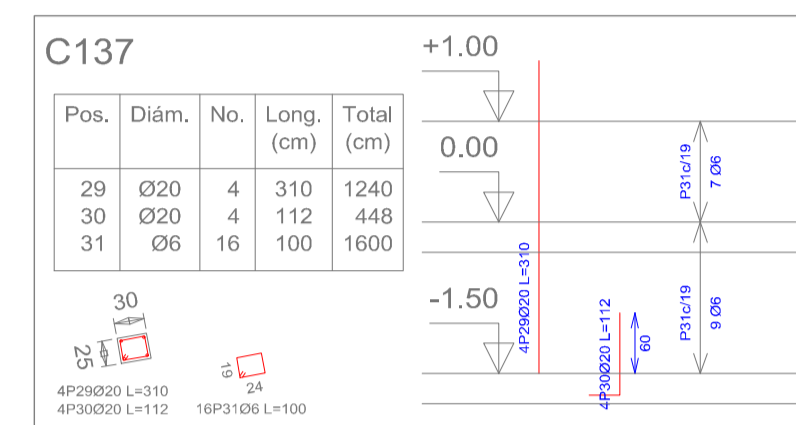
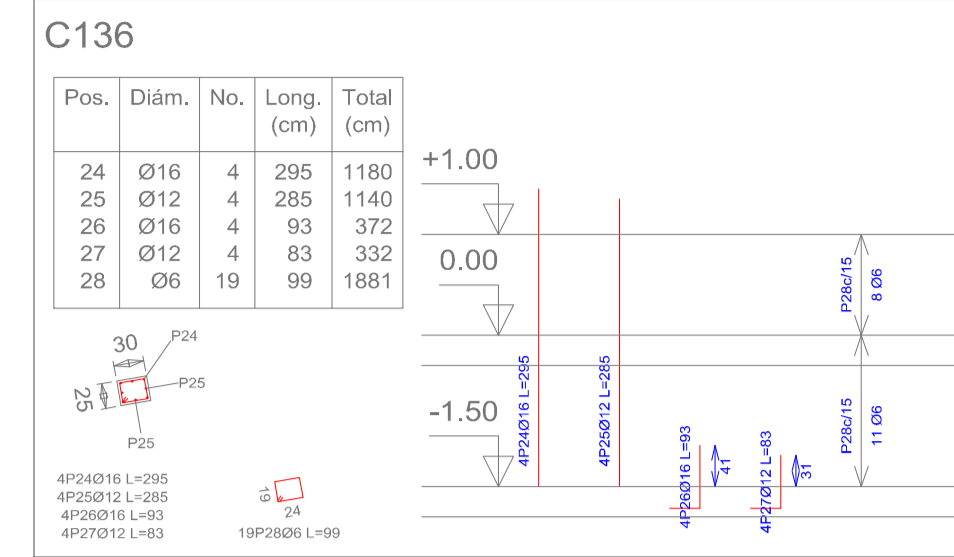
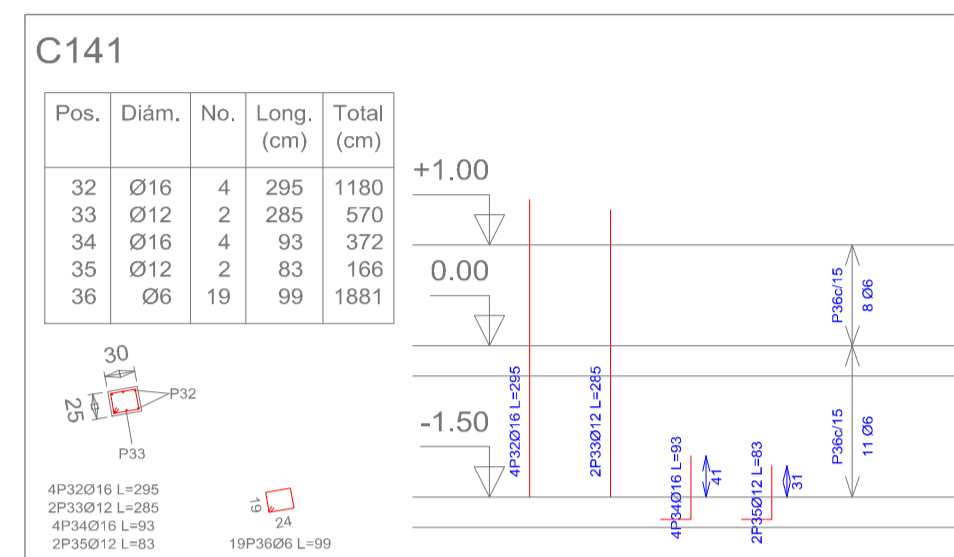
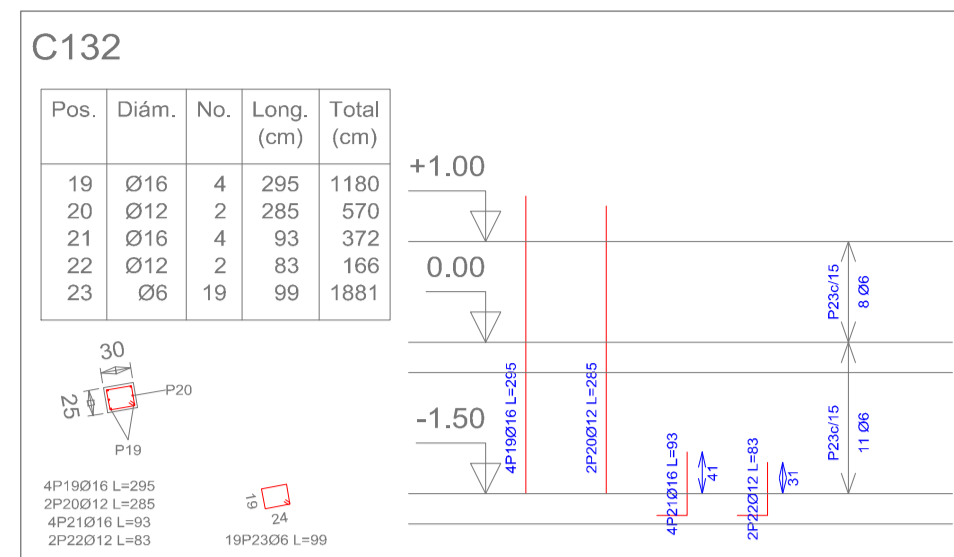
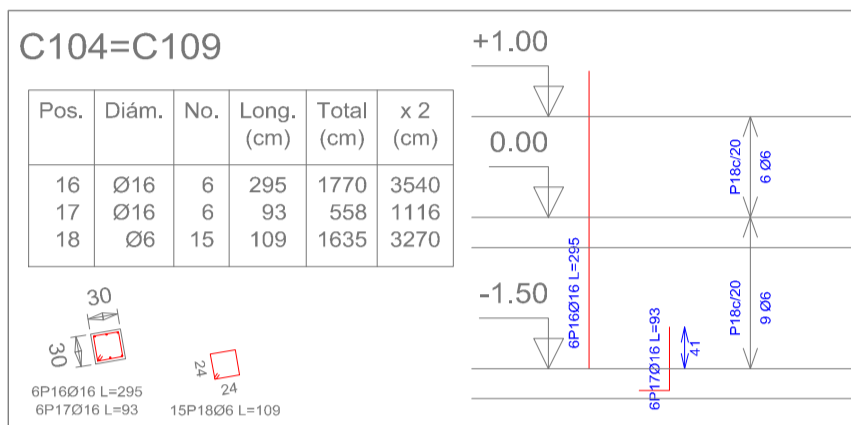
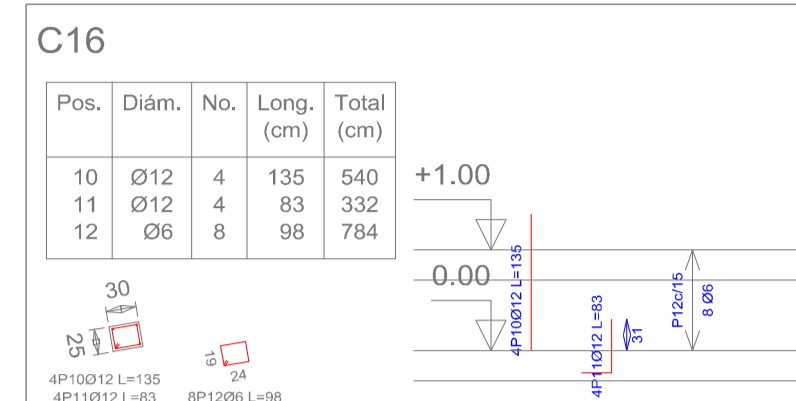
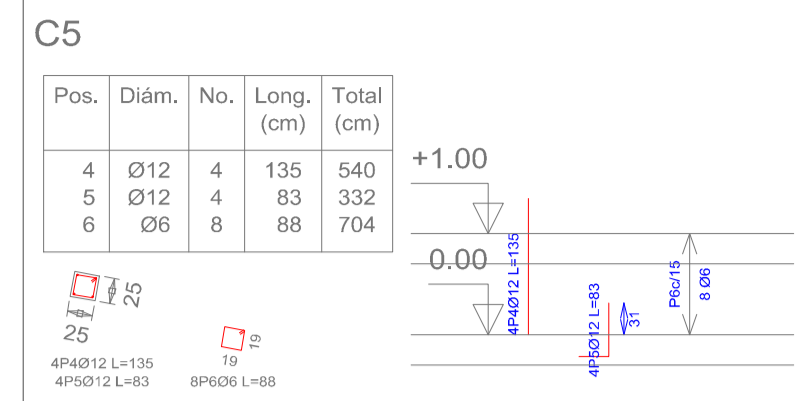
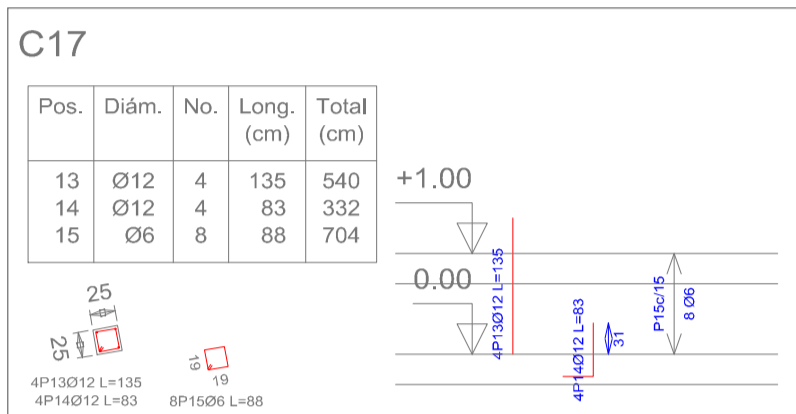
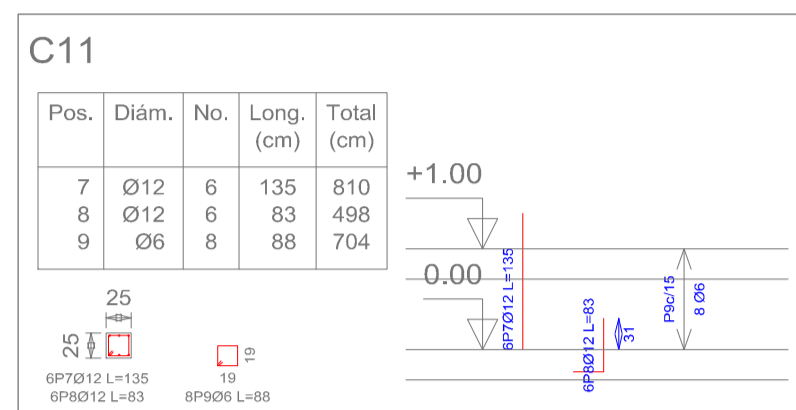
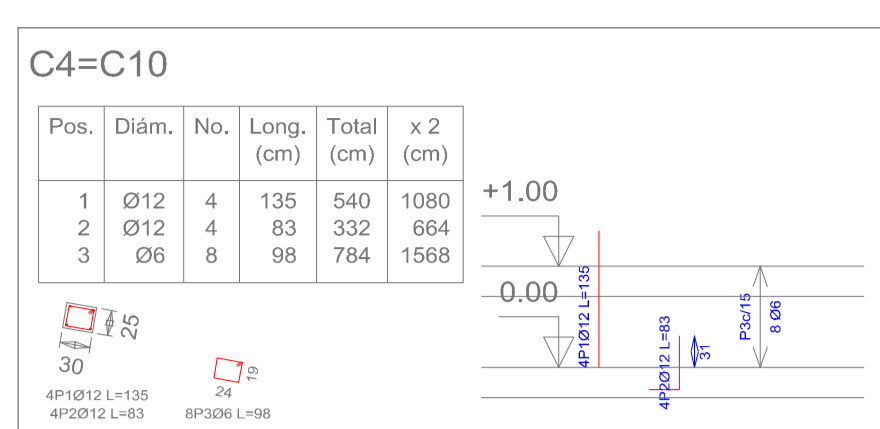


Pilares que terminan en SOBRECIMIENTO 2
Hormigón: H-25 , Control Normal
Acero: AH-500 , Control Normal
Escala: 1:75

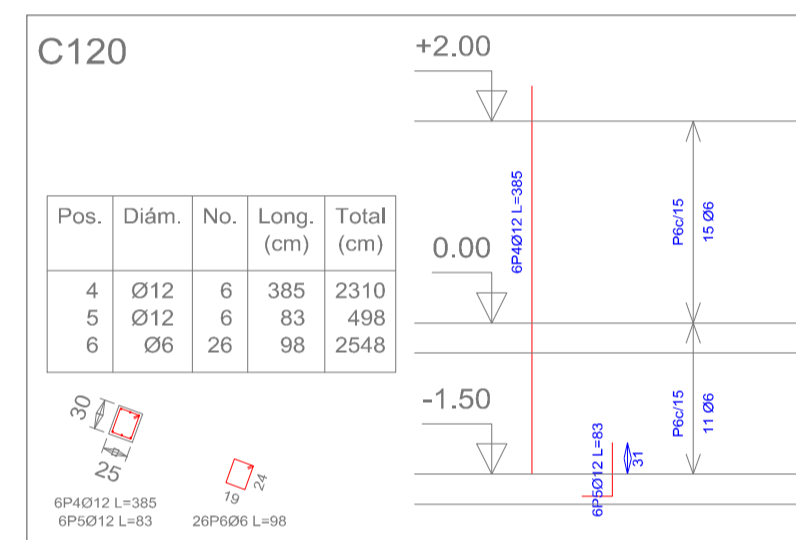
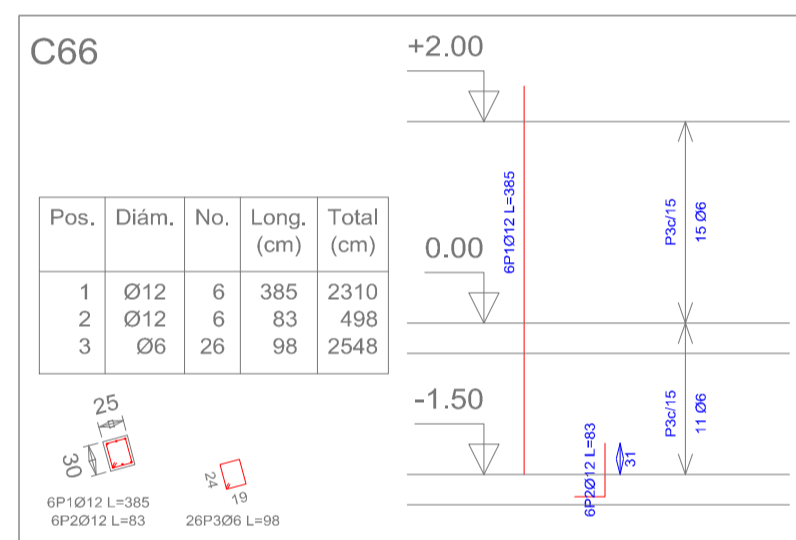
Resumen Acero SOBRECIMIENTO 2 Pilares	Long. total (m)	Peso+10% (kg)	Total
AH-500CN Ø6	149.8	37	
Ø12	86.1	84	
Ø16	93.1	162	
Ø20	16.9	46	329



Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
C4=C10	1	Ø12	4	135	540	4.8
	2	Ø12	4	83	332	2.9
	3	Ø6	8	98	784	1.7
Total+10%:						9.4
C5	4	Ø12	4	135	540	4.8
	5	Ø12	4	83	332	2.9
	6	Ø6	8	88	704	1.6
Total+10%:						9.3
C11	7	Ø12	6	135	810	7.2
	8	Ø12	6	83	498	4.4
	9	Ø6	8	88	704	1.6
Total+10%:						13.2
C16	10	Ø12	4	135	540	4.8
	11	Ø12	4	83	332	2.9
	12	Ø6	8	98	784	1.7
Total+10%:						9.4
C17	13	Ø12	4	135	540	4.8
	14	Ø12	4	83	332	2.9
	15	Ø6	8	88	704	1.6
Total+10%:						9.3
C104=C109	16	Ø16	6	295	1770	27.9
	17	Ø16	6	93	558	8.8
	18	Ø6	15	109	1635	3.6
Total+10%:						40.3
C132	19	Ø16	4	295	1180	18.6
	20	Ø12	2	285	570	9.3
	21	Ø16	4	93	372	5.9
	22	Ø12	2	83	166	1.5
	23	Ø6	19	99	1881	4.2
Total+10%:						39.5
C136	24	Ø16	4	295	1180	18.6
	25	Ø12	2	285	570	9.3
	26	Ø16	4	93	372	5.9
	27	Ø12	4	83	332	2.9
	28	Ø6	19	99	1881	4.2
Total+10%:						40.9
C137	29	Ø20	4	310	1240	30.6
	30	Ø20	4	112	448	11.0
	31	Ø6	16	100	1600	3.6
	Total+10%:					
C141	32	Ø16	4	295	1180	18.6
	33	Ø12	2	285	570	9.3
	34	Ø16	4	93	372	5.9
	35	Ø12	2	83	166	1.5
	36	Ø6	19	99	1881	4.2
	Total+10%:					
Ø6: 36.0						
Ø12: 84.0						
Ø16: 161.8						
Ø20: 45.8						
Total: 327.6						

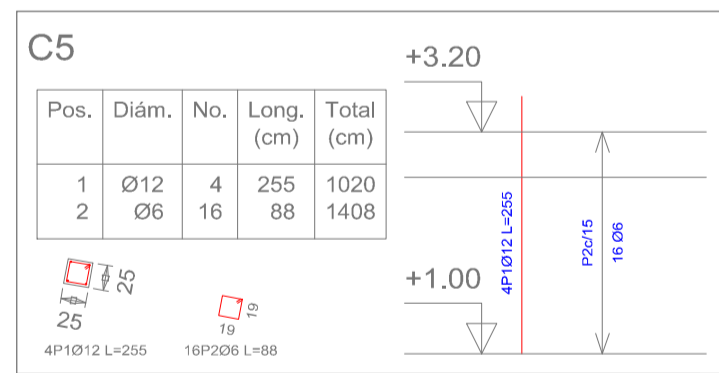
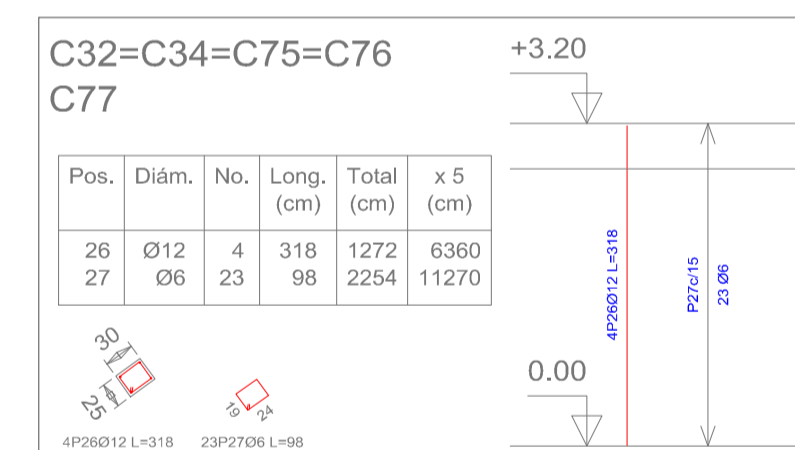
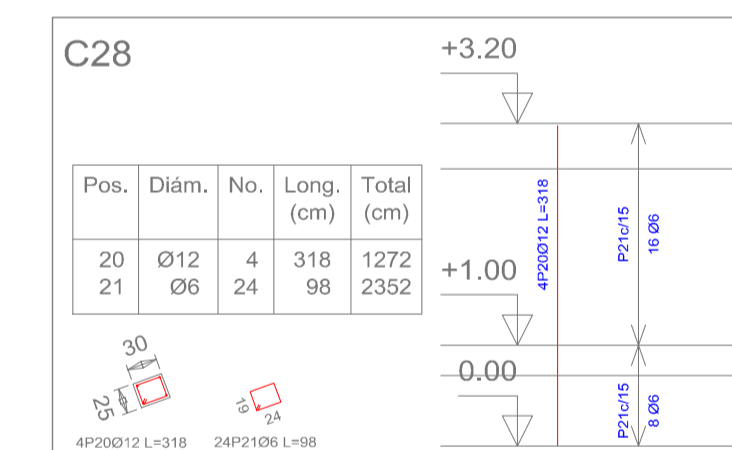
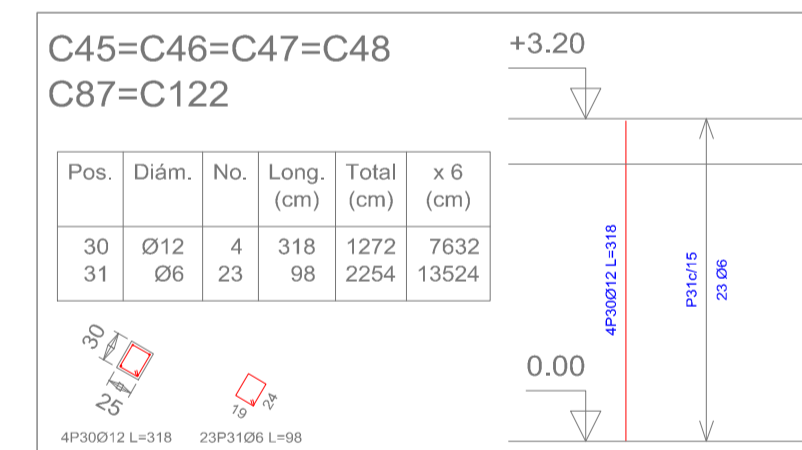
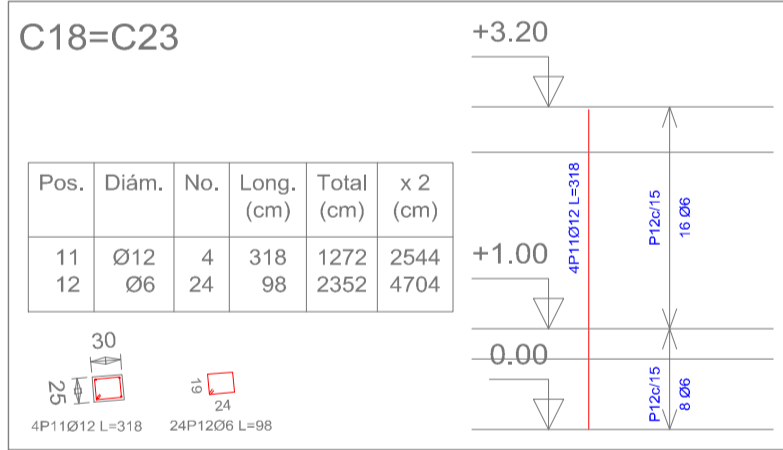
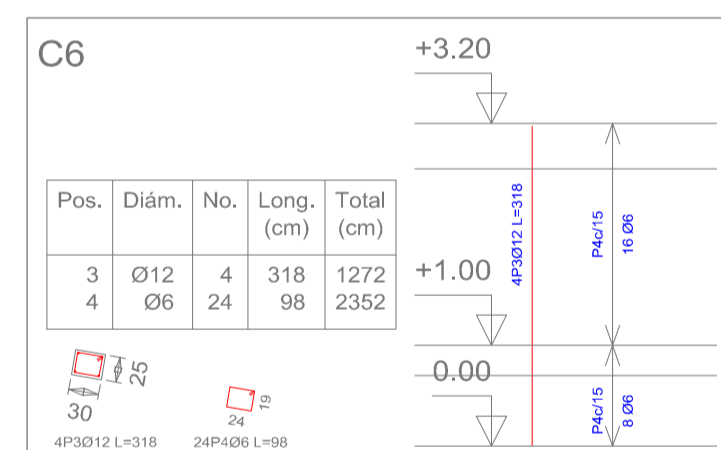
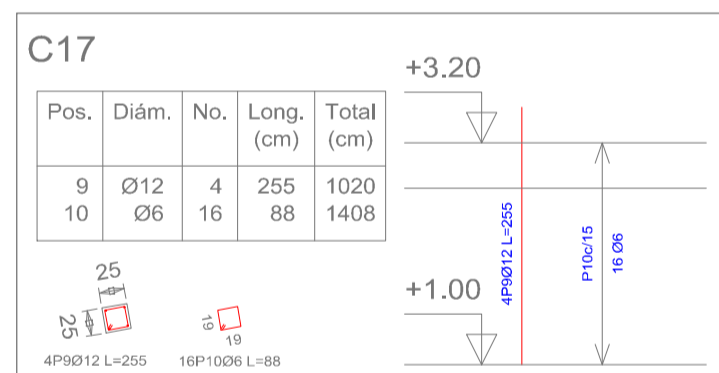
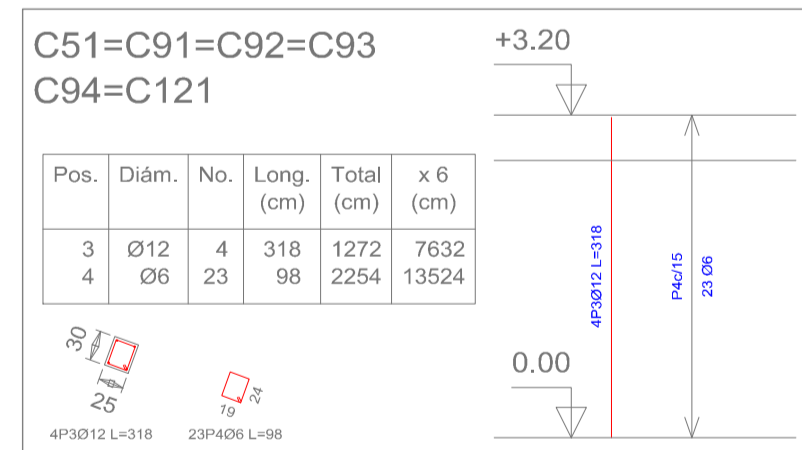
Pilares que terminan en SOBRECIMIENTO 3
Hormigón: H-25 , Control Normal
Acero: AH-500 , Control Normal
Escala: 1:75

Resumen Acero SOBRECIMIENTO 3 Pilares	Long. total (m)	Peso+10% (kg)	Total
AH-500CN Ø6	51.0	12	
Ø12	56.2	55	67



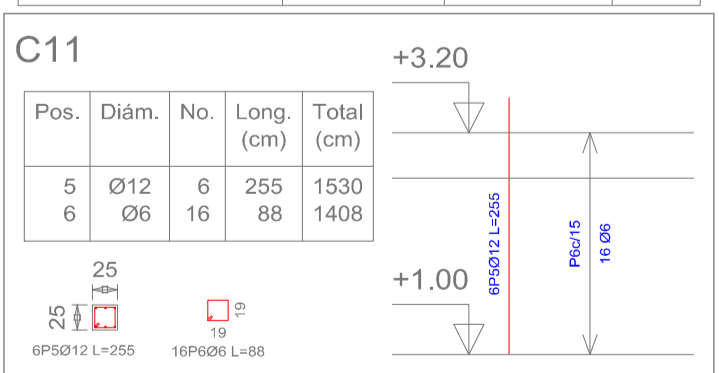
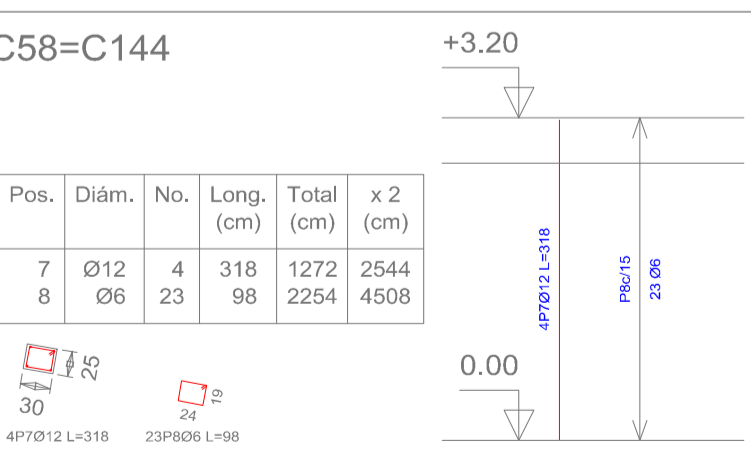
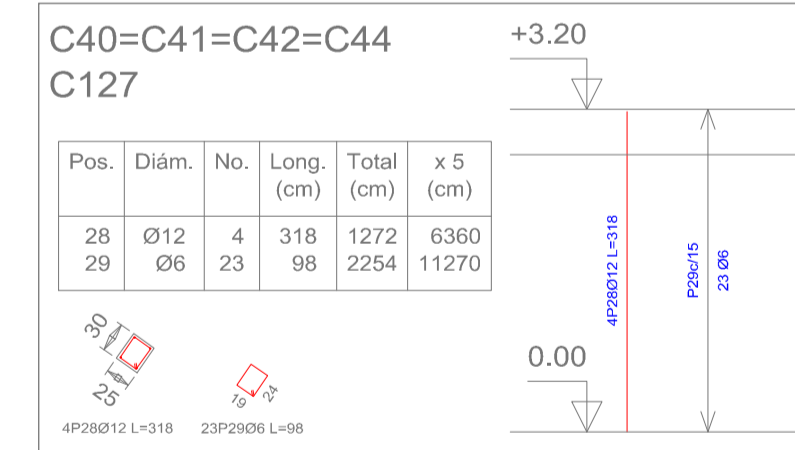
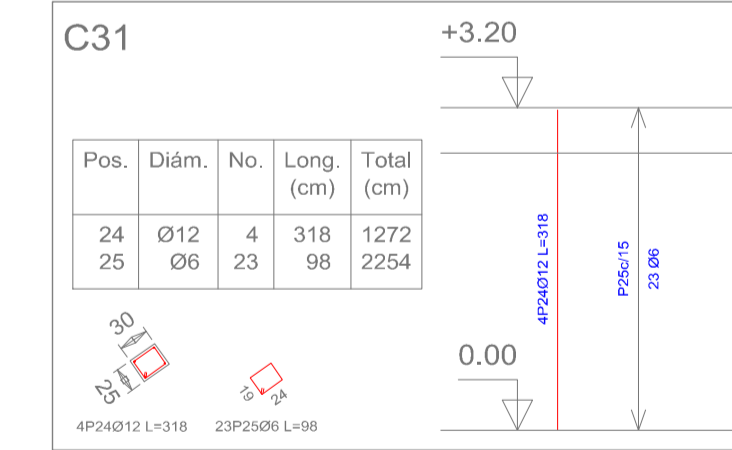
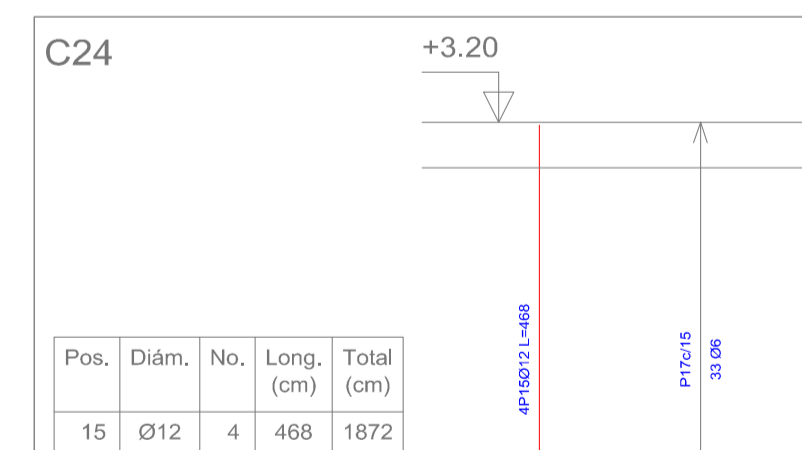
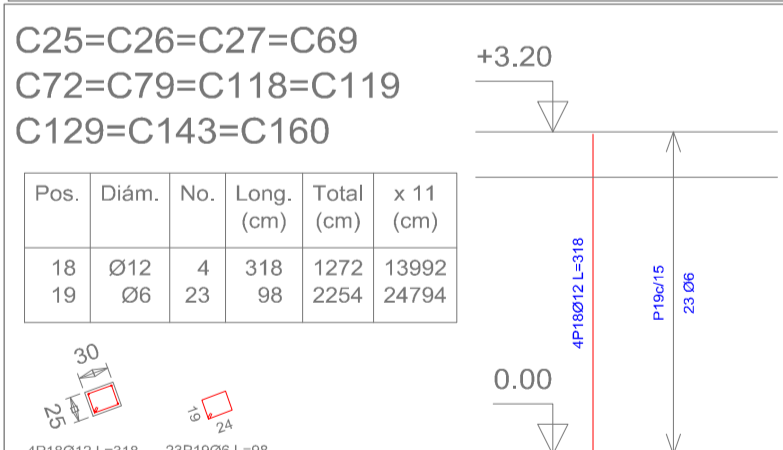
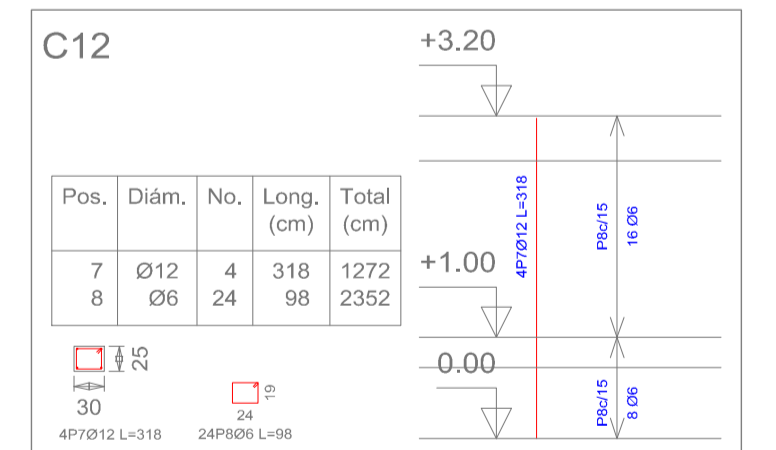
Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
C66	1	Ø12	6	385	2310	20.5
	2	Ø12	6	83	498	4.4
	3	Ø6	26	98	2548	5.7
Total+10%:						30.6
C120	4	Ø12	6	385	2310	20.5
	5	Ø12	6	83	498	4.4
	6	Ø6	26	98	2548	5.7
	Total+10%:					
Ø6: 12.6						
Ø12: 54.8						
Total: 67.4						

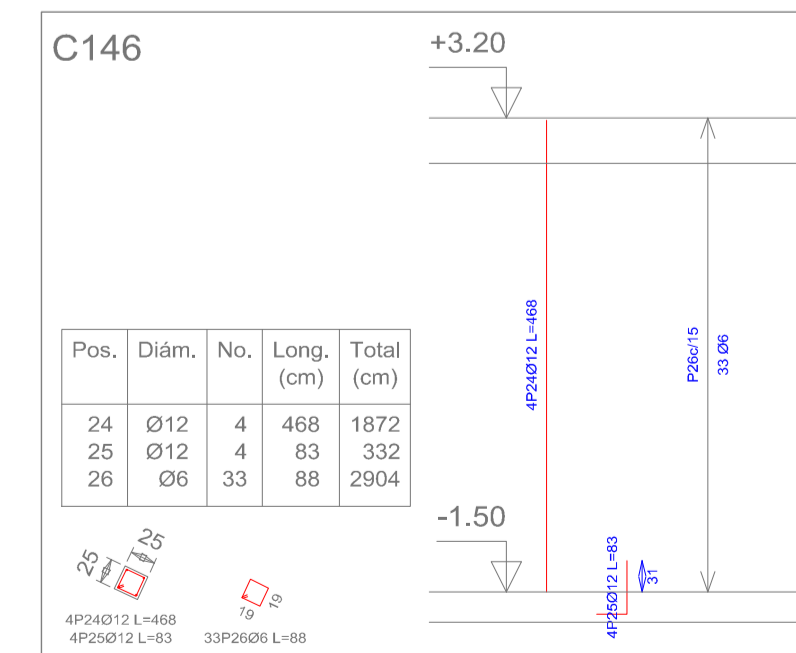
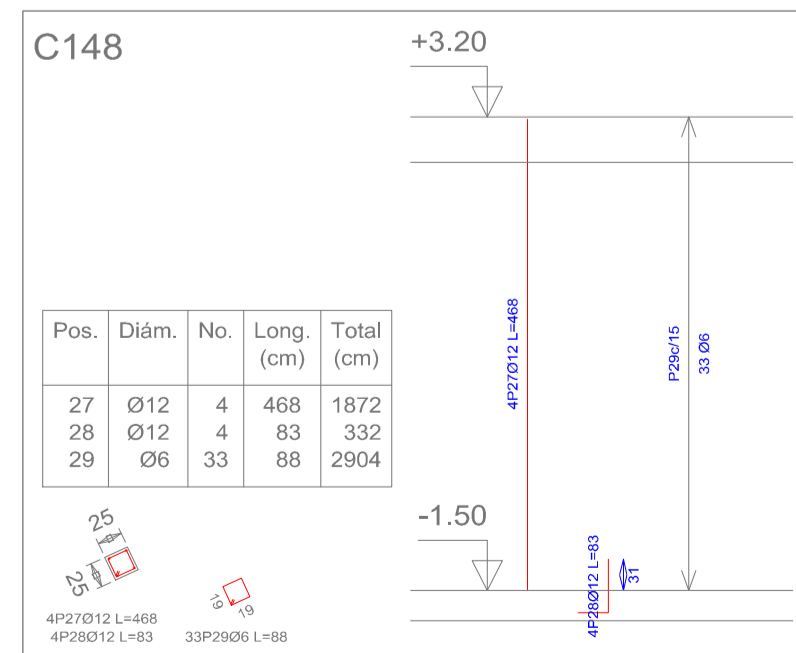
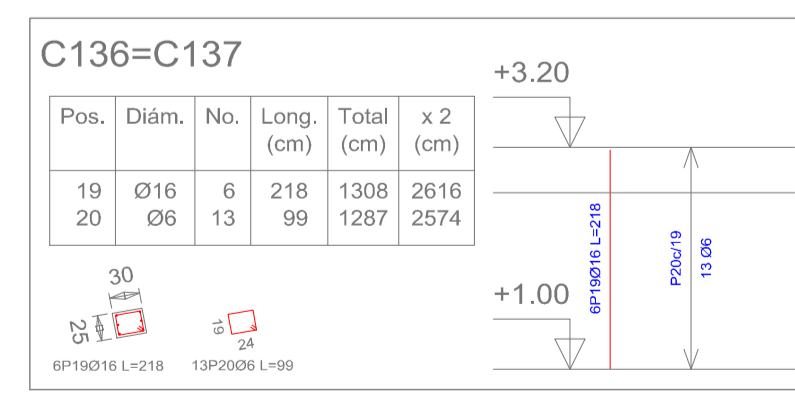
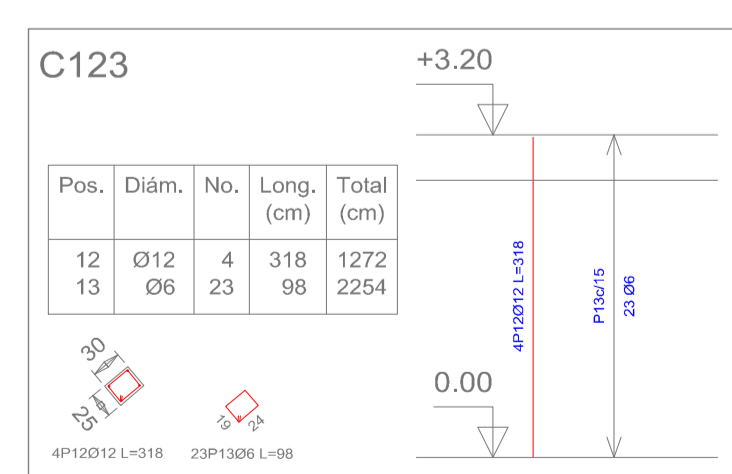
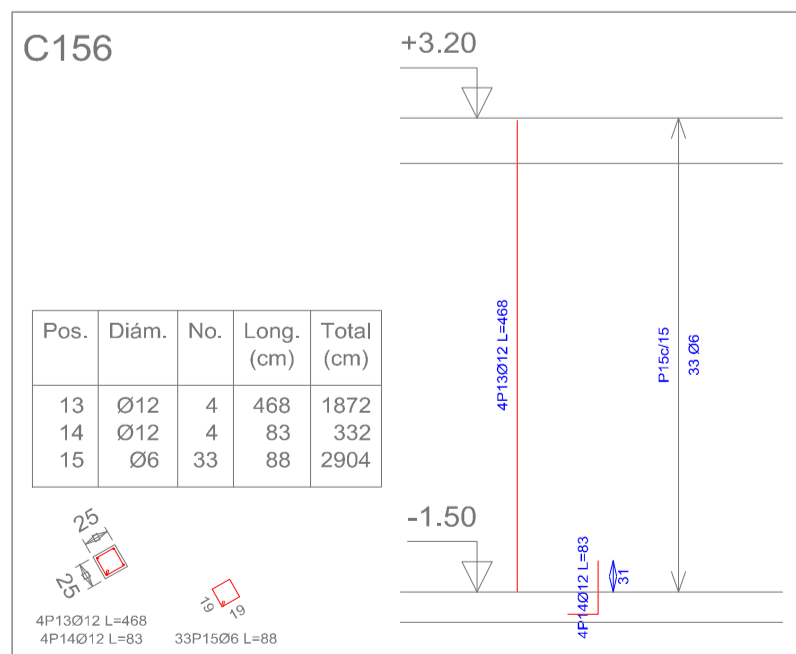
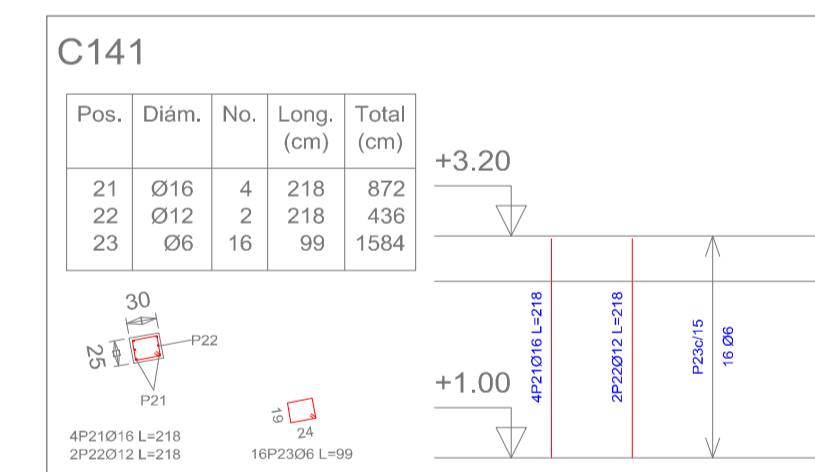
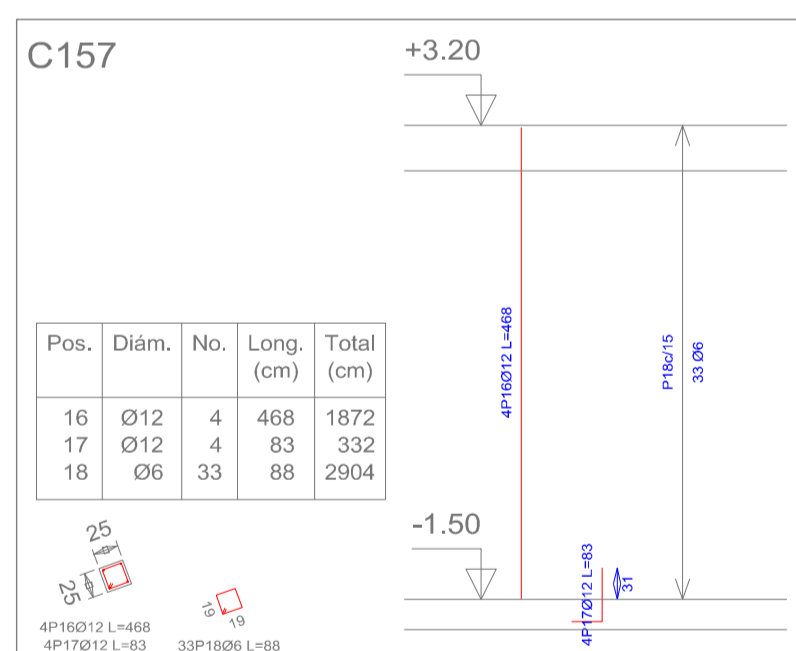
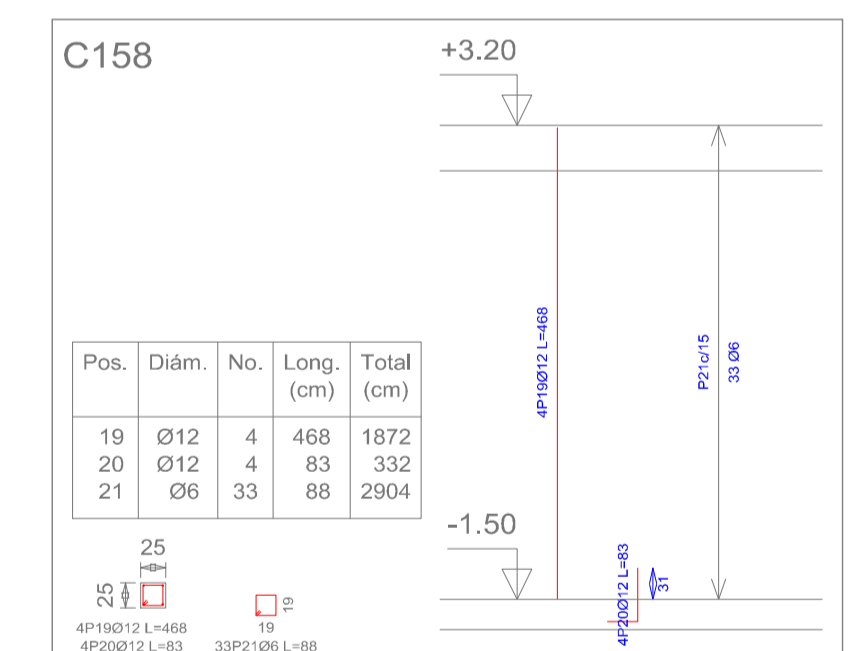
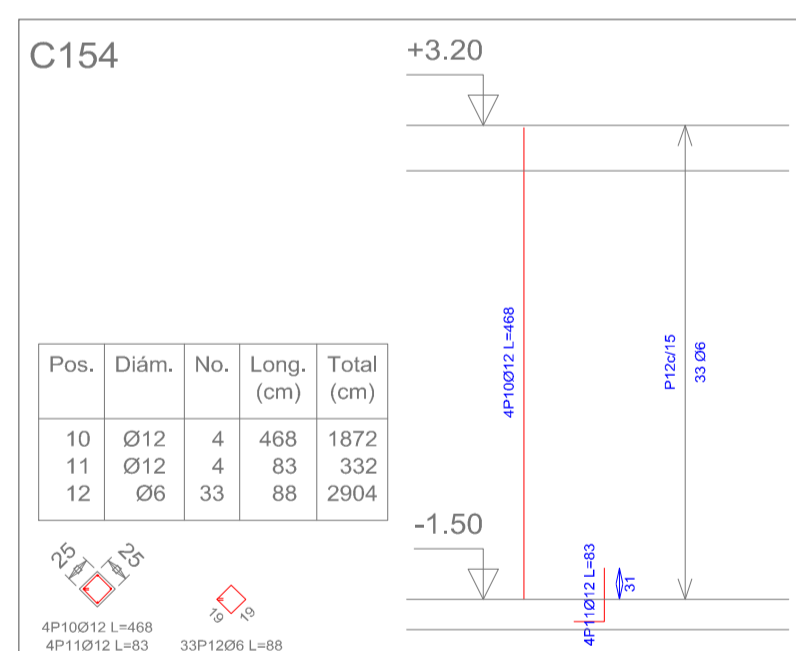
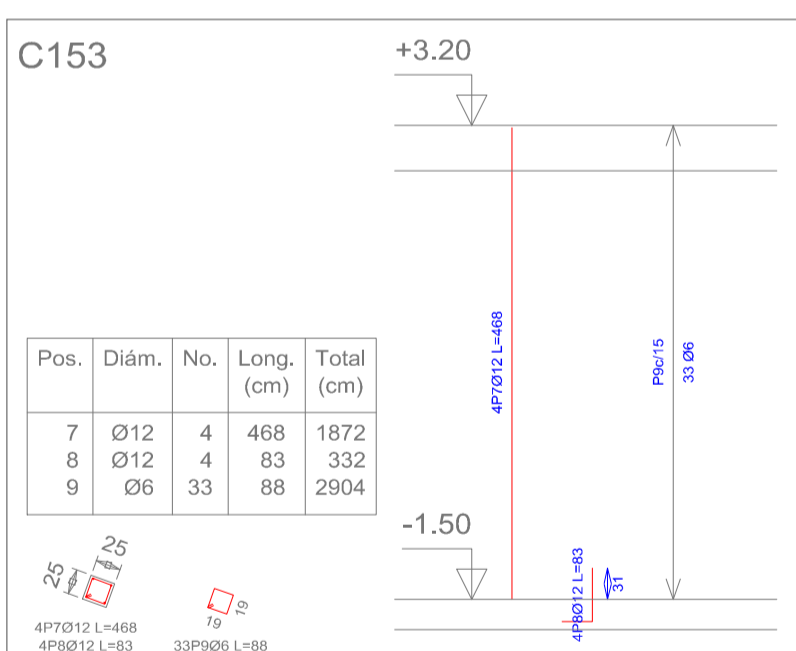
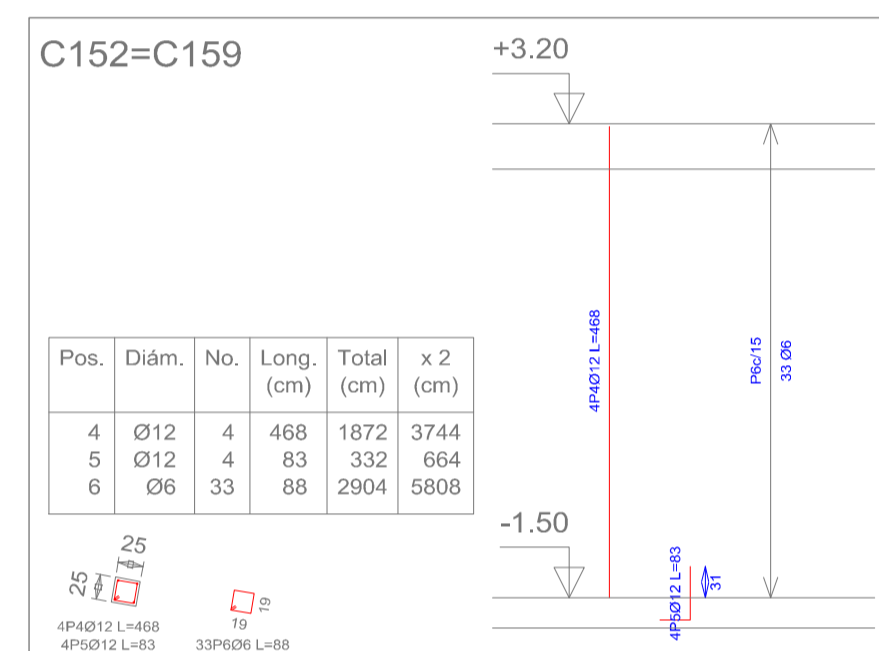
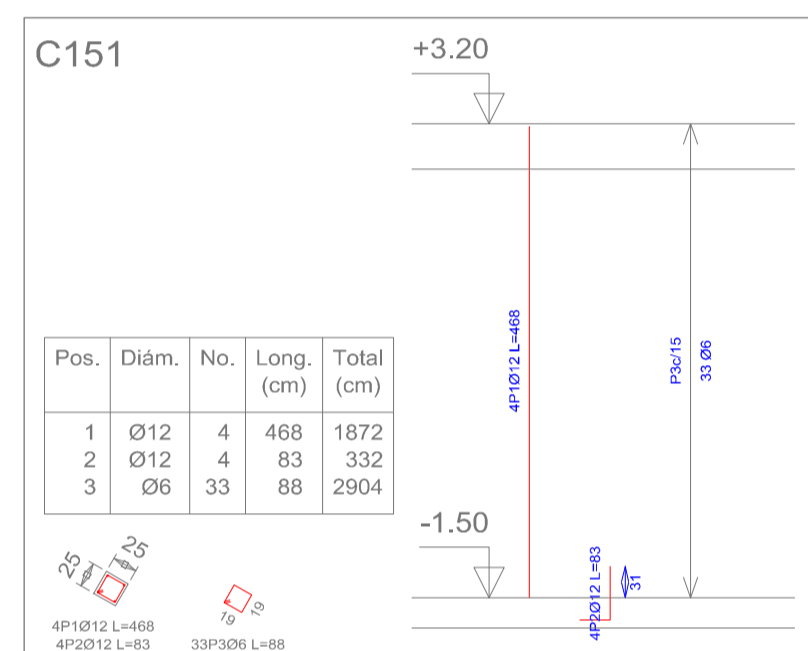
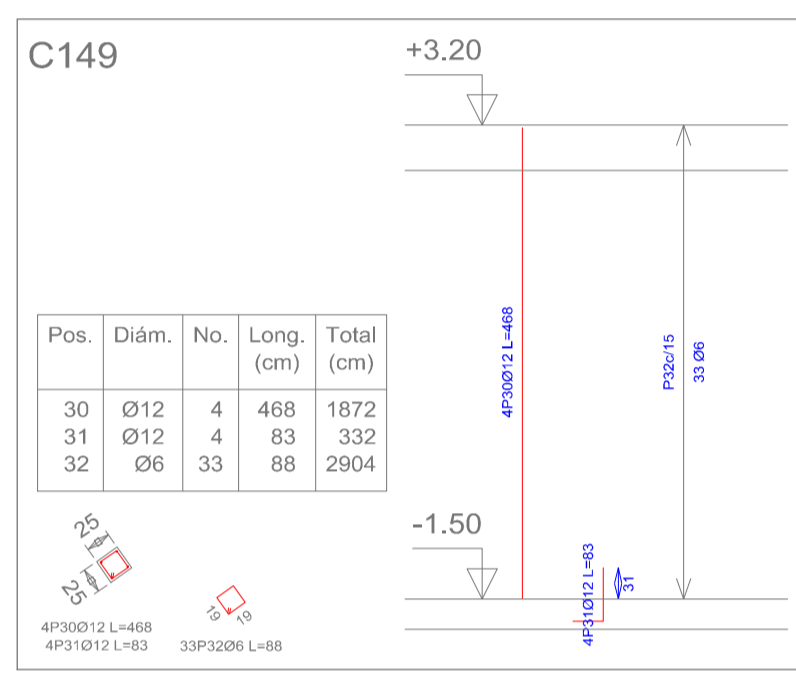
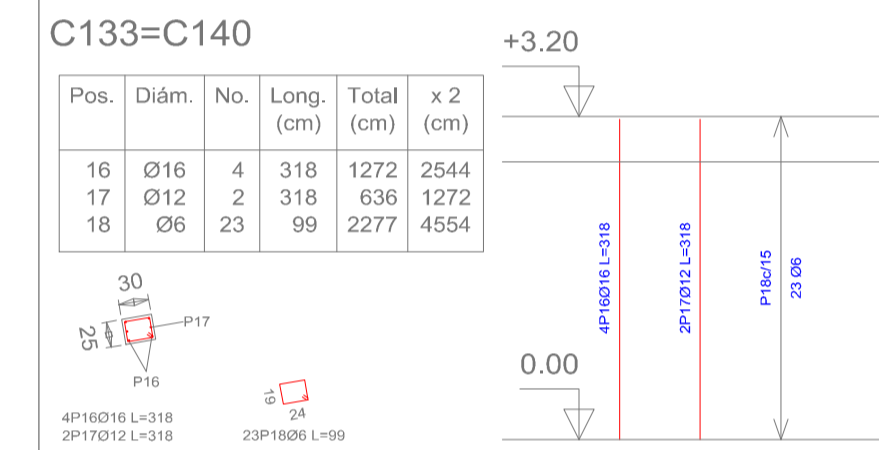
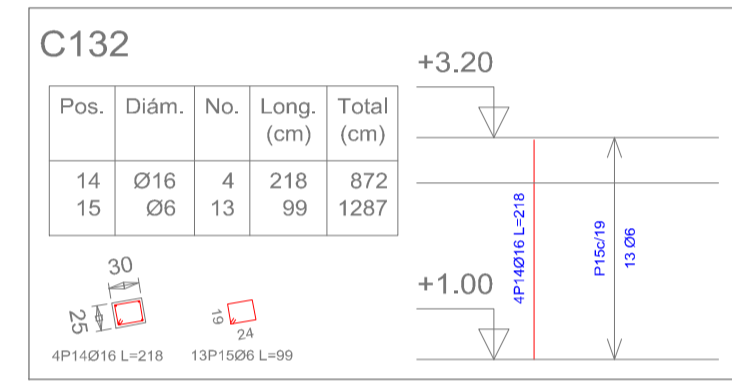
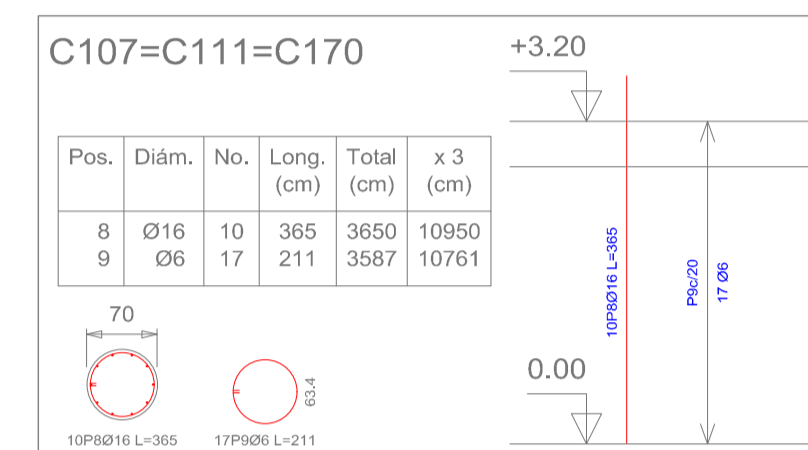
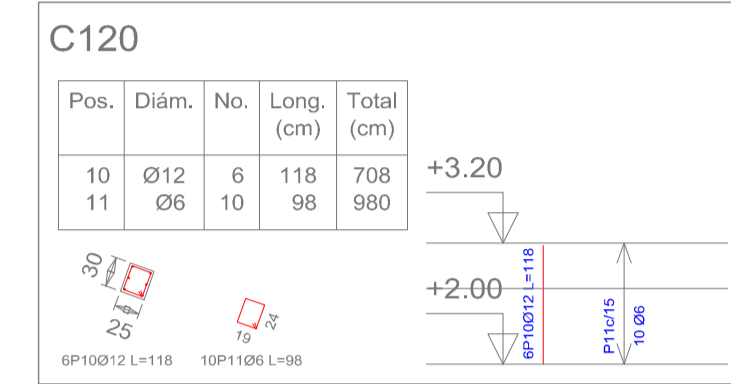
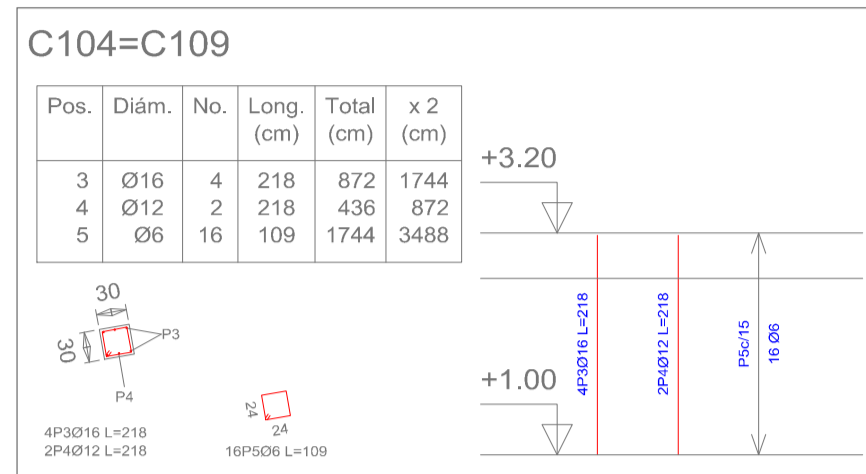
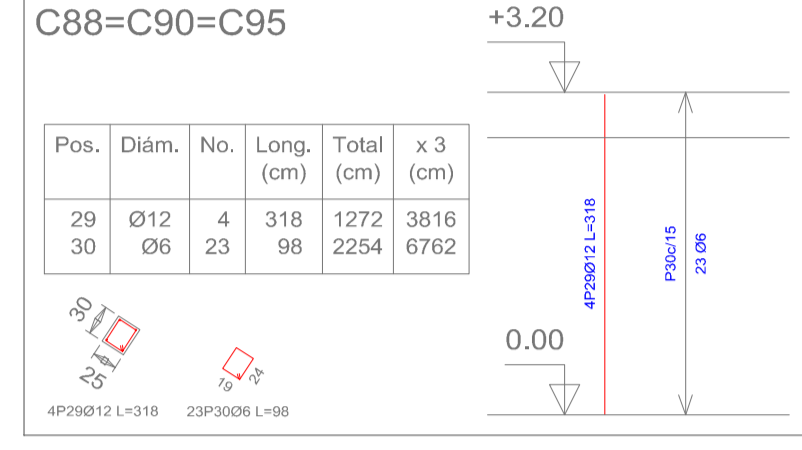
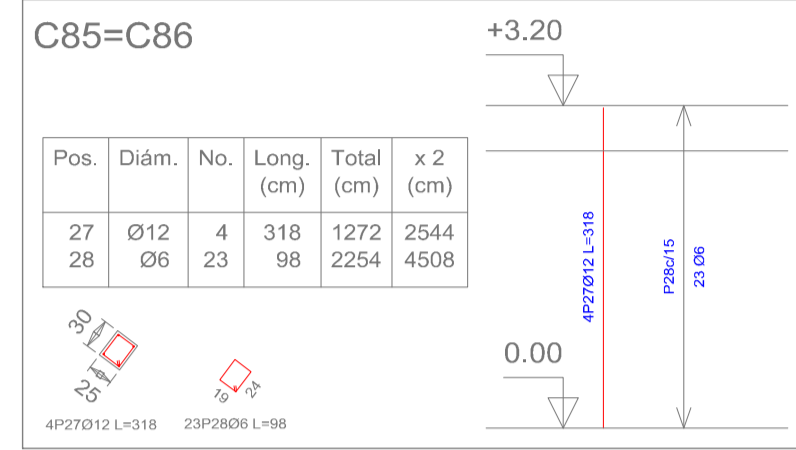
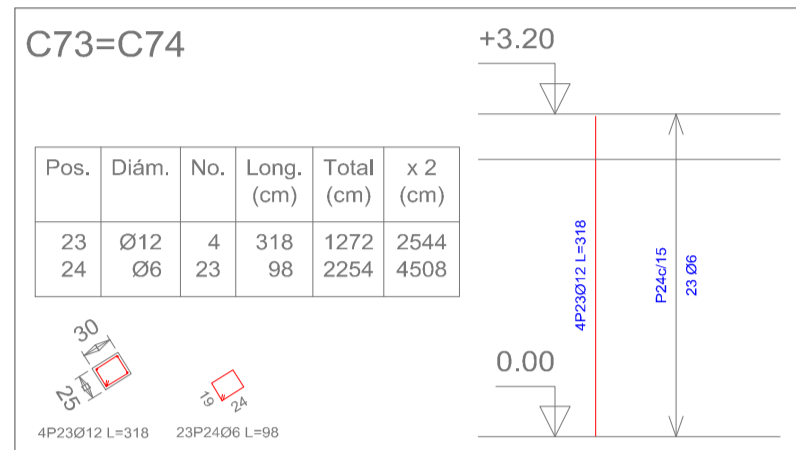
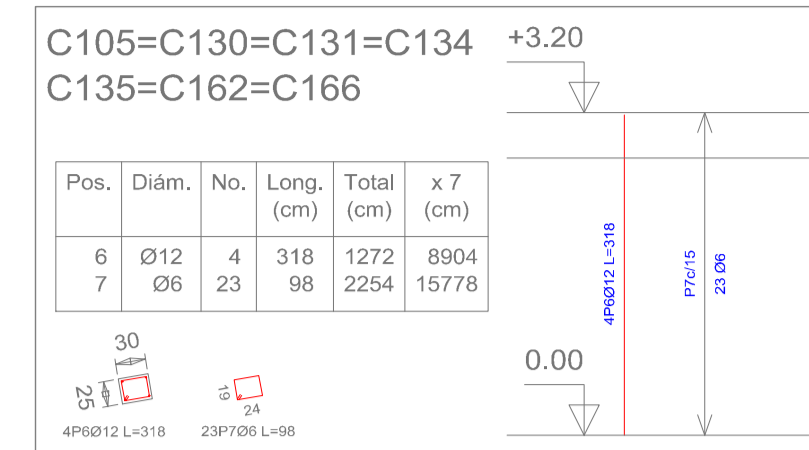
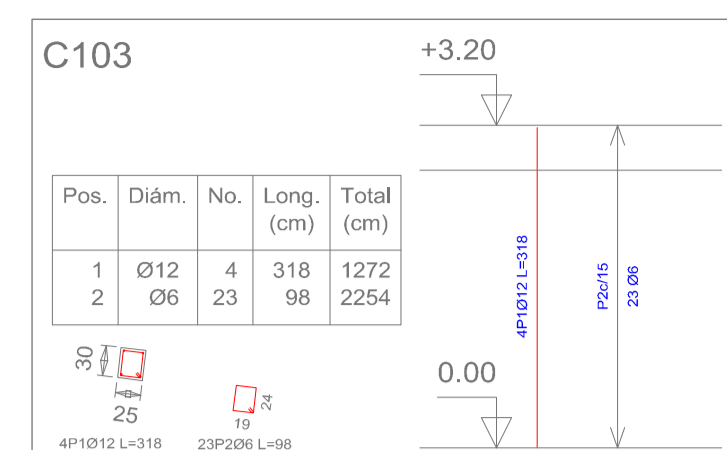
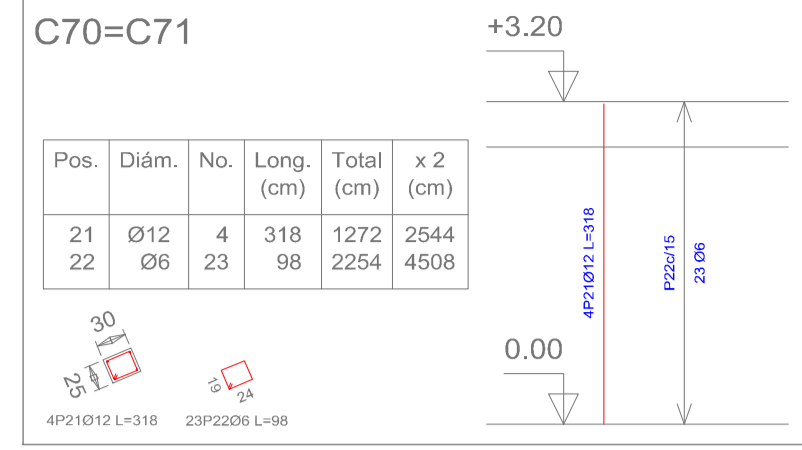
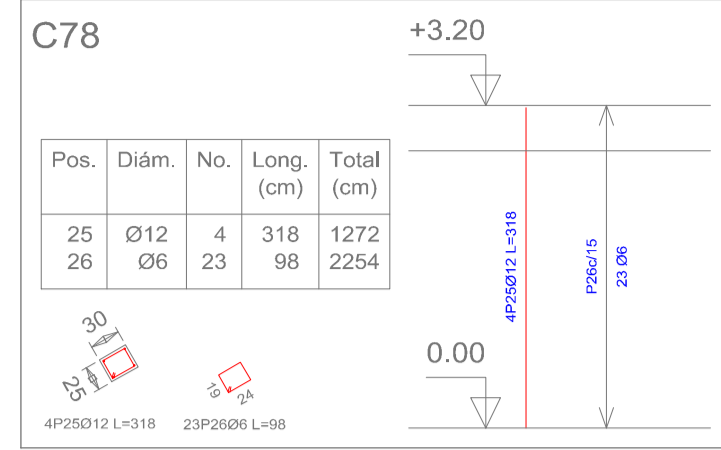
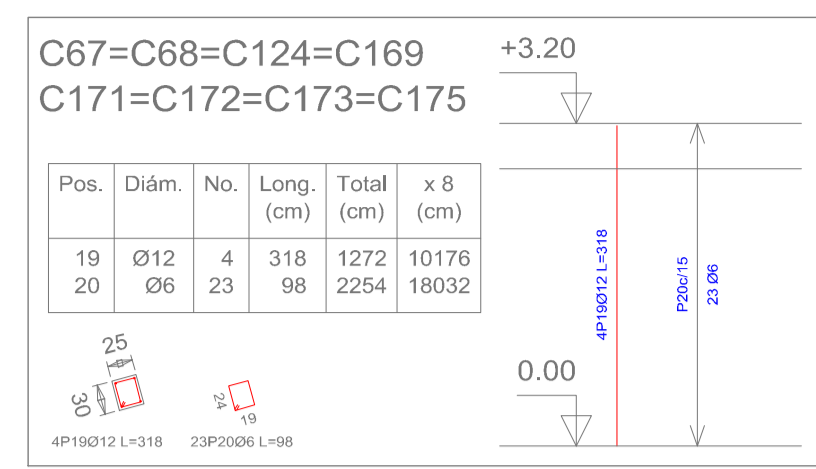
Pilares que terminan en NIVEL LOSA
Hormigón: H-25 , Control Normal
Acero: AH-500 , Control Normal
Escala: 1:75



Resumen Acero NIVEL LOSA Pilares

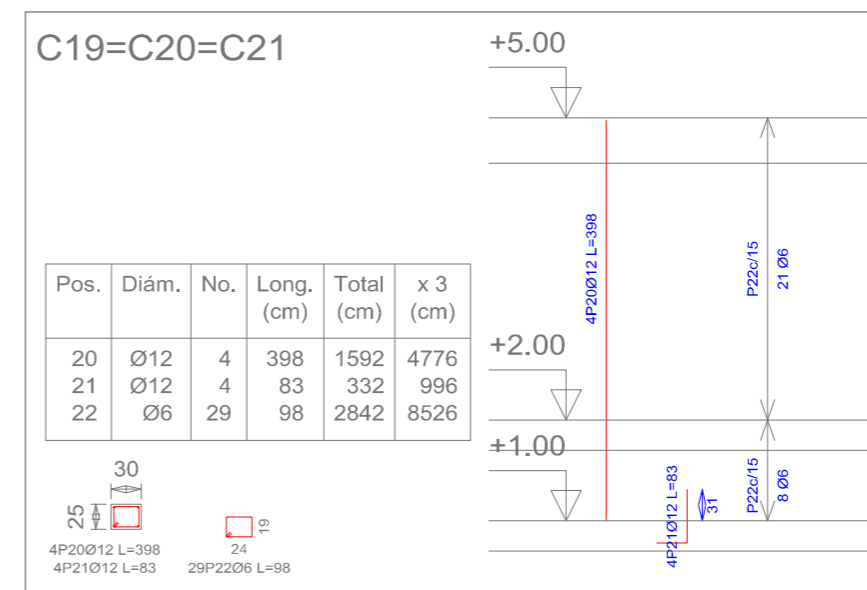
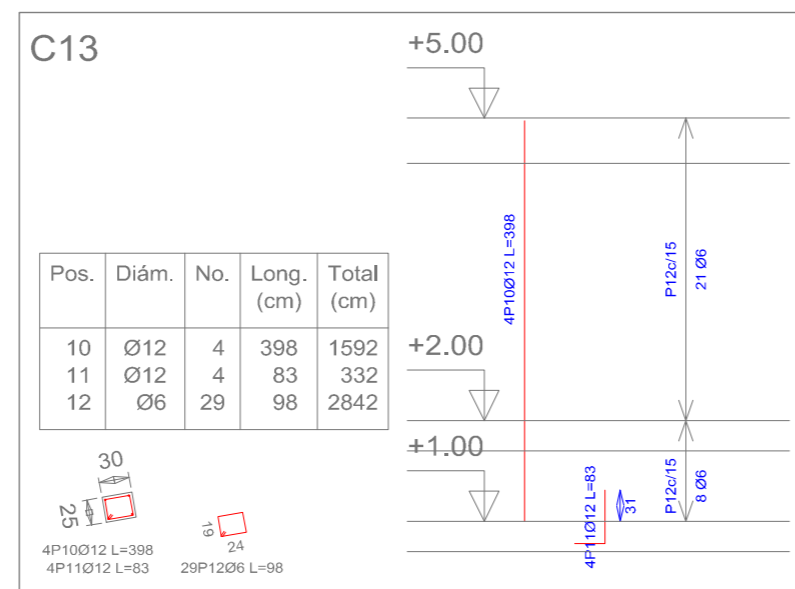
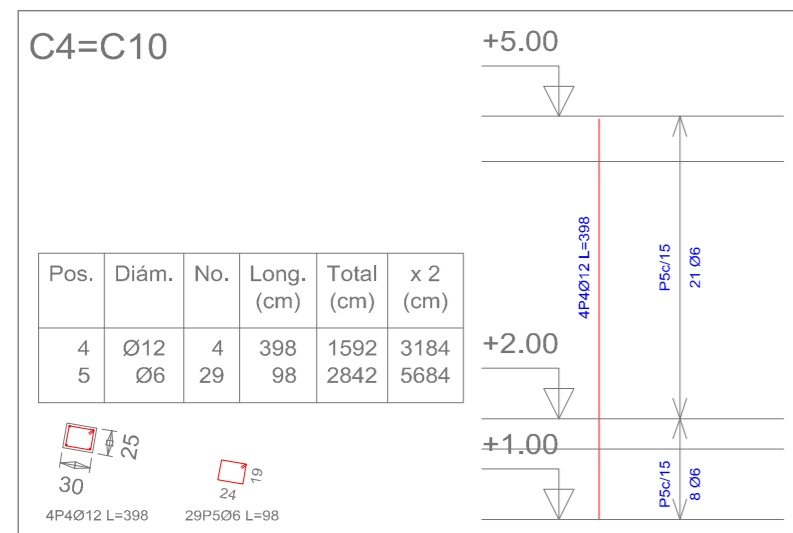
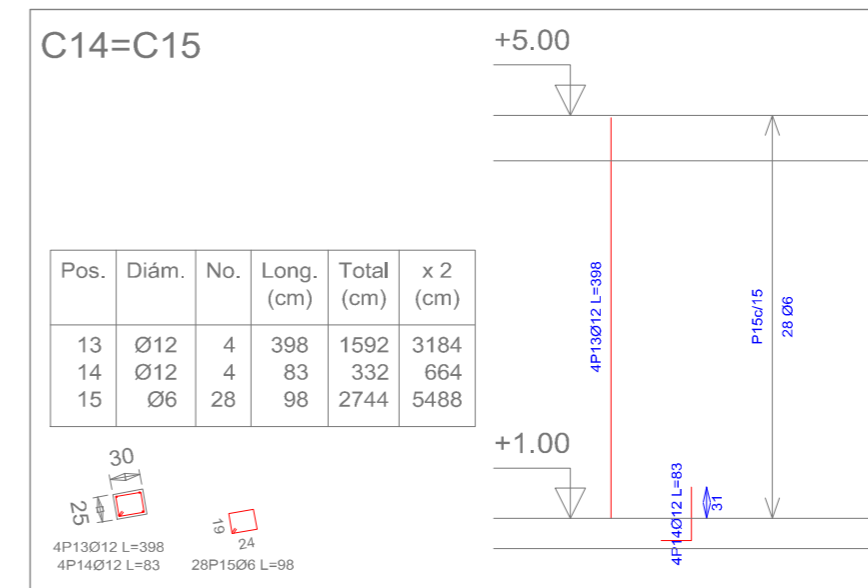
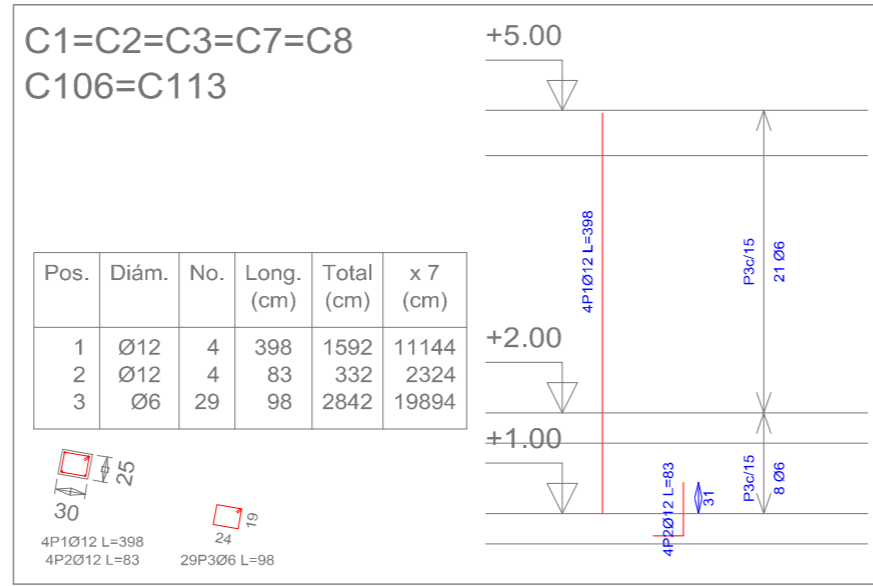
Resumen Acero NIVEL LOSA Pilares	Long. total (m)	Peso+10% (kg)	Total
AH-500CN Ø6	2914.6	711	
Ø12	1612.1	1574	
Ø16	196.0	340	2625





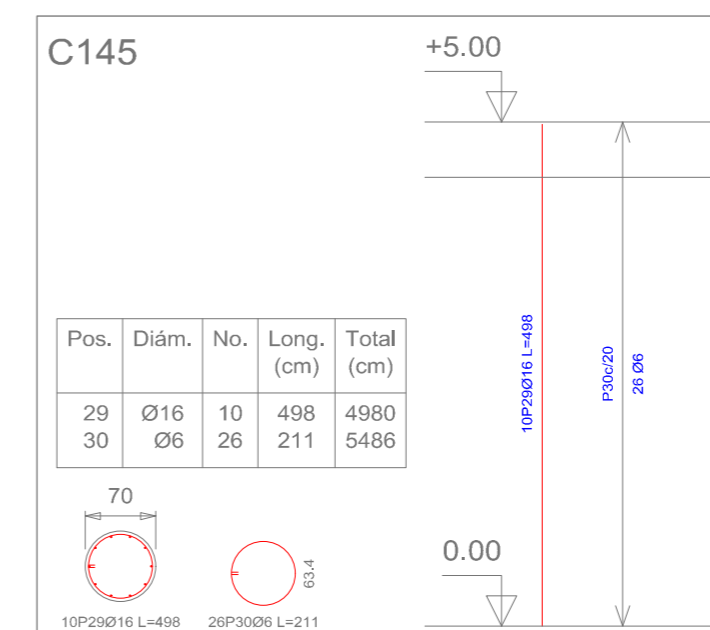
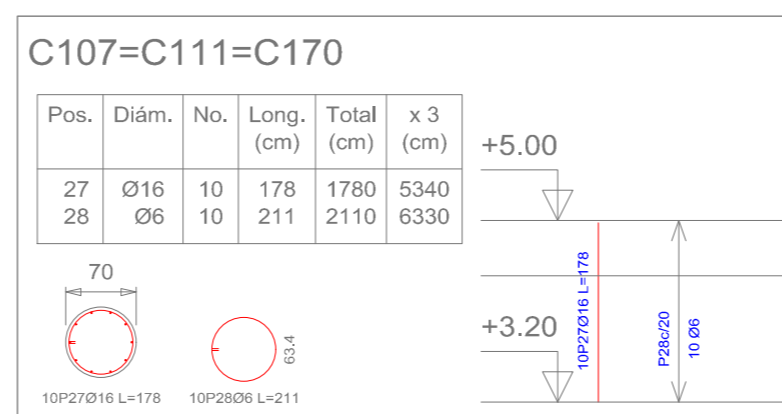
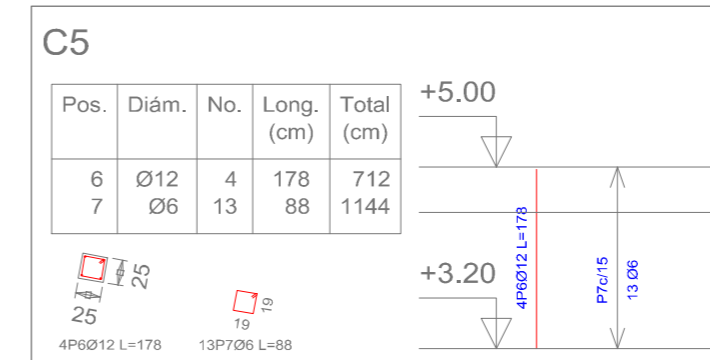
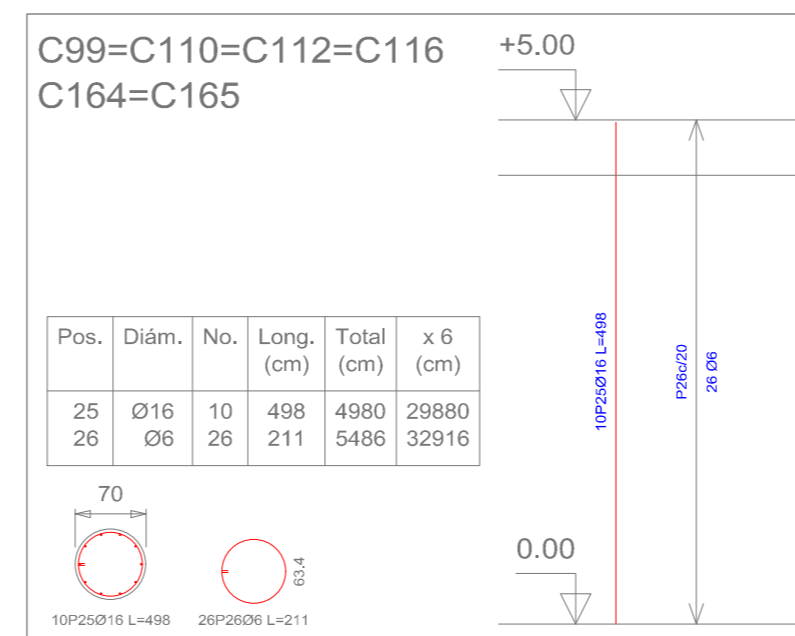
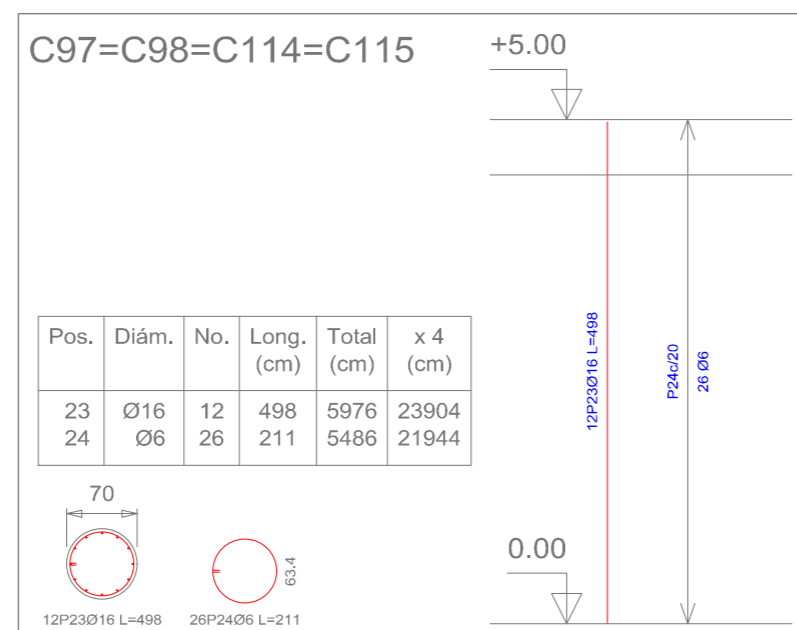
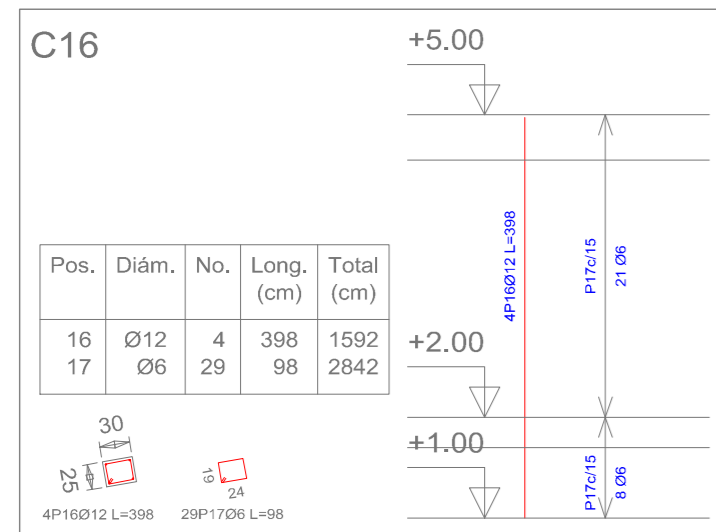
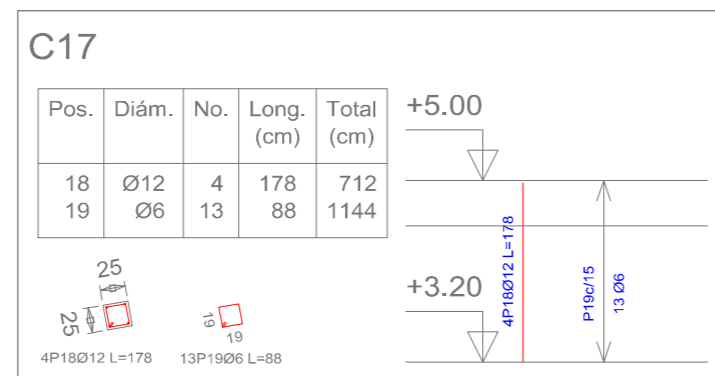
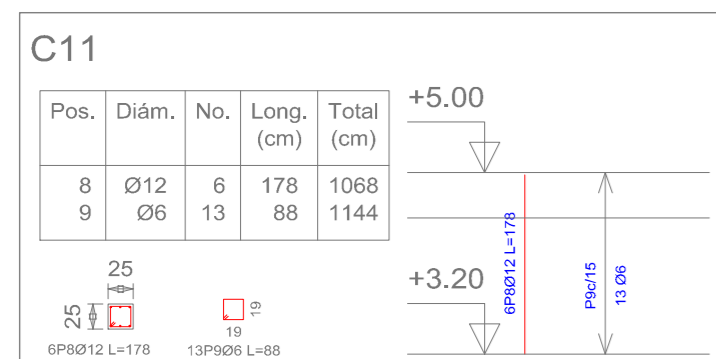
Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
C103	1	Ø12	4	318	1272	11.3
	2	Ø6	23	98	2254	17.9
Total+10%: 13.4						
C104=C109	3	Ø16	4	218	872	13.8
	4	Ø12	2	218	436	3.9
	5	Ø6	16	109	1744	3.9
Total+10%: 18.2						
C110=C111=C170	8	Ø16	10	365	3650	57.6
	9	Ø6	17	211	3587	8.0
Total+10%: 72.2						
C120	10	Ø12	6	118	708	6.3
	11	Ø6	10	98	980	2.2
Total+10%: 18.2						
C123	12	Ø12	4	318	1272	11.3
	13	Ø6	23	98	2254	5.0
Total+10%: 17.9						
C132	14	Ø16	4	218	872	13.8
	15	Ø6	13	99	1287	2.9
Total+10%: 16.4						
C133=C140	16	Ø16	4	318	1272	20.1
	17	Ø12	2	318	636	5.6
	18	Ø6	23	99	2277	5.1
Total+10%: 33.9						
C136=C137	19	Ø16	6	218	1308	20.6
	20	Ø6	13	99	1287	2.9
Total+10%: 25.9						
C141	21	Ø16	4	218	872	13.8
	22	Ø12	2	218	436	3.9
Total+10%: 19.9						
C146	24	Ø12	4	468	1872	16.6
	25	Ø12	4	83	332	2.9
	26	Ø6	33	88	2904	6.4
Total+10%: 26.5						
C148	27	Ø12	4	468	1872	16.6
	28	Ø12	4	83	332	2.9
Total+10%: 28.5						
C149	30	Ø12	4	468	1872	16.6
	31	Ø12	4	83	332	2.9
	32	Ø6	33	88	2904	6.4
Total+10%: 28.5						
C151	1	Ø12	4	468	1872	16.6
	2	Ø12	4	83	332	2.9
Total+10%: 20.1						
C153	7	Ø12	4	468	1872	16.6
	8	Ø12	4	83	332	2.9
Total+10%: 20.1						
C154	10	Ø12	4	468	1872	16.6
	11	Ø12	4	83	332	2.9
Total+10%: 20.1						
C156	13	Ø12	4	468	1872	16.6
	14	Ø12	4	83	332	2.9
	15	Ø6				

Pilares que terminan en NIVEL CUBIERTA
Hormigón: H-25 , Control Normal
Acero: AH-500 , Control Normal
Escala: 1:75



Resumen Acero NIVEL CUBIERTA Pilares	Long. total (m)	Peso+10% (kg)	Total
AH-500CN Ø6	1153.8	282	1708
Ø12	322.8	315	
Ø16	639.9	1111	

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
C1=C2=C3=C7=C8=C106=C113	1	Ø12	4	398	1592	14.1
	2	Ø12	4	83	332	2.9
	3	Ø6	29	98	2842	6.3
Total+10%: (x7):						25.6
C4=C10	4	Ø12	4	398	1592	14.1
	5	Ø6	29	98	2842	6.3
Total+10%: (x2):						22.4
C5	6	Ø12	4	178	712	6.3
	7	Ø6	13	88	1144	2.5
Total+10%:						9.7
C11	8	Ø12	6	178	1068	9.5
	9	Ø6	13	88	1144	2.5
Total+10%:						13.2
C13	10	Ø12	4	398	1592	14.1
	11	Ø12	4	83	332	2.9
	12	Ø6	29	98	2842	6.3
Total+10%:						25.6
C14=C15	13	Ø12	4	398	1592	14.1
	14	Ø12	4	83	332	2.9
	15	Ø6	28	98	2744	6.1
Total+10%: (x2):						25.4
C16	16	Ø12	4	398	1592	14.1
	17	Ø6	29	98	2842	6.3
Total+10%:						22.4
C17	18	Ø12	4	178	712	6.3
	19	Ø6	13	88	1144	2.5
Total+10%:						9.7
C19=C20=C21	20	Ø12	4	398	1592	14.1
	21	Ø12	4	83	332	2.9
	22	Ø6	29	98	2842	6.3
Total+10%: (x3):						25.6
C97=C98=C114=C115	23	Ø16	12	497	5964	94.1
	24	Ø6	26	211	5486	12.2
Total+10%: (x4):						116.9
C99=C110=C112=C116=C164=C165	25	Ø16	10	497	4970	78.4
	26	Ø6	26	211	5486	12.2
Total+10%: (x6):						99.7
C107=C111=C170	27	Ø16	10	178	1780	28.1
	28	Ø6	10	211	2110	4.7
Total+10%: (x3):						36.1
C145	29	Ø16	10	497	4970	78.4
	30	Ø6	26	211	5486	12.2
Total+10%:						99.7
Ø6:						282.0
Ø12:						313.9
Ø16:						1110.1
Total:						1706.0

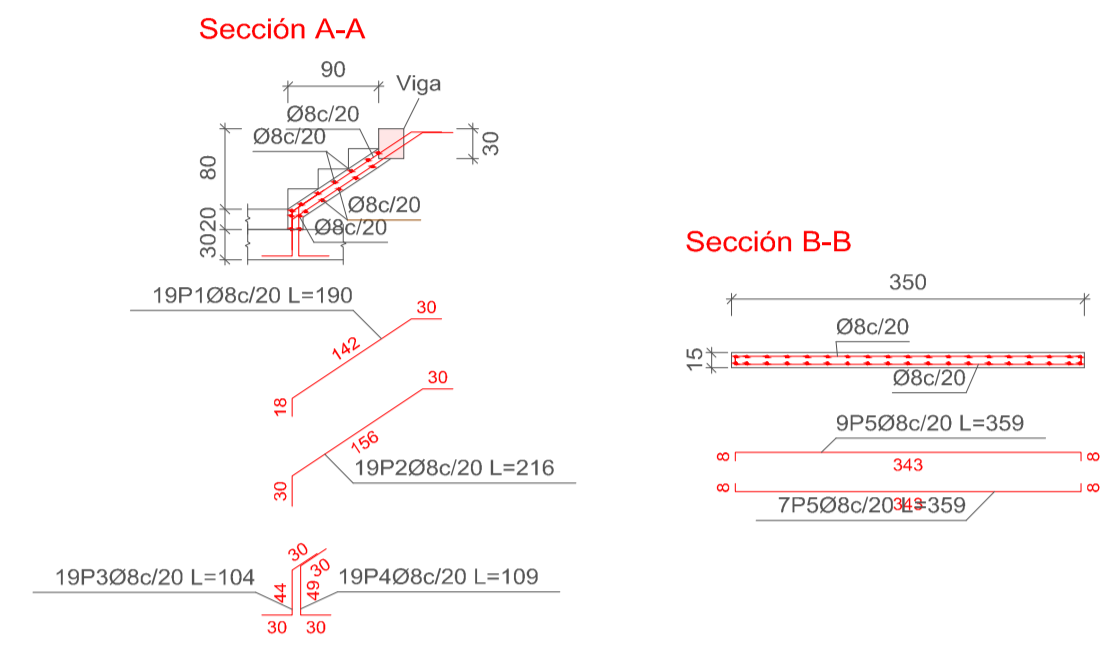


ESCALA: 1:75

UNIVERSIDAD AUTONOMA "JUAN MISAEL SARACHO" FACULTAD DE CIENCIAS Y TECNOLOGIA		
MATERIA: CIV - 502 PROYECTO ING. CIVIL II (M. ESTRUCTURAS)		
PROYECTO: DISEÑO ESTRUCTURAL CONSTRUCCIÓN CENTRO INTEGRAL SOCIAL Y CULTURAL ENTRE RÍOS		
DESCRIPCION: DESPLIEGUE DE PILARES (CONTINUACION)	UNIVERSITARIO: ANDRÉS FERNÁNDEZ FIGUEROA	LAMINA: 23
FECHA: MAYO 2023	ESCALA: INDICADA	

Escalera 1 SOBRECIMIENTO 2

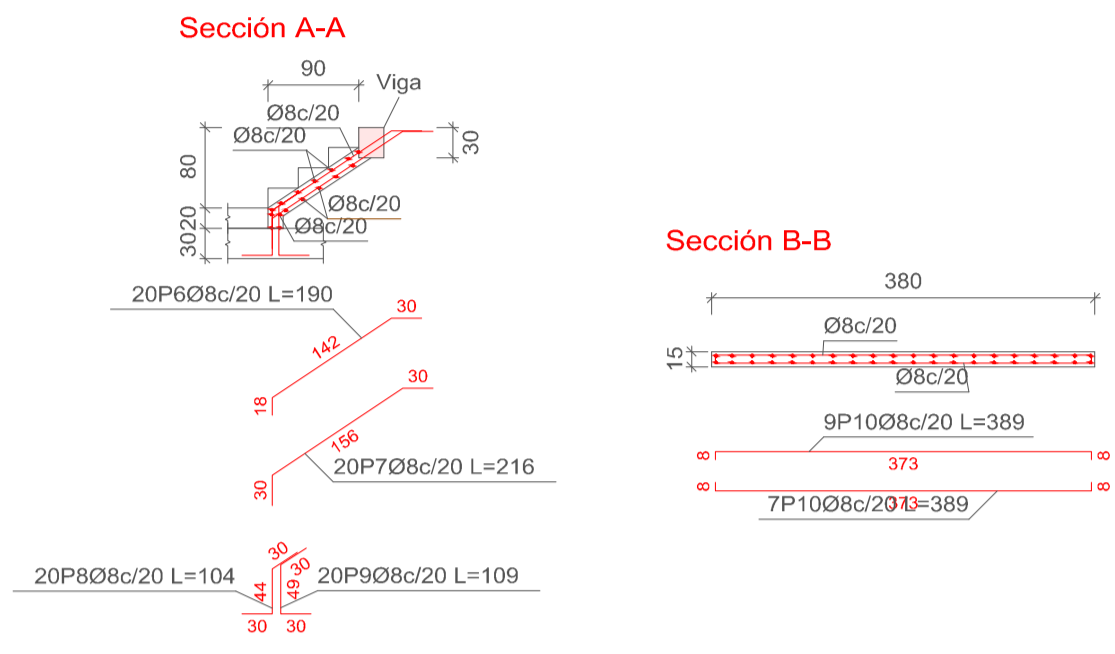
Tramo 1	
Ámbito	3.500 m
Espesor	0.15 m
Huella	0.300 m
Contrahuella	0.200 m
Desnivel que salva	1.00 m
Nº de escalones	4
Planta final	SOBRECIMIENTO 2
Planta inicial	SOBRECIMIENTO 1
Peso propio	0.375 tm ²
Peldañeado (Realizado con ladrillo)	0.133 tm ²
Solado	0.100 tm ²
Barandillas	0.300 tm
Sobrecarga de uso	0.300 tm ²
Hormigón	H-25 , Control Normal
Acero	AH-500 , Control Normal
Rec. geométrico	3.0 cm



Escala 1:75

Escalera 2 SOBRECIMIENTO 2

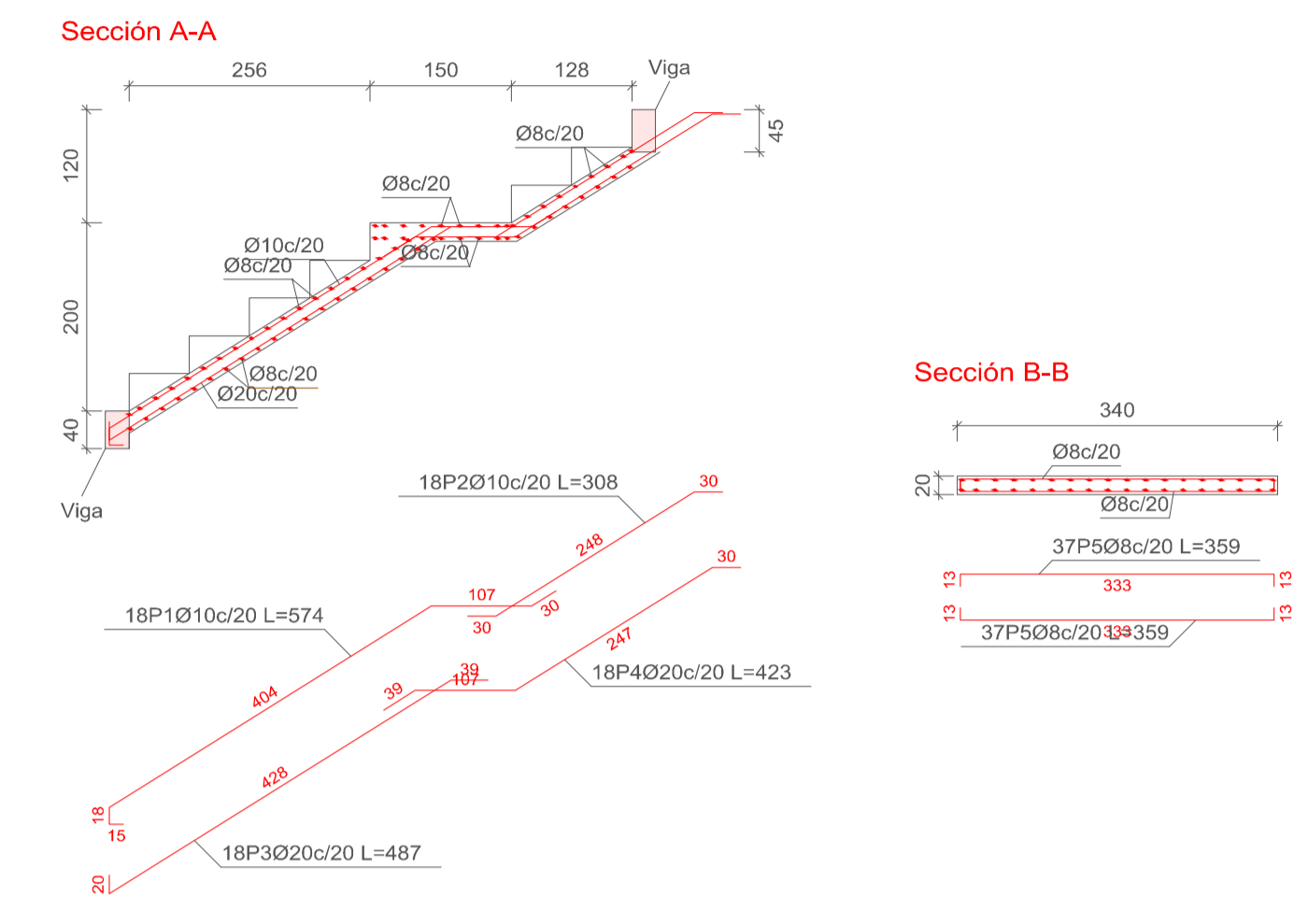
Tramo 1	
Ámbito	3.800 m
Espesor	0.15 m
Huella	0.300 m
Contrahuella	0.200 m
Desnivel que salva	1.00 m
Nº de escalones	4
Planta final	SOBRECIMIENTO 3
Planta inicial	SOBRECIMIENTO 2
Peso propio	0.375 tm ²
Peldañeado (Realizado con ladrillo)	0.133 tm ²
Solado	0.100 tm ²
Barandillas	0.300 tm
Sobrecarga de uso	0.300 tm ²
Hormigón	H-25 , Control Normal
Acero	AH-500 , Control Normal
Rec. geométrico	3.0 cm



Escala 1:75

Gradería 1,2,3,4,5,6

Tramo 1	
Ámbito	3.400 m
Espesor	0.20 m
Huella	0.640 m
Contrahuella	0.400 m
Desnivel que salva	3.20 m
Nº de escalones	8
Planta final	NIVEL LOSA
Planta inicial	SOBRECIMIENTO 1
Peso propio	0.500 tm ²
Peldañeado (Realizado con ladrillo)	0.271 tm ²
Solado	0.100 tm ²
Barandillas	0.300 tm
Sobrecarga de uso	0.500 tm ²
Hormigón	H-25 , Control Normal
Acero	AH-500 , Control Normal
Rec. geométrico	3.0 cm



Escala 1:75

Resumen Acero	Long. total (m)	Peso+10% (kg)
Escalera 1 SOBRECIMIENTO 2		
AH-500CN	Ø8	175.1
		76

Resumen Acero	Long. total (m)	Peso+10% (kg)
Escalera 2 SOBRECIMIENTO 2		
AH-500CN	Ø8	186.0
		81

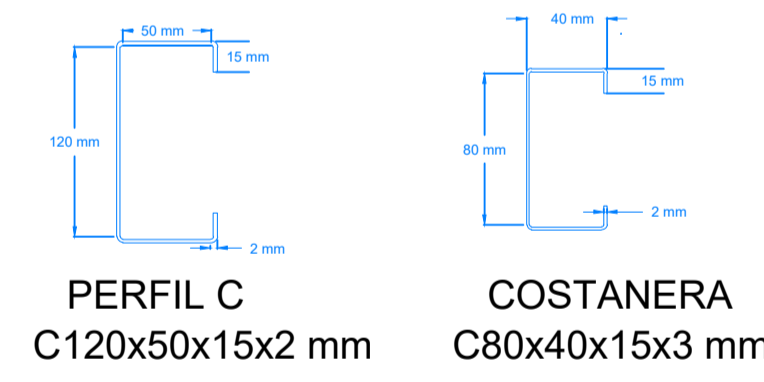
Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
Escalera 1 SOBRECIMIENTO 2 -Tramo 1	1	Ø8	19	190	3610	14.2
	2	Ø8	19	216	4104	16.2
	3	Ø8	19	104	1976	7.8
	4	Ø8	19	109	2071	8.2
	5	Ø8	16	359	5744	22.7
Total+10%						76.0
Escalera 2 SOBRECIMIENTO 2 -Tramo 1	6	Ø8	20	190	3800	15.0
	7	Ø8	20	216	4320	17.0
	8	Ø8	20	104	2080	8.2
	9	Ø8	20	109	2180	8.6
	10	Ø8	16	389	6224	24.6
Total+10%						80.7
Ø8:						156.7
Total:						156.7

ESTRUCTURA 1: 3D

Resumen Acero	Long. total (m)	Peso+10% (kg)	Total
Gradería 1			
AH-500CN	Ø8	265.7	115
	Ø10	158.8	108
	Ø20	163.8	444
Total			667

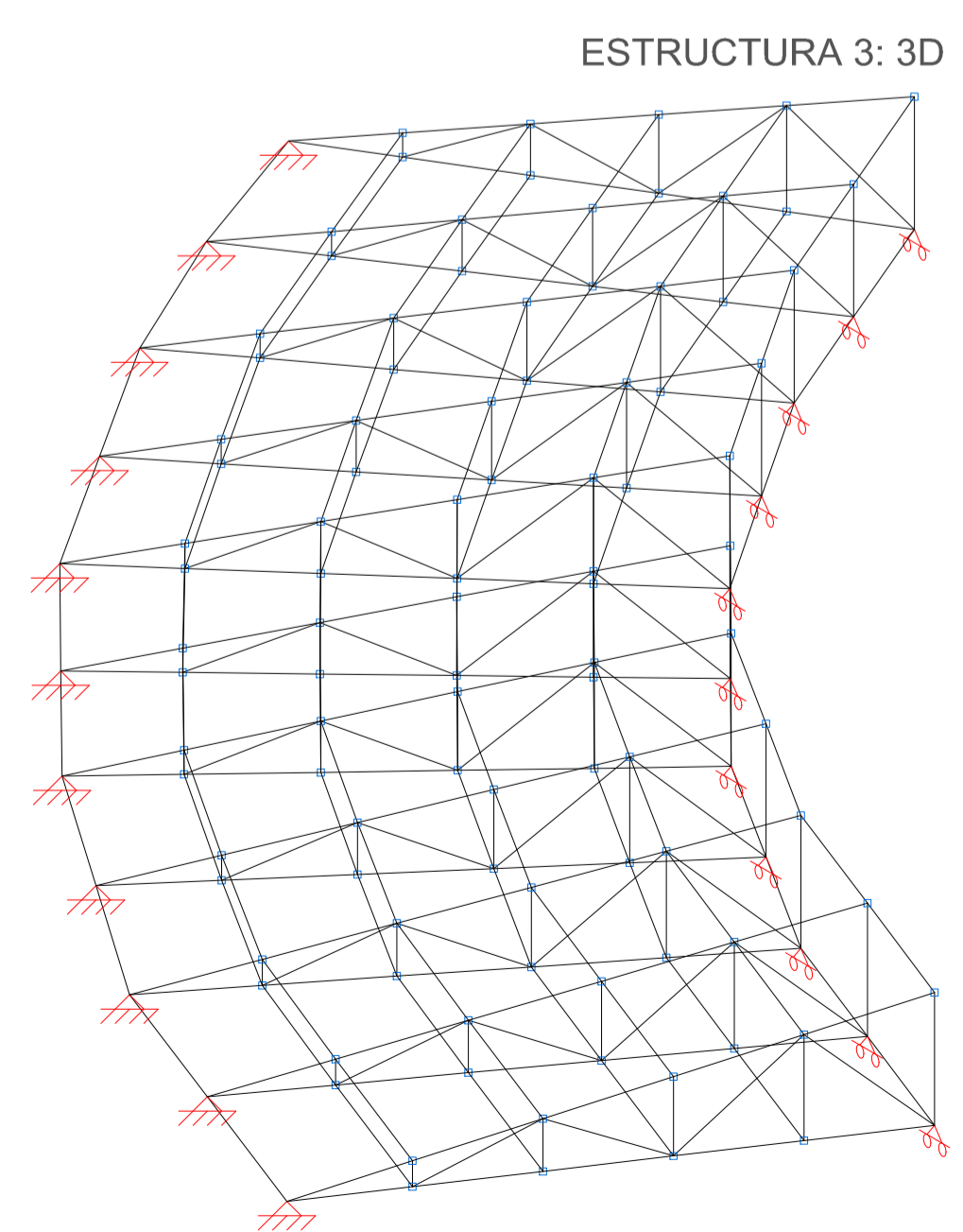
SECCIONES DE PERFILES EMPLEADAS (Esc: 1:5)

Centro integral Social y Cultural Entre Rios
Estructura 3
Norma de acero laminado: ANSI/ AISC 360-10 (LRFD)
Escala 1:75

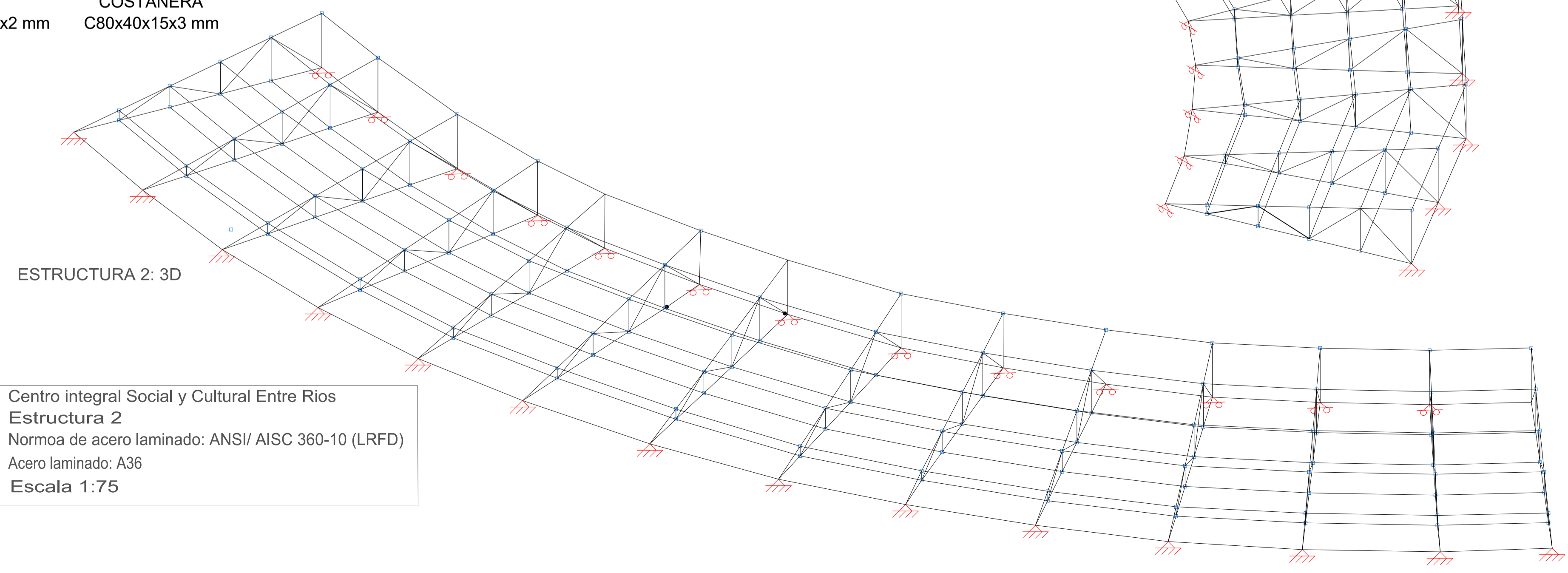


PERFIL C C120x50x15x2 mm
COSTANERA C80x40x15x3 mm

Centro integral Social y Cultural Entre Rios
Estructura 1
Norma de acero laminado: ANSI/ AISC 360-10 (LRFD)
Acero laminado: A36
Escala 1:75



ESTRUCTURA 3: 3D



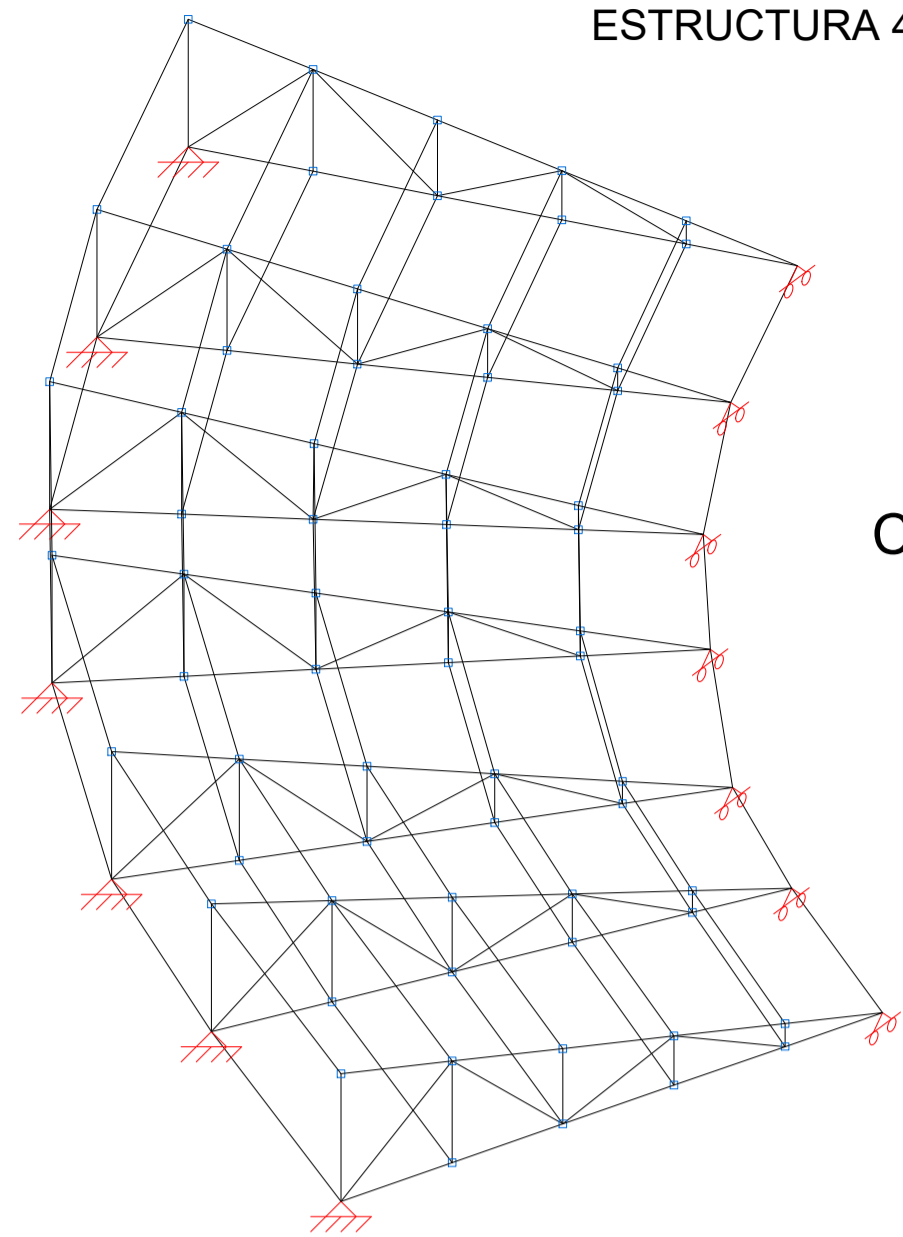
ESTRUCTURA 2: 3D

Centro integral Social y Cultural Entre Rios
Estructura 2
Norma de acero laminado: ANSI/ AISC 360-10 (LRFD)
Acero laminado: A36
Escala 1:75

Elemento	Pos.	Diám.	No.	Long. (cm)	Total (cm)	AH-500CN (kg)
Gradería 1-Tramo 1	1	Ø10	18	574	10332	63.7
	2	Ø10	18	308	5544	34.2
	3	Ø20	18	487	8766	216.2
	4	Ø20	18	423	7814	187.8
	5	Ø8	74	359	26566	104.8
Total+10%:						667.4
Ø8:						115.3
Ø10:						107.7
Ø20:						444.4
Total:						667.4

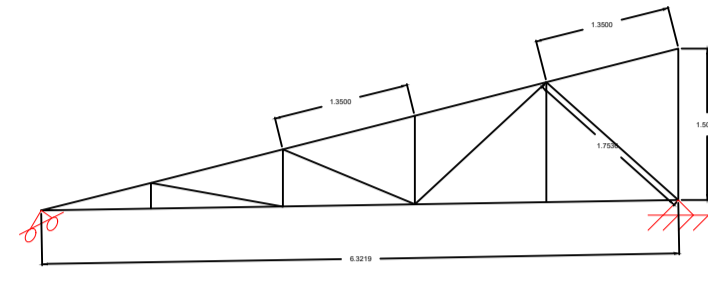
UNIVERSIDAD AUTÓNOMA "JUAN MISAEL SARACHO" FACULTAD DE CIENCIAS Y TECNOLOGÍA		
MATERIA: CIV - 502 PROYECTO ING. CIVIL II (M. ESTRUCTURAS)		
PROYECTO: DISEÑO ESTRUCTURAL CONSTRUCCIÓN CENTRO INTEGRAL SOCIAL Y CULTURAL ENTRE RÍOS		
DESCRIPCIÓN: ESCALERAS Y CUBIERTAS METÁLICAS	UNIVERSITARIO: ANDRÉS FERNÁNDEZ FIGUEROA	LÁMINA: 24
FECHA: MAYO 2023	ESCALA: INDICADA	

ESTRUCTURA 4: 3D

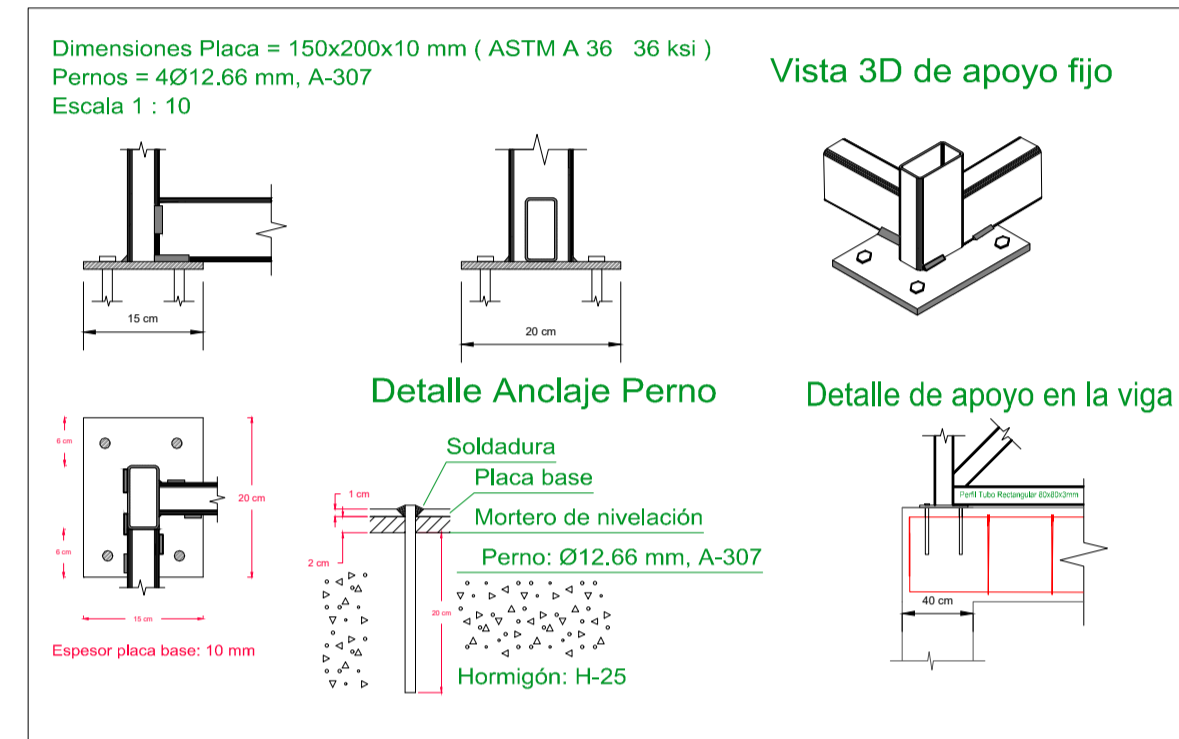


Centro Integral Social y Cultural Entre Rios
Estructura 4
Norma de acero laminado: ANSI/AISC 360-10 (LRFD)
Acero laminado: A36
Escala: 1:75

CERCHA TIPO 1

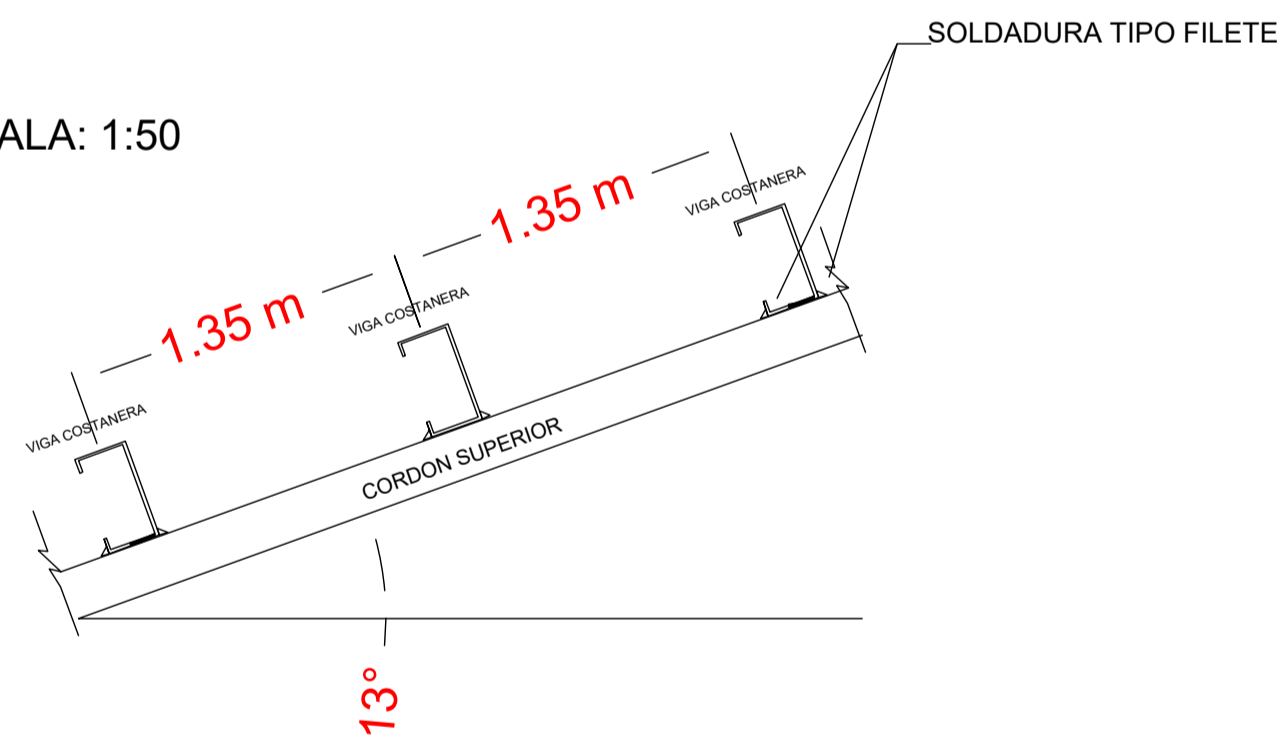


ESCALA: 1:100

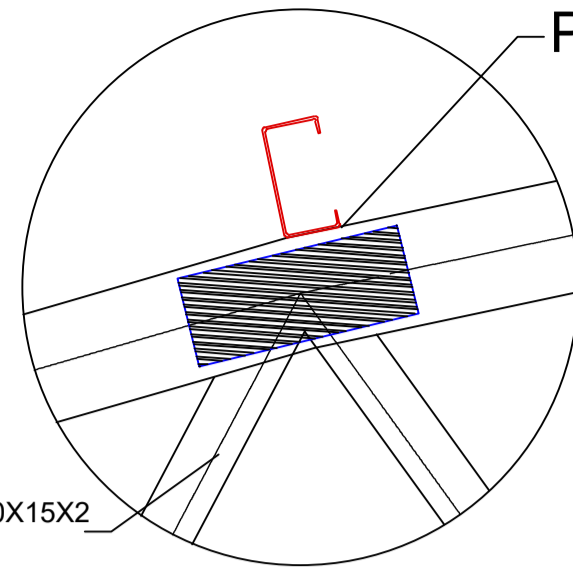


DETALLE DISPOSICION DE CORREA
COSTANERA C120x50x15x2

ESCALA: 1:50



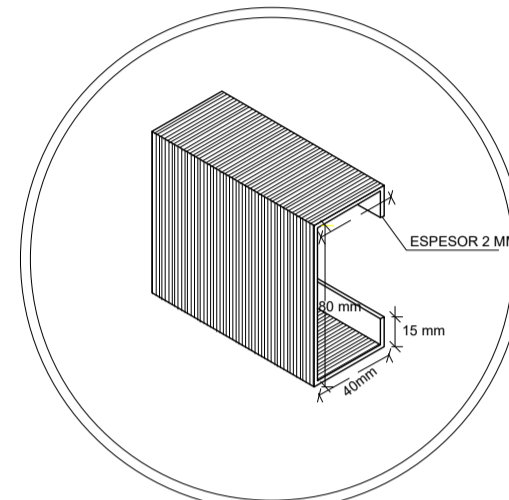
PLANCHA



COSTANERA 80X40X15X2

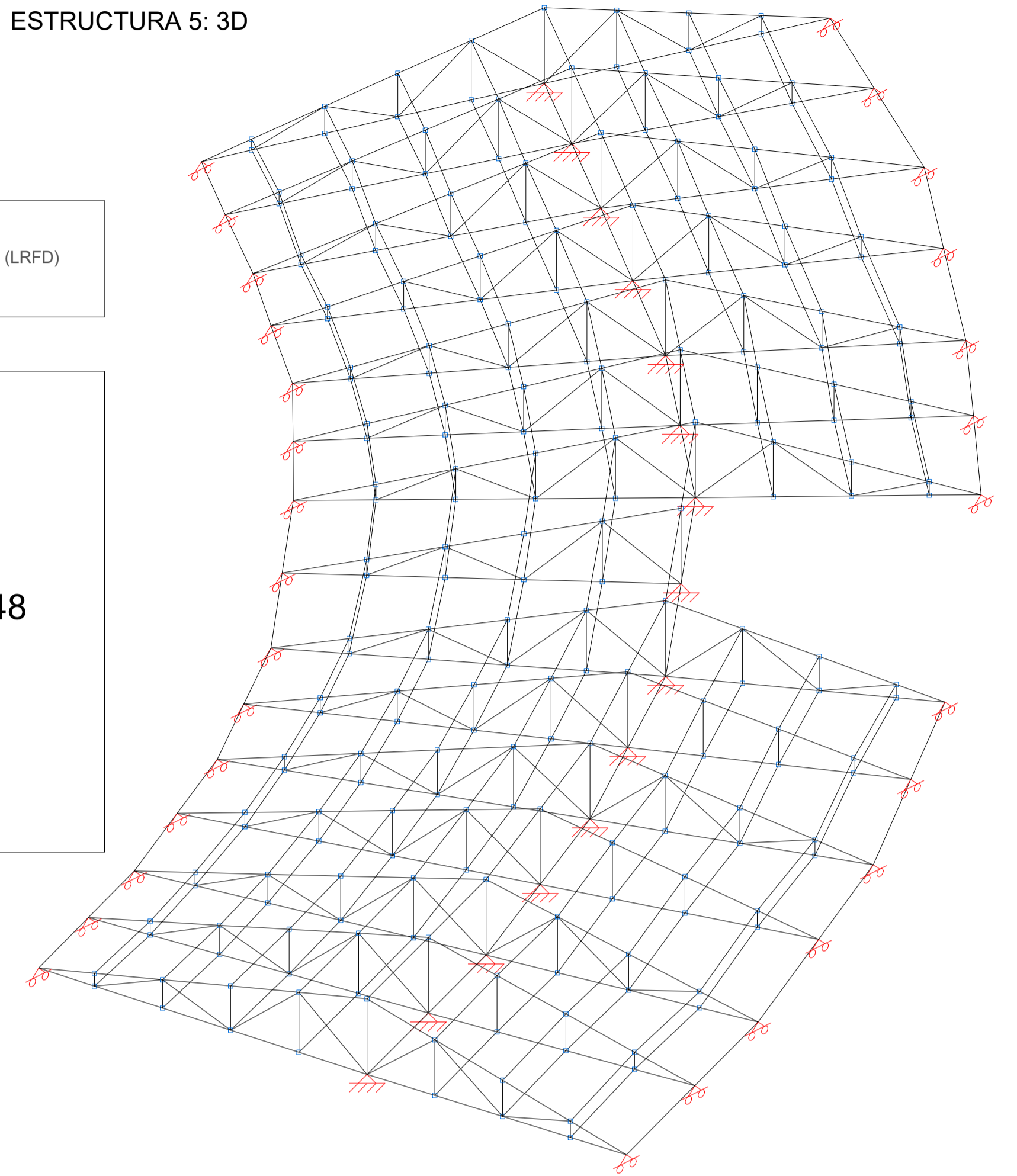
DETALLE DE UNION DE ELEMENTOS
ESC.: 1:5

ESCALA: 1:100



DETALLE PERFIL "C"
ESC.: 1:5

ESTRUCTURA 5: 3D



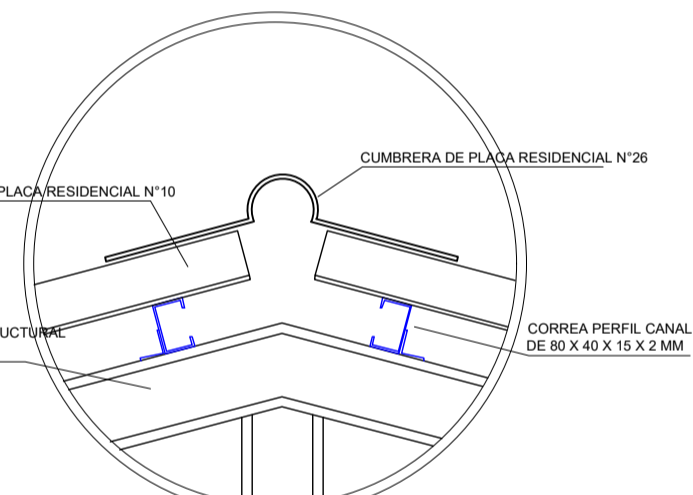
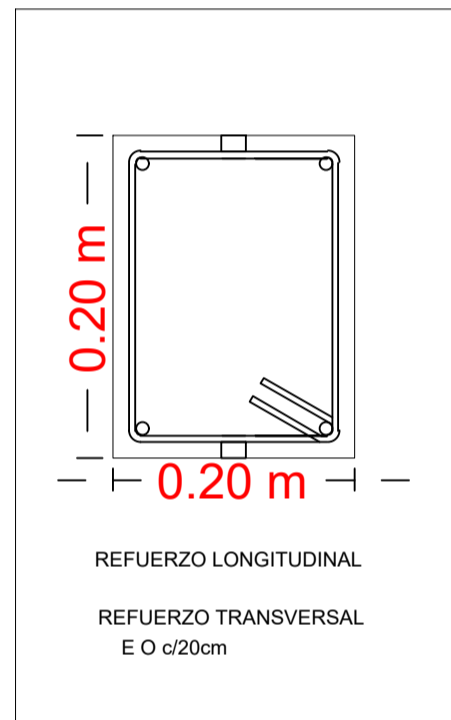
Centro Integral Social y Cultural Entre Rios
Estructura 5
Norma de acero laminado: ANSI/AISC 360-10 (LRFD)
Acero laminado: A36
Escala: 1:75

NOTA:

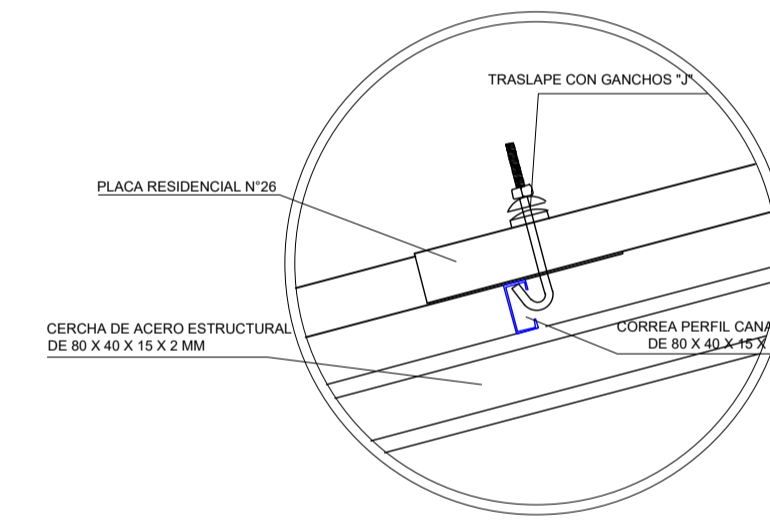
Perfiles Utilizados:
C 100x40x15x2 mm
C 120x50x15x2 mm
Limite de fluencia fy (ksi) : 36
Limite de fluencia fy (MPa) : 248
Tipo de H°A° fc(MPa) : 25

Tipo de Cubierta:
Placa Ondulada Duralit
Cumbrera Duralit

SECCION TRANSVERSAL
VIGAS DE ENCADENADO (VE20x30)
ESCALA 1:10

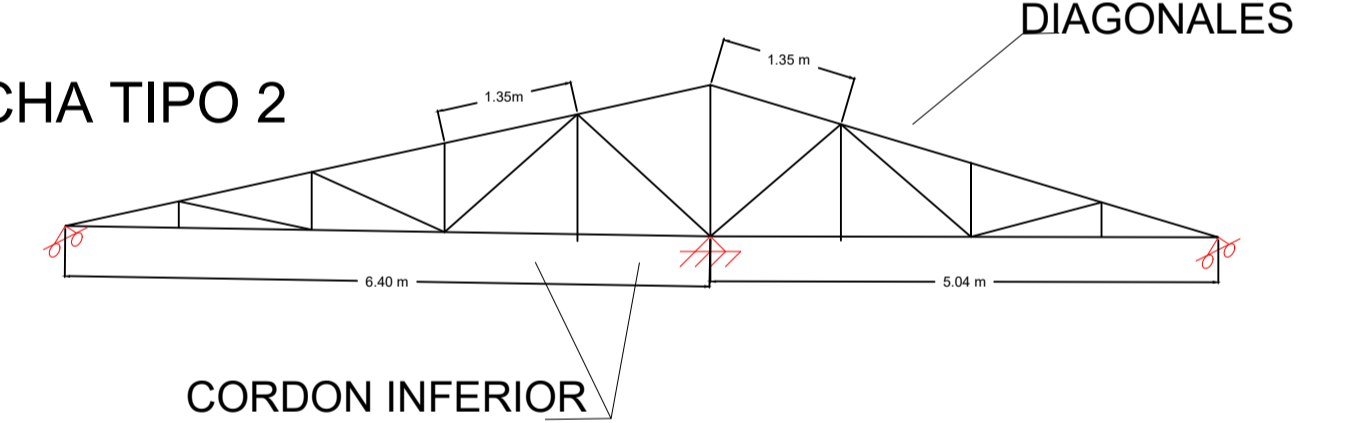


DETALLE DE CUMBRERA
ESC.: 1:5



DETALLE TRASLAPIE DE PLACA
ESC.: 1:5

CERCHA TIPO 2



APORTE ACADÉMICO CUBIERTA
ATIRANTADA PARA ESCENARIO AL
AIRE LIBRE

