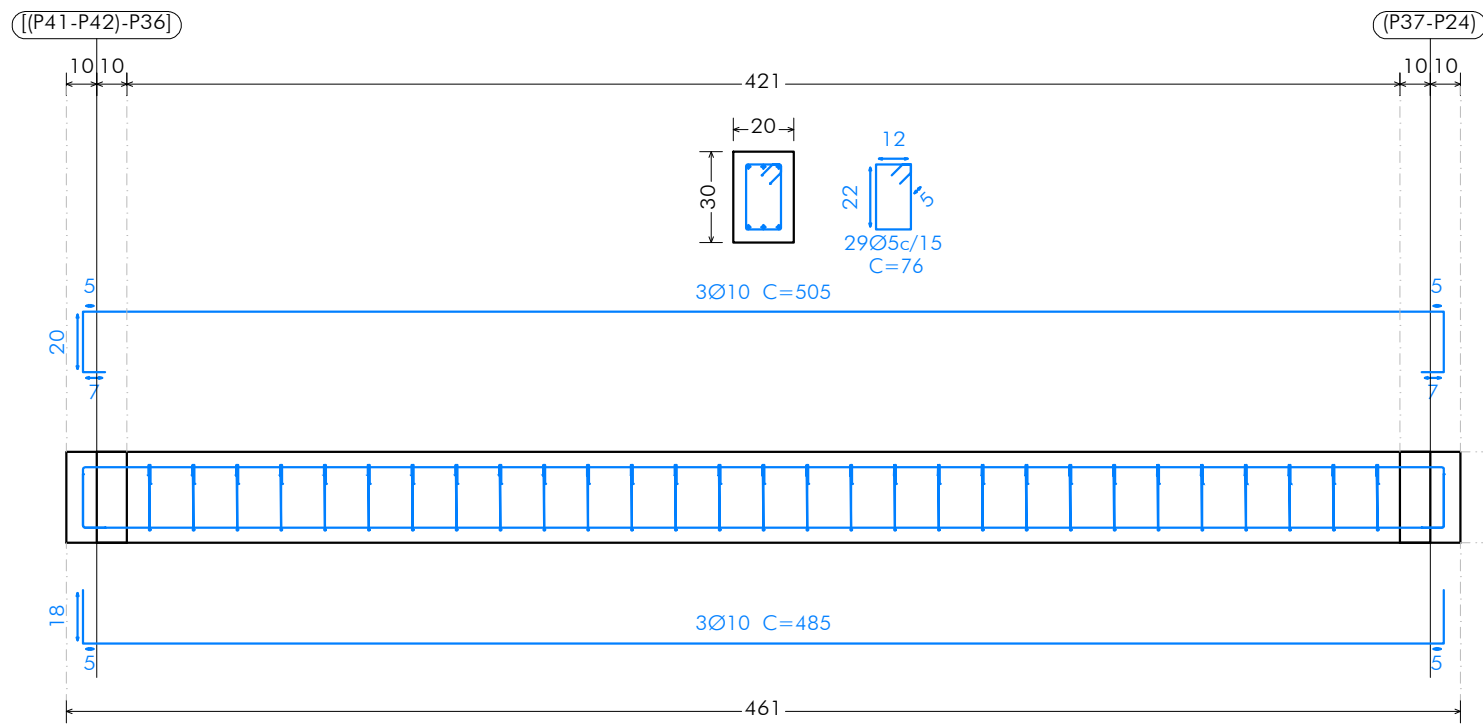


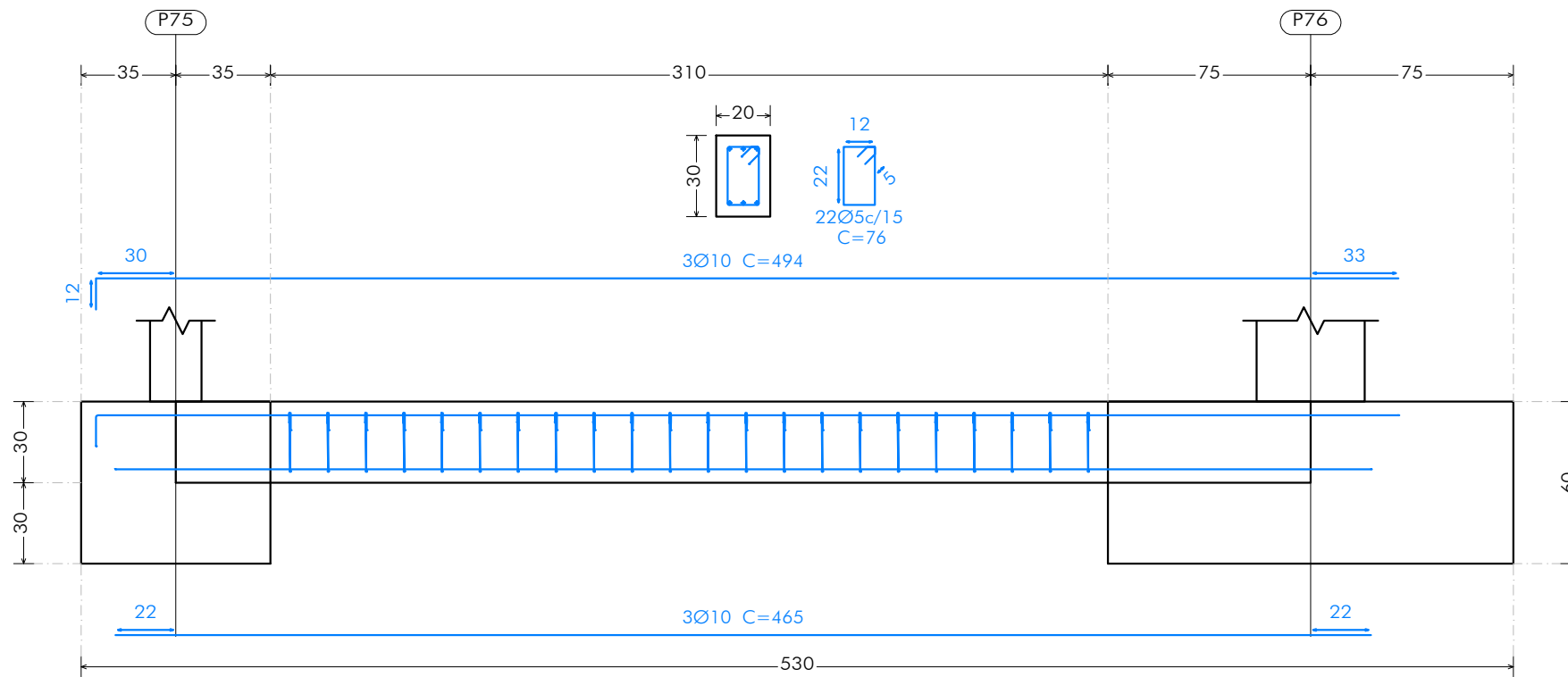
DETALHAMENTO VIGAS DE FUNDAÇÃO  
NÍVEL -0,80M

01 VB1 {(P41-P42)-P36)-(P37-P42)}  
ESCALA 1:25



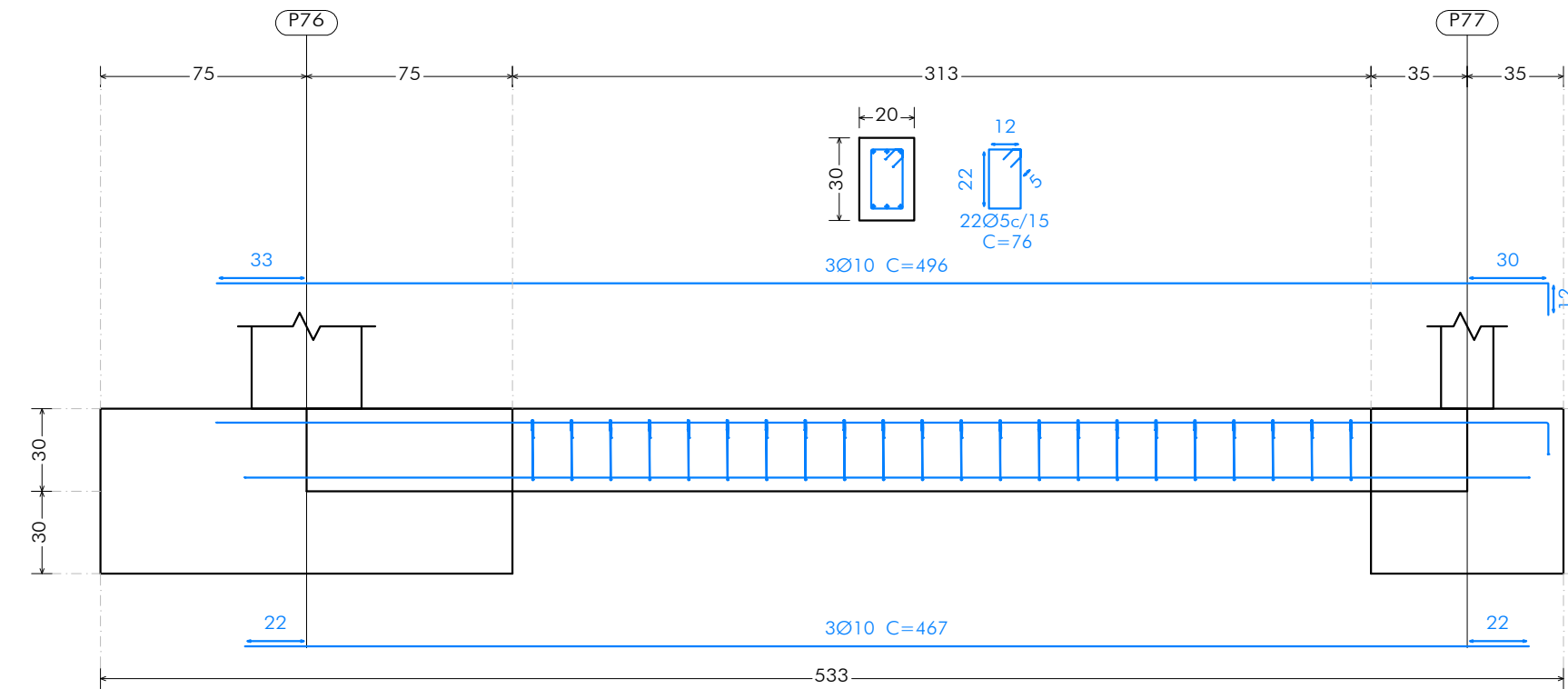
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 {(P41-P42)-P36)-(P37-P42)}	17 18 19	Ø10 Ø10 Ø5	3 3 29	18 7 76	449 491 76	18 7 76	485 505 2204	1455 1515 2204	9.0 9.3 3.5	
Total+10%:									20.1	3.9

02 VB1 (P75-P76)  
ESCALA 1:25



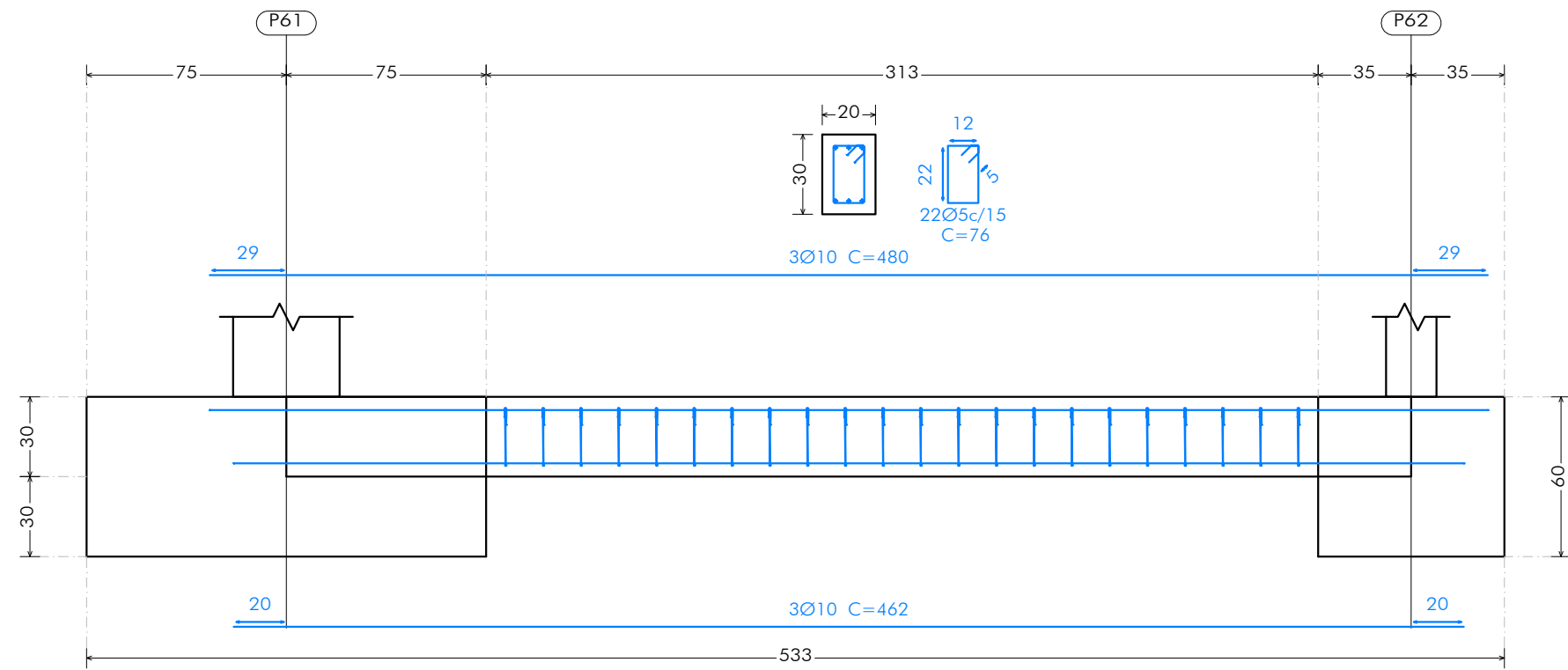
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P75 - P76)	20 21 22	Ø10 Ø10 Ø5	3 3 22	12 3 76	465 505 76	12 3 76	465 494 1672	1395 1482 9.1	8.6 9.1 2.6	
Total+10%:									19.5	2.9

03 VB1 (P76-P77)  
ESCALA 1:25



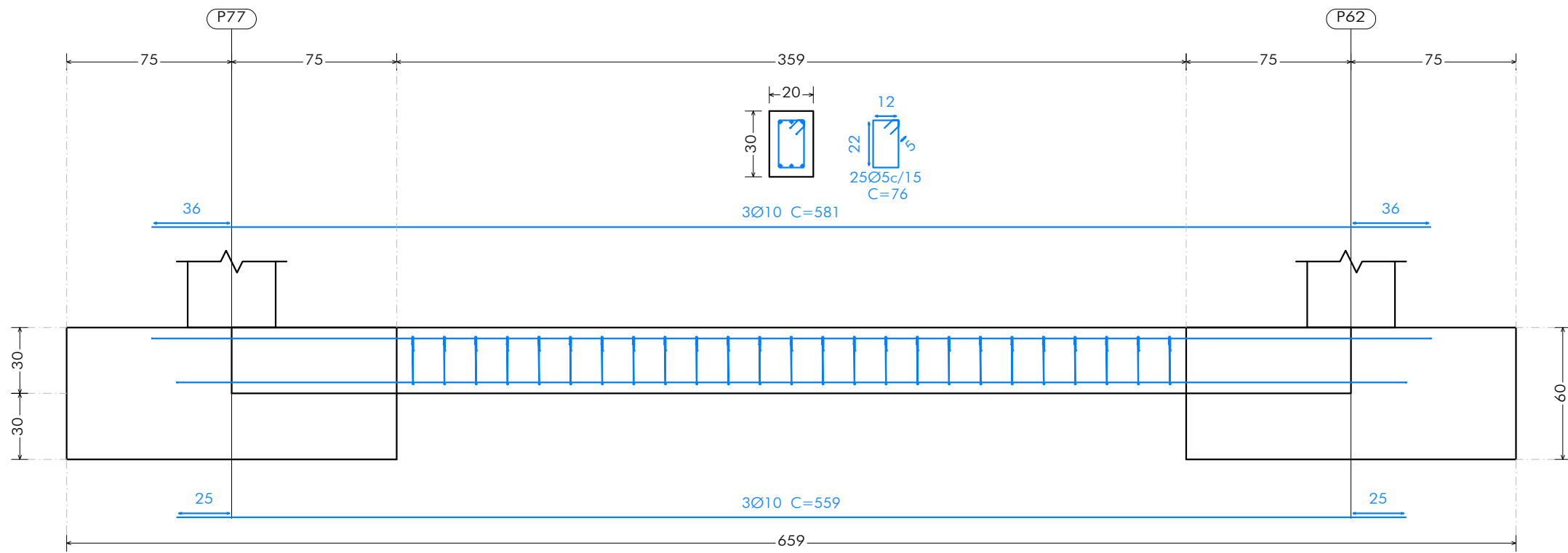
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P76 - P77)	29 30 31	Ø10 Ø10 Ø5	3 3 22	3 3 76	467 484 76	12 12 76	467 496 1672	1401 1488 9.2	8.6 9.2 2.6	
Total+10%:									19.6	2.9

04 VB1 (P61-P62)  
ESCALA 1:25



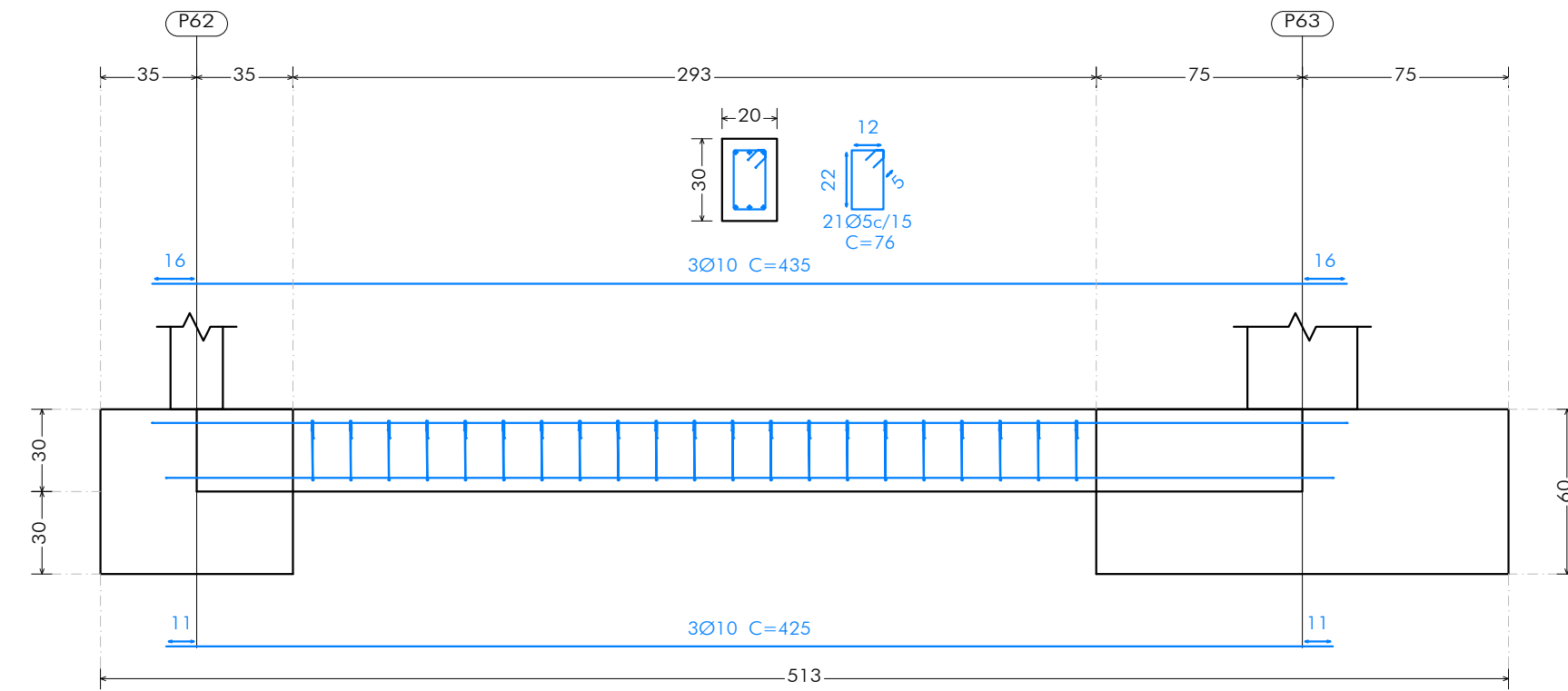
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P61 - P62)	26 27 28	Ø10 Ø10 Ø5	3 3 22	3 3 76	462 480 76	3 3 76	462 480 1672	1386 1440 9.3	8.5 8.9 2.6	
Total+10%:									19.1	2.9

05 VB1 (P77-P62)  
ESCALA 1:25



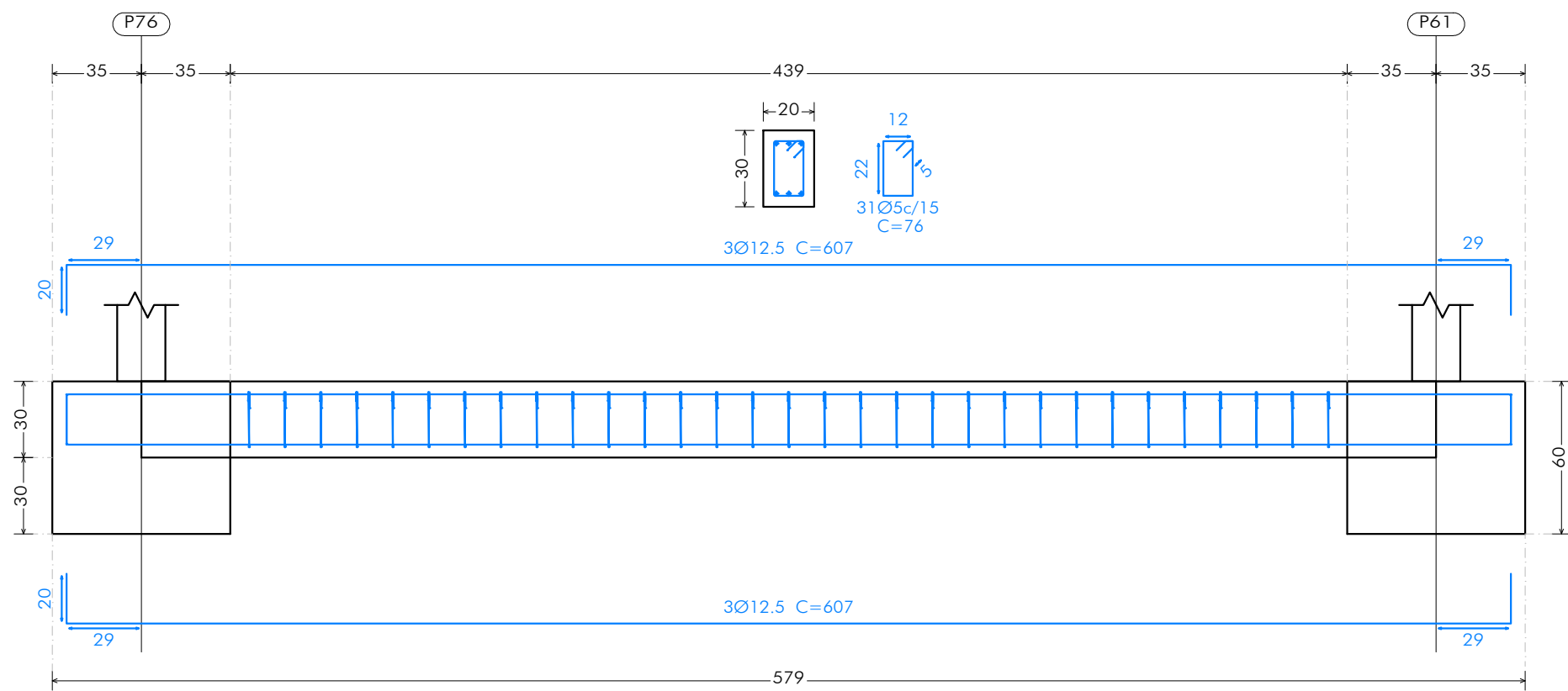
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P77 - P62)	32 33 34	Ø10 Ø10 Ø5	3 3 25	3 3 76	559 581 76	3 3 76	559 581 1900	1677 1743 9.3	10.3 10.7 3.0	
Total+10%:									23.1	3.3

06 VB1 (P62-P63)  
ESCALA 1:25



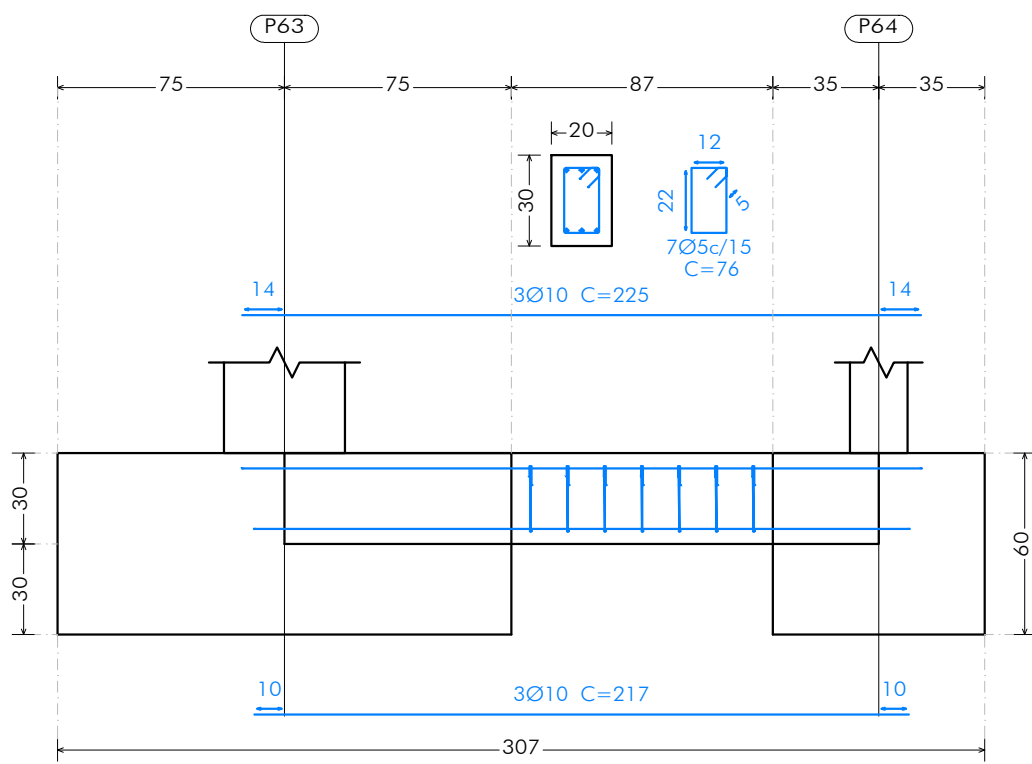
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P62 - P63)	38 39 40	Ø10 Ø10 Ø5	3 3 21	3 3 76	425 435 76	3 3 76	425 435 1596	1275 1305 8.0	7.9 8.0 2.5	
Total+10%:									17.5	2.8

07 VB2 (P76-P61)  
ESCALA 1:25



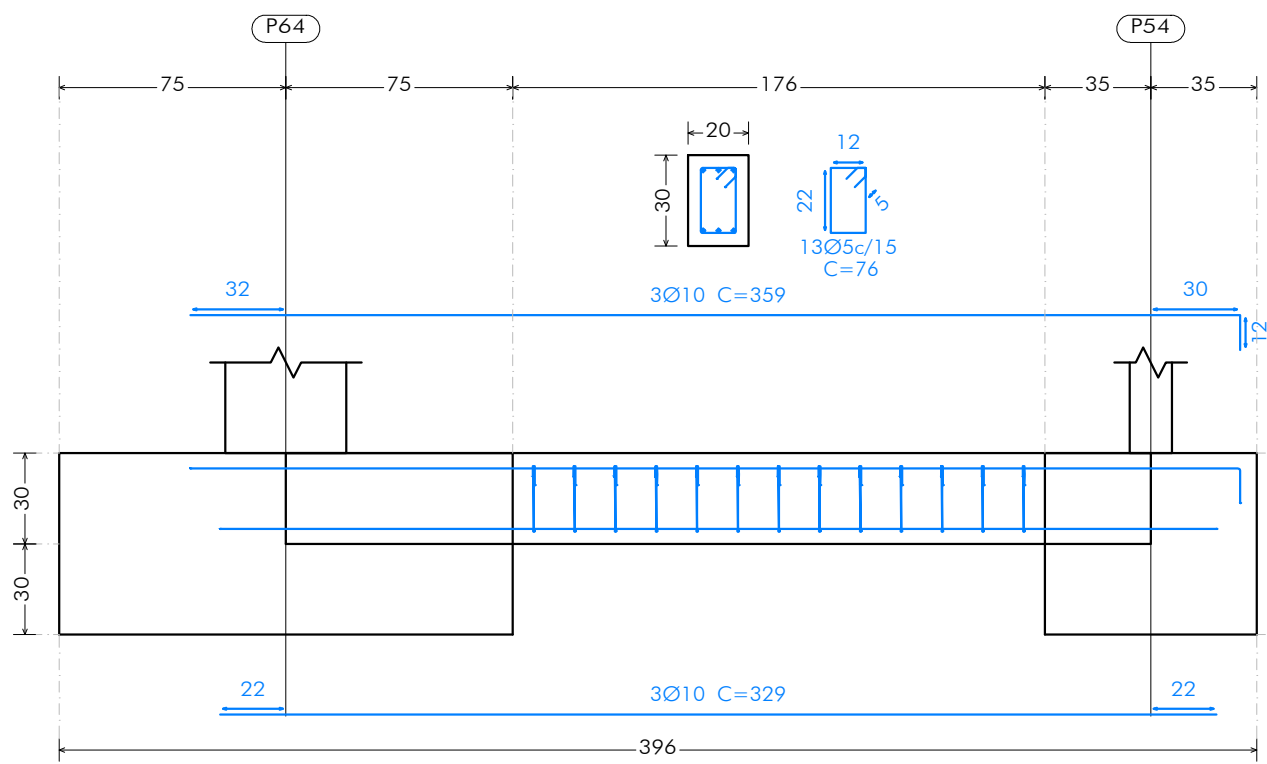
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V2 (P76 - P61)	23 24 25	Ø12.5 Ø12.5 Ø5	3 3 31	3 3 76	567 567 76	20 20 76	607 607 2356	1821 1821 17.5	17.5 17.5 3.7	
Total+10%:									38.5	4.1

08 VB1 (P63-P64)  
ESCALA 1:25



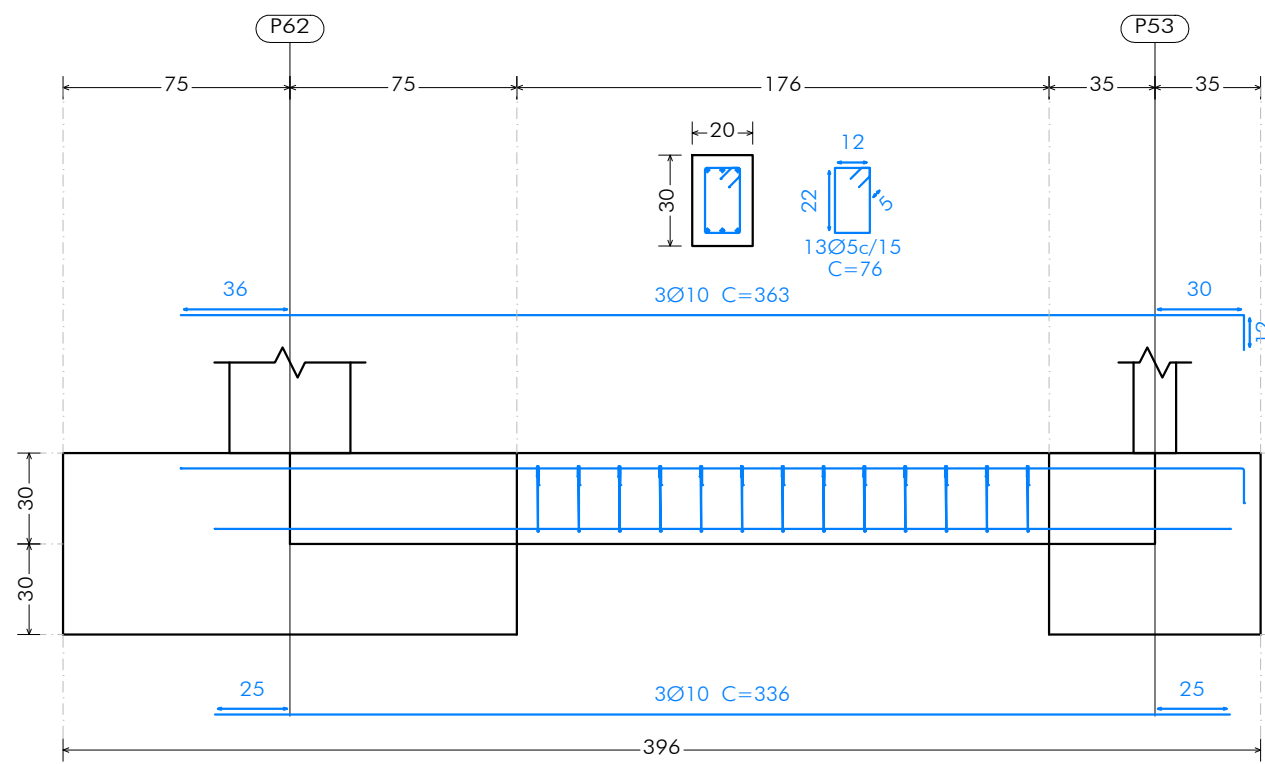
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P63 - P64)	1 2 3	Ø10 Ø10 Ø5	3 3 7	3 3 76	217 225 76	217 225 76	651 675 532	4.0 4.2 0.8		
Total+10%:									9.0	0.9

09 VB1 (P64-P54)  
ESCALA 1:25



Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P64 - P54)	4 5 6	Ø10 Ø10 Ø5	3 3 13	3 3 76	329 347 76	12 12 76	329 347 988	987 1077 6.6	6.1 6.6 1.6	
Total+10%:									14.0	1.8

11 VB1 (P62-P53)  
ESCALA 1:25



Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1 (P62 - P53)	1 2 3	Ø10 Ø10 Ø5	3 3 13	3 3 76	336 351 76	12 12 76	336 351 988	1008 1089 6.7	6.2 6.7 1.6	
Total+10%:									14.2	1.8

QUADRO REVISÕES:

REVISÃO	REFERÊNCIA	DESCRIÇÃO	DATA	APROVAÇÃO
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

ANCORAGEM:

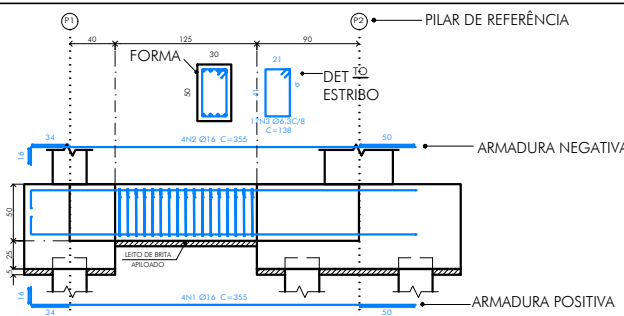
COMP. ANCORAGEM RETA E COM GANCHO	ACO CA-50/CA-60
Fck=30,0MPa	
Ø(mm)	U(lcm)
5.0	21.0
6.3	28.1
8.0	35.1
10.0	42.1
12.5	56.1
16.0	70.1
20.0	84.2

CONSUMOS:

CONCRETO USINADO	VIGAS BALDRAME
RESISTÊNCIA	C30
Fck (MPa)	30
VOLUME DE CONCRETO	20,30M³
CONSUMO MÍNIMO CIMENTO	300KG/M³
FATOR AGUA/CIMENTO	0,60
SLUMP	10+/-2

ACO (ACO CA-50)	VIGAS BALDRAME
Ø(mm)	U(lcm)
5.0	2095
6.3	-
8.0	-
10.0	2053
12.5	1129
16.0	356

LEGENDA:



OBSERVAÇÕES:

- ABAIXO DE TODAS AS VIGAS BALDRAMES E BLOCOS DE CONCRETO ARMADO DEVE-SE COLOCAR LASTRO DE BRITA COM ESPESURA DE 5cm.
- O QUANTITATIVO APRESENTADO NO QUADRO "CONSUMO" SE REFERE A TODA A ESTRUTURA.

ICHTHUS ENGENHARIA

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FONE: +55 35 3025.6092  
ART. N: MG20221428328

ESCOLA MUNICIPAL CANARINHO

CLIENTE: Prefeitura Municipal de Congonhal

TÍTULO: PROJETO ESTRUTURAL INFRAESTRUTURA DETALHAMENTO VIGAS BALDRAMES NÍVEL -0,80M

AUTOR DO PROJETO: CARLOS H. A. ROSSI

CREA: 46.052/D

DESENHO Nº: BMS/NSP

DATA: 06/52

ESCALA: 1:25

UNIDADE: centímetro

REVISÃO Nº: emissão

DATA: set.2022

REVISOR: C.Rossi

CGH-F/PCE/00-06