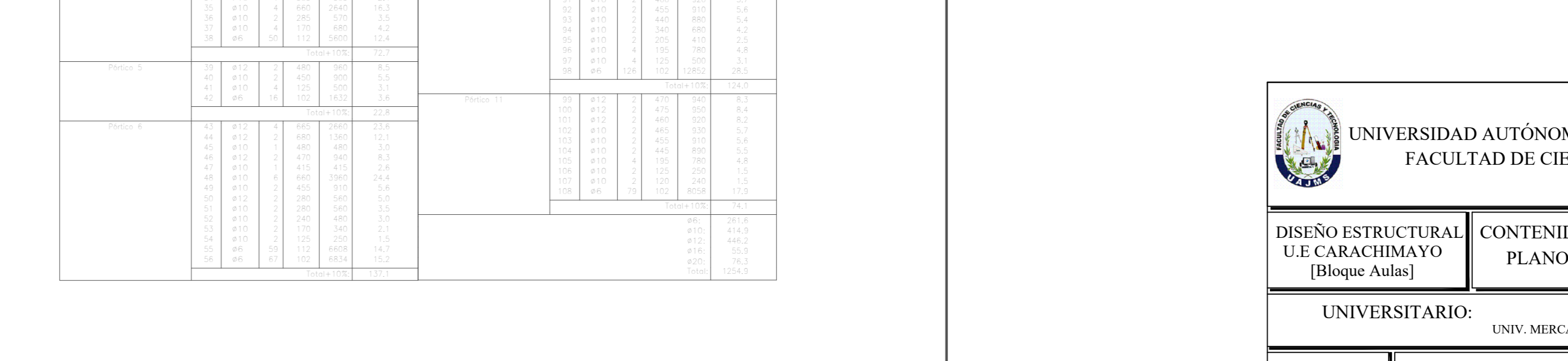
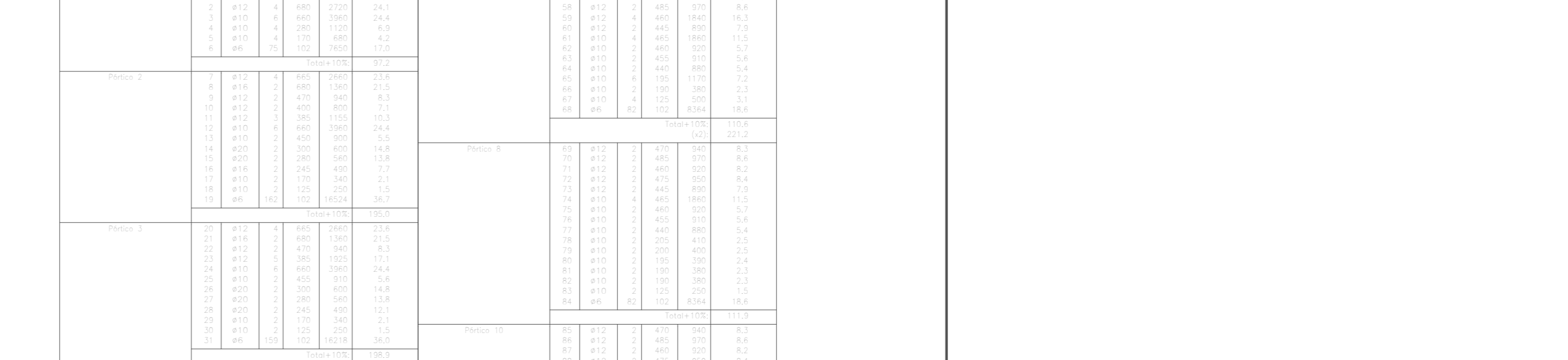
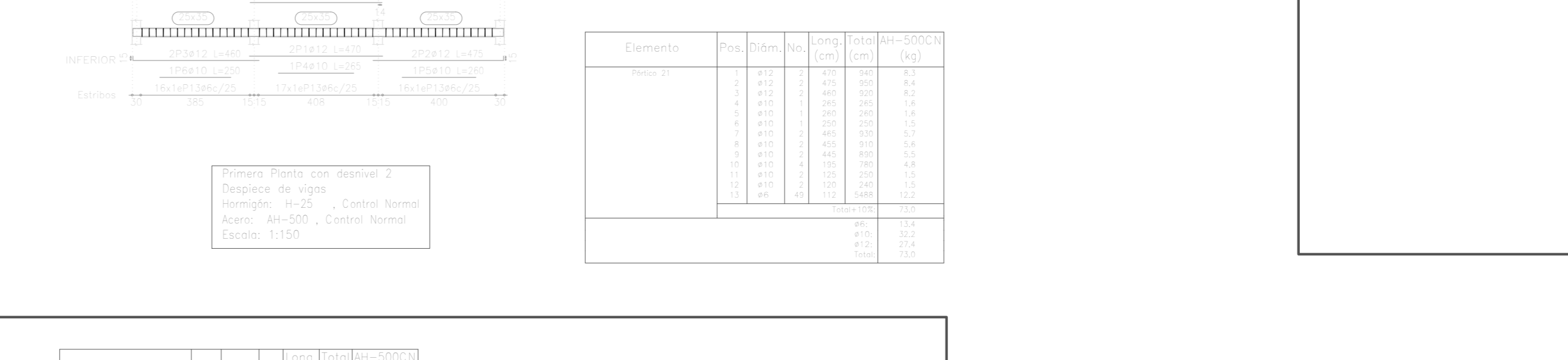
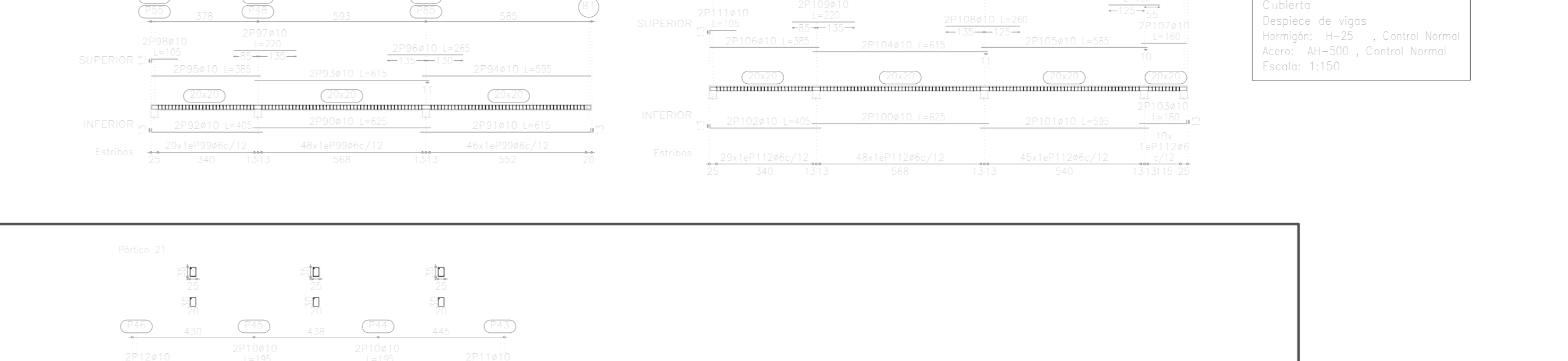
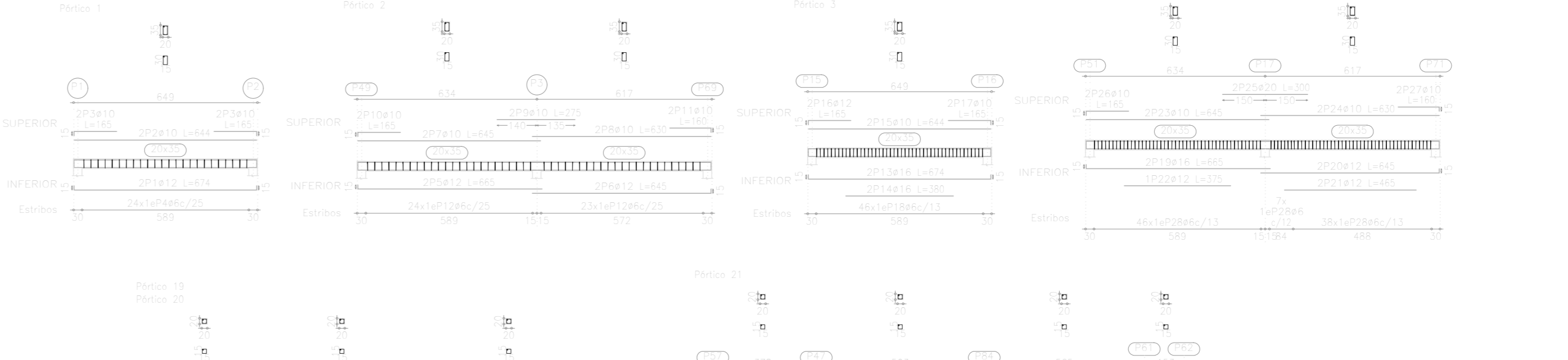
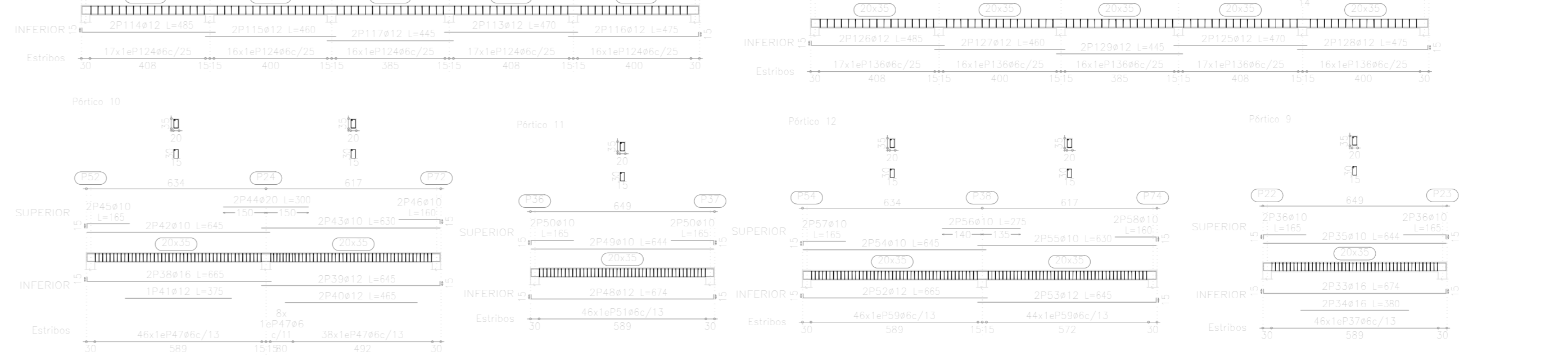
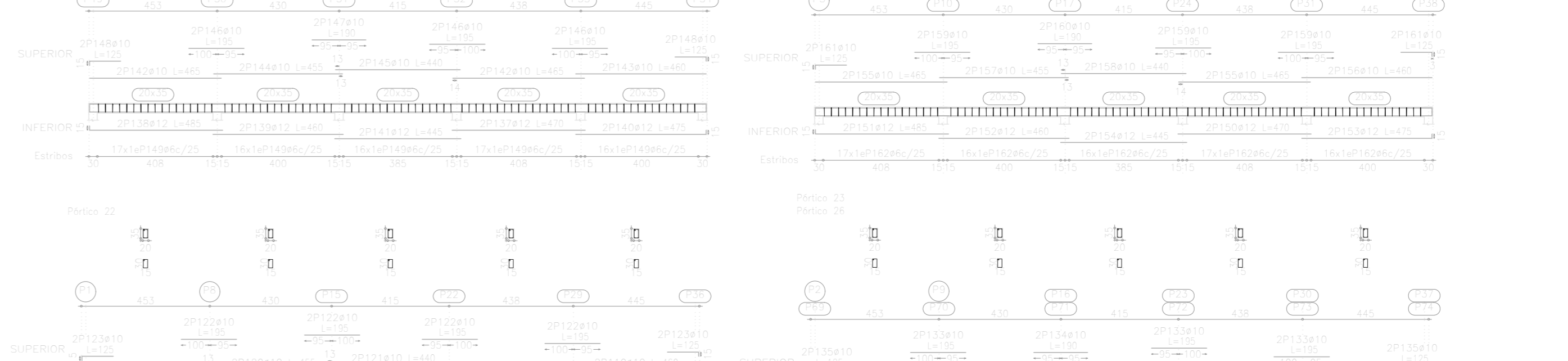
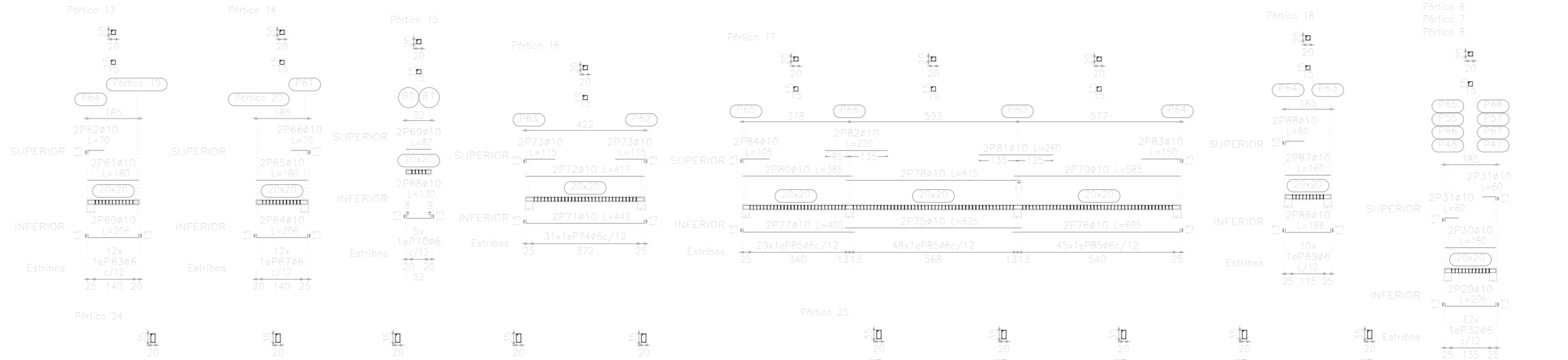


Elemento	Pos.	Diám.	No.	Long. (cm)	Volumen (m ³)	Peso (kg)
Beam 1	1	412	2	200	0.0008	6.4
	2	412	2	200	0.0008	6.4
	3	412	2	200	0.0008	6.4
	4	412	2	200	0.0008	6.4

Primera Planta con desnivel 2
Desplaza de vigas
Norma: N-22 - Control Normal
Acero: AH-500 - Control Normal
Escala: 1:150



Elemento	Pos.	Diám.	No.	Long. (cm)	Volumen (m ³)	Peso (kg)
Beam 1	1	412	2	200	0.0008	6.4
	2	412	2	200	0.0008	6.4
	3	412	2	200	0.0008	6.4
	4	412	2	200	0.0008	6.4

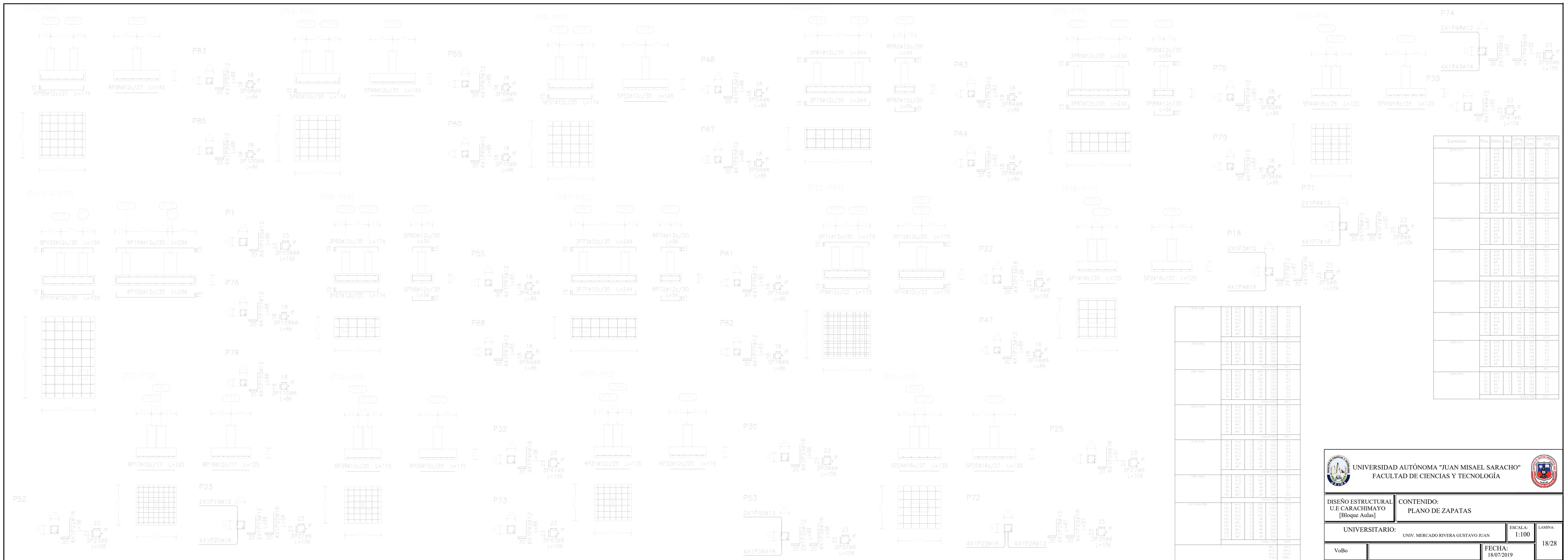
Primera Planta con desnivel 2
Desplaza de vigas
Norma: N-22 - Control Normal
Acero: AH-500 - Control Normal
Escala: 1:150



Cimentación
 Diseño cimentación
 Normas: N-25, Control Normas
 Escala: 1:100

Resumen Acero Cimentación	Long. total (m)	Peso+10% (kg)	Total
Asi-500c4	48	216.4	80
#12	412	1074.4	1043
#16	116	132.5	230
			1339

Elemento	Res.	Dim.	Vol.	Peso	Peso+10%	Total
Cimentación	Asi-500c4	48	216.4	80	216.4	80
#16	116	132.5	230	1339		
					...	



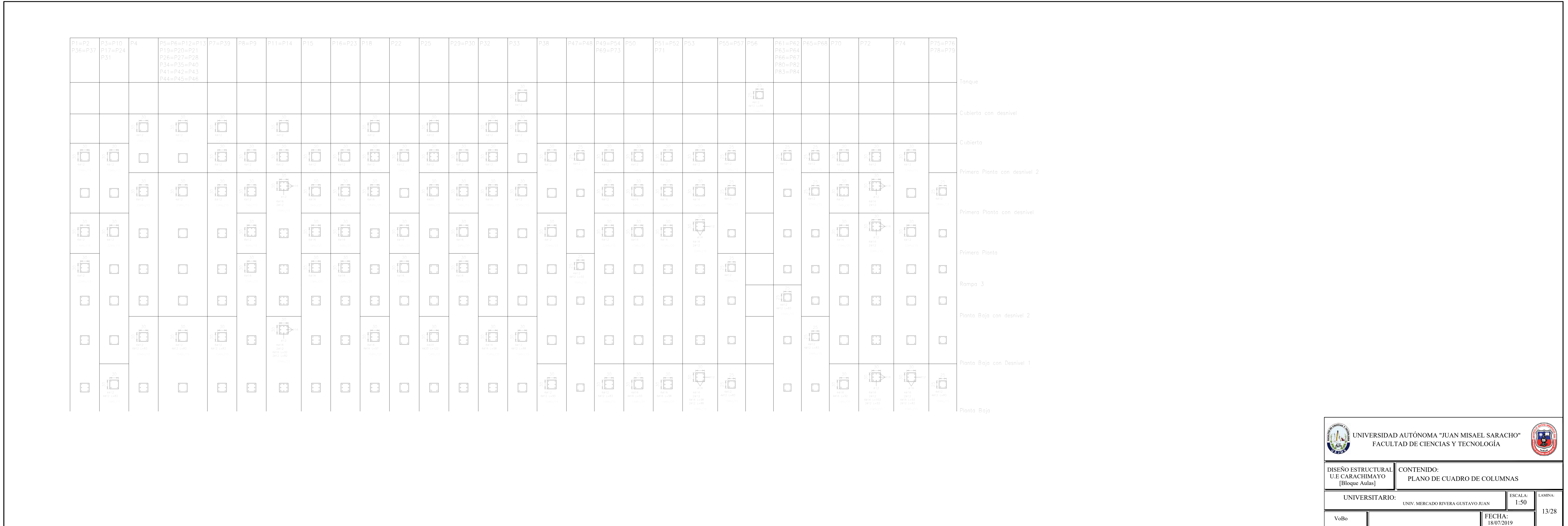
Elemento	Pos.	Dim.	No.	Long.	Area	Vol.	Costo	Vol. (m³)
Columnas	1	20x20	1	100	0.4	40	12000	4000
Columnas	2	20x20	2	100	0.8	80	24000	8000
Columnas	3	20x20	3	100	1.2	120	36000	12000
Columnas	4	20x20	4	100	1.6	160	48000	16000
Columnas	5	20x20	5	100	2.0	200	60000	20000
Columnas	6	20x20	6	100	2.4	240	72000	24000
Columnas	7	20x20	7	100	2.8	280	84000	28000
Columnas	8	20x20	8	100	3.2	320	96000	32000
Columnas	9	20x20	9	100	3.6	360	108000	36000
Columnas	10	20x20	10	100	4.0	400	120000	40000




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DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Aulas]	CONTENIDO: PLANO DE ZAPATAS
UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN	ESCALA: 1:100
VoBo	FECHA: 18/07/2019
LAMINA: 18/28	

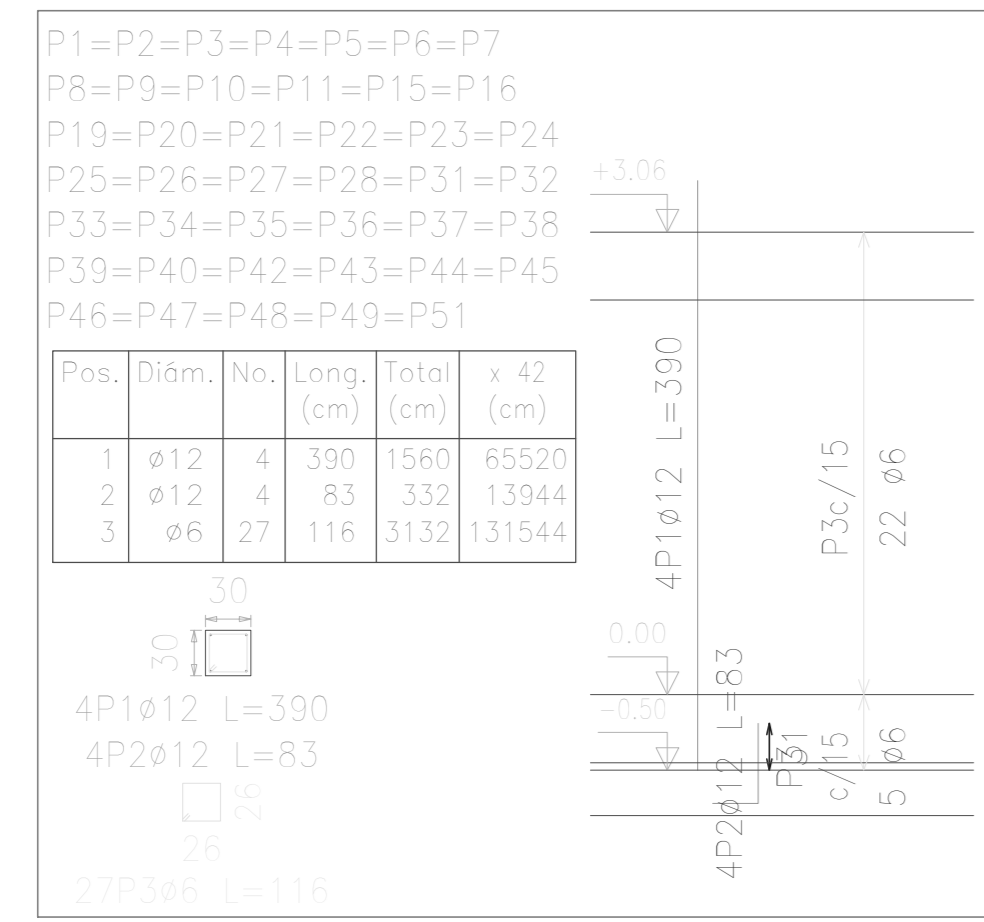




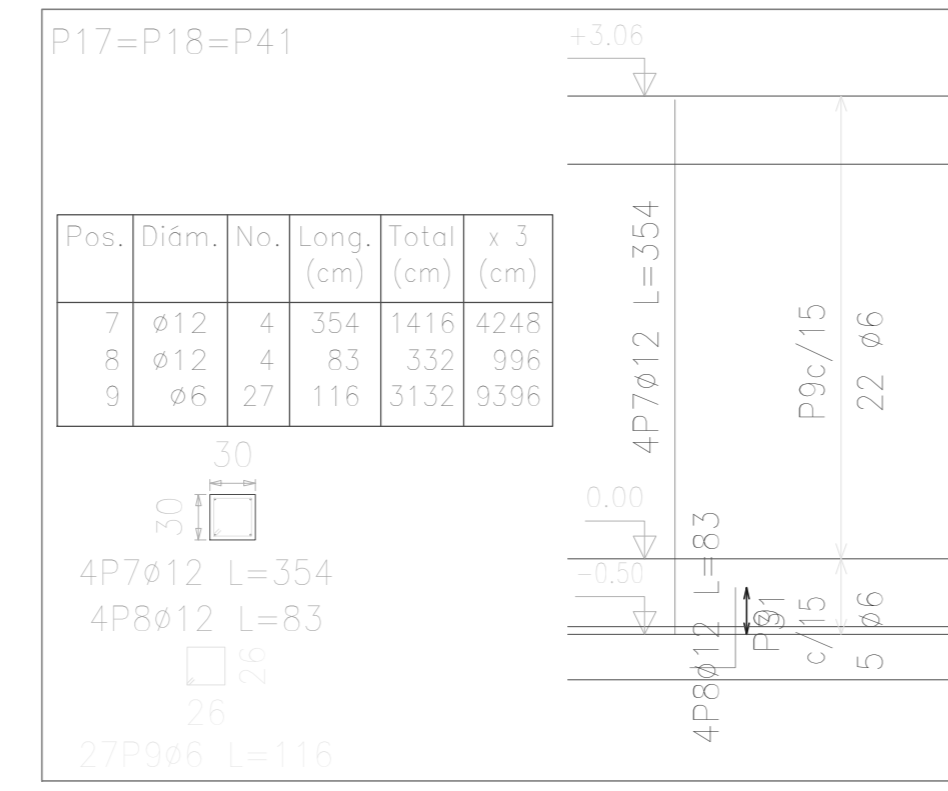
UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"
FACULTAD DE CIENCIAS Y TECNOLOGÍA



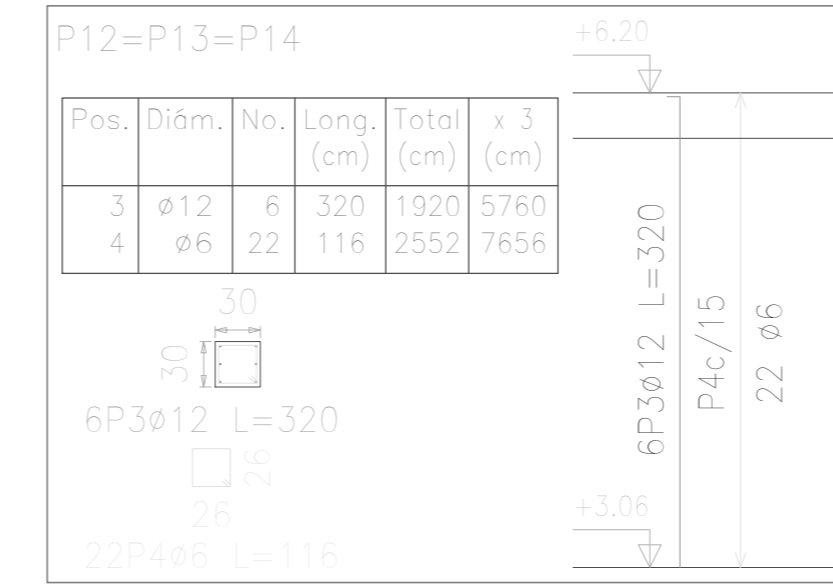
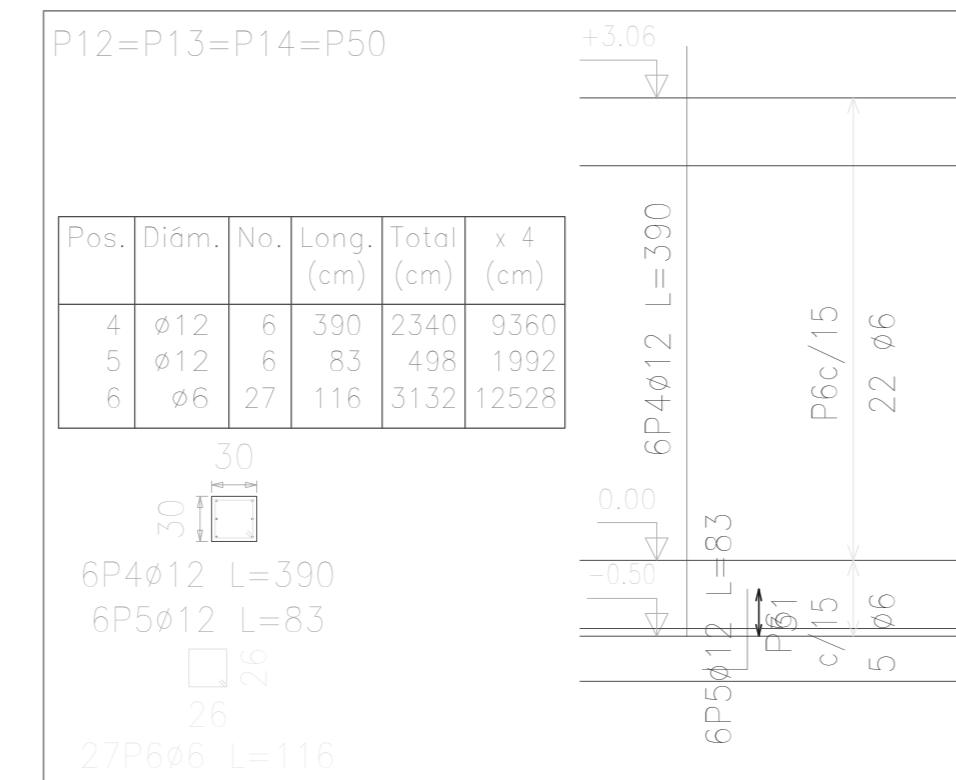
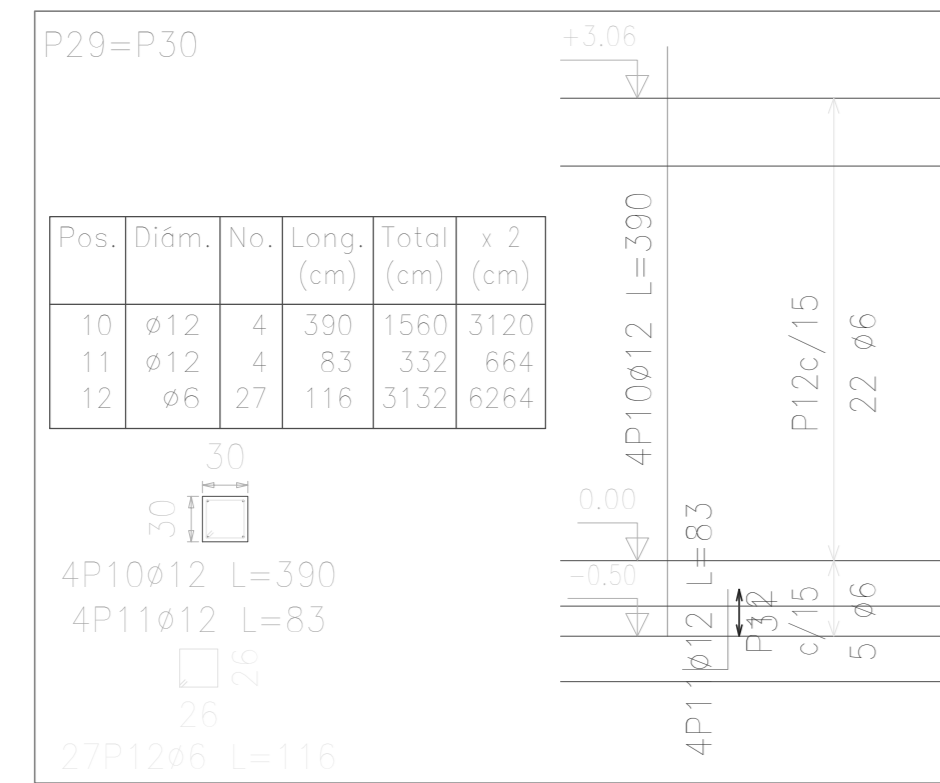
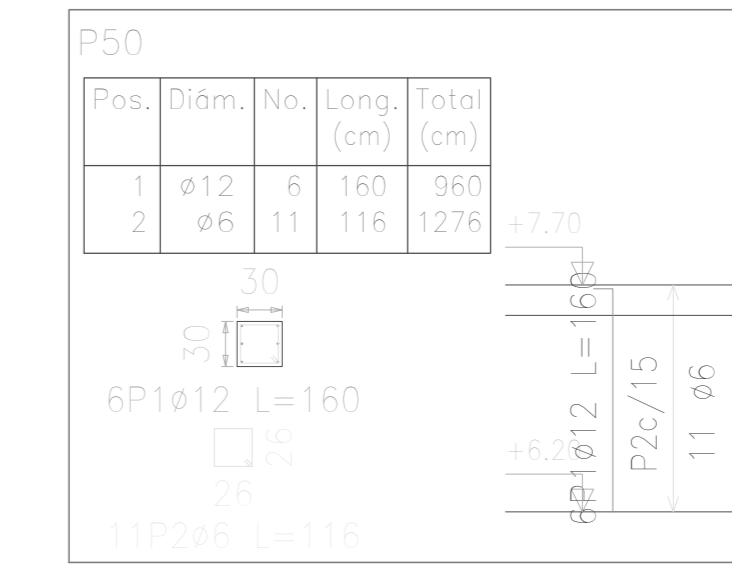
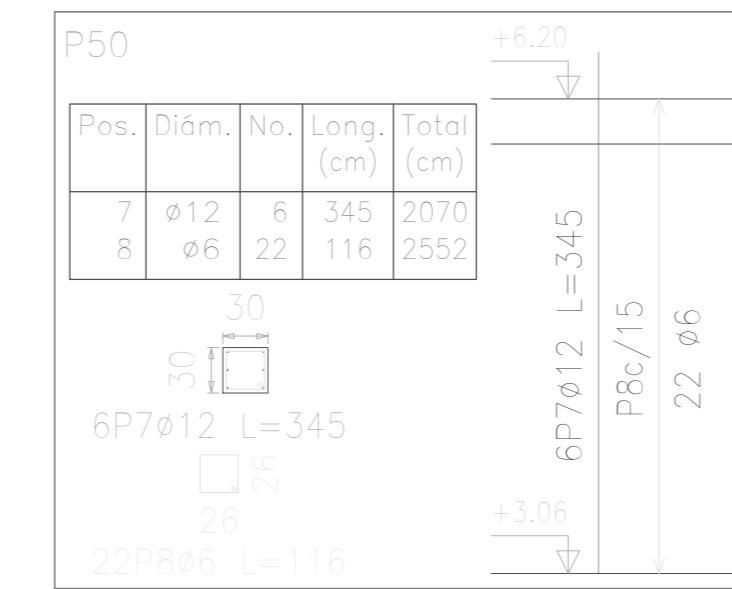
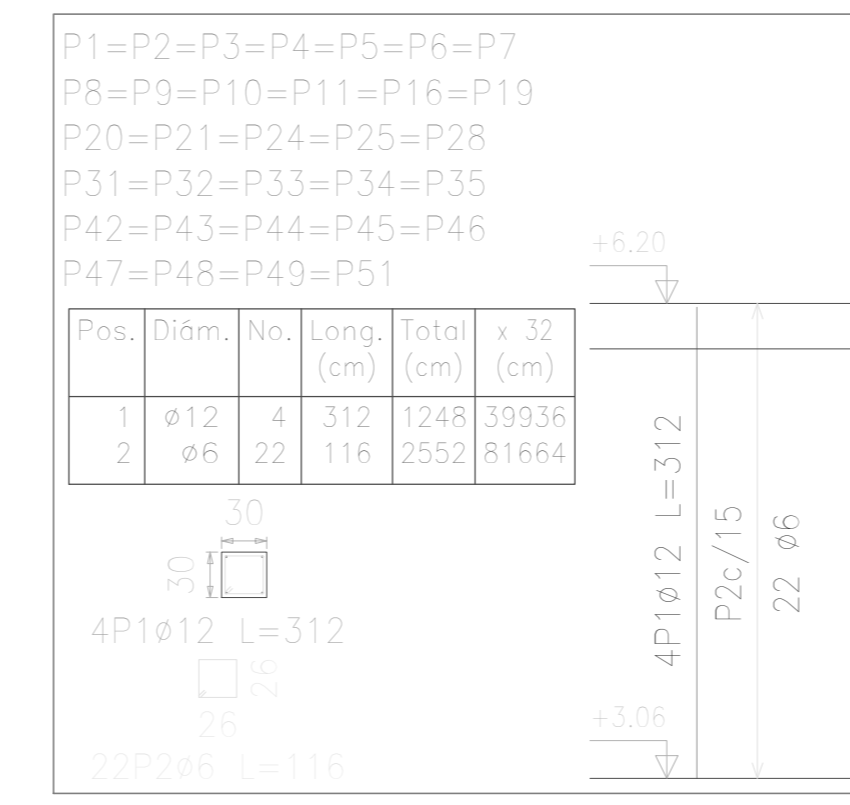
DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Aulas]	CONTENIDO: PLANO DE CUADRO DE COLUMNAS
UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN	ESCALA: 1:50
VoBo	FECHA: 18/07/2019
LAMINA: 13/28	



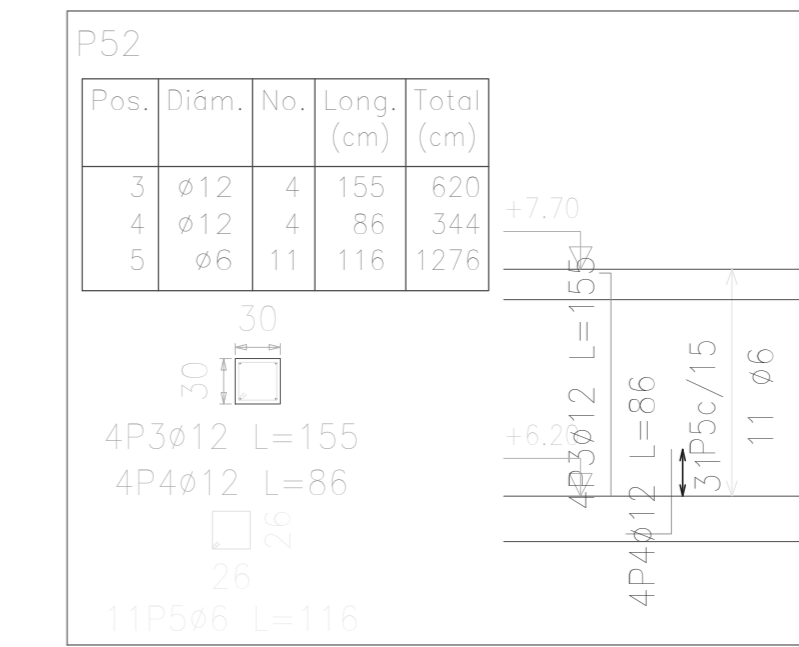
Pilares que terminan en Primera Planta
Hormigón: H-25, Control Normal
Acero: AH-500, Control Normal
Escala: 1:50



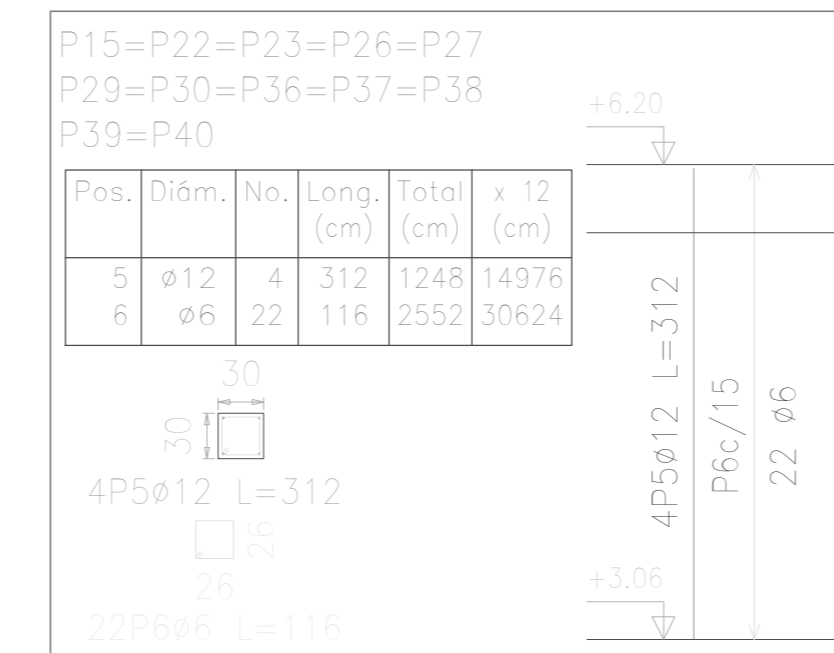
Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Vol. (m³)	Vol. (kg)
Hormigón	1	ø12	4	390	1560	0.001	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3
Acero	1	ø12	4	390	1560	0.000	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3



Pilares que terminan en Cubierta
Hormigón: H-25, Control Normal
Acero: AH-500, Control Normal
Escala: 1:50



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Vol. (m³)	Vol. (kg)
Hormigón	1	ø12	4	390	1560	0.001	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3
Acero	1	ø12	4	390	1560	0.000	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Vol. (m³)	Vol. (kg)
Hormigón	1	ø12	4	390	1560	0.001	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3
Acero	1	ø12	4	390	1560	0.000	15.6
	2	ø12	4	83	332	0.000	3.3
	3	ø6	27	116	3132	0.000	31.3

Pilares que terminan en Tanque
Hormigón: H-25, Control Normal
Acero: AH-500, Control Normal
Escala: 1:50

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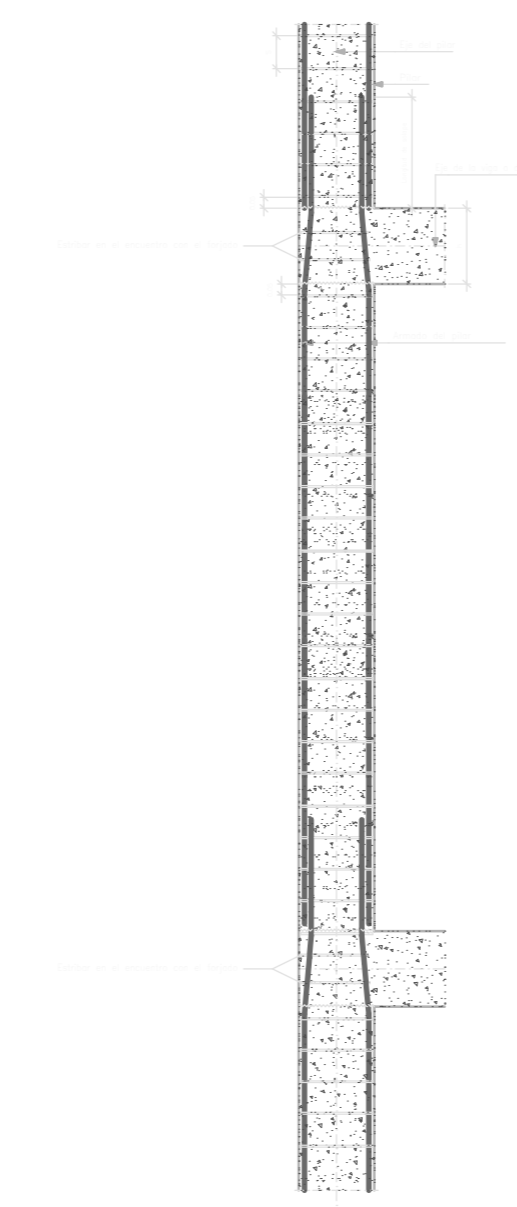
DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Internado] CONTENIDO: PLANO DE ARMADURA DE COLUMNAS

UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN ESCALA: 1:50 LAMINA: 21/28

VoBo FECHA: 18/07/2019

P1=P2=P3=P4=P5 P6=P7=P8=P9 P10=P11=P16 P19=P20=P21 P24=P25=P28 P31=P32=P33 P34=P35=P42 P43=P44=P45 P46=P47=P48 P49=P51	P12=P13=P14	P15=P22=P23 P26=P27=P36 P37=P38=P39 P40	P17=P18=P41	P29=P30	P50	P52
Tanque					30 6ø12 L=160	30 4ø12 L=155 4ø12 L=86
Cubierta					30 6ø12 L=160	30 4ø12 L=155 4ø12 L=86
Primera Planta	30 4ø12 L=312	30 6ø12 L=320	30 4ø12 L=312	30 4ø12 L=312	30 6ø12 L=345	
Planta Baja Cimentación	30 4ø12 L=390 4ø12 L=83	30 6ø12 L=390 6ø12 L=83	30 4ø12 L=390 4ø12 L=83	30 4ø12 L=354 4ø12 L=83	30 4ø12 L=390 4ø12 L=83	30 6ø12 L=390 6ø12 L=83

Plano de columna en planta



Cuadro de pilares
Hormigón: H-25, Control Normal
Acero: AH-500, Control Normal
Escala: 1:50

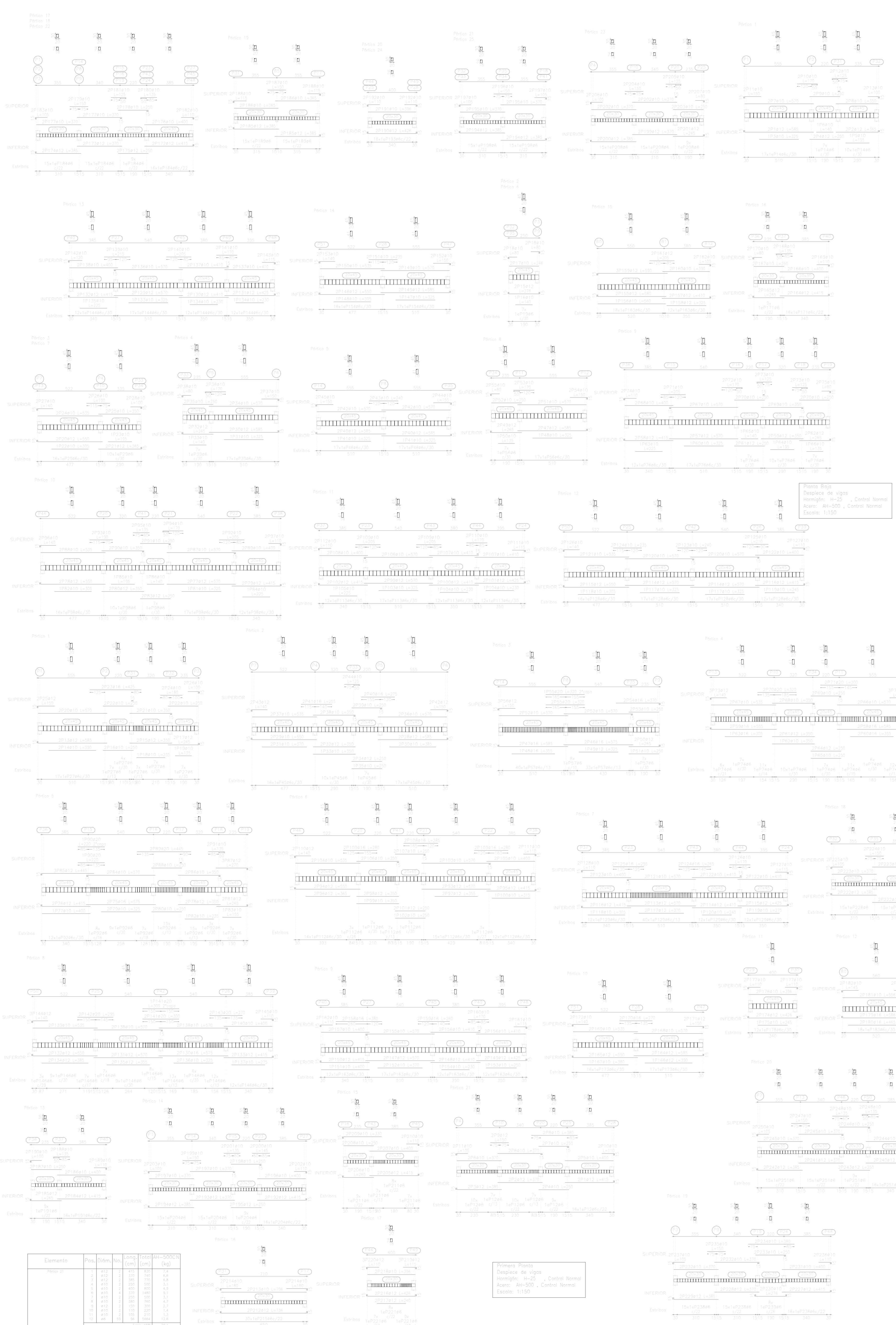
Requisitos Acero	Long. total (m)	Peso (kg)	Total
ø12	232.15	713	
ø6	1645.1	1657	2370

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DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Internado] CONTENIDO: PLANO DE CUADRO DE COLUMNAS

UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN ESCALA: 1:50 LAMINA: 22/28

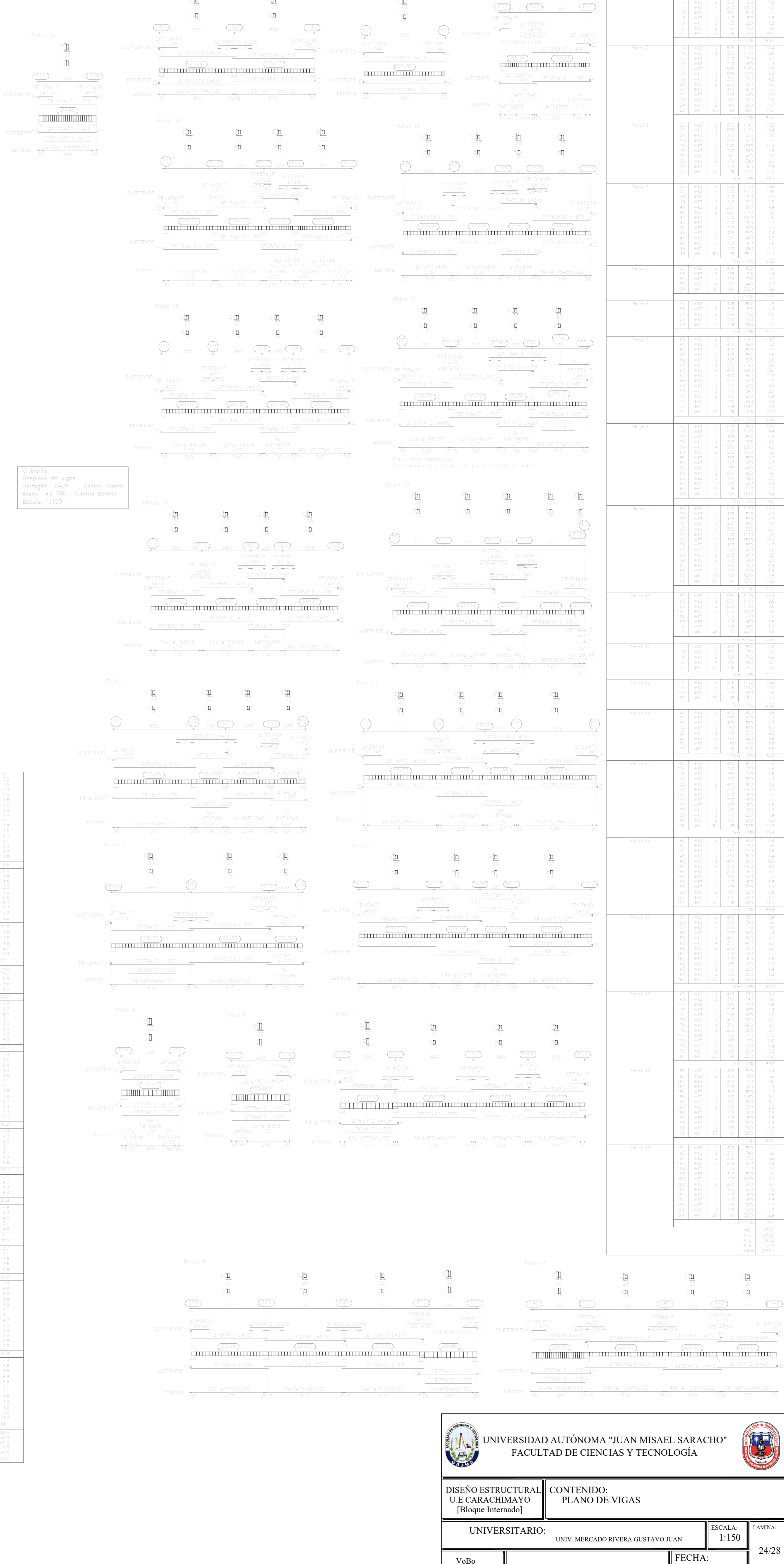
VoBo FECHA: 18/07/2019



Elemento	Pos.	Dim.	No.	Long. (cm)	Vol. (cm ³)	Vol. (kg)
Panel 1	1	410	1	100	410	0.41
	2	410	1	100	410	0.41
	3	410	1	100	410	0.41
	4	410	1	100	410	0.41
	5	410	1	100	410	0.41
	6	410	1	100	410	0.41
	7	410	1	100	410	0.41
	8	410	1	100	410	0.41
	9	410	1	100	410	0.41
	10	410	1	100	410	0.41
Panel 2	1	410	1	100	410	0.41
	2	410	1	100	410	0.41
	3	410	1	100	410	0.41
	4	410	1	100	410	0.41
	5	410	1	100	410	0.41
	6	410	1	100	410	0.41
	7	410	1	100	410	0.41
	8	410	1	100	410	0.41
	9	410	1	100	410	0.41
	10	410	1	100	410	0.41

Elemento	Pos.	Dim.	No.	Long. (cm)	Vol. (cm ³)	Vol. (kg)
Panel 1	1	410	1	100	410	0.41
	2	410	1	100	410	0.41
	3	410	1	100	410	0.41
	4	410	1	100	410	0.41
	5	410	1	100	410	0.41
	6	410	1	100	410	0.41
	7	410	1	100	410	0.41
	8	410	1	100	410	0.41
	9	410	1	100	410	0.41
	10	410	1	100	410	0.41

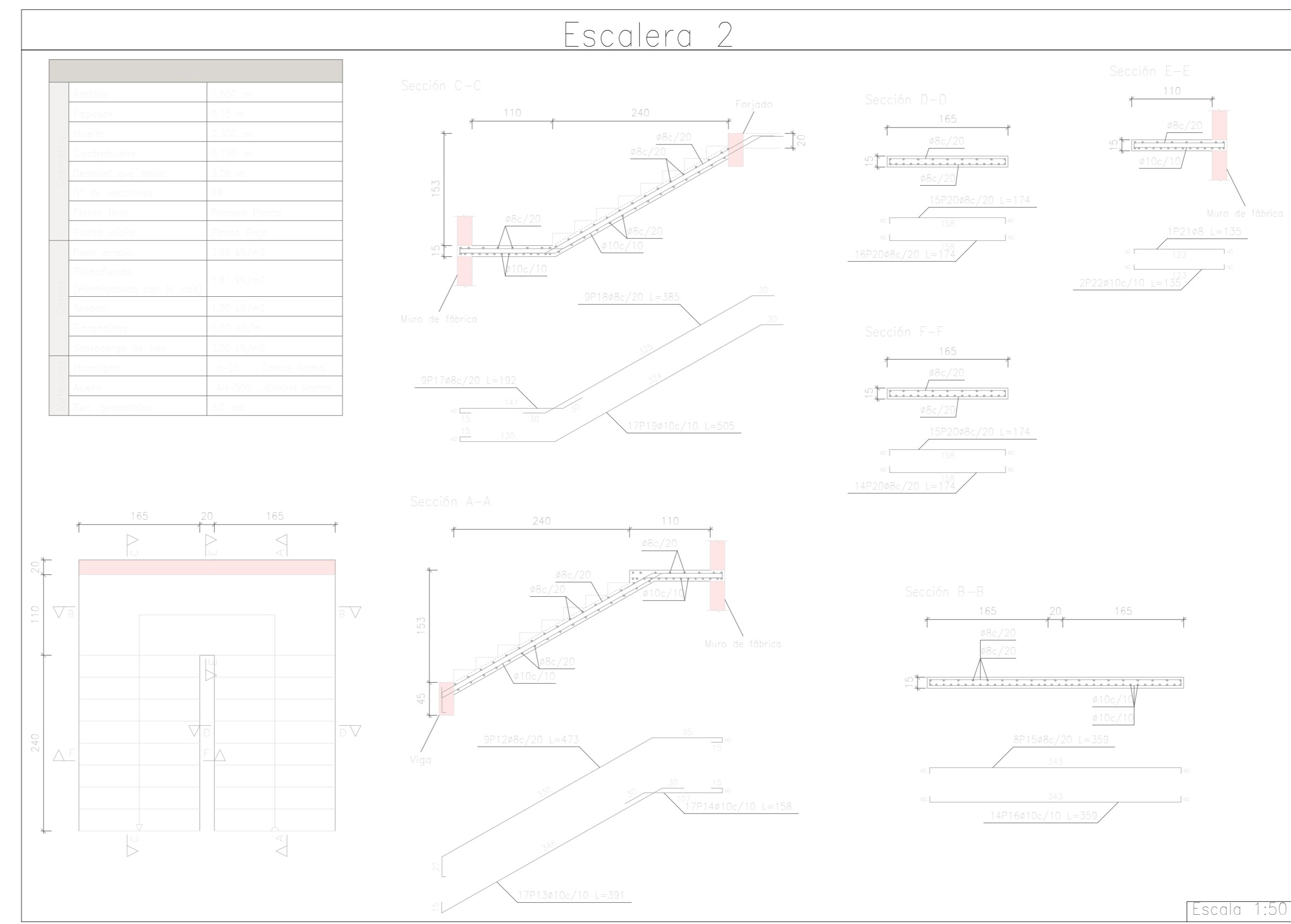
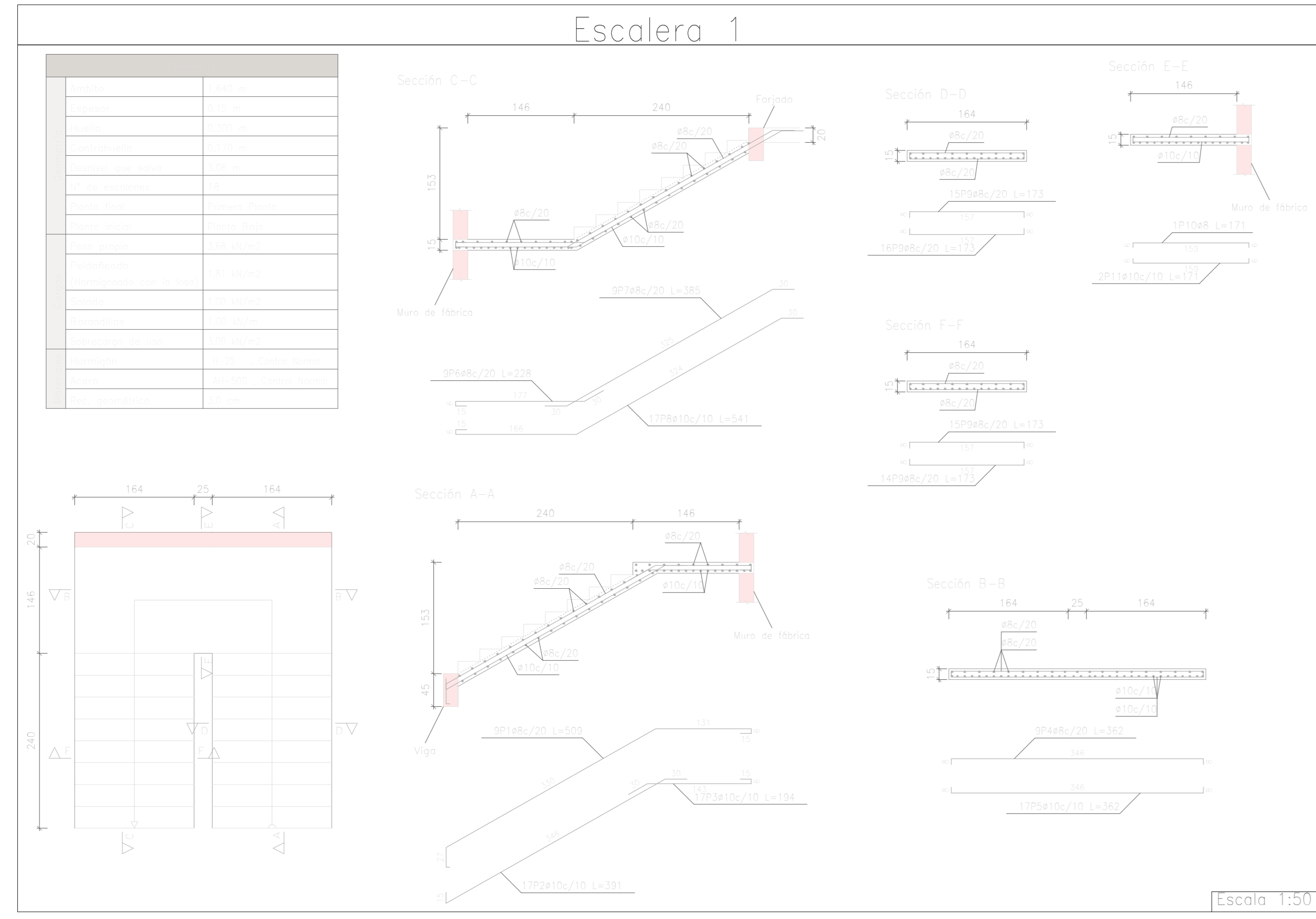
Subasta
Desplaz de vigas
Herraje: H-25, Control Normal
Acero: A41-500, Control Normal
Escala: 1:50



Recursos Acero Escalera 1	Long. Total (m)	Peso+10% (kg)	Total
AH-500CN #R	233.1	104	
#10	258.4	174	278

Recursos Acero Escalera 2	Long. Total (m)	Peso+10% (kg)	Total
AH-500CN #R	223.0	95	
#10	231.1	157	256

Elemento	Pos.	Diám.	Nº	Long. (cm)	Peso (kg)
Escalera 1					
1	1	10	1	23310	104
2	1	10	1	25840	174
3	1	10	1	23310	104
4	1	10	1	25840	174
5	1	10	1	23310	104
6	1	10	1	25840	174
7	1	10	1	23310	104
8	1	10	1	25840	174
9	1	10	1	23310	104
10	1	10	1	25840	174
Escalera 2					
11	1	10	1	22300	95
12	1	10	1	23110	157
13	1	10	1	22300	95
14	1	10	1	23110	157
15	1	10	1	22300	95
16	1	10	1	23110	157
17	1	10	1	22300	95
18	1	10	1	23110	157
19	1	10	1	22300	95
20	1	10	1	23110	157
TOTAL					
					278
					256
					534

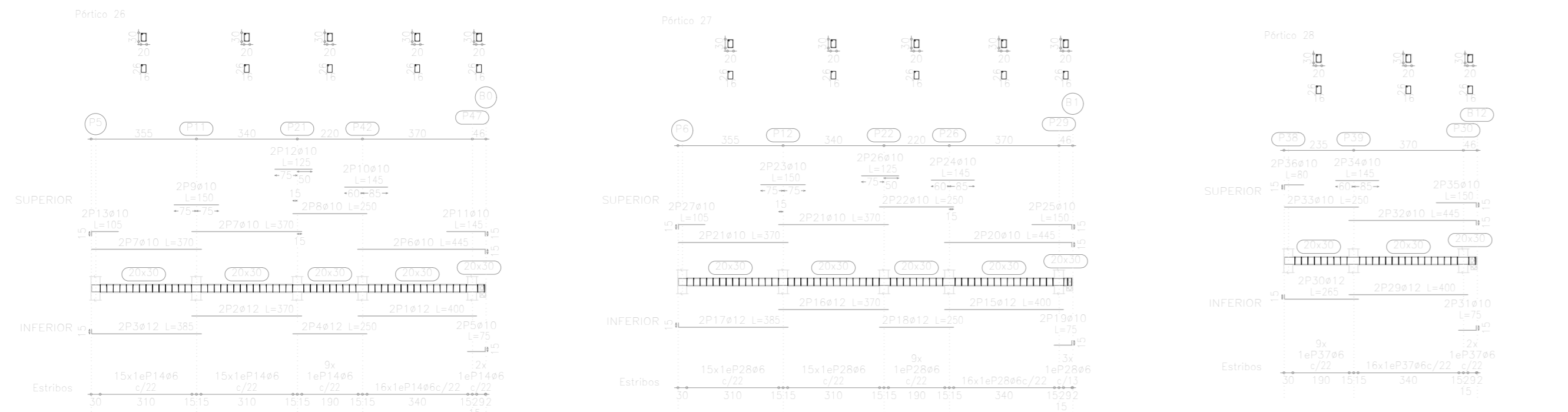


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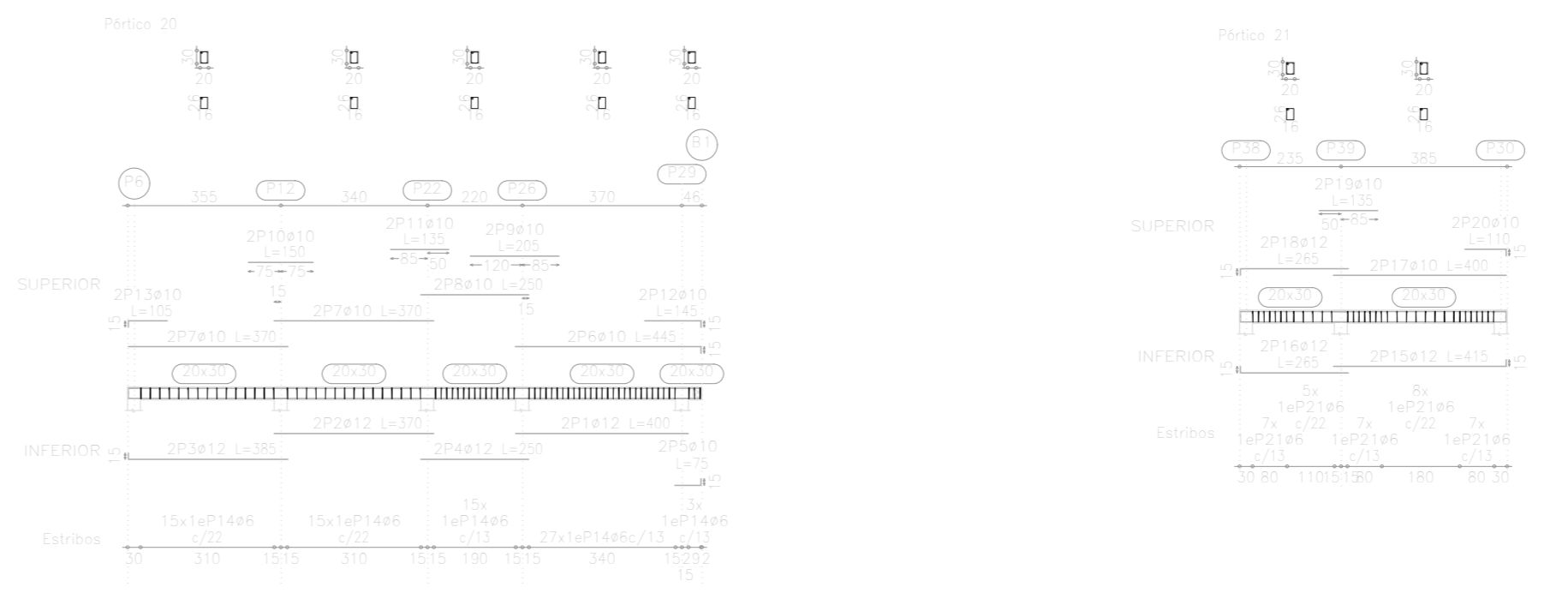
DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Intermedio] CONTENIDO: PLANO DE ESCALERAS

UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN ESCALA: 1:50 LAMINA: 23/28

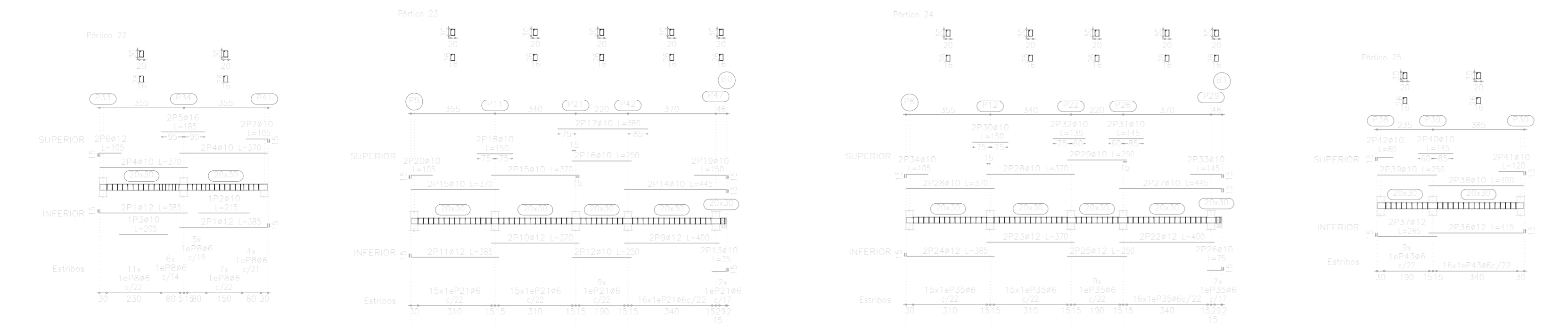
VoBo FECHA: 18/07/2019



Elemento	Pos.	Diám.	Nº	Long. (cm)	Peso+10% (kg)
Planta Slab					
1	1	10	1	23310	104
2	1	10	1	25840	174
3	1	10	1	23310	104
4	1	10	1	25840	174
5	1	10	1	23310	104
6	1	10	1	25840	174
7	1	10	1	23310	104
8	1	10	1	25840	174
9	1	10	1	23310	104
10	1	10	1	25840	174
TOTAL					
					278



Elemento	Pos.	Diám.	Nº	Long. (cm)	Peso+10% (kg)
Planta Slab					
1	1	10	1	22300	95
2	1	10	1	23110	157
3	1	10	1	22300	95
4	1	10	1	23110	157
5	1	10	1	22300	95
6	1	10	1	23110	157
7	1	10	1	22300	95
8	1	10	1	23110	157
9	1	10	1	22300	95
10	1	10	1	23110	157
TOTAL					
					256



Elemento	Pos.	Diám.	Nº	Long. (cm)	Peso+10% (kg)
Planta Plata					
1	1	10	1	23310	104
2	1	10	1	25840	174
3	1	10	1	23310	104
4	1	10	1	25840	174
5	1	10	1	23310	104
6	1	10	1	25840	174
7	1	10	1	23310	104
8	1	10	1	25840	174
9	1	10	1	23310	104
10	1	10	1	25840	174
TOTAL					
					278

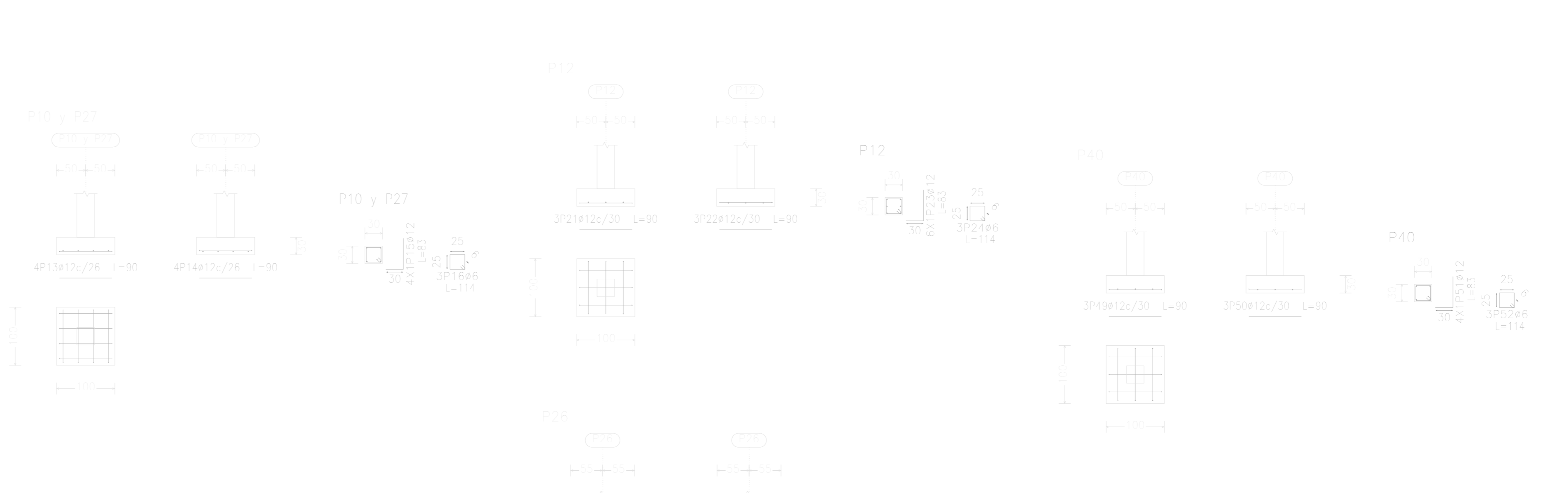
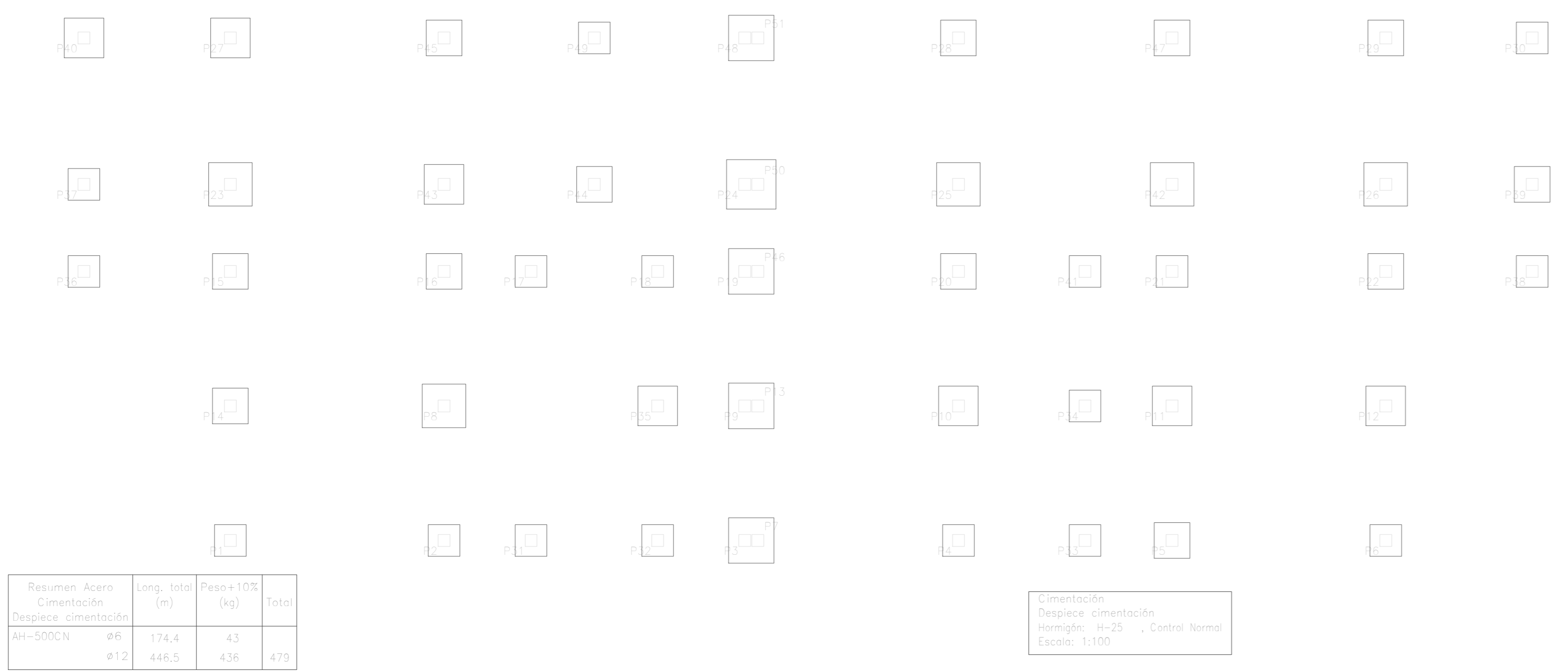
Planta Plata: Desplazamiento de vigas. Homólogo: H-25, Control Normal. Acero: AH-500, Control Normal. Escala: 1:50.

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DISEÑO ESTRUCTURAL U.E. CARACHIMAYO [Bloque Intermedio] CONTENIDO: PLANO DE VIGAS

UNIVERSITARIO: UNIV. MERCADO RIVERA GUSTAVO JUAN ESCALA: 1:50 LAMINA: 25/28

VoBo FECHA: 18/07/2019



Resumen Acero	Long. total	Peso+10%	Total
Cimentación	(m)	(kg)	
SH-500C4	46	174.4	43
#12	448.5	436	479

Cimentación:
Resaca: cimentación
Ejemplo: #12 - Cables Normales
Espesor: 1:100

P1, P2, P4, P6, P17, P18, P21, P30, P31, P32, P33, P34, P36, P37, P38, P41 y P49

P1, P2, P4, P6, P17, P18, P21, P30, P31, P32, P33, P34, P36, P37, P38, P41 y P49

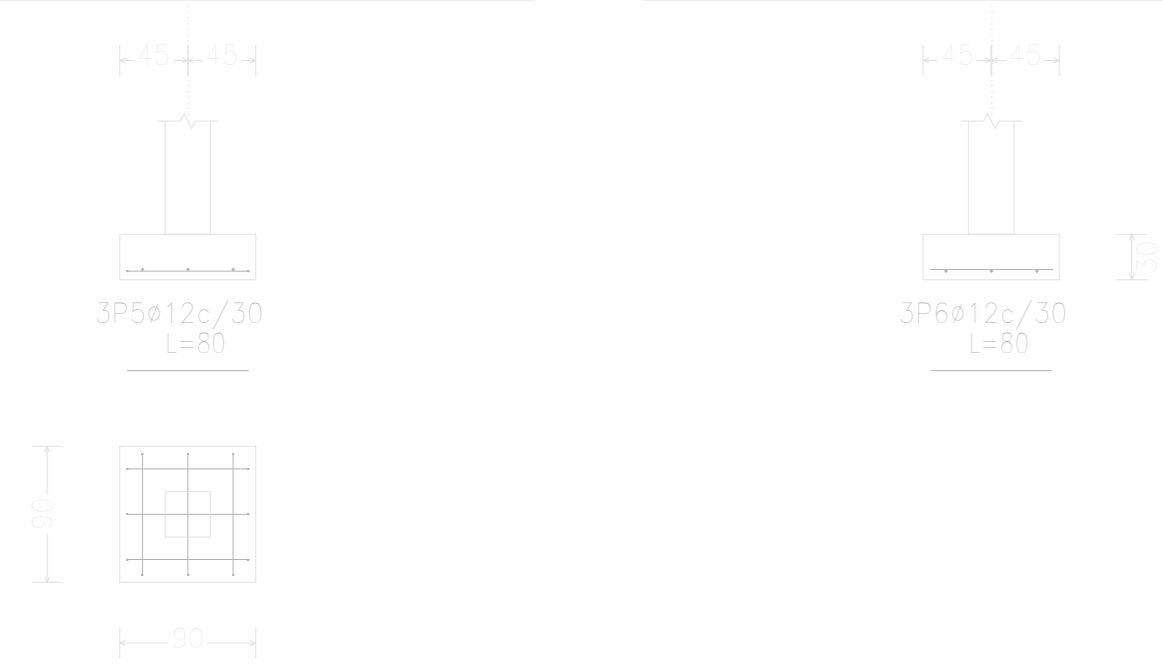


P1, P2, P4, P6, P17, P18, P21, P30, P31, P32, P33, P34, P36, P37, P38, P41 y P49



P5, P15, P16, P20, P22, P28, P39, P44, P45 y P47

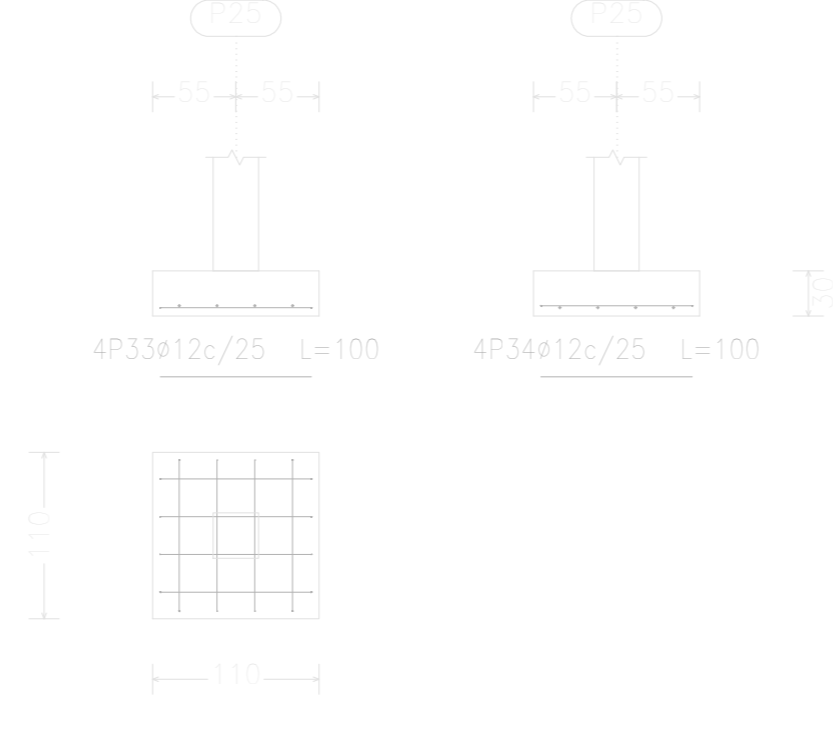
P5, P15, P16, P20, P22, P28, P39, P44, P45 y P47



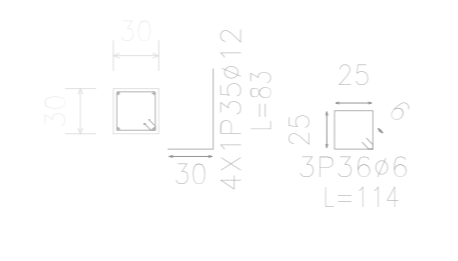
P5, P15, P16, P20, P22, P28, P39, P44, P45 y P47



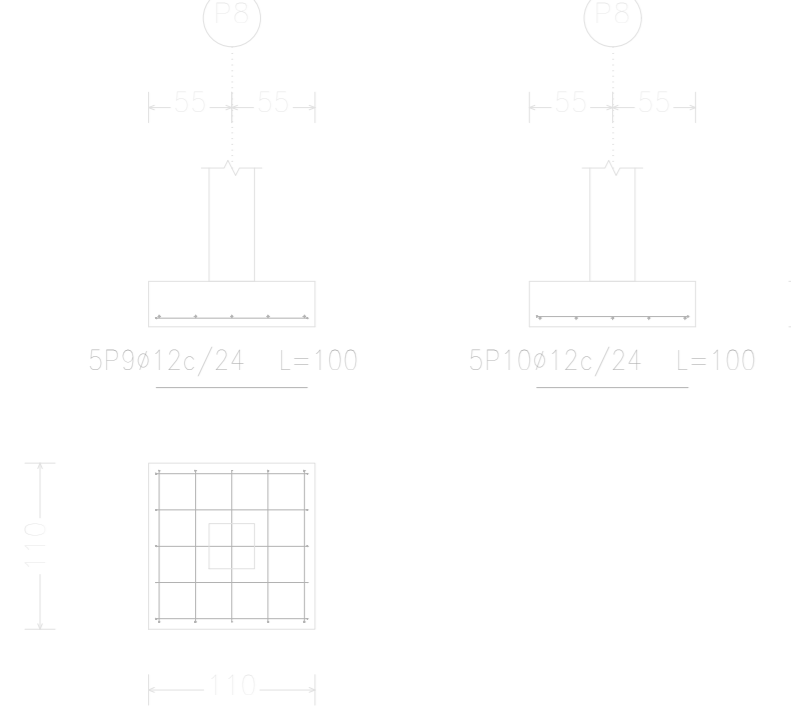
P25



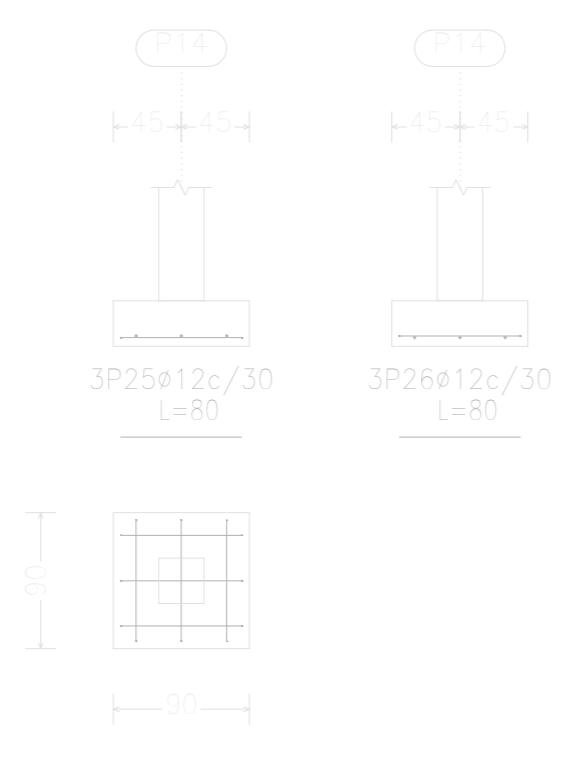
P25



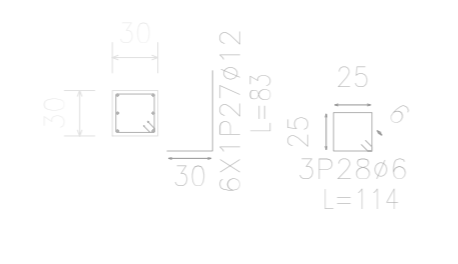
P8



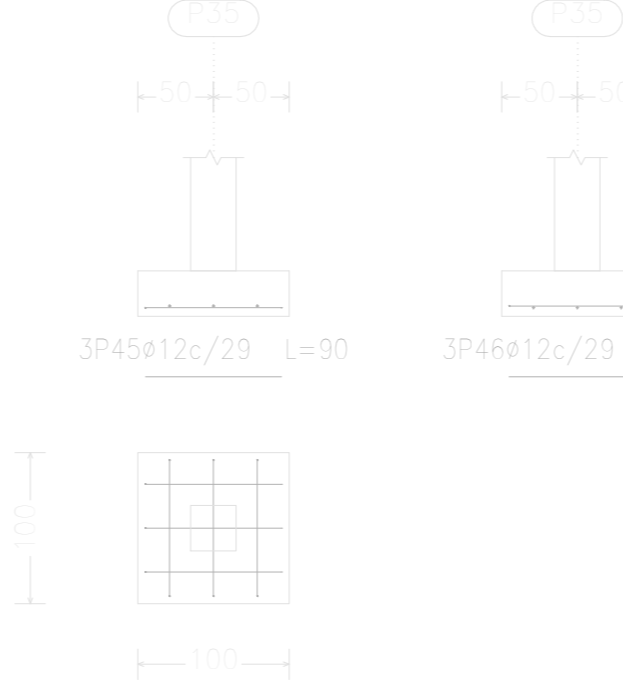
P14



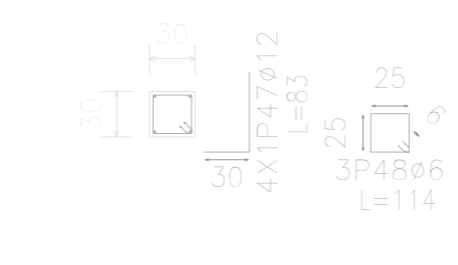
P14



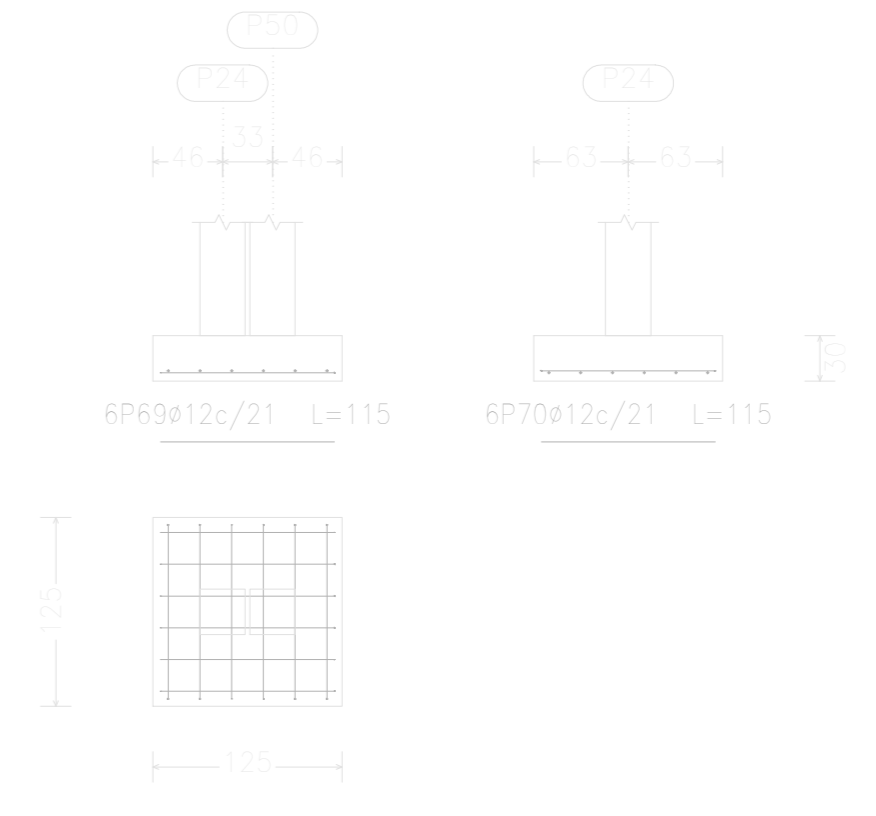
P35



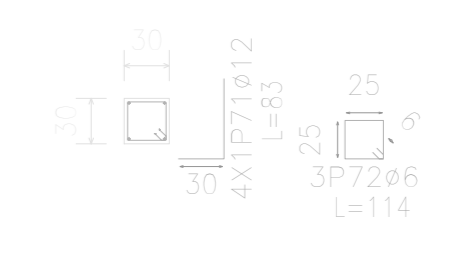
P35



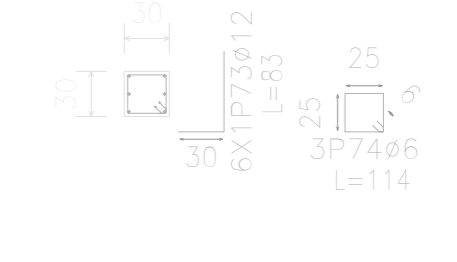
P24-P50



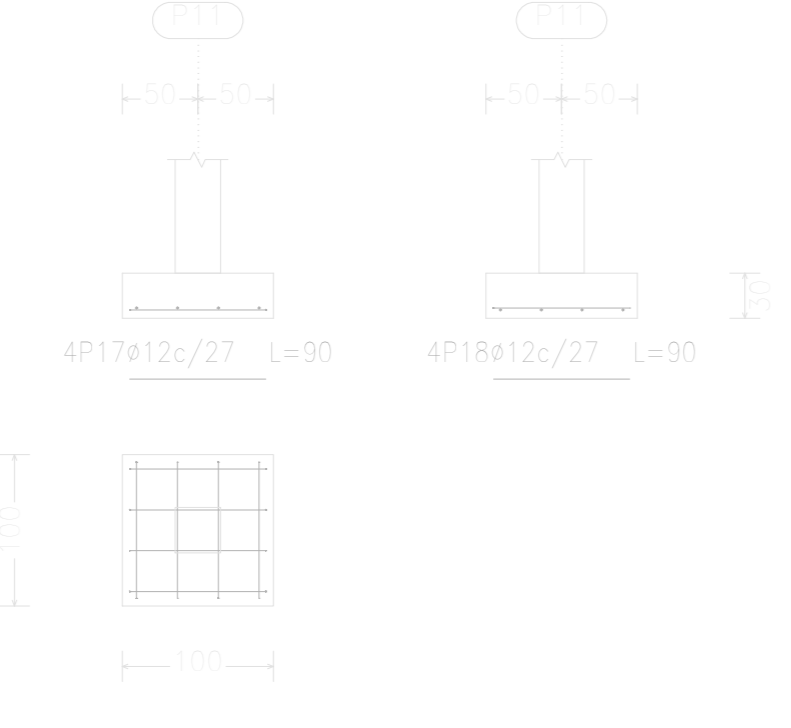
P24



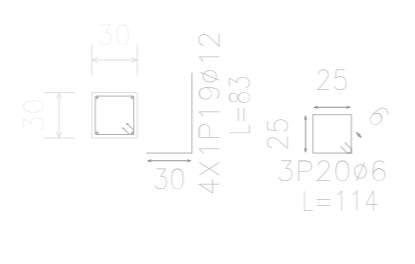
P50



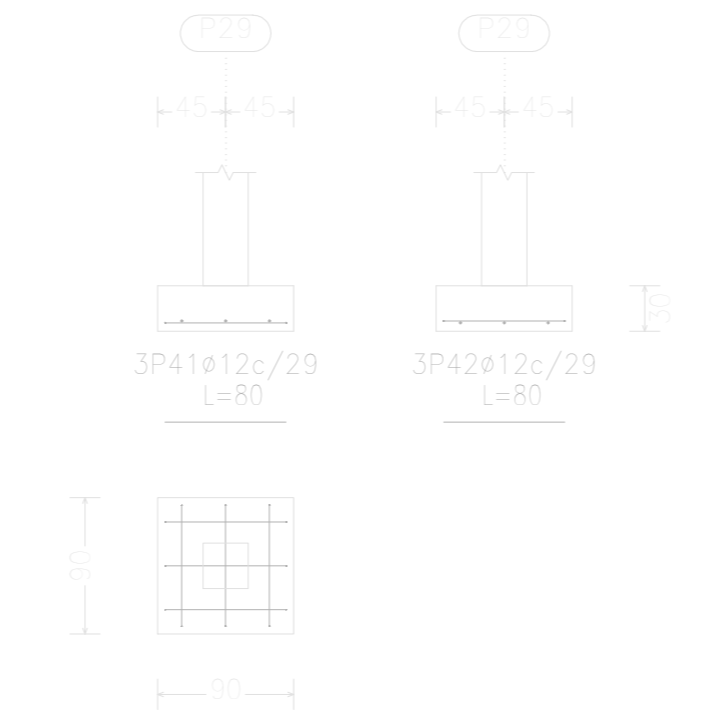
P11



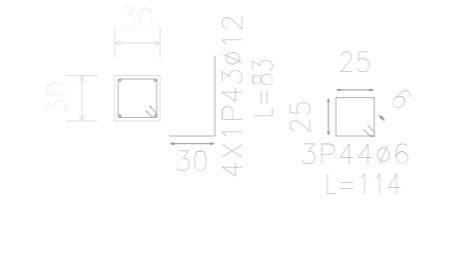
P11



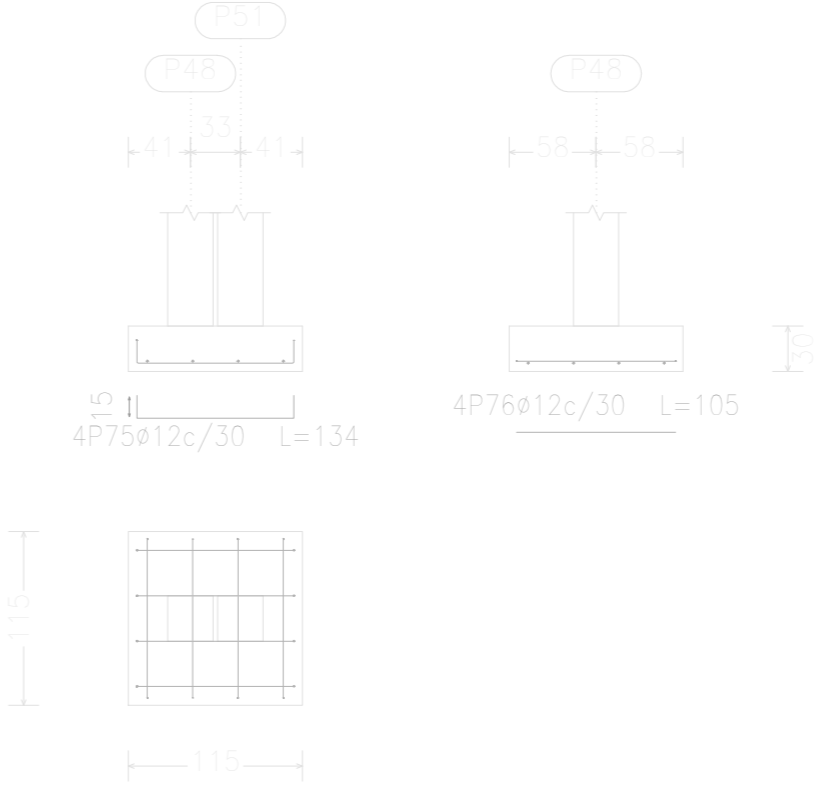
P29



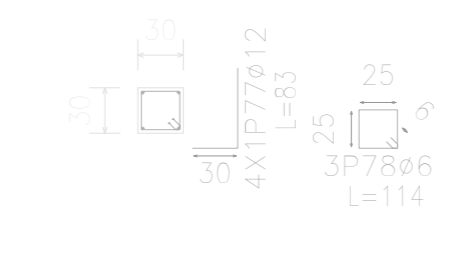
P29



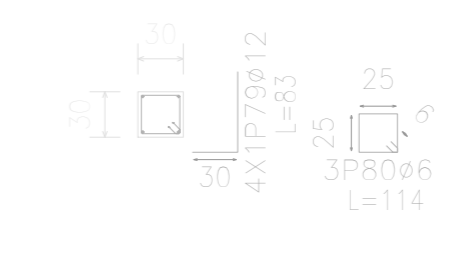
P48-P51



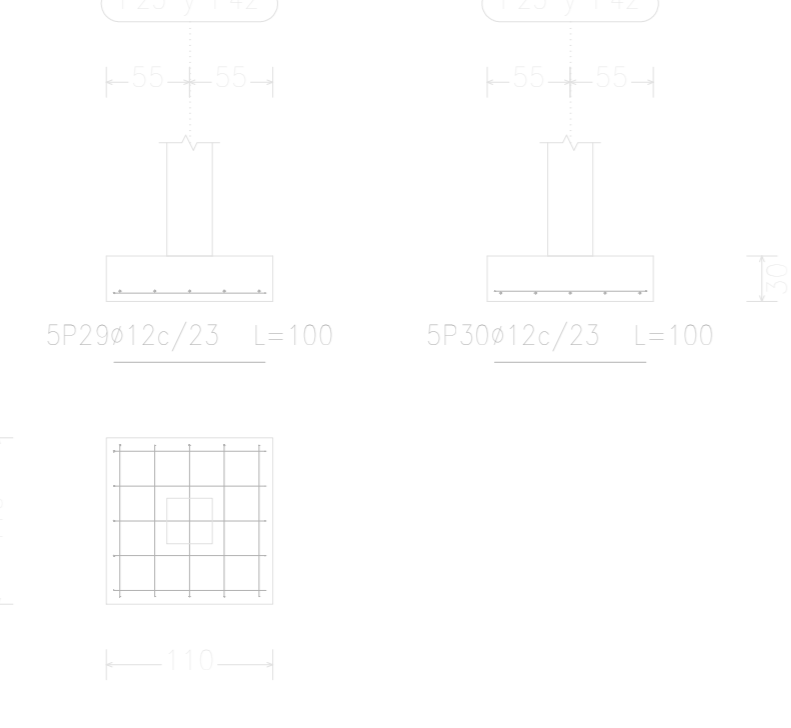
P48



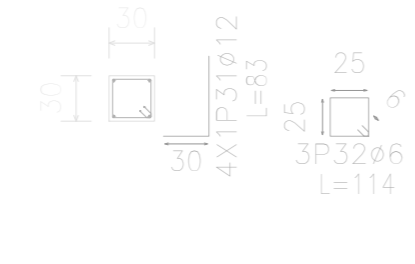
P51



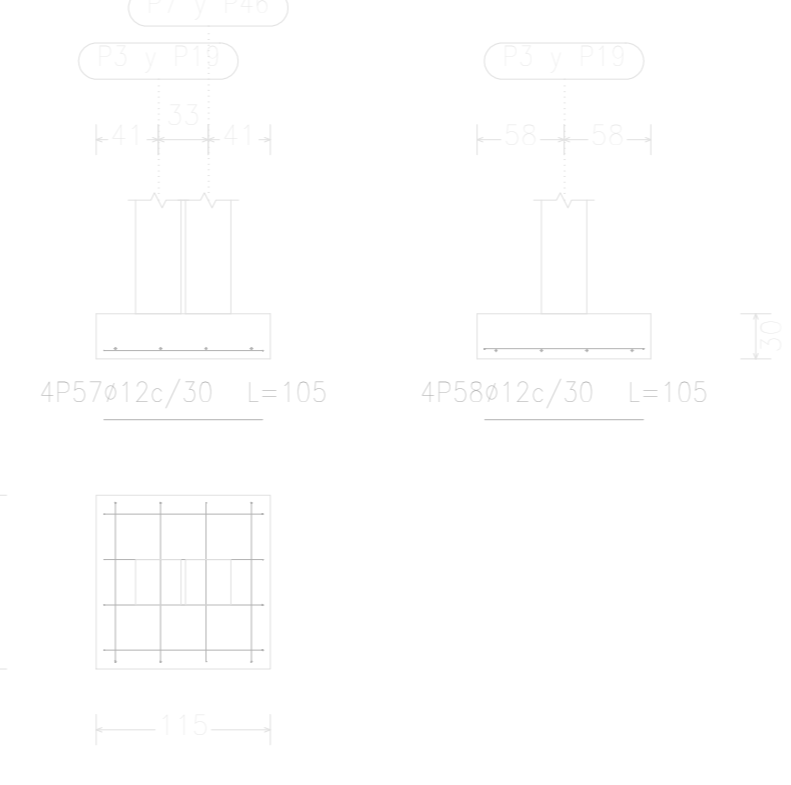
P23 y P42



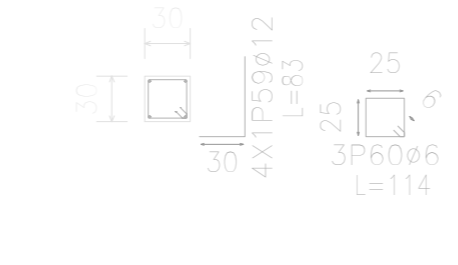
P23 y P42



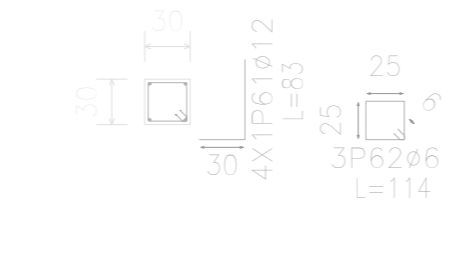
P3-P7 y P19-P46

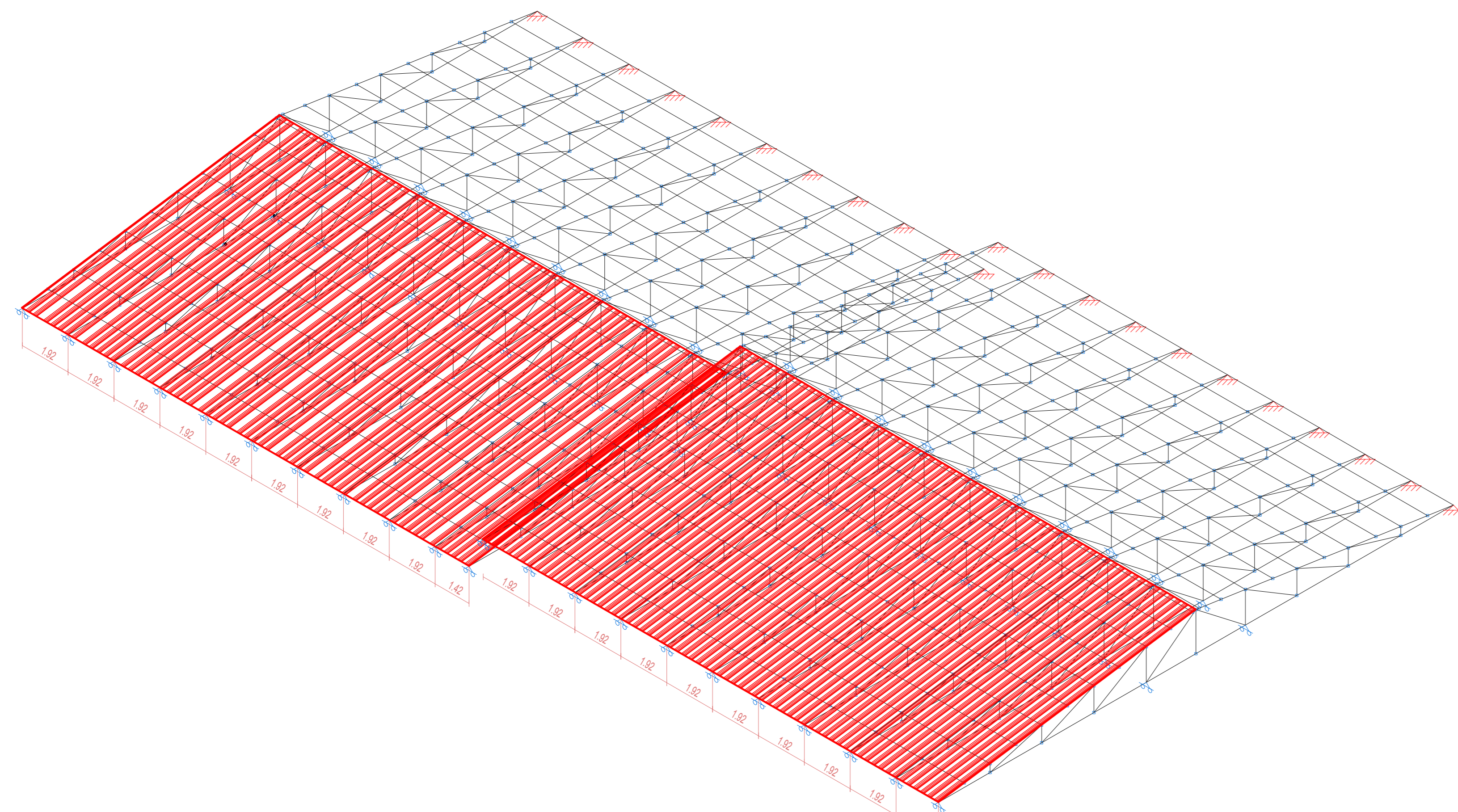


P3 y P19

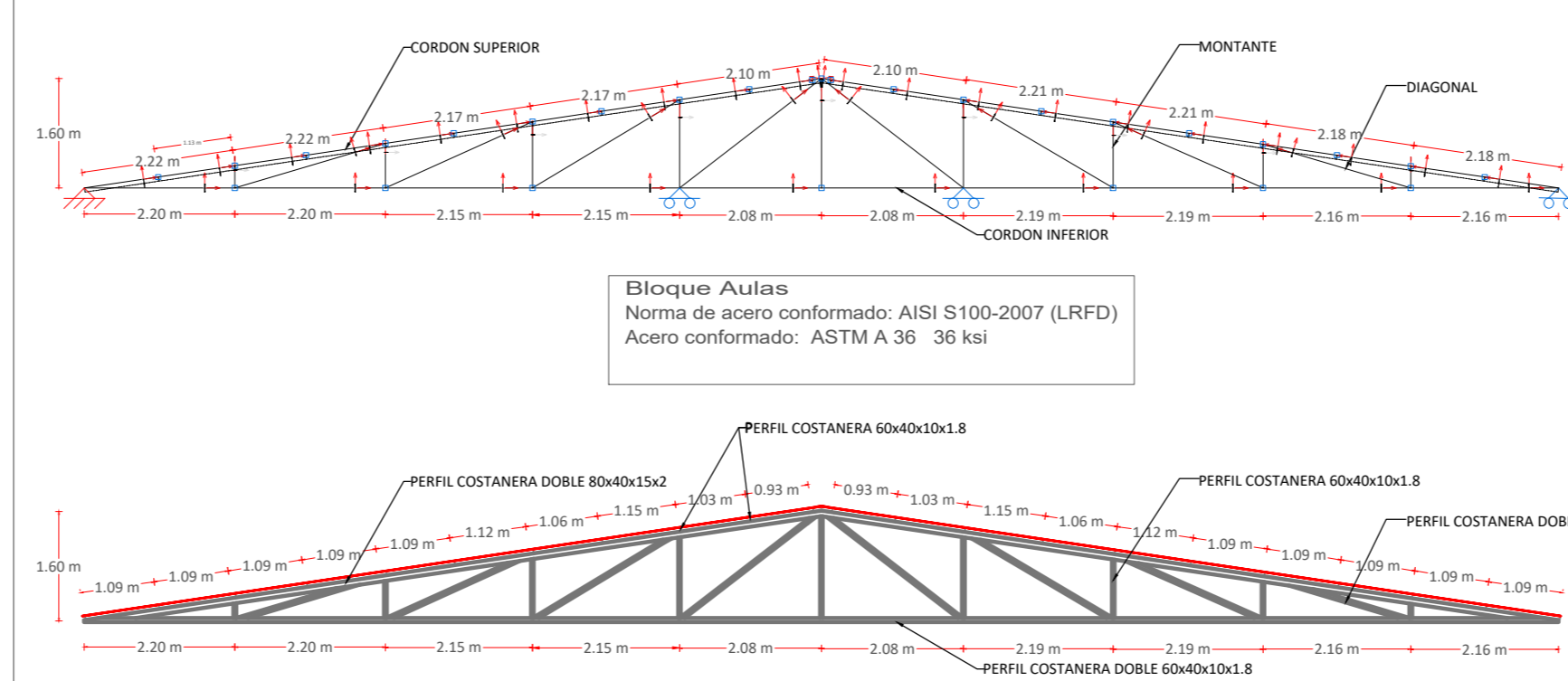


P7 y P46

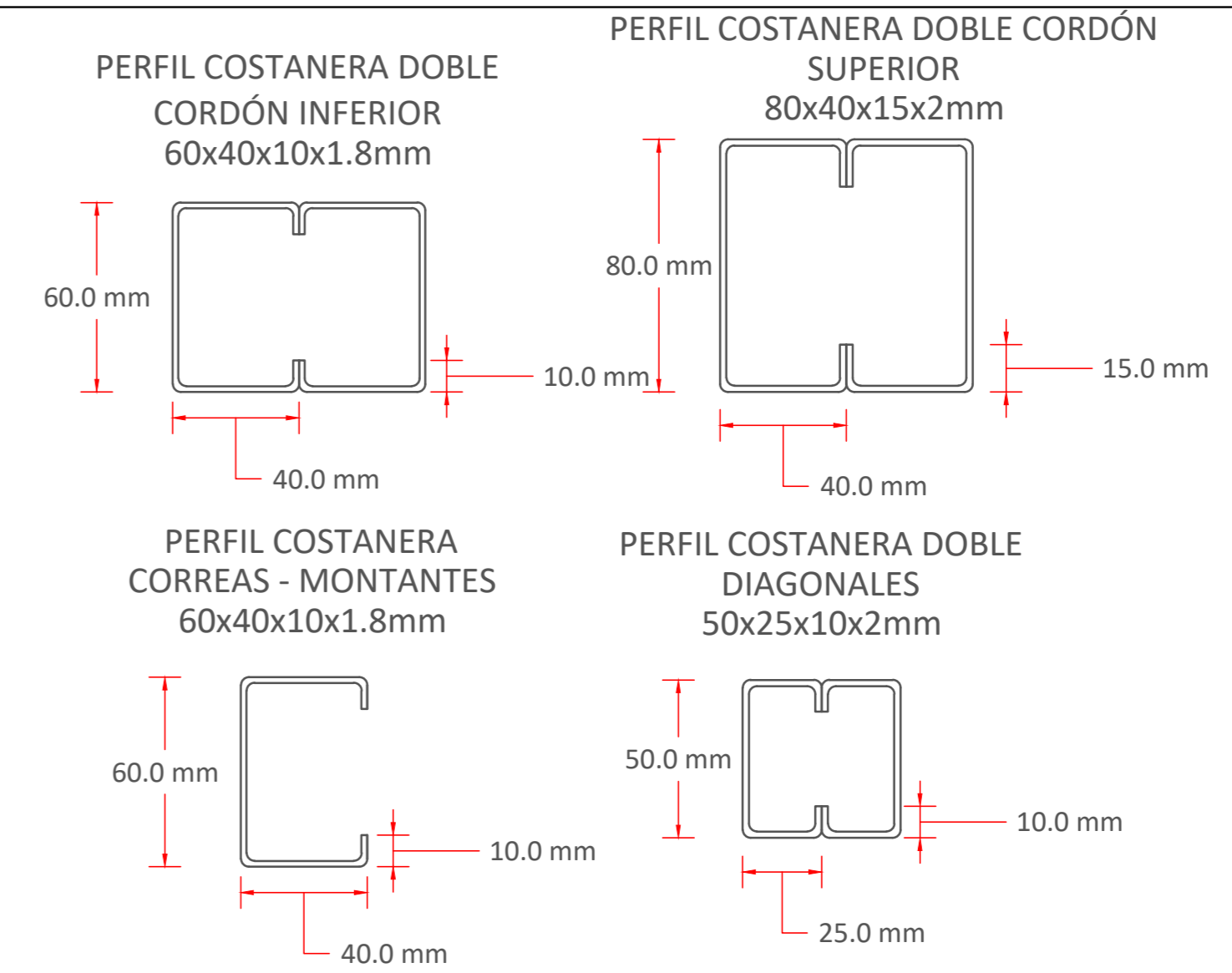




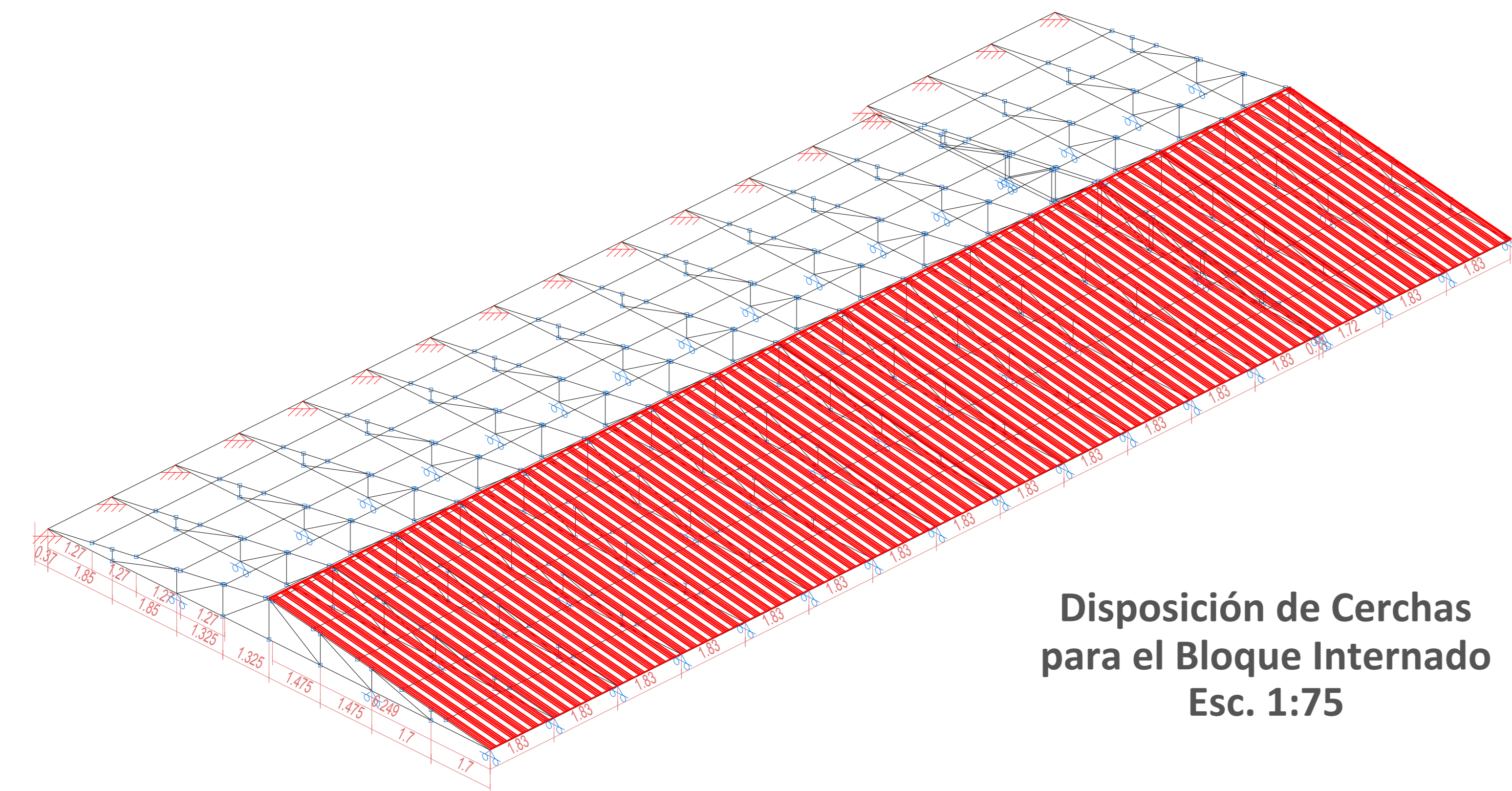
Disposición de Cerchas para el Bloque Aulas Esc. 1:100



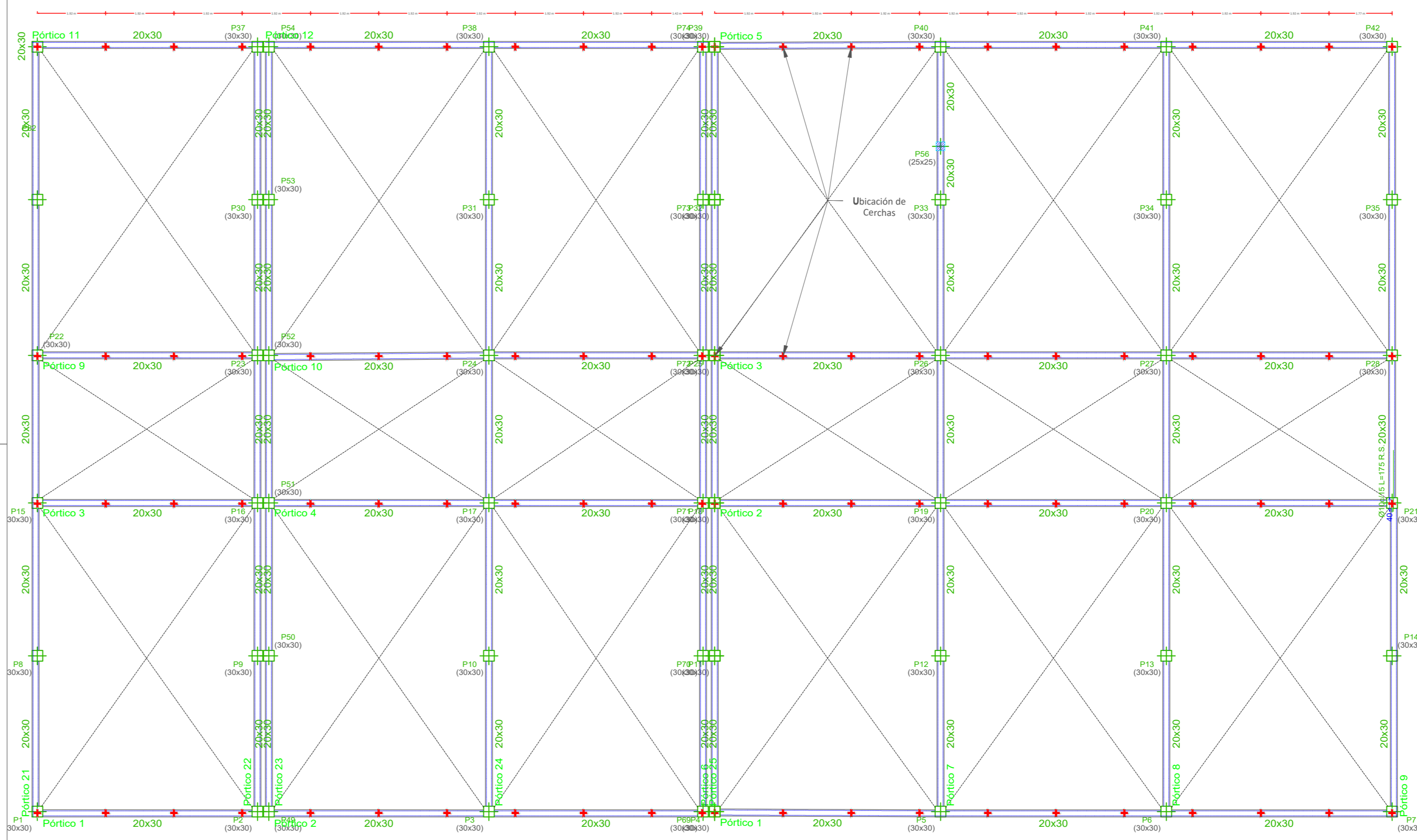
Modelo de Cercha para el Bloque Aulas Esc. 1:100



Perfiles Bloque Aulas Conformado en Frío Esc. 1:2

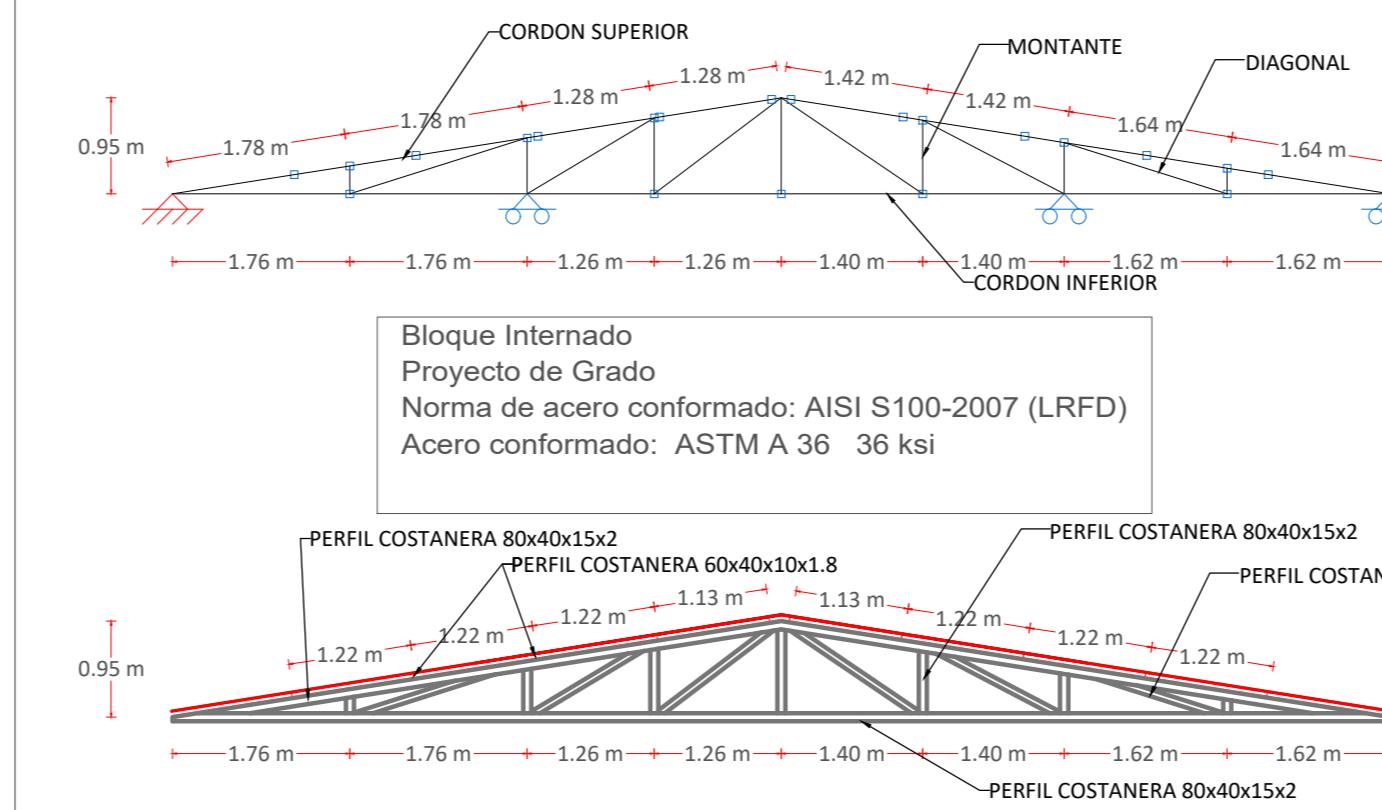
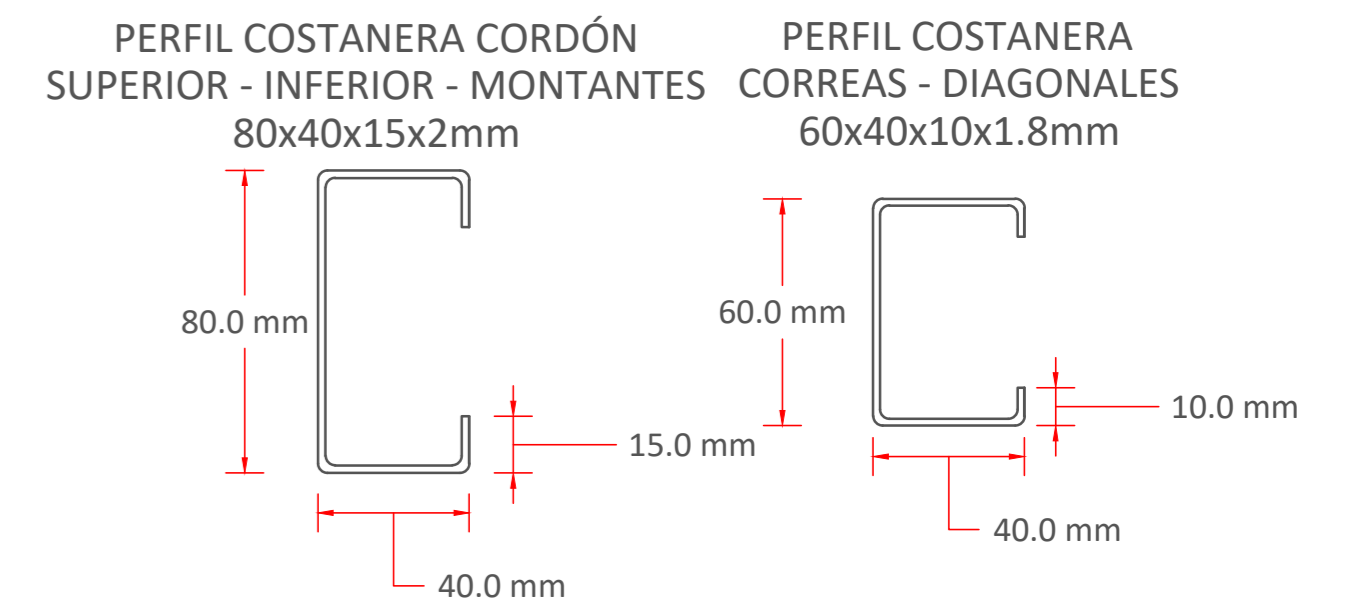


Disposición de Cerchas para el Bloque Internado Esc. 1:75

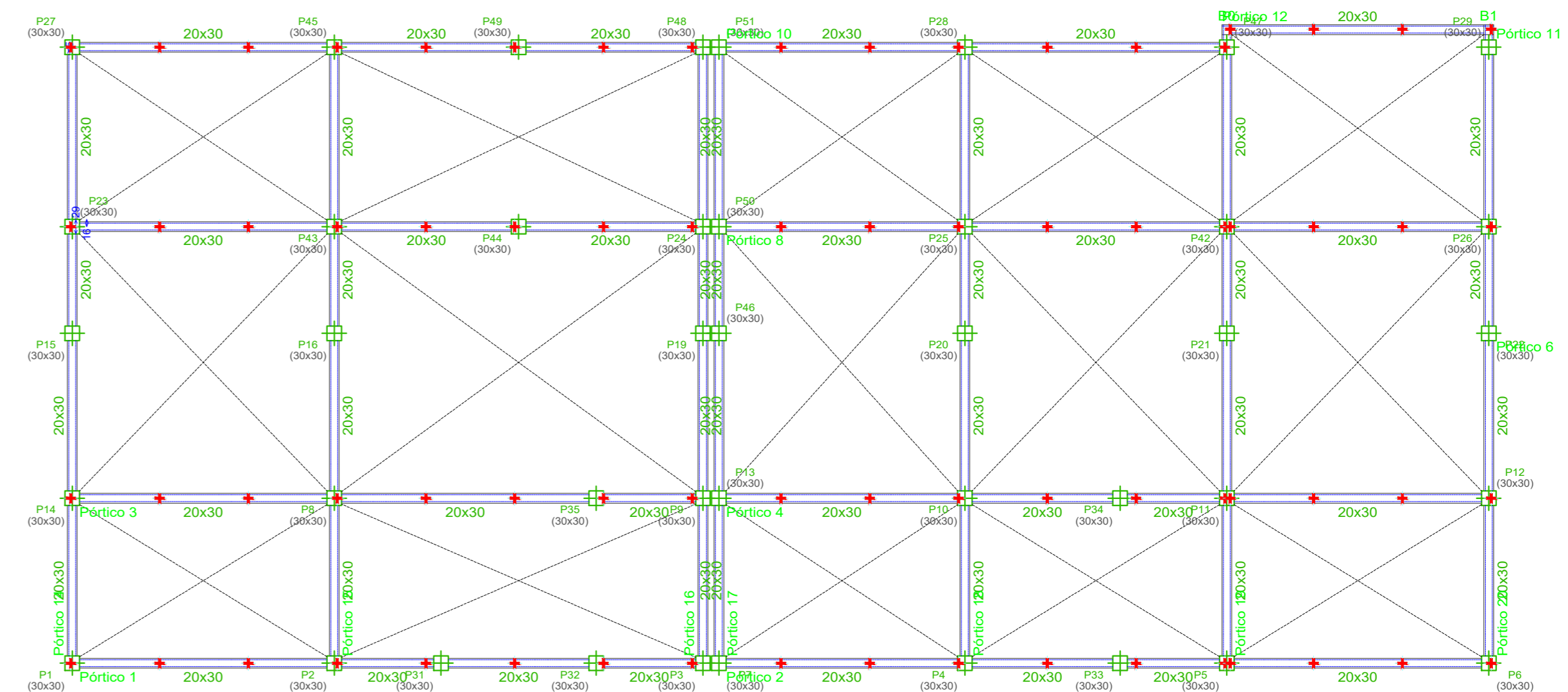


Replanteo de Cerchas para el Bloque Aulas Esc. 1:100

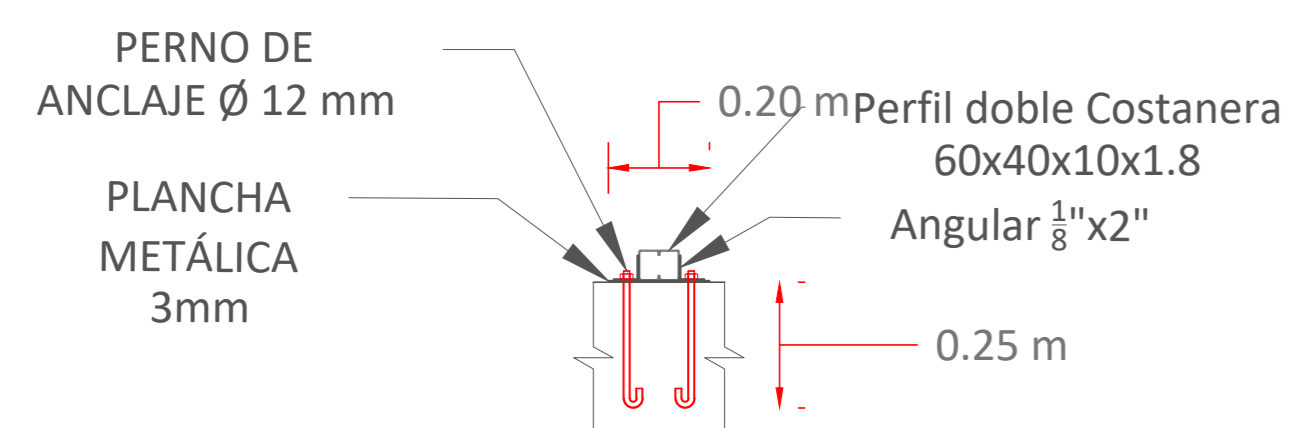
Perfiles Bloque Internado Conformado en Frío Esc. 1:2



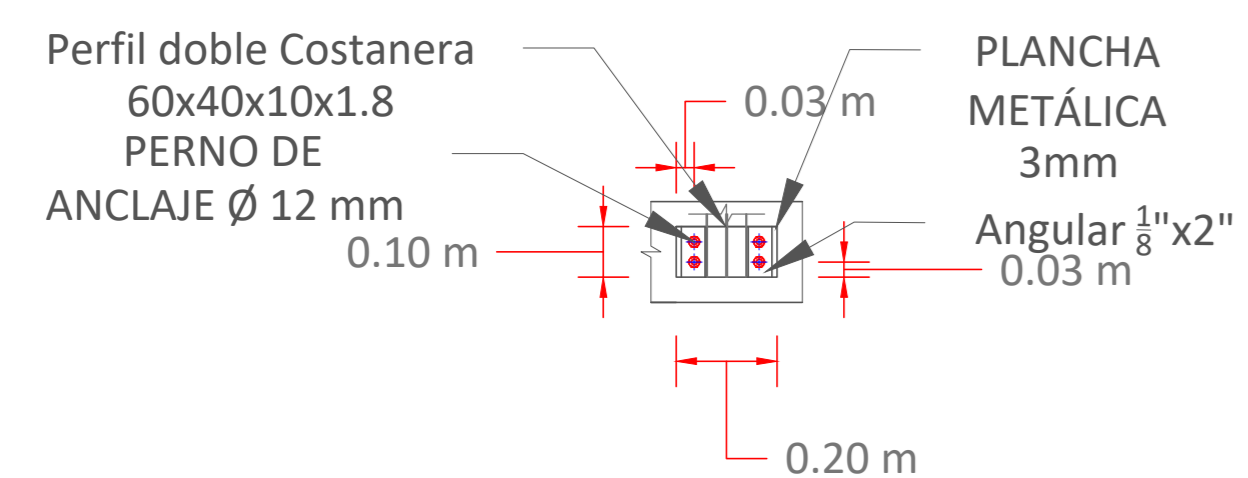
Modelo de Cercha para el Bloque Internado Esc. 1:75



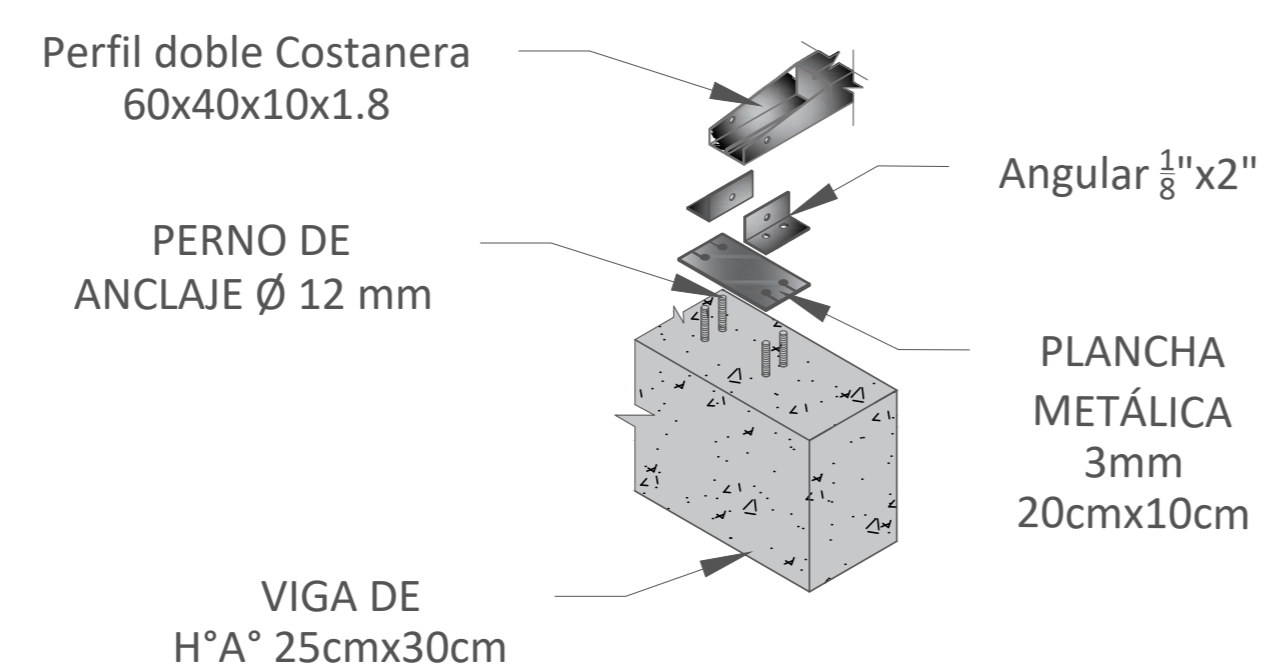
Replanteo de Cerchas para el Bloque Internado Esc. 1:100



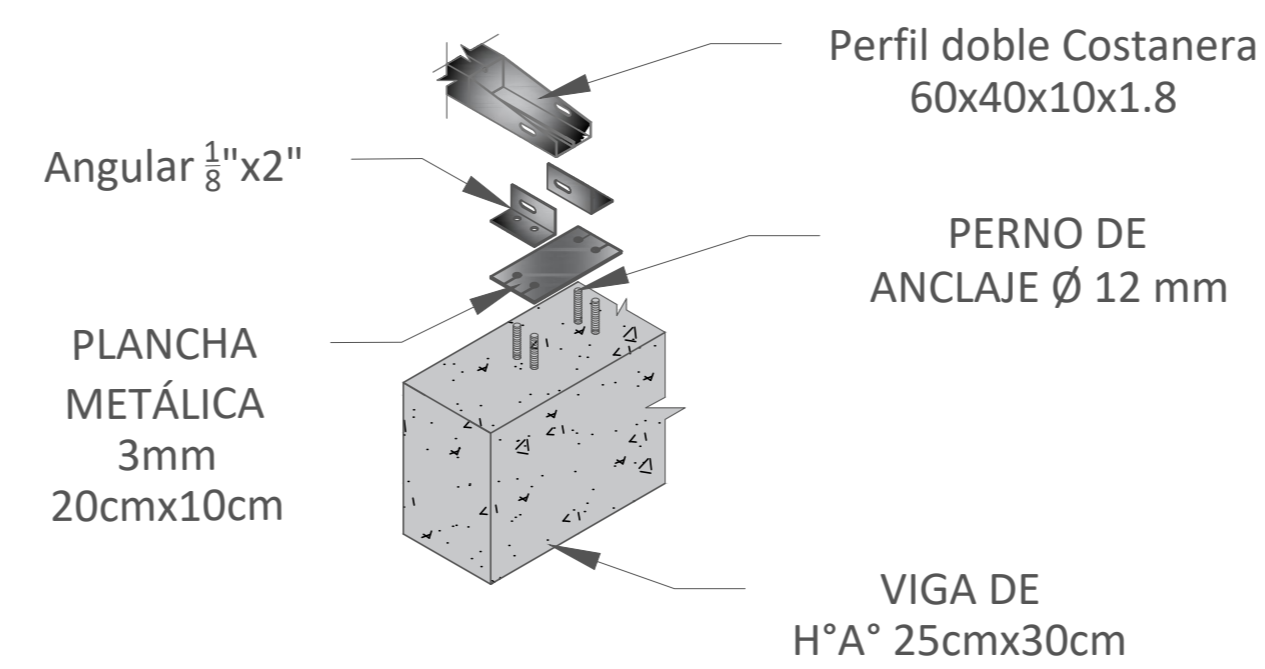
Detalle de los Pernos Bloque Aulas de Anclaje Esc 1:15

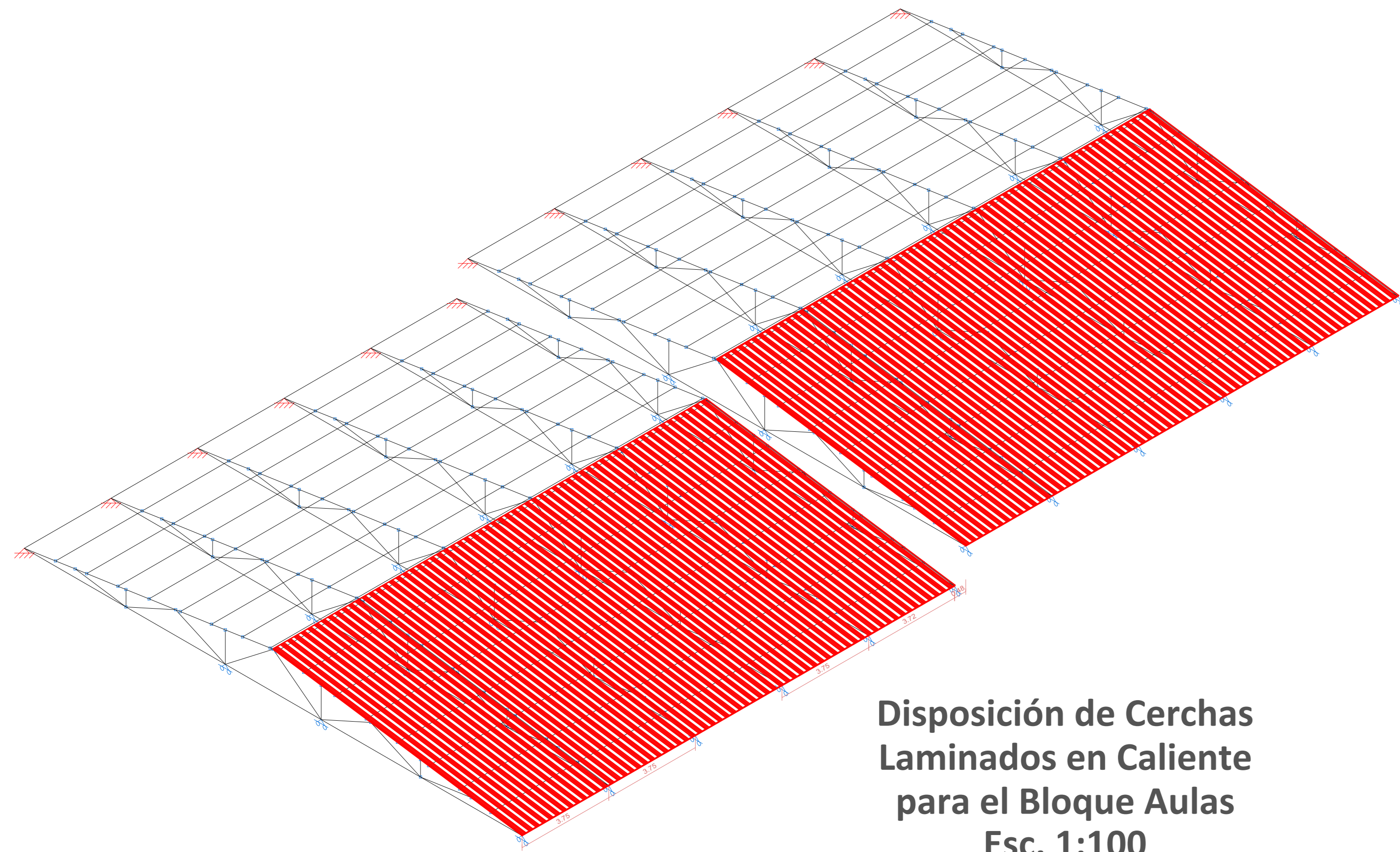


Detalle Unión Apoyo Fijo Bloque Aulas de Anclaje Esc 1:15

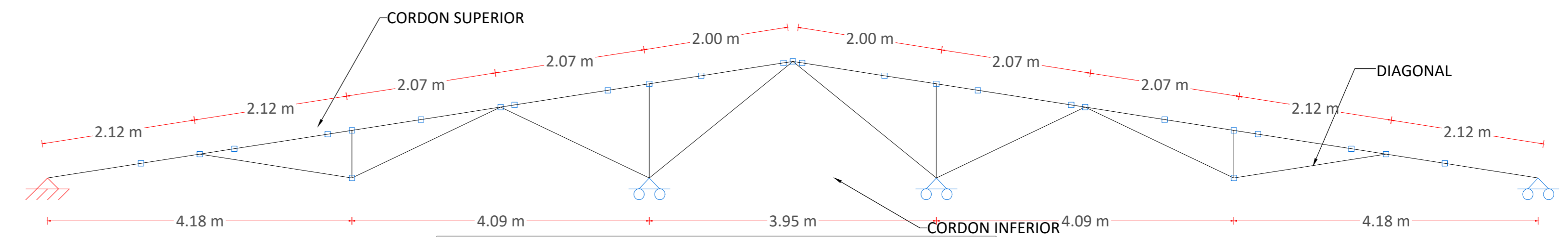


Detalle Unión Apoyo Movil Bloque Aulas de Anclaje Esc 1:15



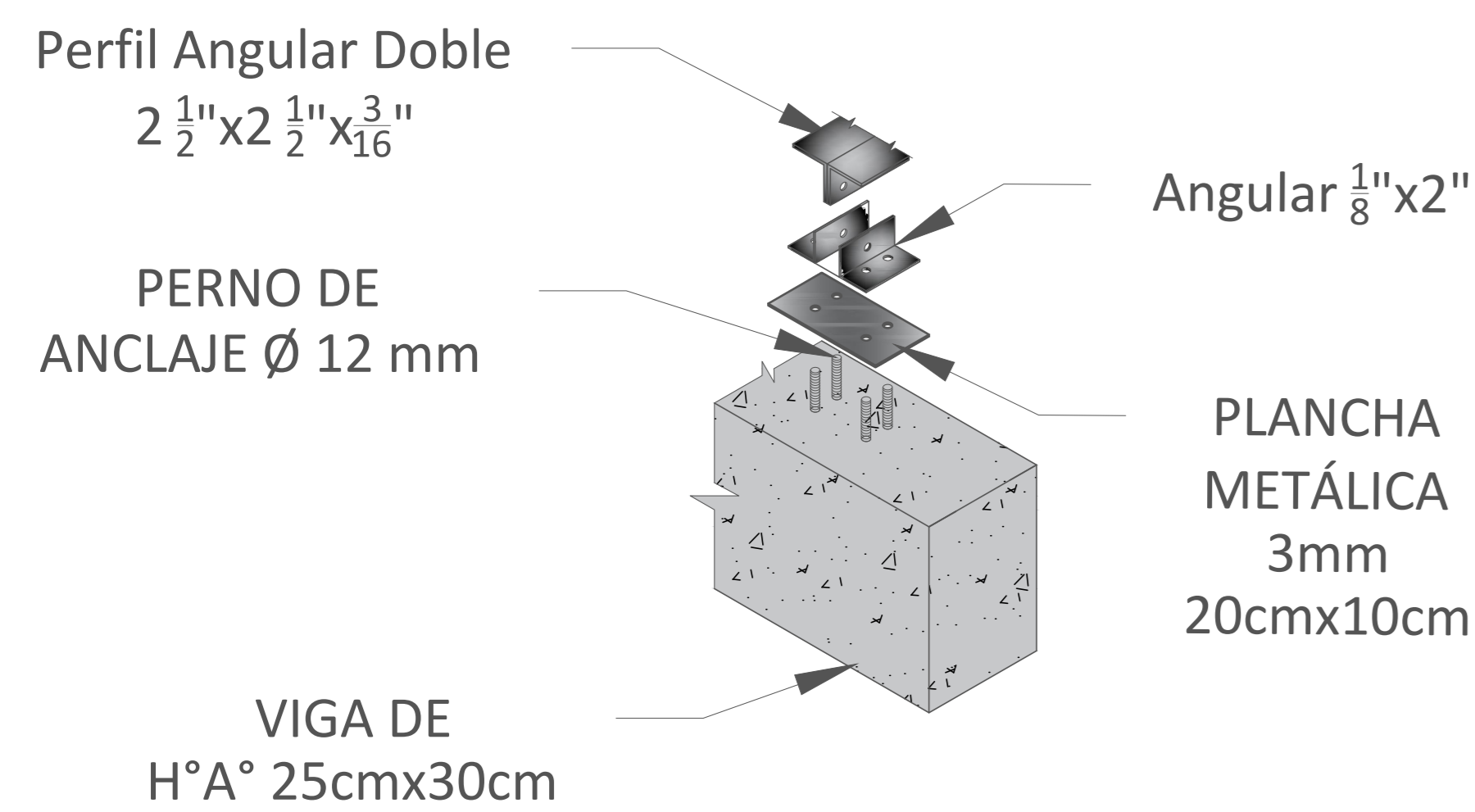
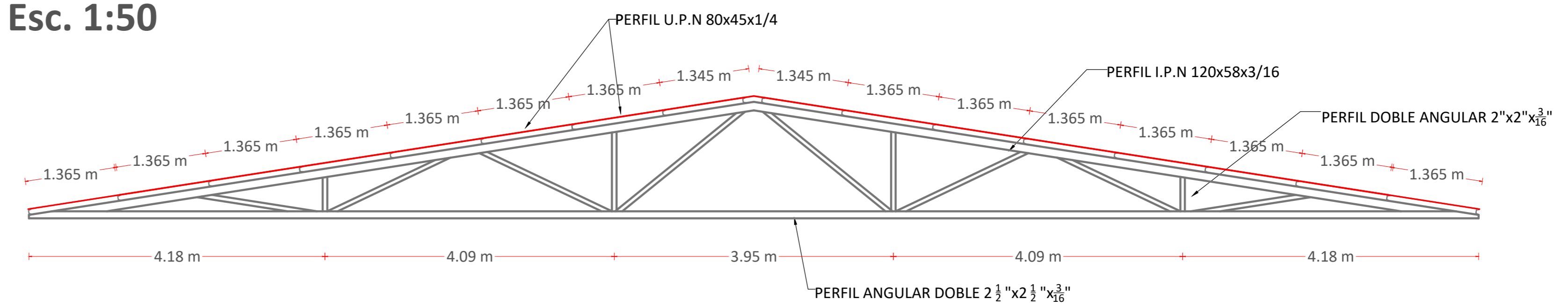


Disposición de Cerchas Laminados en Caliente para el Bloque Aulas
Esc. 1:100

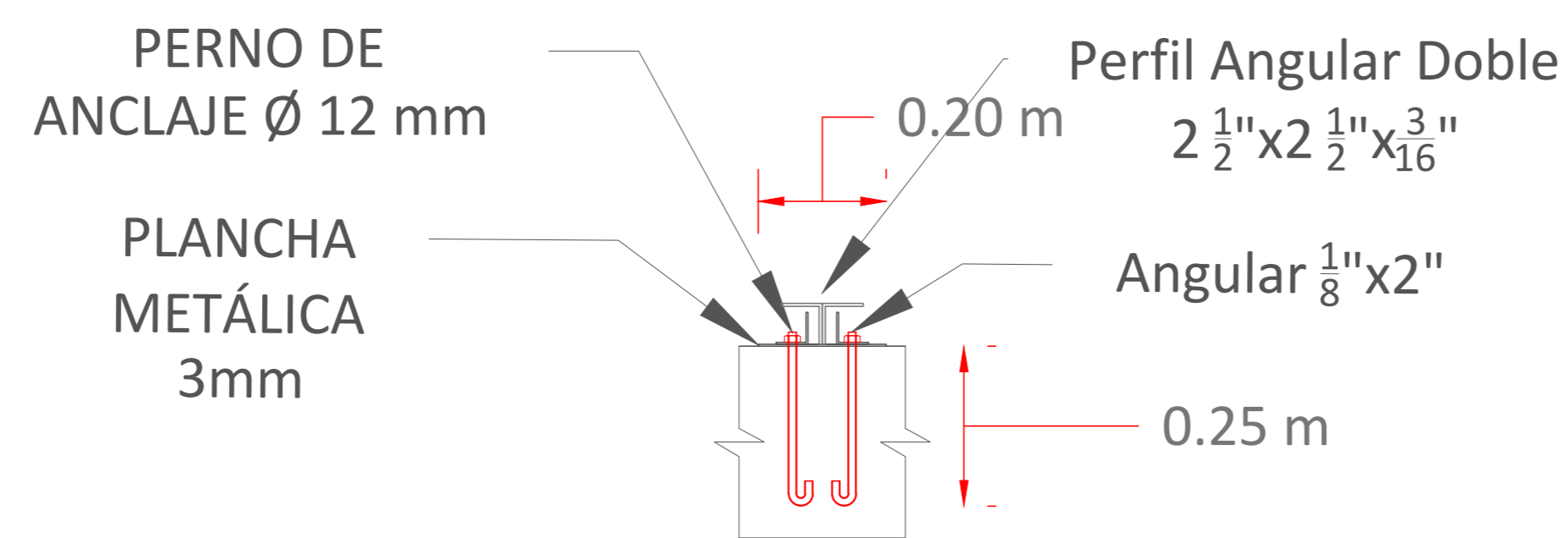


Modelo de Cercha para el Bloque Aulas
Esc. 1:50

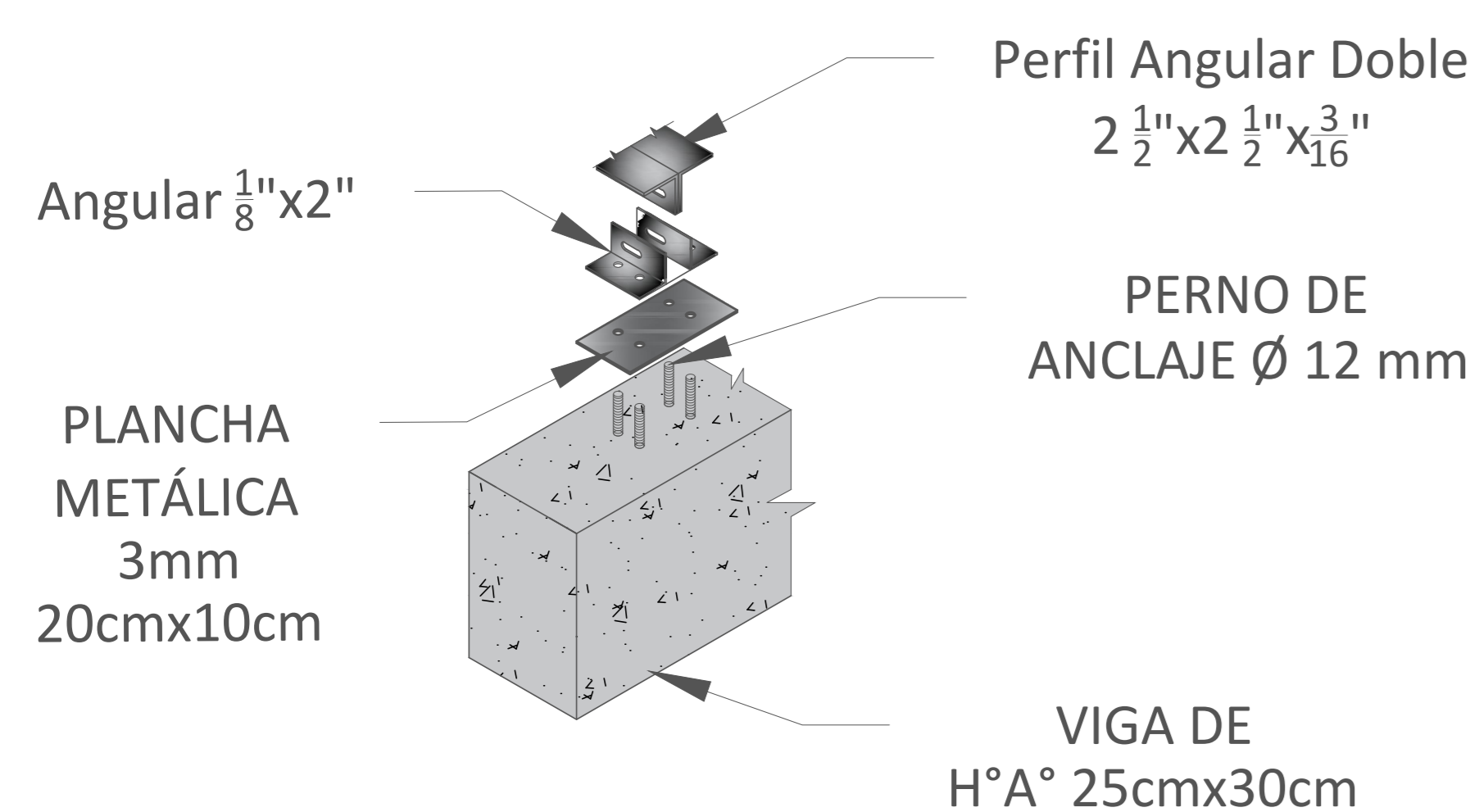
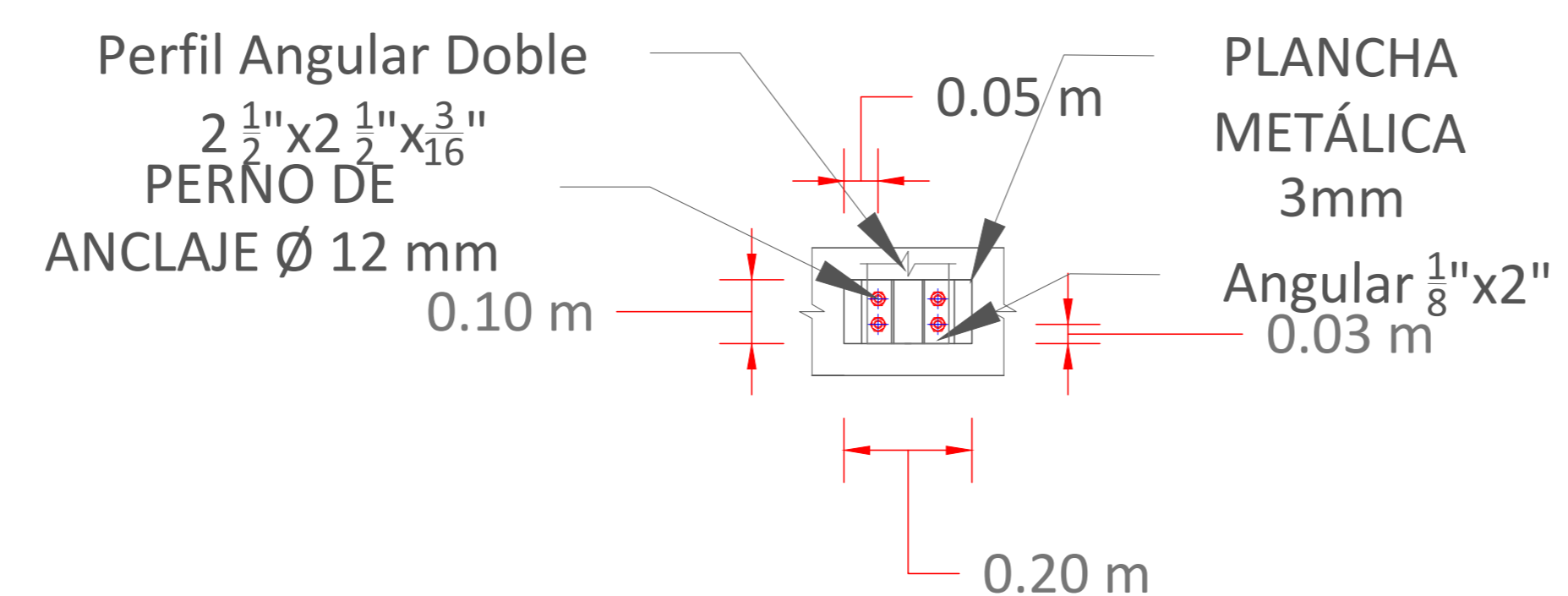
bloque aulas con perfiles laminados en caliente
Proyecto de Grado
Norma de acero laminado: ANSI/AISC 360-05 (LRFD)
Acero laminado: A36



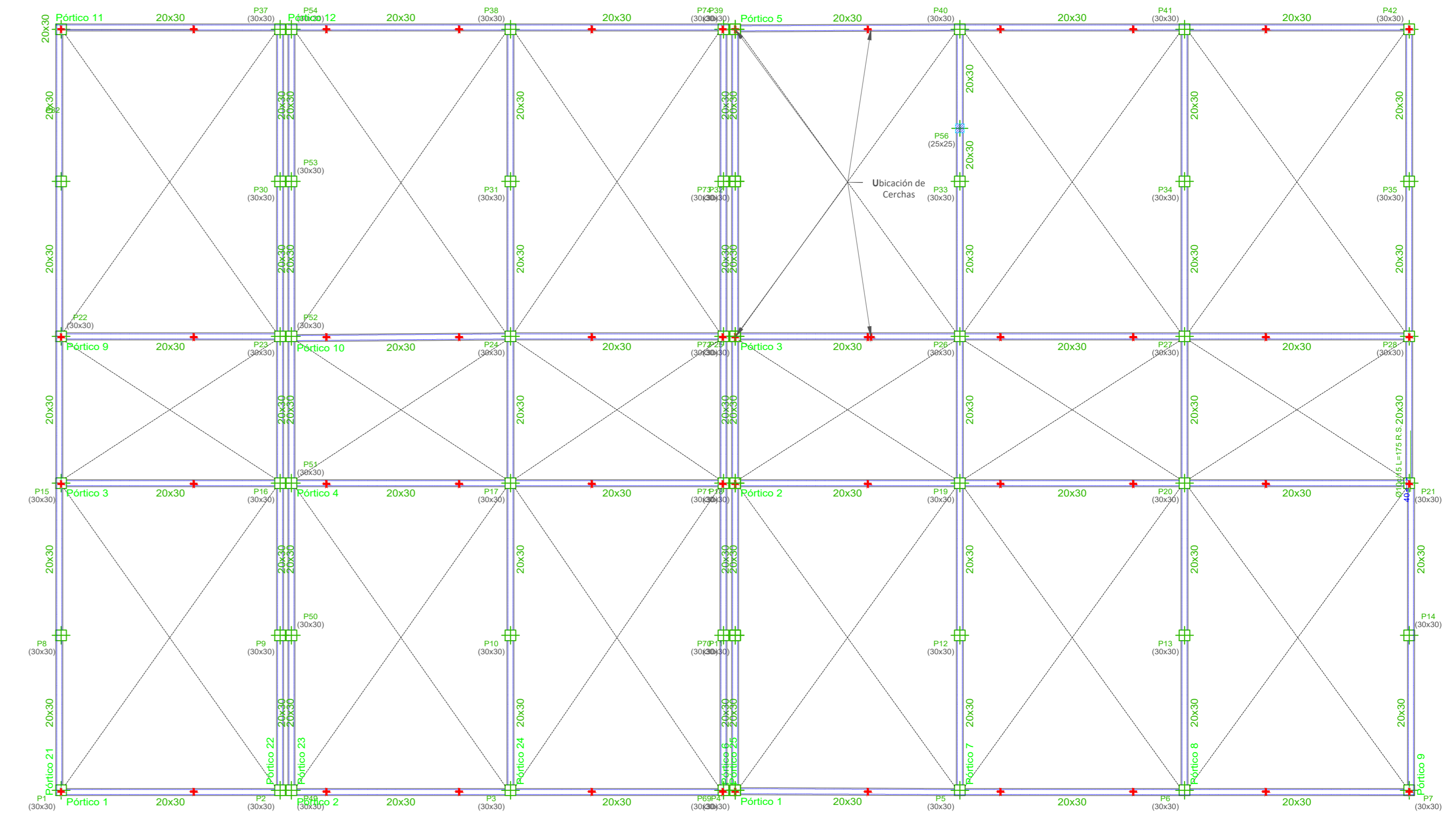
Detalle Unión Apoyo Fijo Bloque Aulas de Anclaje
Esc 1:10



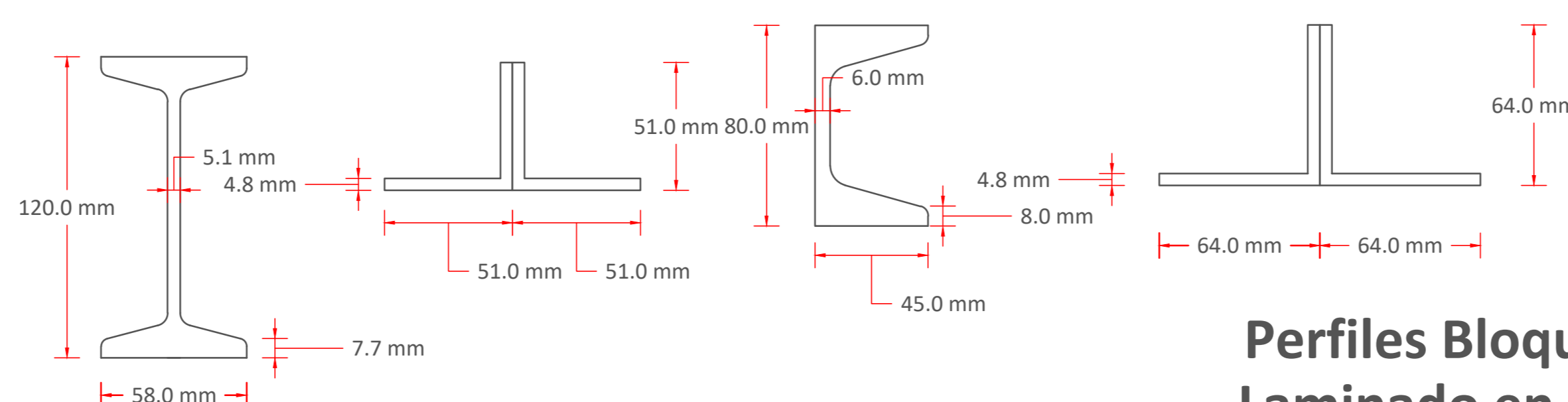
Detalle de los Pernos Bloque Aulas de Anclaje
Esc 1:10



Detalle Unión Apoyo Móvil Bloque Aulas de Anclaje
Esc 1:10



Replanteo de Cerchas para el Bloque Aulas
Esc. 1:100



Perfiles Bloque Aulas Laminado en Caliente
Esc. 1:2