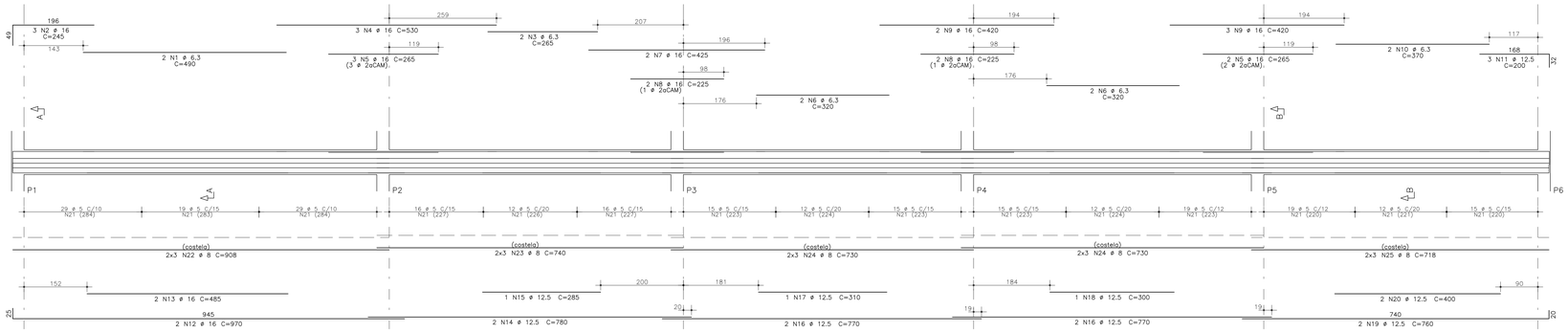
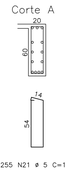
V1 20X60

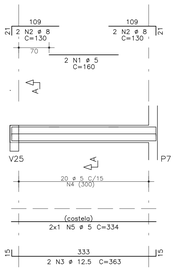


Corte A



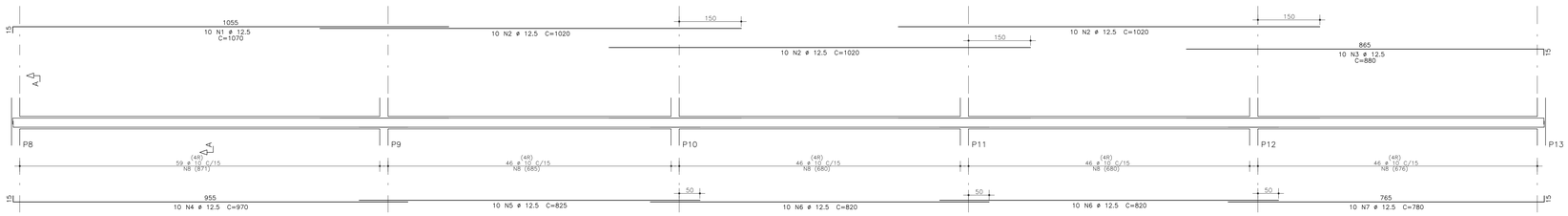
Corte B

V2=V4 15X40

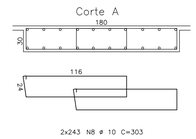


Corte A

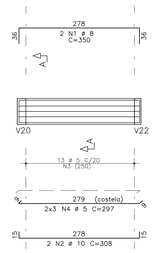
V3 180X30



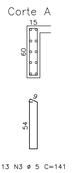
Corte A



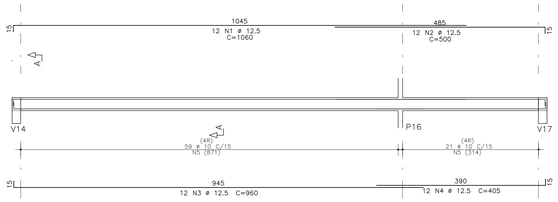
V10 15X60



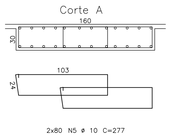
Corte A



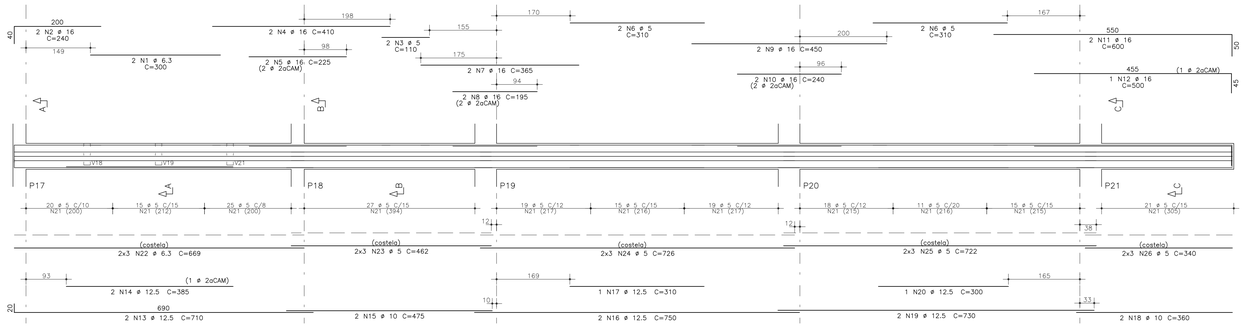
V5=V8 160X30



Corte A



V6 15X60

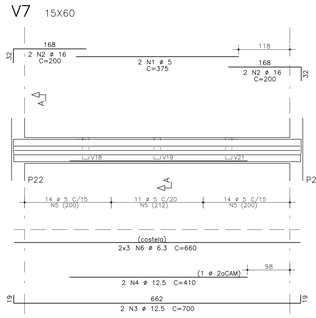


Corte A

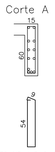
Corte B

Corte C

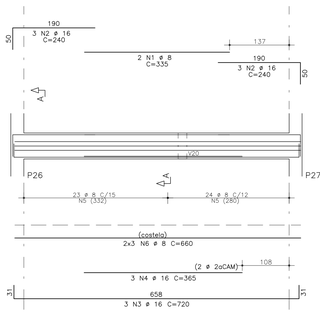
V7 15X60



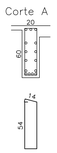
Corte A



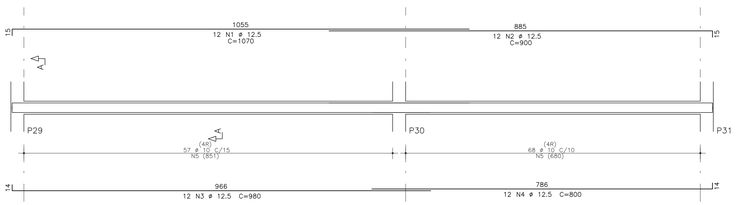
V9 20X60



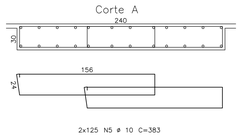
Corte A



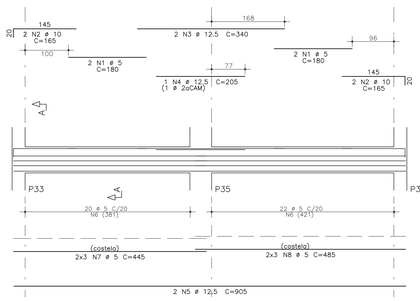
V11 240X30



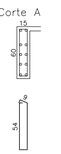
Corte A



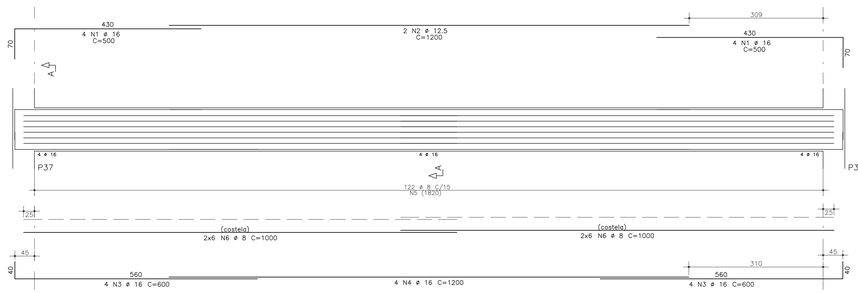
V12 15X60



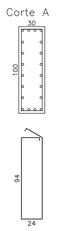
Corte A



V13 30X100



Corte A



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
V1					
50A	1	6.3	2	490	980
50A	2	16	3	245	735
50A	3	6.3	2	265	530
50A	4	16	5	530	1590
50A	5	16	5	265	1325
50A	6	6.3	4	320	1280
50A	7	16	2	425	850
50A	8	16	4	225	900
50A	9	16	5	420	2100
50A	10	6.3	2	370	740
50A	11	12.5	3	200	600
50A	12	16	2	970	1940
50A	13	16	2	485	970
50A	14	12.5	2	780	1560
50A	15	12.5	1	285	285
50A	16	12.5	4	770	3080
50A	17	12.5	1	310	310
50A	18	12.5	1	300	300
50A	19	12.5	2	760	1520
50A	20	12.5	2	400	800
60B	21	5	255	151	38505
50A	22	8	6	908	5448
50A	23	8	6	740	4440
50A	24	8	12	730	8760
50A	25	8	6	718	4308
V2=V4	(X2)				
60B	1	5	4	160	640
50A	2	8	8	130	1040
50A	3	12.5	4	363	1452
60B	4	5	40	101	4040
60B	5	5	4	334	1336
V3					
50A	1	12.5	10	1070	10700
50A	2	12.5	30	1020	30600
50A	3	12.5	10	880	8800
50A	4	12.5	10	970	9700
50A	5	12.5	10	825	8250
50A	6	12.5	20	820	16400
50A	7	12.5	10	780	7800
50A	8	10	486	303	147258
V5=V8	(X2)				
50A	1	12.5	24	1060	25440
50A	2	12.5	24	500	12000
50A	3	12.5	24	960	23040
50A	4	12.5	24	405	9720
50A	5	10	320	277	88640
V6					
50A	1	6.3	2	300	600
50A	2	16	2	240	480
60B	3	5	2	110	220
50A	4	16	2	410	820
50A	5	16	2	225	450
60B	6	5	4	310	1240
50A	7	16	2	365	730
50A	8	16	2	195	390
50A	9	16	2	450	900
50A	10	16	2	240	480
50A	11	16	2	600	1200
50A	12	16	1	500	500
50A	13	12.5	2	710	1420
50A	14	12.5	2	385	770
50A	15	10	2	475	950
50A	16	12.5	2	750	1500
50A	17	12.5	1	310	310
50A	18	10	2	360	720
50A	19	12.5	2	730	1460
50A	20	12.5	1	300	300
60B	21	5	205	141	28905
50A	22	6.3	6	669	4014
60B	23	5	6	462	2772
60B	24	5	6	726	4356
60B	25	5	6	722	4332
60B	26	5	6	340	2040
V7					
60B	1	5	2	375	750
50A	2	16	2	200	800
50A	3	12.5	2	700	1400
50A	4	12.5	2	410	820
60B	5	5	39	141	5499
50A	6	6.3	6	660	3960
V9					
50A	1	8	2	335	670
50A	2	16	6	240	1440
50A	3	16	3	720	2160
50A	4	16	3	365	1095
50A	5	8	47	154	7238
50A	6	8	6	660	3960
V10					
50A	1	8	2	350	700
50A	2	10	2	308	616
60B	3	5	13	141	1833
60B	4	5	6	297	1782
V11					
50A	1	12.5	12	1070	12840
50A	2	12.5	12	900	10800
50A	3	12.5	12	980	11760
50A	4	12.5	12	800	9600
50A	5	10	250	383	95750
V12					
60B	1	5	4	180	720
50A	2	10	4	165	660
50A	3	12.5	2	340	680
50A	4	12.5	1	205	205
50A	5	12.5	2	905	1810
60B	6	5	42	141	5922
60B	7	5	6	445	2670
60B	8	5	6	485	2910
V13					
50A	1	16	8	500	4000
50A	2	12.5	2	1200	2400
50A	3	16	8	600	4800
50A	4	16	4	1200	4800
50A	5	8	122	278	33916
50A	6	8	24	1000	24000

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	1105	170
50A	6.3	121	30
50A	8	945	373
50A	10	3346	2064
50A	12.5	2304	2219
50A	16	355	559
Peso Total	60B =		170 kg
Peso Total	50A =		5,246 kg

REVISÃO	ASSUNTO	DESENHO	DATA
01	REVISÃO GERAL DO PROJETO	JC	01/02/2024
00	EMISSÃO INICIAL	KN	20/06/2023

PAGO

APROVO

PROPRIETÁRIO

PROJETO

PROJETO

CONSTRUÇÃO

CONSELHO PROFISSIONAL

SOP-CE
SUPERINTENDÊNCIA DE OBRAS PÚBLICAS

GOVERNO DO ESTADO DO CEARÁ
Secretaria das Cidades

SECRETARIA DAS CIDADES
SOP - SUPERINTENDÊNCIA DE OBRAS PÚBLICAS

PROJETO:
ESCOLA DE ENSINO MÉDIO PADRÃO - TIPO II
PROJETO PADRÃO

INTERESSADO: SEDUC - SECRETARIA DE EDUCAÇÃO
ÁREA TÉCNICA: ESTRUTURA DE CONCRETO ARMADO
ENDEREÇO: RSDO S/N
ETAPA: EXECUTIVO
MUNICÍPIO: CEARÁ
CONTEÚDO: ARM. VIGAS DO 1º TETO - V1 a V13
ESCALA: 1:50

AUTOR: JM — CREA:
TELEFONE: — EMAIL:
AUTOR: — CREA:
TELEFONE: — EMAIL:

DESENHO: JC
DATA: 01/02/2024
REVISÃO: 01
ARQUIVO: EEEM TIPO2 R1 01-02-2024.dwg

PRANCHA: **13** 30

Fck:	≥ 30,6MPa
Ec:	≥ 30,7GPa
Cobrimentos:	
LAJES	- 2,5cm
VIGAS	- 3,0cm
PILARES	- 3,0cm
FUNDAÇÕES	- 4,5cm
Classe de Agressividade Ambiental:	MODERADA

RESERVA DE PROPRIEDADE INTELECTUAL

A PROPRIEDADE INTELECTUAL DO PRESENTE PROJETO É RESERVADA AO SEUS AUTORES DE ACORDO COM A LEGISLAÇÃO PERTINENTE. O USO DESTE PROJETO OU DE QUALQUER DE SEUS ELEMENTOS, QUE NÃO FORNA OS DETERMINADOS, SERÃO CONSIDERADOS COMO APROPRIAÇÃO ILÍCITA E SERÃO APLICADAS AS LEIS QUE DEFENDEM DIREITOS DIRETOS A TODOS OS EFEITOS