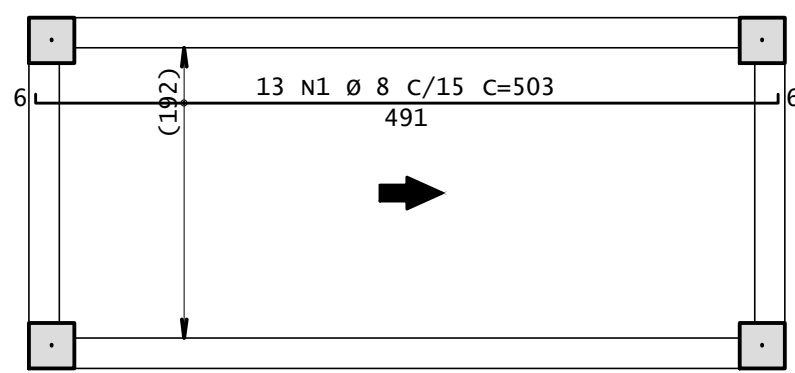
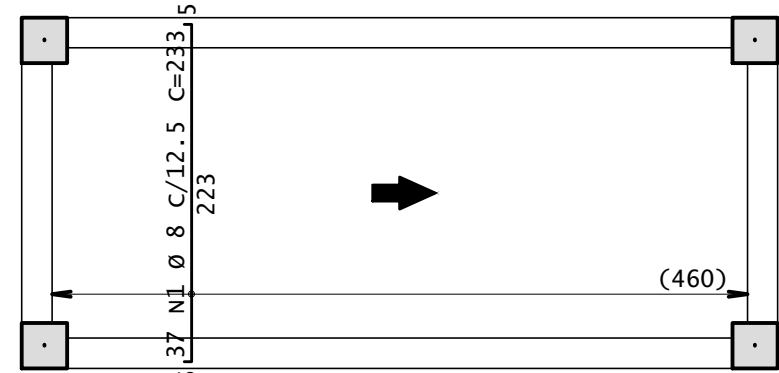


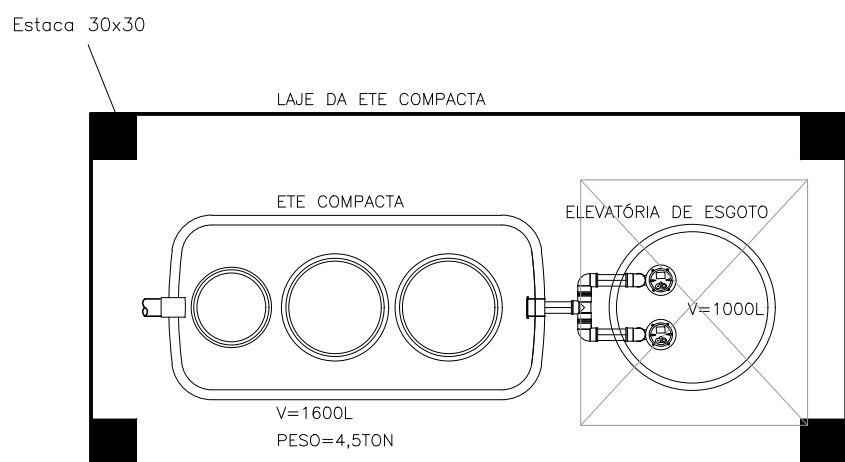
DETALHE PLATAFORMA ETE  
ESC: 1/50



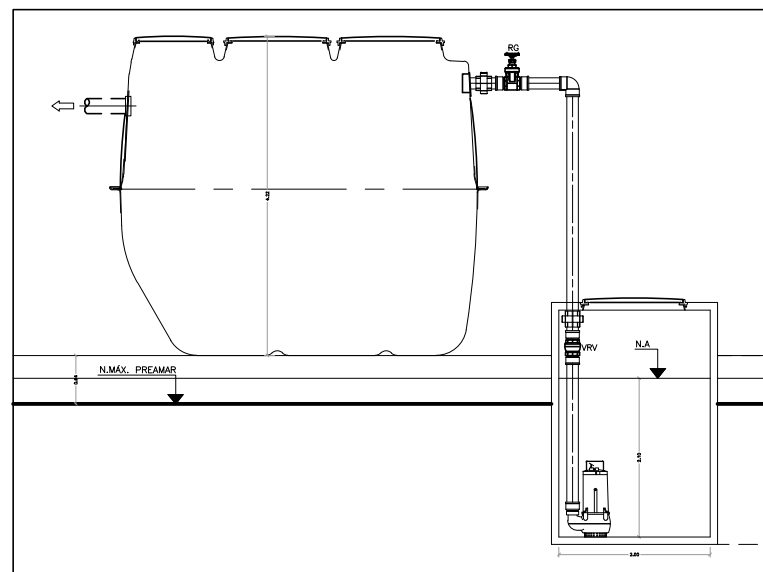
ARMADURA POSITIVA PRINCIPAL DA LAJE  
ESC: 1/50



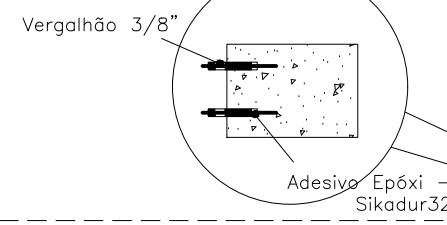
ARMADURA POSITIVA SECUNDÁRIA DA LAJE  
ESC: 1/50



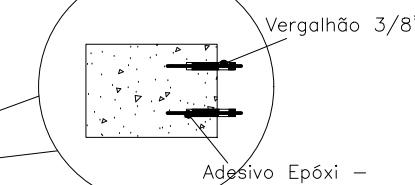
VISTA - ETE COMPACTA E  
ELEVATÓRIO DE ESGOTO  
ESC: 1/50



DETALHE DE FIXAÇÃO DA  
ARMADURA COM EPOXI  
SEM ESCALA

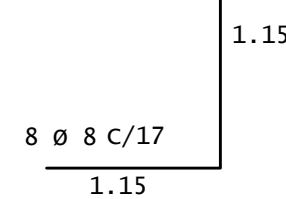
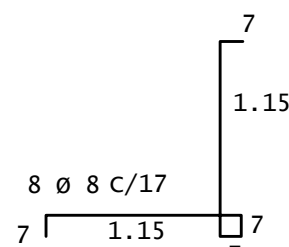
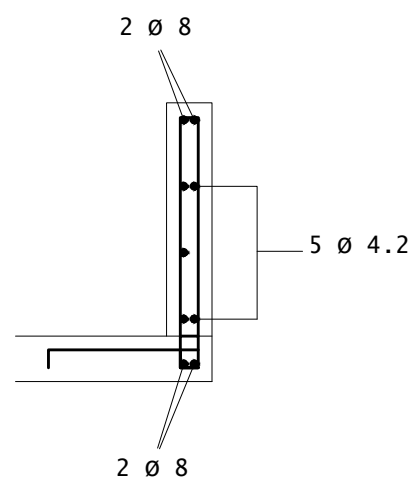


DETALHE DE FIXAÇÃO DA  
ARMADURA COM EPOXI  
SEM ESCALA

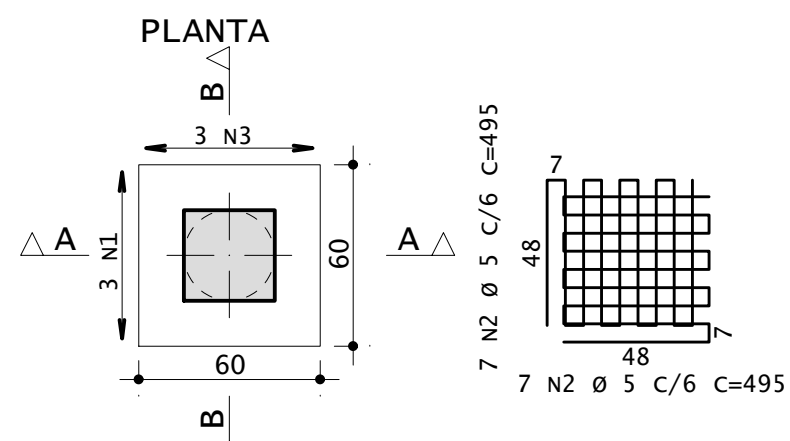


8 Ø 8 C/17

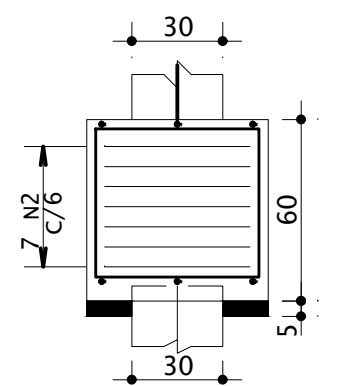
Corte A



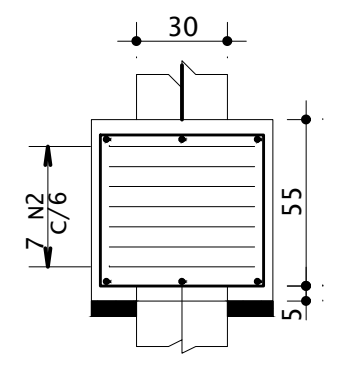
B1/B2/B3/B4  
(ESCALA 1:25)



CORTE A - A



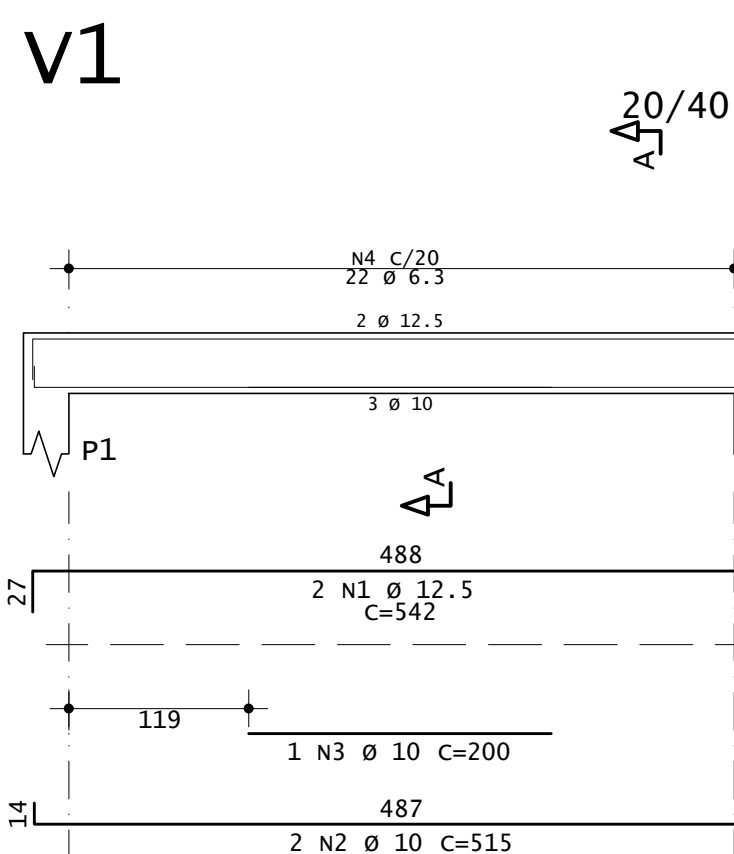
CORTE B - B



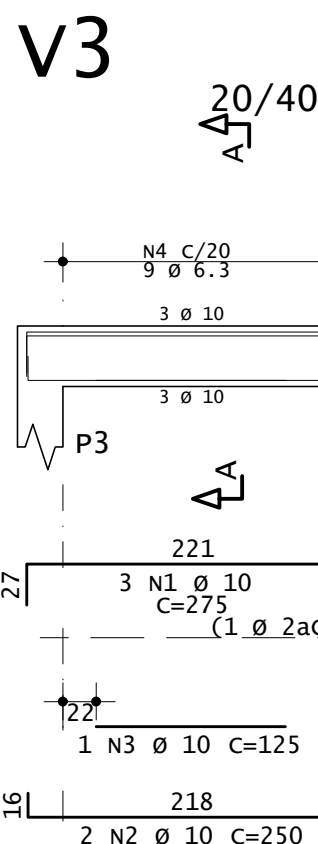
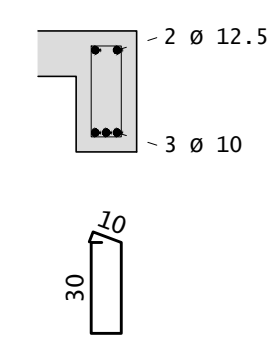
3 N1 Ø 10 C=229

3 N3 Ø 10 C=231

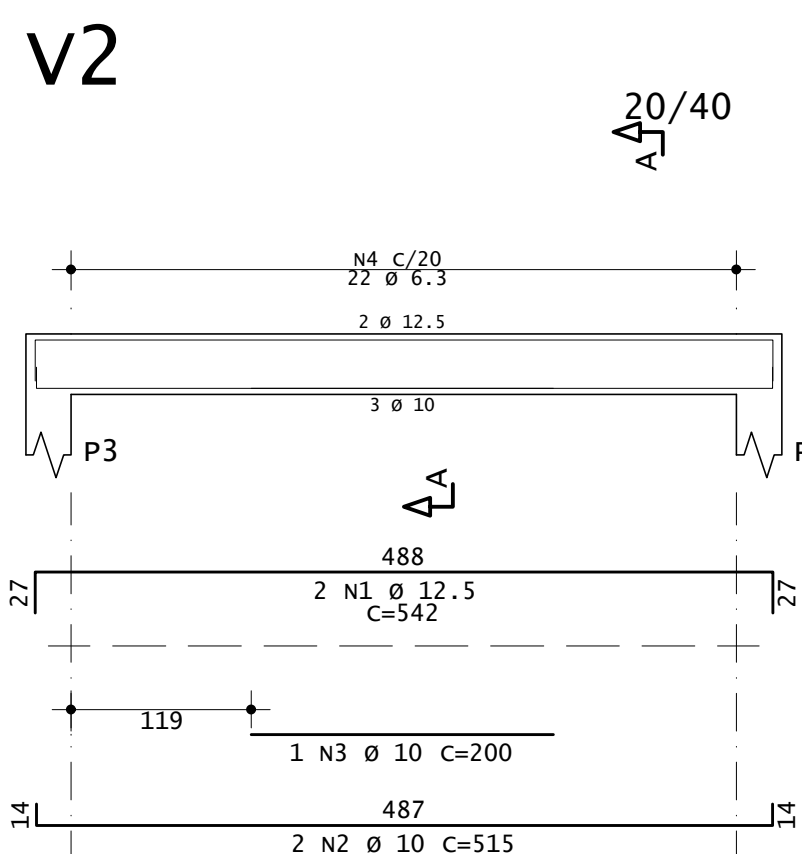
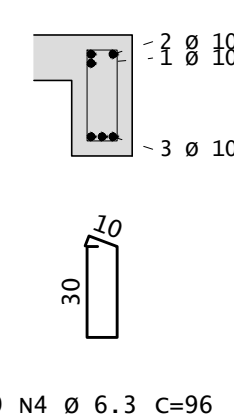
ARMADURA BLOCOS DE COROAMENTO  
ESC: 1/25



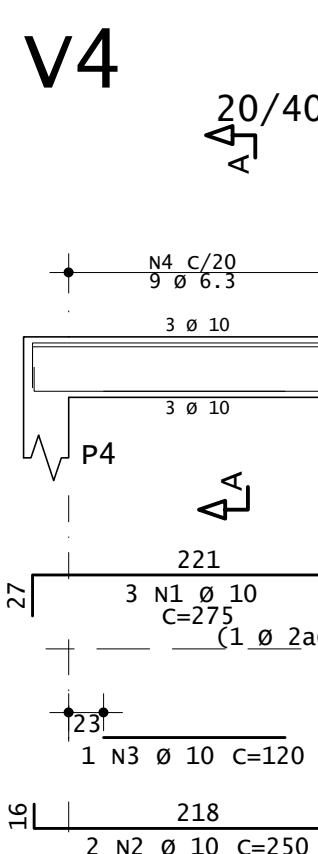
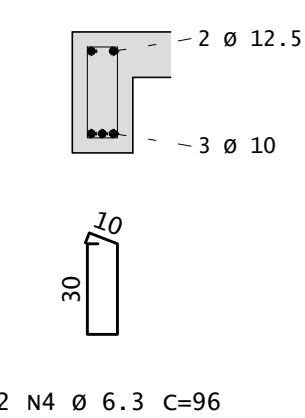
Corte A



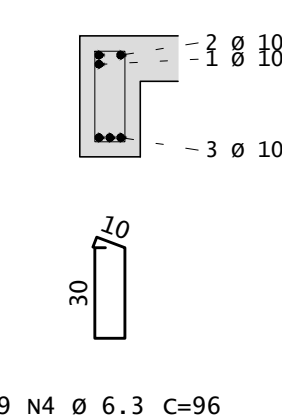
Corte A



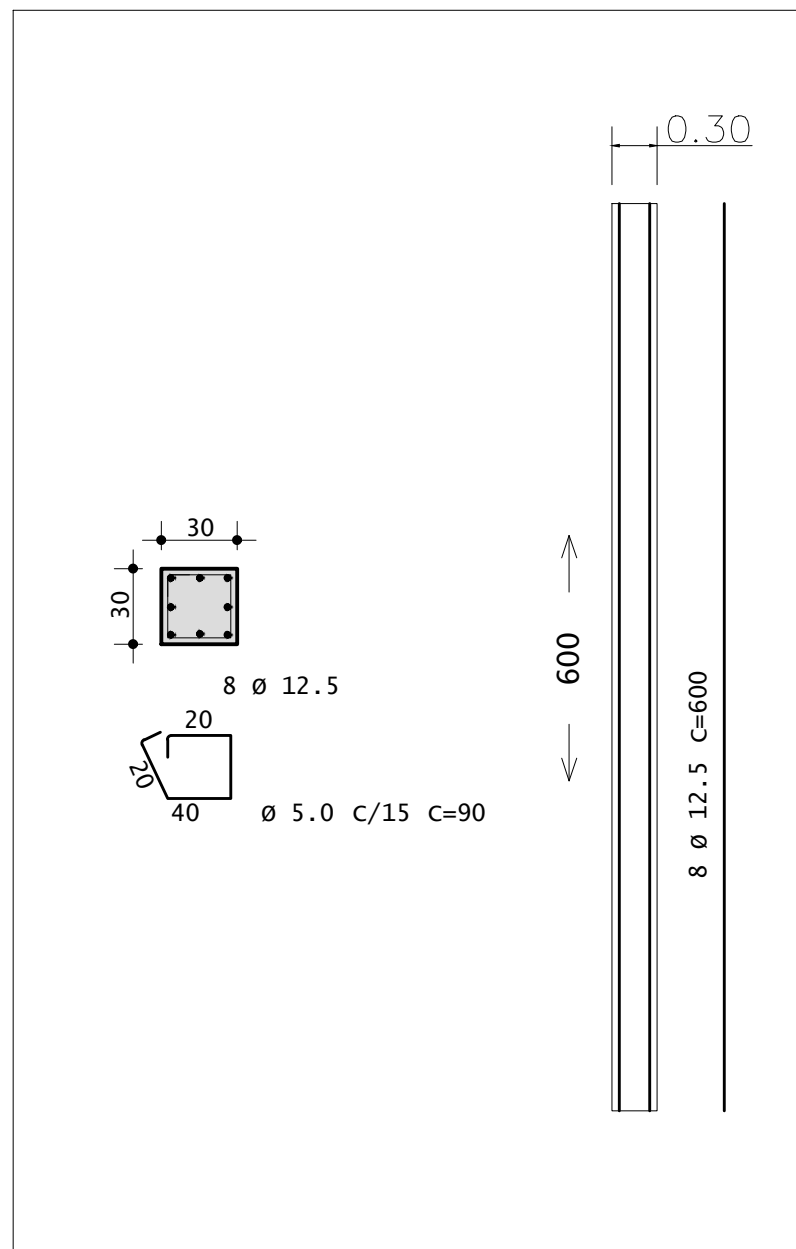
Corte A



Corte A



ESTACA  
(ESCALA 1:50)



ARMADURA ESTACAS DE CONCRETO  
ESC: 1/50

AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
B1	50A	2	10	3	229
	60A	2	5	14	495
	50A	3	10	3	231
B2	50A	1	10	3	229
	60A	2	5	14	495
	50A	3	10	3	231
B3	50A	1	10	3	229
	60A	2	5	14	495
	50A	3	10	3	231
B4	50A	1	10	3	229
	60A	2	5	14	495
	50A	3	10	3	231

RESUMO AÇO BLOCOS			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	277	64
50A	10	55	34
Peso Total		60A =	64 kg
Peso Total		50A =	34 kg

	AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT (cm)	TOTAL (cm)
Laje - Armadura positiva principal						
	50A	1	8	13	503	6539
Laje - Armadura positiva secundaria						
	50A	1	8	37	233	8621
V1	50A	1	12.5	2	542	1084
	50A	2	10	2	515	1030
	50A	3	10	1	200	200
	50A	4	6.3	22	96	2112
V2	50A	1	12.5	2	542	1084
	50A	2	10	2	515	1030
	50A	3	10	1	200	200
	50A	4	6.3	22	96	2112
V3	50A	1	10	3	275	825
	50A	2	10	2	250	500
	50A	3	10	1	125	125
	50A	4	6.3	9	96	864
V4	50A	1	10	3	275	825
	50A	2	10	2	250	500
	50A	3	10	1	120	120
	50A	4	6.3	9	96	864

RESUMO AÇO LAJE E VIGAS			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
50A	6.3	60	15
50A	8	152	60
50A	10	54	33
50A	12.5	22	21
Peso Total		50A =	128 kg

RESUMO AÇO ETE REBAIXADA			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	4.2	22	3
50A	8	246	97
Peso Total		50A =	97 kg
Peso Total		60A =	3 kg

RESUMO DE FORMA E CONCRETO		
ESTRUTURA	FORMA (m²)	CONCRETO (m³)
Vigas	10.40	0.98
Laje	8.79	1.32
TOTAL	19.20	2.30

RESUMO ESTACAS DE CONCRETO		
	QUANT.	COMP. (m)
ETE	4	60

A D - EMPREENDIMENTOS, PROJETOS E CONSTRUÇÃO LTDA

COMPANHIA DE PORTOS E HIDROVIAS - CPH

TERMINAL HIDROVIÁRIO DE PORTEL

ENGº CLEMENTINO FILHO - CREA 5571-D/PA  
ENGº CLEMENTINO NETTO - CREA 1515122280

Estrutura ETE

Planta de forma  
Armadura estacas e blocos de coroamento  
Armadura laje  
Armadura vigas

DATA: 19/06/2020 ESCALA: Indicada DESENHO: PORTEL-ETE-011-R00 CONCRETO

DES. N.º

REV. N.º

00

011