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V1	50A	1	10	415	1245
	50A	2	10	385	770
	60A	3	5	28	1988
V2	50A	1	10	415	1245
	50A	2	10	385	770
	60A	3	5	28	1988
V3	50A	1	8	310	930
	50A	2	8	305	610
	60A	3	5	21	1491
V4	50A	1	8	310	930
	50A	2	8	305	610
	60A	3	5	21	1491

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	70	11
50A	8	31	12
50A	10	40	25
Peso Total		60A =	11 kg
Peso Total		50A =	37 kg

CONSUMO TOTAL DE CONCRETO	
Volume Total	= 0.4 m³

CONSUMO TOTAL DE FÔRMAS	
Área Total	= 6.3 m²

Prefeitura Municipal de Benjamin Constant

Secretaria Municipal de Obras e Urbanismo

APROVADO

O projeto está em conformidade com as leis municipais e normas da ABNT.

Data: 12/06/2020



João Lúcio Gonçalves
Engenheiro Civil/Mecânico
CREA-0765-D



Elias James Araújo do Carmo
Secretário Municipal de Obras e Urbanismo

CONCRETO fck = 20 MPa				0001
CLIENTE				DES. N.º
OBRA CREAS				012
TÍTULO ARMAÇÃO VIGAS PRIMEIRO				REV. N.º
v1 / v2 / v3 / v4				01
DATA 03/05/2020	ESCALA 1:50	DESENHO CRE-PRI-VTG-012-R01	COORD.	ENG.º