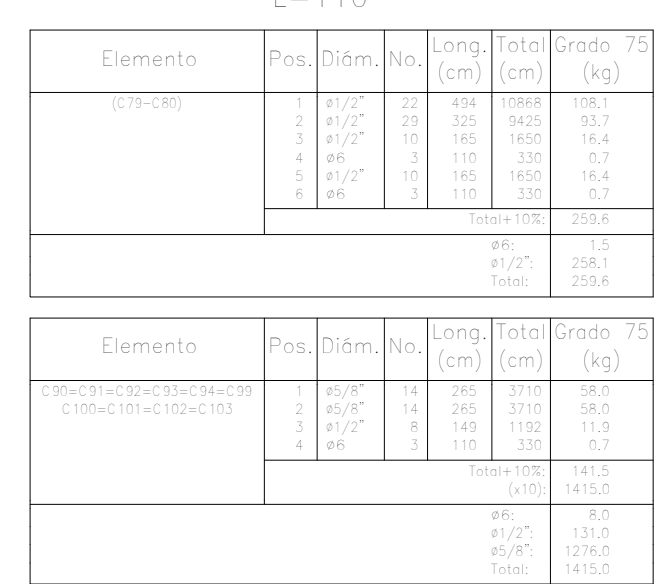
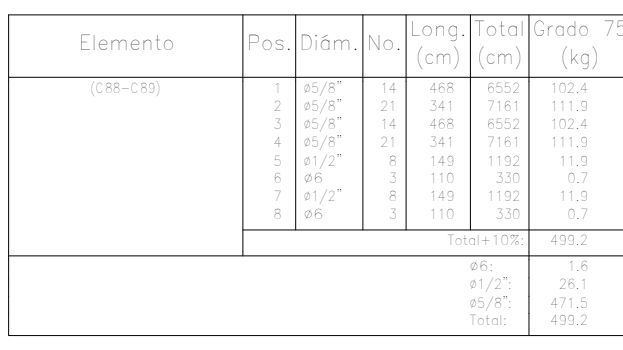
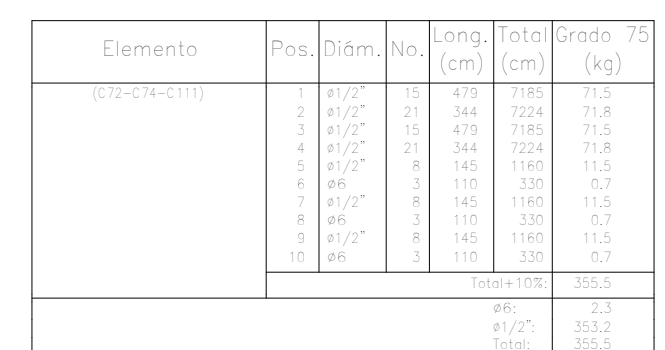
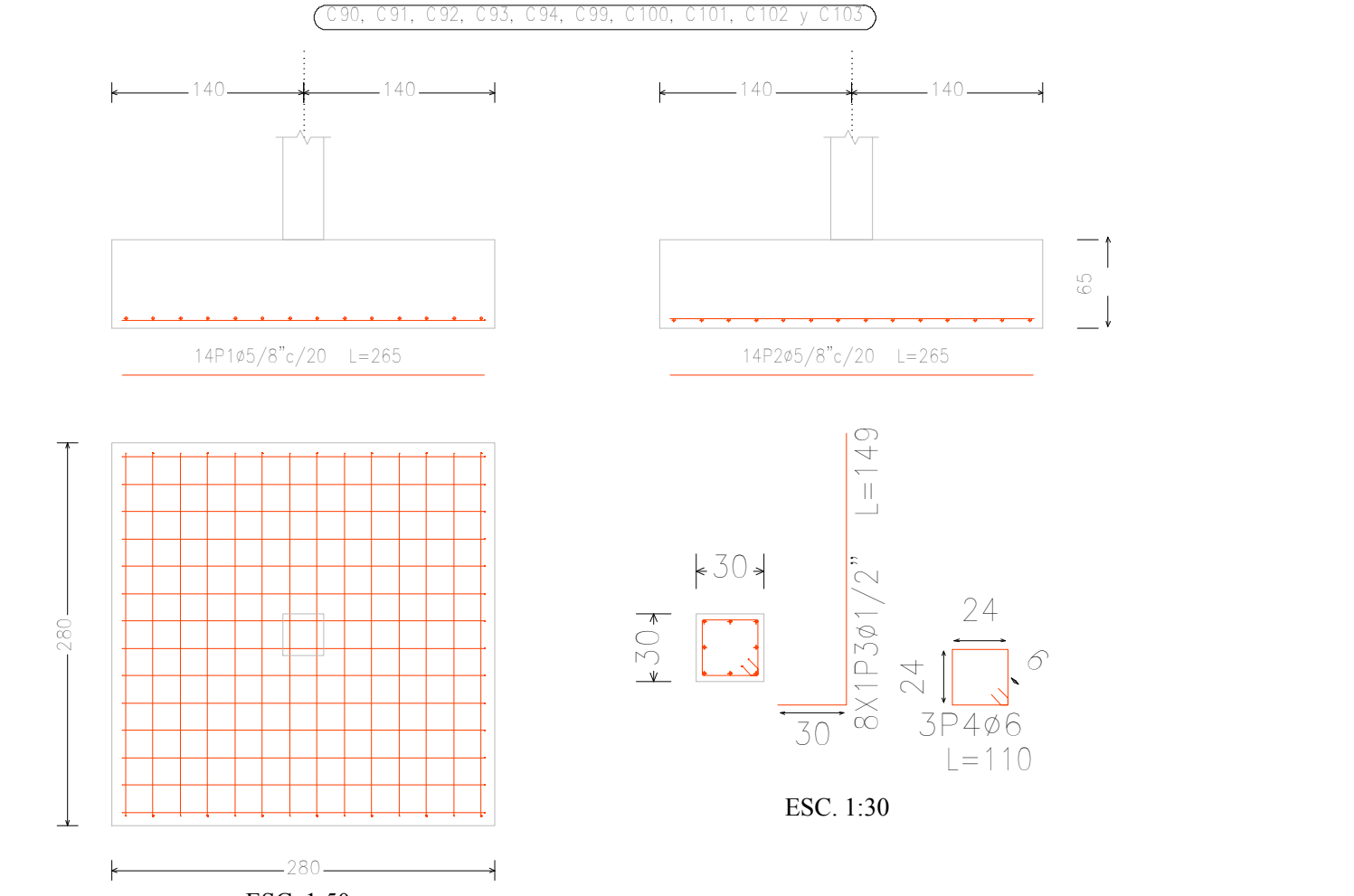
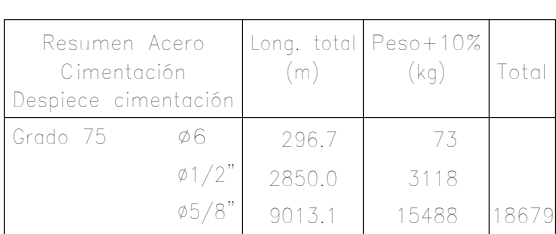
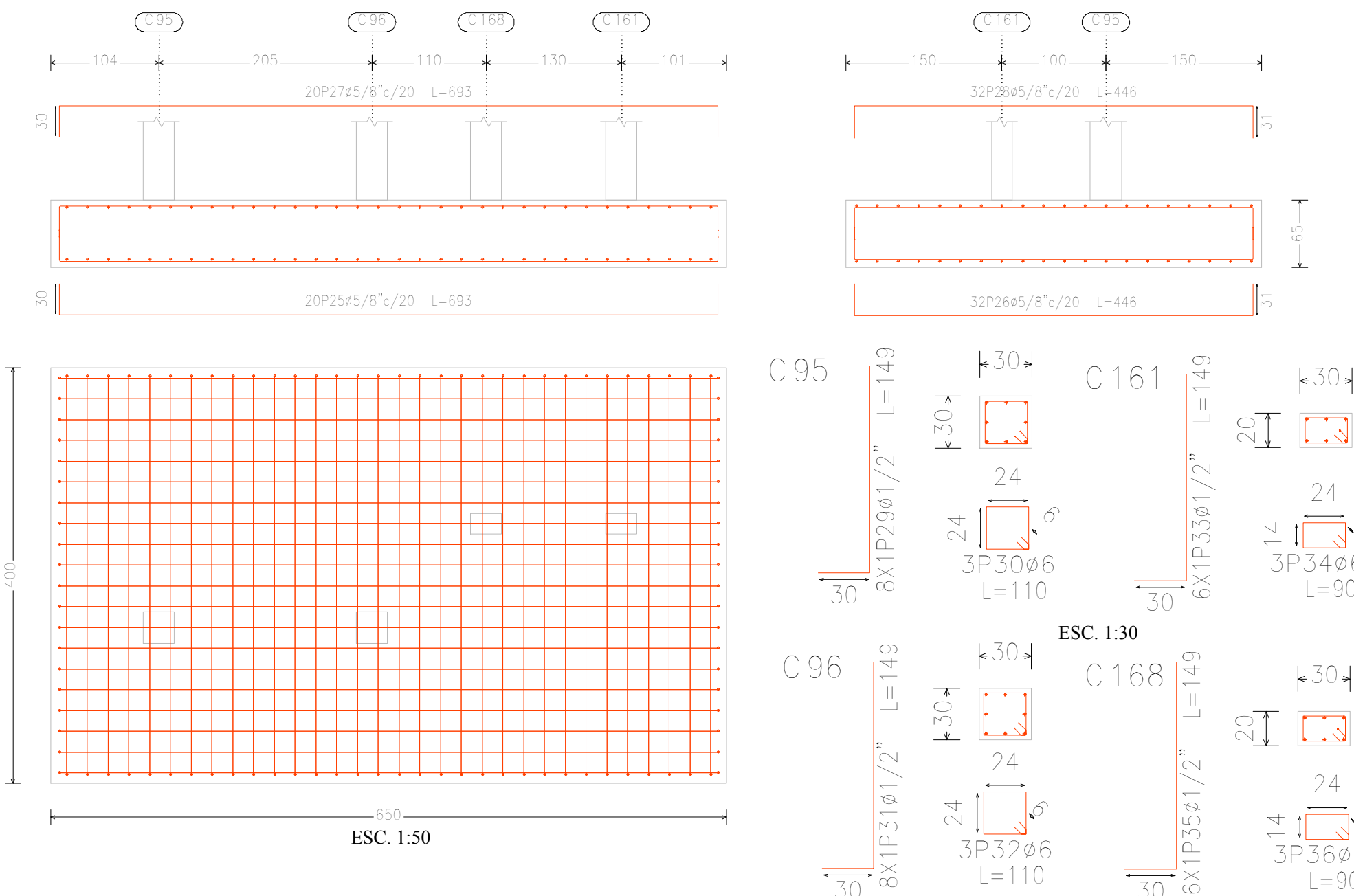




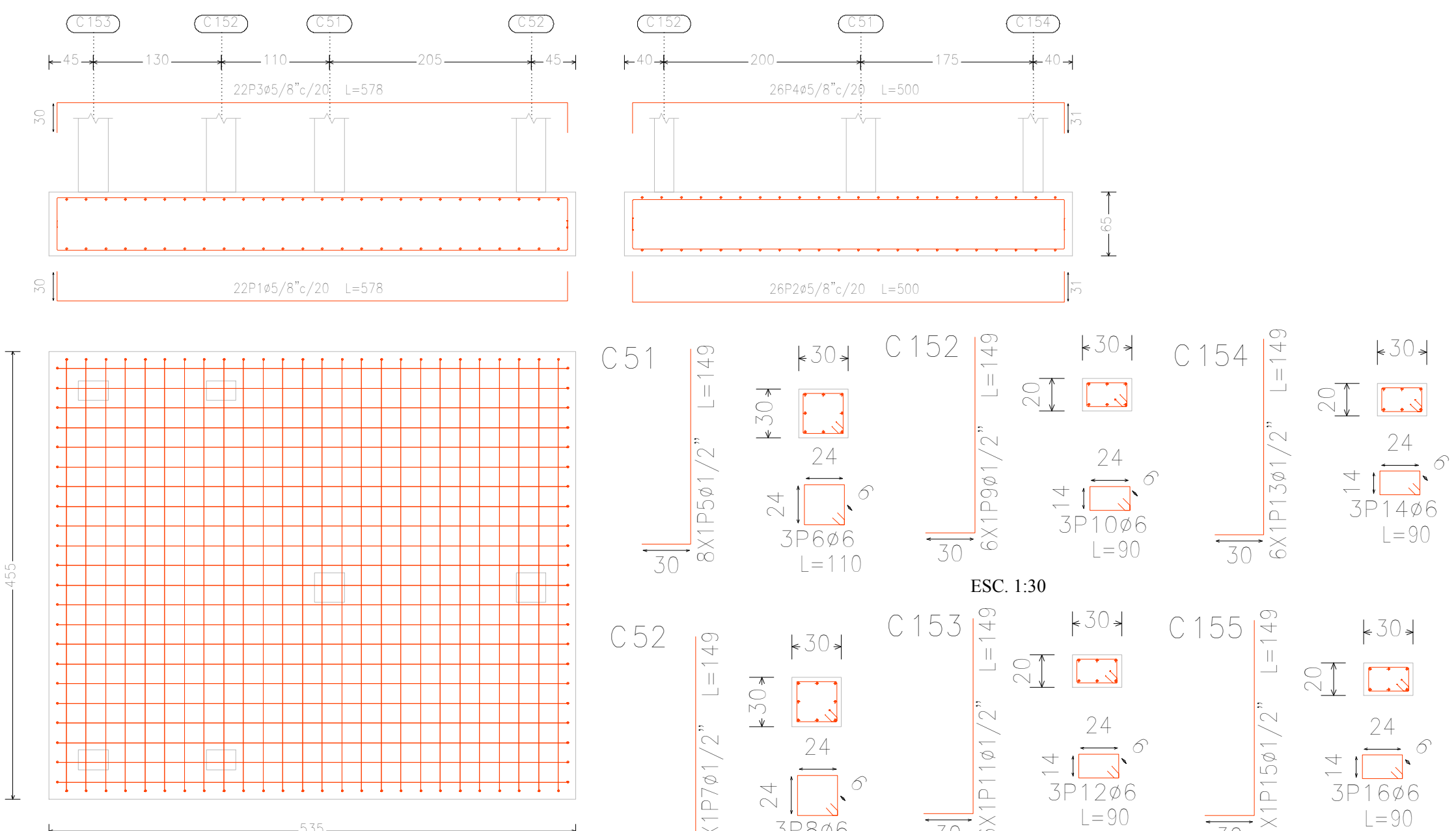
(C44-C45-C46-C47)



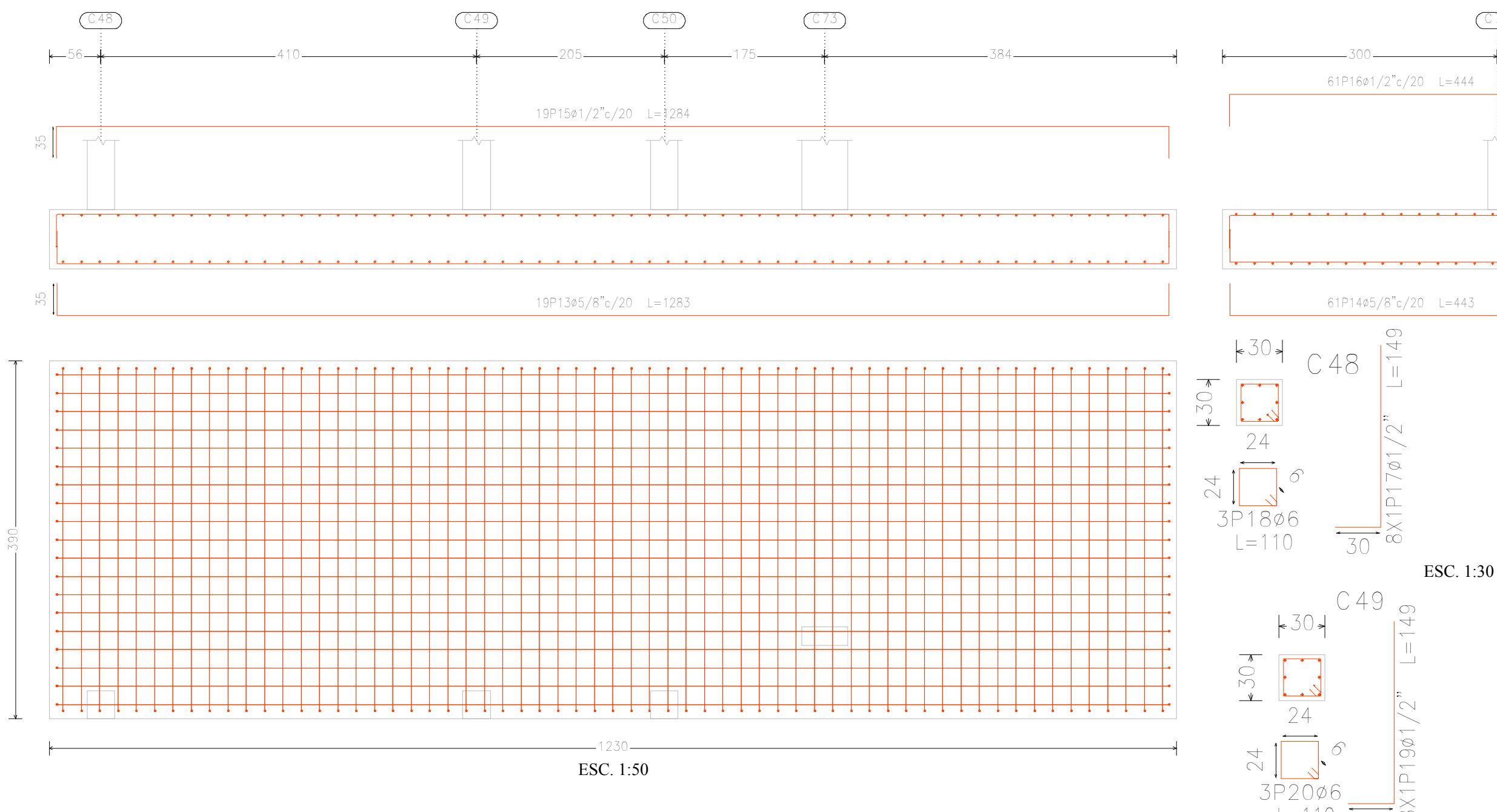
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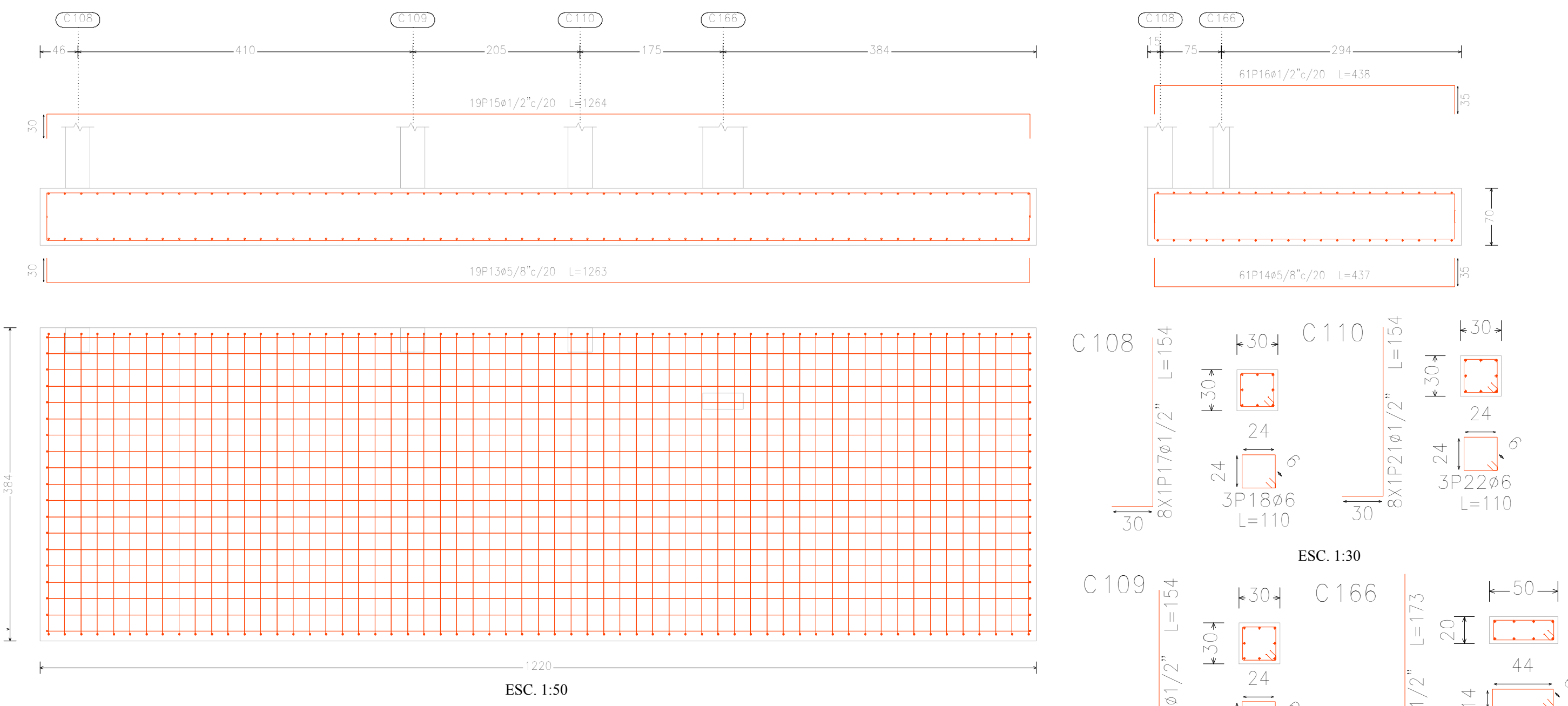
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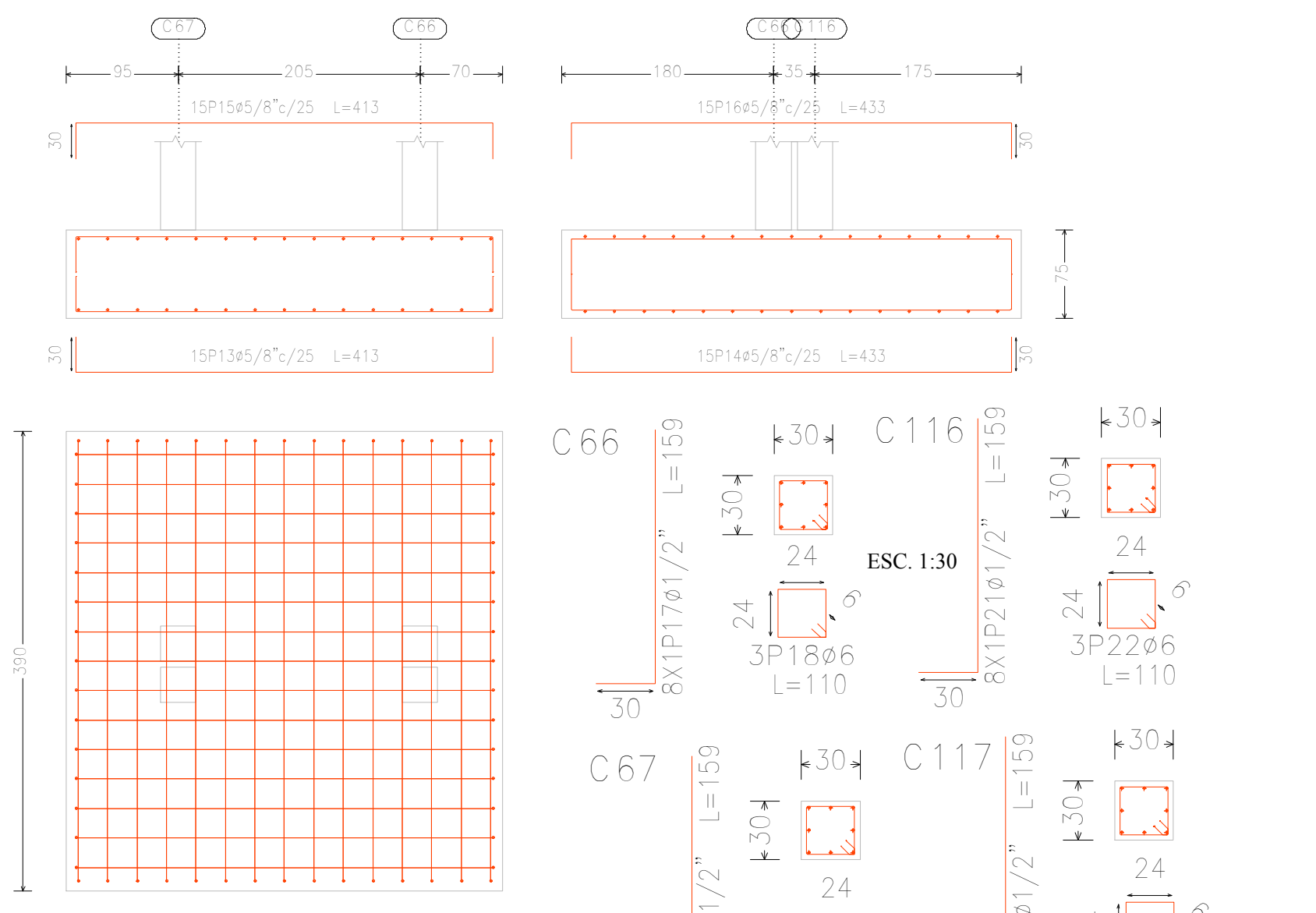
(C48-C49-C50-C73)



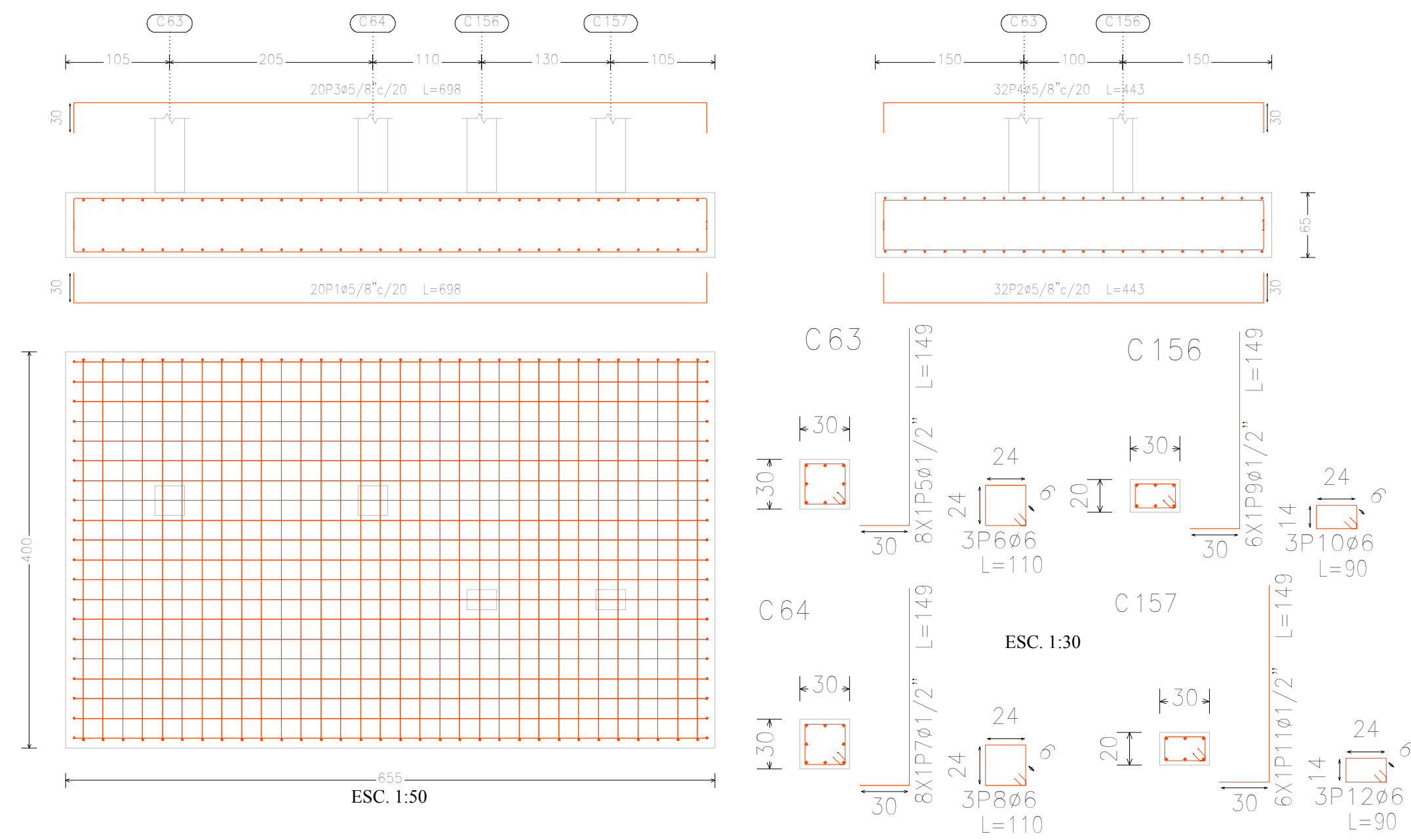
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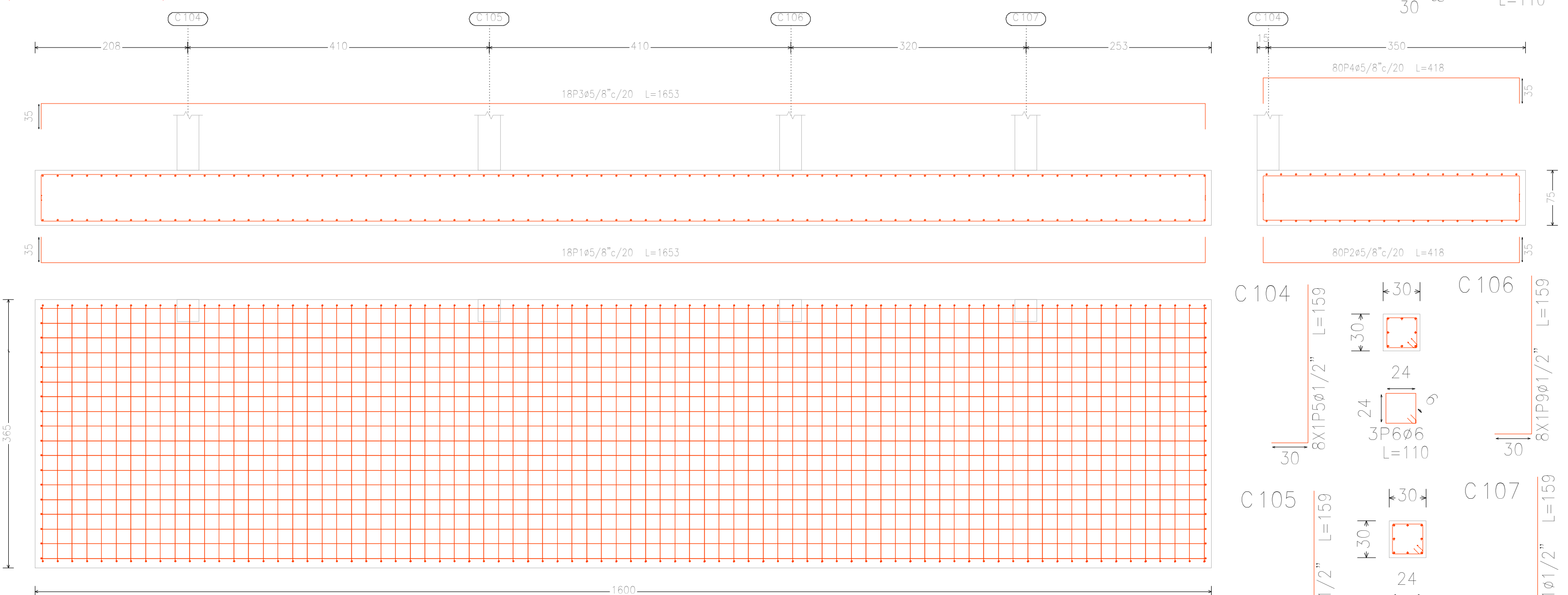
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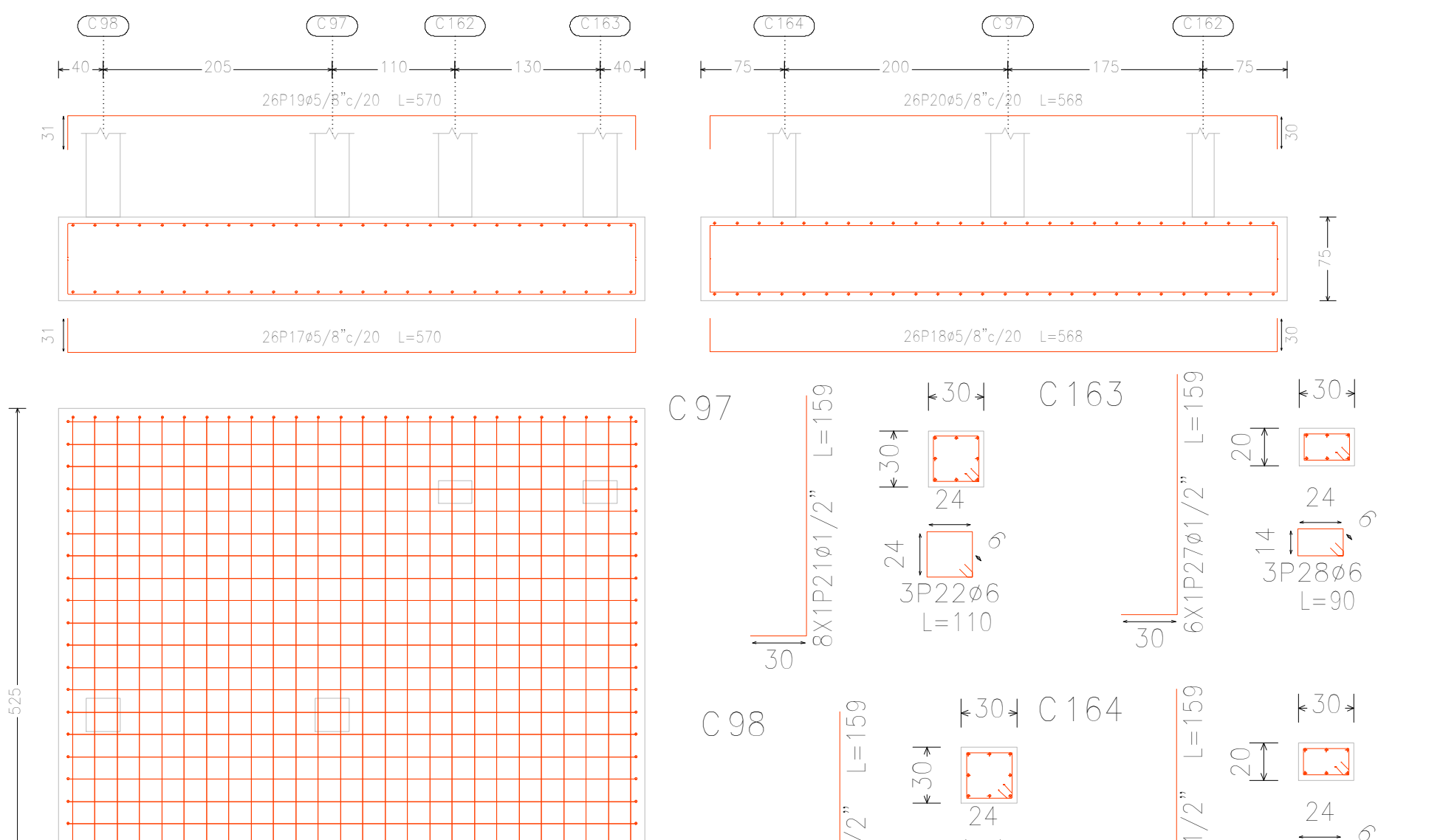
(C63-C64-C156-C157)



(C104-C105-C106-C107)



(C97-C98-C162-C163-C164-C165)



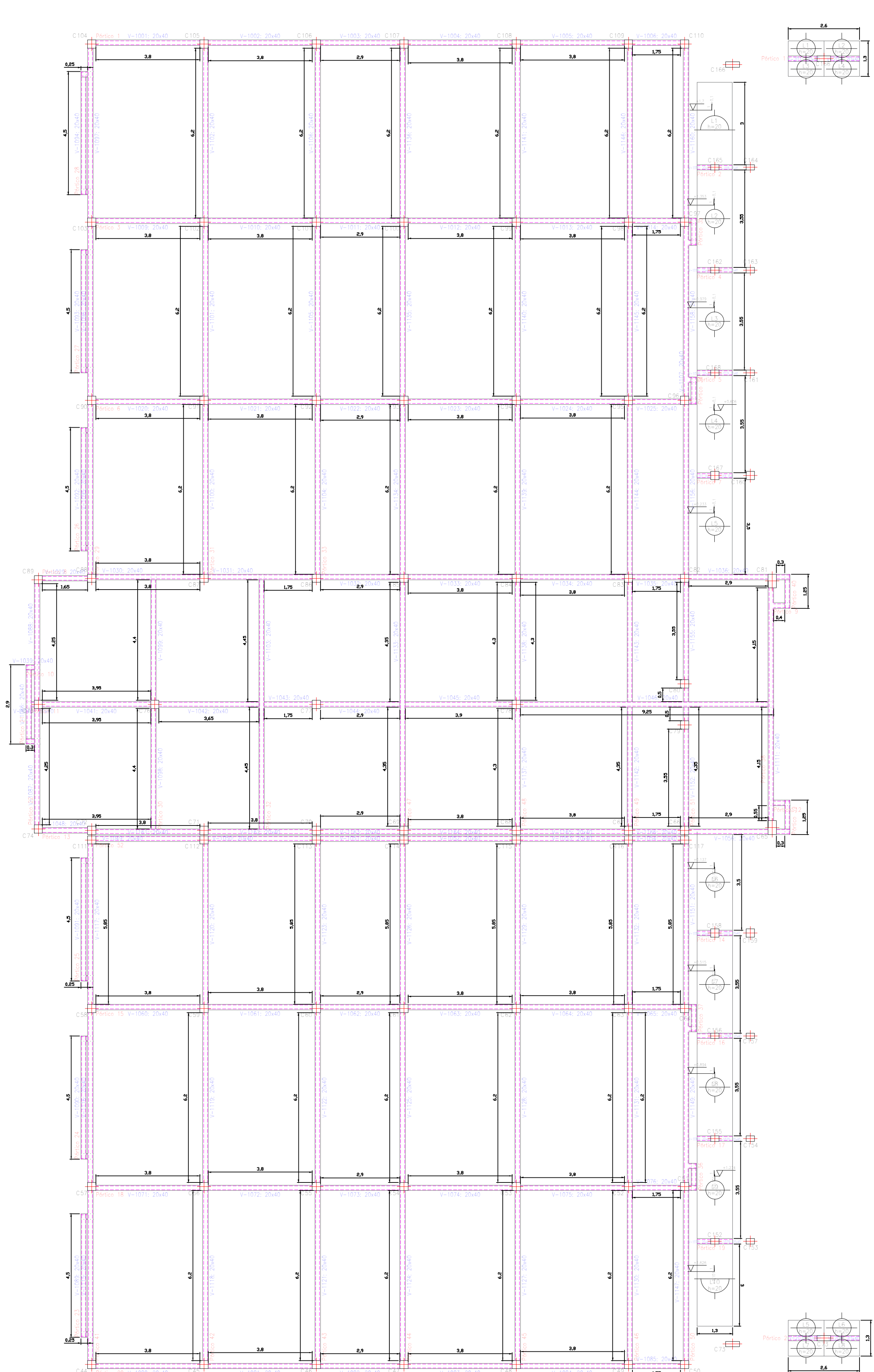
Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
BARRAS DE REFORZAMIENTO (C44-C47)						
C44	1	14	18	1653	204.4	102.2
C45	2	14	18	1653	204.4	102.2
C46	3	14	18	1653	204.4	102.2
C47	4	14	18	1653	204.4	102.2
BARRAS DE REFORZAMIENTO (C48-C50)						
C48	1	14	18	1284	158.1	79.0
C49	2	14	18	1284	158.1	79.0
C50	3	14	18	1283	158.0	79.0
BARRAS DE REFORZAMIENTO (C108-C110)						
C108	1	14	18	1284	158.1	79.0
C109	2	14	18	1284	158.1	79.0
C110	3	14	18	1283	158.0	79.0

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
BARRAS DE REFORZAMIENTO (C104-C107)						
C104	1	14	18	1653	204.4	102.2
C105	2	14	18	1653	204.4	102.2
C106	3	14	18	1653	204.4	102.2
C107	4	14	18	1653	204.4	102.2
BARRAS DE REFORZAMIENTO (C156-C157)						
C156	1	14	18	443	55.4	27.7
C157	2	14	18	443	55.4	27.7
BARRAS DE REFORZAMIENTO (C162-C165)						
C162	1	14	18	568	70.9	35.4
C163	2	14	18	568	70.9	35.4
C164	3	14	18	568	70.9	35.4
C165	4	14	18	568	70.9	35.4

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
BARRAS DE REFORZAMIENTO (C95-C96)						
C95	1	14	18	693	86.6	43.3
C96	2	14	18	693	86.6	43.3
BARRAS DE REFORZAMIENTO (C161-C168)						
C161	1	14	18	446	55.7	27.8
C162	2	14	18	446	55.7	27.8
C163	3	14	18	446	55.7	27.8
C164	4	14	18	446	55.7	27.8
C165	5	14	18	446	55.7	27.8
C166	6	14	18	446	55.7	27.8
C167	7	14	18	446	55.7	27.8
C168	8	14	18	446	55.7	27.8

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
BARRAS DE REFORZAMIENTO (C51-C52)						
C51	1	14	18	578	71.9	35.9
C52	2	14	18	578	71.9	35.9
BARRAS DE REFORZAMIENTO (C152-C155)						
C152	1	14	18	500	62.5	31.2
C153	2	14	18	500	62.5	31.2
C154	3	14	18	500	62.5	31.2
C155	4	14	18	500	62.5	31.2

DETALLE DE REFORZAMIENTO DE ZAPATA						
Referencia	Tip. de elemento	Elementos (cm)	Long. (cm)	Grado 75 (kg)	Grado 75 (kg)	Grado 75 (kg)
C44, C45, C46, C47, C48, C49, C50, C108, C109, C110, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C173, C174, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C199, C200, C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C239, C240, C241, C242, C243, C244, C245, C246, C247, C248, C249, C250, C251, C252, C253, C254, C255, C256, C257, C258, C259, C260, C261, C262, C263, C264, C265, C266, C267, C268, C269, C270, C271, C272, C273, C274, C275, C276, C277, C278, C279, C280, C281, C282, C283, C284, C285, C286, C287, C288, C289, C290, C291, C292, C293, C294, C295, C296, C297, C298, C299, C300, C301, C302, C303, C304, C305, C306, C307, C308, C309, C310, C311, C312, C313, C314, C315, C316, C317, C318, C319, 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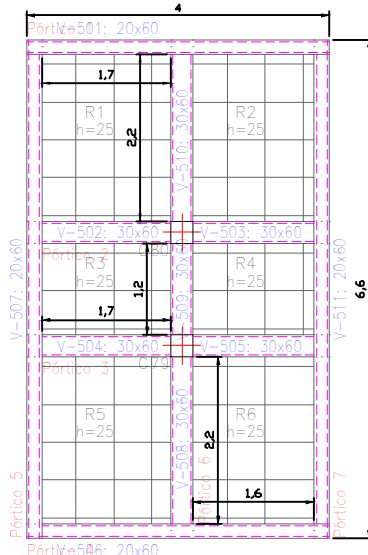


Fundación
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Acero en forjados: Grado 75 (Latinoamérica)
Escala: 1:100

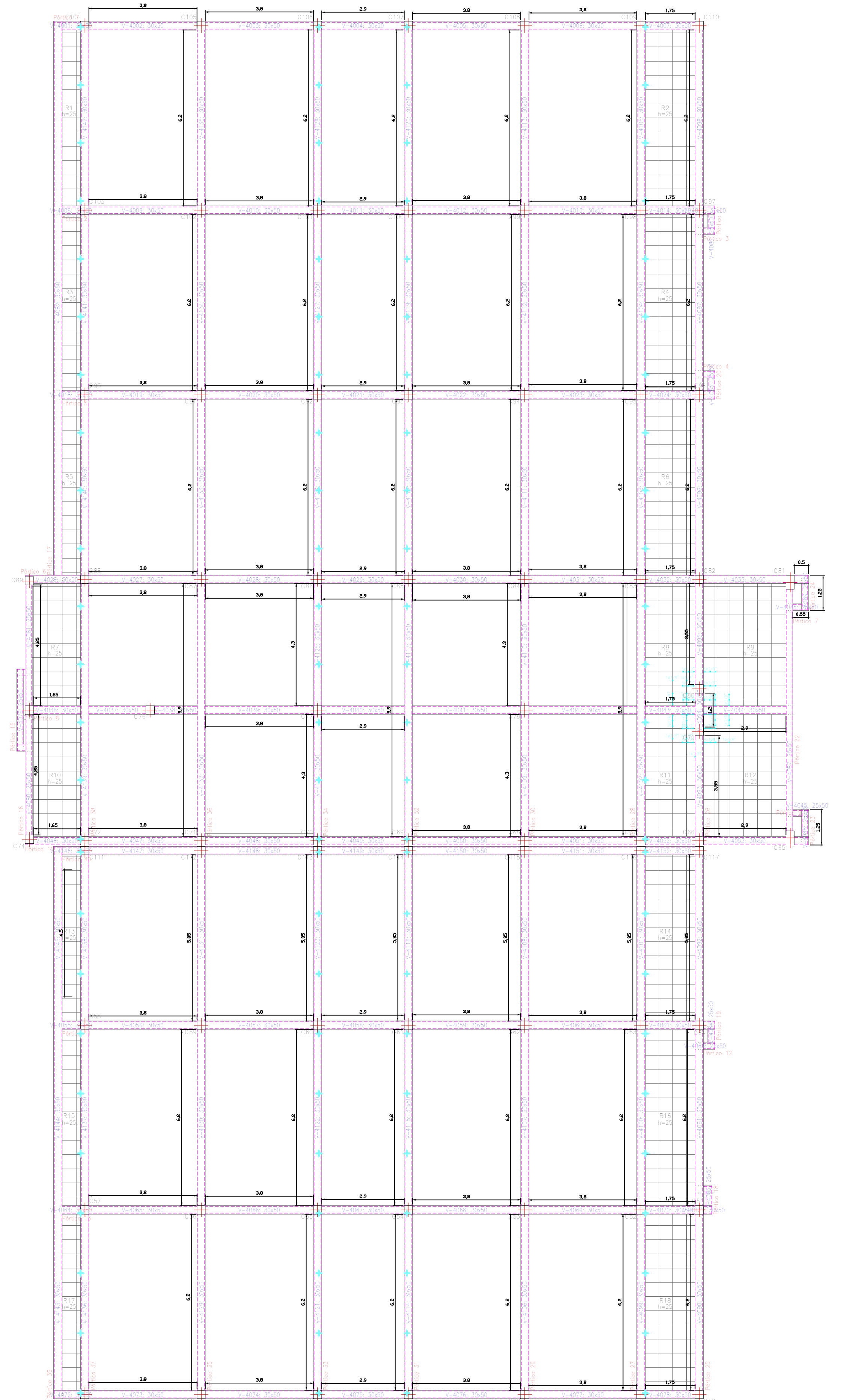
Avul modo de rampa
Replanteo
Hormigón: $f_c=250$
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Escala: 1:100



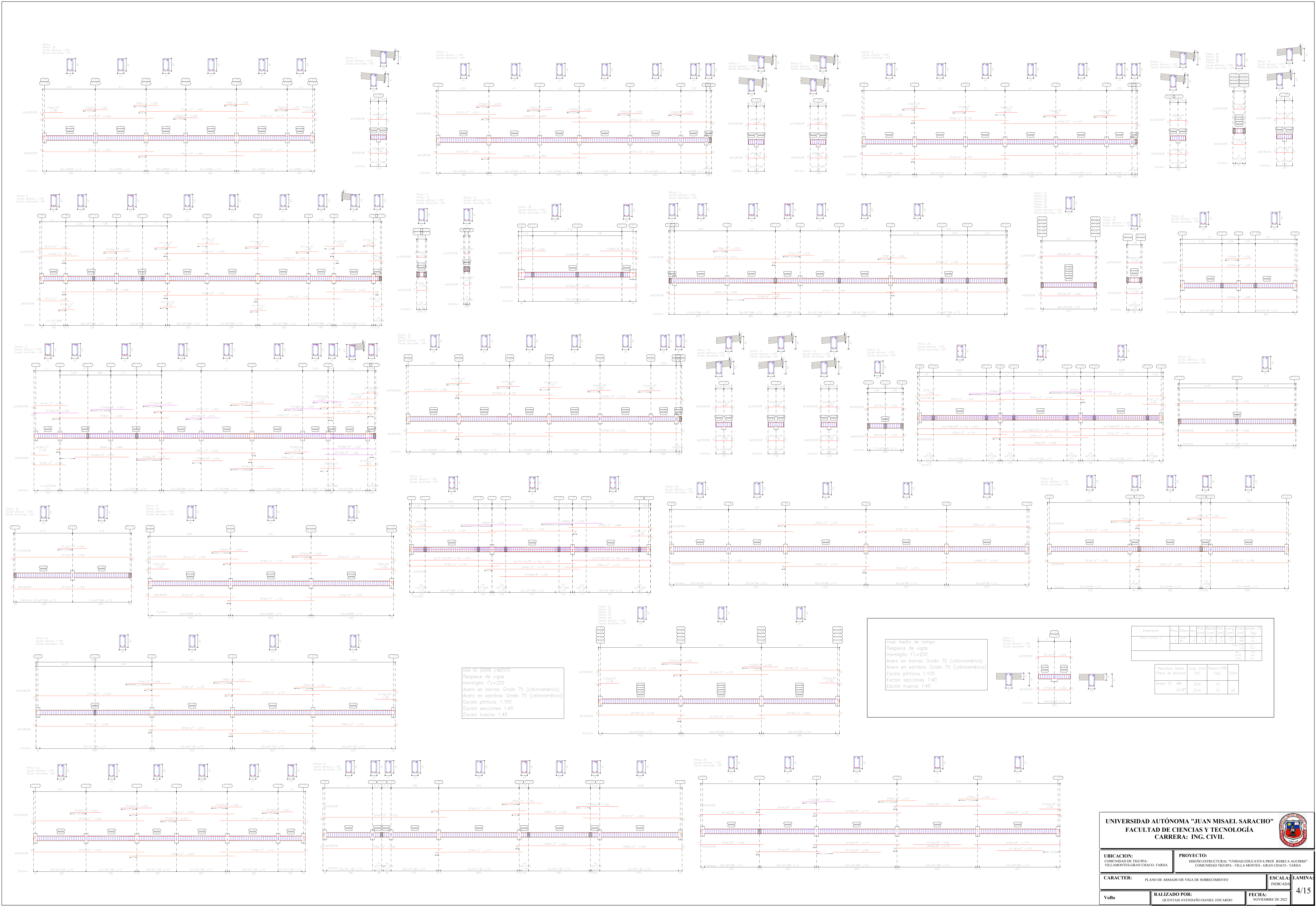
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Escala: 1:100

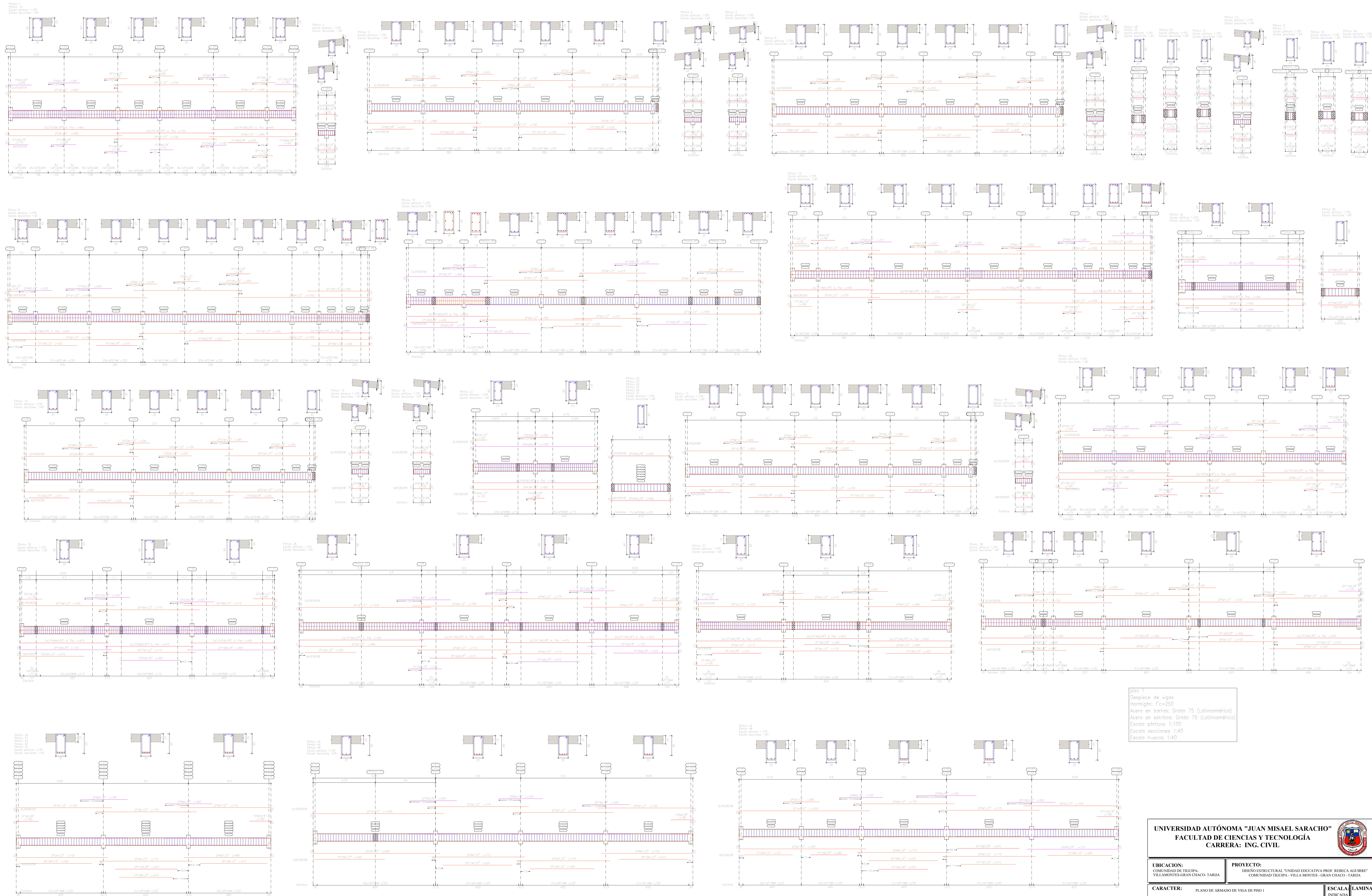


rampa
Replanteo
Hormigón: $f_c=250$
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Escala: 1:100



piso 3
Replanteo
Hormigón: $f_c=250$
Acero en forjados: Grado 75 (Latinoamérica)
Escala: 1:100





UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"
FACULTAD DE CIENCIAS Y TECNOLOGÍA
CARRERA: ING. CIVIL

UBICACIÓN:
COMUNIDAD DE TIGUPA-
VILLAMONTES-GRAN CHACO- TARIÁ

PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUPA- VILLA MONTES- GRAN CHACO- TARIÁ

CARACTER: PLANO DE ARMADO DE VIGA DE PISO 1

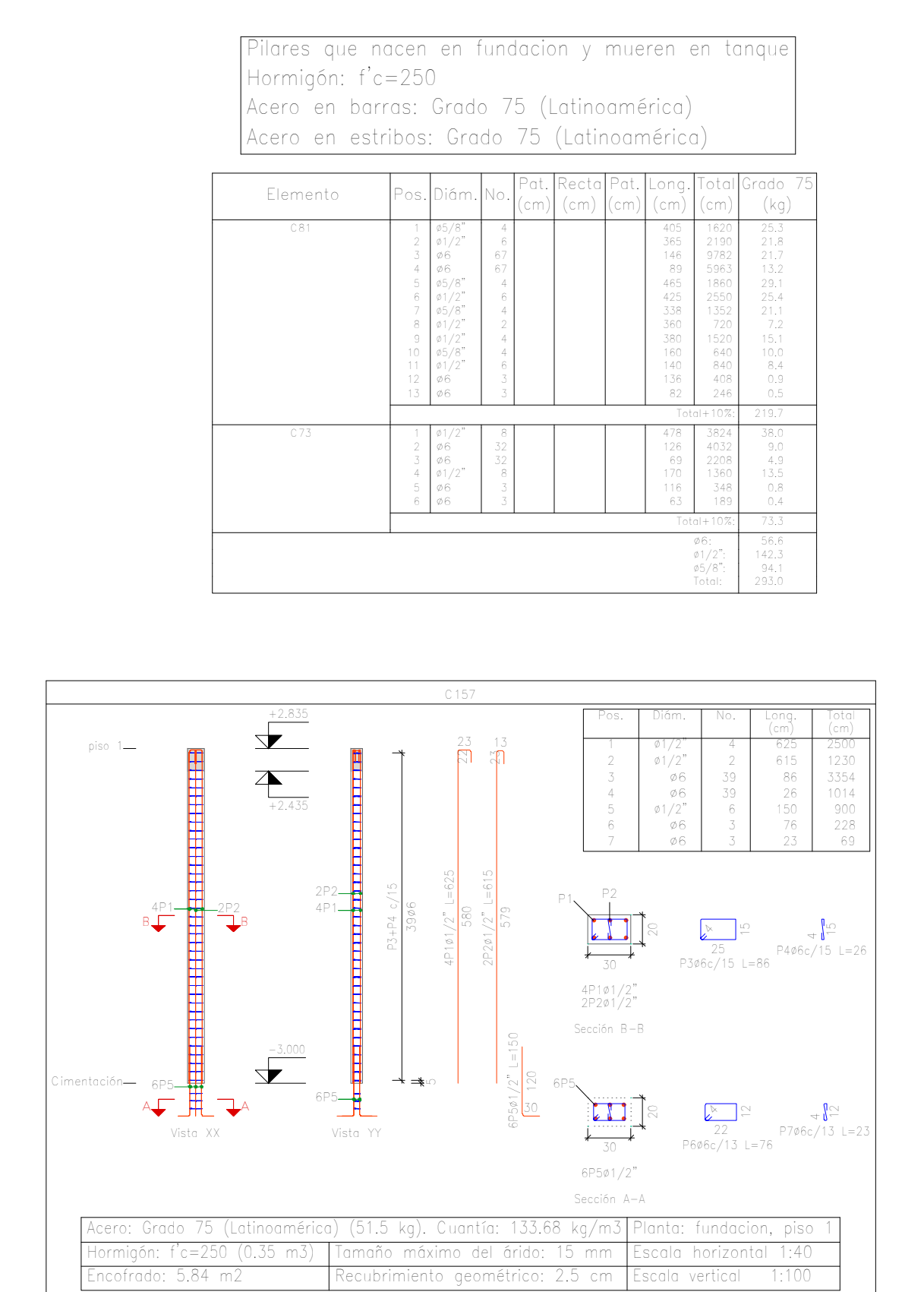
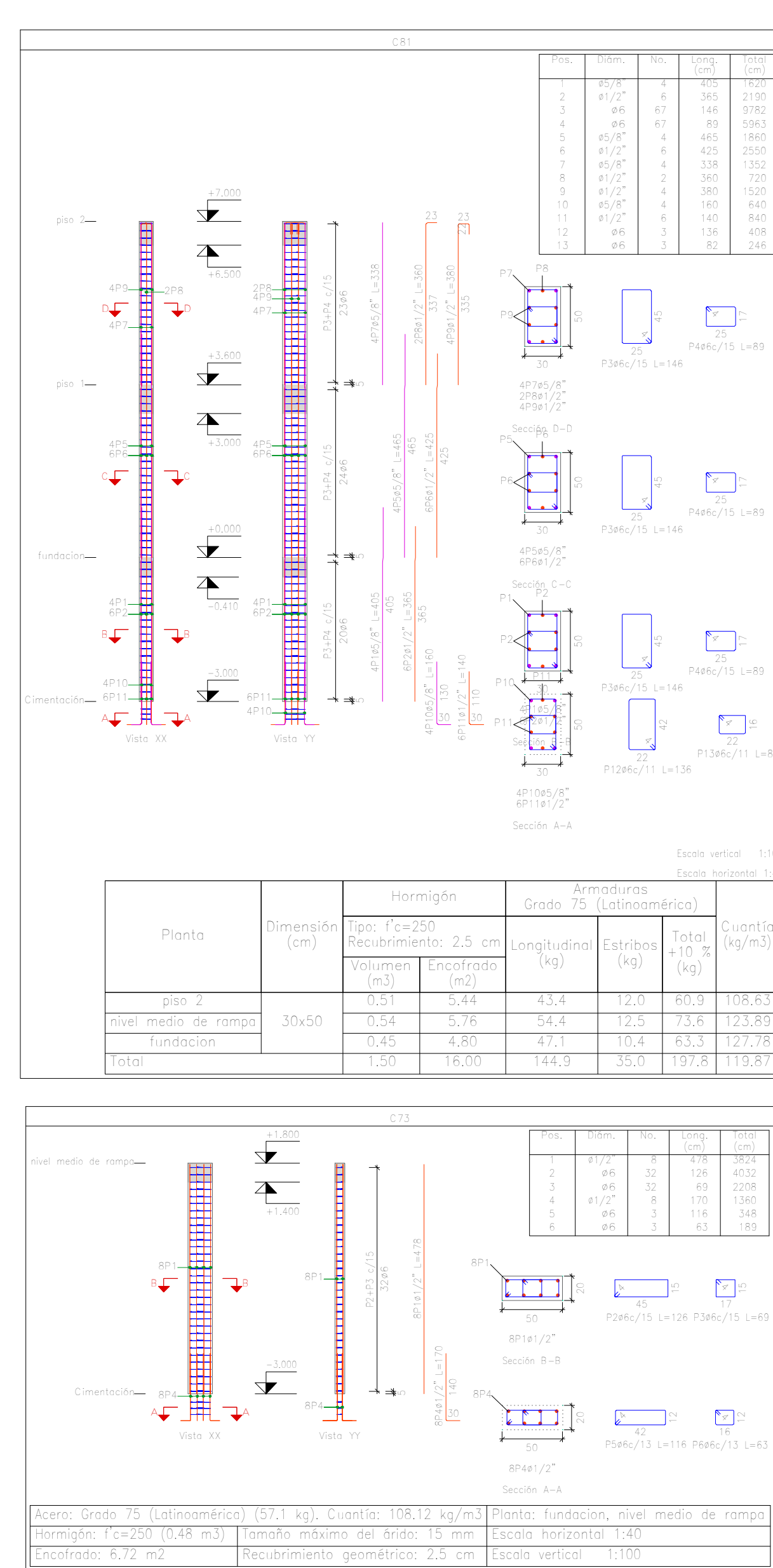
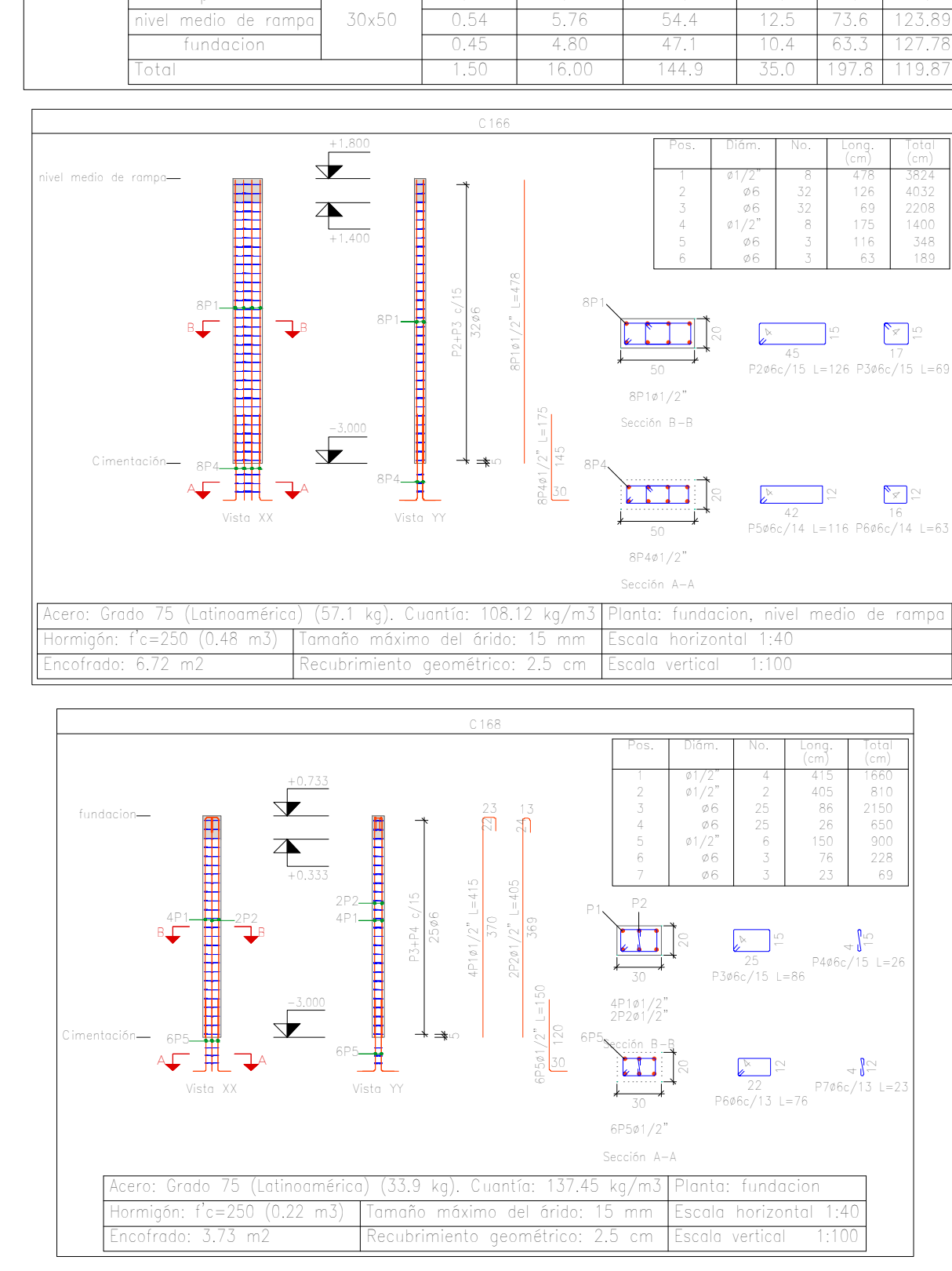
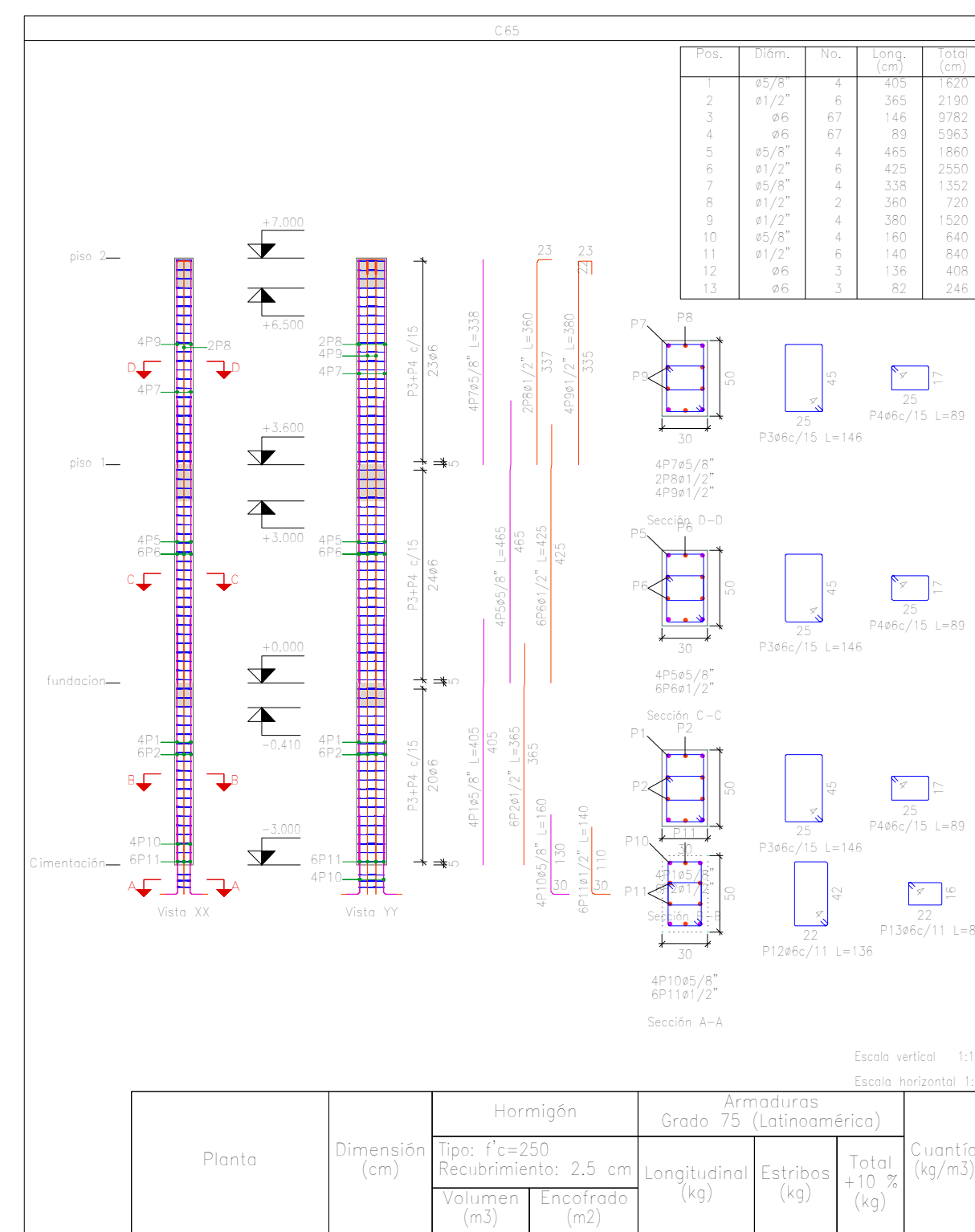
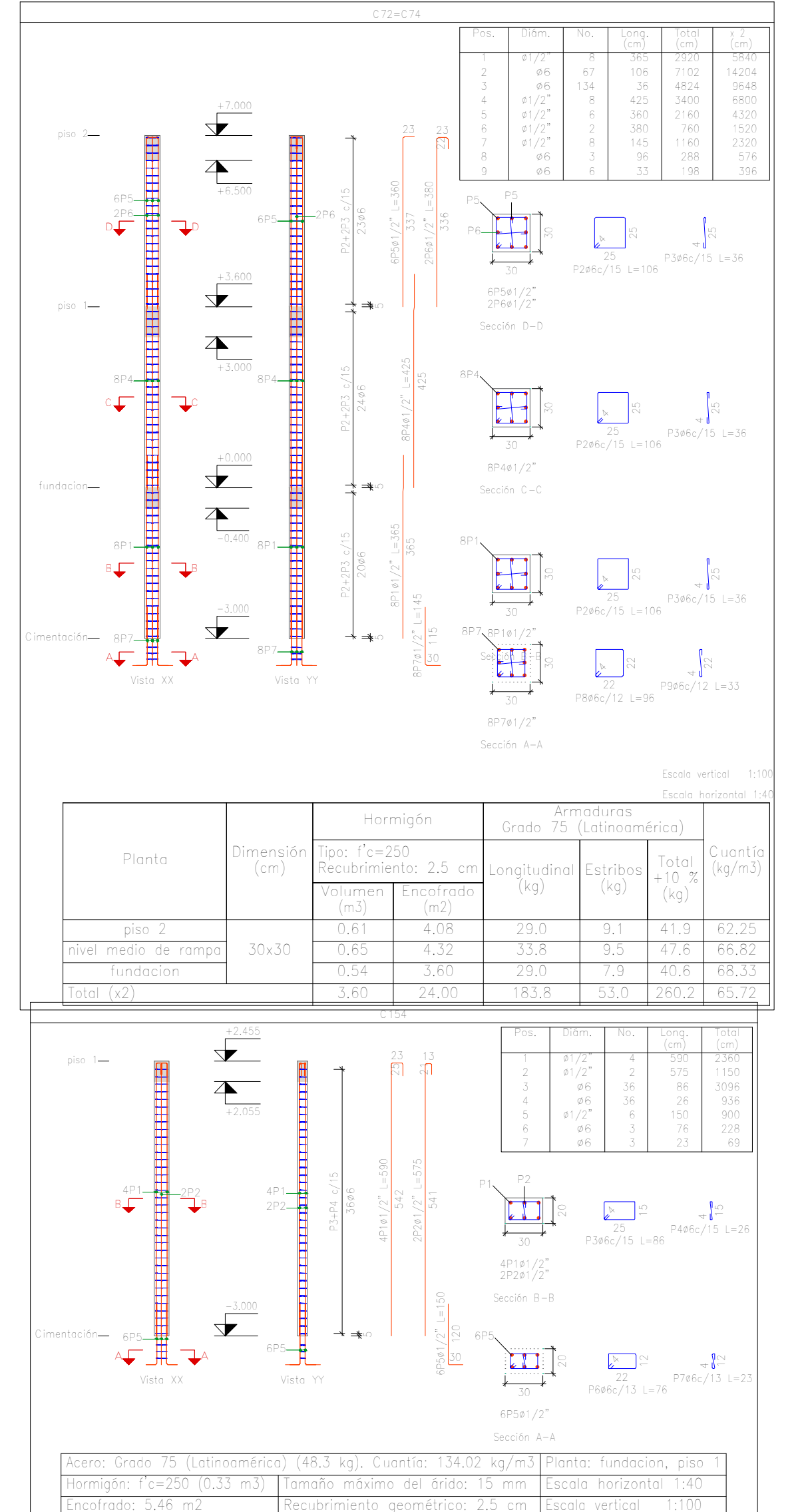
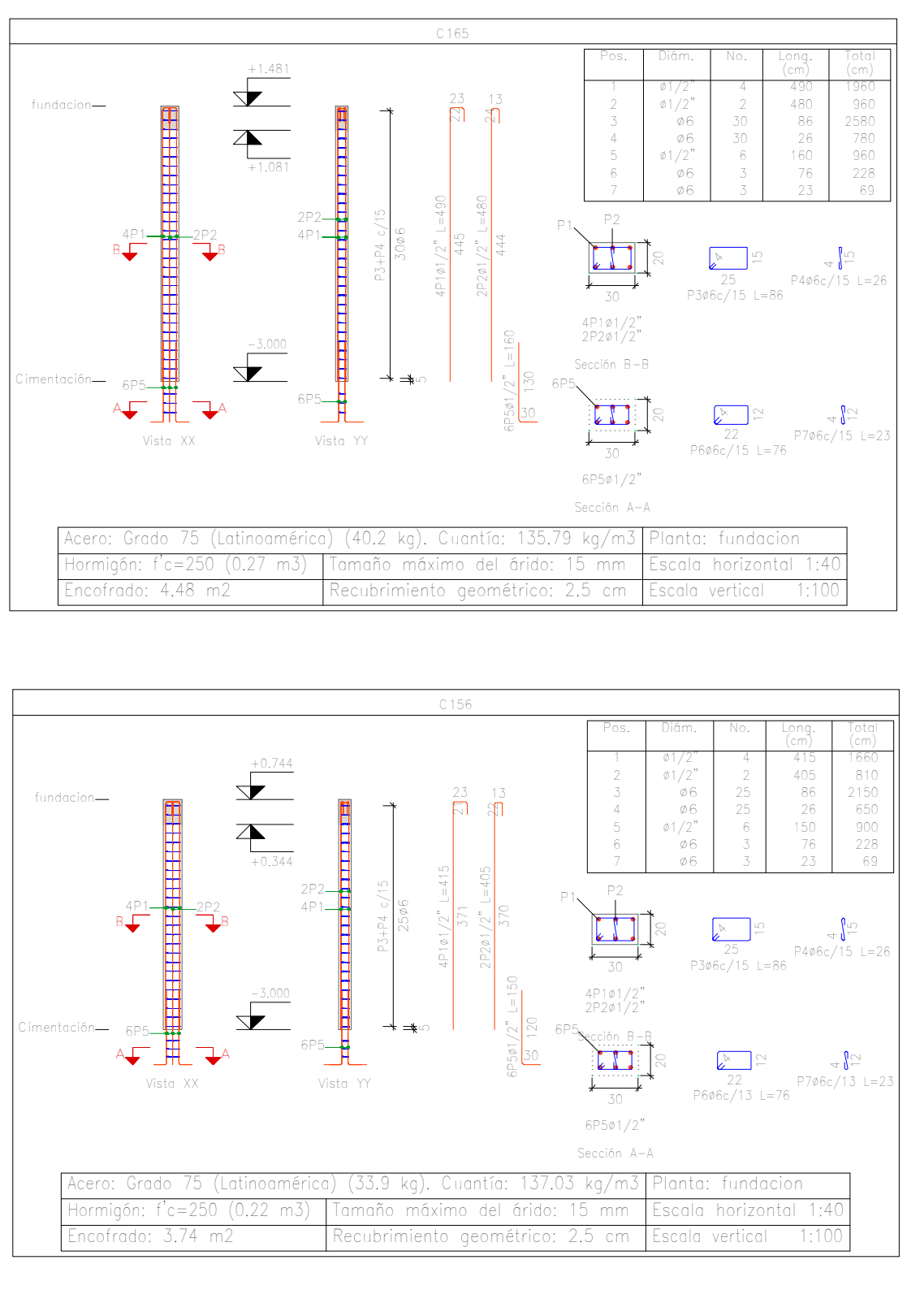
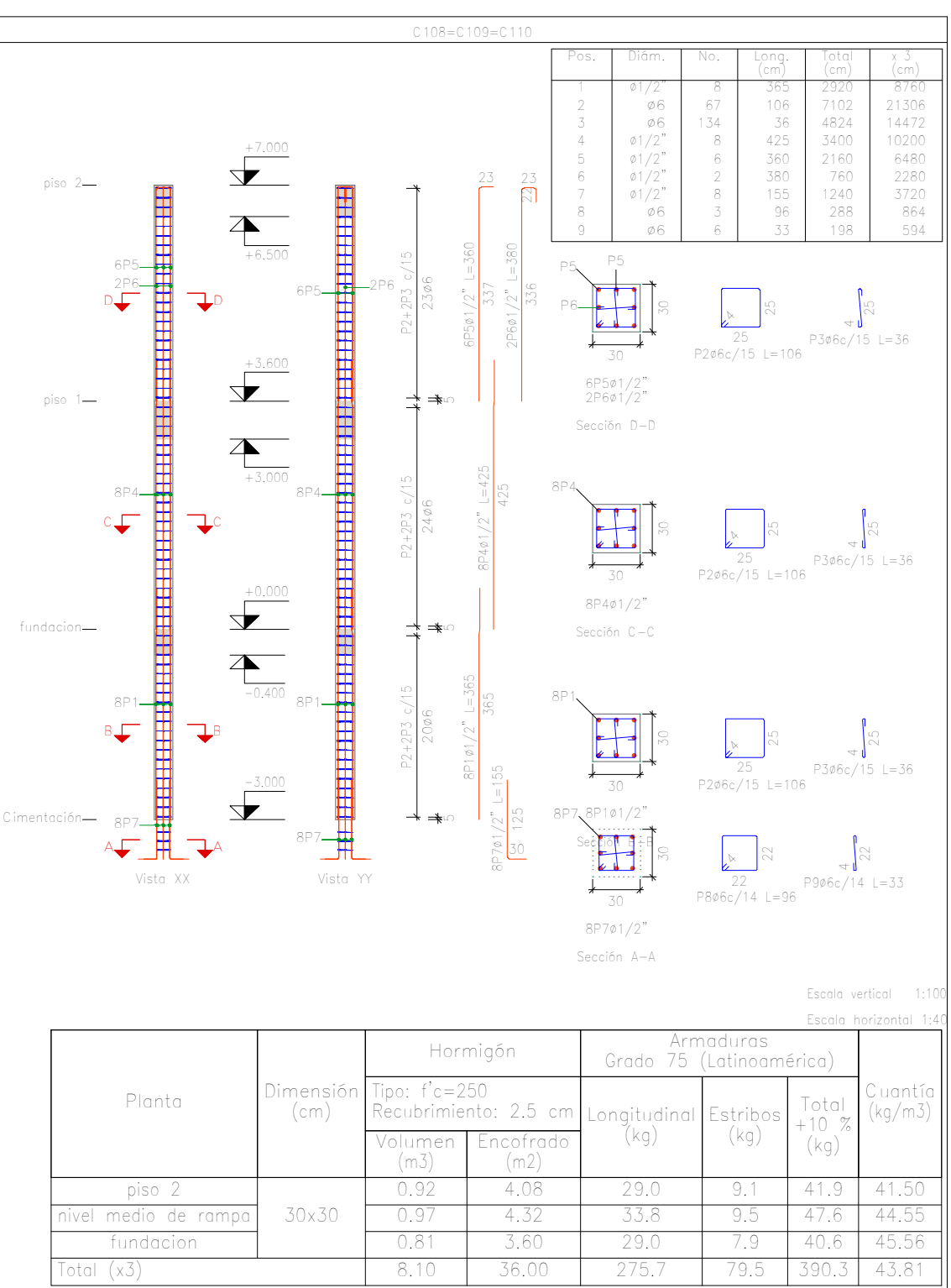
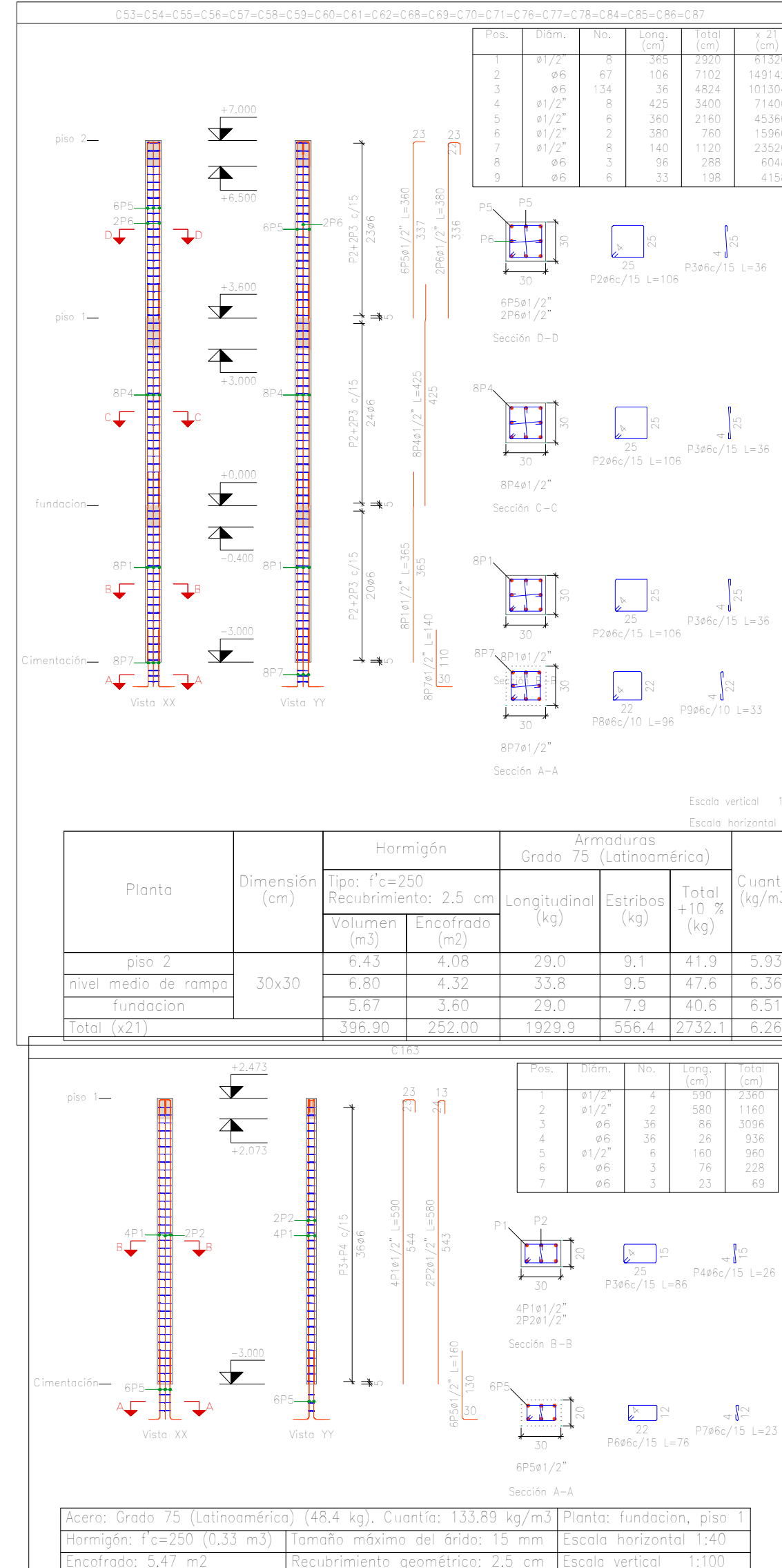
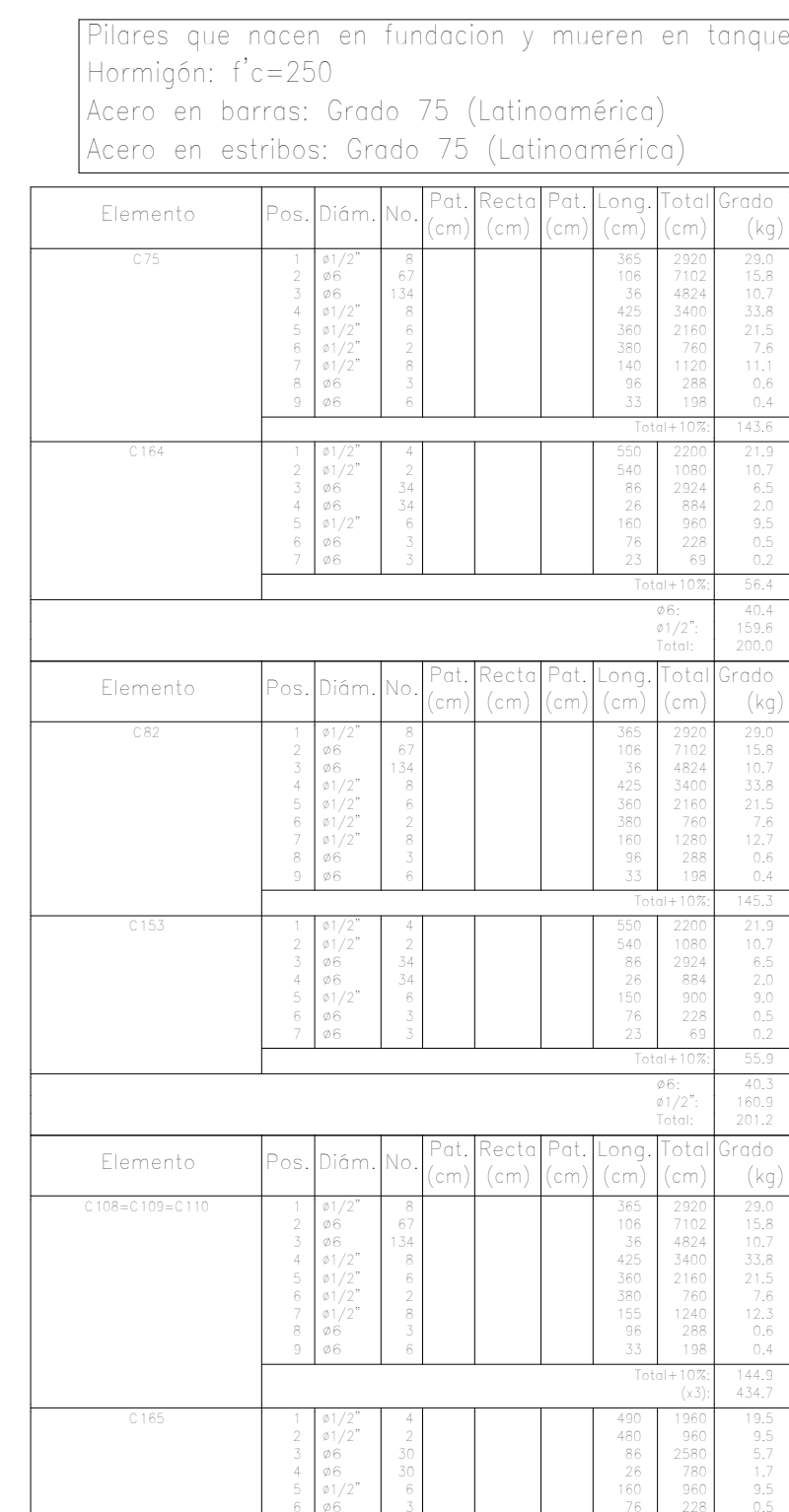
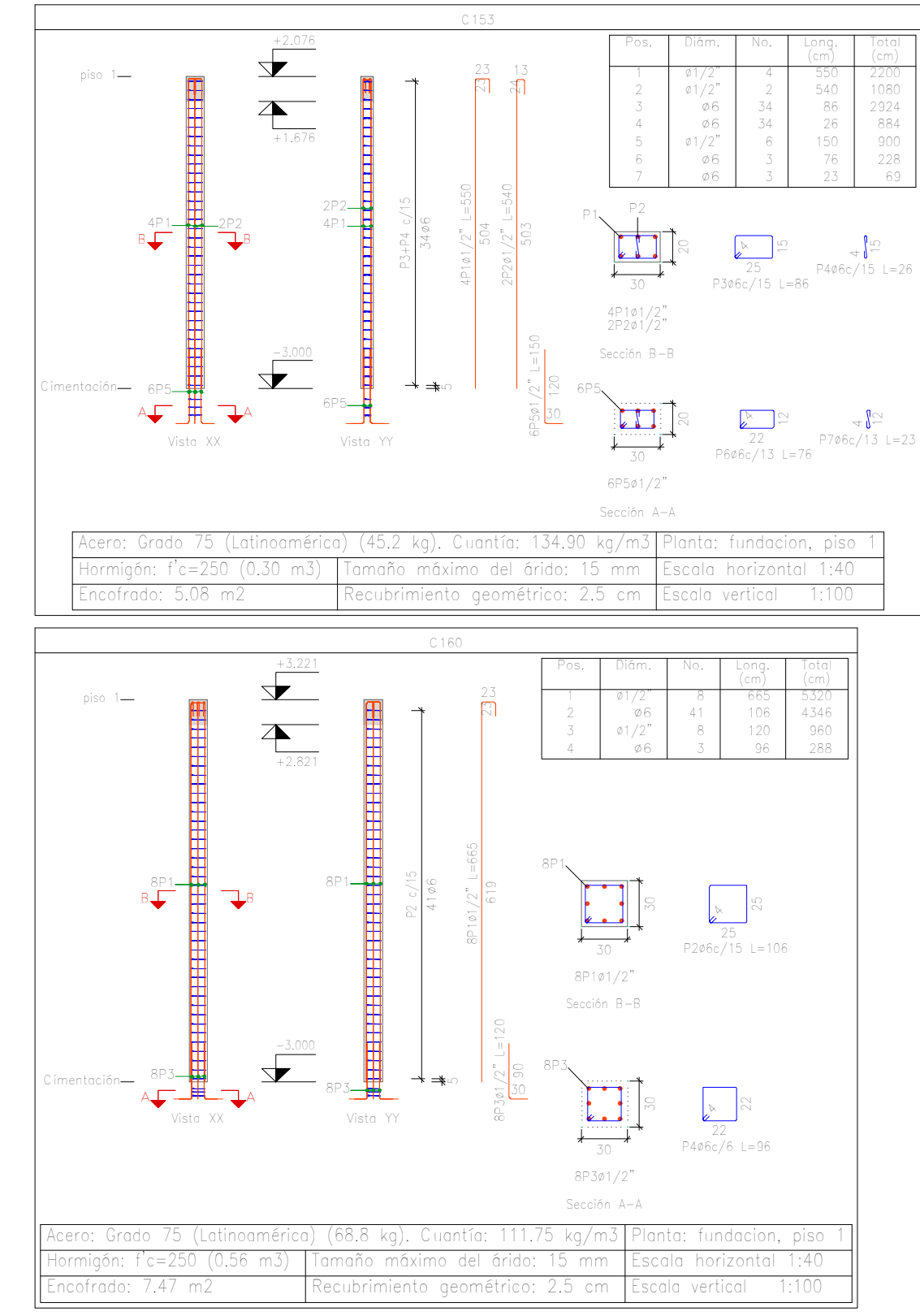
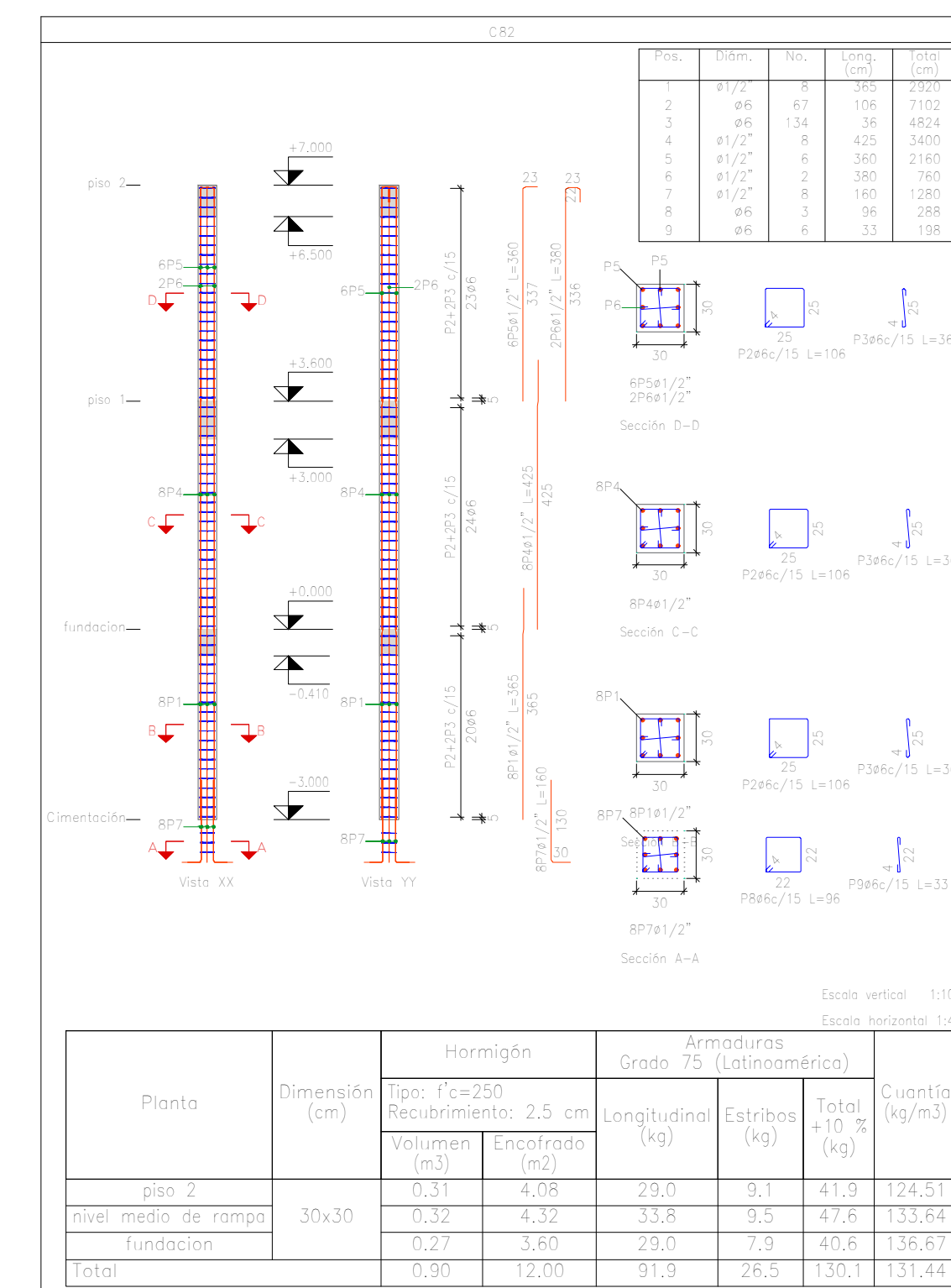
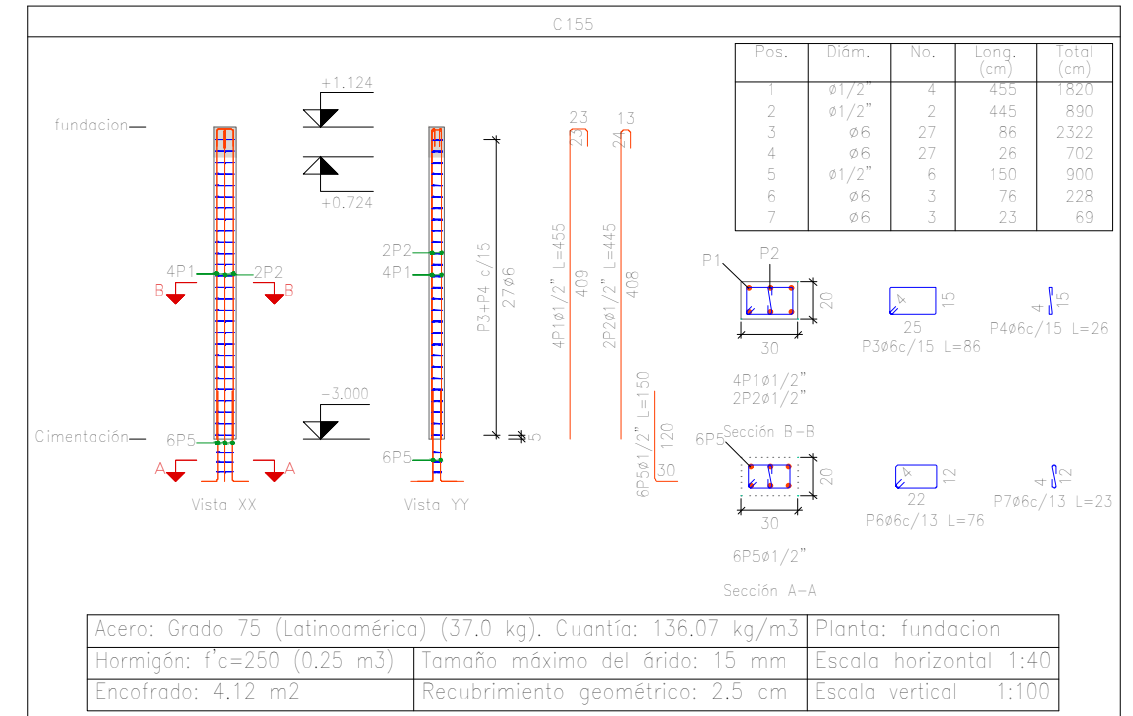
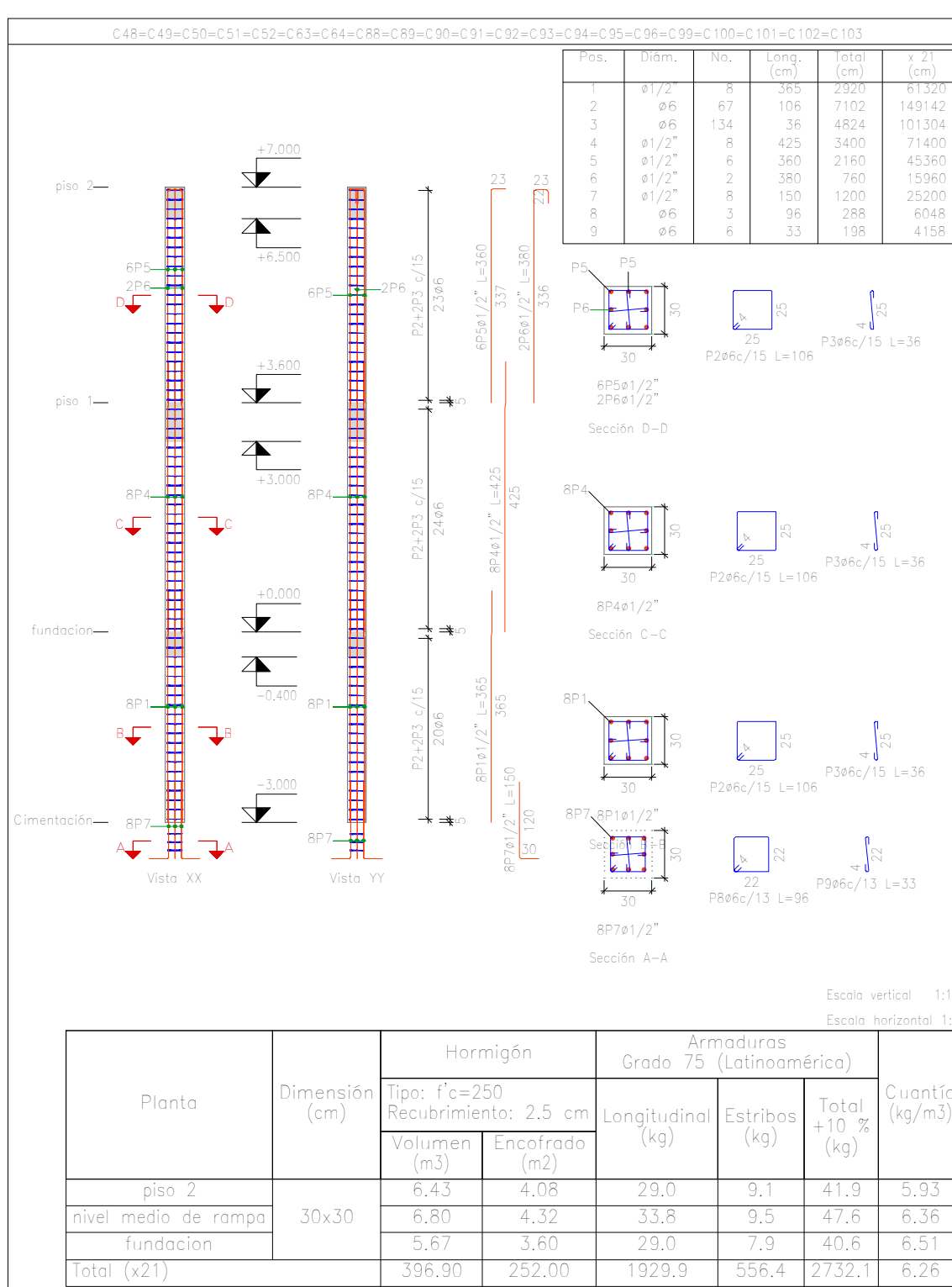
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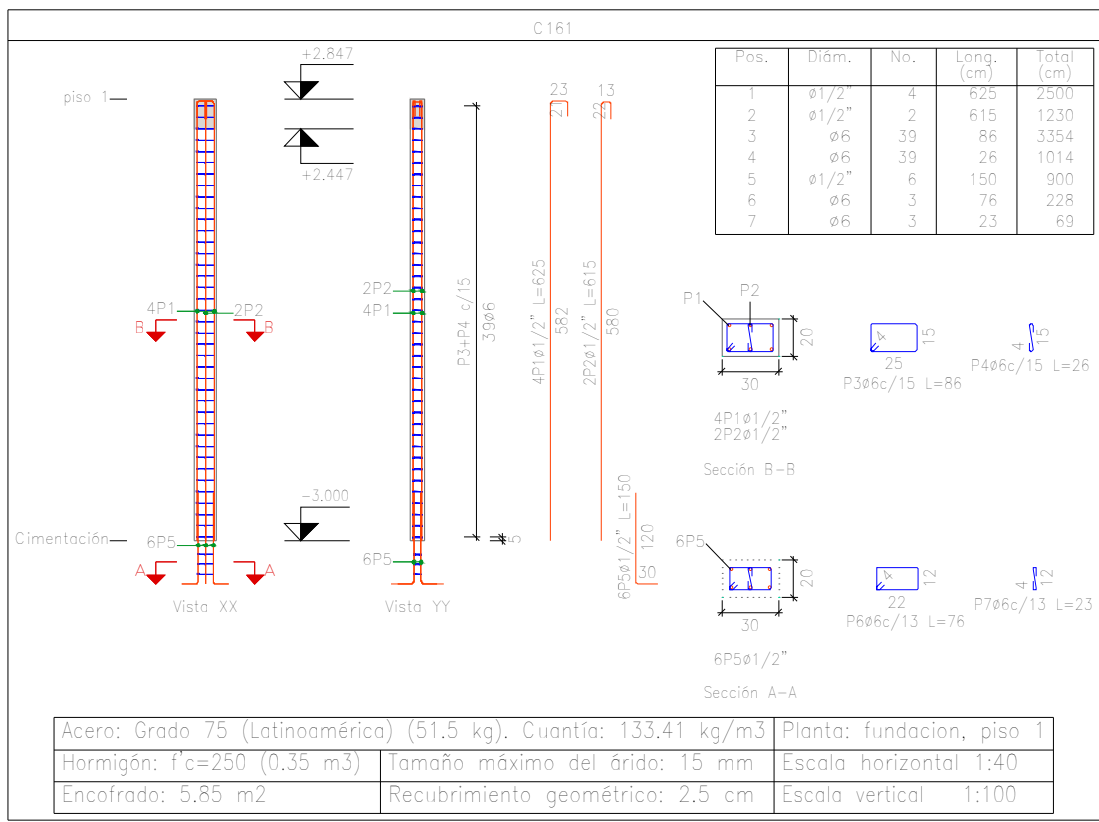
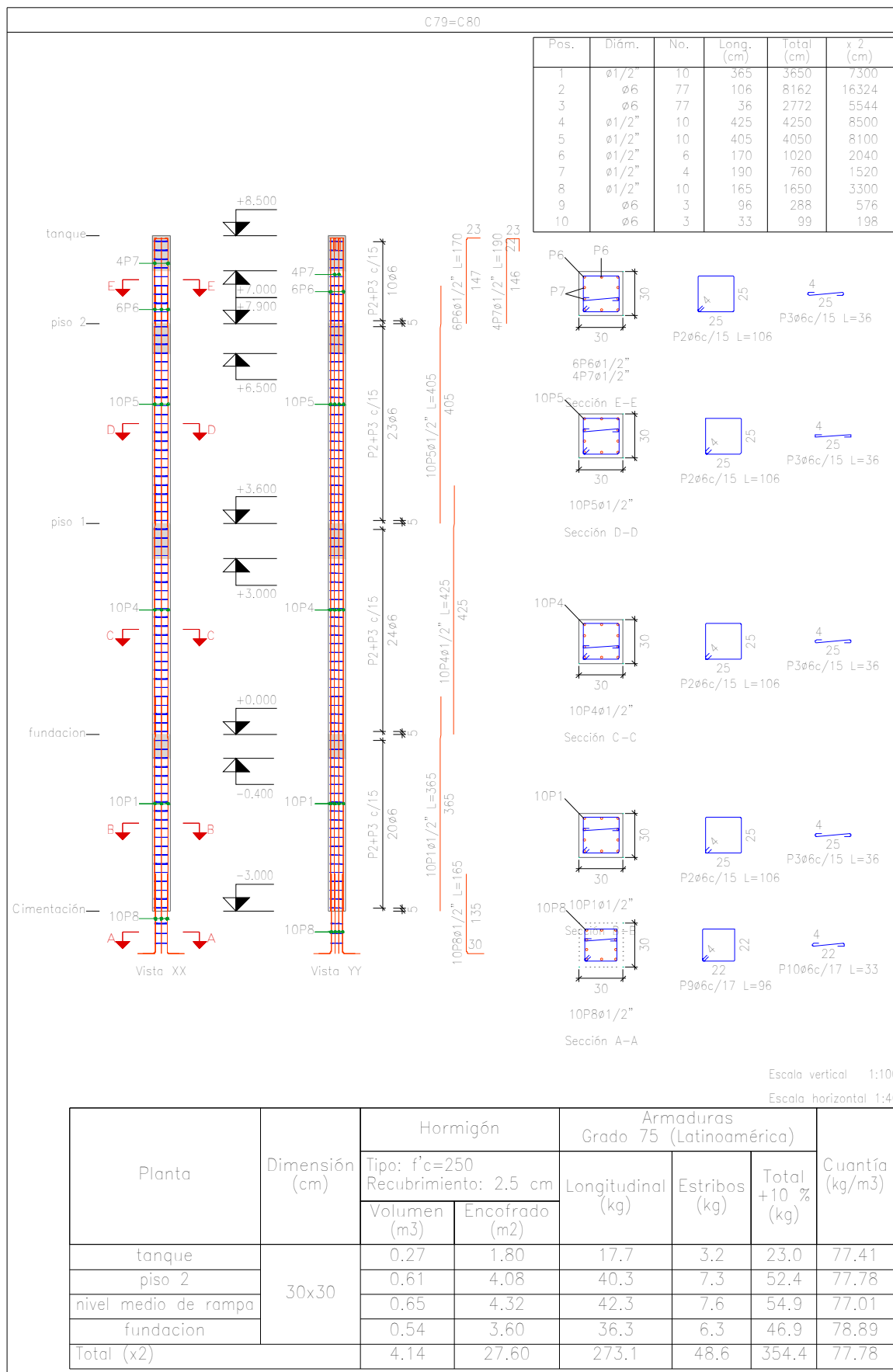
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QUINTANA AVENDAÑO DANIEL EDUARDO

ESCALA: LAMINA INDICADA

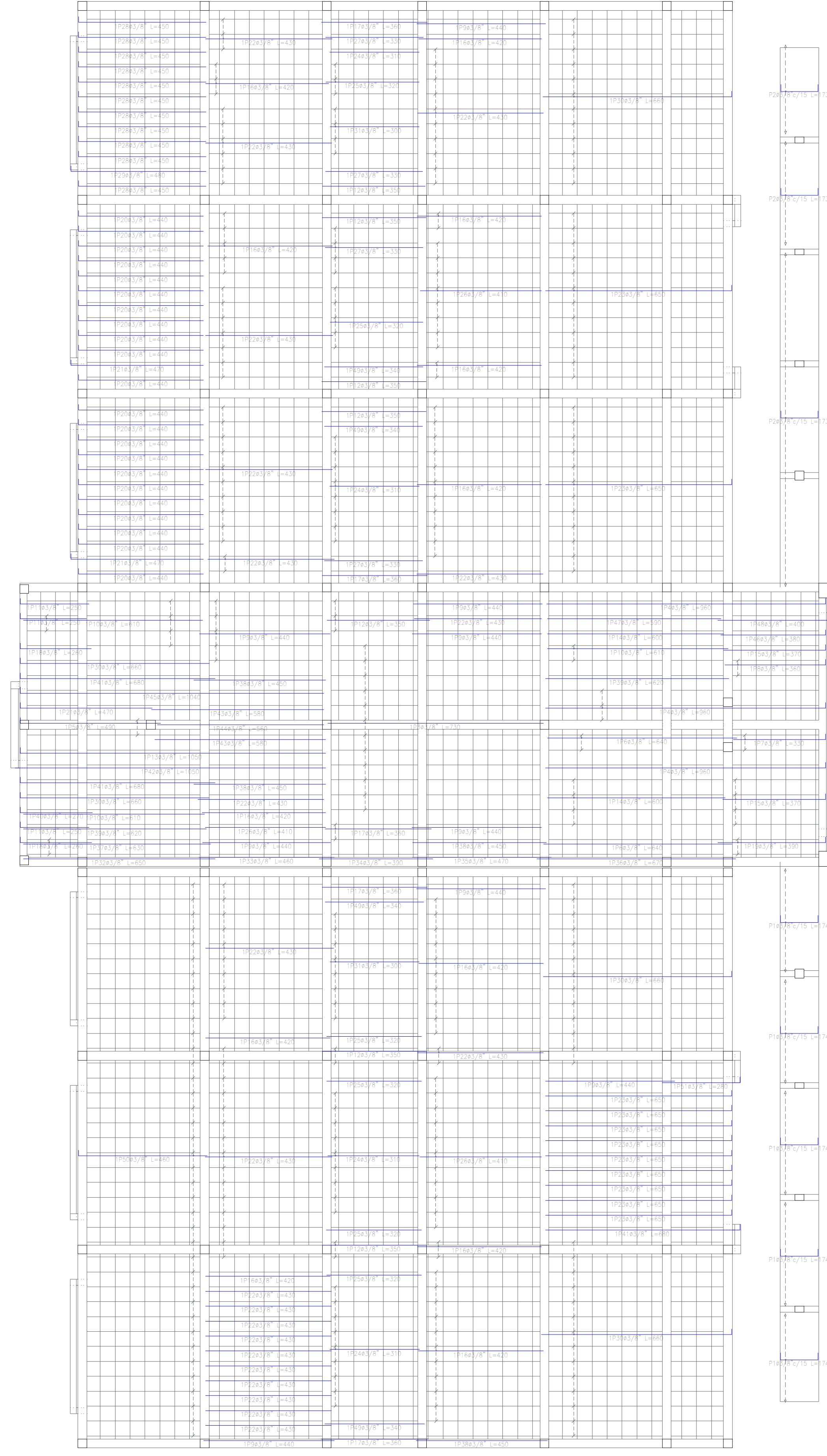
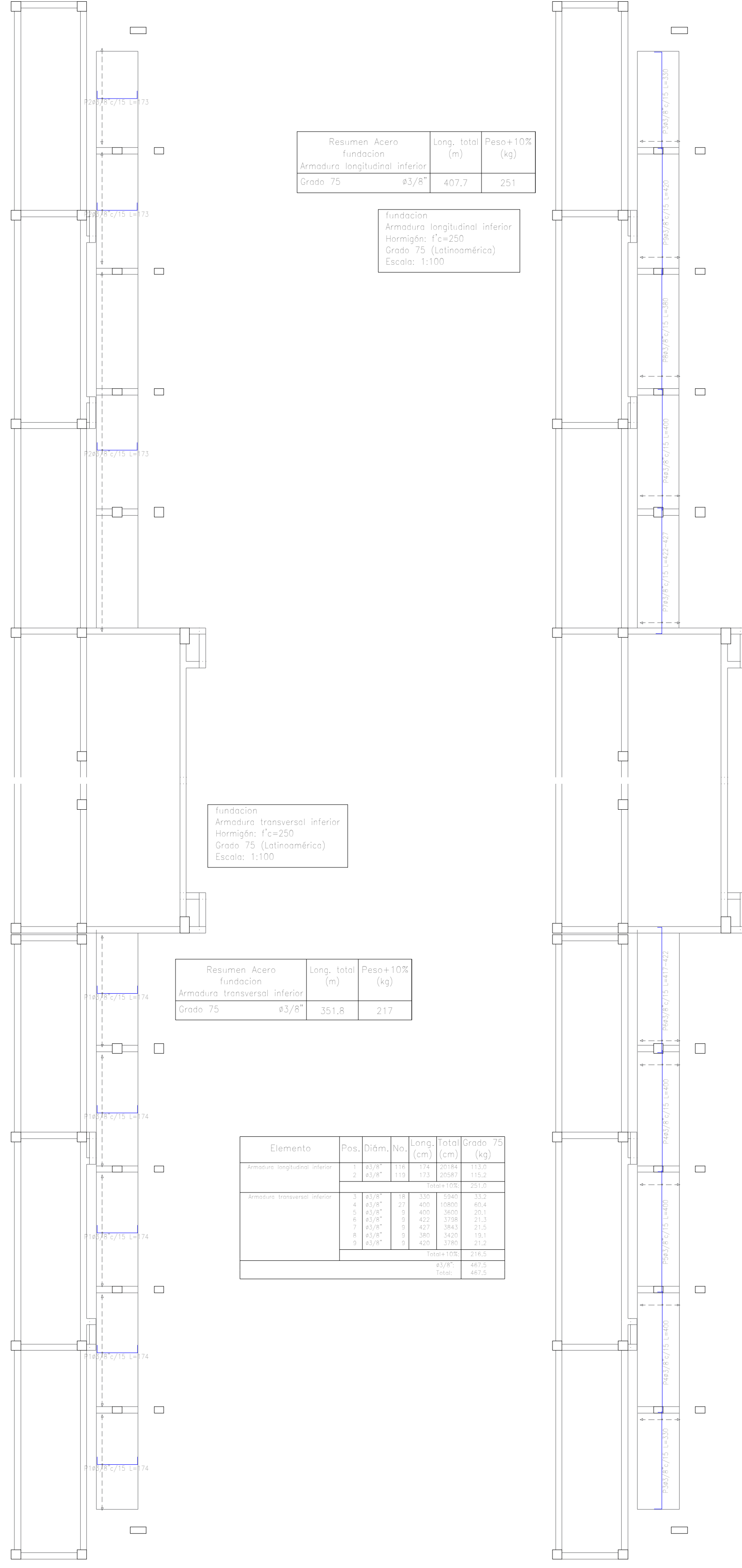
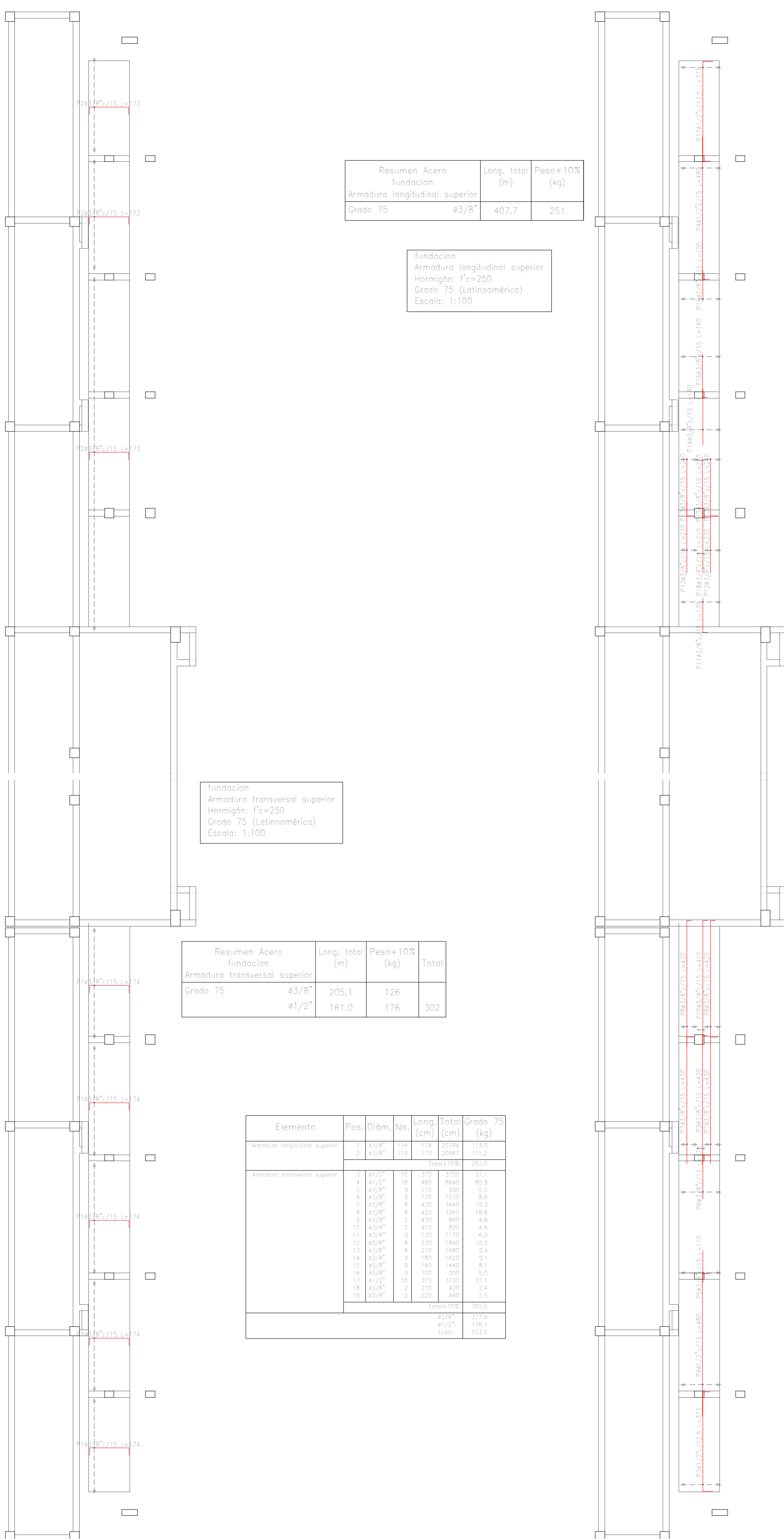
FECHA:
NOVIEMBRE DE 2022

5/15





Pilares que nacen en fundación y mueren en tanque									
Hormigón: f'c=250									
Acero en barras: Grado 75 (Latinoamérica)									
Acero en estribos: Grado 75 (Latinoamérica)									



Elemento	Pos.	Dim.	No.	Long. (cm)	Grado 75
Armadura longitudinal superior					
1	205.1	176	12	205.1	12.0
2	205.1	176	12	205.1	12.0
3	205.1	176	12	205.1	12.0
4	205.1	176	12	205.1	12.0
5	205.1	176	12	205.1	12.0
6	205.1	176	12	205.1	12.0
7	205.1	176	12	205.1	12.0
8	205.1	176	12	205.1	12.0
9	205.1	176	12	205.1	12.0
10	205.1	176	12	205.1	12.0
11	205.1	176	12	205.1	12.0
12	205.1	176	12	205.1	12.0
13	205.1	176	12	205.1	12.0
14	205.1	176	12	205.1	12.0
15	205.1	176	12	205.1	12.0
16	205.1	176	12	205.1	12.0
17	205.1	176	12	205.1	12.0
18	205.1	176	12	205.1	12.0
19	205.1	176	12	205.1	12.0
20	205.1	176	12	205.1	12.0
21	205.1	176	12	205.1	12.0
22	205.1	176	12	205.1	12.0
23	205.1	176	12	205.1	12.0
24	205.1	176	12	205.1	12.0
25	205.1	176	12	205.1	12.0
26	205.1	176	12	205.1	12.0
27	205.1	176	12	205.1	12.0
28	205.1	176	12	205.1	12.0
29	205.1	176	12	205.1	12.0
30	205.1	176	12	205.1	12.0
31	205.1	176	12	205.1	12.0
32	205.1	176	12	205.1	12.0
33	205.1	176	12	205.1	12.0
34	205.1	176	12	205.1	12.0
35	205.1	176	12	205.1	12.0
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37	205.1	176	12	205.1	12.0
38	205.1	176	12	205.1	12.0
39	205.1	176	12	205.1	12.0
40	205.1	176	12	205.1	12.0
41	205.1	176	12	205.1	12.0
42	205.1	176	12	205.1	12.0
43	205.1	176	12	205.1	12.0
44	205.1	176	12	205.1	12.0
45	205.1	176	12	205.1	12.0
46	205.1	176	12	205.1	12.0
47	205.1	176	12	205.1	12.0
48	205.1	176	12	205.1	12.0
49	205.1	176	12	205.1	12.0
50	205.1	176	12	205.1	12.0
Armadura transversal superior					
51	205.1	176	12	205.1	12.0
52	205.1	176	12	205.1	12.0
53	205.1	176	12	205.1	12.0
54	205.1	176	12	205.1	12.0
55	205.1	176	12	205.1	12.0
56	205.1	176	12	205.1	12.0
57	205.1	176	12	205.1	12.0
58	205.1	176	12	205.1	12.0
59	205.1	176	12	205.1	12.0
60	205.1	176	12	205.1	12.0
61	205.1	176	12	205.1	12.0
62	205.1	176	12	205.1	12.0
63	205.1	176	12	205.1	12.0
64	205.1	176	12	205.1	12.0
65	205.1	176	12	205.1	12.0
66	205.1	176	12	205.1	12.0
67	205.1	176	12	205.1	12.0
68	205.1	176	12	205.1	12.0
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76	205.1	176	12	205.1	12.0
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96	205.1	176	12	205.1	12.0
97	205.1	176	12	205.1	12.0
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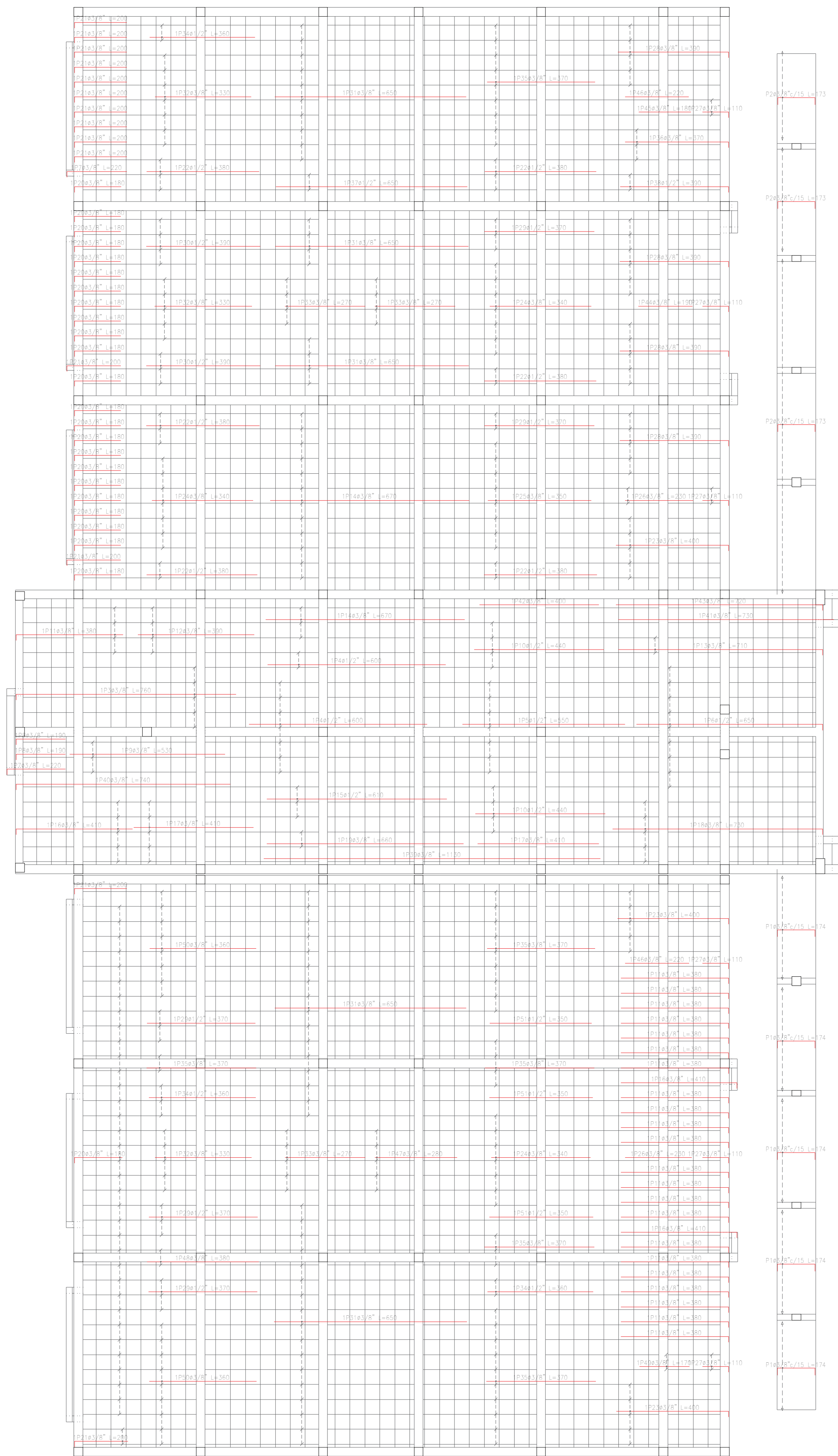
plano 1
Armadura transversal inferior
Hormigon: f'c=250
Grado 75 (Latinoamérica)
Escala: 1:100

Resumen Acero	Long. total (m)	Peso+10% (kg)	Total
plano 1	2102.3	1294	
Armadura transversal inferior	214.2	235	
Grado 75	214.2	235	1529

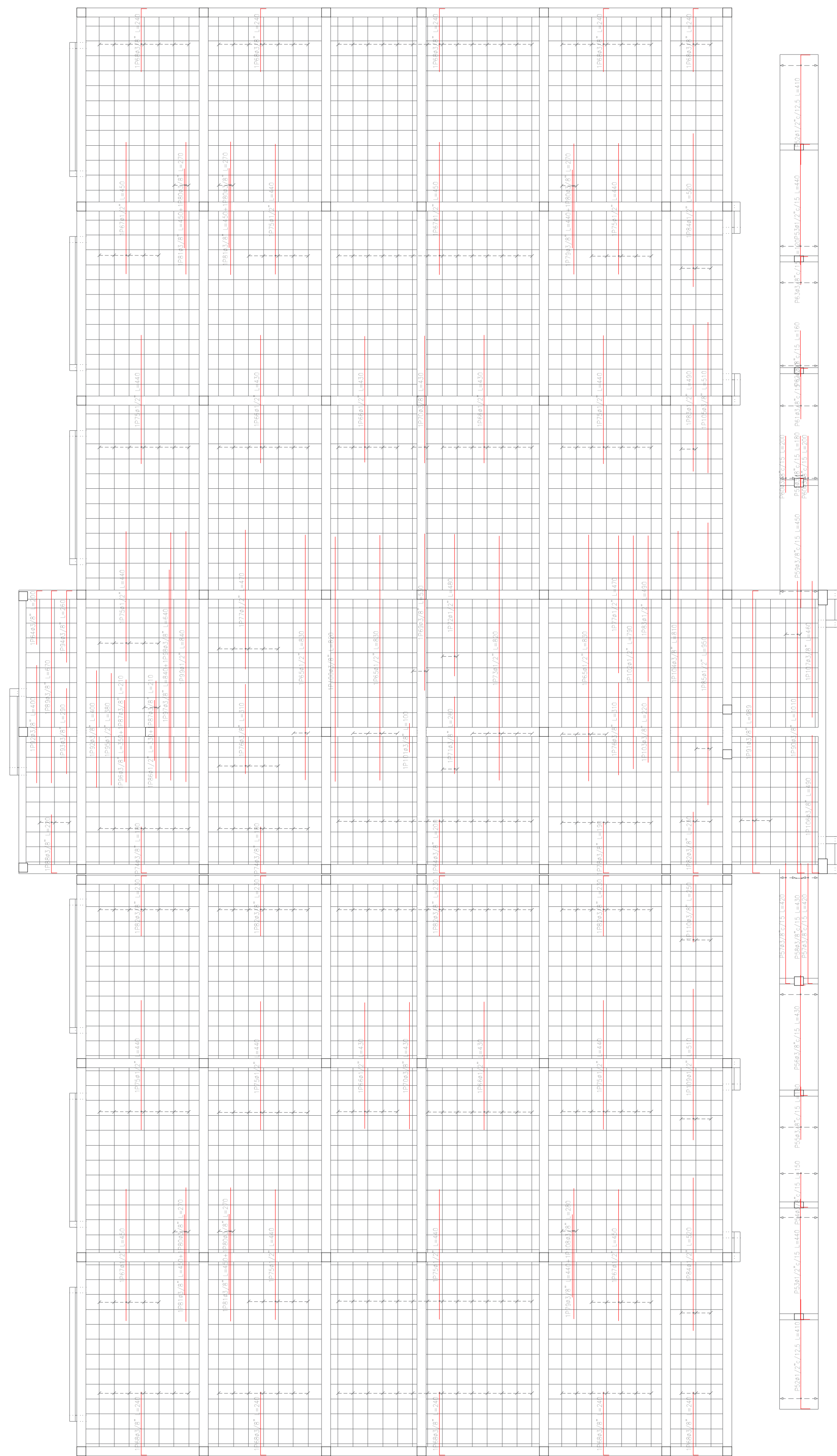
Resumen Acero piso 1 Armadura longitudinal inferior	Long. total (m)	Peso+10% (kg)
Grado 75 #3/8"	2618,8	1612

Resumen Acero piso 1	Long. total (m)	Peso+10% (kg)	Total
Armadura transversal superior			
Grado 75 #3/8"	828.6	510	
#1/2"	1001.6	1096	1606

Resumen Acero piso 1	Long. total (m)	Peso+10% (kg)	Total
Armadura longitudinal superior			
Grado 75	Ø3/8"	1896.6	1168
	Ø1/2"	397.1	434
			1602



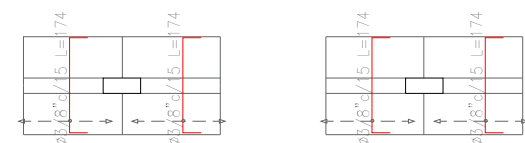
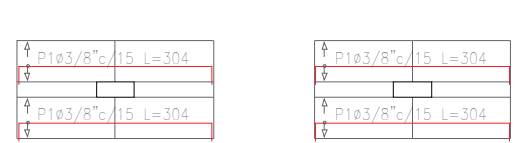
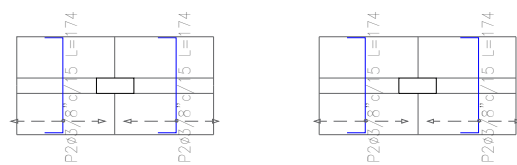
Diamond	Pos.	Index	No.	Long. (cm)	Form	Weight (mg)
Natural (negative space)	100	100	1	113	2000	151.2
	100	100	2	100	1000	100.0
	100	100	3	100	1000	100.0
	100	100	4	100	1000	100.0
	100	100	5	100	1000	100.0
	100	100	6	100	1000	100.0
	100	100	7	100	1000	100.0
	100	100	8	100	1000	100.0
	100	100	9	100	1000	100.0
	100	100	10	100	1000	100.0
	100	100	11	100	1000	100.0
	100	100	12	100	1000	100.0
	100	100	13	100	1000	100.0
	100	100	14	100	1000	100.0
	100	100	15	100	1000	100.0
	100	100	16	100	1000	100.0
	100	100	17	100	1000	100.0
	100	100	18	100	1000	100.0
	100	100	19	100	1000	100.0
	100	100	20	100	1000	100.0
Synthetic (negative space)	100	100	21	100	1000	100.0
	100	100	22	100	1000	100.0
	100	100	23	100	1000	100.0
	100	100	24	100	1000	100.0
	100	100	25	100	1000	100.0
	100	100	26	100	1000	100.0
	100	100	27	100	1000	100.0
	100	100	28	100	1000	100.0
	100	100	29	100	1000	100.0
	100	100	30	100	1000	100.0
	100	100	31	100	1000	100.0
	100	100	32	100	1000	100.0
	100	100	33	100	1000	100.0
	100	100	34	100	1000	100.0
	100	100	35	100	1000	100.0
	100	100	36	100	1000	100.0
	100	100	37	100	1000	100.0
	100	100	38	100	1000	100.0
	100	100	39	100	1000	100.0
	100	100	40	100	1000	100.0
Natural (positive space)	100	100	41	100	1000	100.0
	100	100	42	100	1000	100.0
	100	100	43	100	1000	100.0
	100	100	44	100	1000	100.0
	100	100	45	100	1000	100.0
	100	100	46	100	1000	100.0
	100	100	47	100	1000	100.0
	100	100	48	100	1000	100.0
	100	100	49	100	1000	100.0
	100	100	50	100	1000	100.0
	100	100	51	100	1000	100.0
	100	100	52	100	1000	100.0
	100	100	53	100	1000	100.0
	100	100	54	100	1000	100.0
	100	100	55	100	1000	100.0
	100	100	56	100	1000	100.0
	100	100	57	100	1000	100.0
	100	100	58	100	1000	100.0
	100	100	59	100	1000	100.0
	100	100	60	100	1000	100.0
Synthetic (positive space)	100	100	61	100	1000	100.0
	100	100	62	100	1000	100.0
	100	100	63	100	1000	100.0
	10	100	64	100	1000	100.0



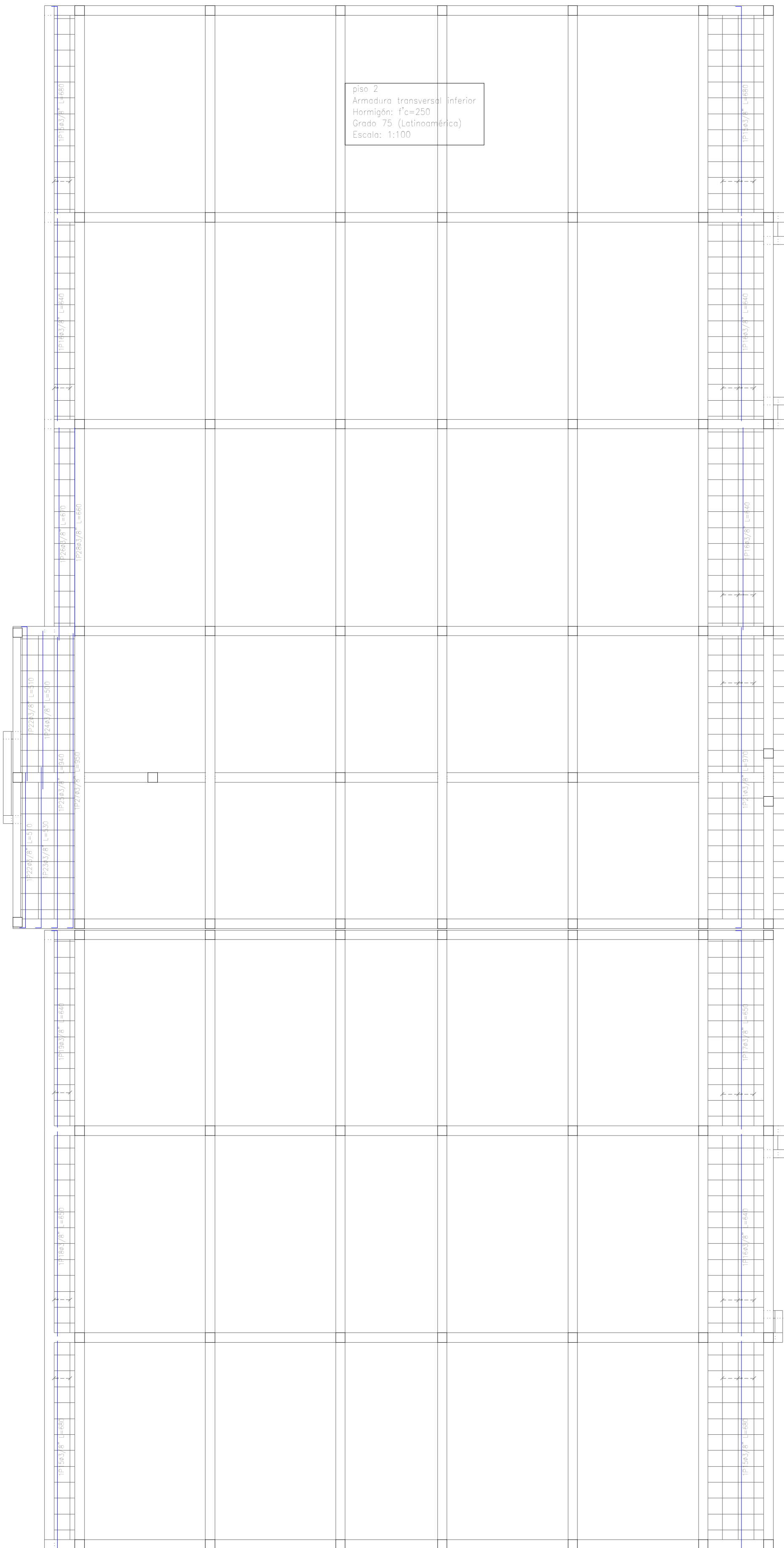
nivel medio de rampa Armadura transversal inferior Hormigón: f'c=250 Grado 75 (Latinoamérica) Escala: 1:100		
Resumen Acero nivel medio de rampa Armadura transversal inferior	Long. total (m)	Peso+10% (kg)
Grado 75	43/8"	39

nivel medio de rampa Armadura longitudinal superior Hormigón: f'c=250 Grado 75 (Latinoamérica) Escala: 1:100		
Resumen Acero nivel medio de rampa Armadura longitudinal superior	Long. total (m)	Peso+10% (kg)
Grado 75	#3/8"	48,6
		30

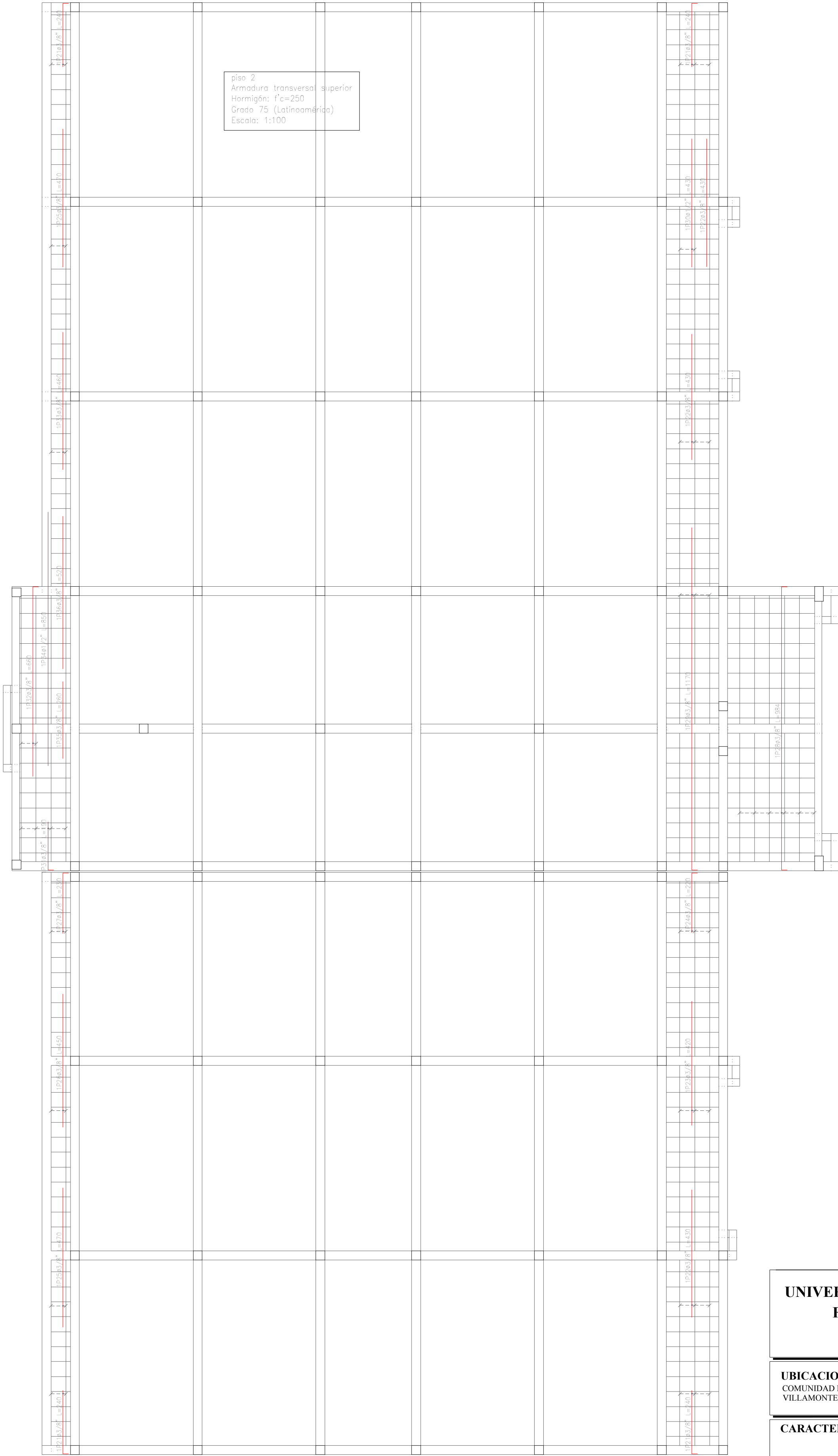
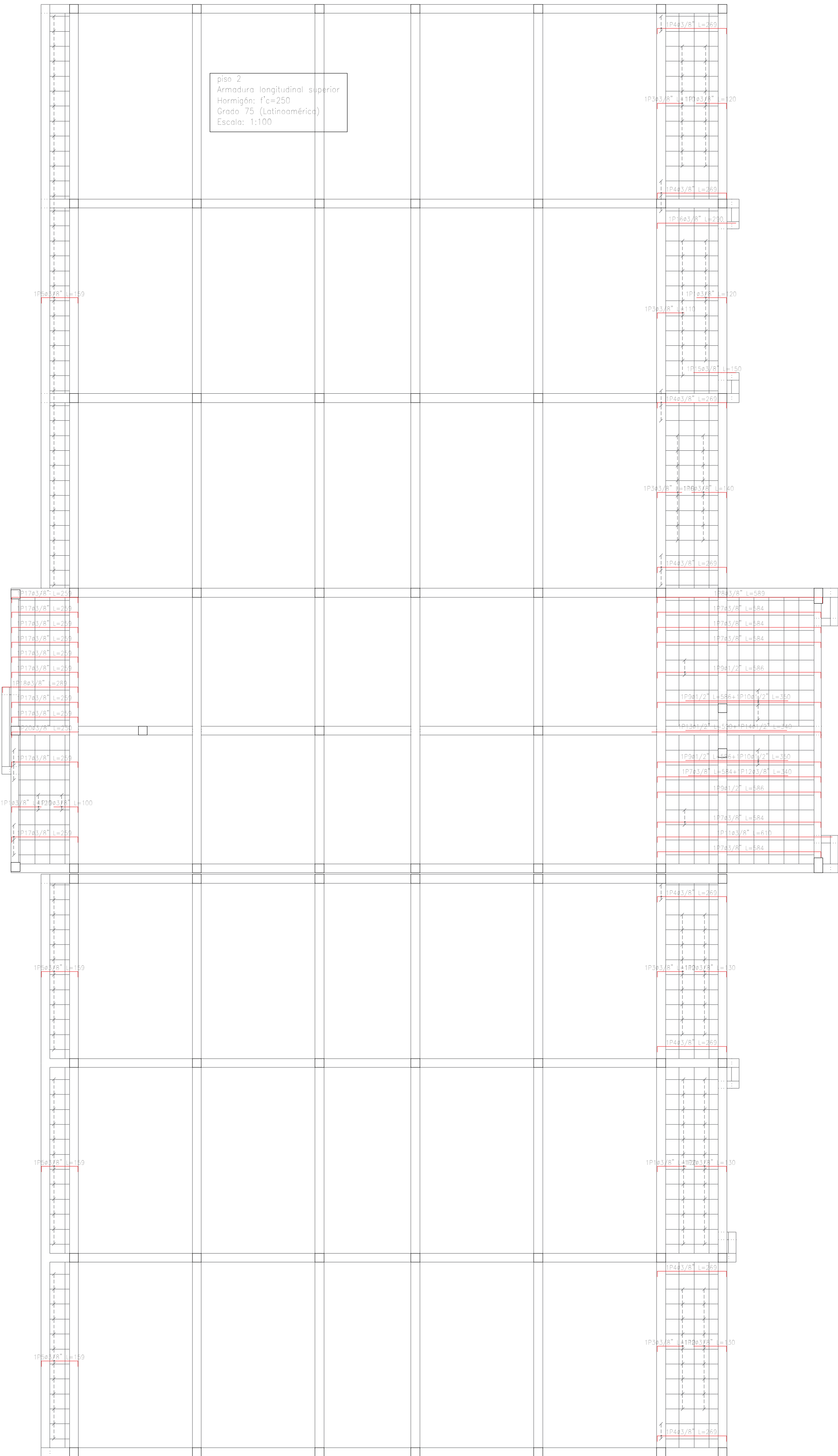
nivel medio de rampa Armadura transversal superior Hormigón: f'c=250 Grado 75 (Latinoamérica) Escala: 1:100		
Resumen Acero nivel medio de rampa Armadura transversal superior	Long. total (m)	Peso+10% (kg)
Grado 75	43/8*	39



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armado longitudinal superior	1	85/8"	18	204	4884	27,2
	Total + 10%					23,9
Armado transversal superior	2	85/8"	28	174	8234	33,1
	Total + 10%					38,6
85/8"						68,5
Total:						68,5



12/15



Resumen Acero	Long. total	Peso+10%	Total
piso 2	(m)	(kg)	
Armadura longitudinal superior			
Grado 75	407.4	251	332
	73.7	81	

Resumen Acero	Long. total	Peso+10%	Total
piso 2	(m)	(kg)	
Armadura transversal superior			
Grado 75	237.6	146	165
	17.1	19	

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura longitudinal superior	1	ø3/8"	32	120	3840	21.2
	2	ø3/8"	30	130	3900	21.8
	3	ø3/8"	46	110	5060	27.7
	4	ø3/8"	17	265	4505	25.6
	5	ø3/8"	16	109	1744	9.7
	6	ø3/8"	8	140	1120	6.3
	7	ø3/8"	1	584	584	3.3
	8	ø3/8"	1	584	584	3.3
	9	ø1/2"	8	584	4672	26.8
	10	ø1/2"	6	355	2130	12.4
	11	ø3/8"	1	610	610	3.4
	12	ø3/8"	1	345	345	1.9
	13	ø1/2"	1	565	565	3.2
	14	ø1/2"	1	345	345	1.9
	15	ø3/8"	1	155	155	0.8
	16	ø3/8"	1	250	250	1.4
	17	ø3/8"	14	255	3570	20.3
	18	ø3/8"	1	285	285	1.6
	19	ø3/8"	1	105	105	0.6
	20	ø3/8"	1	255	255	1.4
Total+10%					331.3	
Armadura transversal superior	21	ø3/8"	10	245	2450	13.6
	22	ø3/8"	1	420	420	2.4
	23	ø3/8"	4	420	1680	9.4
	24	ø3/8"	5	225	1125	6.3
	25	ø3/8"	4	470	1880	10.5
	26	ø3/8"	2	450	900	5.0
	27	ø3/8"	2	230	460	2.6
	28	ø3/8"	6	984	5904	33.0
	29	ø3/8"	1	1170	1170	6.6
	30	ø1/2"	2	420	840	4.8
	31	ø3/8"	4	120	480	2.7
	32	ø3/8"	2	660	1320	7.4
	33	ø3/8"	2	465	930	5.1
	34	ø1/2"	1	855	855	4.8
	35	ø3/8"	1	260	260	1.5
	36	ø3/8"	1	520	520	2.9
Total+10%					185.0	
					ø3/8"	38.9
					ø1/2"	59.4
					Total:	438.3

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FACULTAD DE CIENCIAS Y TECNOLOGÍA
CARRERA: ING. CIVIL



UBICACION:
COMUNIDAD DE TIGUIPA-
VILLAMONTES-GRAN CHACO- TARIJA

PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUIPA - VILLA MONTES - GRAN CHACO - TARIJA

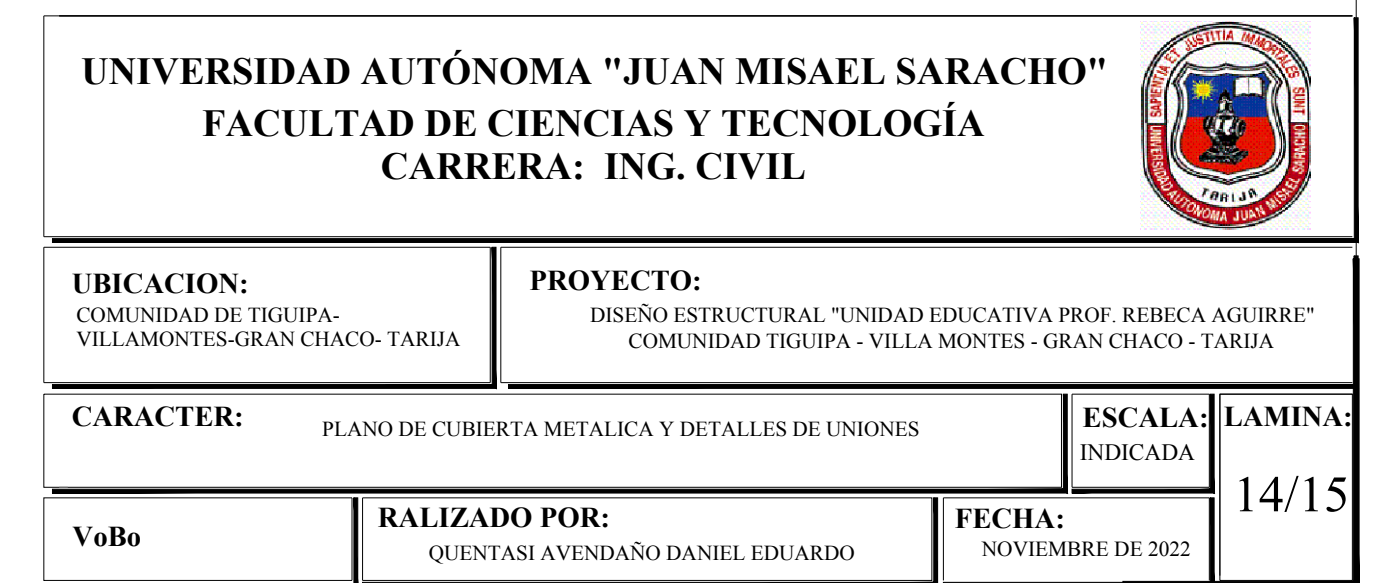
CARACTER: PLANO DE ARMADURA DE LOS ARETICULAR

ESCALA: LAMINA:
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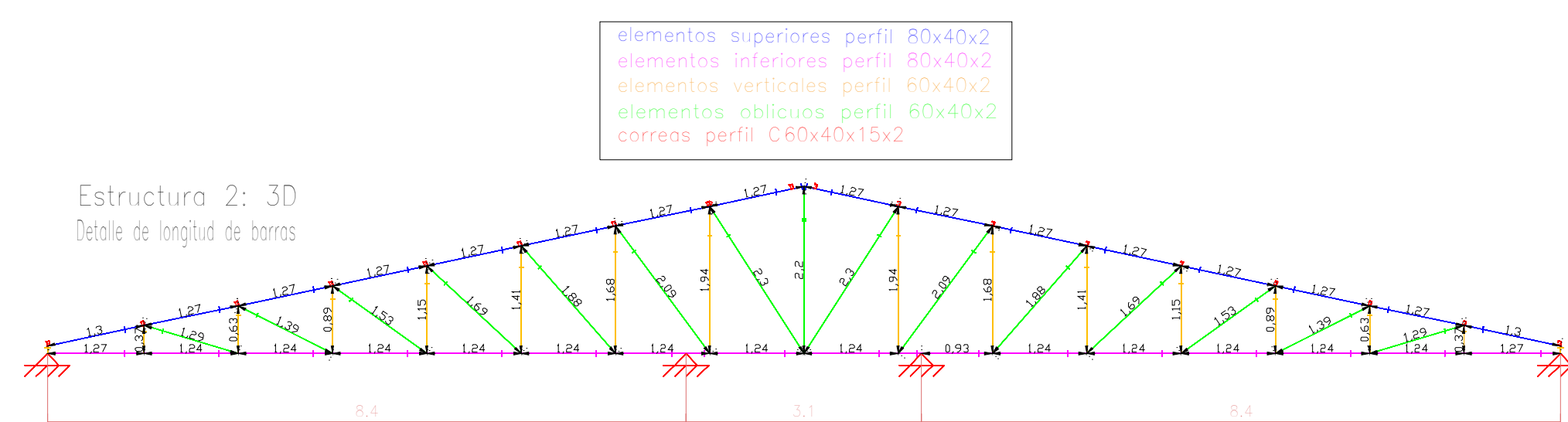
VoBo

RALIZADO POR:
QUENTASI AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022

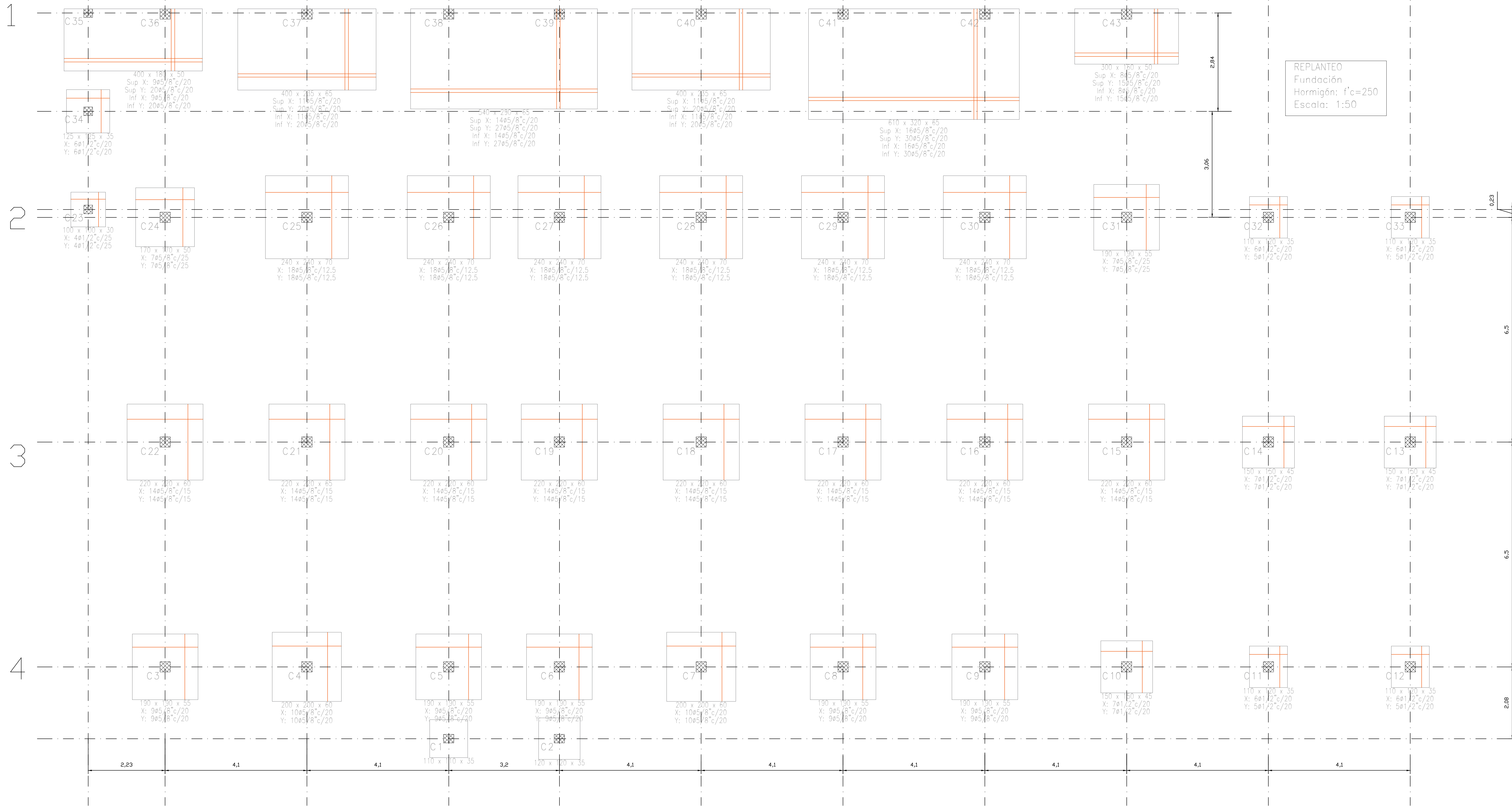


Technical drawing of a road cross-section. The drawing shows a road with a 21% slope (PENDIENTE i= 21%). The road is divided into two lanes, each 3.1 meters wide. The total width of the road is 6.2 meters. The road is flanked by a 2.11-meter wide shoulder on the left and a 2.04-meter wide shoulder on the right. The total width of the road and shoulders is 10.36 meters. The drawing also shows a 48.5-meter wide area, which is the sum of the road width and the shoulders. The drawing is a technical drawing of a road cross-section, showing the road, shoulders, and the slope. The drawing is a technical drawing of a road cross-section, showing the road, shoulders, and the slope. The drawing is a technical drawing of a road cross-section, showing the road, shoulders, and the slope.



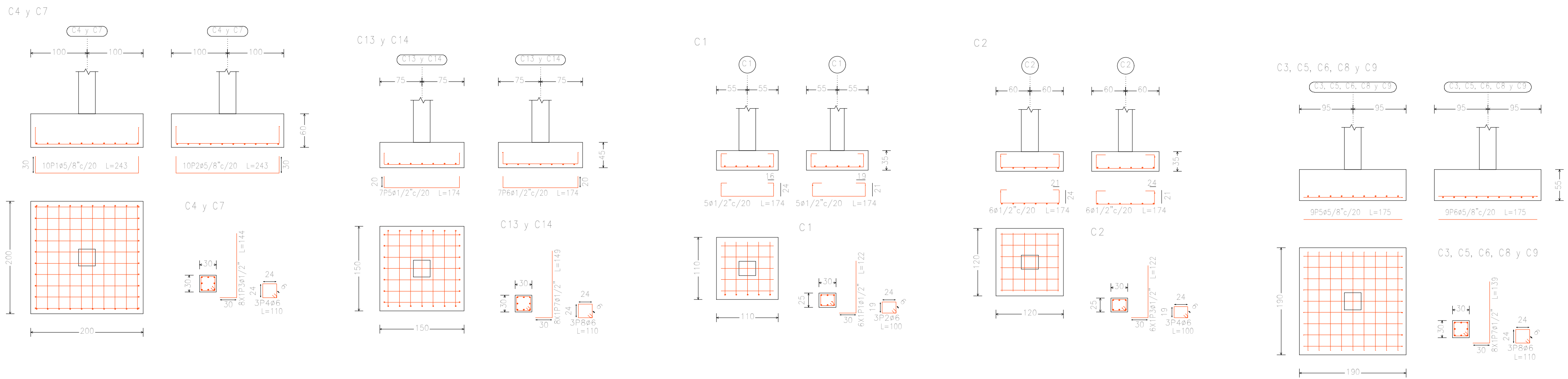
FECHA:
NOVIEMBRE DE 2022

A B C D E F G H I J K



CUADRO DE ELEMENTOS DE FUNDACIÓN					
Referencia	Dimensiones (cm)	Área (cm²)	Área (m²)	Área (m²)	Área (m²)
C1	110x110	12100	1.21	1.21	1.21
C2	110x110	12100	1.21	1.21	1.21
C3, C5, C6, C8 y C9	150x150	22500	2.25	2.25	2.25
C4 y C7	200x200	40000	4.00	4.00	4.00
C10, C11, C12, C13 y C14	110x110	12100	1.21	1.21	1.21
C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43	110x110	12100	1.21	1.21	1.21

Fundación
Hormigón: f'c=250
Escala: 1:100



Elemento	Pos.	Dim.	No.	Long.	Total	Grado	75
C1	1	110	1	110	12100	1.21	1.21
C2	1	110	1	110	12100	1.21	1.21
C3, C5, C6, C8 y C9	1	150	1	150	22500	2.25	2.25
C4 y C7	1	200	1	200	40000	4.00	4.00
C10, C11, C12, C13 y C14	1	110	1	110	12100	1.21	1.21

Resumen: Acero	Long. total	Peso x 1000	Total
Grado 75	85	139.5	34
Grado 85	14.5	9	9
Grado 95	632.0	691	691
Grado 100	2701.3	4642	5337

Elemento	Pos.	Dim.	No.	Long.	Total	Grado	75
C1	1	110	1	110	12100	1.21	1.21
C2	1	110	1	110	12100	1.21	1.21
C3, C5, C6, C8 y C9	1	150	1	150	22500	2.25	2.25
C4 y C7	1	200	1	200	40000	4.00	4.00
C10, C11, C12, C13 y C14	1	110	1	110	12100	1.21	1.21

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DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUPA - VILLA MONTES - GRAN CHACO - TARIJA

CARACTER:
PLANO DE REPLANTEO Y DE DESPICES DE ZAPATAS

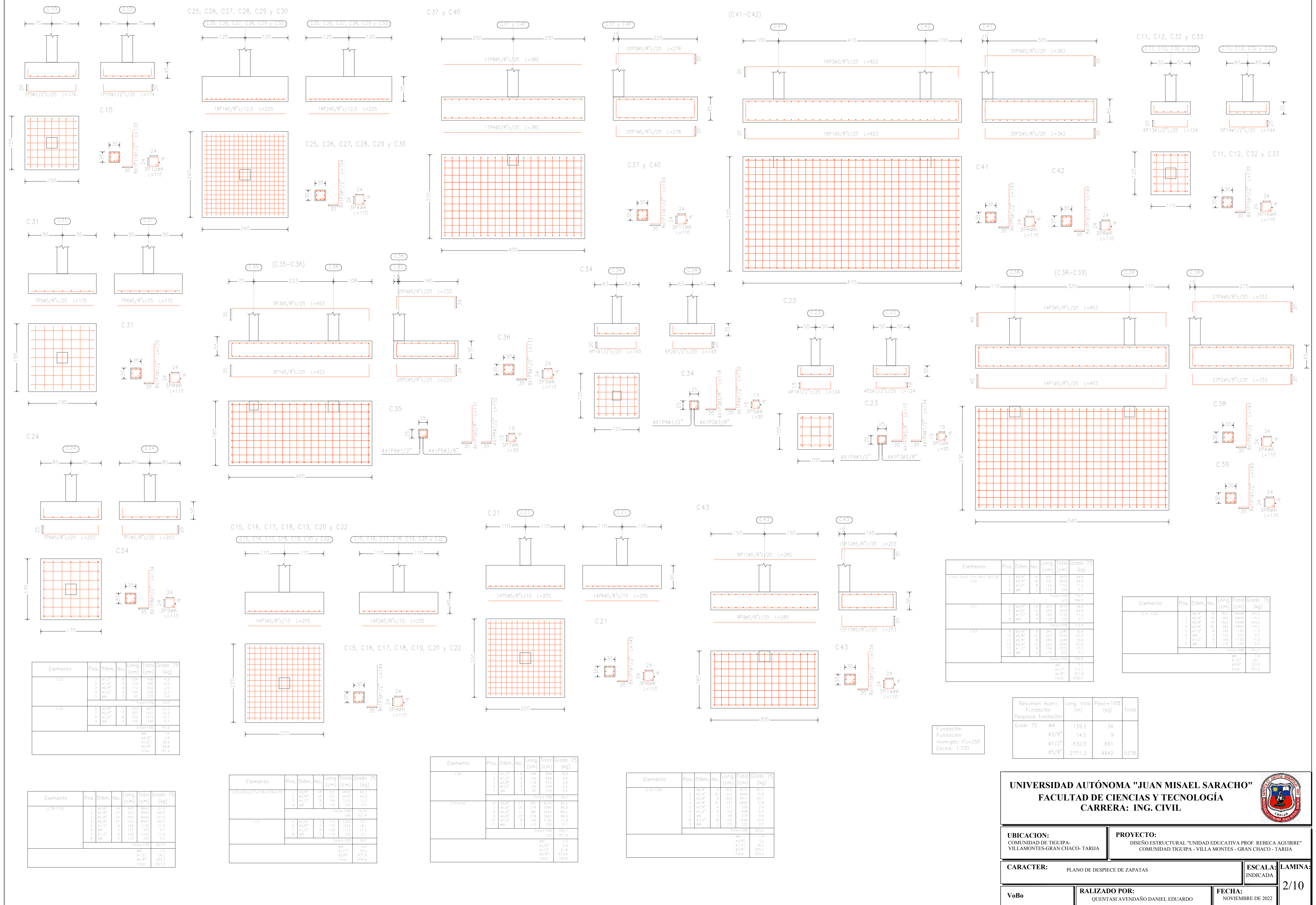
ESCALA:
LAMINA
INDICADA

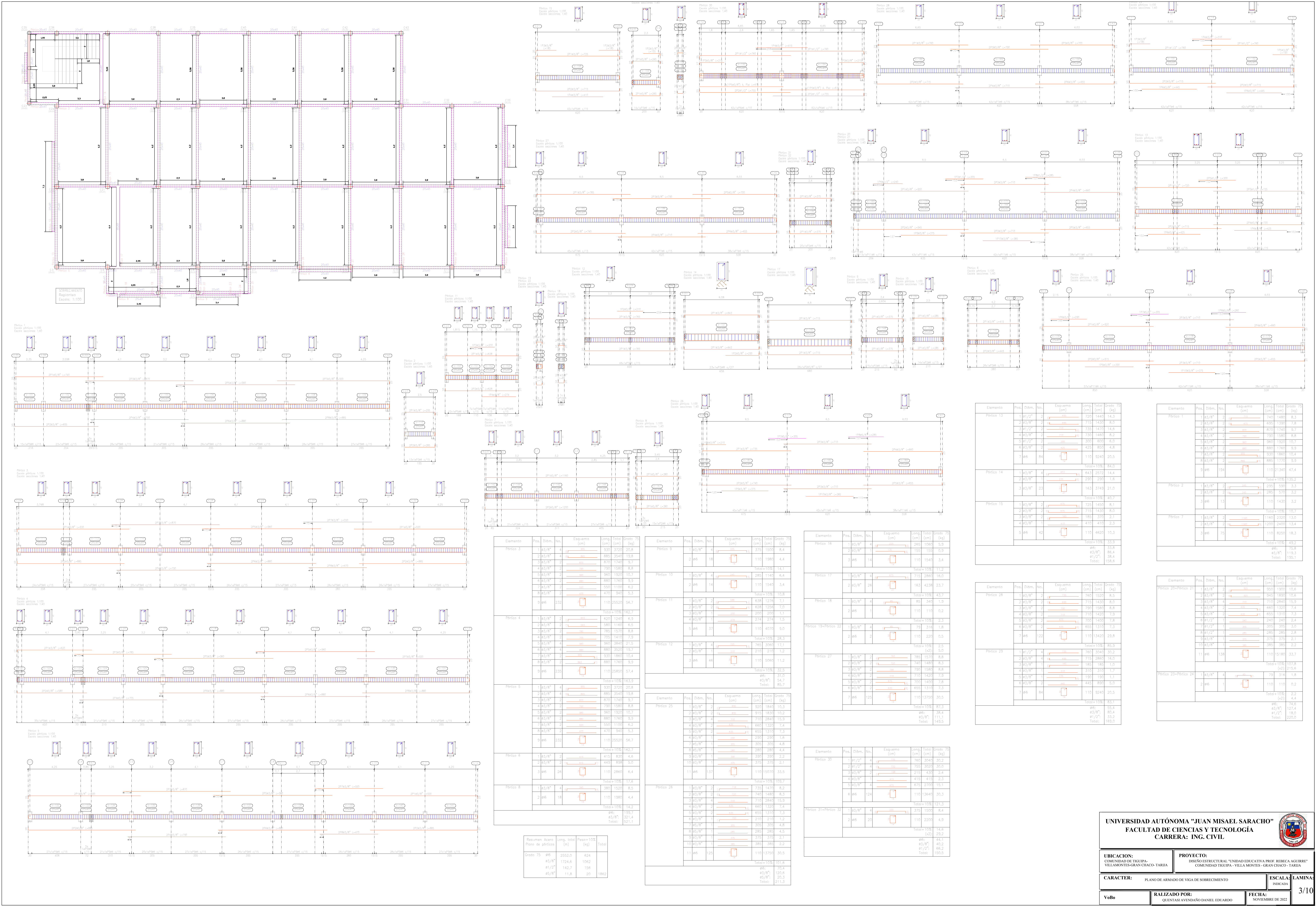
VoBo

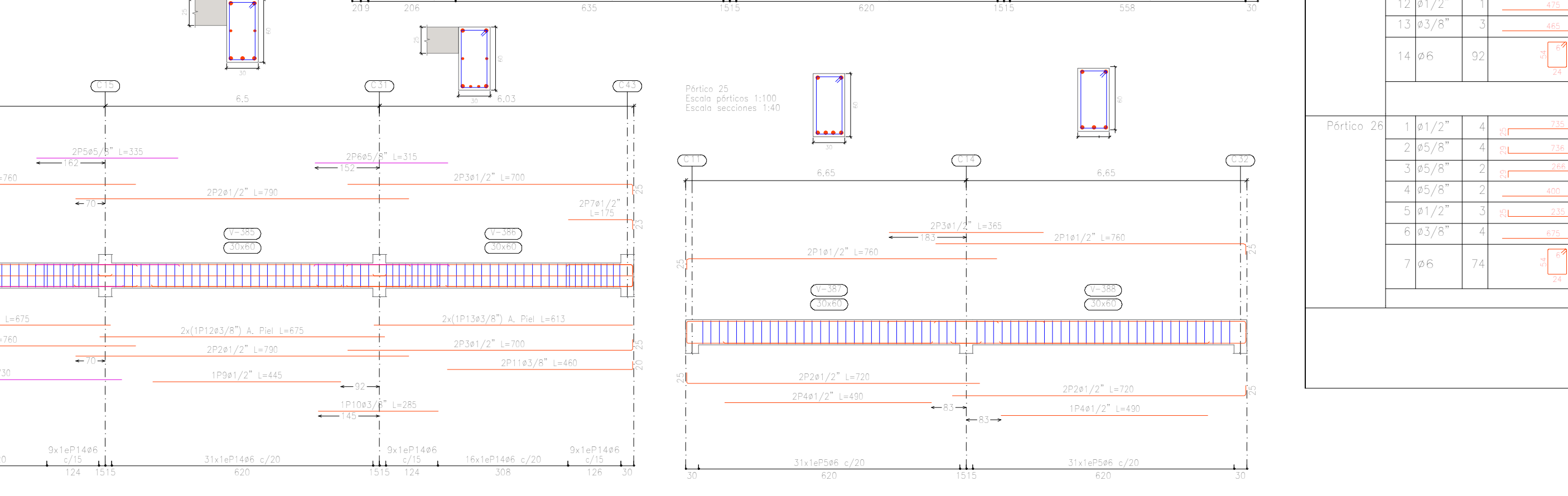
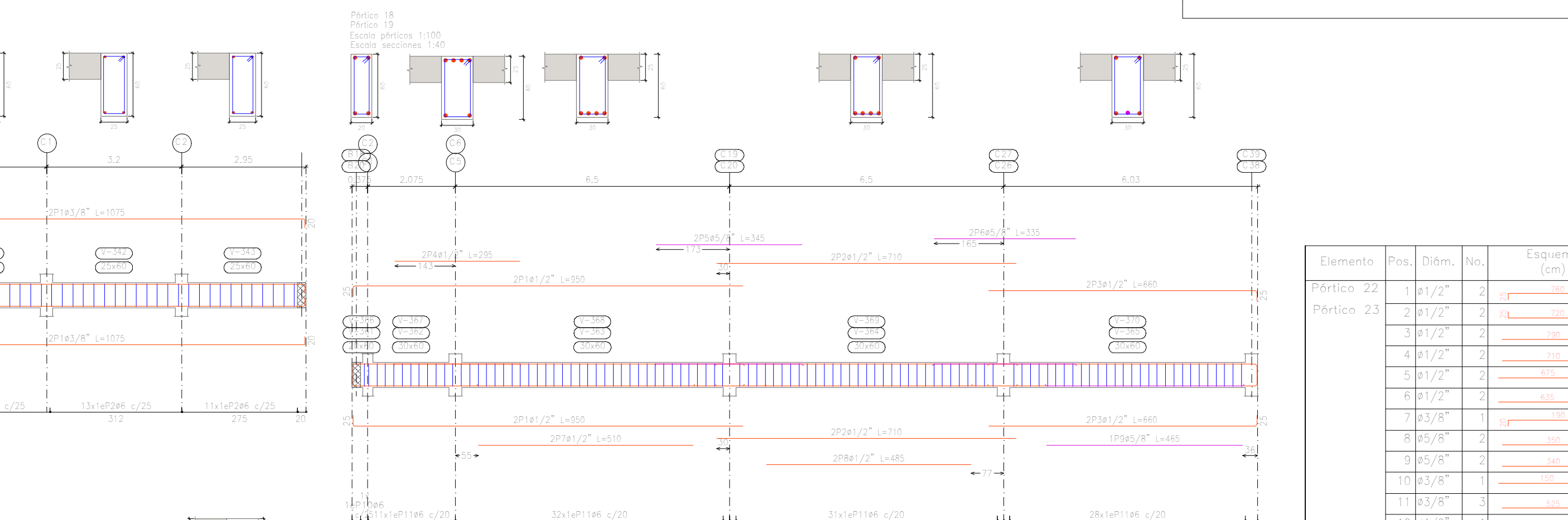
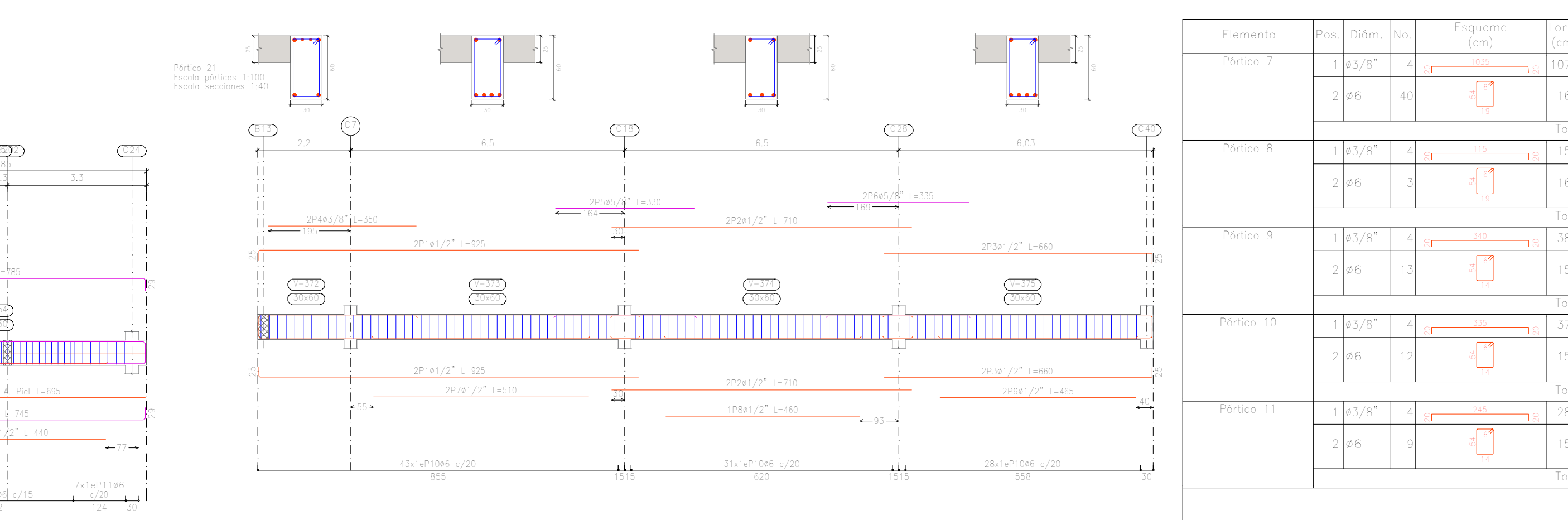
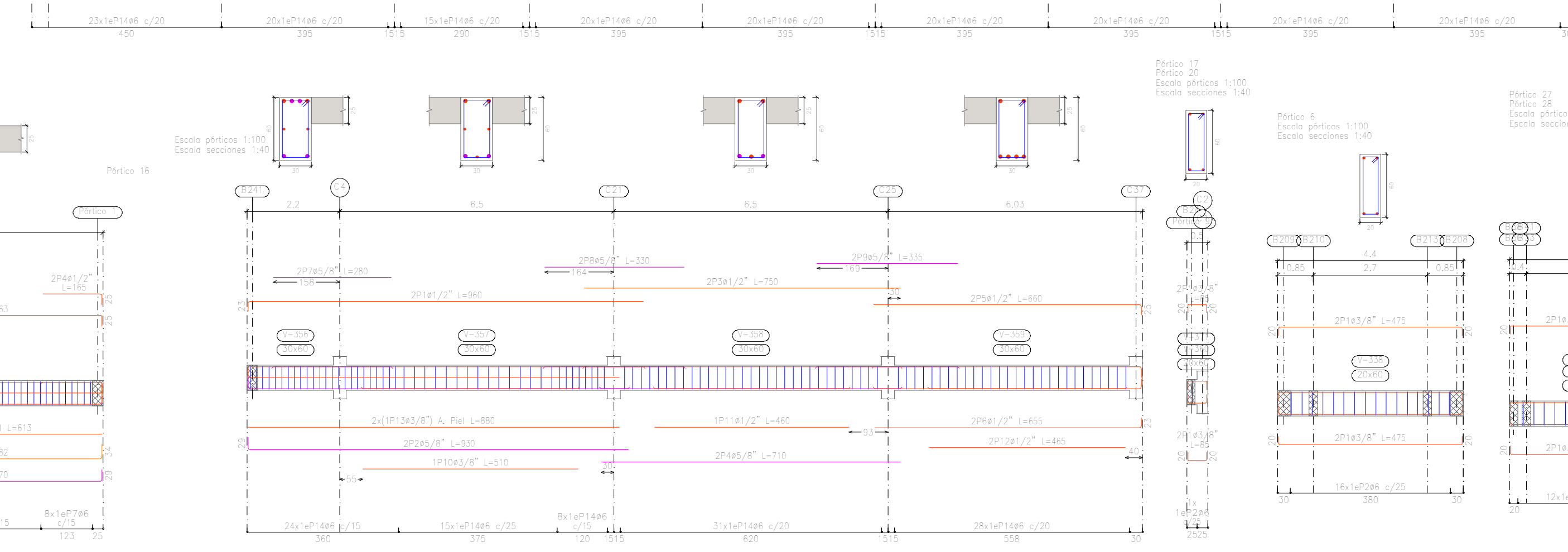
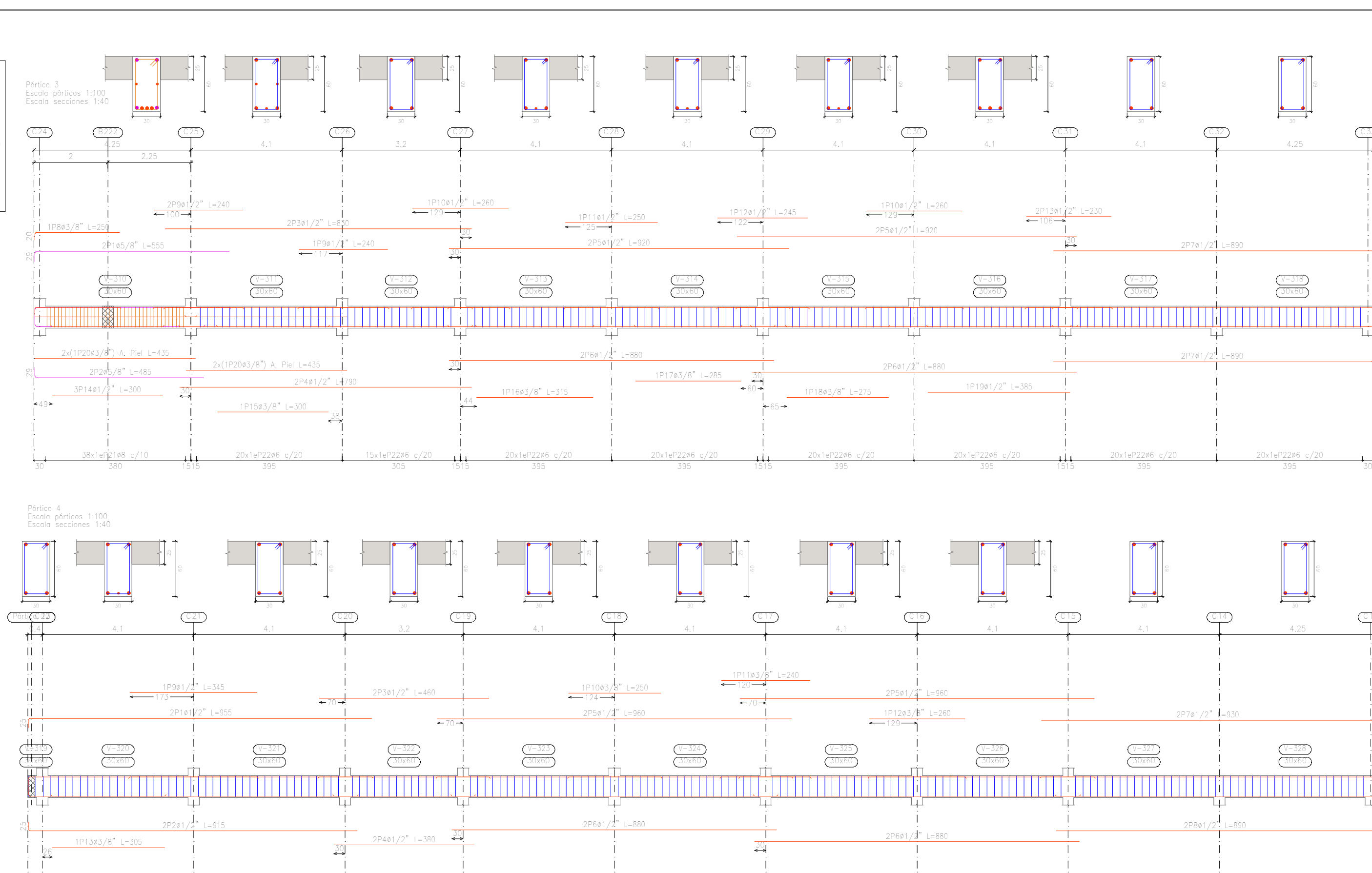
REALIZADO POR:
QUINTANA AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022

1/10

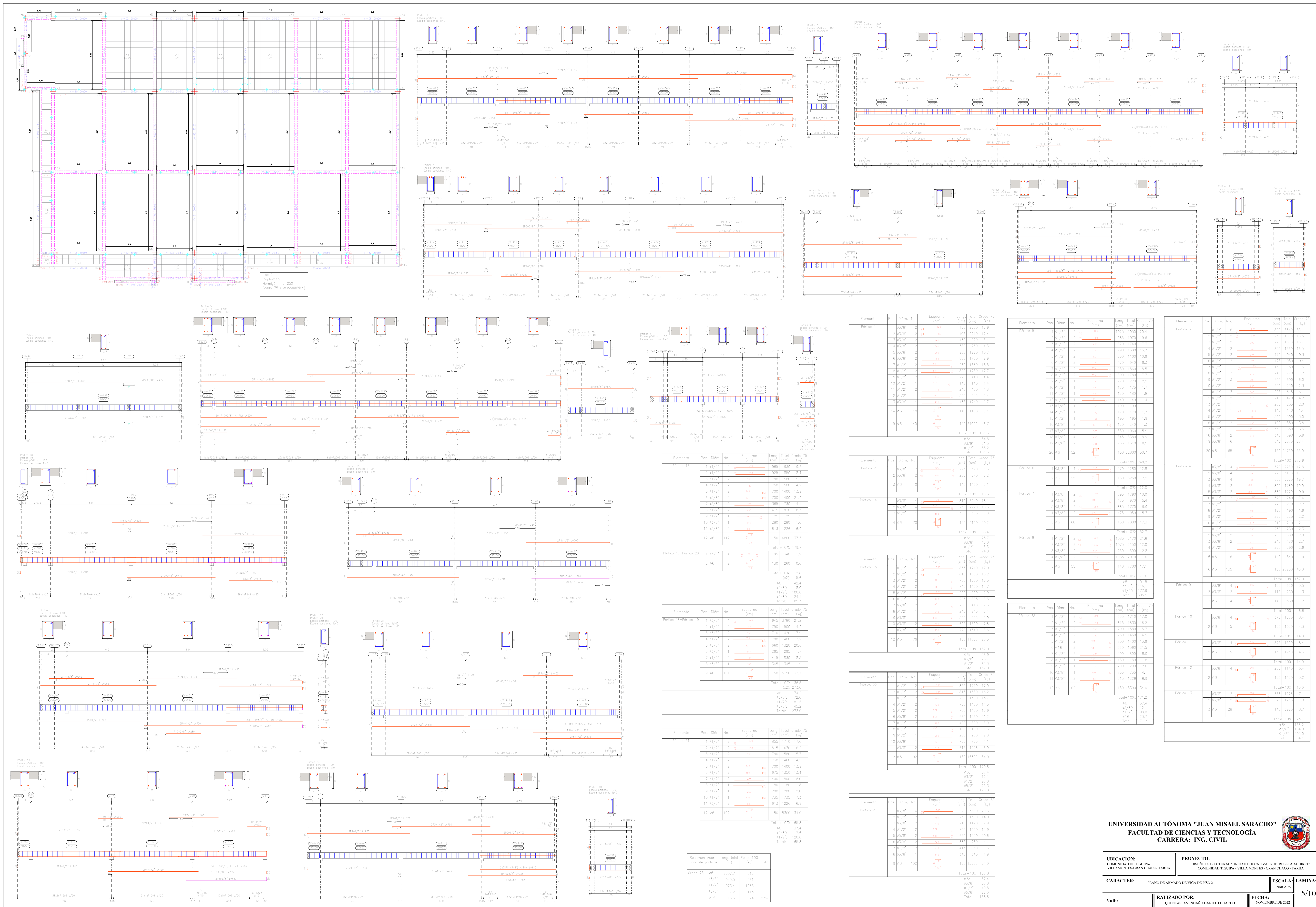


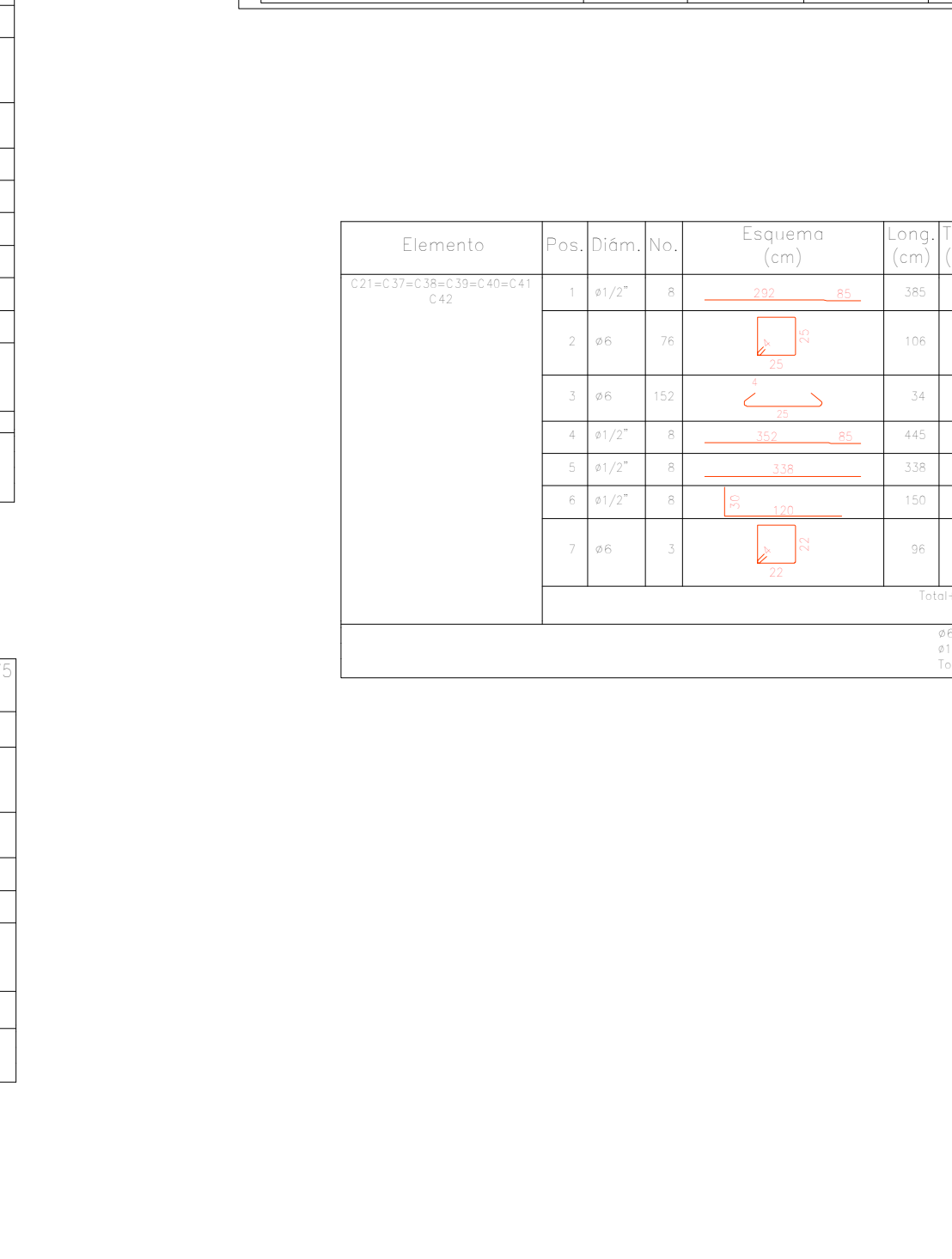
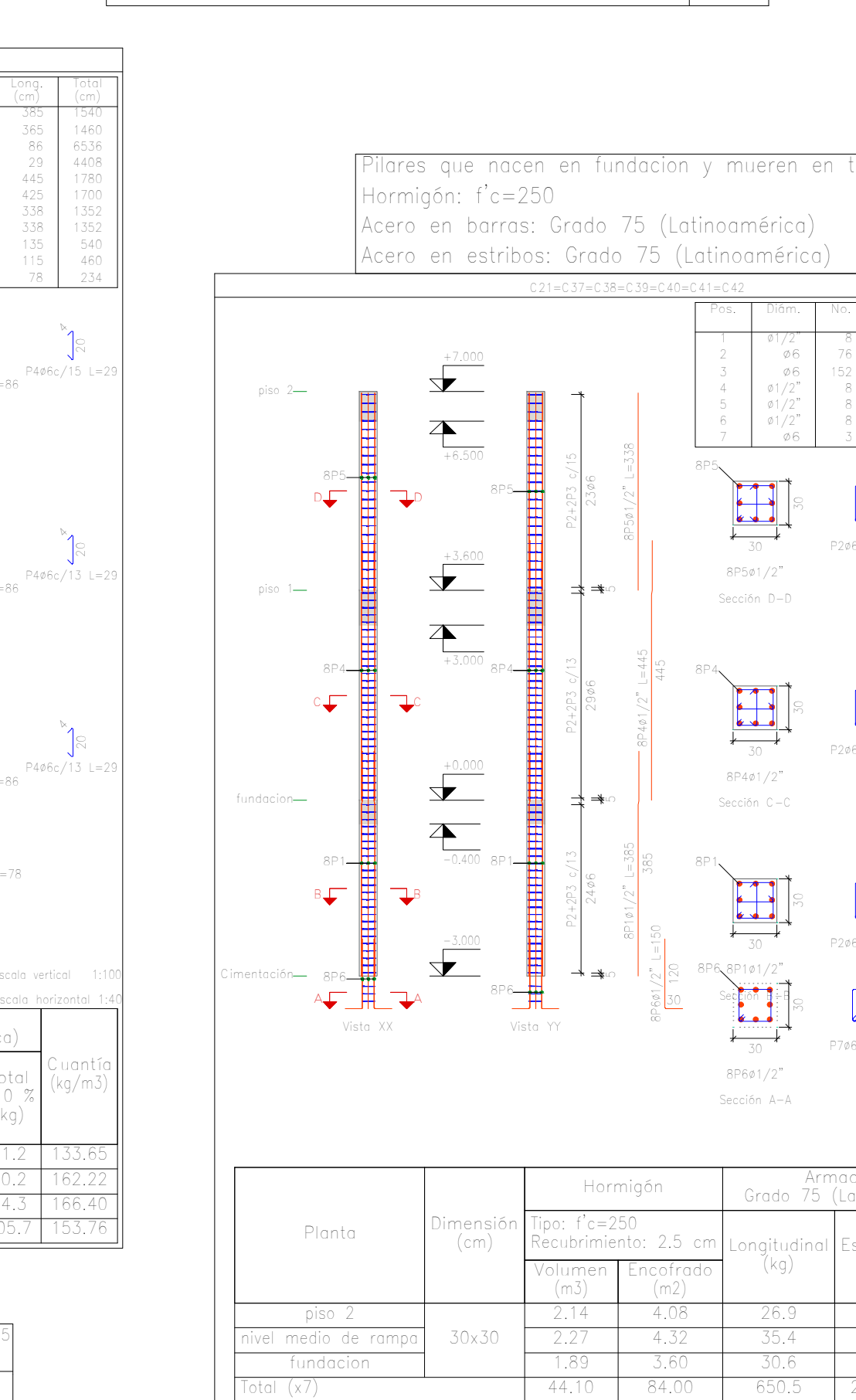
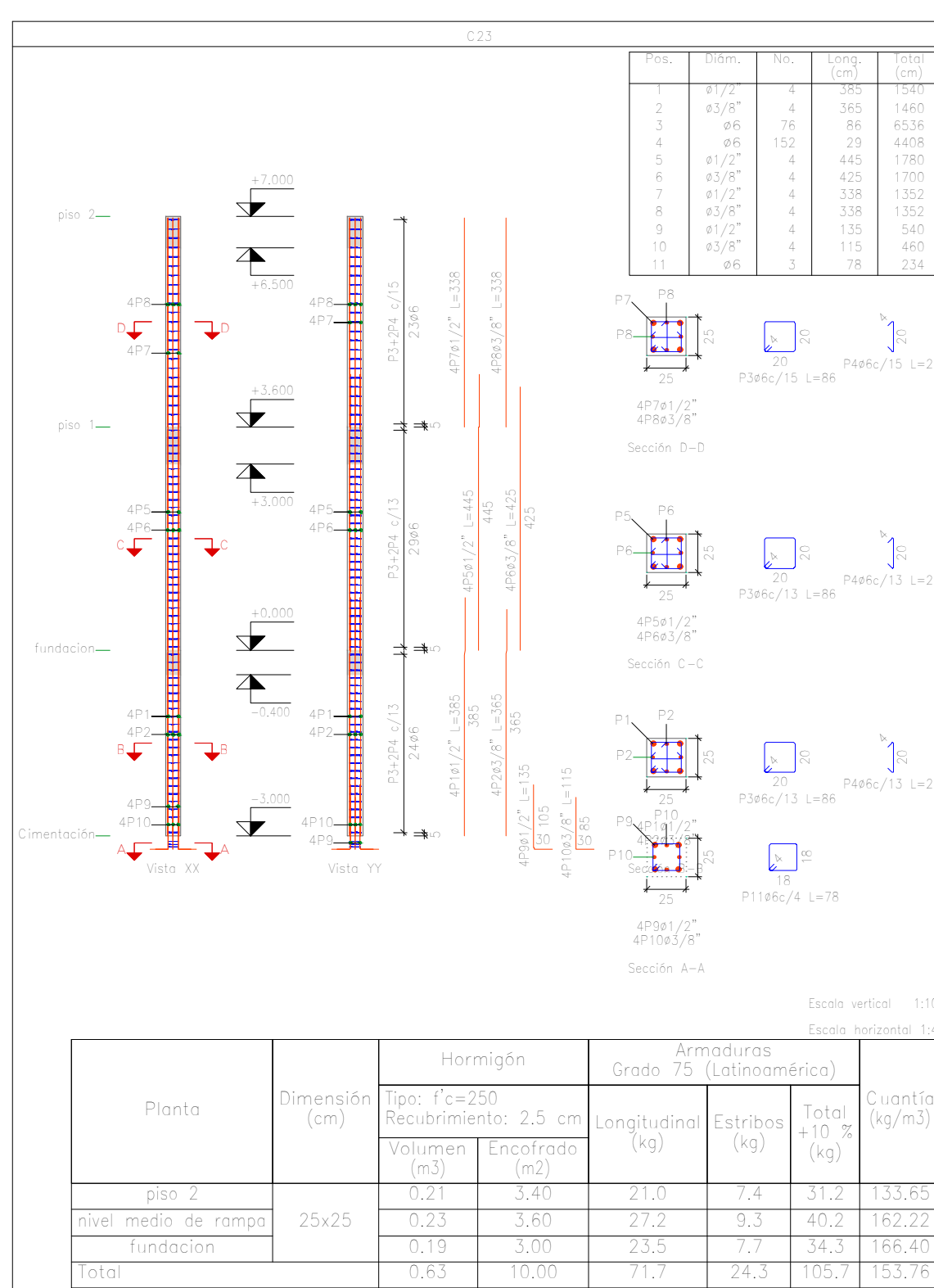
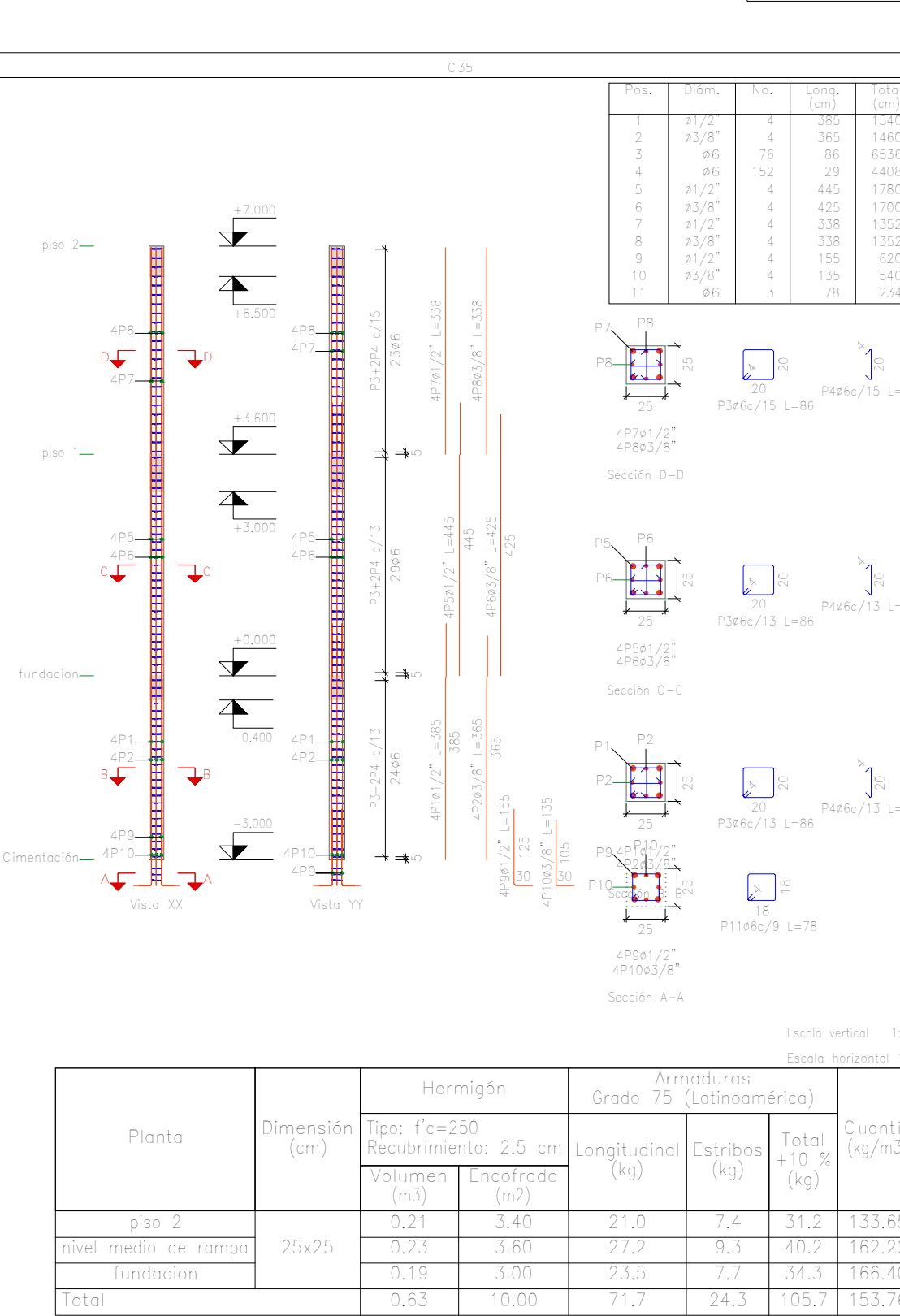
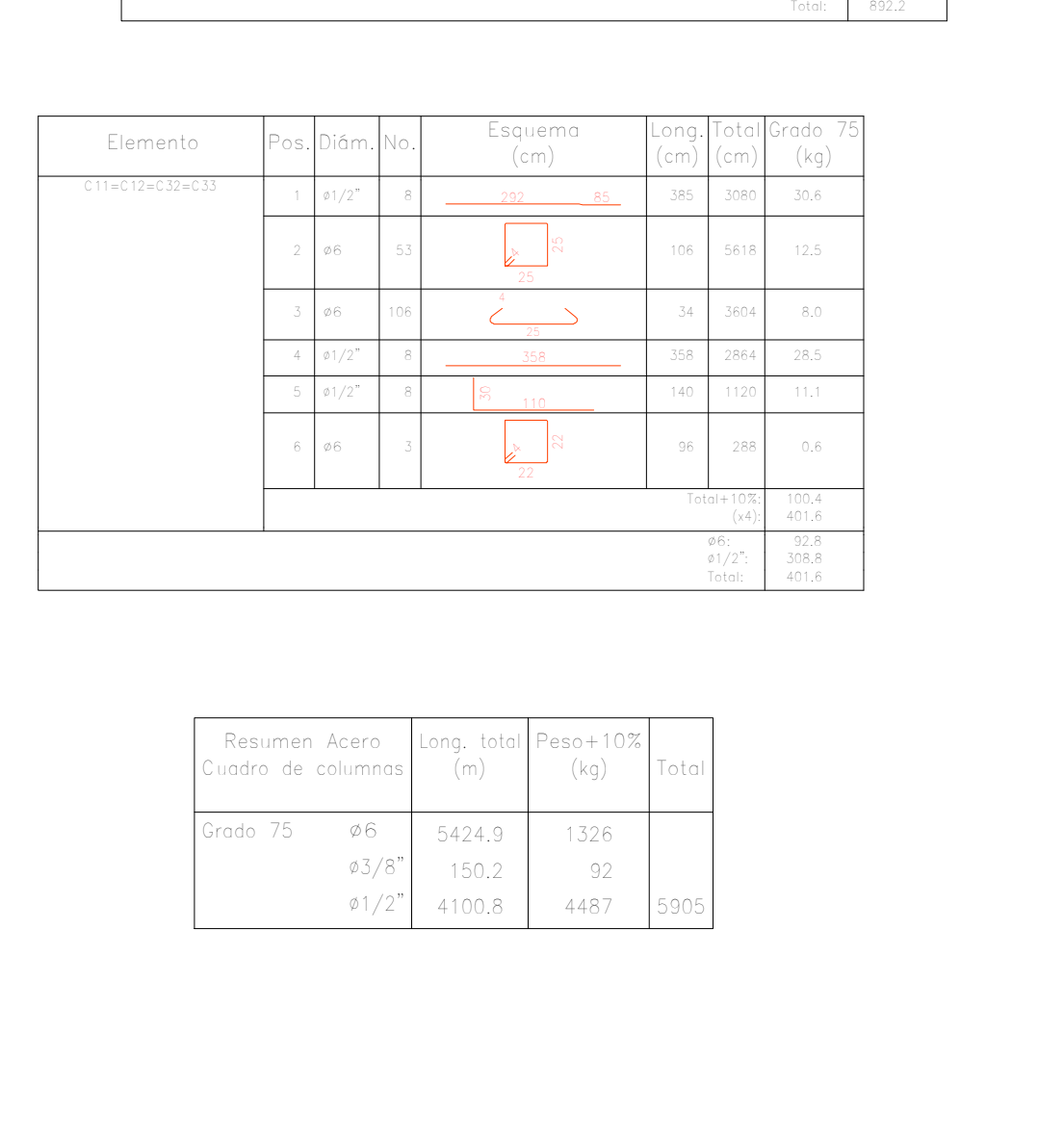
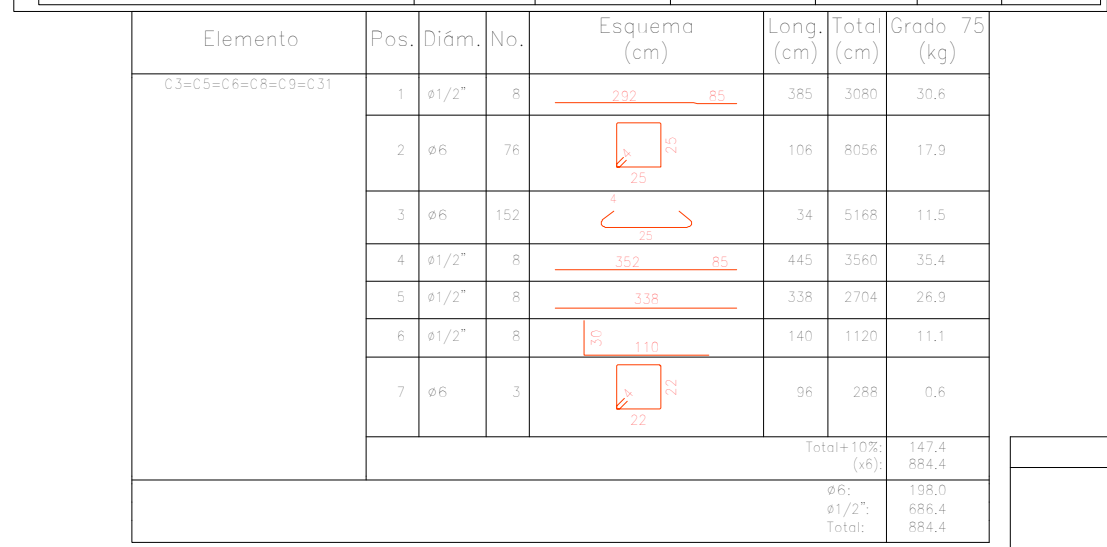
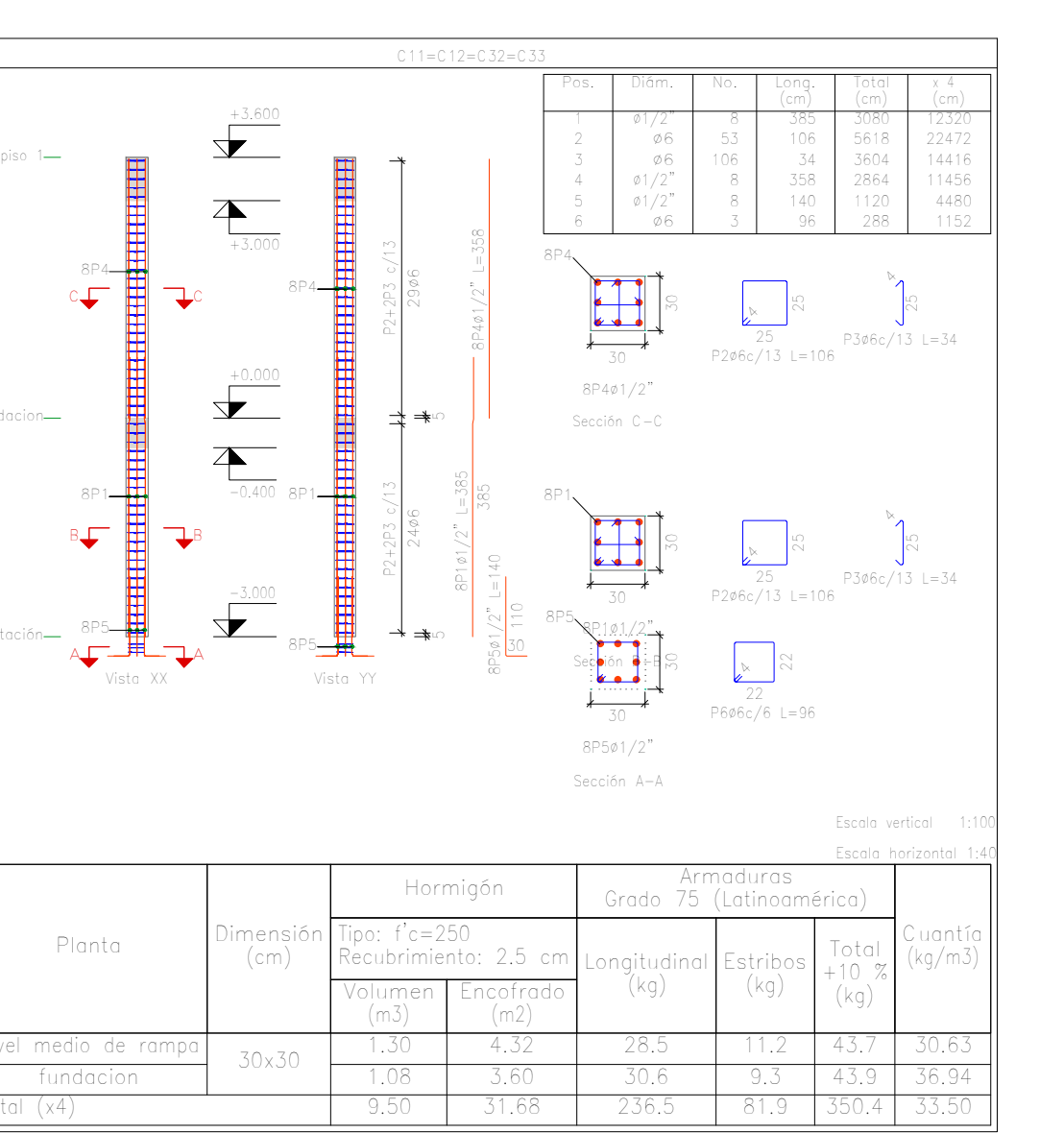
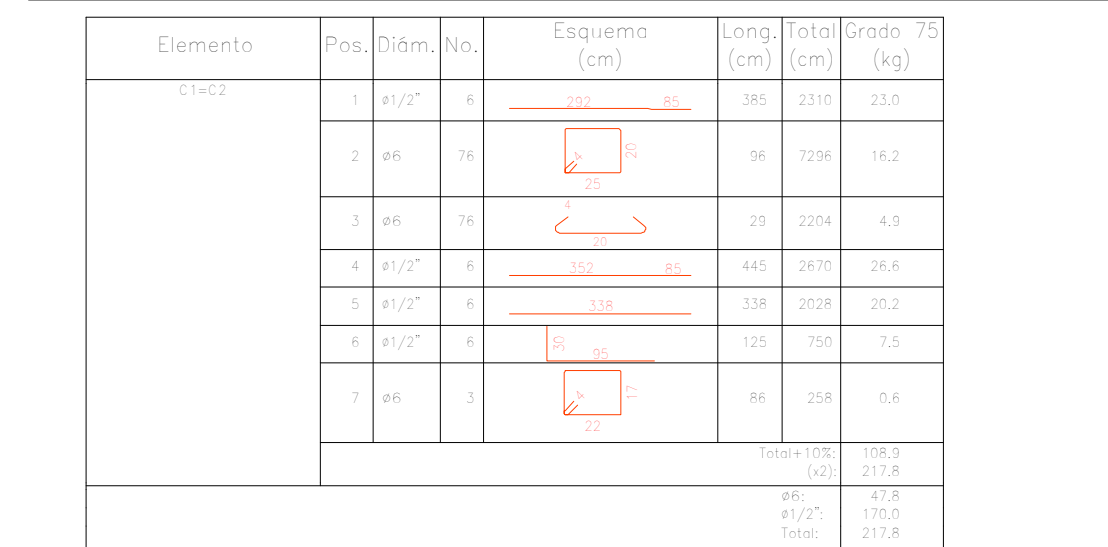


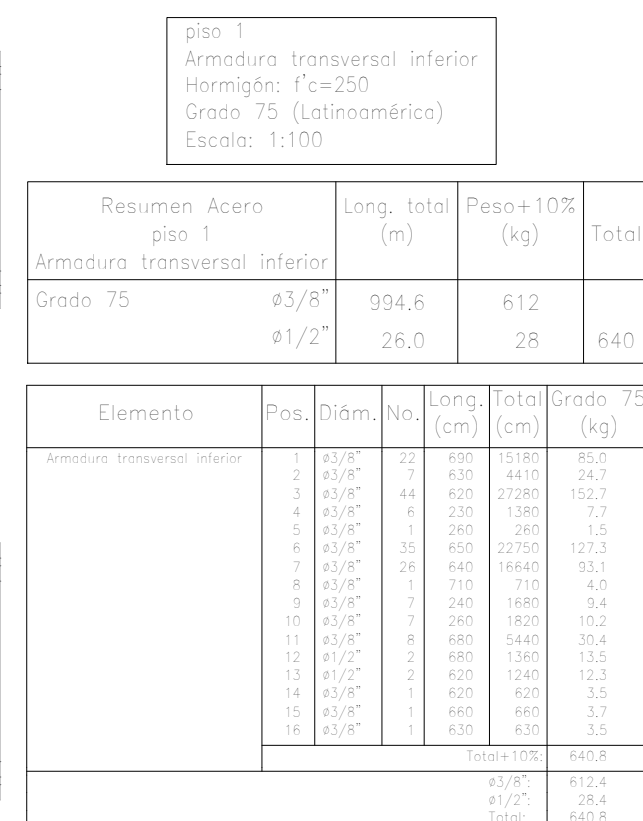
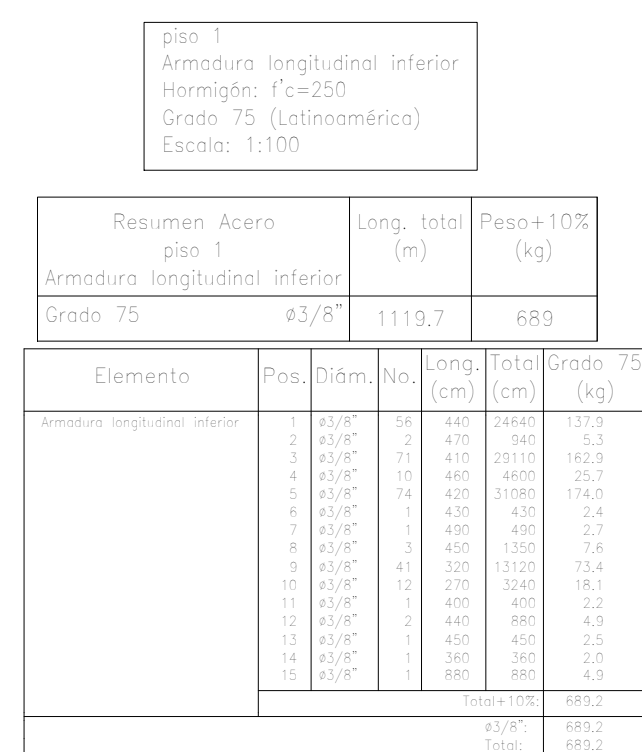
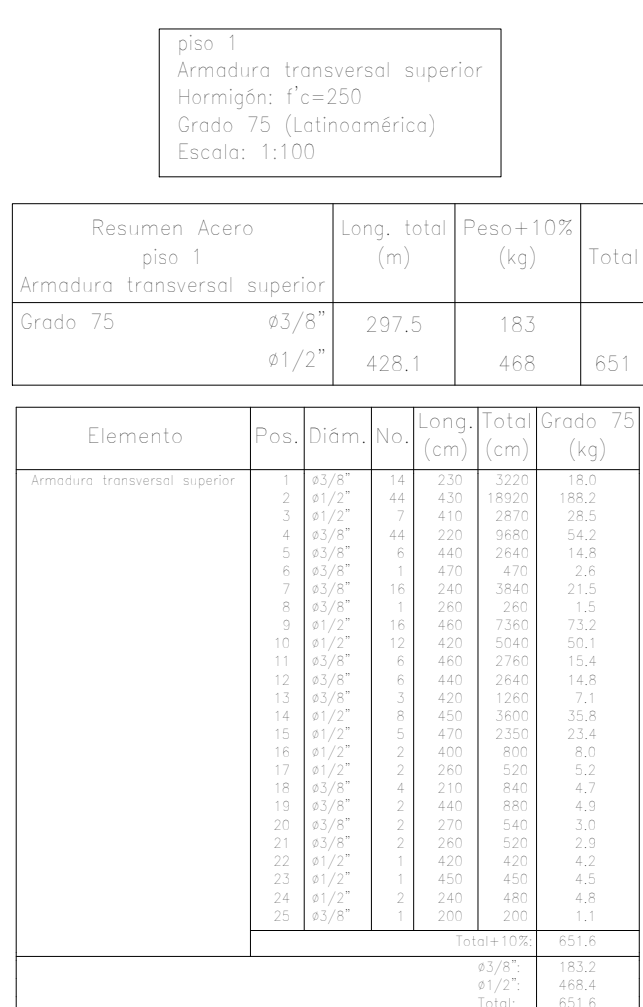
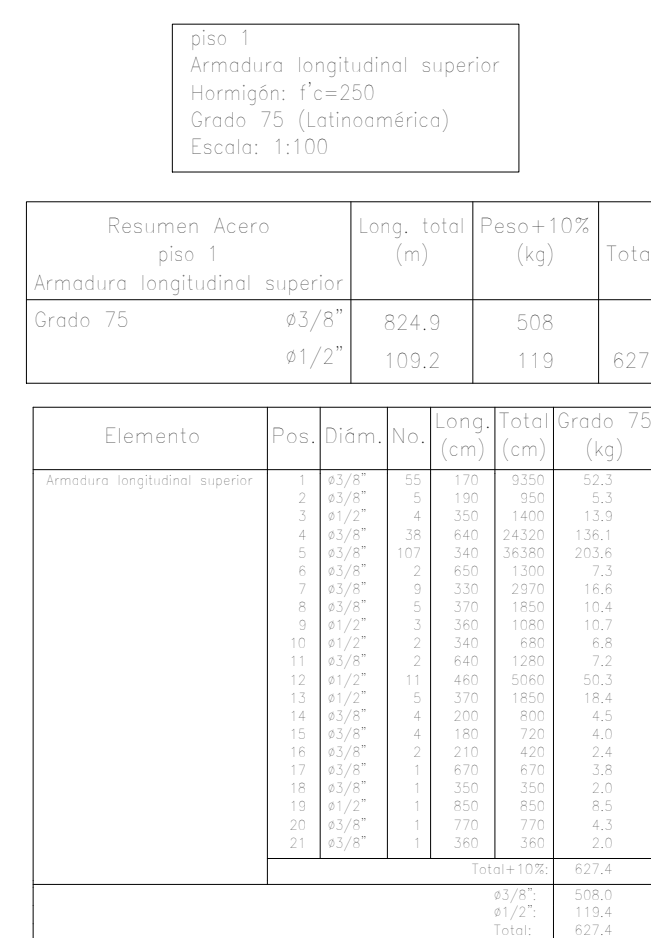


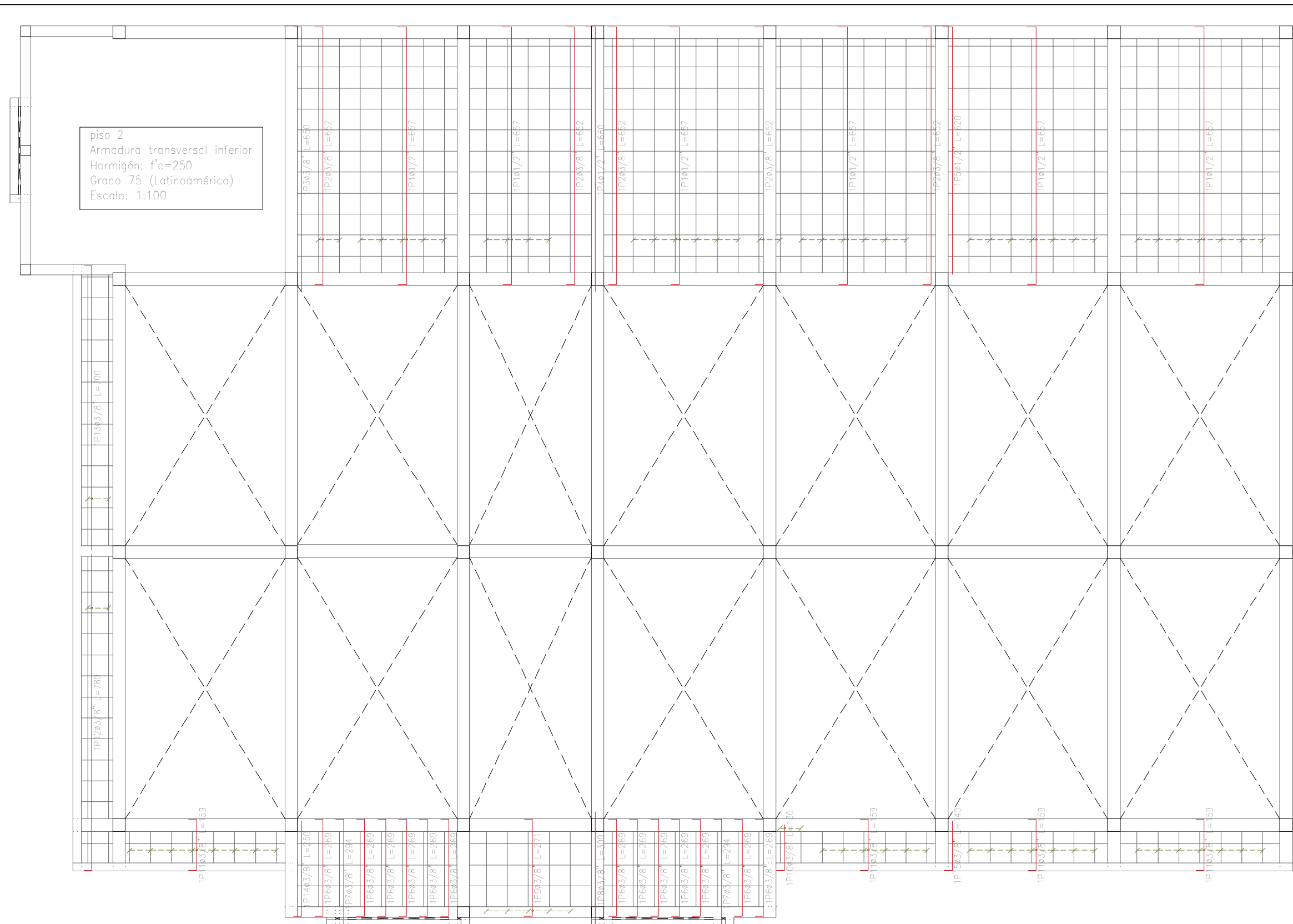
Grado (m)	Elemento	Pos.	Diám.	No.	Esquema	Long. (m)	Total (m)
1570 15.6	Pértica 18	1	91/2"	4		950	3800
1430 14.8	Pértica 18	2	3 91/2"	4		710	2840
1350 15.7		3	91/2"	2		640	2640
1420 14.1		4	91/2"	2		200	530
140 13.9		5	45/8"	2		343	690
125 13.1		6	45/8"	2		333	678
120 12.9		7	91/2"	3		515	1020
70 10.9		8	91/2"	3		485	970
680 10.6		9	45/8"	2		485	485
170 1.0		10	6"	-		150	150
1573 8.8		11	6"	100		170	17340
475 4.7							
1395 7.8							
5640 34.7							
						Total: 1195	(12)
105 183.8						68	85
102 367.2						81/2"	407
3040 30.2						45/8"	407
3060 47.8						Total:	407
59 8.2							
80 12.5							
78 8.8							
270 15.1							
2580 27.9							
105 165.8							
107 1.1							
107 1.1							
78 8.8							
72 24.0							
81 12.3							
107 1.1							

Elemento		Sys.	Diám.	No.	Esquema (m)	Long. (m)	Total (m)	Grado (°)	Grado (°)
							Total:	313,9	
Período 21									
	1	1/2"	4			925	3700	36,8	
	2	1/2"	4			710	2845	28,2	
	3	1/2"	4			661	2642	26,3	
	4	3/8"	2			350	700	3,9	
	5	5/8"	2			330	660	10,3	
	6	3/8"	2			330	670	10,5	
	7	1/2"	2			510	1020	10,3	
	8	1/2"	2			440	440	4,6	
	9	1/2"	2			445	530	9,2	
	10	66	102			170	17340	38,5	
						suma = 1038	196,7		
Período 22-Período 28									
	1	3/4"	4			375	1500	8,4	
	2	66	12			150	1800	4,0	
						suma = 1038	13,6		
						(62)	27,2		
						66:	31,7		
						61/8":	22,		
						1/2":	126,		
						5/8":	22,9		
						Totales:	223,4		









Elemento	Pos.	Diám.	No.	Long. (cm)	Ordo (cm)	75
Armatura longitudinal interior	1	8/8"	11	420	430	7.7
	2	8/8"	10	330	330	18.5
	3	8/8"	11	410	390	20
	4	8/8"	12	420	420	14.1
	5	8/8"	11	440	480	27.1
	6	8/8"	2	430	430	6.8
	7	8/8"	1	320	320	1.8
	8	8/8"	24	155	314	21.4
	9	8/8"	2	460	460	5.1
	10	8/8"	2	760	1520	8.5
	11	8/8"	1	470	470	2.8
	12	8/8"	1	750	750	4.2
	13	8/8"	1	570	570	3.2
	14	8/8"	1	440	440	4.1
	15	8/8"	1	480	480	2.7
	16	8/8"	1	440	440	2.5
	17	8/8"	1	570	570	4.1
	18	8/8"	1	460	460	0.9
				Total+10%	233.8	
				Total	233.8	

Technical drawing of a building facade showing a grid of windows and doors. The drawing includes dimensions and labels for various openings.

Top Section (Windows):

- Leftmost window: $17'03\frac{1}{8}" \times 18'0"$
- Second window from left: $17'03\frac{1}{8}" \times 20'0"$
- Third window from left: $17'03\frac{1}{8}" \times 6'0"$
- Fourth window from left: $17'03\frac{1}{8}" \times 6'10"$
- Fifth window from left: $17'16\frac{1}{8}" \times 3'0"$
- Sixth window from left: $17'03\frac{1}{8}" \times 3'0"$
- Seventh window from left: $17'03\frac{1}{8}" \times 5'0"$
- Eighth window from left: $17'03\frac{1}{8}" \times 5'0"$
- Rightmost window: $17'03\frac{1}{8}" \times 1'0"$

Bottom Section (Doors):

- Leftmost door: $17'18\frac{1}{2}" \times 4'0"$
- Second door from left: $17'03\frac{1}{8}" \times 6'0"$
- Third door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fourth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fifth door from left: $17'16\frac{1}{8}" \times 6'0"$
- Sixth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Seventh door from left: $17'18\frac{1}{2}" \times 4'0"$
- Eighth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Ninth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Tenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Eleventh door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twelfth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fourteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fifteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Sixteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Seventeenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Eighteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Nineteenth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twentieth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-first door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-second door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-third door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-fourth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-fifth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-sixth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-seventh door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-eighth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Twenty-ninth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirtieth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-first door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-second door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-third door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-fourth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-fifth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-sixth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-seventh door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-eighth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Thirty-ninth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fortieth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-first door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-second door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-third door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-fourth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-fifth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-sixth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-seventh door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-eighth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Forty-ninth door from left: $17'03\frac{1}{8}" \times 6'0"$
- Fiftieth door from left: $17'03\frac{1}{8}" \times 6'0"$

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado (°)
Armonía longitudinal superior	1	8 1/8"	9	250	2250	12,3
	2	8 1/8"	9	800	8400	30,3
	3	8 1/8"	9	310	2850	15,1
	4	8 1/8"	11	190	2090	11,1
	5	8 1/8"	9	810	7290	30,3
	6	8 1/2"	2	130	260	6,8
	7	8 1/2"	2	340	680	6,8
	8	8 1/2"	2	310	620	6,2
	9	8 1/2"	24	150	3614	24,4
	10	8 1/2"	6	660	3960	26,6
	11	8 1/8"	7	660	660	5,7
	12	8 1/8"	7	670	670	5,7
	13	8 1/8"	7	660	660	5,7
	14	8 1/8"	7	650	650	5,6
	15	8 1/2"	1	800	800	8,0
	16	8 1/8"	7	1120	1120	6,3
	17	8 1/8"	7	410	410	4,1
	18	8 1/8"	7	830	830	5,5
	19	8 1/8"	7	180	180	2,0
					total=105	
					43 1/8"	173,4
					49 1/2"	43,8
					base	27,0

Resumen Acero piso 2	Long. total (m)	Peso+10% (kg)
Armadura transversal superior		
Grado 75 $\phi 3/8^*$	329.0	203

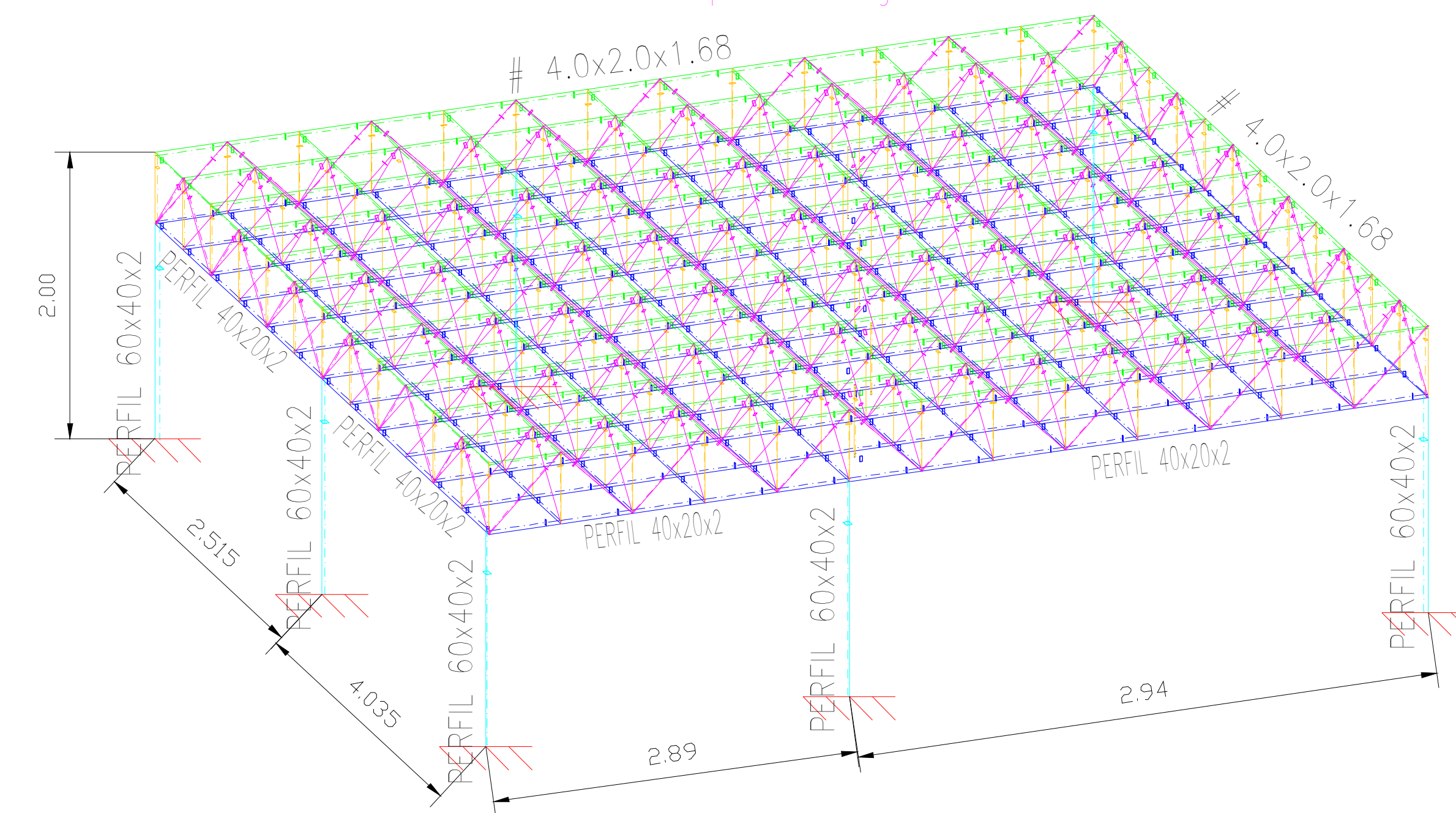
cubierta 2: 3D

U.E. PROF. REBECA AGUIRRE
cubierta 2
Norma de acero conformado: AISI S100-2007 (LRFD)
Acero conformado: ASTM A 36 36 ksi

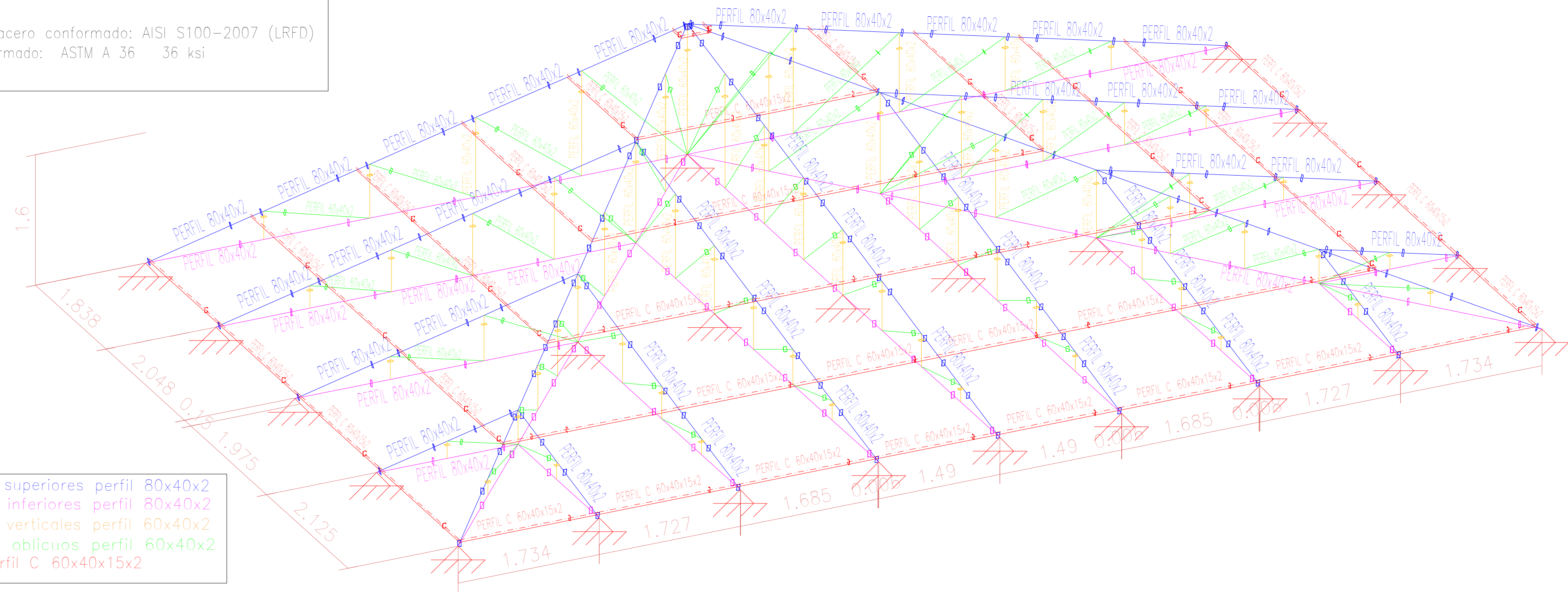
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elementos inferiores	perfil #	80x40x2
elementos verticales	perfil #	60x40x2
elementos oblicuos	perfil #	60x40x2
correas	perfil C	60x40x15X2

U.E. PROF. REBECA AGUIRRE
cubierta 3
Norma de acero conformado: AISI S100-2007 (LRFD)
Acero conformado: ASTM A 36 36 ksi

cubierta 3: 3D

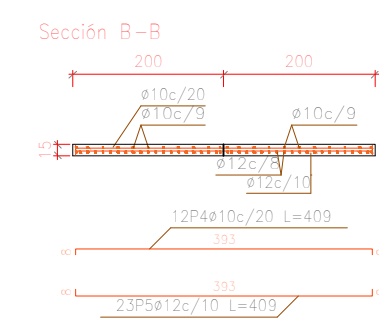
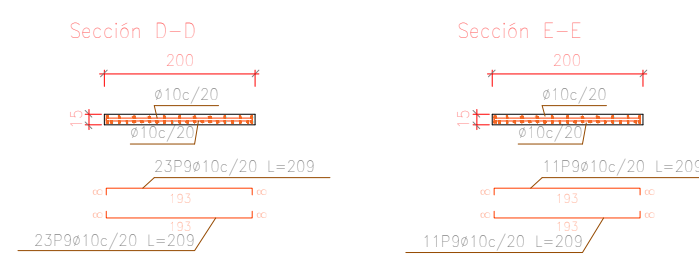
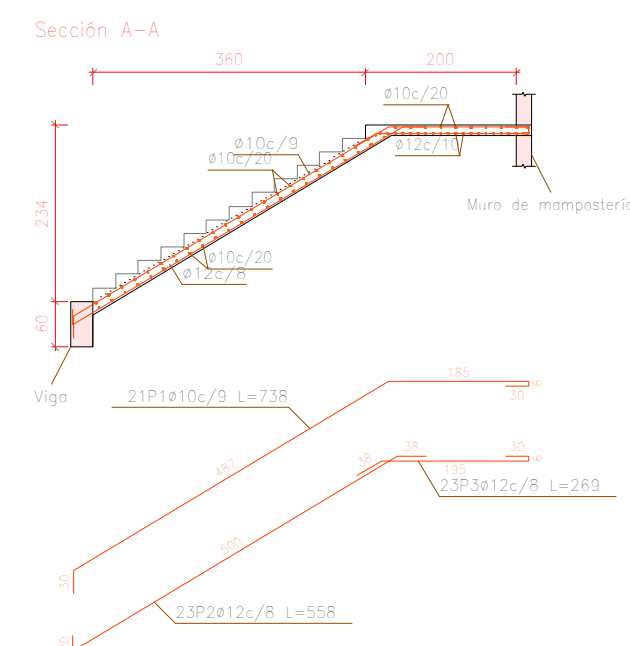
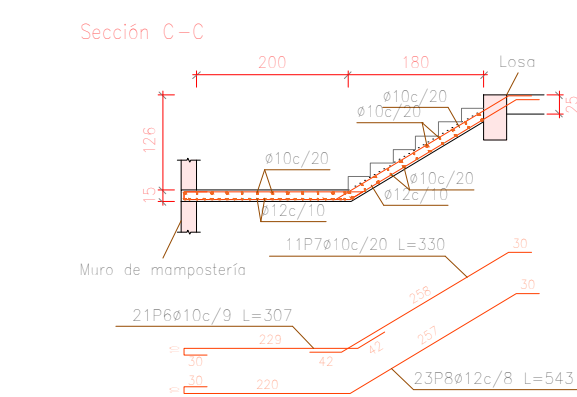
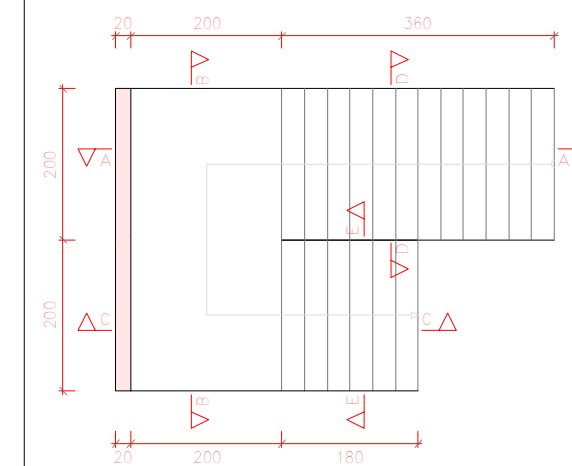


elementos superiores	perfil	80x40x2
elementos inferiores	perfil	80x40x2
elementos verticales	perfil	60x40x2
elementos oblicuos	perfil	60x40x2
correas	perfil C	60x40x15x2



Escala 1:50

Tromo 1		
Geometría	Ancho	2,000 m
	Espesor	0,15 m
	Huella	0,300 m
	Contrahuella	0,180 m
	Desnivel que salva	3,60 m
Carga	N° de escalones	20
	Planta final	piso 1
	Planta inicial	fundación
	Peso propio	3,68 kN/m ²
	Peldaño (Homologando con la losa)	1,89 kN/m ²
Materiales	Solado	0,98 kN/m ²
	Barandillos	0,49 kN/m
	Sobrecarga de uso	3,92 kN/m ²
	Rec. geométrico	3,0 cm



Elemento	Pos.	Diâm.	No.	Long. (m)	Total (m)	Grado 75 (kg)
Escalera 3-Tramo 1	1	ø10	21	738	15438	90,66
	2	ø12	23	558	10854	114,20
	3	ø12	21	269	5640	50,2
	4	ø10	12	409	4308	30,2
	5	ø12	23	409	5407	43,5
	6	ø10	11	307	3377	29,8
	7	ø10	11	320	3630	22,4
	8	ø12	23	543	11489	111,2
	9	ø10	68	209	14212	87,6
Totale 10SC					ø10:78	
					ø10: 231,66	
					ø12: 392,12	
					Total: ø10:78	

Resumen Acero Escalera 3	Long. total (m)	Peso+10% (kg)	Total
Grado 75 $\phi 10$	342.5	251.66	
$\phi 12$	381.8	359.12	610.78

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VILLAMONTES-GRAN CHACO- TARIJA

PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUIPA - VILLA MONTES - GRAN CHACO - TARIJA

CARACTER:	PLANO DE CUBIERTA METALICA Y GRADA DE HºAº
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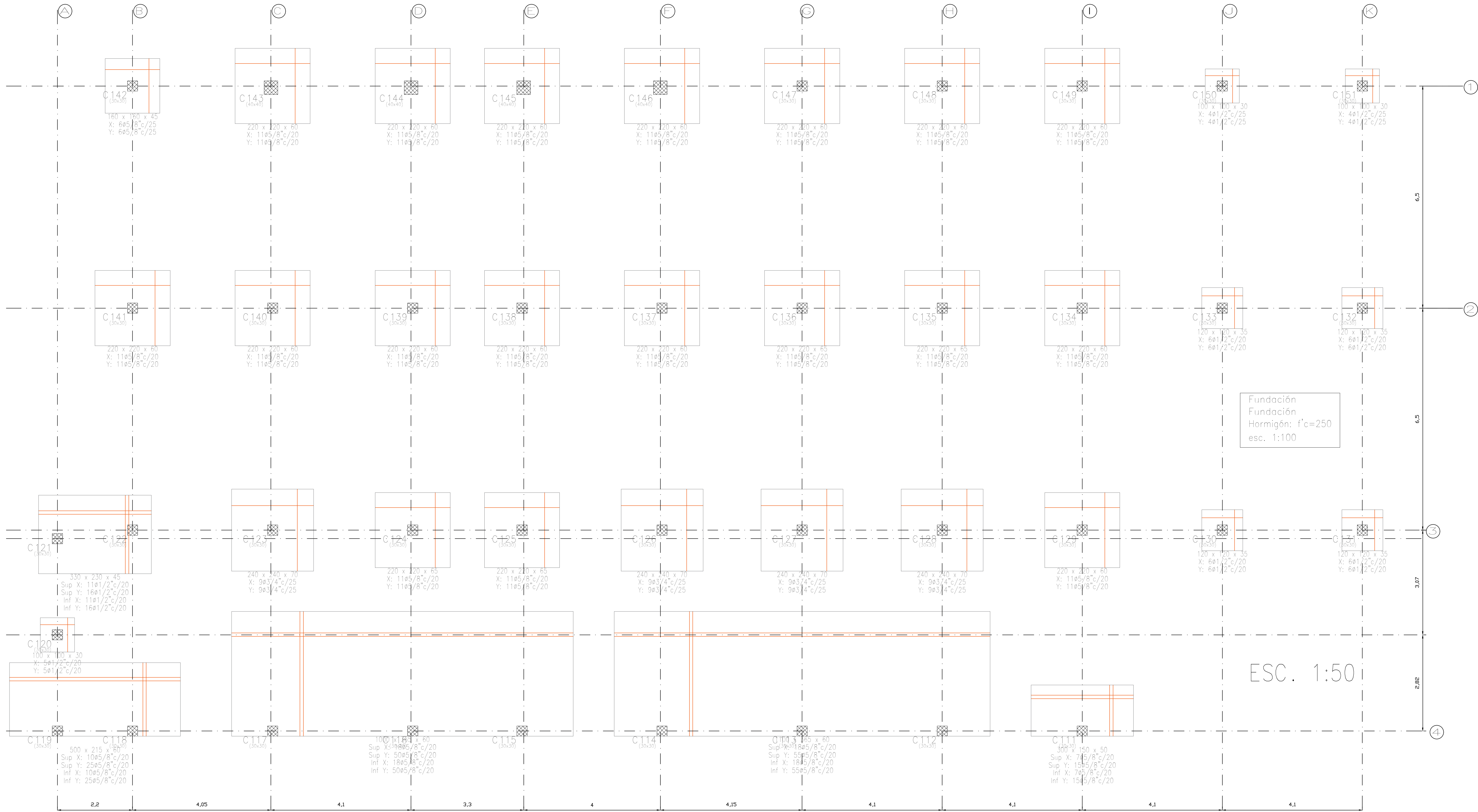
ESCALA:	LAMINA:
INDICADA	

VoBo

REALIZADO POR:
QUENTASI AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022

0/10



Cuento de elementos de fundación					
Referencia	Dimensiones (cm)	Área (cm²)	Área (m²)	Área (m²)	Área (m²)
C119	100x100	10000	0.01	0.01	0.01
C120	100x100	10000	0.01	0.01	0.01
C121	100x100	10000	0.01	0.01	0.01
C122	100x100	10000	0.01	0.01	0.01
C123	100x100	10000	0.01	0.01	0.01
C124	100x100	10000	0.01	0.01	0.01
C125	100x100	10000	0.01	0.01	0.01
C126	100x100	10000	0.01	0.01	0.01
C127	100x100	10000	0.01	0.01	0.01
C128	100x100	10000	0.01	0.01	0.01
C129	100x100	10000	0.01	0.01	0.01
C130	100x100	10000	0.01	0.01	0.01
C131	100x100	10000	0.01	0.01	0.01
C132	100x100	10000	0.01	0.01	0.01
C133	100x100	10000	0.01	0.01	0.01
C134	100x100	10000	0.01	0.01	0.01
C135	100x100	10000	0.01	0.01	0.01
C136	100x100	10000	0.01	0.01	0.01
C137	100x100	10000	0.01	0.01	0.01
C138	100x100	10000	0.01	0.01	0.01
C139	100x100	10000	0.01	0.01	0.01
C140	100x100	10000	0.01	0.01	0.01
C141	100x100	10000	0.01	0.01	0.01
C142	100x100	10000	0.01	0.01	0.01
C143	100x100	10000	0.01	0.01	0.01
C144	100x100	10000	0.01	0.01	0.01
C145	100x100	10000	0.01	0.01	0.01
C146	100x100	10000	0.01	0.01	0.01
C147	100x100	10000	0.01	0.01	0.01
C148	100x100	10000	0.01	0.01	0.01
C149	100x100	10000	0.01	0.01	0.01
C150	100x100	10000	0.01	0.01	0.01
C151	100x100	10000	0.01	0.01	0.01

Fundación

Hormigón: f'c=250

esc. 1:100

Resumen Acero

Fundación

Desplazamiento

Grado 75

Ø8

18.4

8

Ø1/2"

767.6

840

Ø5/8"

2829.1

4861

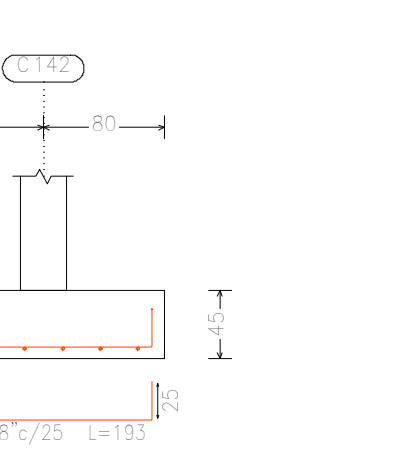
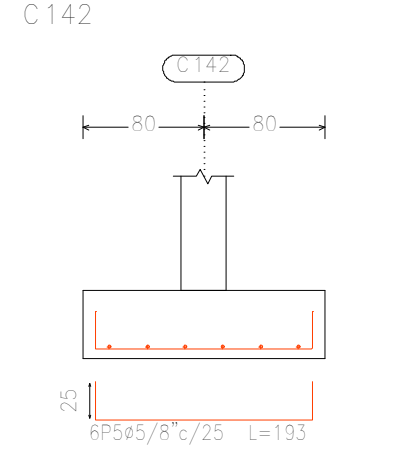
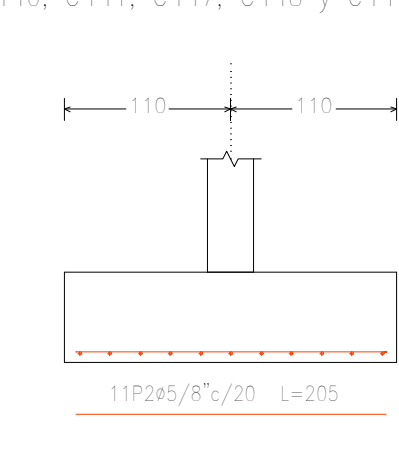
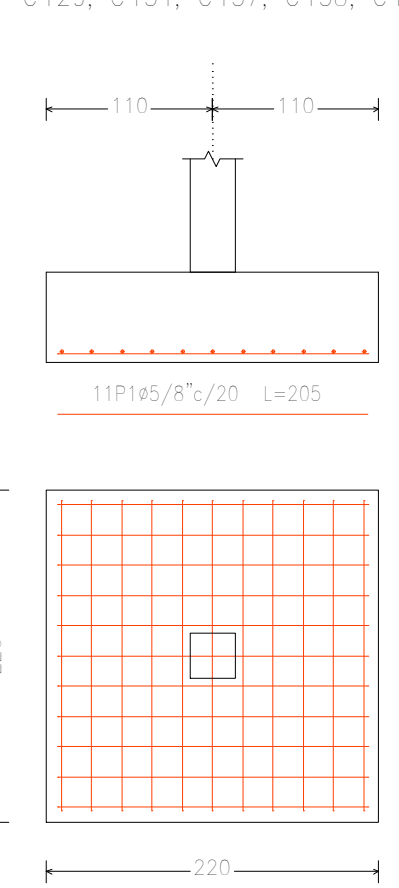
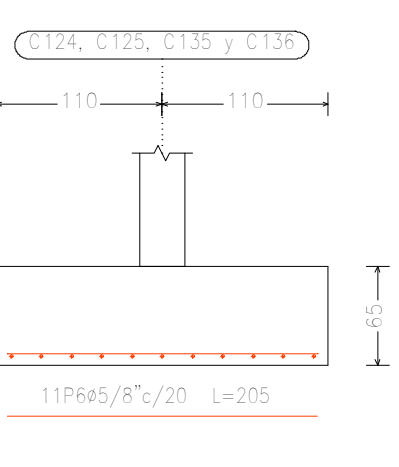
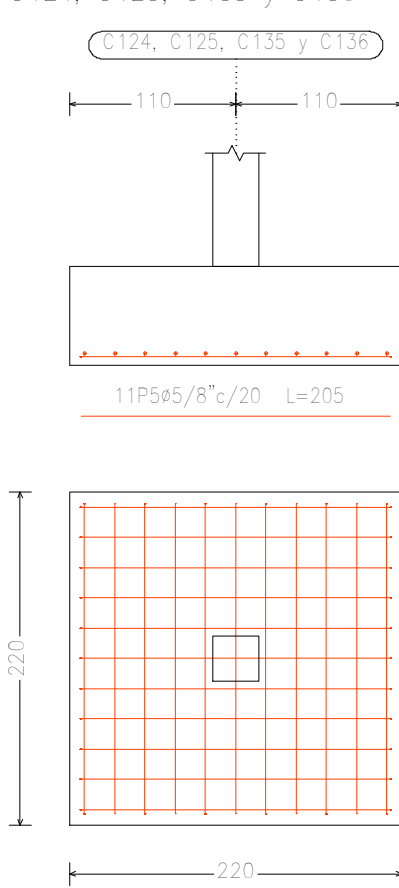
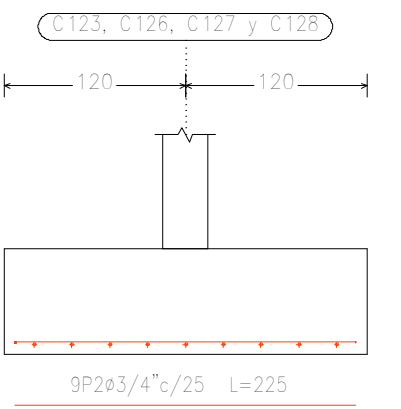
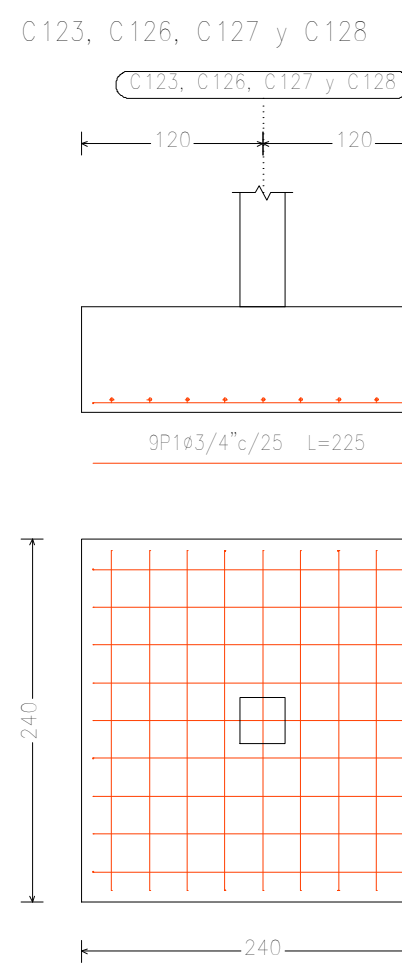
Ø3/4"

190.0

468

6207

ESC. 1:100



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
C123, C126, C127 y C128	1	Ø8	8	225	144	144
	2	Ø1/2"	8	225	144	144
	3	Ø5/8"	8	225	144	144
	4	Ø3/4"	8	225	144	144
Total						576

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (kg)	Grado 75 (kg)
C124, C125, C135 y C136	1	Ø8	8	205	128	128
	2	Ø1/2"	8	205	128	128
	3	Ø5/8"	8	205	128	128
	4	Ø3/4"	8	205	128	128
Total						512

Resumen Acero	Long. total (m)	Peso + 10% (kg)	Total
Grado 75	122.1	30	
Ø8	18.4	8	
Ø1/2"	767.6	840	
Ø5/8"	2829.1	4861	
Ø3/4"	190.0	468	6207

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COMUNIDAD TIGUPA- VILLA MONTES- GRAN CHACO- TARIJA

CARACTER: PLANO DE REPLANTEO Y DESPICES DE ZAPATAS

VoBo

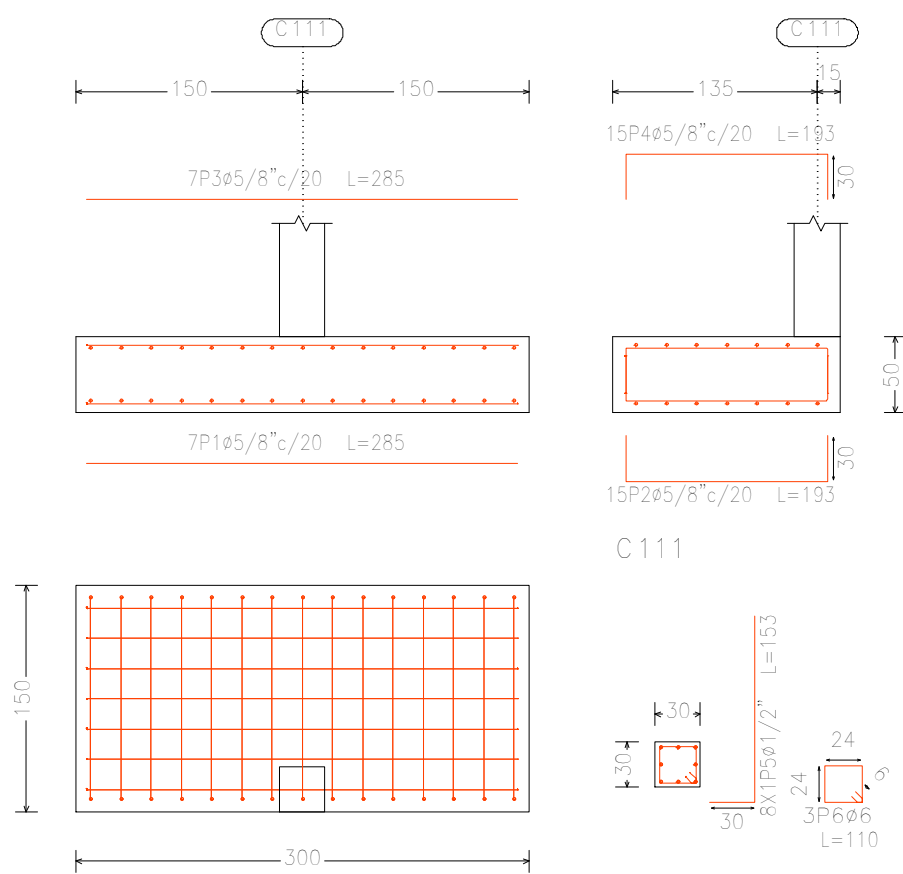
REALIZADO POR: QUINTAS AVENDAÑO DANIEL EDUARDO

FECHA: NOVIEMBRE DE 2022

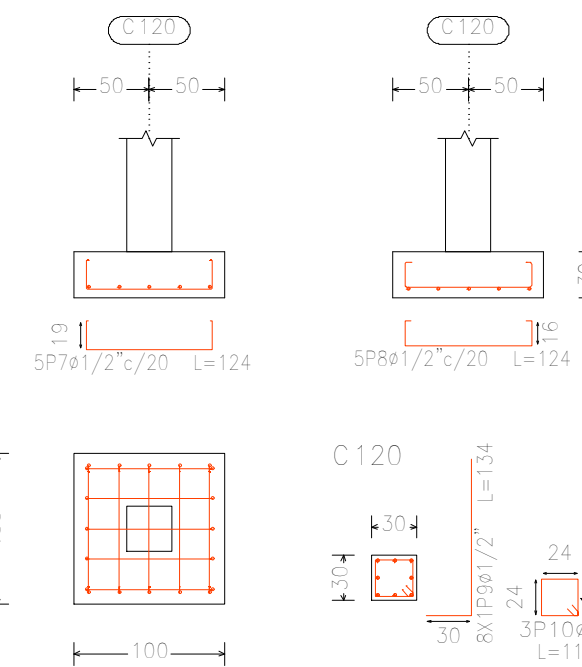
ESCALA: LAMINA INDICADA

1/10

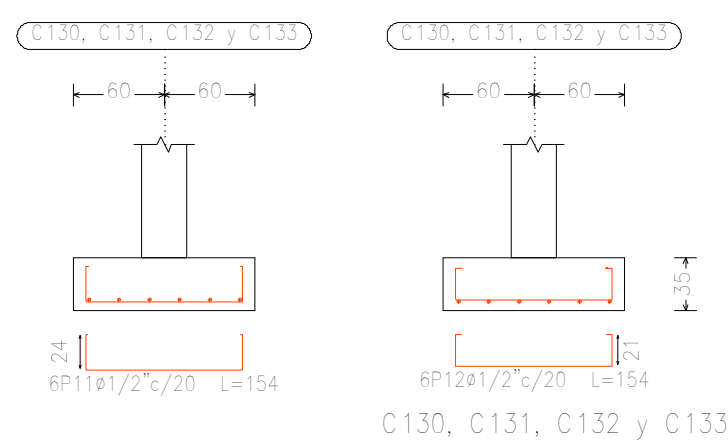
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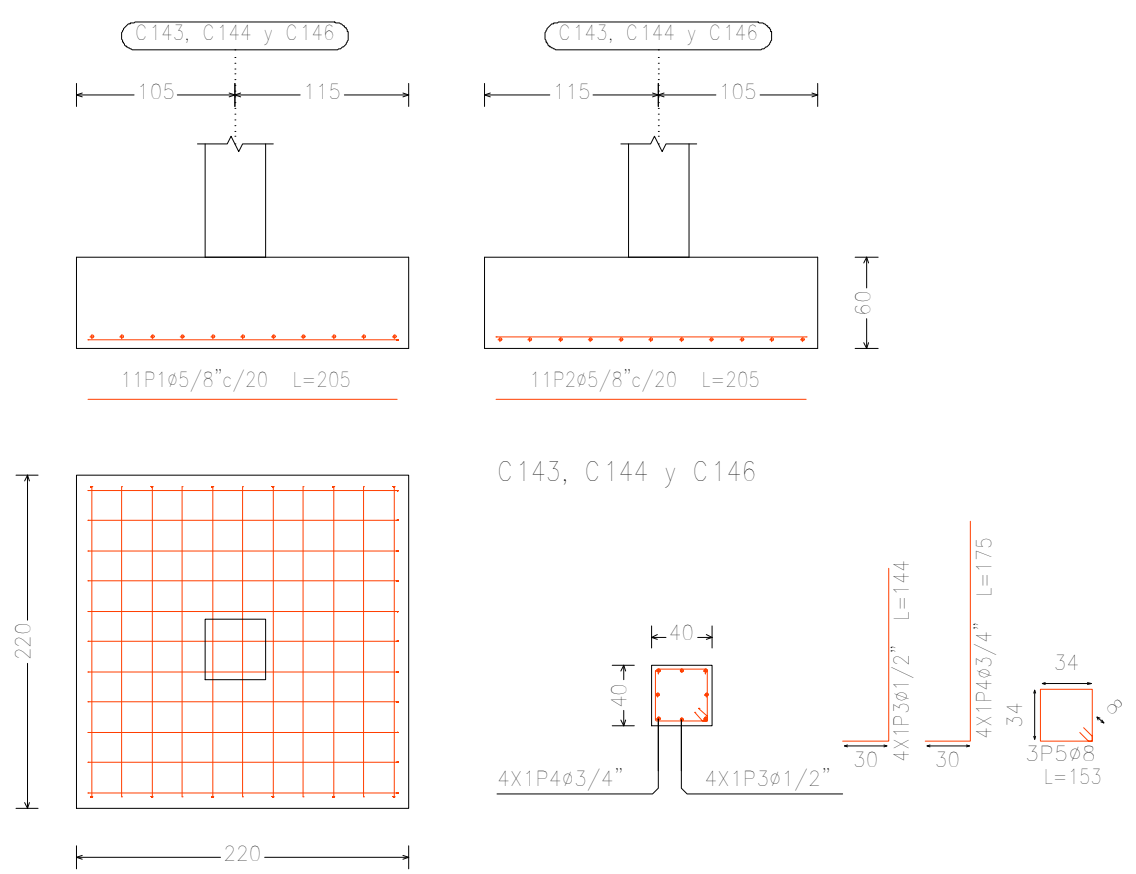
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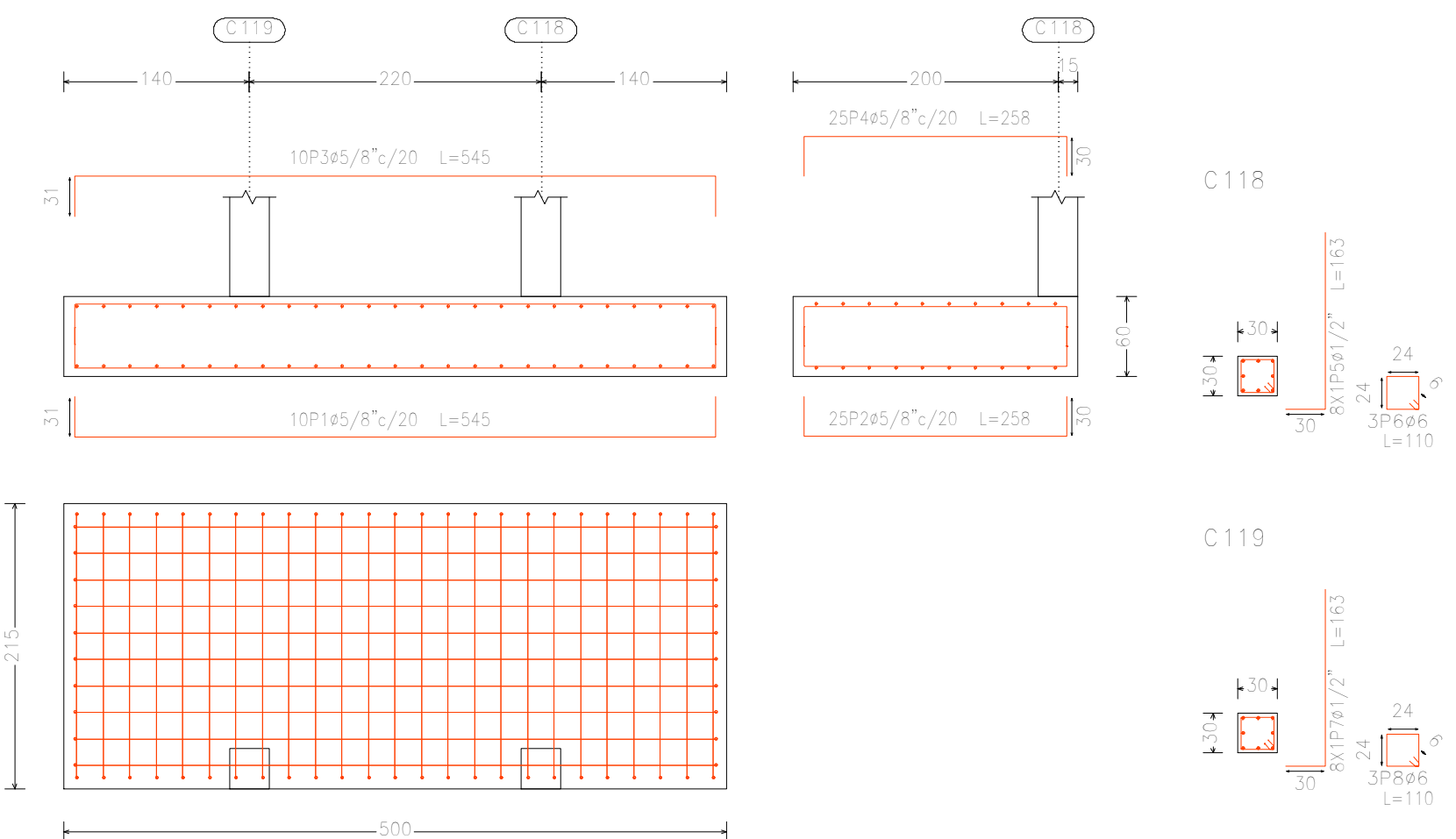
C130, C131, C132 y C133



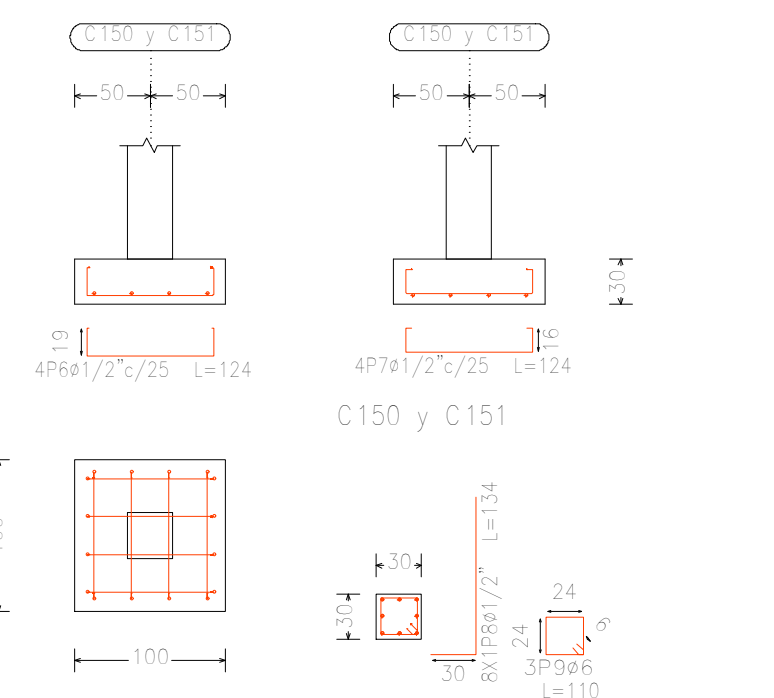
C143, C144 y C146



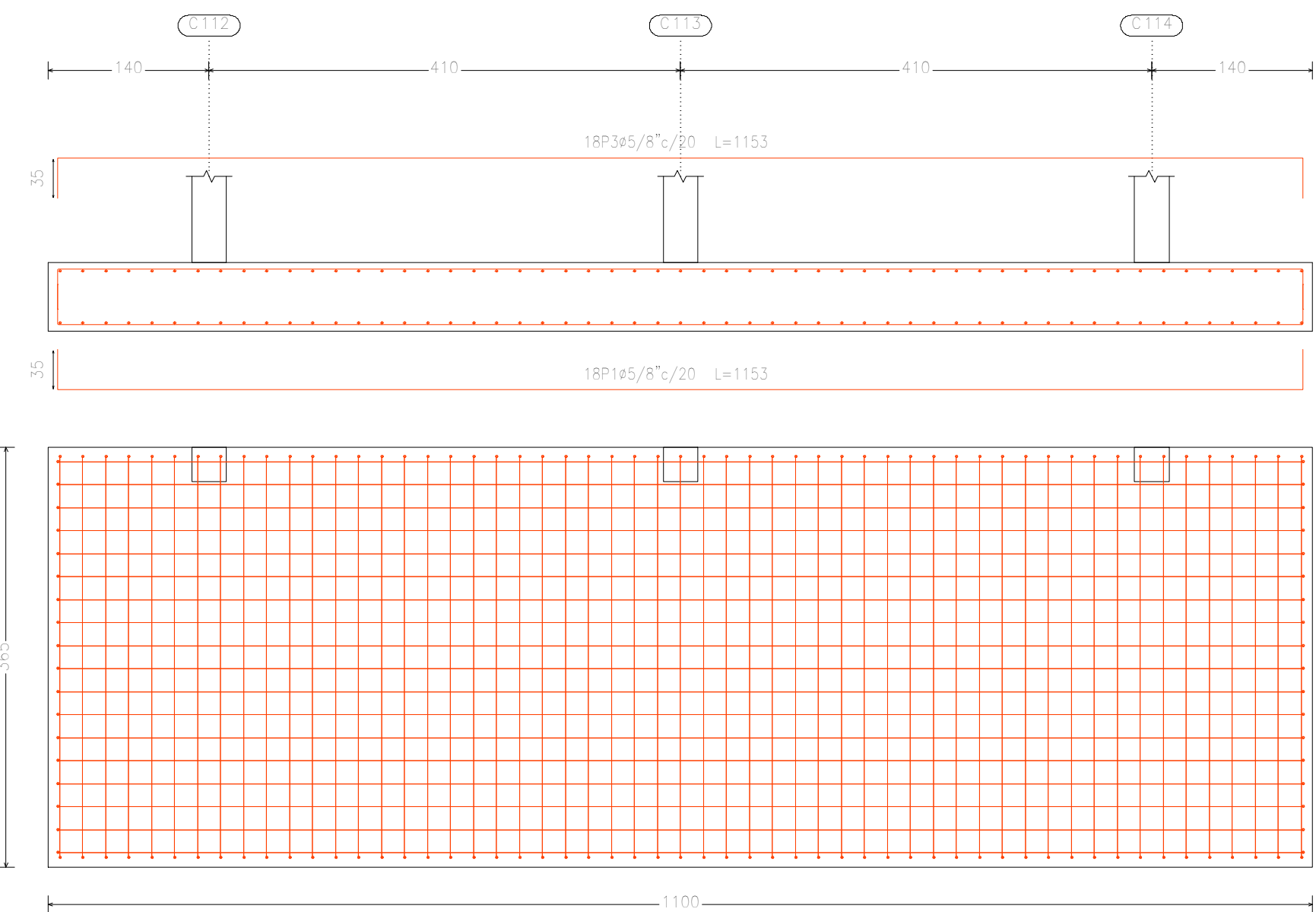
(C118-C119)



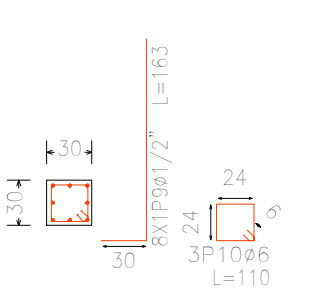
C150 y C151



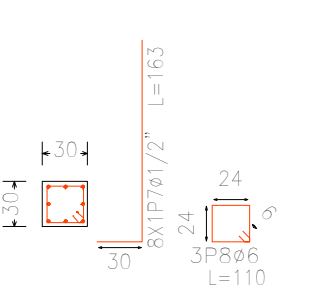
(C112-C113-C114)



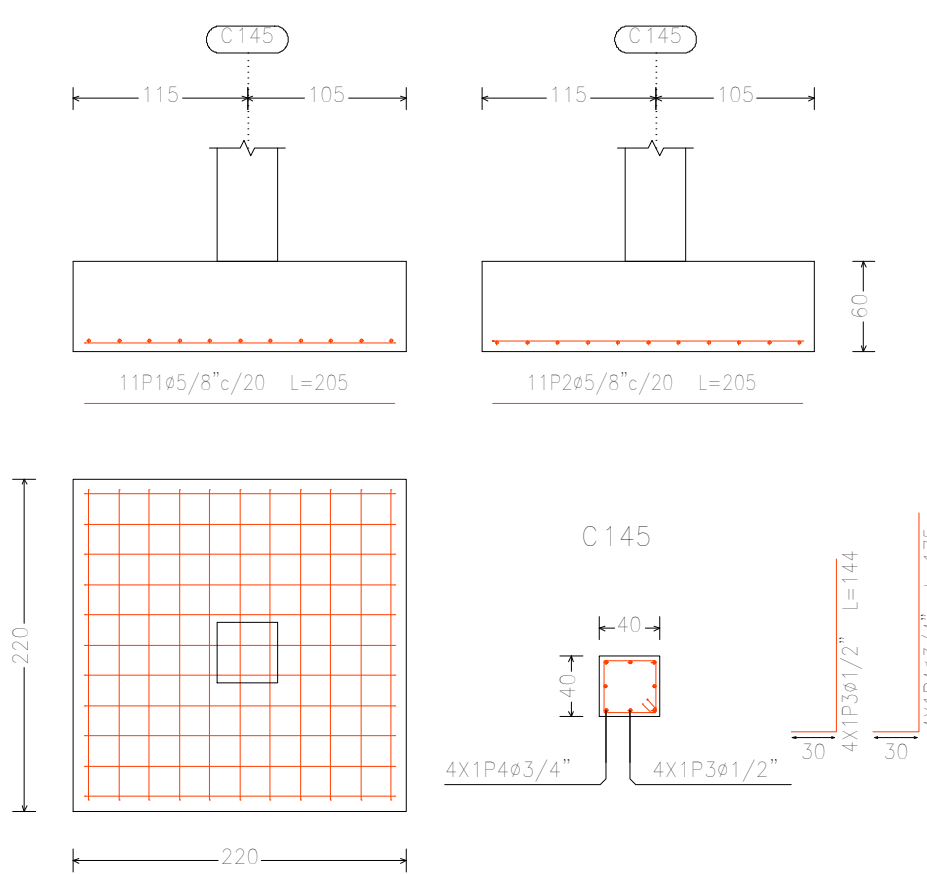
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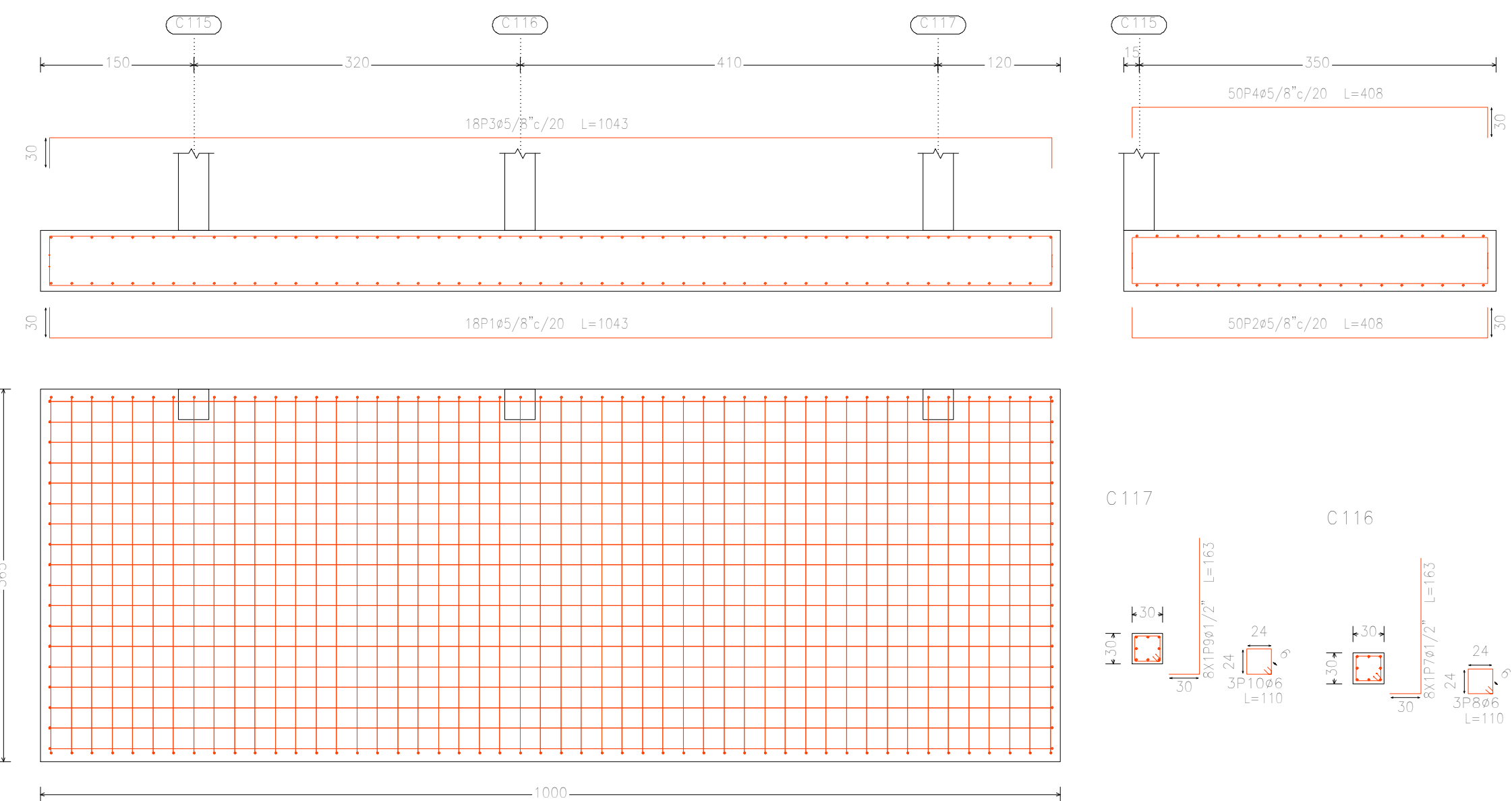
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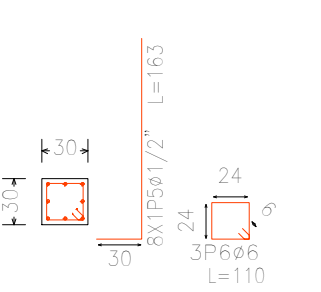
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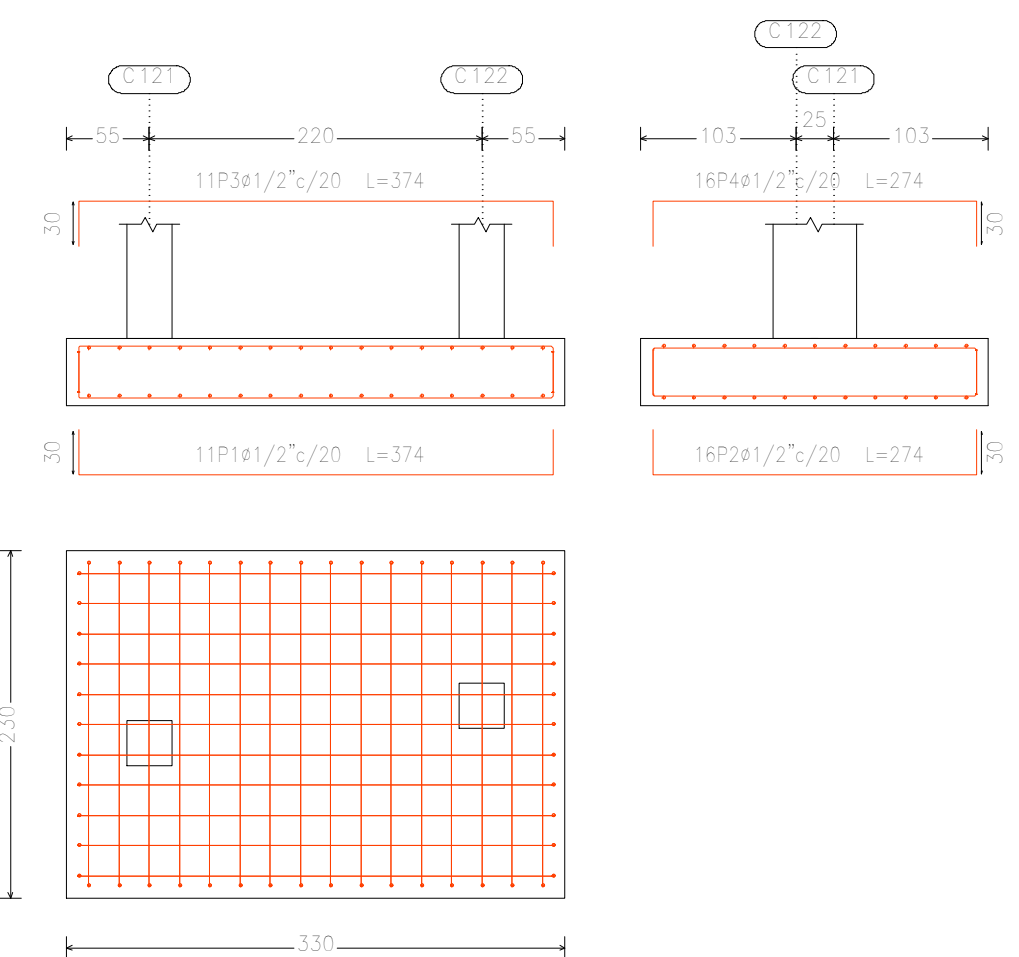
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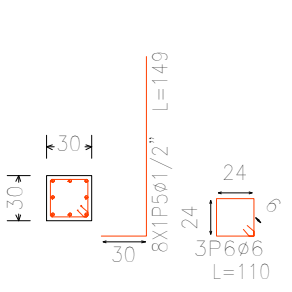
C115



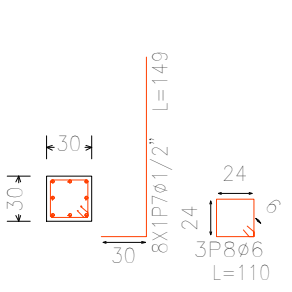
(C121-C122)



C121



C122



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
C111	1	ø5/8"	10	285	2850	31.2
	2	ø5/8"	10	285	2850	31.2
	3	ø5/8"	10	285	2850	31.2
	4	ø5/8"	10	285	2850	31.2
	5	ø5/8"	10	285	2850	31.2
	6	ø5/8"	10	285	2850	31.2
	7	ø5/8"	10	285	2850	31.2
Total=105						182.3
C120	1	ø1/2"	10	124	1240	6.2
	2	ø1/2"	10	124	1240	6.2
	3	ø1/2"	10	124	1240	6.2
	4	ø1/2"	10	124	1240	6.2
	5	ø1/2"	10	124	1240	6.2
	6	ø1/2"	10	124	1240	6.2
	7	ø1/2"	10	124	1240	6.2
Total=105						28.7
C130=C131=C132=C133	1	ø1/2"	10	154	1540	9.2
	2	ø1/2"	10	154	1540	9.2
	3	ø1/2"	10	154	1540	9.2
	4	ø1/2"	10	154	1540	9.2
	5	ø1/2"	10	154	1540	9.2
	6	ø1/2"	10	154	1540	9.2
	7	ø1/2"	10	154	1540	9.2
Total=105						57.0
C143=C144=C146	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0
C150=C151	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0
C145	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0
C150=C151	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0
C145	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0
C150=C151	1	ø5/8"	11	205	2255	35.2
	2	ø5/8"	11	205	2255	35.2
	3	ø5/8"	11	205	2255	35.2
	4	ø5/8"	11	205	2255	35.2
	5	ø5/8"	11	205	2255	35.2
	6	ø5/8"	11	205	2255	35.2
	7	ø5/8"	11	205	2255	35.2
Total=105						103.0

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
C118-C119	1	ø5/8"	10	545	5450	88.0
	2	ø5/8"	10	545	5450	88.0
	3	ø5/8"	10	545	5450	88.0
	4	ø5/8"	10	545	5450	88.0
	5	ø5/8"	10	545	5450	88.0
	6	ø5/8"	10	545	5450	88.0
	7	ø5/8"	10	545	5450	88.0
Total=105						435.1
C118	1	ø5/8"	10	545	5450	88.0
	2	ø5/8"	10	545	5450	88.0
	3	ø5/8"	10	545	5450	88.0
	4	ø5/8"	10	545	5450	88.0
	5	ø5/8"	10	545	5450	88.0
	6	ø5/8"	10	545	5450	88.0
	7	ø5/8"	10	545	5450	88.0
Total=105						435.1

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
C131-C132	1	ø1/2"	11	374	4114	40.2
	2	ø1/2"	11	374	4114	40.2
	3	ø1/2"	11	374	4114	40.2
	4	ø1/2"	11	374	4114	40.2
	5	ø1/2"	11	374	4114	40.2
	6	ø1/2"	11	374	4114	40.2
	7	ø1/2"	11	374	4114	40.2
Total=105						213.8
C131-C132	1	ø1/2"	11	374	4114	40.2
	2	ø1/2"	11	374	4114	40.2
	3	ø1/2"	11	374	4114	40.2
	4	ø1/2"	11	374	4114	40.2
	5	ø1/2"	11	374	4114	40.2
	6	ø1/2"	11	374	4114	40.2
	7	ø1/2"	11	374	4114	40.2
Total=105						213.8

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
C112-C113-C114	1	ø5/8"	18	1153	20754	324.2
	2	ø5/8"	18	1153	20754	324.2
	3	ø5/8"	18	1153	20754	324.2
	4	ø5/8"	18	1153	20754	324.2
	5	ø5/8"	18	1153	20754	324.2
	6	ø5/8"	18	1153	20754	324.2
	7	ø5/8"	18	1153	20754	324.2
Total=105						1948.5
C112-C113-C114	1	ø5/8"	18	1153	20754	324.2
	2	ø5/8"	18	1153	20754	324.2
	3	ø5/8"	18	1153	20754	324.2
	4	ø5/8"	18	1153	20754	324.2
	5	ø5/8"	18	1153	20754	324.2
	6	ø5/8"	18	1153	20754	324.2
	7	ø5/8"	18	1153	20754	324.2
Total=105						1948.5

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
C115-C116-C117	1	ø5/8"	18	1043	18774	293.2
	2	ø5/8"	18	1043	18774	293.2
	3	ø5/8"	18	1043	18774	293.2
	4	ø5/8"	18	1043	18774	293.2
	5	ø5/8"	18	1043	18774	293.2
	6	ø5/8"	18	1043	18774	293.2
	7	ø5/8"	18	1043	18774	293.2
Total=105						1391.8
C115-C116-C117	1	ø5/8"	18	1043	18774	293.2
	2	ø5/8"	18	1043	18774	293.2
	3	ø5/8"	18	1043	18774	293.2
	4	ø5/8"	18	1043	18774	293.2
	5	ø5/8"	18	1043	18774	293.2
	6	ø5/8"	18	1043	18774	293.2
	7	ø5/8"	18	1043	18774	293.2
Total=105						1391.8

Resumen Acero Fundación	Long. total (m)	Peso+10% (kg)	Total
Grado 75	122.1	30	
ø8	18.4	8	
ø1/2"	767.6	840	
ø5/8"	2829.1	4861	
ø3/4"	190.0	468	6207

UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"
FACULTAD DE CIENCIAS Y TECNOLOGÍA
CARRERA: ING. CIVIL



UBICACION:
COMUNIDAD DE TIGUIPA-
VILLAMONTES-GRAN CHACO - TARIJA

PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUIPA - VILLA MONTES - GRAN CHACO - TARIJA

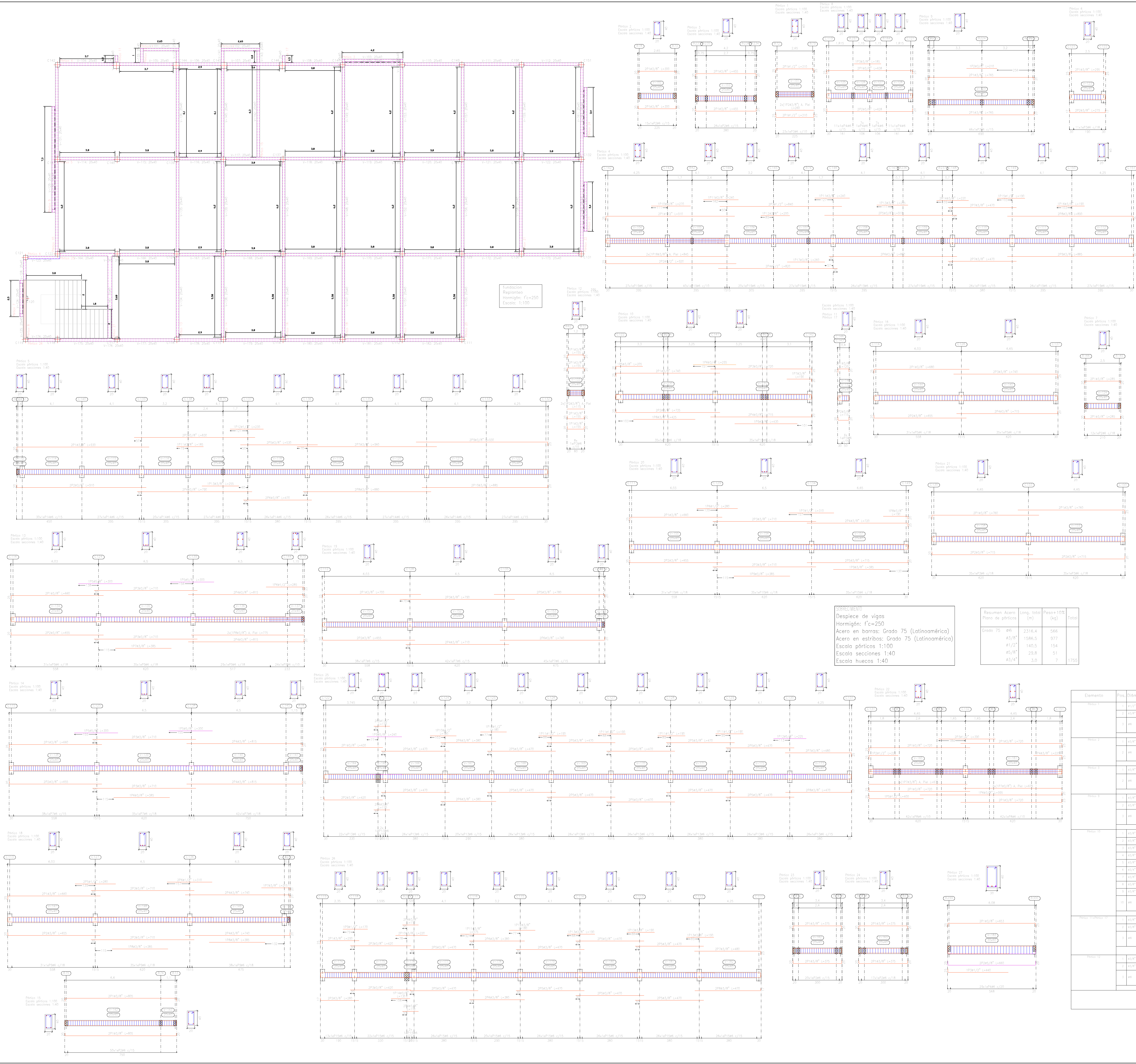
CARACTER: PLANO DE DESPIECE DE ZAPATAS

ESCALA: 1/10
INDICADA

VoBo

RALIZADO POR:
QUENTASI AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022



Elemento	Pos.	Dim.	No.	Esquema (cm)	Long. (cm)	Toto (kg)	Grado 75
Partes A	1	$\varnothing 12,7$	2		915	1620	18,1
	2	$\varnothing 12,7$	2		915	1640	18,2
	3	$\varnothing 12,7$	2		900	1685	18,7
	4	$\varnothing 12,7$	2		915	1640	18,2
	5	$\varnothing 12,7$	2		915	1620	18,1
	6	$\varnothing 12,7$	2		980	1745	20,3
	7	$\varnothing 12,7$	4		475	840	10,5
	8	$\varnothing 12,7$	2		695	1195	19,9
	9	$\varnothing 12,7$	2		695	1170	19,3
	10	$\varnothing 12,7$	1		230	250	1,0
	11	$\varnothing 12,7$	2		230	240	0,9
	12	$\varnothing 12,7$	2		200	200	0,8
	13	$\varnothing 12,7$	1		215	215	1,0
	14	$\varnothing 12,7$	2		220	240	1,0
	15	$\varnothing 12,7$	1		135	155	0,9
Partes B	16	$\varnothing 12,7$	1		135	135	0,5
	17	$\varnothing 12,7$	1		240	240	1,5
	18	$\varnothing 12,7$	2		640	1655	3,2
	19	405	2400		115	21945	60,1
	Partes C (22,2)						
	1	$\varnothing 12,7$	2		915	1660	19,4
	2	$\varnothing 12,7$	2		915	1620	18,2
	3	$\varnothing 12,7$	2		910	1640	18,3
	4	$\varnothing 12,7$	2		910	1640	18,3
	5	$\varnothing 12,7$	1		230	230	0,9
	6	$\varnothing 12,7$	2		475	940	5,0
	7	$\varnothing 12,7$	2		695	1325	15,7
	8	$\varnothing 12,7$	2		695	1145	15,9
	9	$\varnothing 12,7$	2		515	1095	10,6
	10	$\varnothing 12,7$	2		695	1170	19,9
Partes D	11	$\varnothing 12,7$	1		195	195	1,0
	12	$\varnothing 12,7$	1		205	205	1,0
	13	$\varnothing 12,7$	1		205	210	1,6
	14	405	230		115	21945	59,1
	Partes E (148,7)						
	1	$\varnothing 12,7$	2		230	230	1,0
	2	$\varnothing 12,7$	2		217	254	2,1
	3	405	113		115	2210	57,0
Partes F	1	$\varnothing 12,7$	2		630	1015	5,7
	2	$\varnothing 12,7$	2		630	1225	7,0
	3	$\varnothing 12,7$	1		165	165	0,6
	4	405	38		115	2280	58,8
Partes G (162,5)							
Partes H (478)							

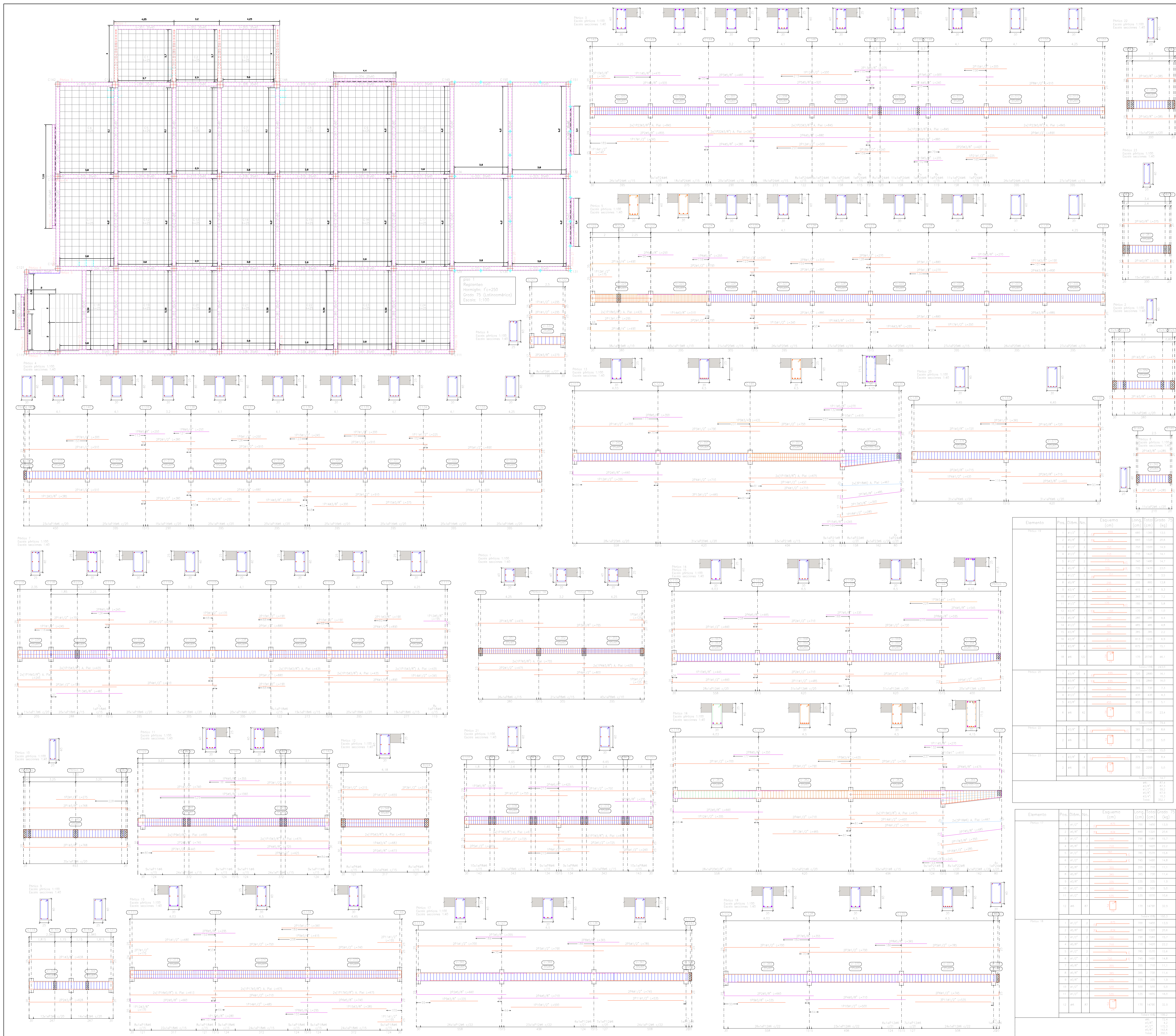
Elemento	Pos.	Dist. (m)	Vol.	Esquejo (cm)	Long. (cm)	Total (cm)	Queda (cm)
Rece 14	1	4,00	1,0		800	1.040	7,6
	2	4,00	1,0		800	1.040	7,6
	3	4,00	1,0		800	1.040	7,6
	4	4,00	1,0		800	1.040	7,6
	5	4,00	1,0		800	1.040	7,6
Rece 15	1	8,0	8,0		110	1.040	8,0
	2	4,00	1,0		800	1.040	7,6
	3	8,00	8,0		800	1.040	7,6
	5	4,00	1,0		710	2.040	10,0
	4	4,00	1,0		740	2.040	10,0
	5	4,00	1,0		740	2.040	10,0
	6	4,00	1,0		740	2.040	10,0
	7	4,00	1,0		740	2.040	10,0
	8	4,00	1,0		740	2.040	10,0
	9	8,00	8,0		110	2.040	21,0
Rece 16	1	4,00	1,0		800	1.040	7,6
	2	4,00	1,0		800	1.040	7,6
	3	4,00	1,0		800	1.040	7,6
	4	4,00	1,0		800	1.040	7,6
	5	4,00	1,0		800	1.040	7,6
	6	4,00	1,0		800	1.040	7,6
	7	4,00	1,0		800	1.040	7,6
	8	4,00	1,0		800	1.040	7,6
	9	4,00	1,0		800	1.040	7,6
	10	4,00	1,0		800	1.040	7,6

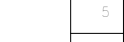
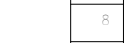
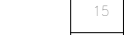
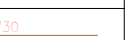
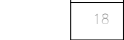
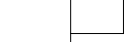
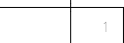
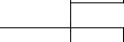
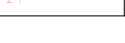
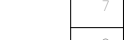
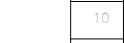
Elemento	Pos.	Item	Idem.	Esquema (cm)	long. (cm)	prof. (cm)	cond. (kg)
Pavim. 13	1	330.87	3		840	1310	7.4
	2	330.97	3		840	1310	7.4
	3	330.97	4		1100	2640	15.8
	4	330.97	4		1100	2640	15.8
	5	330.97	3		840	1310	7.4
	6	330.97	3		840	1310	7.4
	7	330.97	3		840	1310	7.4
	8	330.97	3		840	1310	7.4
	9	330.97	3		840	1310	7.4
	10	330.97	3		840	1310	7.4
Pavim. 14	1	330.97	3		840	1310	7.4
	2	330.97	3		840	1310	7.4
	3	330.97	4		1100	2640	15.8
	4	330.97	4		1100	2640	15.8
	5	330.97	3		840	1310	7.4
	6	330.97	3		840	1310	7.4
	7	330.97	3		840	1310	7.4
	8	330.97	3		840	1310	7.4
	9	330.97	3		840	1310	7.4
	10	330.97	3		840	1310	7.4
Pavim. 15	1	330.97	4		1100	2640	15.8
	2	330.97	4		1100	2640	15.8
	3	330.97	3		840	1310	7.4
	4	330.97	3		840	1310	7.4
	5	330.97	3		840	1310	7.4
	6	330.97	3		840	1310	7.4
	7	330.97	3		840	1310	7.4
	8	330.97	3		840	1310	7.4
	9	330.97	3		840	1310	7.4
	10	330.97	3		840	1310	7.4
Pavim. 16	1	330.97	4		1100	2640	15.8
	2	330.97	4		1100	2640	15.8
	3	330.97	3		840	1310	7.4
	4	330.97	3		840	1310	7.4
	5	330.97	3		840	1310	7.4
	6	330.97	3		840	1310	7.4
	7	330.97	3		840	1310	7.4
	8	330.97	3		840	1310	7.4
	9	330.97	3		840	1310	7.4

Elemento	Pos.	Dim. No.	Esquema (cm)	Long. (cm)	Grosor (μg)	TS
Pírex 21	1	1.0/0.7	1	100	40	4.0
	2	1.0/0.7	2	925	840	6.7
	3	1.0/1.7	3	110	1100	2.2
	4	1.0/1.7	4	110	1200	1.2
	5	1.0/1.7	5	475	1140	4.1
	6	1.0/1.7	6	305	1240	3.5
	7	1.0/1.7	7	400	900	5.4
	8	1.0/1.7	8	675	940	5.3
	9	1.0/1.7	9	240	240	5.1
	10	1.0/1.7	10	300	300	5.0
11	10	226		110	1440	15.2
Pírex 24	1	1.0/1.7	1	205	960	3.2
	2	1.0/1.7	2	315	990	3.1
	3	1.0/1.7	3	420	1000	3.4
	4	1.0/1.7	4	525	1000	3.7
	5	1.0/1.7	5	630	1000	4.0
	6	1.0/1.7	6	735	1000	4.3
	7	1.0/1.7	7	840	1000	4.6
	8	1.0/1.7	8	945	1000	4.9
	9	1.0/1.7	9	1050	1000	5.2
	10	1.0/1.7	10	1155	1000	5.5
Pírex 27	1	1.0/1.7	1	405	960	3.4
	2	1.0/1.7	2	475	960	3.3
	3	1.0/1.7	3	545	960	3.2
	4	1.0/1.7	4	615	960	3.1
	5	1.0/1.7	5	685	960	3.0
	6	1.0/1.7	6	755	960	2.9
	7	1.0/1.7	7	825	960	2.8
	8	1.0/1.7	8	895	960	2.7
	9	1.0/1.7	9	965	960	2.6
	10	1.0/1.7	10	1035	960	2.5
Pírex 31	1	1.0/1.7	1	615	1900	7.3
	2	1.0/1.7	2	715	1910	7.0
	3	1.0/1.7	3	815	1920	6.7
	4	1.0/1.7	4	915	1930	6.4
	5	1.0/1.7	5	1015	1940	6.1
	6	1.0/1.7	6	1115	1950	5.8
	7	1.0/1.7	7	1215	1960	5.5
	8	1.0/1.7	8	1315	1970	5.2
	9	1.0/1.7	9	1415	1980	4.9
	10	1.0/1.7	10	1515	1990	4.6
Pírex 37	1	1.0/1.7	1	615	1900	7.3
	2	1.0/1.7	2	715	1910	7.0
	3	1.0/1.7	3	815	1920	6.7
	4	1.0/1.7	4	915	1930	6.4
	5	1.0/1.7	5	1015	1940	6.1
	6	1.0/1.7	6	1115	1950	5.8
	7	1.0/1.7	7	1215	1960	5.5
	8	1.0/1.7	8	1315	1970	5.2
	9	1.0/1.7	9	1415	1980	4.9
	10	1.0/1.7	10	1515	1990	4.6
Pírex 41	1	1.0/1.7	1	615	1900	7.3
	2	1.0/1.7	2	715	1910	7.0
	3	1.0/1.7	3	815	1920	6.7
	4	1.0/1.7	4	915	1930	6.4
	5	1.0/1.7	5	1015	1940	6.1
	6	1.0/1.7	6	1115	1950	5.8
	7	1.0/1.7	7	1215	1960	5.5
	8	1.0/1.7	8	1315	1970	5.2

Elemento	Ris. Dim.	Vol. (mm ³)	Eq. (mm (cm))	Long. (cm)	Total (mm)	Grado (kg)
Riscia 20	40/30°	2		440	1320	7,4
	40/30°	1		440	1320	7,4
	40/30°	1		700	2040	10,8
	40/30°	3		700	2040	10,8
	40/30°	2		710	2140	8,1
	40/30°	1		240	740	2,9
	40/30°	1		210	630	3,1
	40/30°	1		260	780	3,7
	40/30°	1		360	1080	4,3
	40	100		110	1100	24,7
Riscia 21	Riscia 21					
	40/30°	4		710	2840	11,7
	40/30°	4		710	2840	11,7
	40	75		110	2750	12,1
Riscia 22	Riscia 22					
	40/30°	8		720	5760	32,2
	40/30°	1		120	1200	5,2
	40/30°	1		120	1200	5,2
	40/30°	1		120	1200	5,2
	40/30°	3		400	4000	18,2
	40/30°	1		190	1900	8,5
	40/30°	4		490	4900	21,7
40	40	124		110	13640	35,3
	Riscia 23					
	40/30°	1		120	1200	5,2

Elemento	Pos.	Diâm.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado (kg)	75
Prensa 24	1	ø1/8"	4		375	1900	8,4	
	2	ø6	13		110	1830	4,2	
						Total = 1025	13,6	



Elemento	Pos.	Diam. (m)	No.	Ess. (mm)	Long. (cm)	Peso (kg)	Elemento	Pos.	Diam. (m)	No.	Ess. (mm)	Long. (cm)	Peso (kg)
Reuso 1	1	400	2		430	5.5	Reuso 5	1	400	2		440	5.5
	2	400	2		430	5.5		2	400	2		430	5.5
	3	400	2		430	5.5		3	400	2		430	5.5
	4	400	2		430	5.5		4	400	2		430	5.5
	5	400	2		430	5.5		5	400	2		430	5.5
	6	400	2		430	5.5		6	400	2		430	5.5
	7	400	2		430	5.5		7	400	2		430	5.5
	8	400	2		430	5.5		8	400	2		430	5.5
	9	400	2		430	5.5		9	400	2		430	5.5
	10	400	2		430	5.5		10	400	2		430	5.5
Reuso 2	1	400	4		430	5.5	Reuso 6	1	400	2		430	5.5
	2	400	3		430	5.5		2	400	2		430	5.5
	3	400	2		430	5.5		3	400	2		430	5.5
	4	400	2		430	5.5		4	400	2		430	5.5
	5	400	2		430	5.5		5	400	2		430	5.5
	6	400	2		430	5.5		6	400	2		430	5.5
	7	400	2		430	5.5		7	400	2		430	5.5
	8	400	2		430	5.5		8	400	2		430	5.5
	9	400	2		430	5.5		9	400	2		430	5.5
Reuso 3 (Reuso 10)	1	400	2		430	5.5	Reuso 7	1	400	2		430	5.5
	2	400	2		430	5.5		2	400	2		430	5.5
	3	400	2		430	5.5		3	400	2		430	5.5
	4	400	2		430	5.5		4	400	2		430	5.5
	5	400	2		430	5.5		5	400	2		430	5.5
	6	400	2		430	5.5		6	400	2		430	5.5
	7	400	2		430	5.5		7	400	2		430	5.5
	8	400	2		430	5.5		8	400	2		430	5.5
	9	400	2		430	5.5		9	400	2		430	5.5
	10	400	2		430	5.5		10	400	2		430	5.5

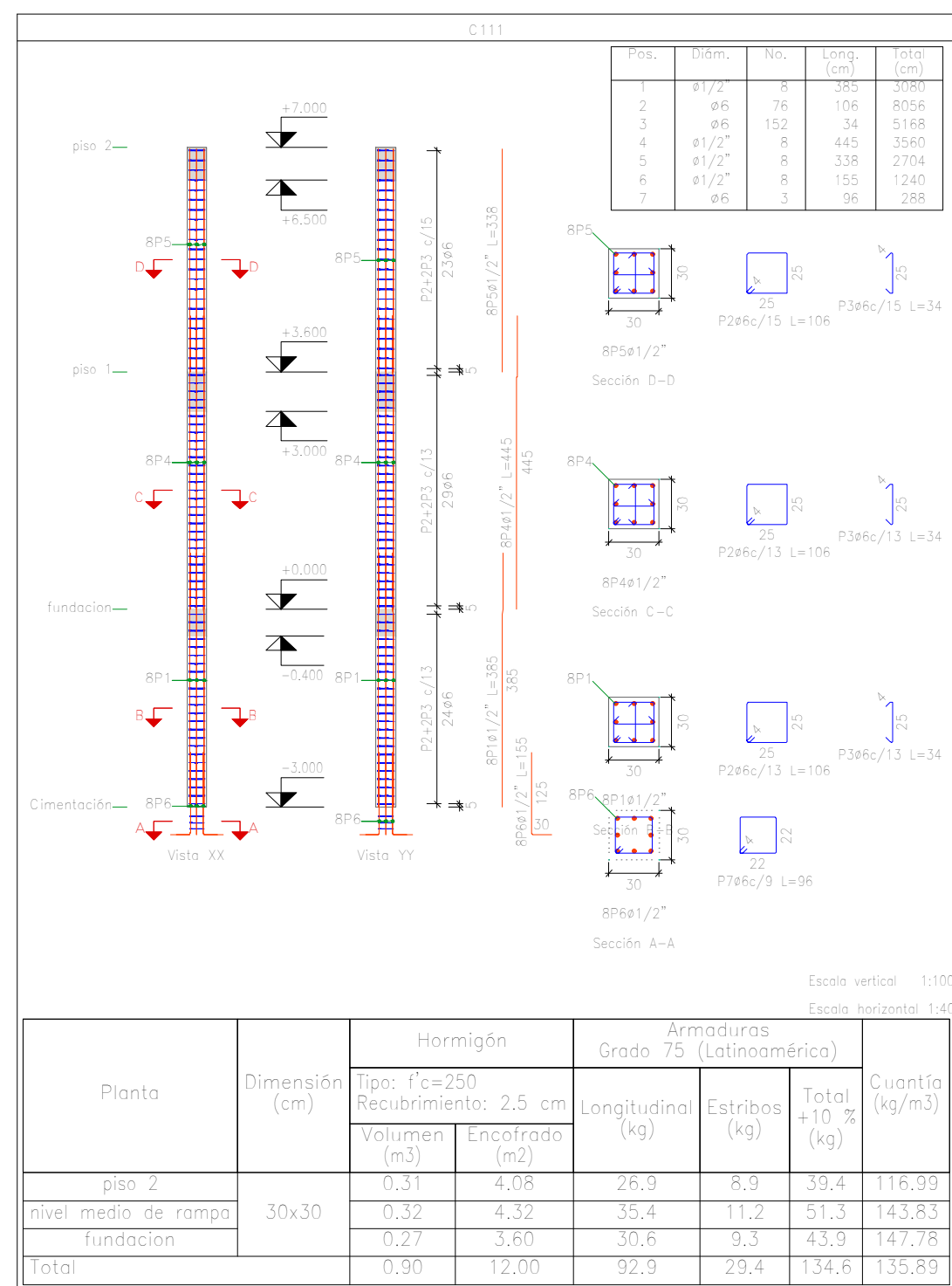
Elemento	Pos.	Idem.	No.	Esquema (cm)	long. (cm)	Grado	75 (kg)
Rota 1	1	60.8"	2		120	1800	25
	2	60.8"	2		120	1700	23.8
	3	60.8"	2		120	1600	18.4
	4	60.8"	2		120	1500	11.3
	5	60.8"	2		120	1400	26.1
	6	60.8"	2		120	1300	15.8
	7	60.8"	2		120	1200	8.8
	8	60.8"	2		120	1100	8.8
	9	60.8"	2		120	1000	13.7
	10	60.8"	2		120	900	7.7
	11	60.8"	2		120	800	10.3
	12	60.8"	2		120	700	18.4
	13	60.8"	2		120	600	8.8
	14	60.8"	2		120	500	8.8
	15	60.8"	2		120	400	13.7
	16	60.8"	2		120	300	7.7
	17	60.8"	2		120	200	10.3
	18	60.8"	2		120	100	18.4
	19	60.8"	2		120	100	8.8
	Rota 2	1	60.8"	4		120	1800
2		60.8"	11		120	1400	3.7
Inventário: 261							
1		60.8"	2		120	1800	25
2		60.8"	2		120	1700	23.8
3		60.8"	2		120	1600	18.4
4		60.8"	2		120	1500	11.3
5		60.8"	2		120	1400	26.1
6		60.8"	2		120	1300	15.8
7		60.8"	2		120	1200	8.8
Rota 3	1	60.8"	8		120	1400	13.7
	2	60.8"	2		120	1800	25
	3	60.8"	2		120	1700	23.8
	4	60.8"	2		120	1600	18.4
	5	60.8"	2		120	1500	11.3
Rota 4	1	60.8"	4		120	1800	25
	2	60.8"	4		120	1400	3.7
	3	60.8"	4		120	1400	3.7
	4	60.8"	4		120	1400	3.7
	5	60.8"	4		120	1400	3.7

[illegible]

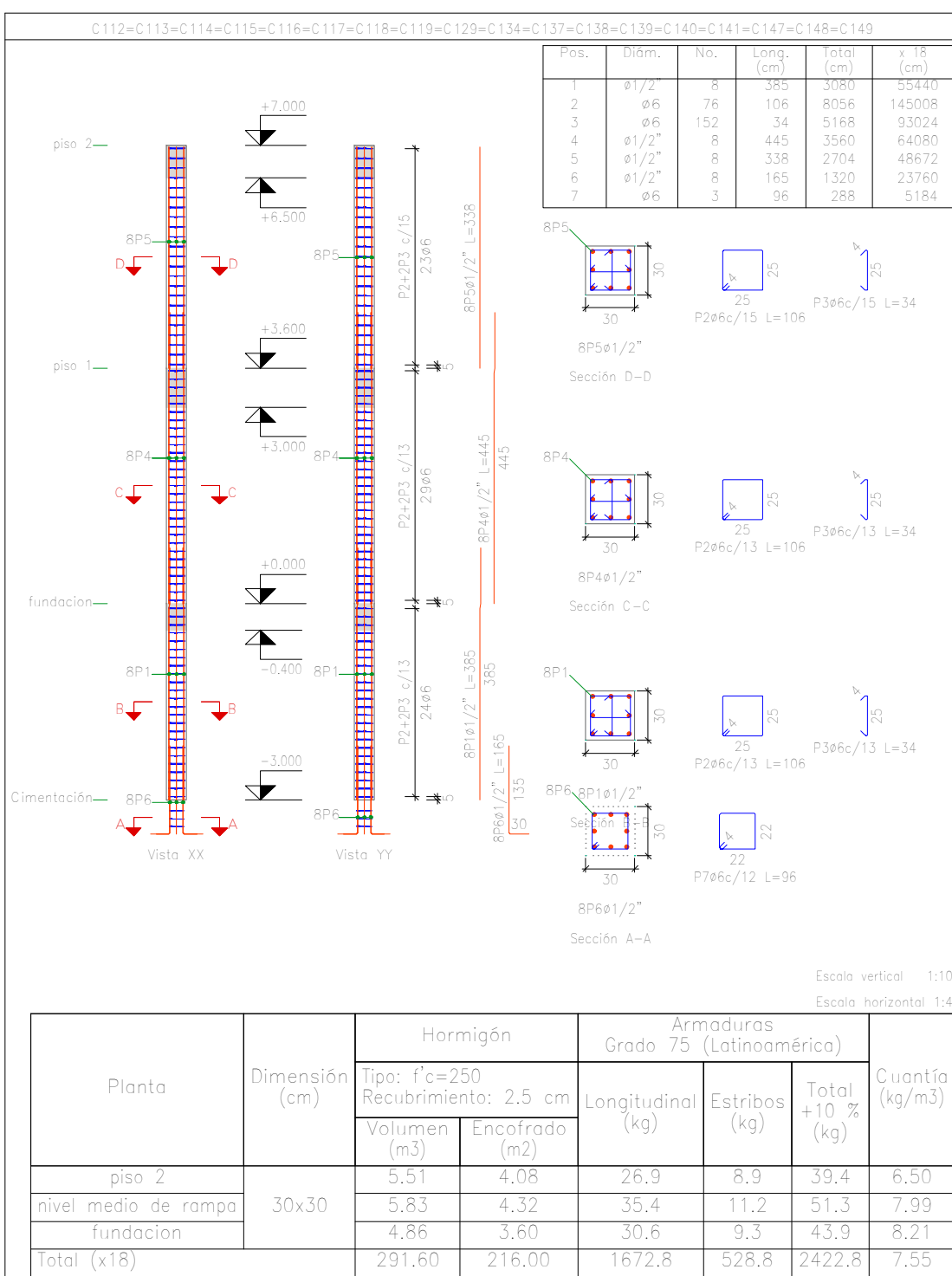
piso 1
Despiece de vigas
Hormigón: $f'_{\text{c}}=250$
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)
Escala pódicos 1:100
Escala secciones 1:40
Escala huecos 1:40

Resumen Acero Plano de pñrticos	Long. total (m)	Peso+10% (kg)	Total:
Grado 75	3132,7	766	
Ø6	376,0	163	
#3/8"	653,0	402	
#1/2"	1370,0	1499	
#5/8"	535,7	921	
#3/4"	48,8	120	
Ø1"	24,4	107	3978

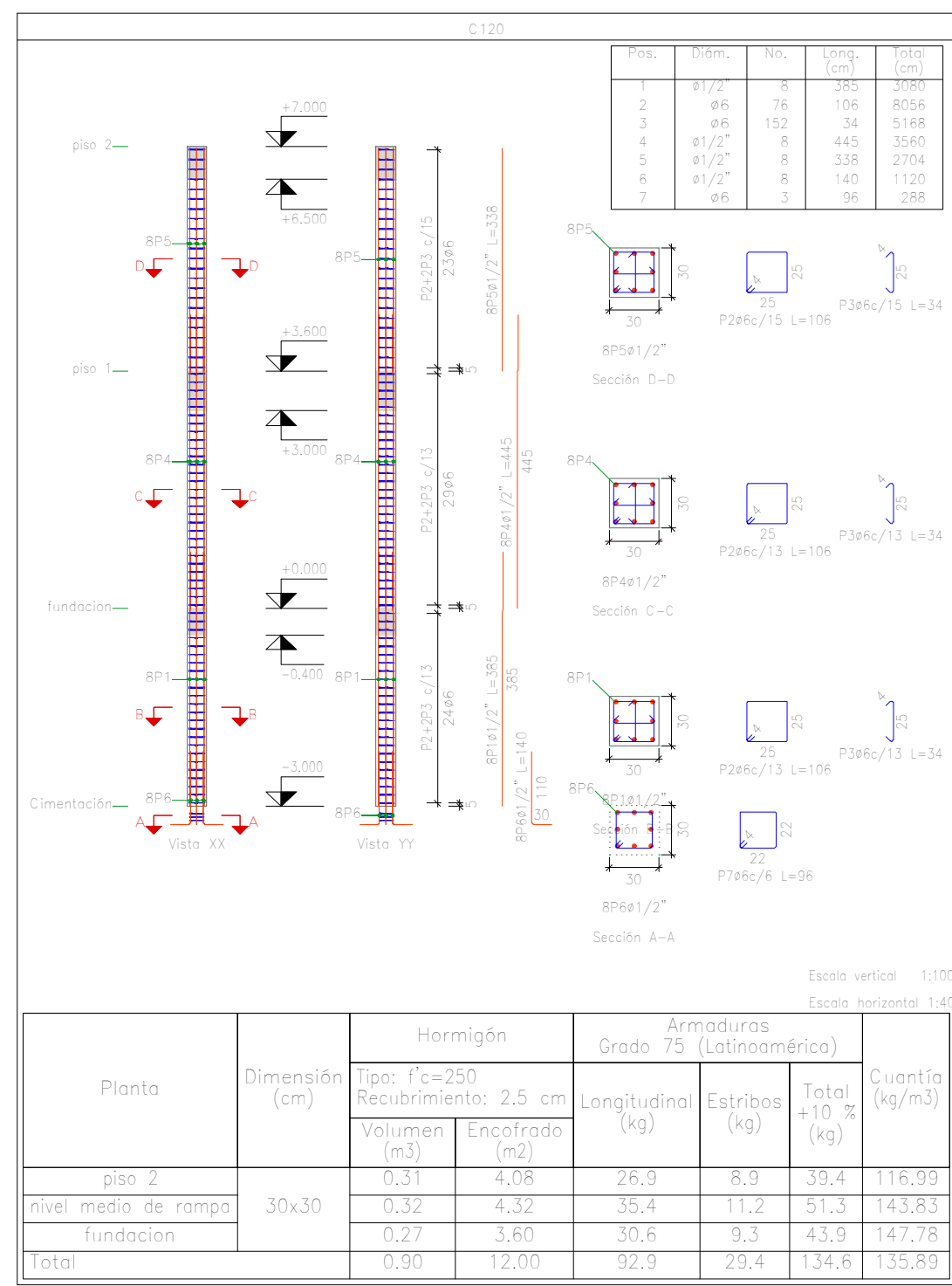
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



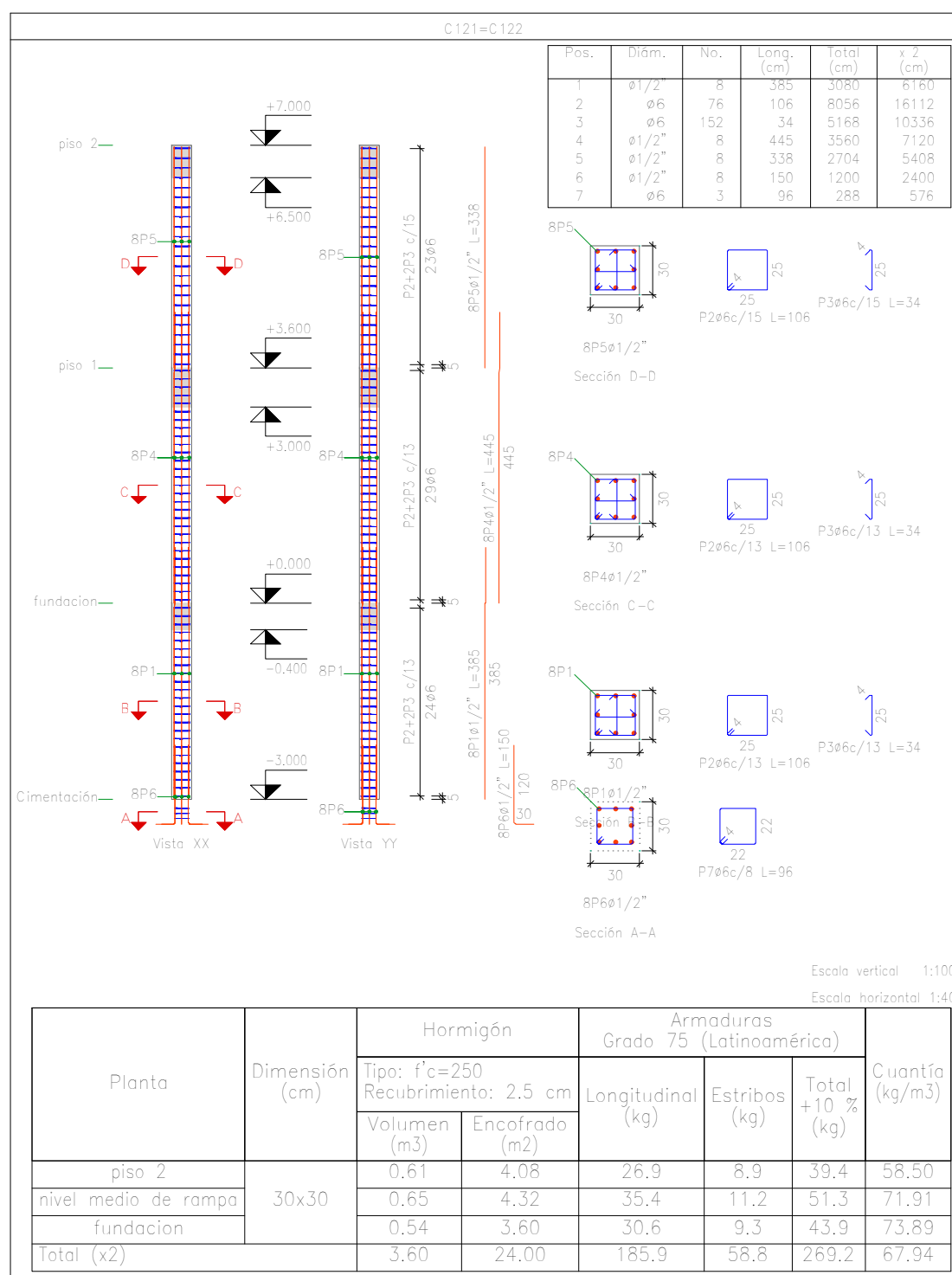
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



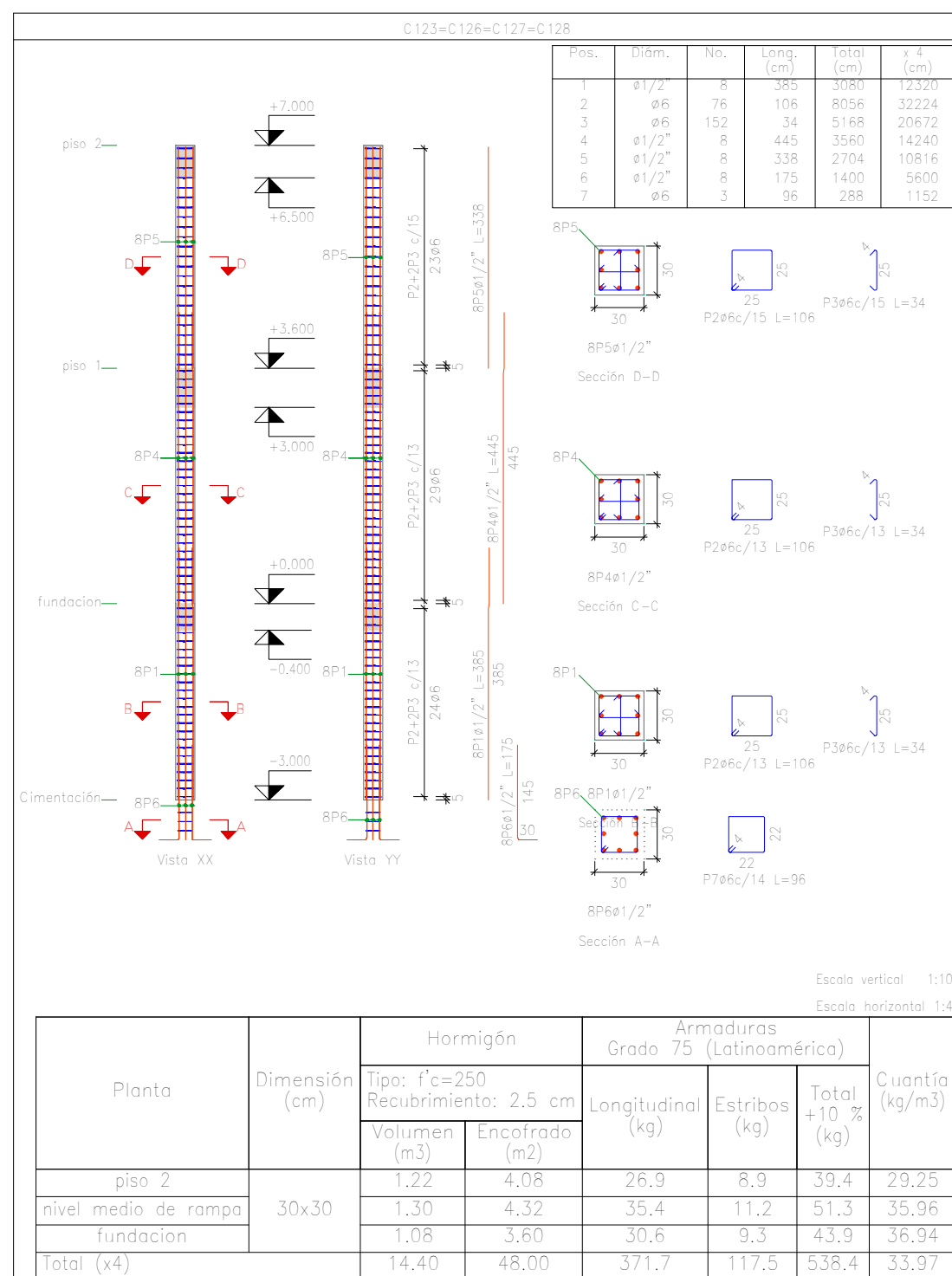
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



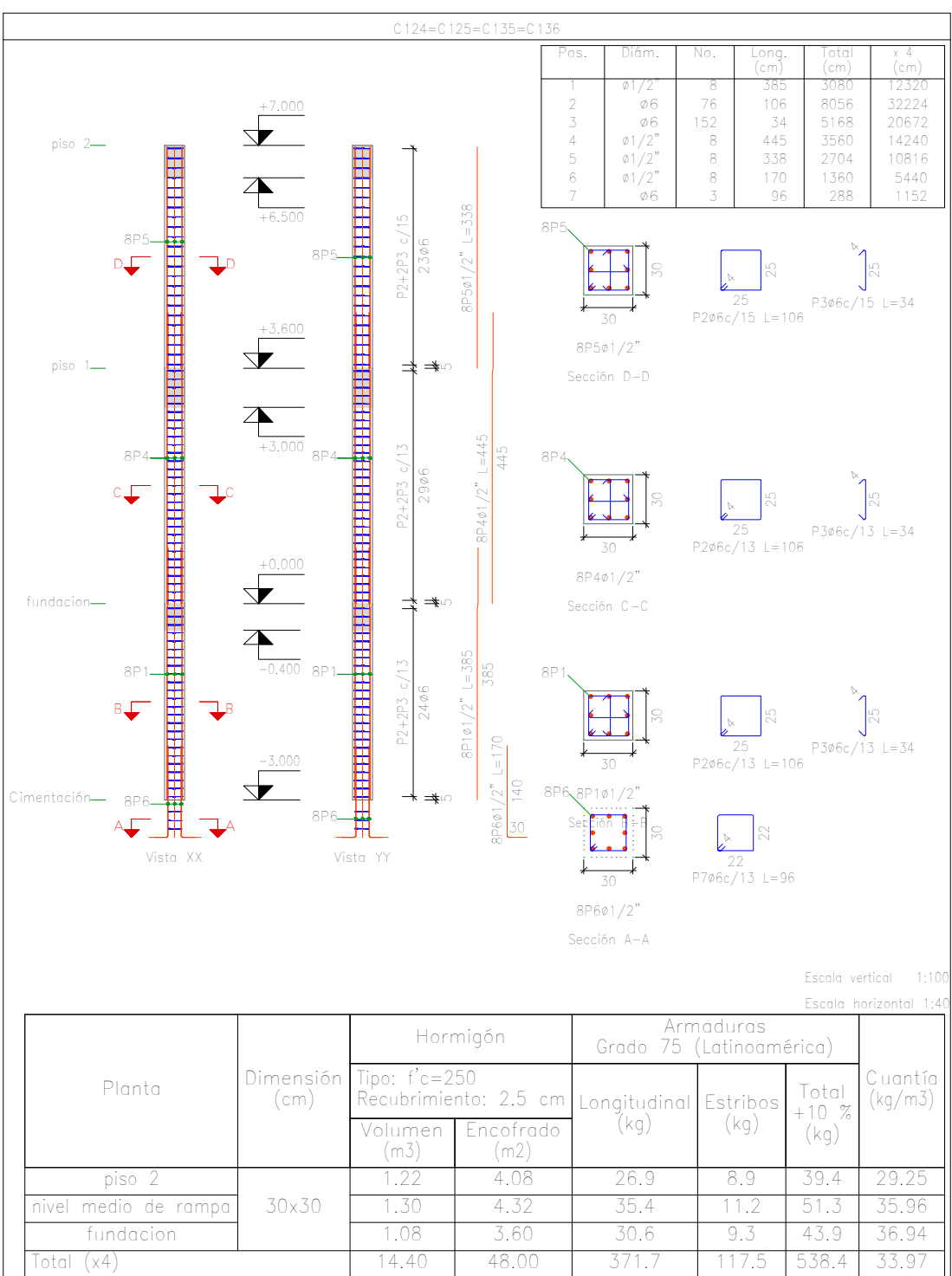
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C111	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C112	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

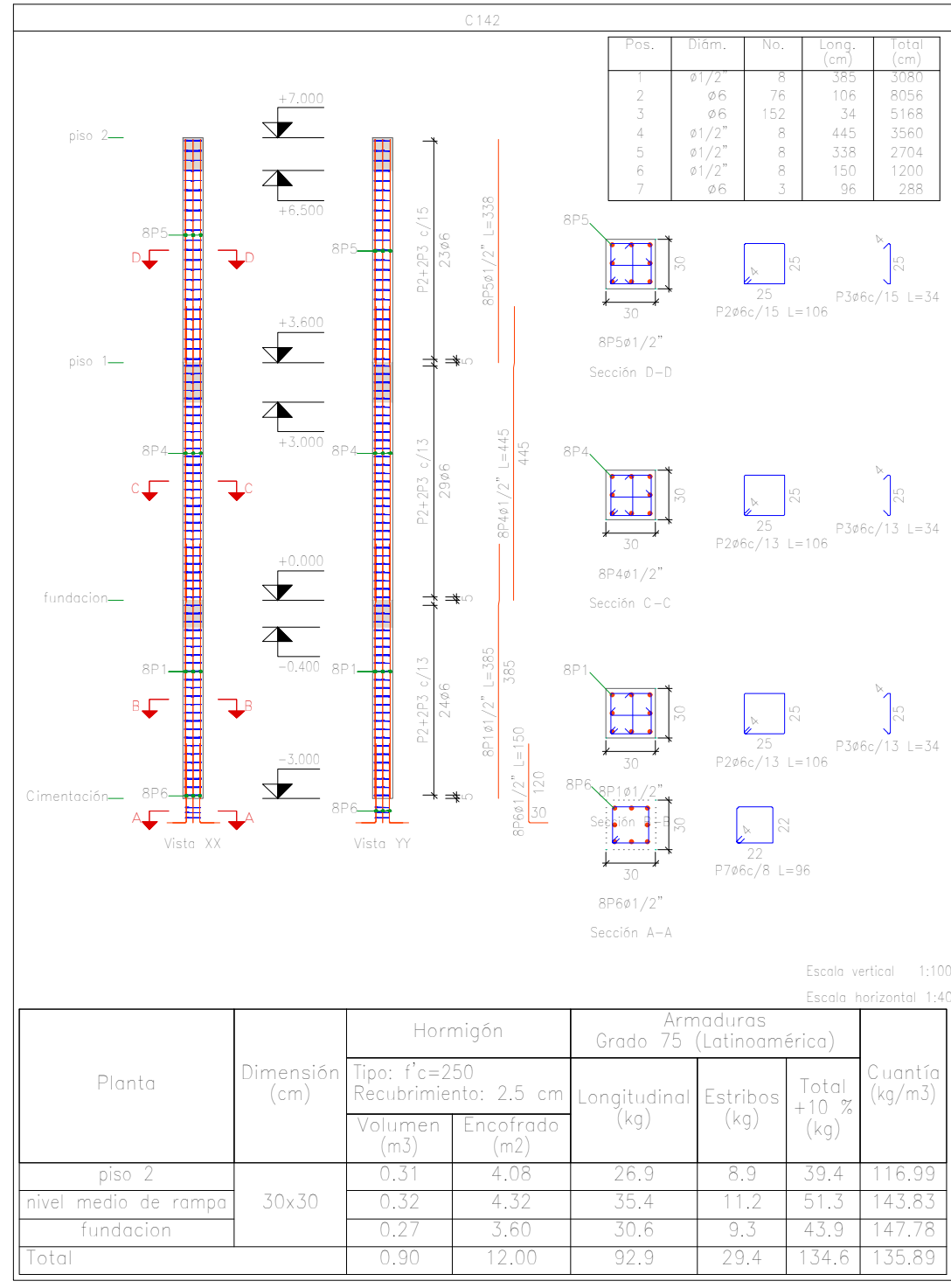
Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C120	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C121	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

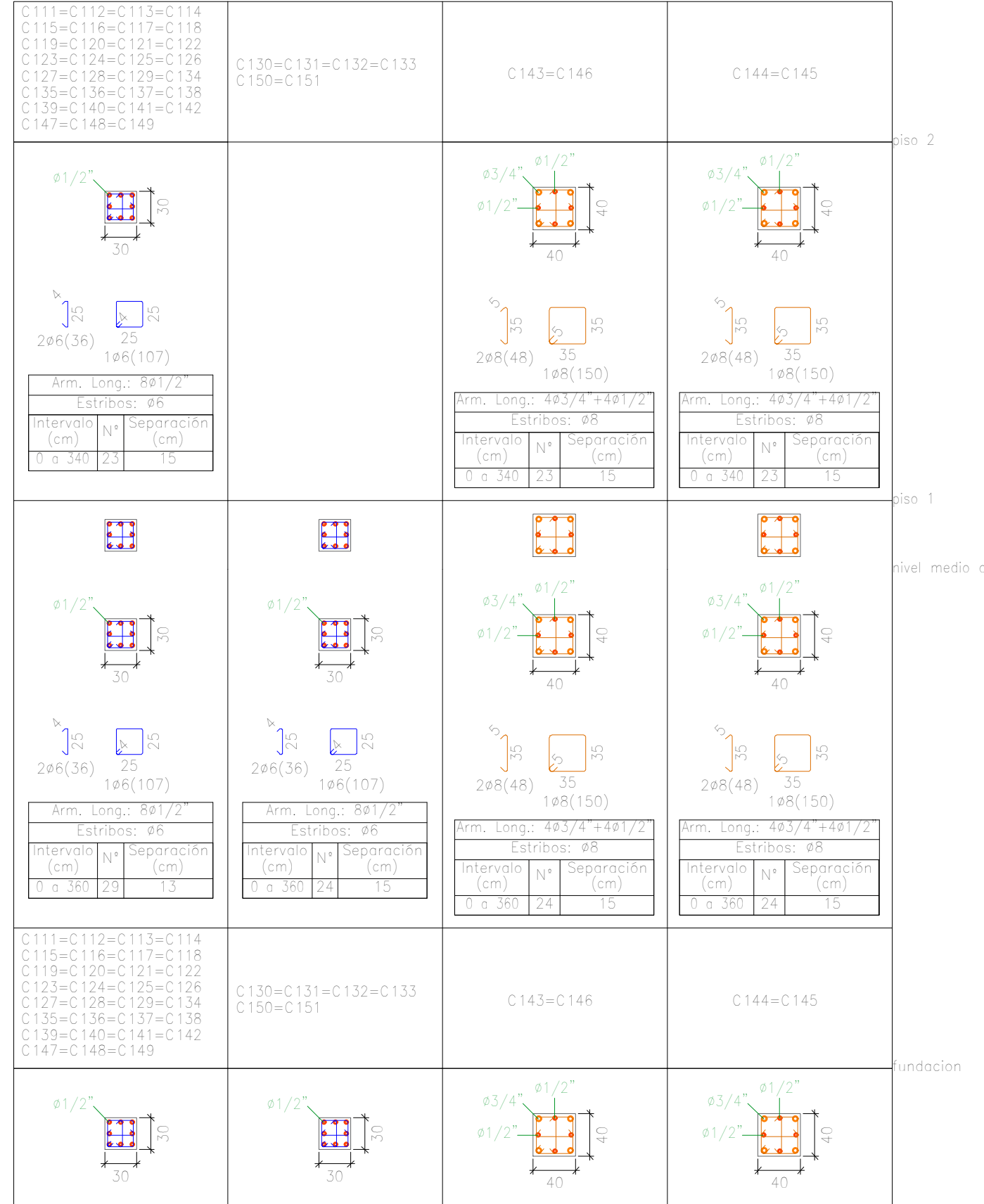
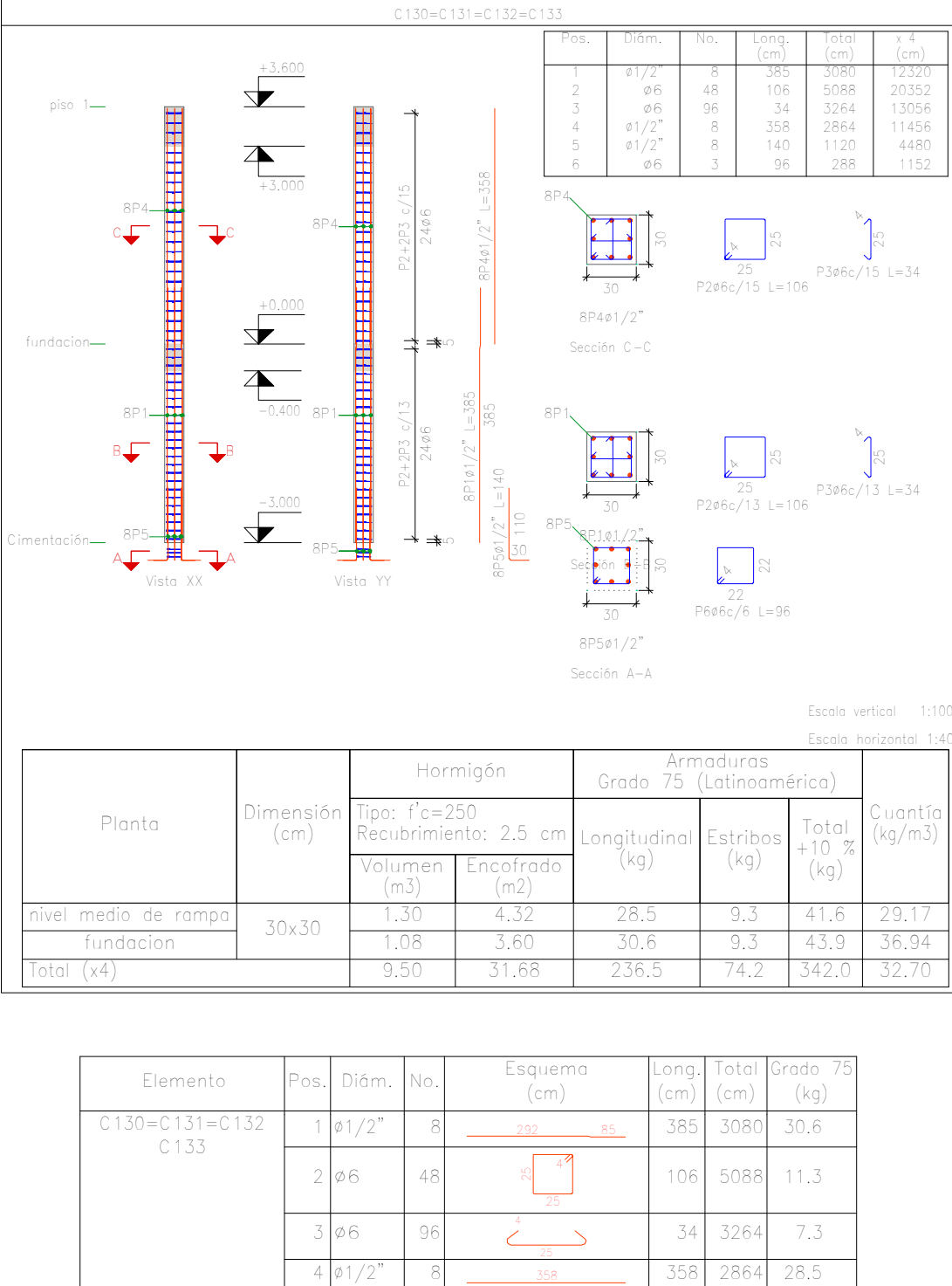
Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C122	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

Elemento	Pos.	Diam.	No.	Esquema (cm)	Long. (cm)	Total (cm)	Grado 75 (kg)
C123	1	#1/2"	8		385	3080	30.6
	2	#6	76		106	8056	17.9
	3	#6	152		34	5168	11.5
	4	#1/2"	8		445	3560	35.4
	5	#1/2"	8		338	2704	26.9
	6	#1/2"	8		155	1240	12.3
	7	#6	3		96	288	0.6
					Total+108	148.7	
					#6:	33.0	
					#1/2":	115.7	
					Total:	148.7	

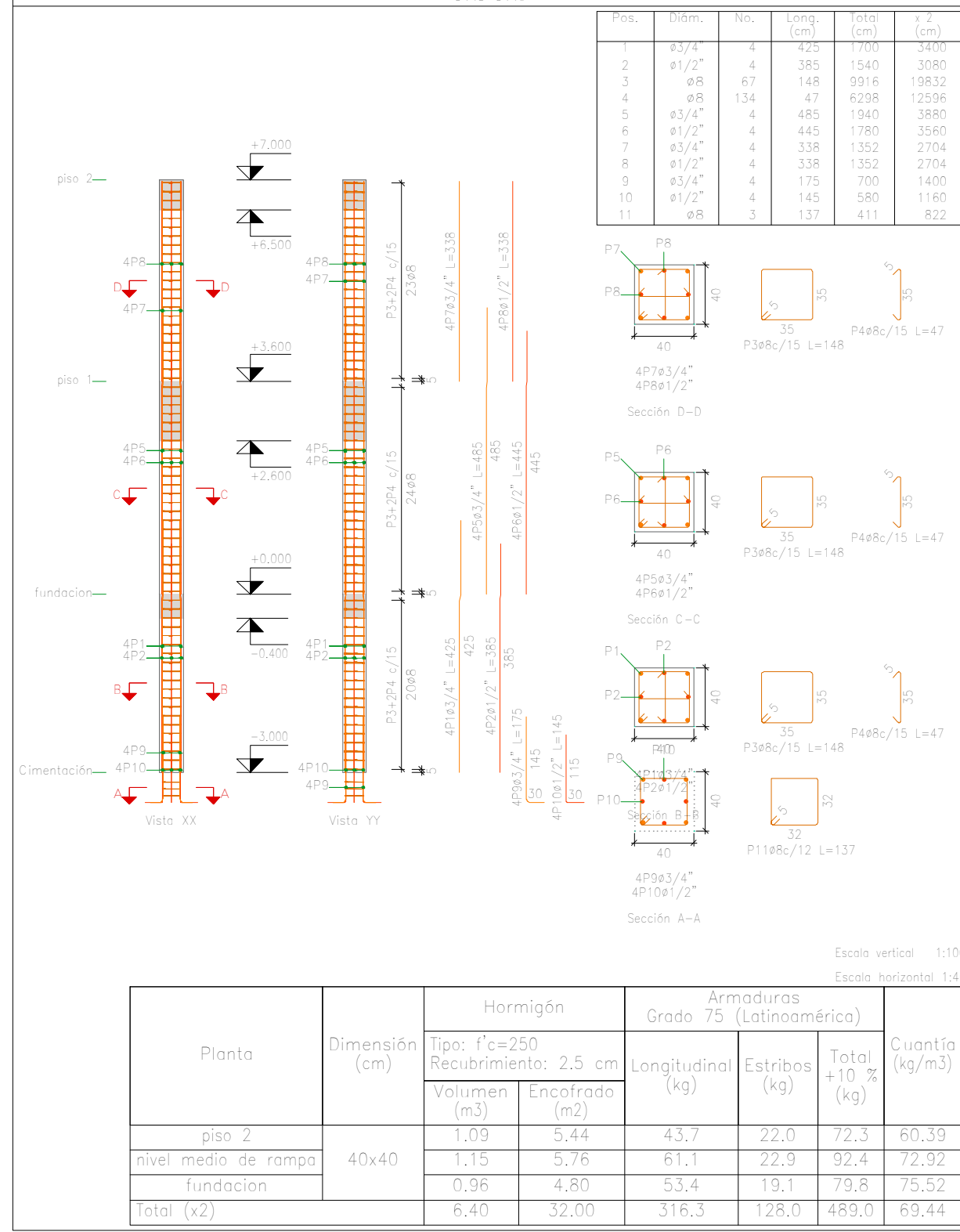
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



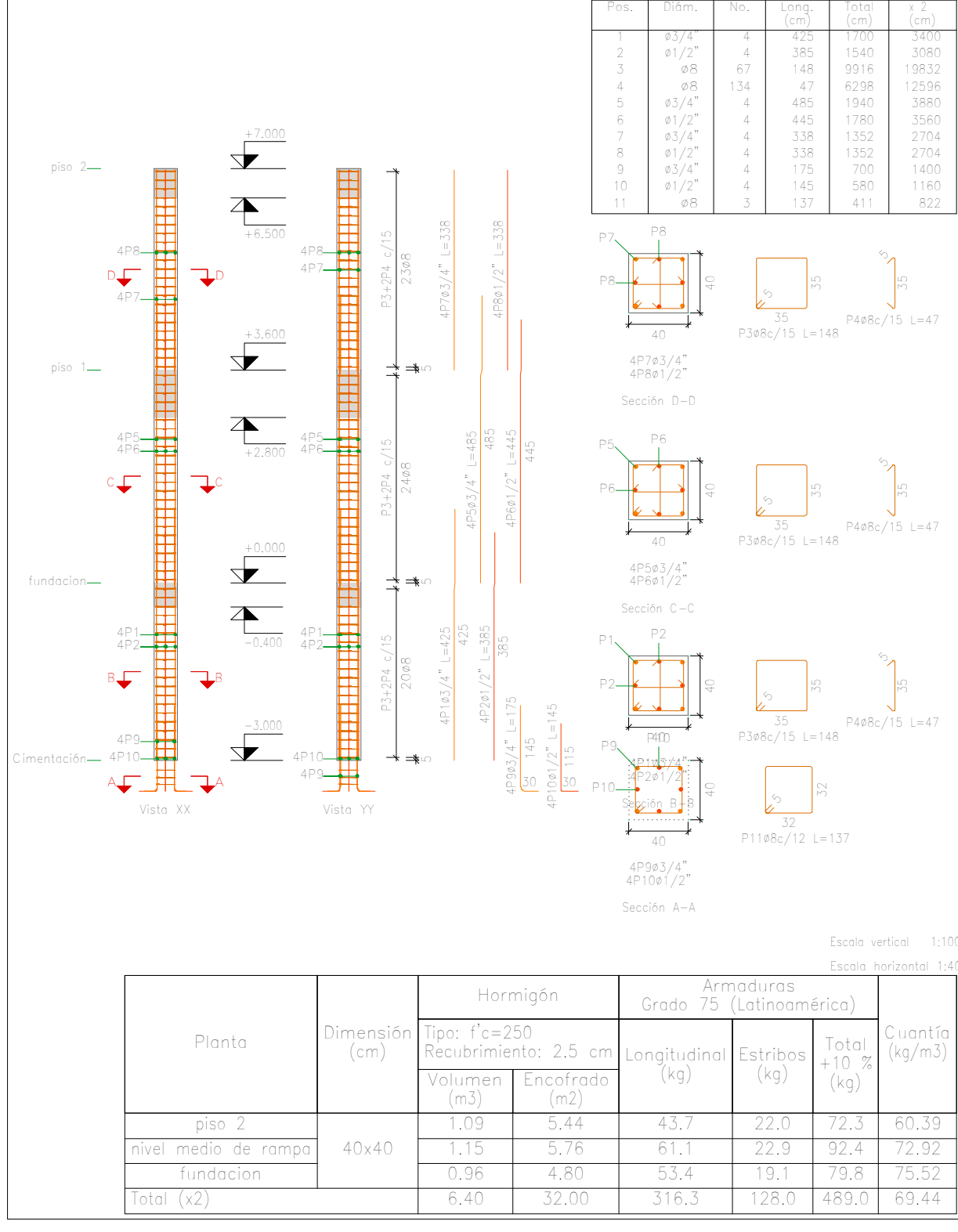
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



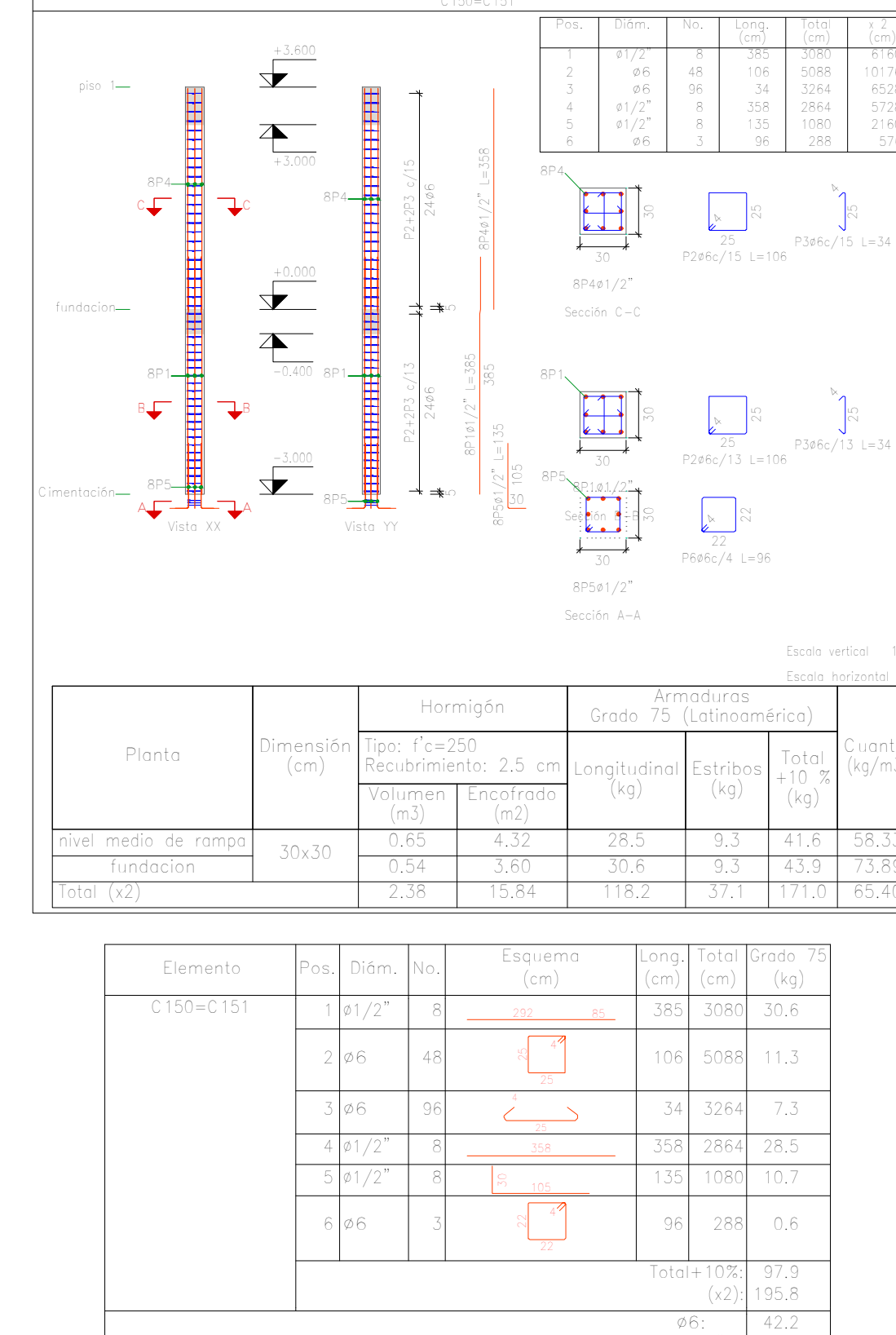
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



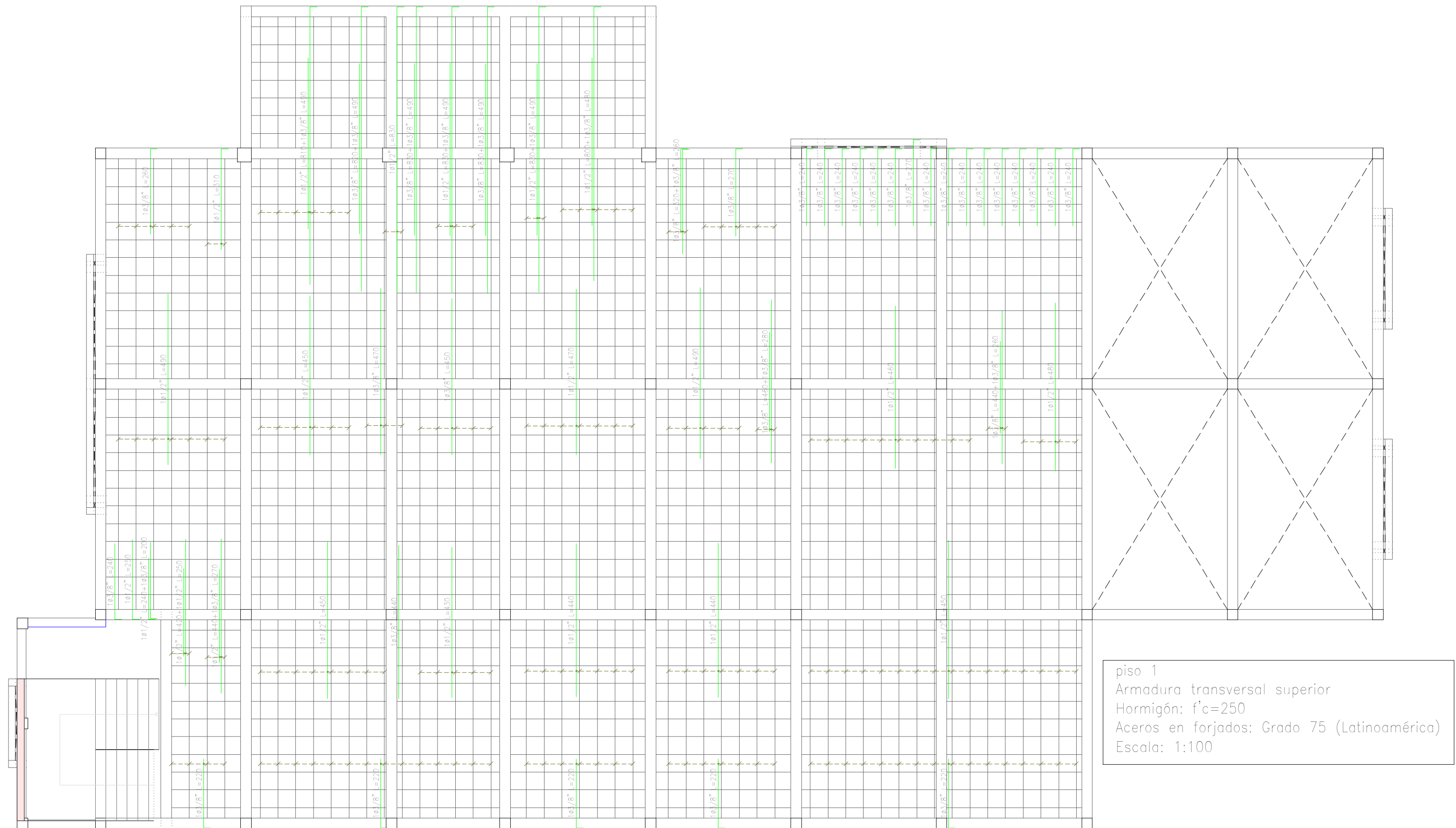
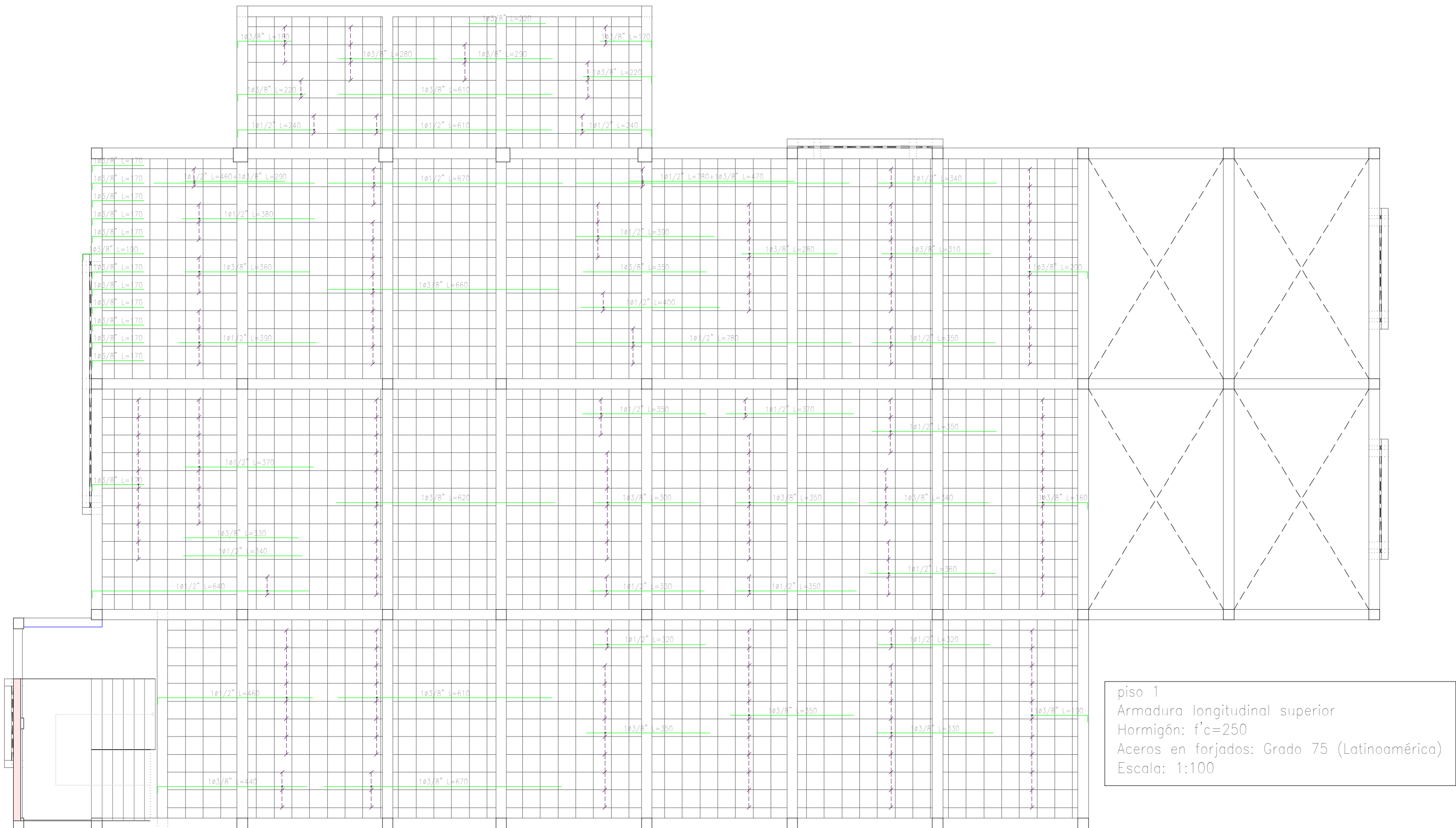
Pilares que nacen en fundación y mueren en tanque
Hormigón: f'c=250
Acero en barras: Grado 75 (Latinoamérica)
Acero en estribos: Grado 75 (Latinoamérica)



UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"

Resumen Acero				
piso 1				
Armadura longitudinal superior				
Grado 75	Ø3/8"	Long. total (m)	Peso+10% (kg)	Total
	Ø1/2"	602,0	371	714

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura longitudinal superior	1	Ø3/8"	23	170	3910	21,9
	2	Ø1/2"	10	370	3700	36,8
	3	Ø3/8"	12	620	7440	41,6
	4	Ø1/2"	12	350	4200	41,6
	5	Ø3/8"	12	160	1920	10,7
	6	Ø3/8"	3	360	1080	6,3
	7	Ø1/2"	8	330	2640	31,0
	8	Ø3/8"	9	660	5940	33,2
	9	Ø1/2"	9	780	7020	38,8
	10	Ø1/2"	8	460	3680	36,6
	11	Ø3/8"	29	350	10150	56,8
	12	Ø3/8"	7	300	2100	11,8
	13	Ø3/8"	4	340	1360	7,6
	14	Ø3/8"	12	180	2160	12,8
	15	Ø1/2"	2	400	800	8,0
	16	Ø3/8"	11	280	3080	17,2
	17	Ø3/8"	3	310	930	5,1
	18	Ø1/2"	4	360	1440	14,3
	19	Ø1/2"	2	440	880	12,7
	20	Ø1/2"	2	330	660	6,6
	21	Ø3/8"	5	220	1100	6,2
	22	Ø3/8"	9	610	5490	30,7
	23	Ø1/2"	4	320	1280	12,7
	24	Ø3/8"	12	200	2400	13,4
	25	Ø1/2"	3	380	1140	11,3
	26	Ø1/2"	3	670	2010	20,0
	27	Ø1/2"	2	460	920	9,2
	28	Ø3/8"	5	290	1450	8,1
	29	Ø3/8"	2	470	940	5,3
	30	Ø1/2"	3	340	1020	10,1
	31	Ø1/2"	4	240	960	9,5
	32	Ø1/2"	10	110	1100	12,1
	33	Ø3/8"	10	330	3300	18,5
	34	Ø3/8"	3	180	540	3,0
	35	Ø3/8"	3	440	1320	7,4
	36	Ø3/8"	3	670	2010	11,3
	37	Ø3/8"	1	220	220	1,2
	Total=1076					713,1
Ø3/8"					370,5	
Ø1/2"					342,6	
Total:					713,1	

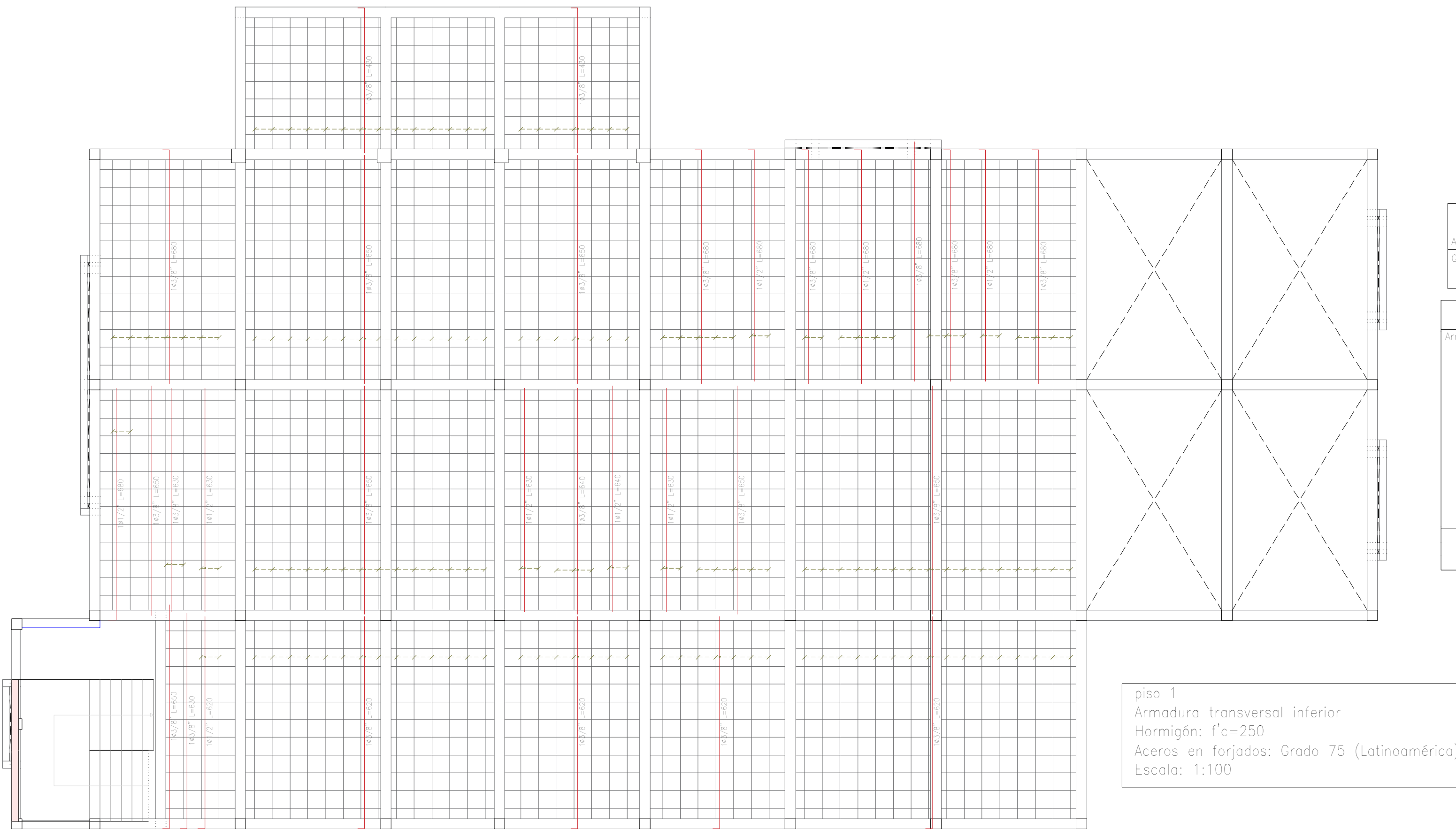
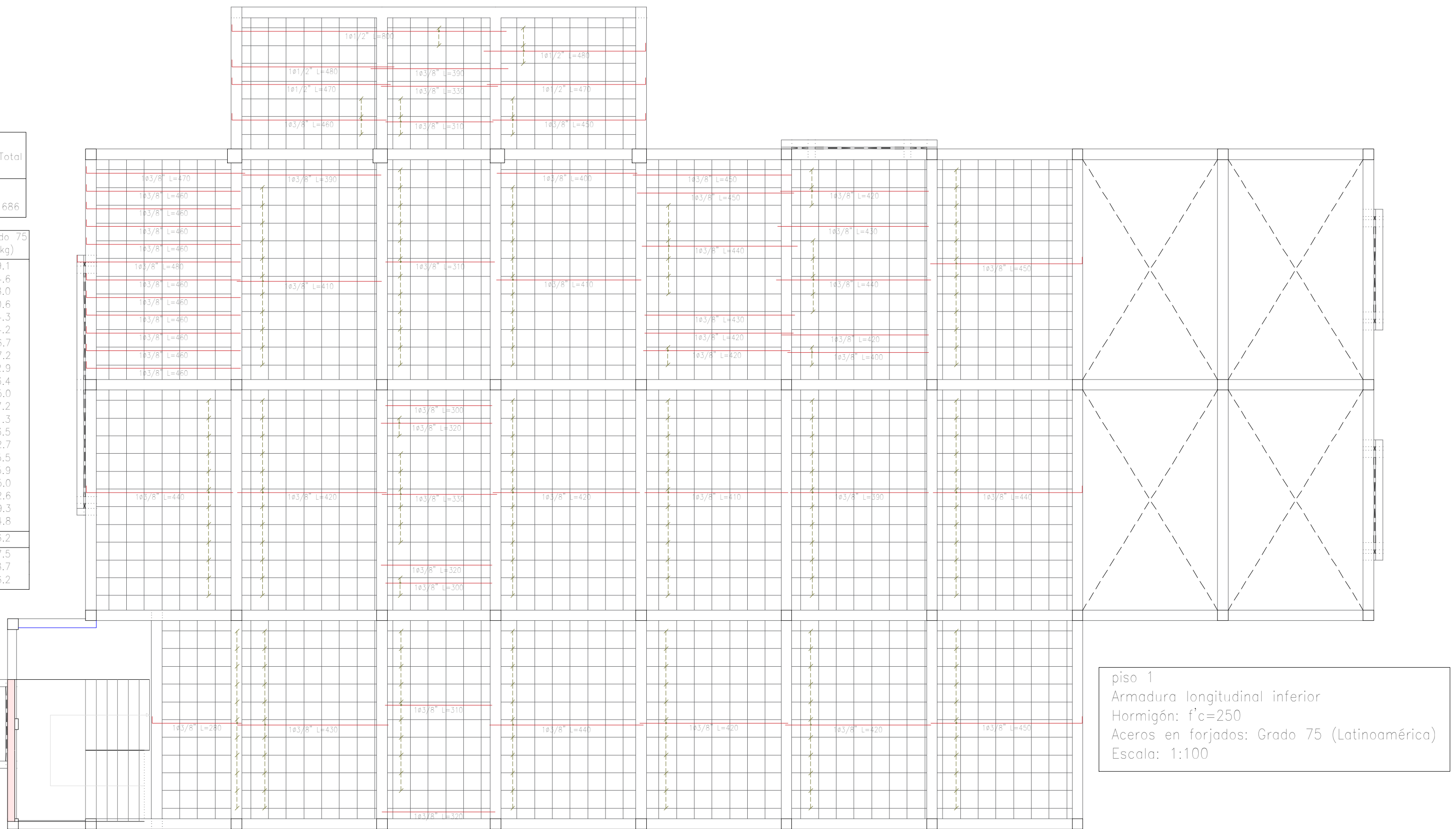


Resumen Acero				
piso 1				
Armadura transversal superior				
Grado 75	Ø3/8"	Long. total (m)	Peso+10% (kg)	Total
	Ø1/2"	379,4	234	607

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura transversal superior	1	Ø3/8"	48	220	10560	55,1
	2	Ø1/2"	16	440	7040	70,0
	3	Ø1/2"	12	490	5880	58,5
	4	Ø3/8"	1	320	320	1,6
	5	Ø3/8"	2	280	560	10,2
	6	Ø3/8"	6	270	1620	9,1
	7	Ø3/8"	2	460	920	5,1
	8	Ø3/8"	2	280	560	3,1
	10	Ø1/2"	4	470	1880	32,7
	10	Ø1/2"	2	800	1600	33,8
	11	Ø3/8"	5	480	2400	13,4
	12	Ø1/2"	7	830	5810	57,8
	13	Ø3/8"	14	490	6860	36,4
	14	Ø1/2"	30	450	13500	134,3
	15	Ø1/2"	10	460	4600	45,8
	16	Ø3/8"	16	240	3840	21,5
	17	Ø1/2"	1	430	2150	21,4
	18	Ø3/8"	10	450	4500	22,6
	19	Ø1/2"	6	810	4860	48,3
	20	Ø3/8"	4	470	1880	7,9
	21	Ø3/8"	3	440	1320	7,4
	22	Ø3/8"	2	260	520	2,9
	23	Ø1/2"	2	480	960	19,1
	24	Ø1/2"	2	420	840	6,4
	25	Ø1/2"	2	250	500	2,5
	26	Ø3/8"	2	270	540	3,0
	27	Ø1/2"	2	310	620	6,2
	28	Ø1/2"	2	250	500	1,1
	29	Ø1/2"	1	240	240	2,4
	30	Ø3/8"	1	200	200	1,1
	31	Ø3/8"	1	820	820	4,8
	32	Ø3/8"	2	830	1660	9,3
	Total=1058				841,0	
				Ø3/8"	235,5	
				Ø1/2"	607,5	
				Total:	841,0	

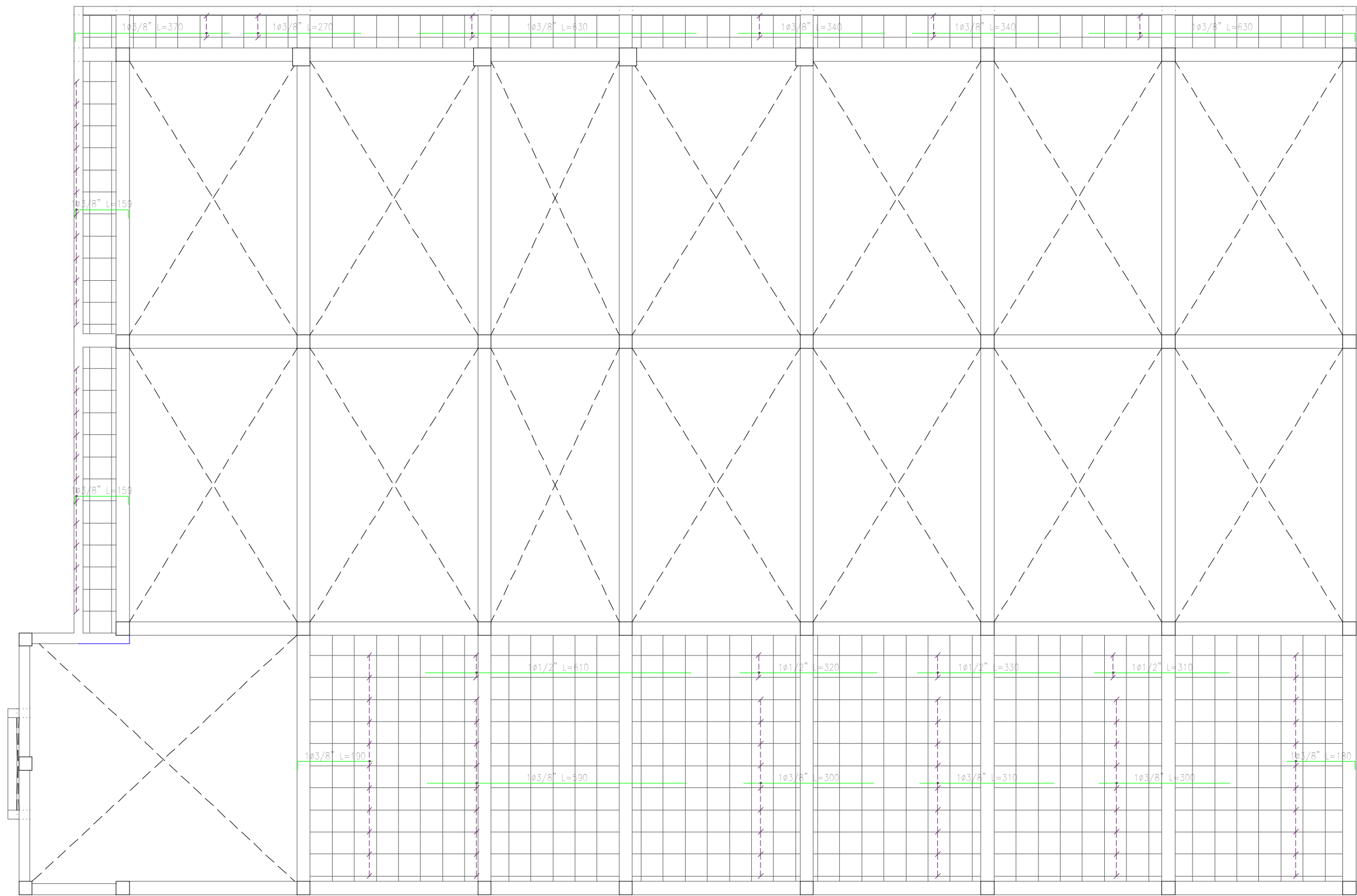
Resumen Acero				
piso 1				
Armadura longitudinal inferior				
Grado 75	Ø3/8"	Long. total (m)	Peso+10% (kg)	Total
	Ø1/2"	1035,4	637	686

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura longitudinal inferior	1	Ø3/8"	24	440	10560	55,1
	2	Ø3/8"	53	420	22260	124,6
	3	Ø3/8"	34	410	13940	30,0
	4	Ø3/8"	14	390	5460	30,6
	5	Ø1/2"	2	480	960	14,3
	6	Ø3/8"	23	440	10120	54,2
	7	Ø3/8"	3	400	1200	6,7
	8	Ø3/8"	4	320	1280	7,2
	9	Ø3/8"	7	330	2310	12,9
	10	Ø3/8"	25	310	7750	43,4
	11	Ø3/8"	300	900	2700	5,0
	12	Ø3/8"	11	280	3080	17,2
	13	Ø3/8"	11	430	4730	31,3
	14	Ø3/8"	11	460	5060	33,5
	15	Ø3/8"	11	480	480	2,7
	16	Ø3/8"	29	450	13050	65,5
	17	Ø1/2"	2	800	1600	15,9
	18	Ø3/8"	2	450	900	5,0
	19	Ø3/8"	2	470	940	5,6
	20	Ø1/2"	2	470	940	9,3
	21	Ø1/2"	2	480	960	4,8
	Total=1076				686,2	
					Ø3/8"	637,5
					Ø1/2"	48,7
					Total:	686,2



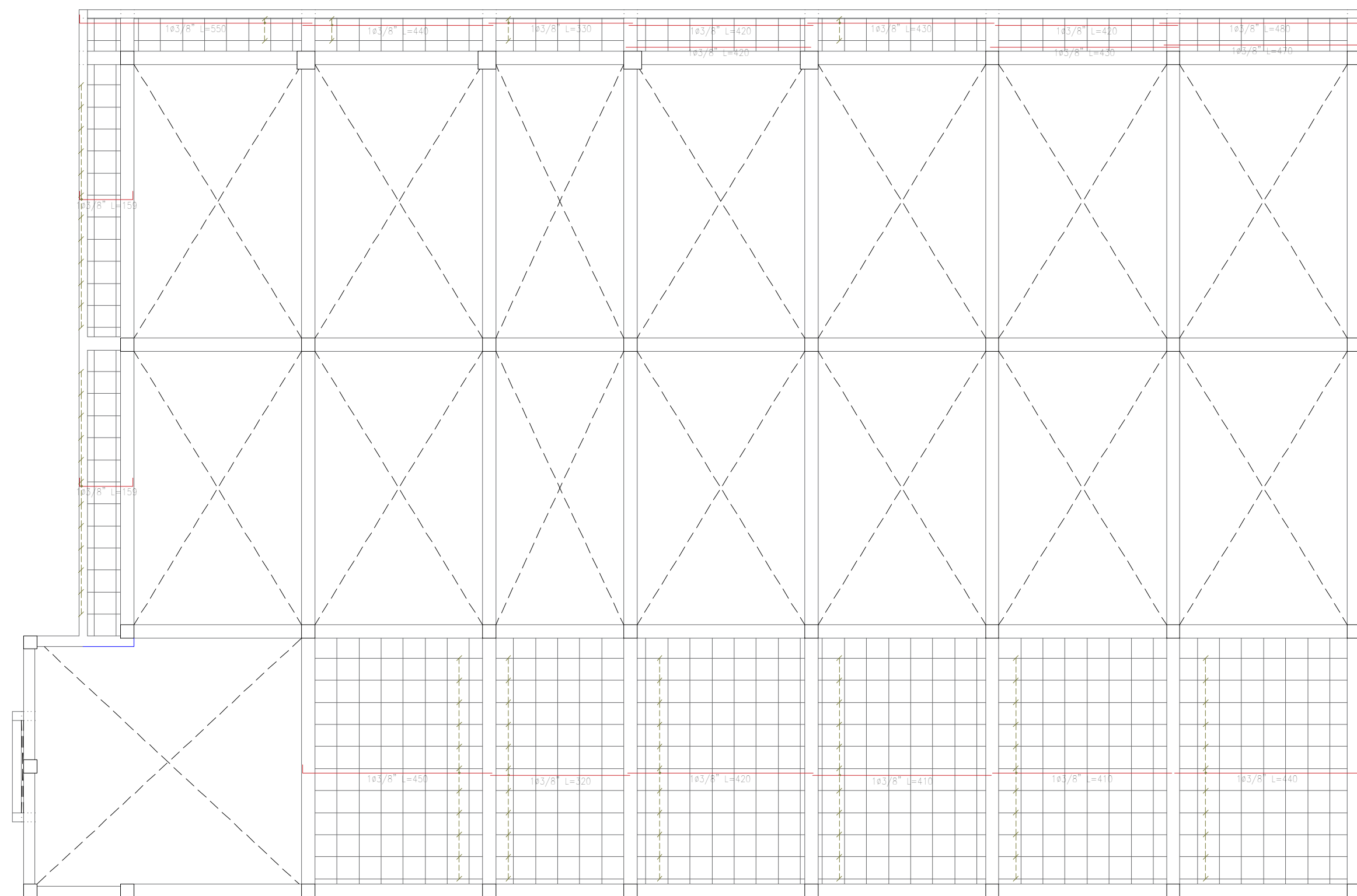
Resumen Acero				
piso 1				
Armadura transversal inferior				
Grado 75	Ø3/8"	Long. total (m)	Peso+10% (kg)	Total
	Ø1/2"	927,8	571	714

Elemento	Pos.	Diám.	No.	Long (cm)	Total (cm)	grado 75
armadura transversal inferior	1	Ø3/8"	44	820	36280	152,7
	2	Ø1/2"	6	630	3780	37,8
	3	Ø3/8"	21	680	14280	79,9
	4	Ø3/8"	51	650	33050	207,4
	5	Ø1/2"	8	680	5440	54,1
	6	Ø1/2"	7	640	4480	12,7
	7	Ø3/8"	21	430	9030	50,5
	8	Ø3/8"	3	640	1920	10,7
	9	Ø1/2"	8	620	4960	12,3
	10	Ø1/2"	2	680	1360	13,5
	11	Ø3/8"	2	630	1260	7,1
	12	Ø3/8"	6	650	3900	3,6
	13	Ø3/8"	1	630	630	3,5
	14	Ø3/8"	1	680	680	3,8
Total=1058					714,3	
Ø3/8"					571,1	
Ø1/2"					143,2	
Total:					714,3	



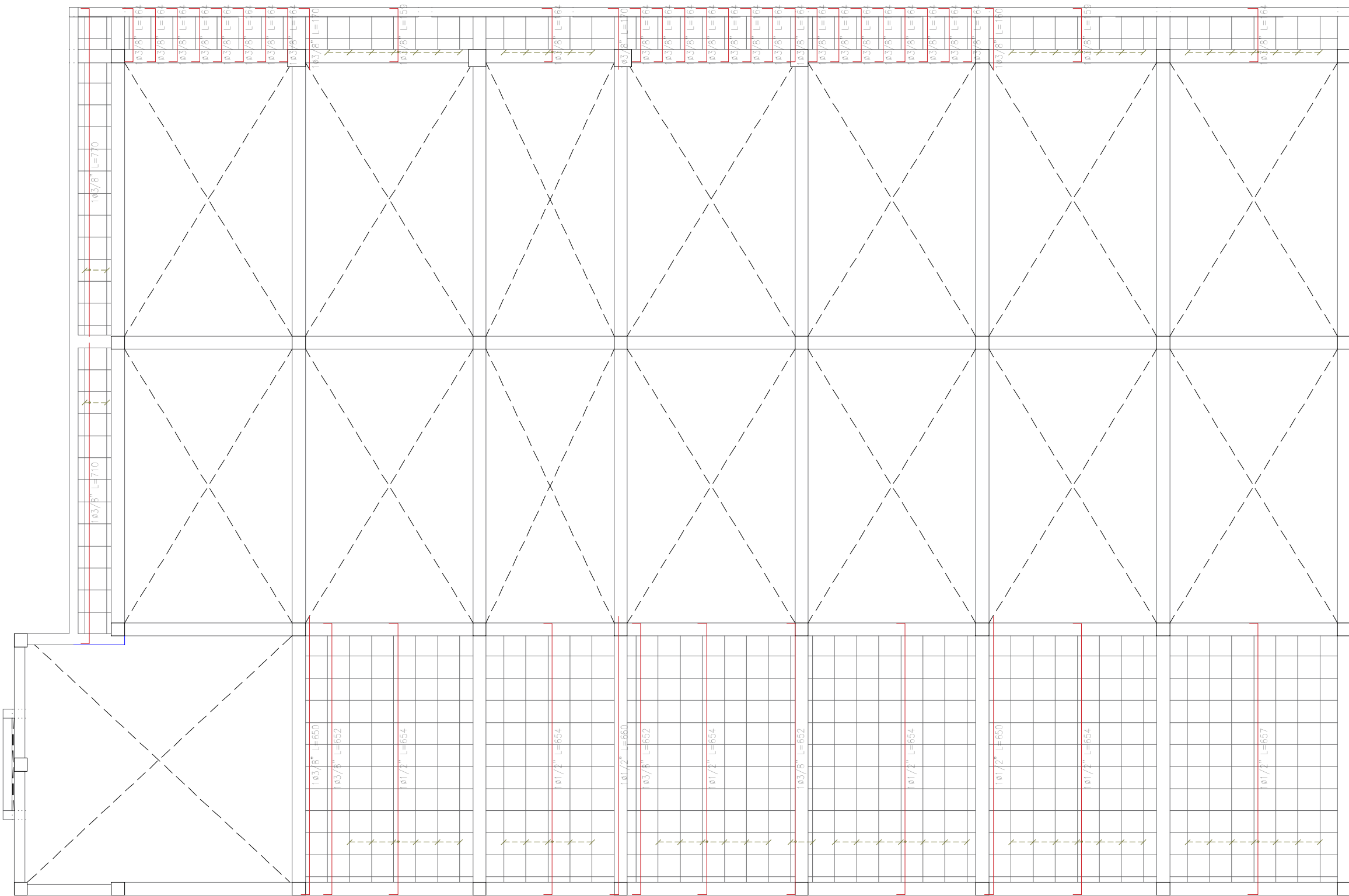
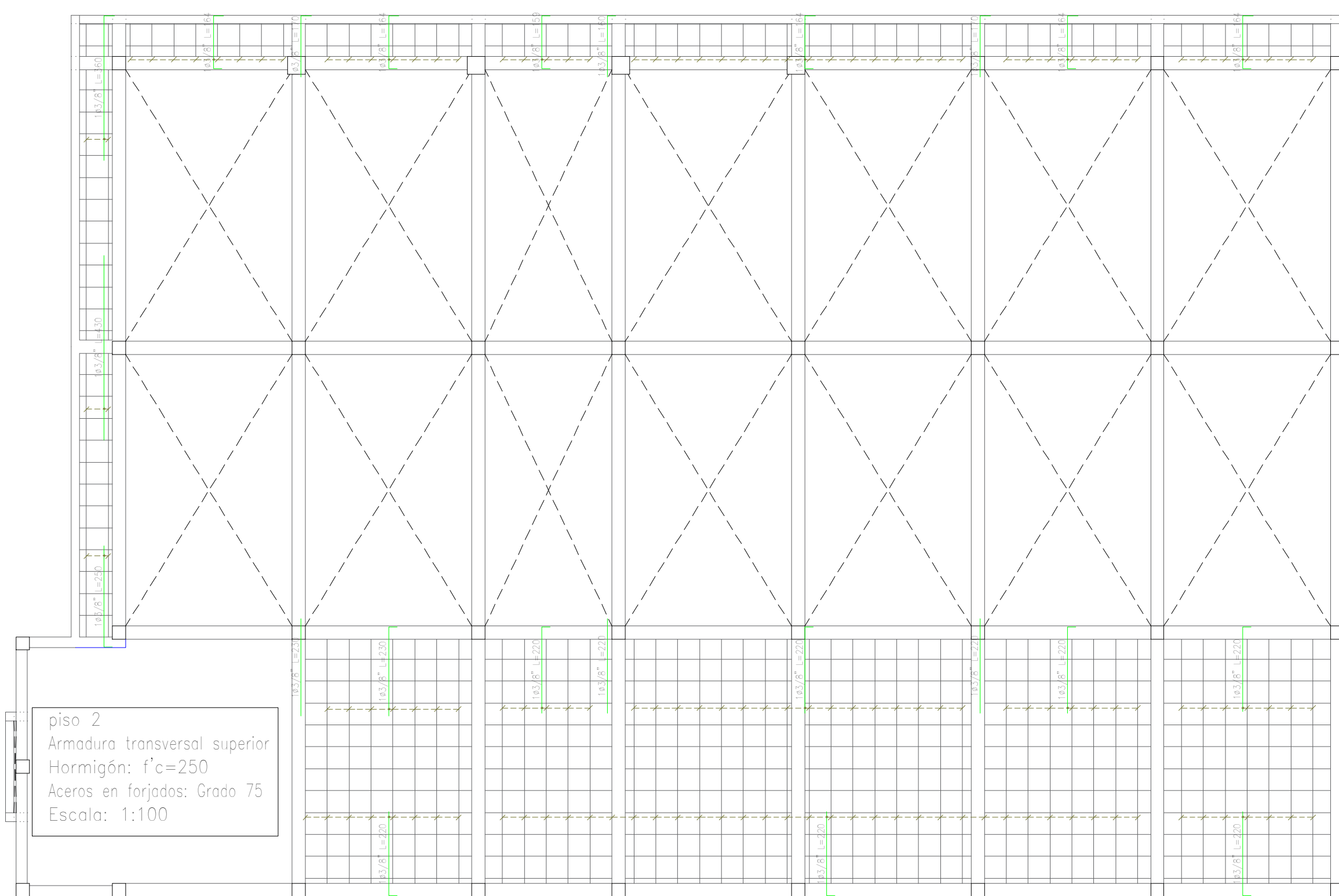
Resumen Acero		Long. total	Peso+10%	Total
piso 2		(m)	(kg)	
Armadura longitudinal superior				
Grado 75	Ø3/8"	265.5	163	197
	Ø1/2"	31.4	34	

piso 2
Armadura longitudinal superior
Hormigón: f'c=250
Aceros en forjados: Grado 75 (Latinoamérica)
Escala: 1:100



Resumen Acero piso 2		Long. total (m)	Peso+10% (kg)
Armadura longitudinal inferior			
Grado 75	Ø3/8"	369.1	227

piso 2
Armadura longitudinal inferior
Hormigón: f'c=250
Aceros en forjados: Grado 75 (Latinoamérica)
Escala: 1:100



piso 2
Armadura transversal inferior
Hormigón: f'c=250
Aceros en forjados: Grado 75 (Latinoamérica)
Escala: 1:100

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura longitudinal superior	1	Ø3/8"	11	190	2090	11.7
	2	Ø3/8"	9	590	5310	29.7
	3	Ø3/8"	18	300	5400	30.2
	4	Ø3/8"	9	310	2790	15.6
	5	Ø3/8"	11	180	1980	11.1
	6	Ø1/2"	2	810	1220	12.1
	7	Ø1/2"	2	320	640	6.4
	8	Ø1/2"	2	330	660	6.6
	9	Ø1/2"	2	310	620	6.2
	10	Ø3/8"	24	159	3816	21.4
	11	Ø3/8"	2	370	740	4.1
	12	Ø3/8"	2	270	540	3.0
	13	Ø3/8"	2	630	1260	7.1
	14	Ø3/8"	4	340	1360	7.6
	15	Ø3/8"	2	630	1260	7.1
Total+10%:						197.9
Ø3/8":						163.5
Ø1/2":						34.4
Total:						197.9

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura longitudinal inferior	1	Ø3/8"	11	450	4950	27.7
	2	Ø3/8"	11	320	3520	19.7
	3	Ø3/8"	14	420	5880	32.9
	4	Ø3/8"	22	410	9020	50.5
	5	Ø3/8"	11	440	4840	27.1
	6	Ø3/8"	24	159	3816	21.4
	7	Ø3/8"	2	550	1100	6.2
	8	Ø3/8"	2	440	880	4.9
	9	Ø3/8"	2	330	660	3.7
	10	Ø3/8"	3	430	1290	7.2
	11	Ø3/8"	1	470	470	2.6
	12	Ø3/8"	1	480	480	2.7
Total+10%:						227.3
Ø3/8":						227.3
Total:						227.3

Resumen Acero piso 2	Long. total (m)	Peso+10% (kg)
Armadura transversal superior		
Grado 75 ø3/8"	306.4	189

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura transversal superior	1	Ø3/8"	80	220	17600	98.5
	2	Ø3/8"	7	230	1610	9.0
	3	Ø3/8"	1	230	230	1.3
	4	Ø3/8"	2	220	440	2.5
	5	Ø3/8"	45	164	7380	41.3
	6	Ø3/8"	5	159	795	4.4
	7	Ø3/8"	2	250	500	2.8
	8	Ø3/8"	2	430	860	4.8
	9	Ø3/8"	2	360	720	4.0
	10	Ø3/8"	2	170	340	1.9
	11	Ø3/8"	1	160	160	0.9
Total+10%:						188.5
Ø3/8":						188.5
Total:						188.5

Resumen Acero piso 2		Long. total (m)	Peso+10% (kg)	Total
Armadura transversal inferior				
Grado 75	Ø3/8"	148.5	91	
	Ø1/2"	261.8	286	377

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Armadura transversal inferior	1	Ø1/2"	31	654	20274	201.6
	2	Ø3/8"	4	652	2608	14.6
	3	Ø1/2"	7	657	4599	45.7
	4	Ø3/8"	1	650	650	3.6
	5	Ø1/2"	1	660	660	6.6
	6	Ø1/2"	1	650	650	6.5
	7	Ø3/8"	2	170	340	1.9
	8	Ø3/8"	36	164	5904	33.0
	9	Ø3/8"	14	159	2226	12.5
	10	Ø3/8"	2	710	1420	7.9
	11	Ø3/8"	2	770	1540	8.6
	12	Ø3/8"	1	160	160	0.9
Total+10%:						377.7
Ø3/8":						91.3
Ø1/2":						286.4
Total:						377.7

UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO"
FACULTAD DE CIENCIAS Y TECNOLOGÍA
CARRERA: ING. CIVIL



UBICACION:
COMUNIDAD DE TIGUIPA-
VILLAMONTES-GRAN CHACO- TARIJA

PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUIPA - VILLA MONTES - GRAN CHACO - TARIJA

CARACTER: PLANO DE ARMADURA DE LOSA RADIER

ESCALA: LAMINA:
INDICADA

VoBo

REALIZADO POR:
QUENTASI AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022

8/10

cubierta 2: 3D

U.E. PROF. REBECA AGUIRRE
cubierta 2
Norma de acero conformado: AISI S100-2007 (LRFD)
Acero conformado: ASTM A 36 36 ksi

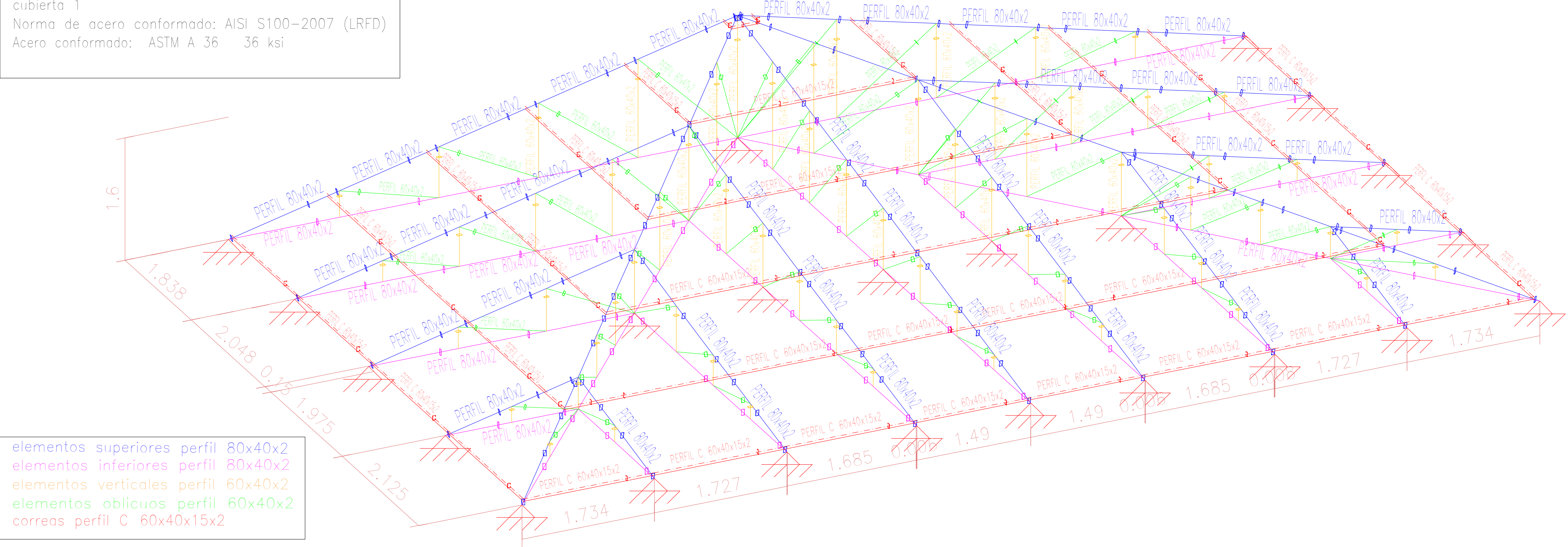
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elementos inferiores	perfil #	80x40x2
elementos verticales	perfil #	60x40x2
elementos oblicuos	perfil #	60x40x2
correas	perfil C	60x40x15x2

U.E. PROF. REBECA AGUIRRE
cubierta 3
Norma de acero conformado: AISI S100-2007 (LRFD)
Acero conformado: ASTM A 36 36 ksi

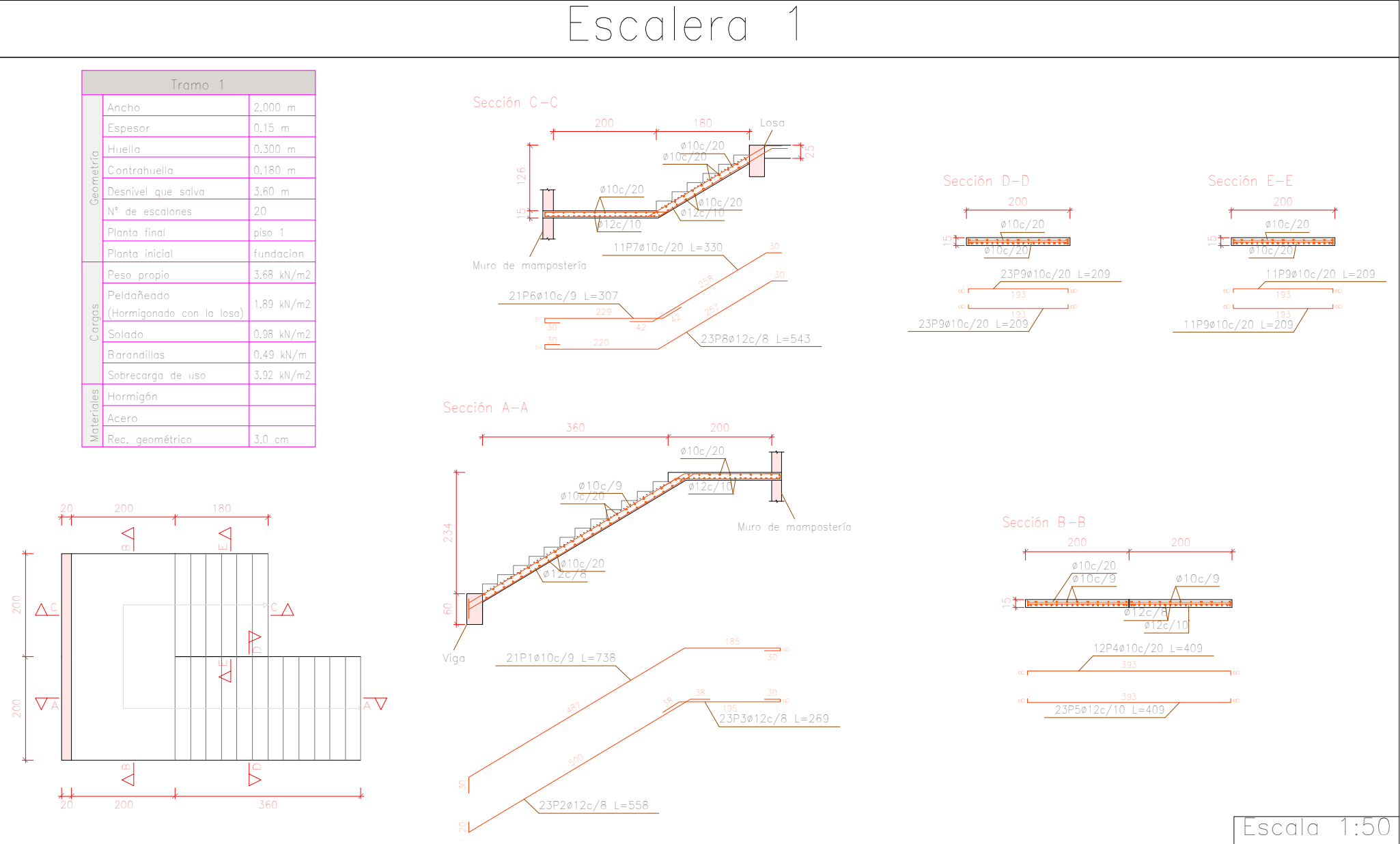
cubierta 3: 3D

4.0x2.0x1.68

U.E. PROF. REBECA AGUIRRE
cubierta 1
Norma de acero conformado: AISI S100-2007 (LRFD)
Acero conformado: ASTM A 36 36 ksi



elementos superiores perfil 80x40x2
elementos inferiores perfil 80x40x2
elementos verticales perfil 60x40x2
elementos oblicuos perfil 60x40x2
correas perfil C 60x40x15x2



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	Grado 75 (kg)
Escalera 3-Tramo 1						
1	ø10	21	738	10438	90.80	
2	ø12	21	528	12834	114.32	
3	ø12	21	285	3845	35.2	
4	ø10	12	409	4908	30.2	
5	ø12	25	409	5407	85.5	
6	ø10	11	307	3371	20.8	
7	ø10	11	330	3630	22.4	
8	ø12	23	543	12489	111.2	
9	ø10	68	209	14212	67.4	
Total: 1000					600.78	
					ø10:	251.68
					ø12:	359.12
					Total:	610.78

Resumen Acero	Long. total (m)	Peso+10% (kg)	Total
Escalera 3			
Grado 75 ø10	342.5	251.68	
ø12	381.8	359.12	610.78

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PROYECTO:
DISEÑO ESTRUCTURAL "UNIDAD EDUCATIVA PROF. REBECA AGUIRRE"
COMUNIDAD TIGUIPA - VILLA MONTES - GRAN CHACO - TARIJA

CARACTER: PLANO DE CUBIERTA METÁLICA Y GRADA DE Hªª

ESCALA: LAMINA:
INDICADA

VoBo

RALIZADO POR:
QUENTASI AVENDAÑO DANIEL EDUARDO

FECHA:
NOVIEMBRE DE 2022

10/10