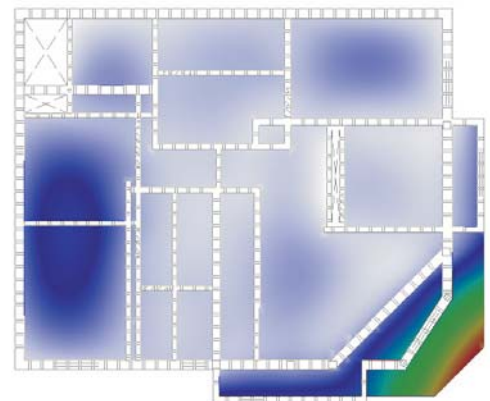
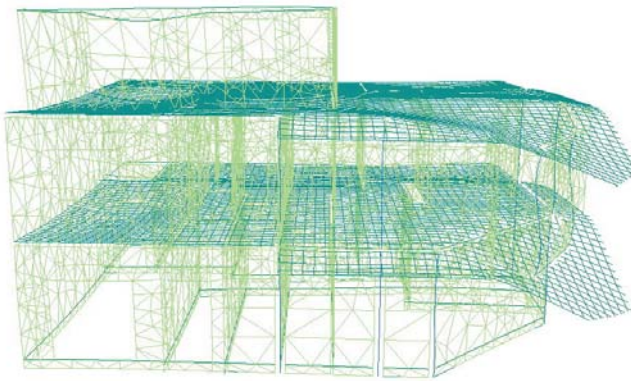
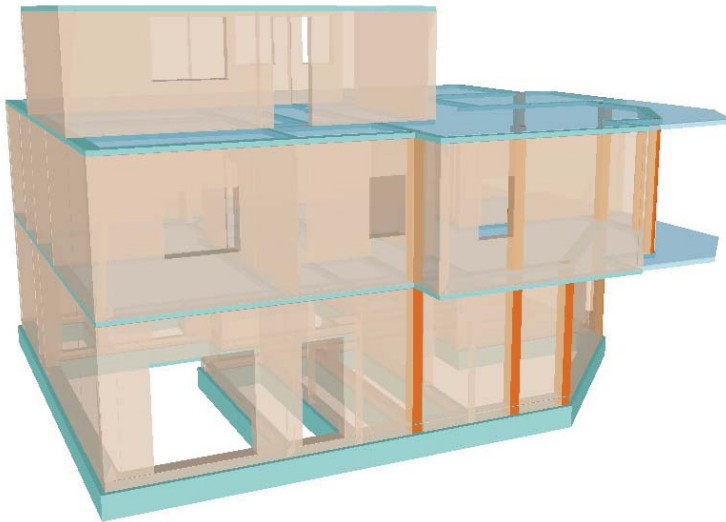


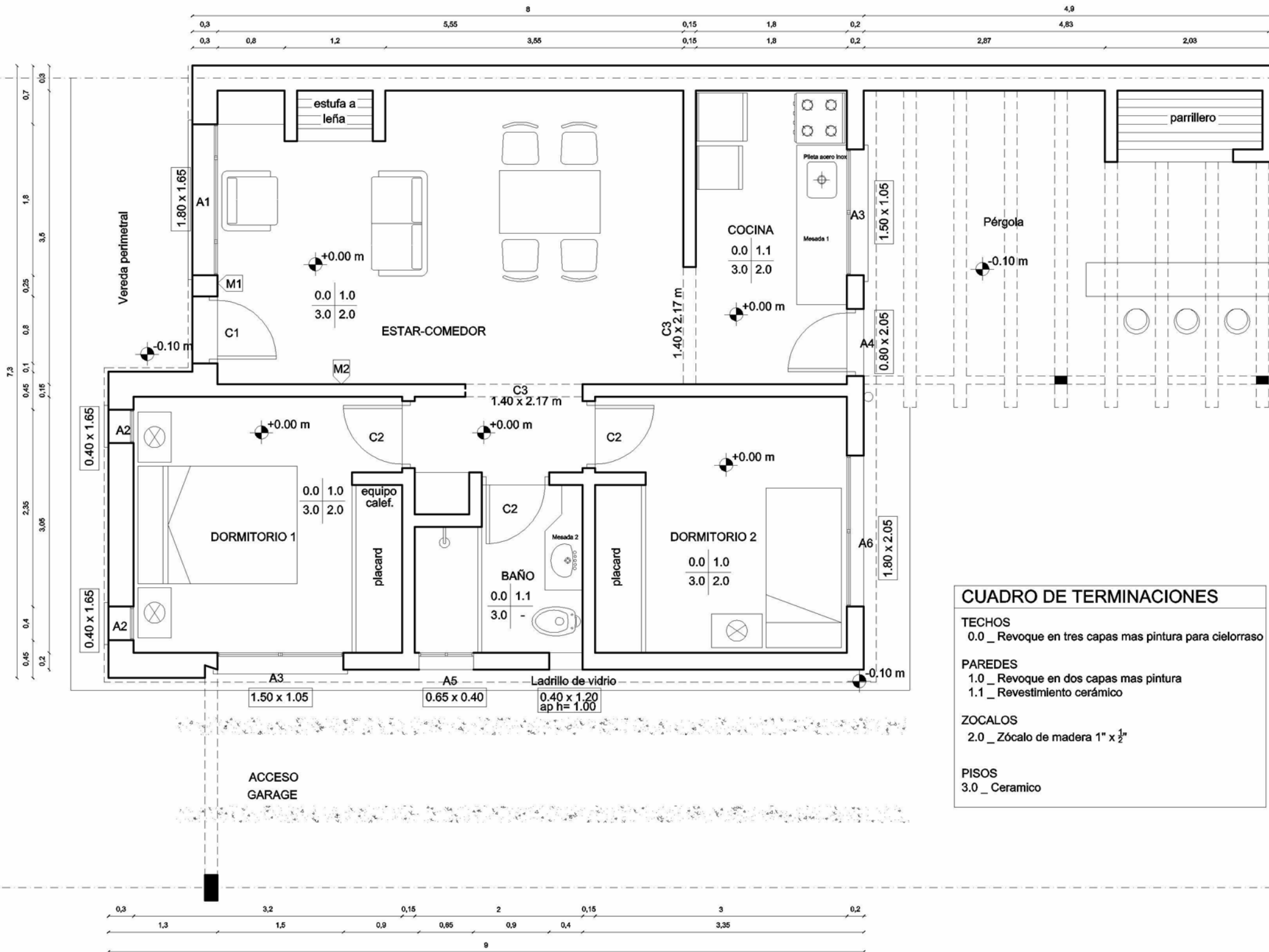
# Proyectos de ESTRUCTURAS



Los proyectos y resoluciones estructurales que componen este repartido son reales. Las soluciones no son de aplicabilidad genérica, sino que corresponden a situaciones específicas, condicionadas por el tipo de suelo y por los procedimientos constructivos planificados. Tampoco son necesariamente la solución ideal. Se publican como material de apoyo, con el fin de mostrar una solución, y formas de representación gráfica, en plantas, planillas, cortes y detalles. Es de particular interés, que el estudiante razone las soluciones adoptadas y desarrolle alternativas con diferentes tipos de suelo y/o sistemas constructivos.

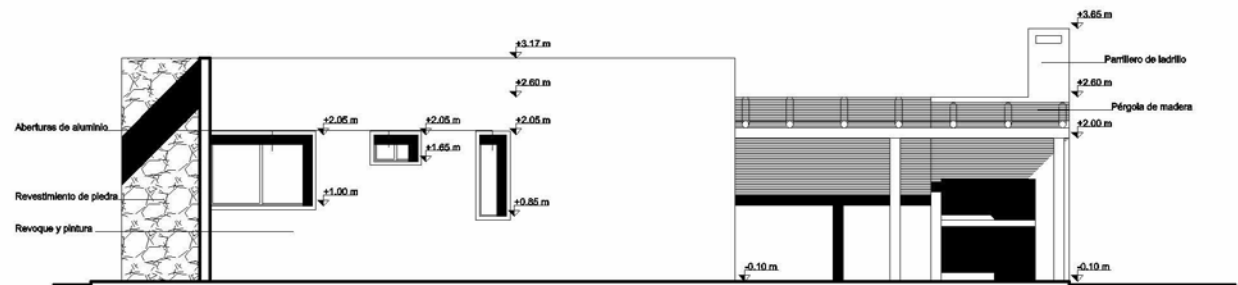
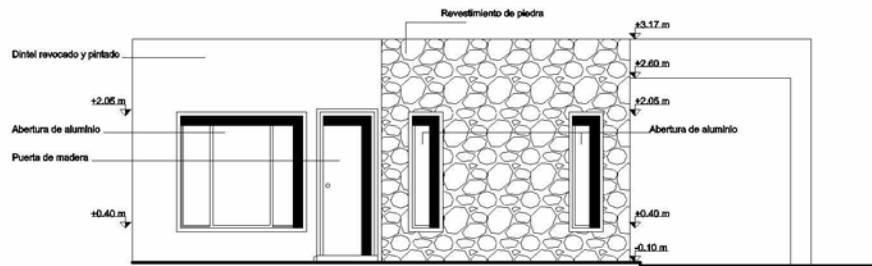
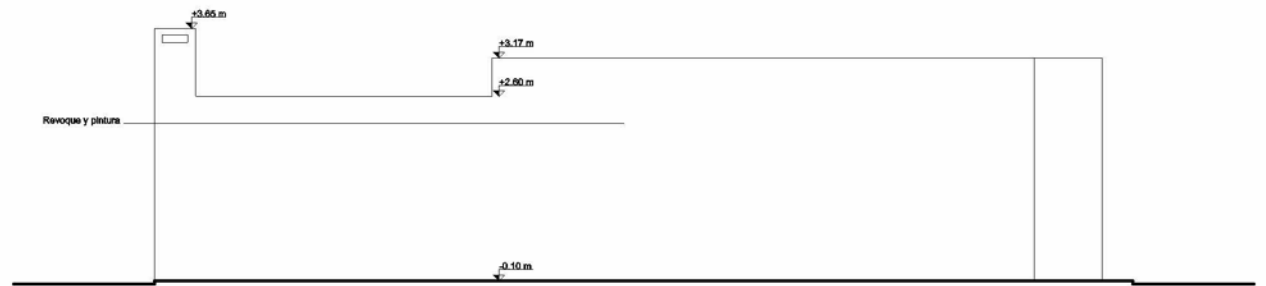
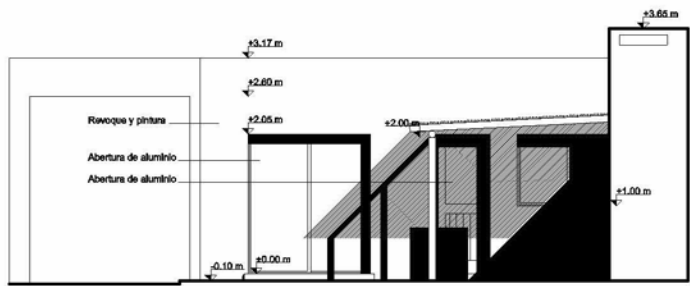
**Arq. Ramiro Chaer**

# VIVIENDA EN PLAYA VERDE



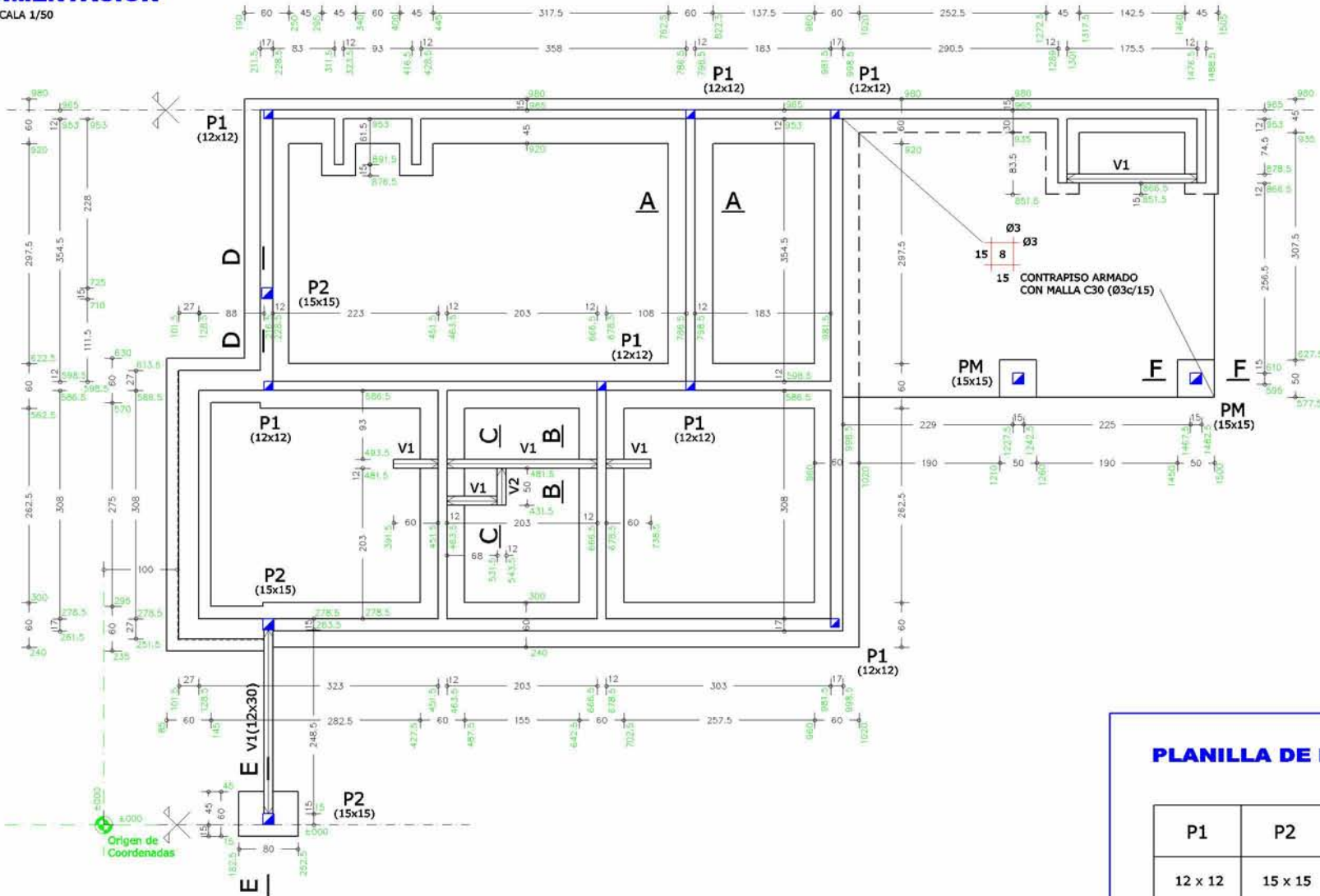
### CUADRO DE TERMINACIONES

<b>TECHOS</b>	0.0 _ Revoque en tres capas mas pintura para cielorraso
<b>PAREDES</b>	1.0 _ Revoque en dos capas mas pintura 1.1 _ Revestimiento cerámico
<b>ZOCALOS</b>	2.0 _ Zócalo de madera 1" x 1/2"
<b>PISOS</b>	3.0 _ Ceramico



# CIMENTACION

ESCALA 1/50



**IMPORTANTE:**  
SE CONSIDERO ARENA FIRME, tensión admisible  $\geq 2 \text{ daN/cm}^2$ .  
LO QUE DEBERA SER VERIFICADO POR LA DIRECCION DE OBRA.

### PLANILLA DE PILARES

P1	P2	PM
12 x 12	15 x 15	15 x 15
4 Ø 8	4 Ø 10	MADERA DURA

NOTACION DE PILARES

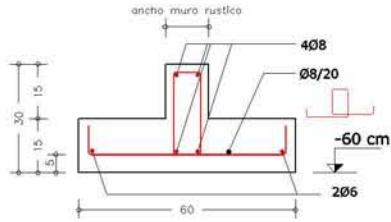
- PILAR QUE NACE
- PILAR QUE TERMINA

ESTRIBADO GENERAL DE PILARES Ø6/15

ARMADURA DE PILARES NACE EN CIMIENTO CORRIDO (VER DETALLE) Y SE ANCLA EN PRETIL.

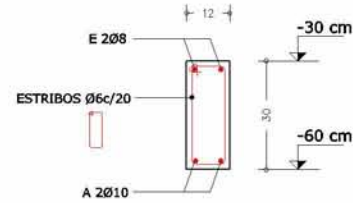
### CORTE A-A DETALLE CIMENTACION CORRIDA

ESCALA 1/12.5



### CORTE B-B DETALLE V1

ESCALA 1/12.5



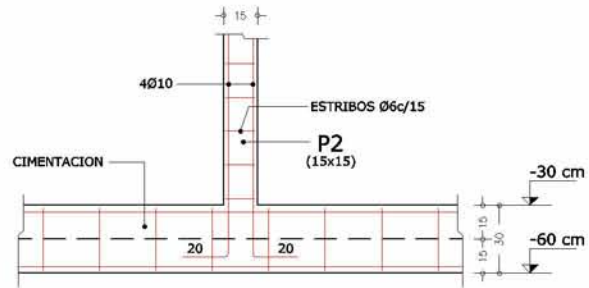
### CORTE C-C DETALLE V2

ESCALA 1/12.5



### CORTE D-D DETALLE NACIMIENTO DE PILARES EN CIMENTACION CORRIDA

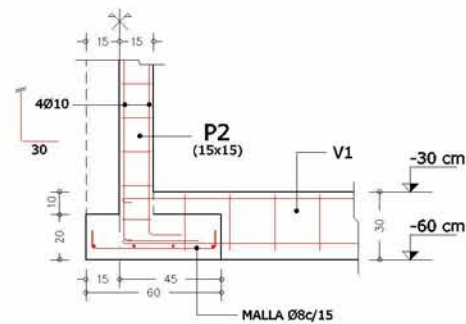
ESCALA 1/20



LA ARMADURA DE LOS PILARES NACE DENTRO DE LA CIMENTACION CORRIDA

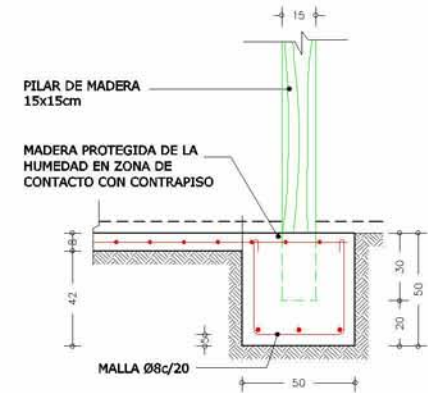
### CORTE E-E DETALLE BASE PILAR EN MEDIANERA

ESCALA 1/20



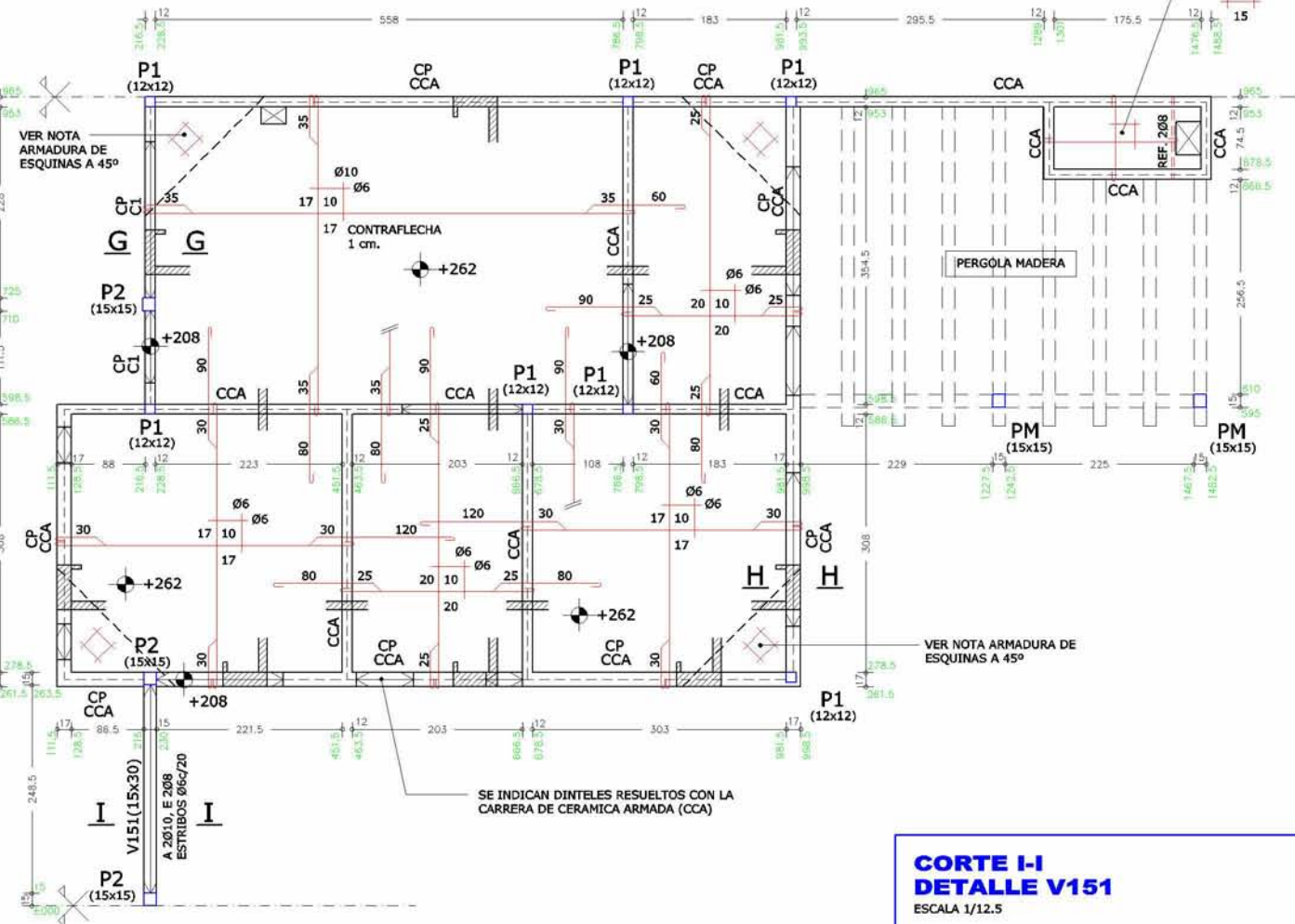
### CORTE F-F DETALLE BASE PILARES DE MADERA

ESCALA 1/20



# ESTRUCTURA SOBRE PLANTA BAJA

ESCALA 1/50

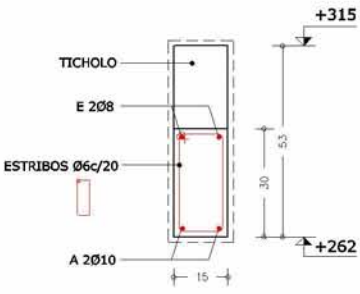


## NOTA ARMADURA DE ESQUINAS A 45°



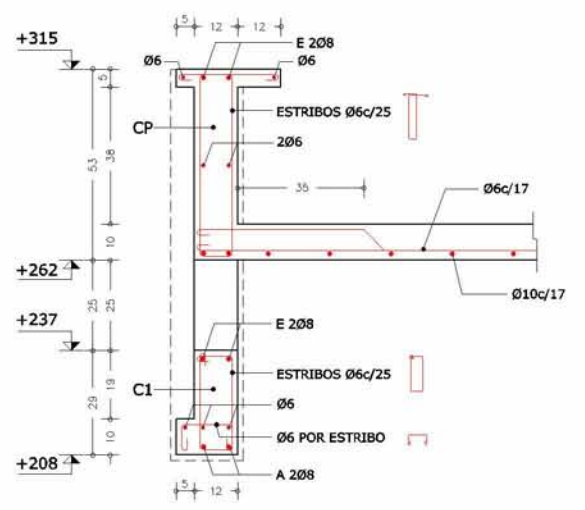
## CORTE I-I DETALLE V151

ESCALA 1/12.5



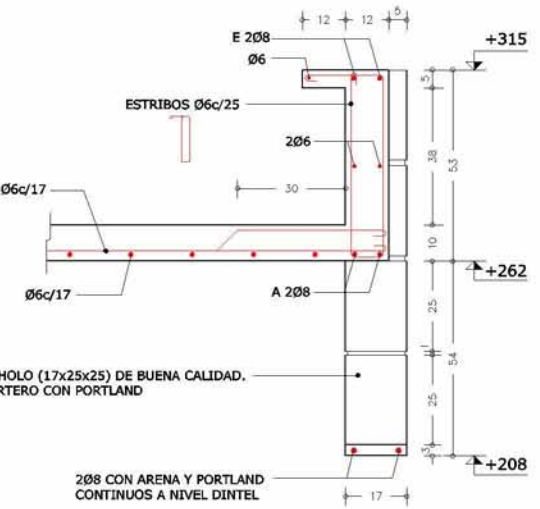
## CORTE G-G DETALLE CARRERA PRETIL (CP) Y CARRERA (C1)

ESCALA 1/12.5



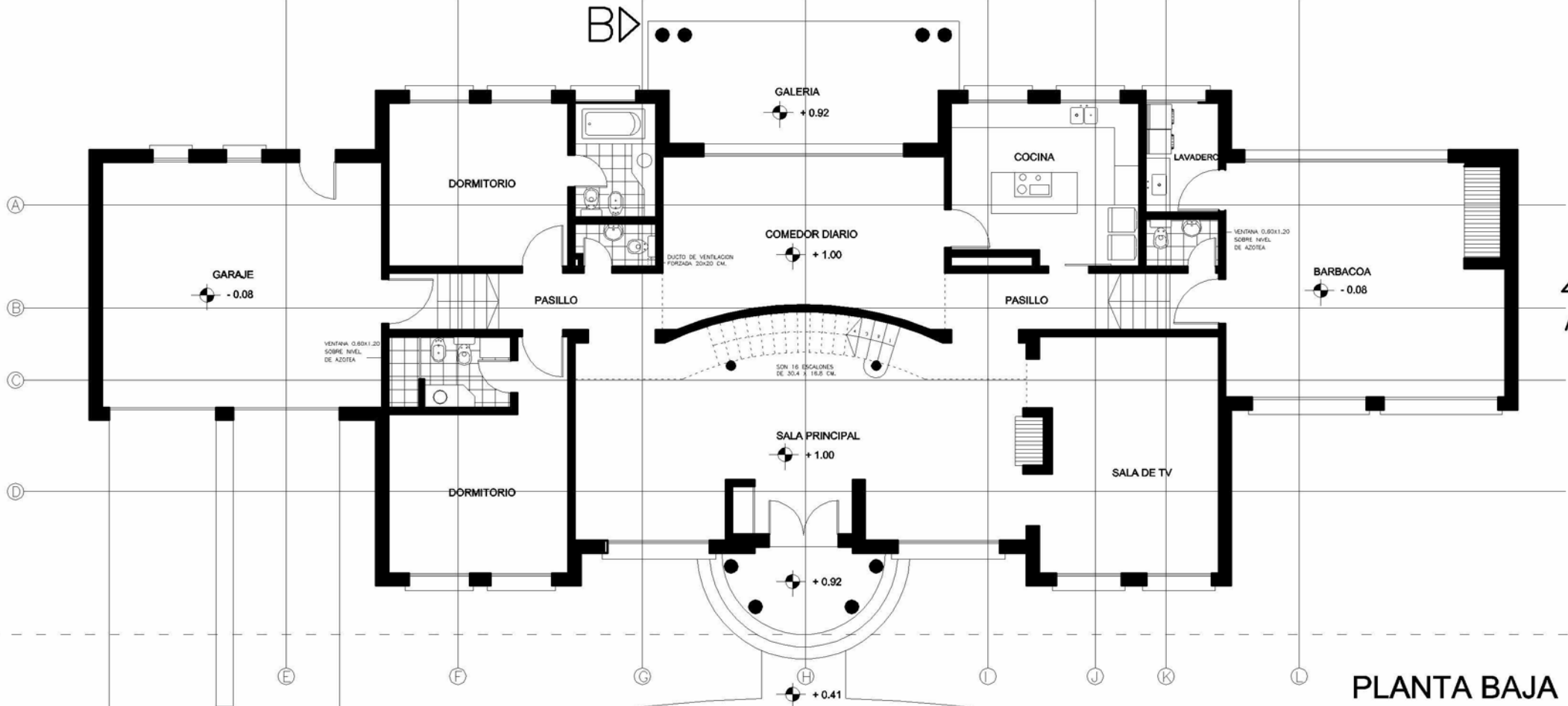
## CORTE H-H DETALLE CARRERA PRETIL (CP) Y CARRERA CERAMICA ARMADA (CCA)

ESCALA 1/12.5

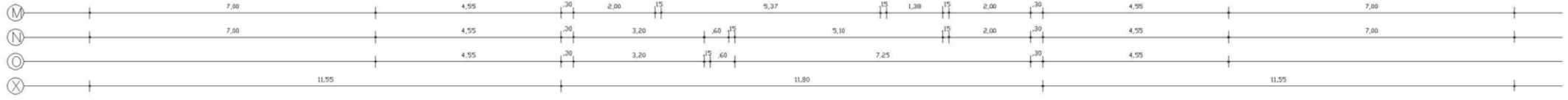


VIVIENDA EN PUNTA DEL ESTE



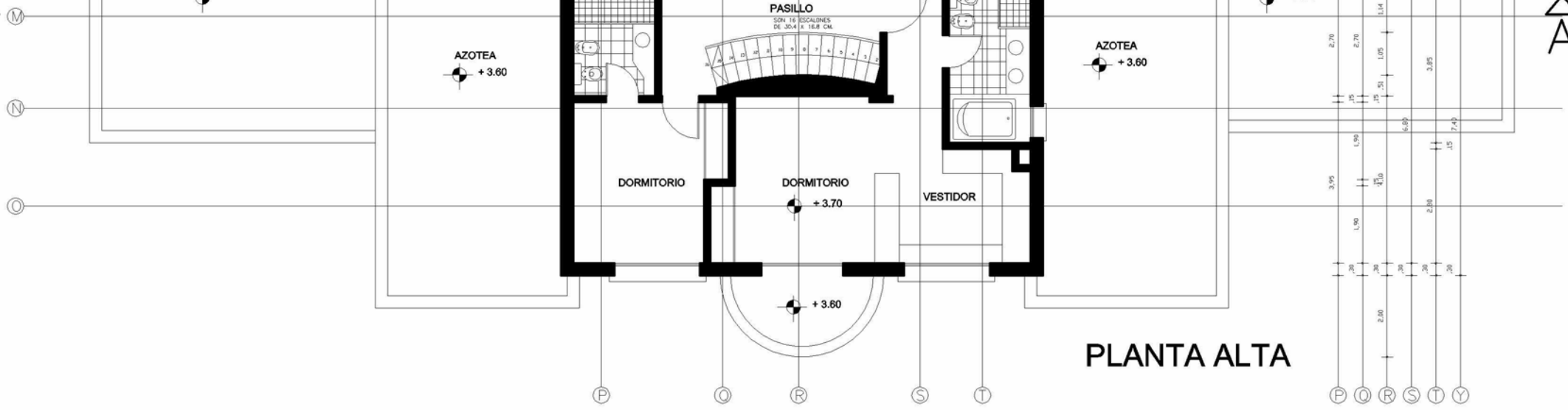


PLANTA BAJA



B▷

▲  
A



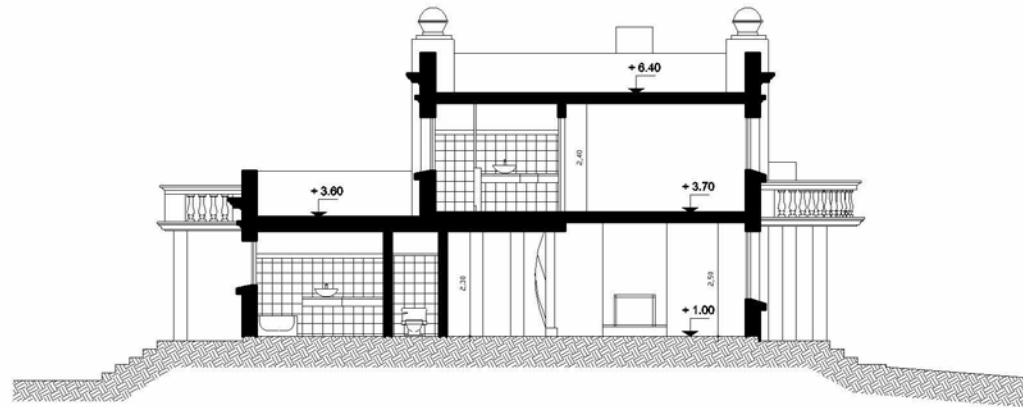
▲  
A

PLANTA ALTA

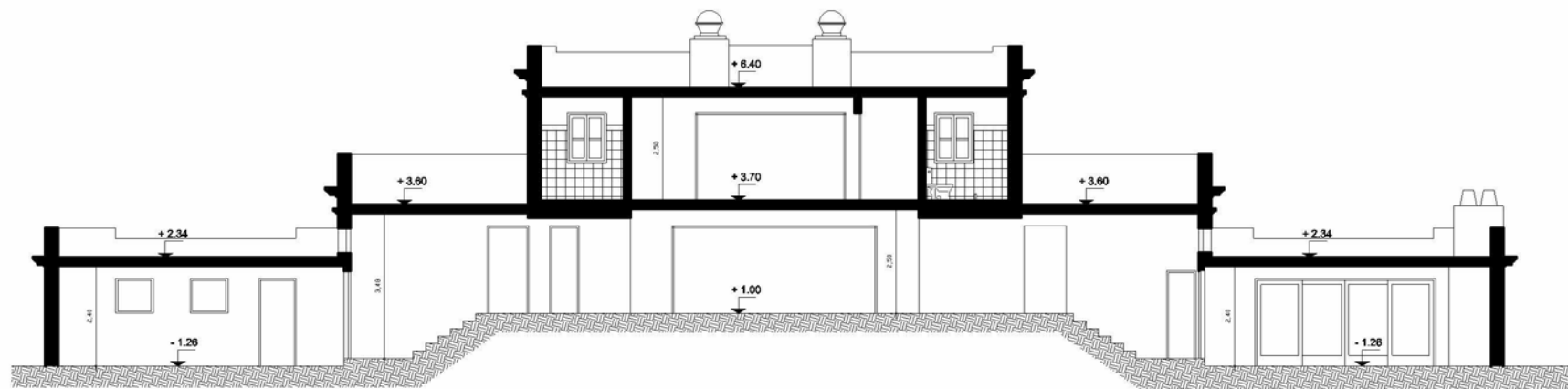
B▷



FACHADA CHIOSSI

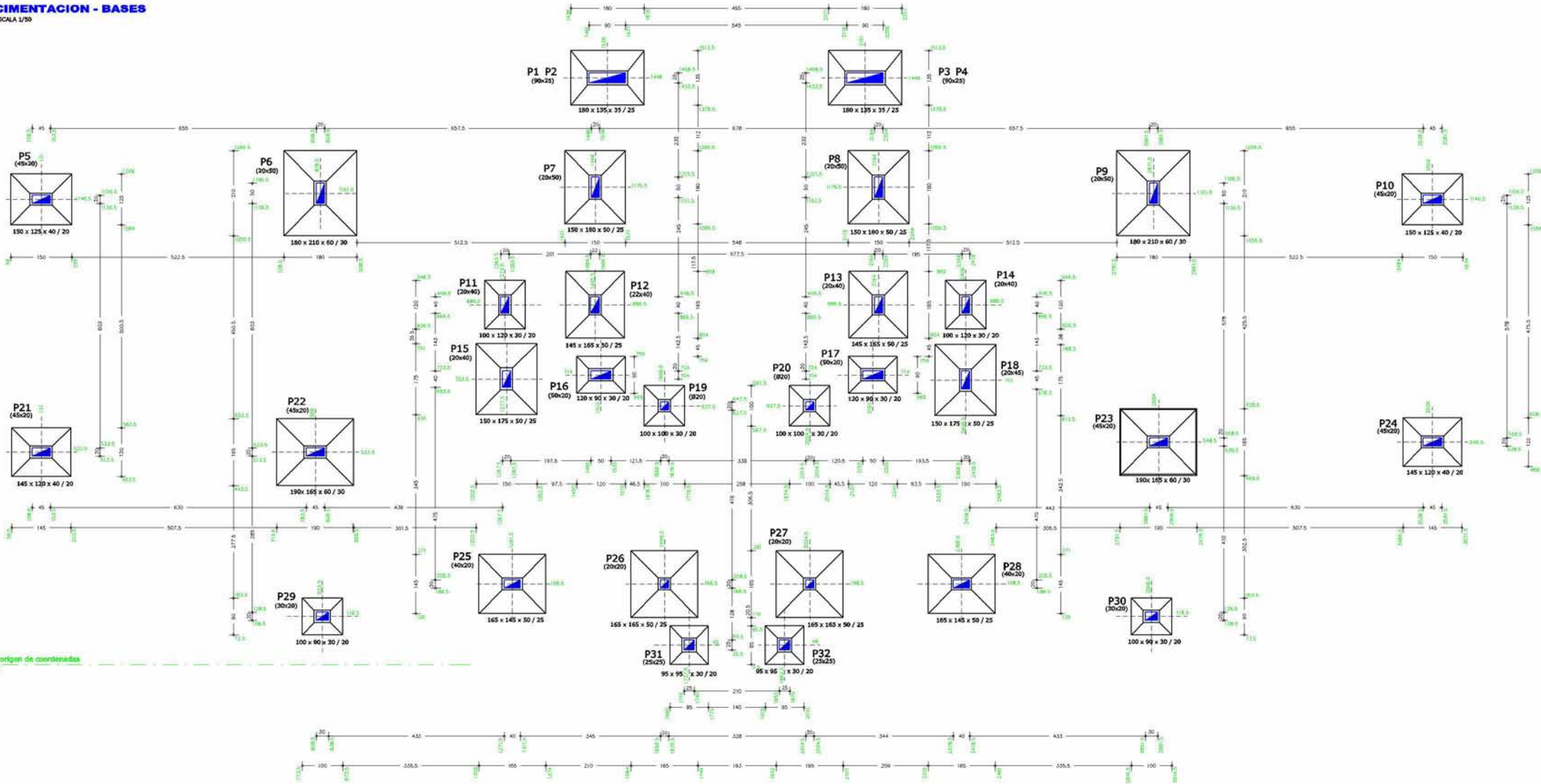


CORTE BB



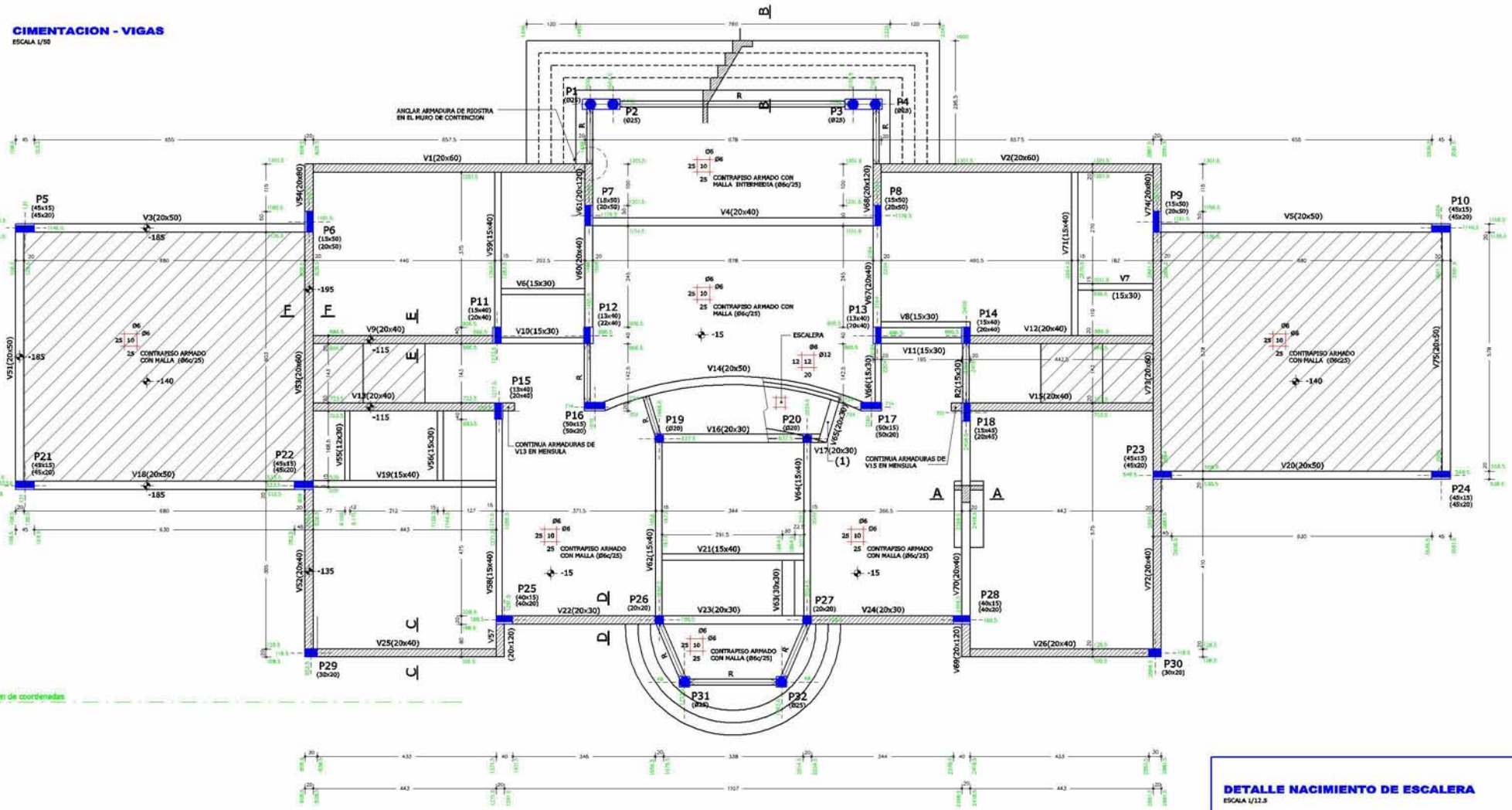
CORTE AA

**CIMENTACION - BASES**  
ESCALA 1/50

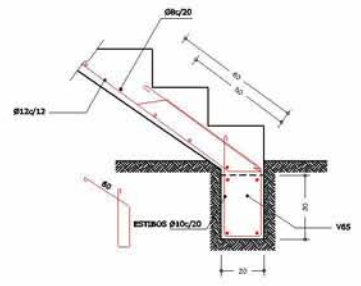


Origen de coordenadas

**CIMENTACION - VIGAS**  
ESCALA 1/50



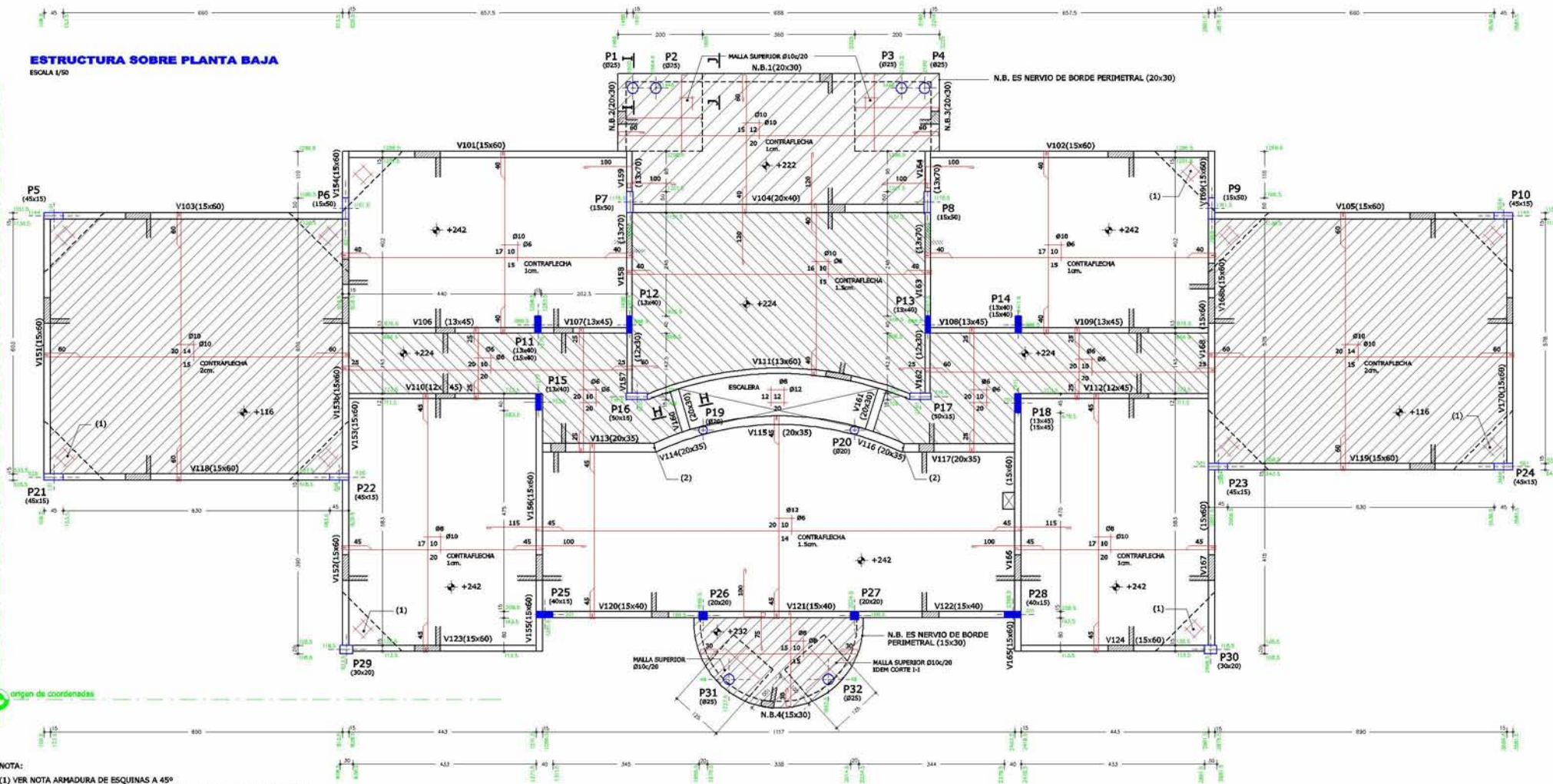
**DETALLE NACIMIENTO DE ESCALERA**  
ESCALA 1/12.5



NOTAS:  
(1) PREVER ARMADURA DE ESCALERA NACIMIENTO EN VIGAS  
VER DETALLE NACIMIENTO DE ESCALERA

# ESTRUCTURA SOBRE PLANTA BAJA

ESCALA 1/50

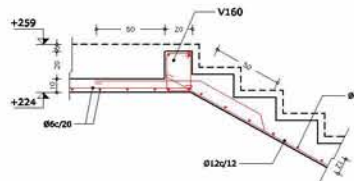


NOTA:

- (1) VER NOTA ARMADURA DE ESQUINAS A 45°
- (2) VERIFICAR EL PERFECTO APOYO DE V113 Y V117 SOBRE EXTREMO DE MENSULA

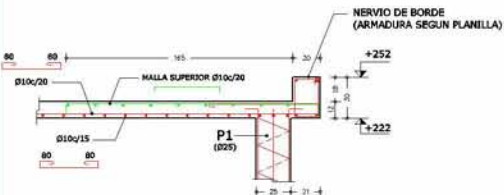
## CORTE H-H DETALLE V160

ESCALA 1/20



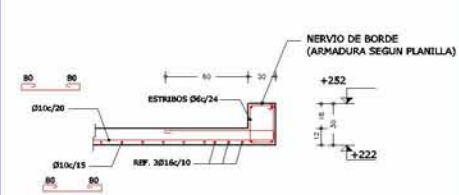
## CORTE I-I

ESCALA 1/20



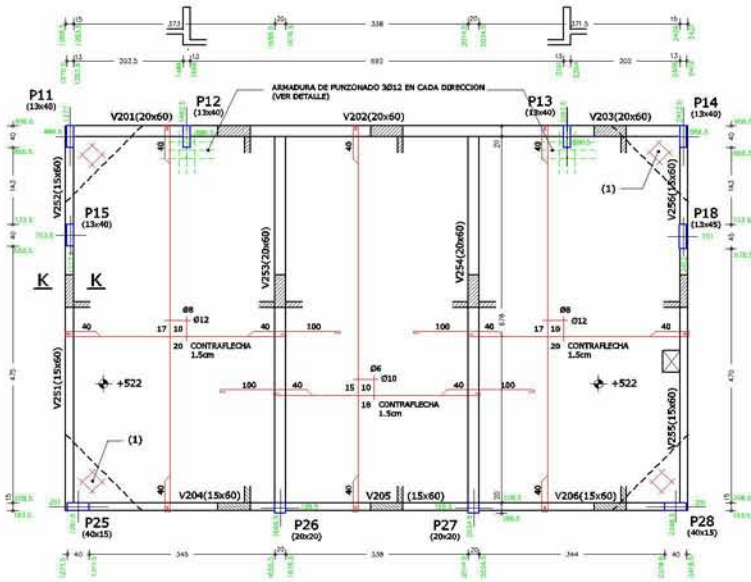
## CORTE J-J

ESCALA 1/20



# ESTRUCTURA SOBRE PLANTA ALTA

ESCALA 1/50

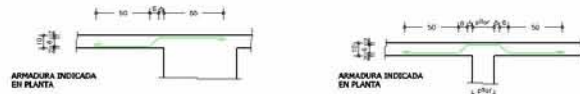


NOTA:

(1) VER NOTA ARMADURA DE ESQUINAS A 45°

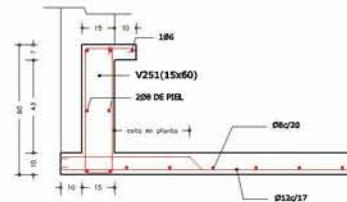
## DETALLE ARMADURA DE PUNZONADO

ESCALA 1/20



## CORTE K-K

ESCALA 1/12.5

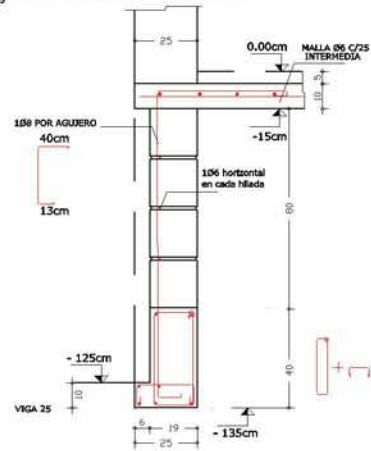


## NOTA ARMADURA DE ESQUINAS A 45°



**CORTE C-C  
DETALLE MURO CONTENCIÓN**

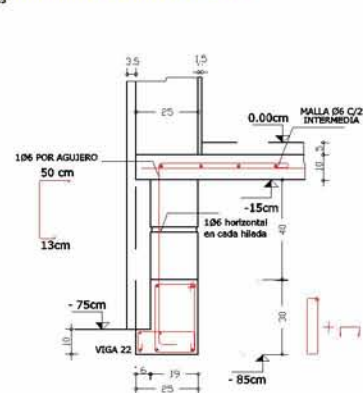
ESCALA 1/12.5



NOTA: SOBRE FACHADA POSTERIOR  
LA VIGA (V001 Y V002)  
ES DE 60 cm Y TRES HILADAS DE  
BLOQUE

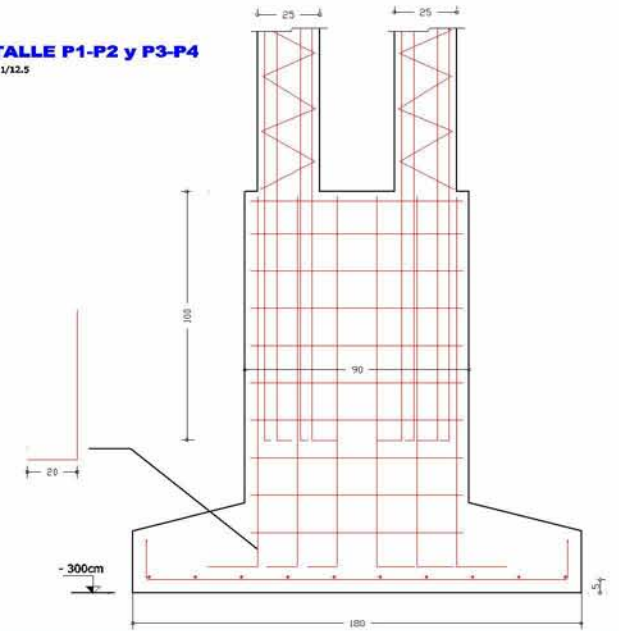
**CORTE D-D  
DETALLE MURO CONTENCIÓN**

ESCALA 1/12.5



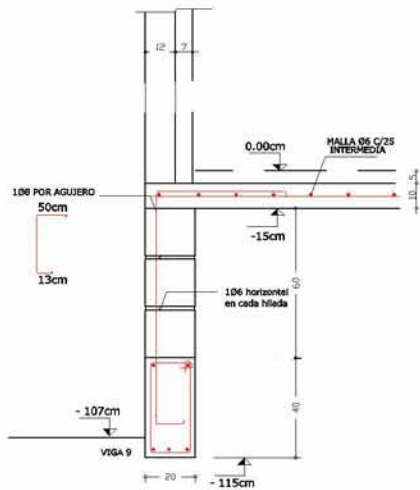
**DETALLE P1-P2 y P3-P4**

ESCALA 1/12.5



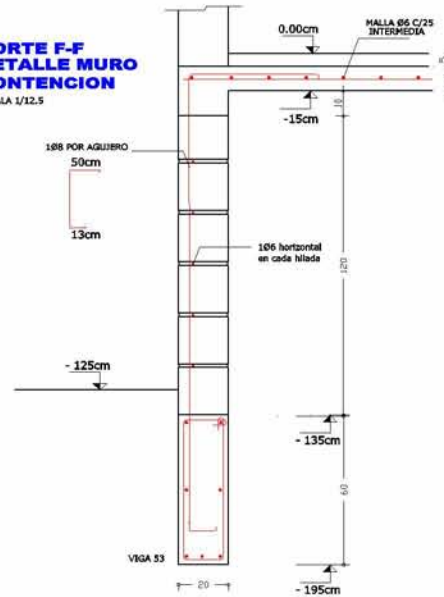
**CORTE E-E  
DETALLE MURO  
CONTENCIÓN**

ESCALA 1/12.5



**CORTE F-F  
DETALLE MURO  
CONTENCIÓN**

ESCALA 1/12.5



NIVEL DE FUNDACION: 1.5m POR DEBAJO DEL NIVEL  
EXTERIOR. SE COMPROBÓ LA  
EXISTENCIA DE TERRENO  
ARENA FIRME T adm 2 Kg/cm<sup>2</sup>





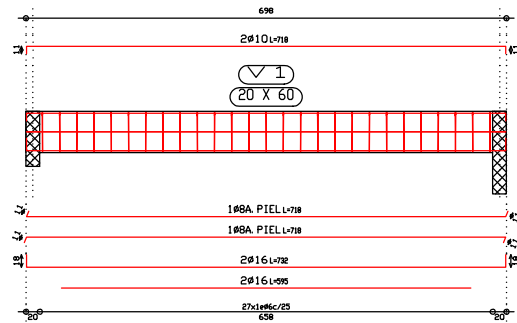
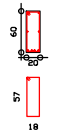
**PLANILLA DE PILARES**

	P1=P4	P2=P3	P5	P6=P7 P8=P9	P10=P21 P24	P11 P14	P12=P13	P15	P16	P17	P18	P19 P20	P22=P23	P25=P28	P26 P27	P29=P30	P31=P32
sobre P. Alta																	
<b>PLANTA ALTA</b>																	
sobre P. Baja						25ø6c/13 26ø6c/13	22ø6c/13 22ø6c/13	22ø6c/13 22ø6c/13			22ø6c/13 22ø6c/13			20ø6c/15 20ø6c/15	23ø6c/15		
<b>PLANTA BAJA</b>																	
sobre garage																	
<b>PLANTA BAJA</b>	Estribo HELICOIDE ø6c/15	Estribo HELICOIDE ø6c/15	14ø6c/15 14ø6c/15	25ø6c/15 23ø6c/15	14ø6c/15 14ø6c/15	20ø6c/15 20ø6c/15	16ø6c/13 16ø6c/13	16ø6c/13 16ø6c/13	11ø6c/15 11ø6c/15	11ø6c/15 11ø6c/15	14ø6c/15 14ø6c/15	Estribo HELICOIDE ø6c/15	11ø6c/15 6ø12	14ø6c/15 14ø6c/15	11ø6c/15	23ø6c/15	23ø6c/12
vigas ciment PB																	
<b>Cimentacion</b>	LA ARMADURA DE PILARES CIRCULARES SE ANCLA 100 cm EN PILAR DE CIMENTACION (VER DETALLE)																
Cimentación			2x11ø6c/15	2x22ø6c/15	2x11ø6c/15	21ø6c/15 21ø6c/15	12ø6c/15 12ø6c/15	12ø6c/15 12ø6c/15	2x12ø6c/15	2x21ø6c/15	8ø12 2x11ø6c/15	4ø16 8ø6c/20	2x11ø6c/15	12ø6c/15 12ø6c/15	10ø6c/20	8ø6c/20	11ø6c/15

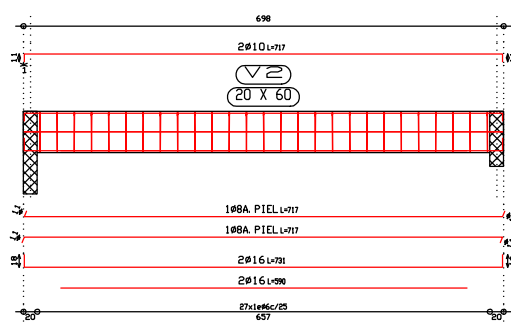
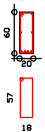
**NOTACION DE PILARES**

- PILAR QUE NACE
- PILAR QUE CONTINUA
- PILAR QUE TERMINA

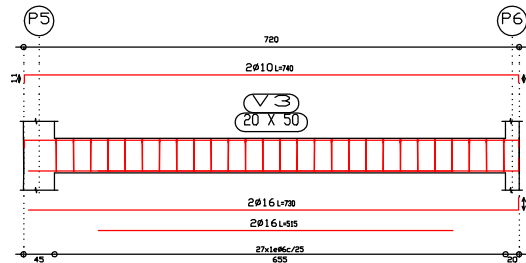
V 1



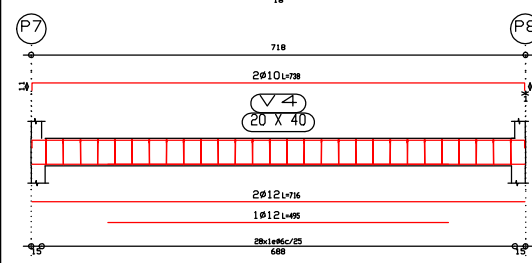
V 2



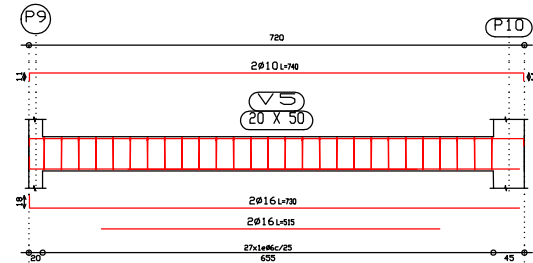
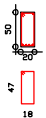
V 3



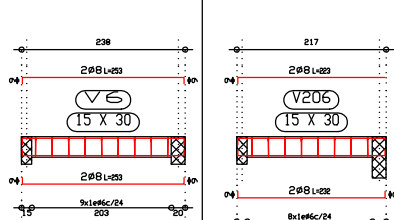
V 4



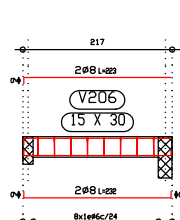
V 5



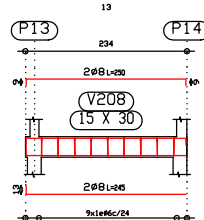
V 6



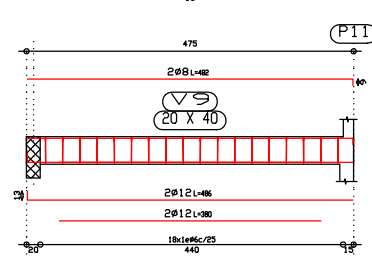
V 7



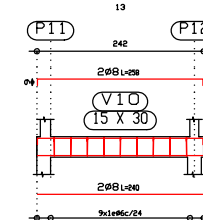
V 8



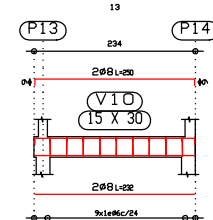
V 9

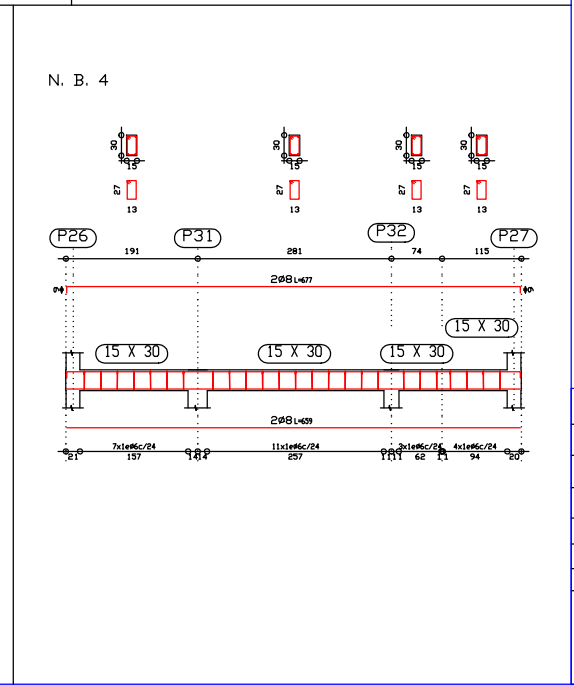
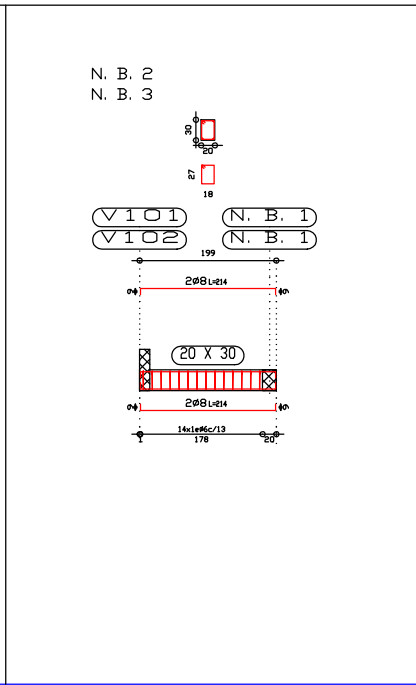
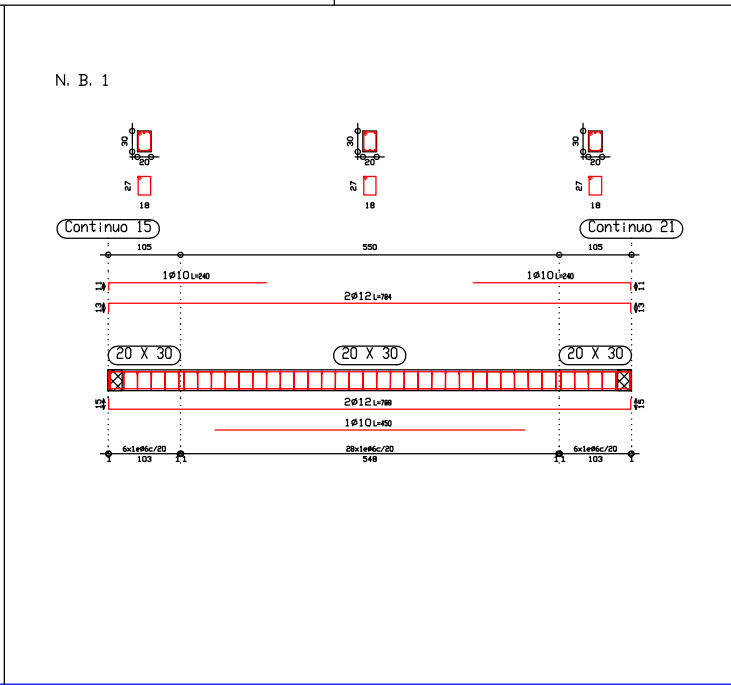
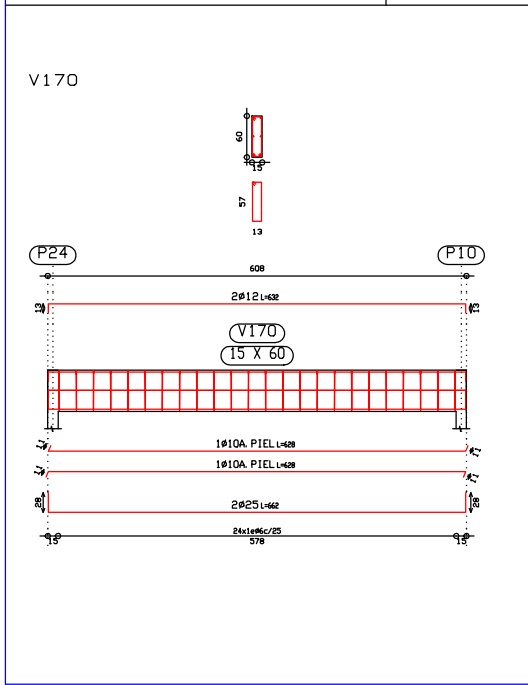
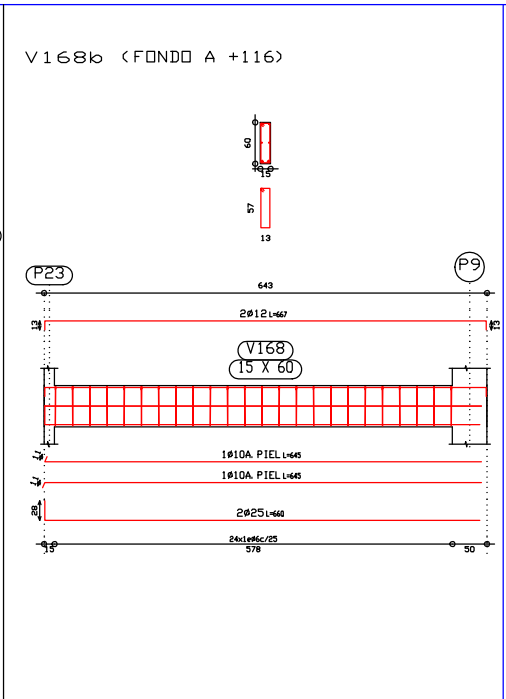
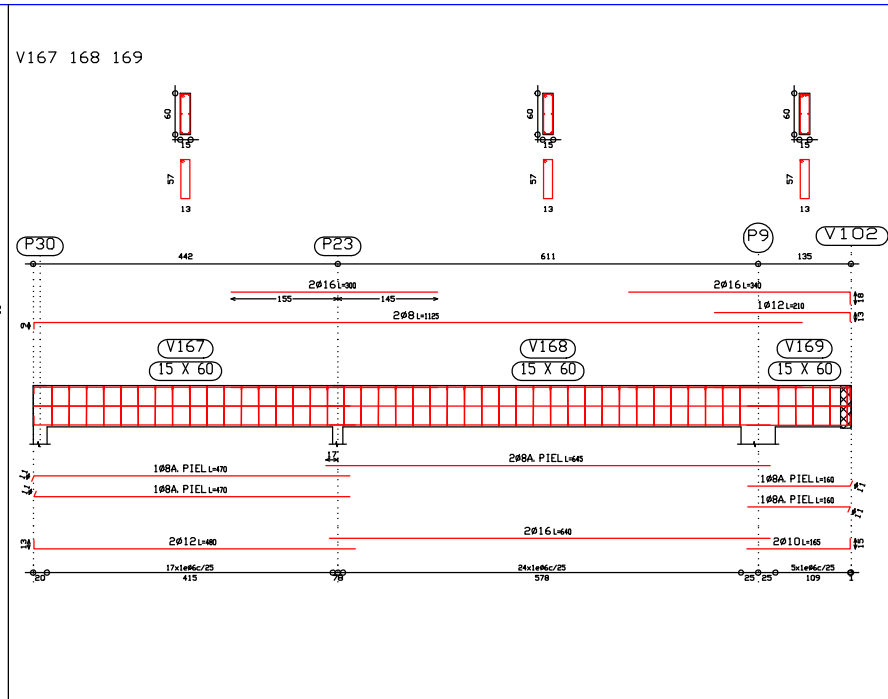
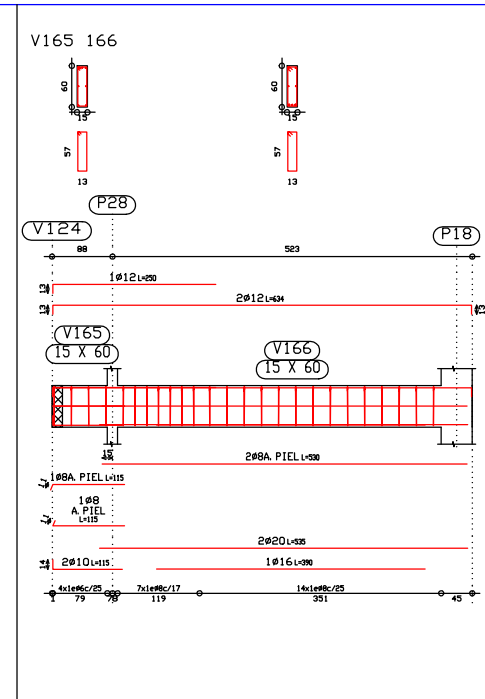
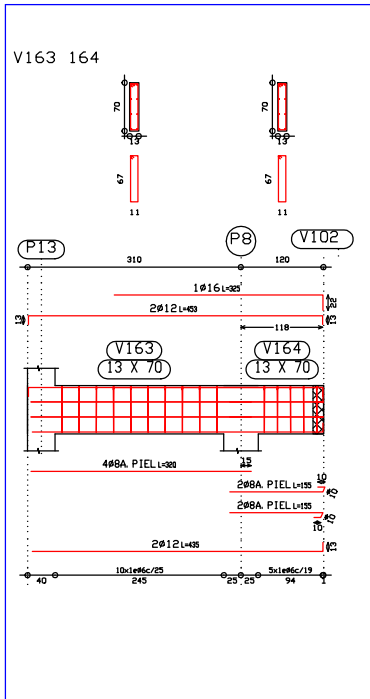


V 10

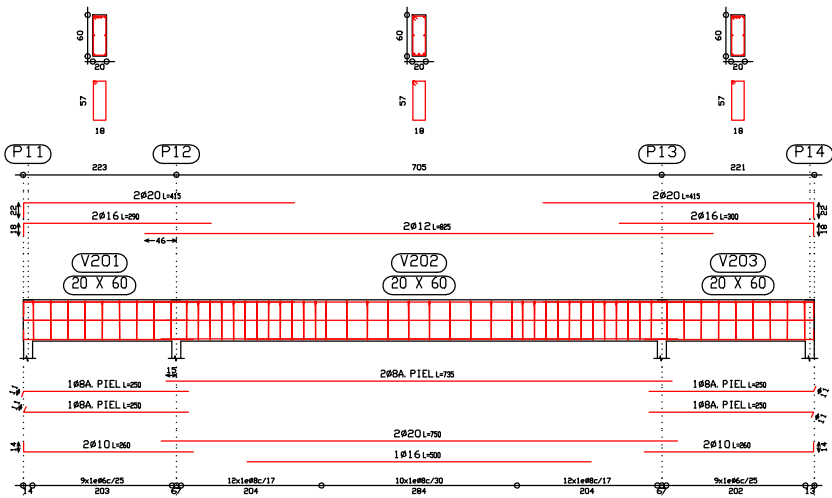


V 11

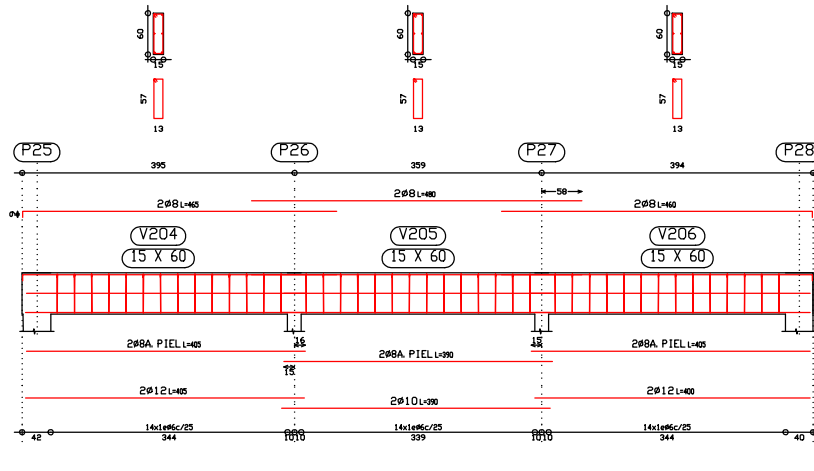




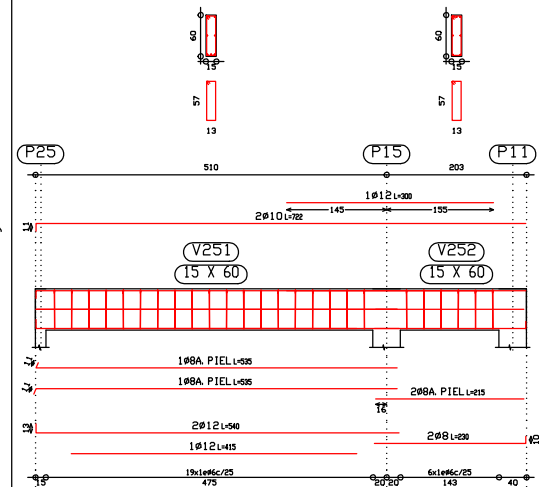
V201 202 203



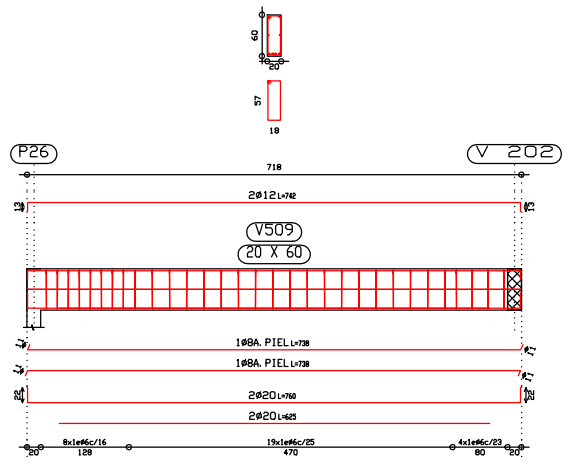
V 204 205 206



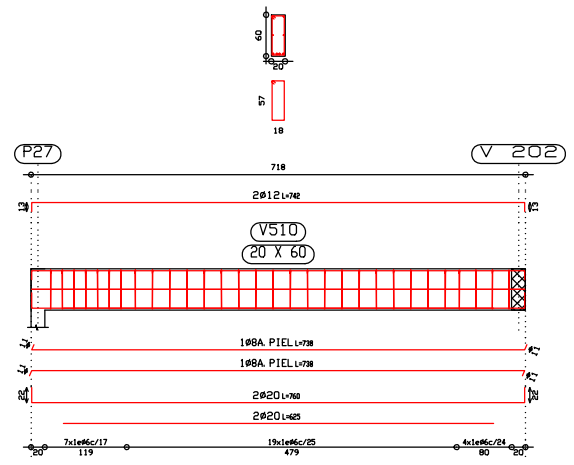
V 251 252



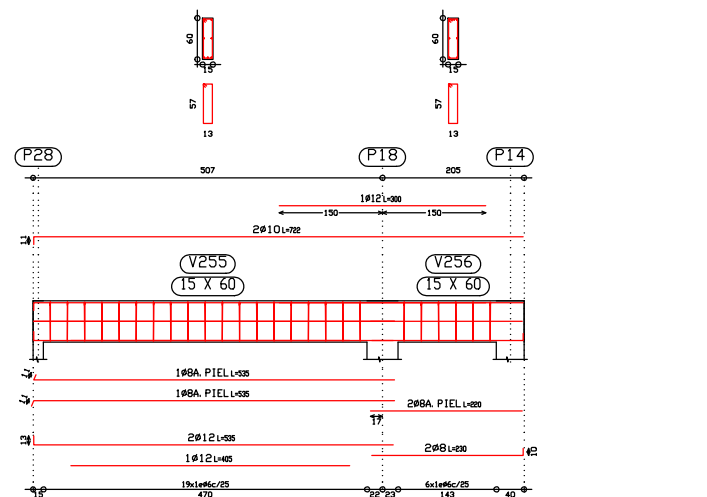
V253



V254

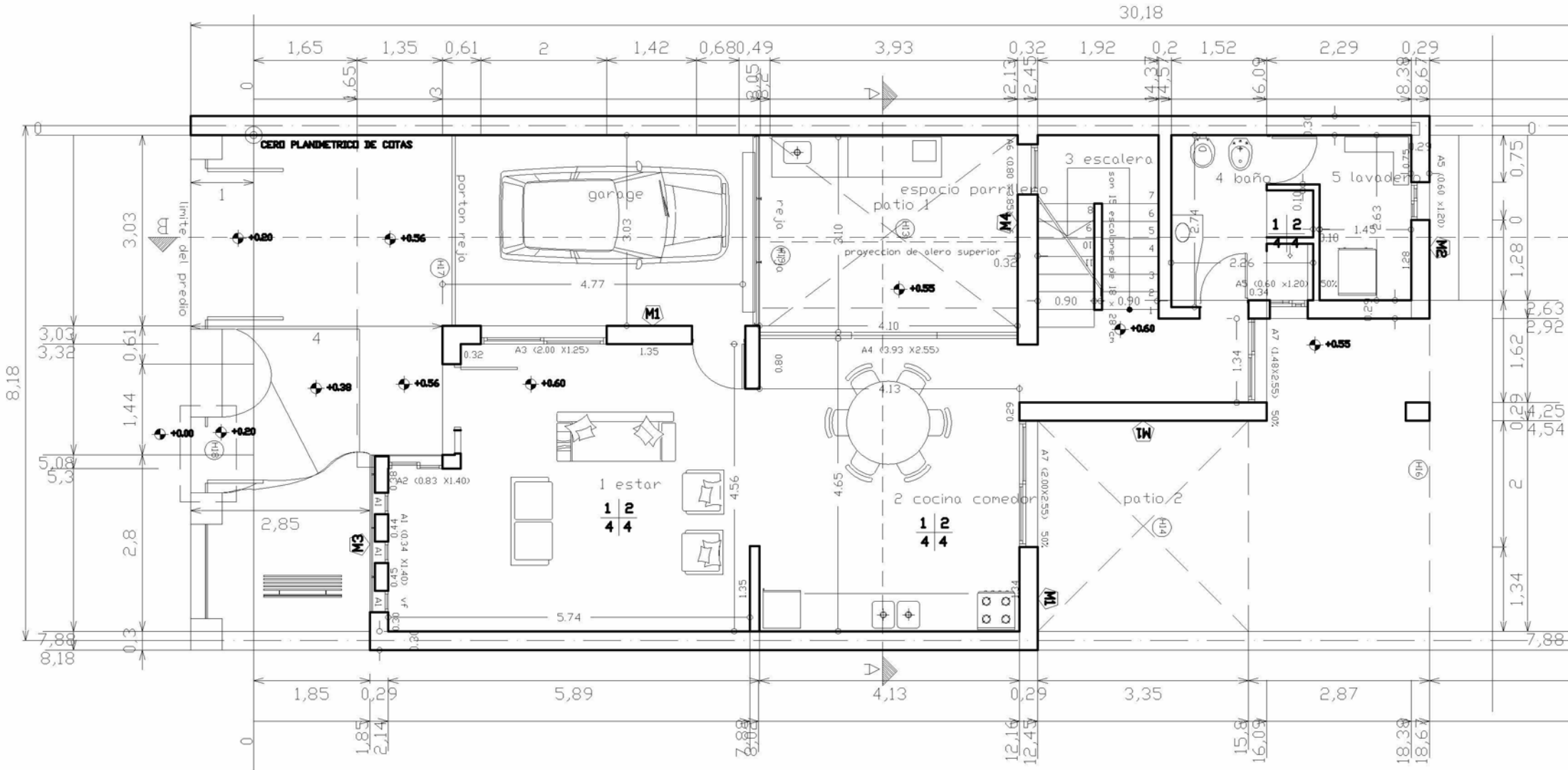


V255 256

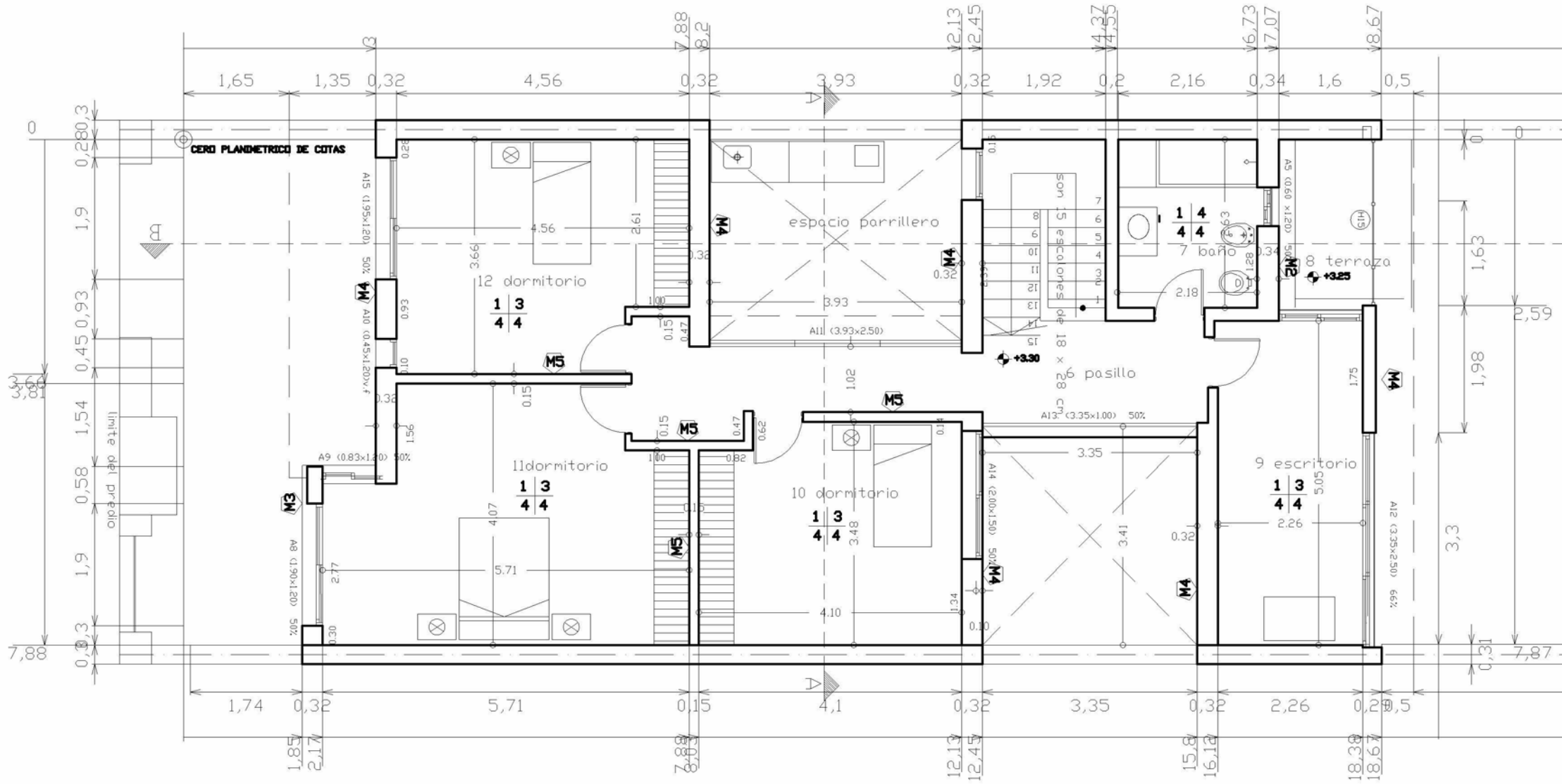


# VIVIENDA EN BARRIO LA BLANQUEADA

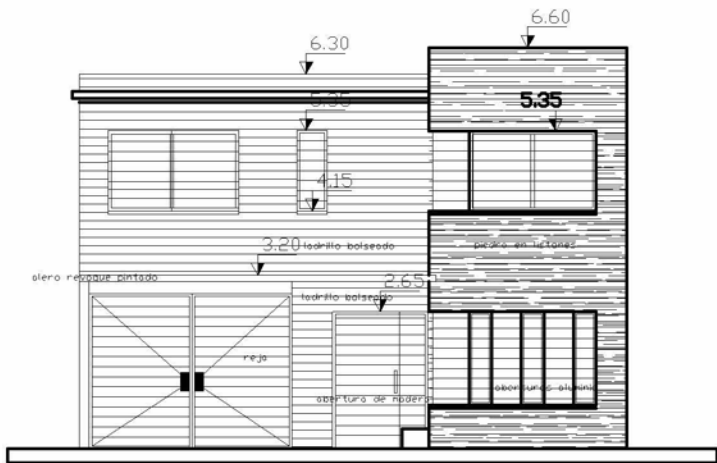
# PLANTA BAJA



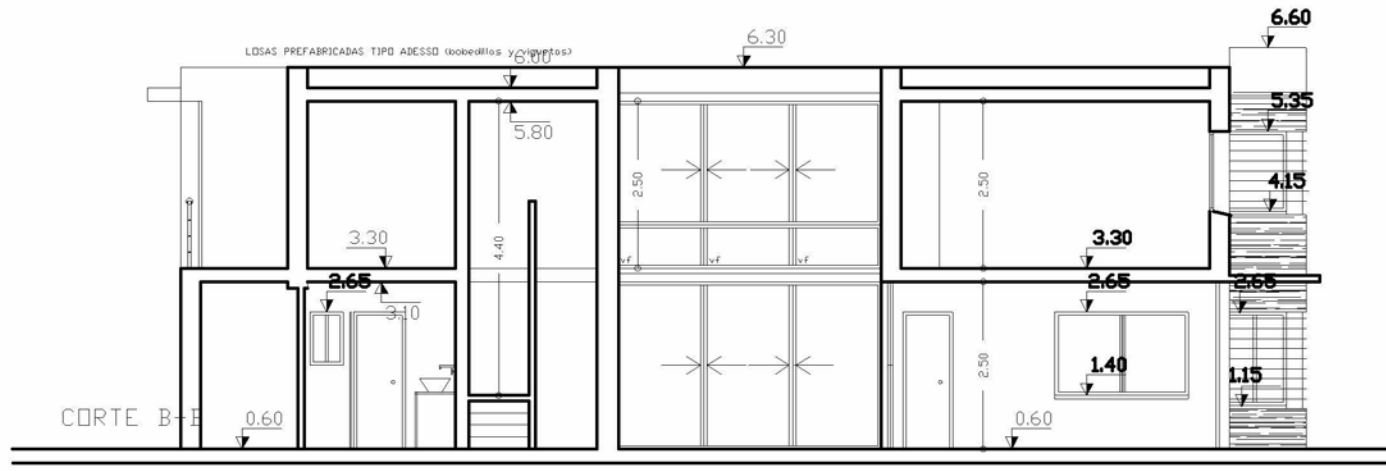
# PLANTA ALTA



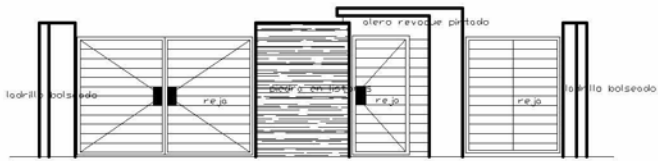




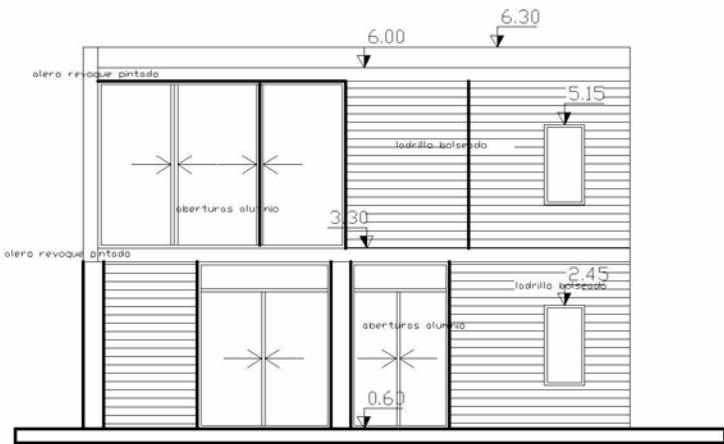
FACHADA LUCIANO ROMERO



CORTE B-B



FACHADA ACCESO

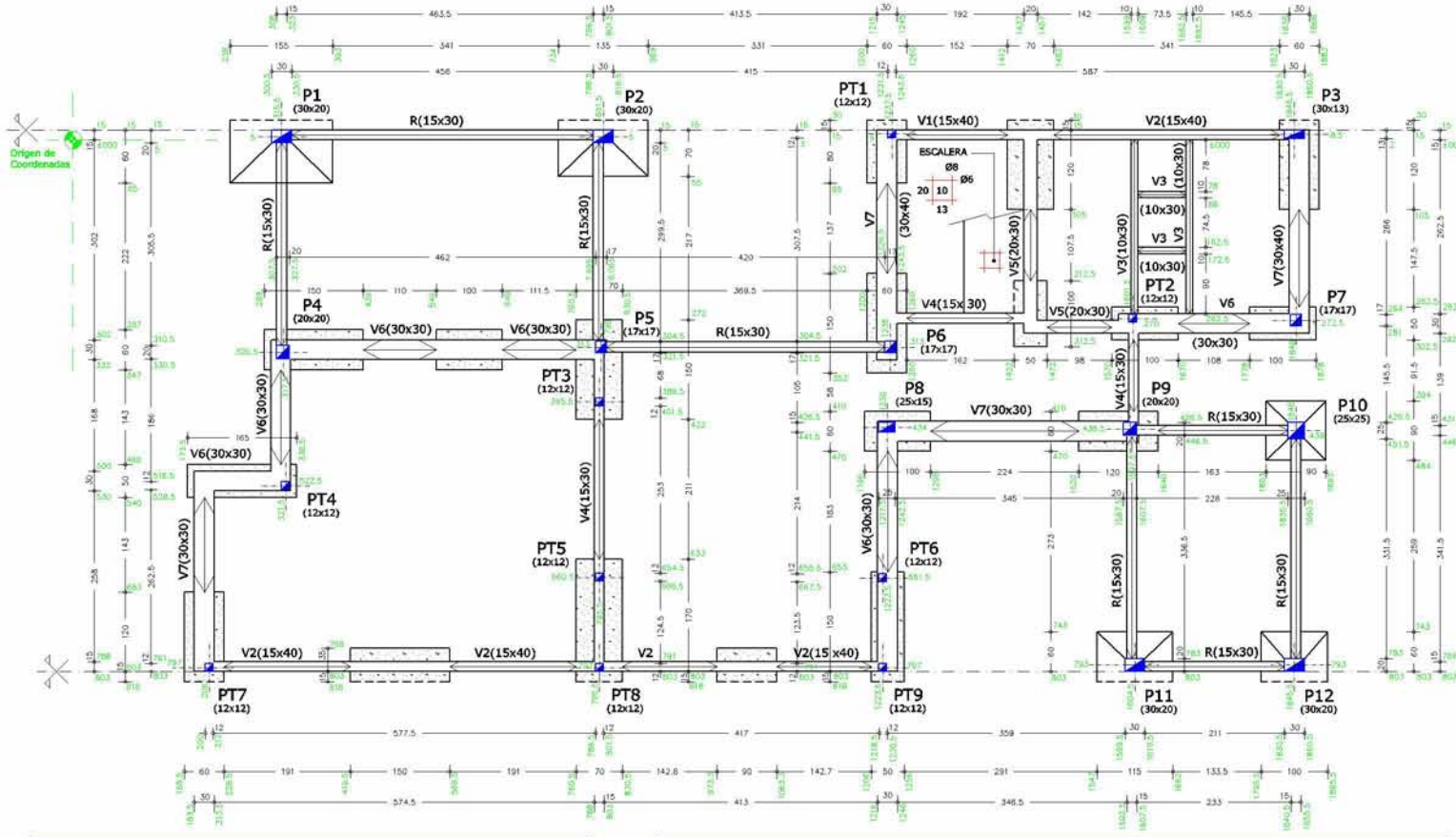


FACHADA AL fondo

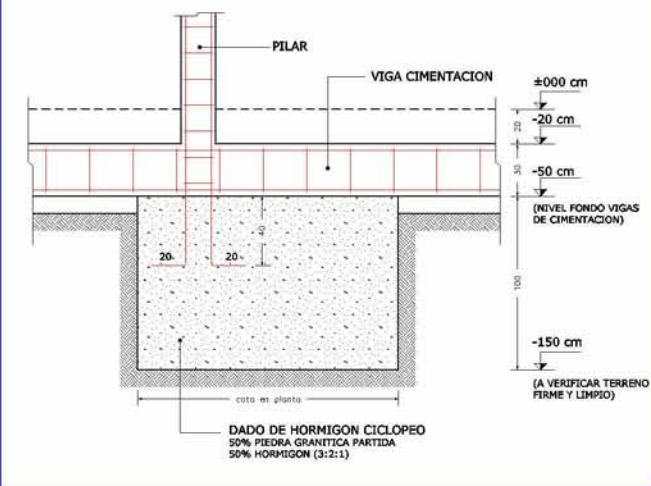


CORTE A-A

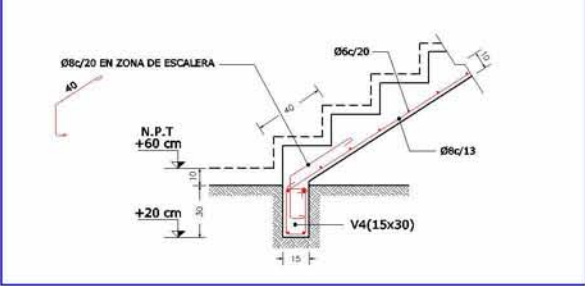
**CIMENTACION**  
ESCALA 1/50



**DETALLE NACIMIENTO DE PILARES SOBRE DADOS**  
ESCALA 1/20



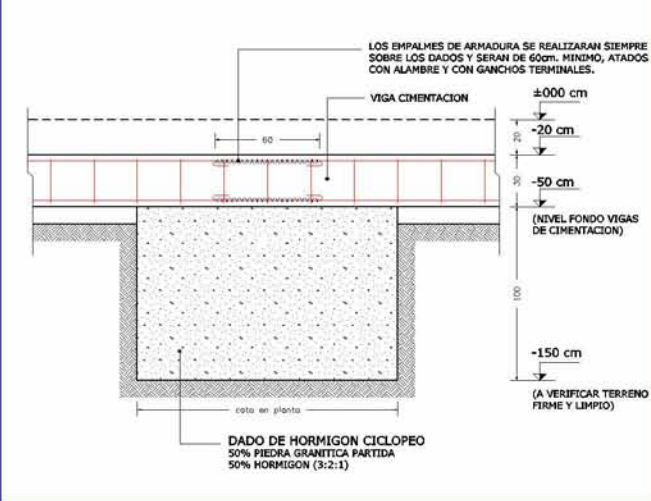
**DETALLE NACIMIENTO ESCALERA**  
ESCALA 1/20



**PLANILLA DE VIGAS - I 000**

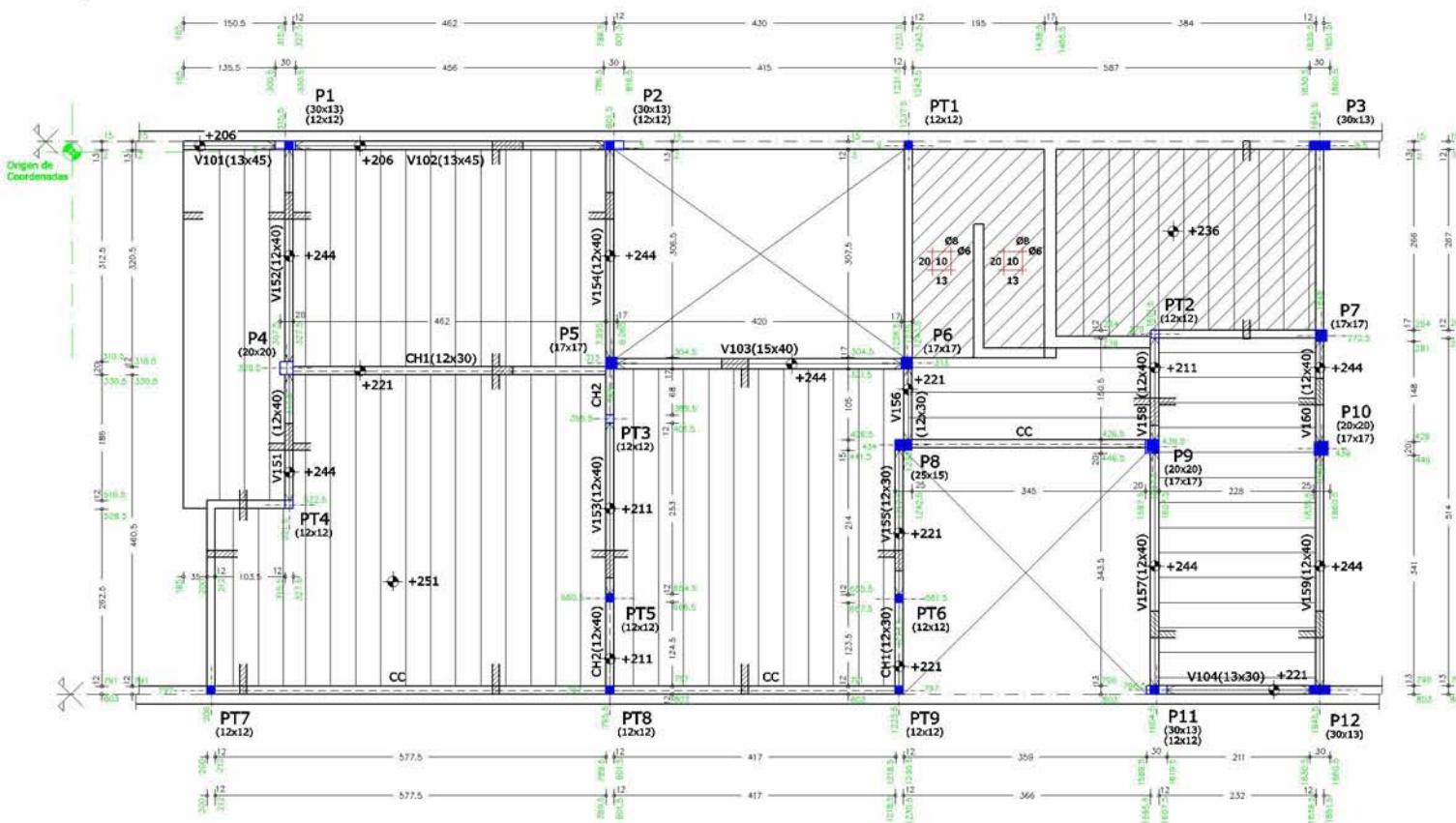
VIGA	LUZ LIBRE	b	H	ARMADURA LONGITUDINAL		ESTRIBOS	OBSERVACIONES	VIGA
				A	E			
1		15	40	2Ø12	2Ø12	Ø6c/15		1
2		15	40	2Ø16	2Ø16	Ø8c/20		2
3		10	30	2Ø8	2Ø8	Ø6c/20		3
4		15	30	2Ø8	2Ø8	Ø6c/20	Ø8c/20 EN ZONA DE ESCALERA	4
5		20	30	2Ø8	2Ø8	Ø6c/20		5
6		30	30	2Ø10	2Ø10	Ø6c/20		6
7		30	30	2Ø12	2Ø12	Ø6c/20		7
R		15	30	2Ø8	2Ø8	Ø6c/20	RIOSTRA	R

**DETALLE EMPALMES SOBRE DADOS**  
ESCALA 1/20



## ESTRUCTURA SOBRE PLANTA BAJA

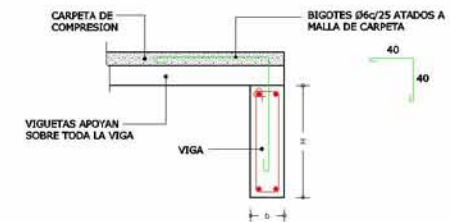
ESCALA 1/50



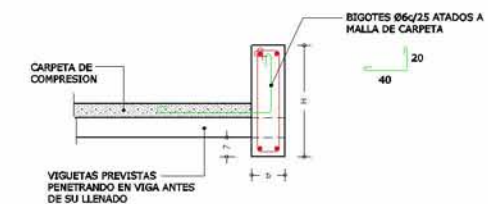
## DETALLES APOYO VIGUETAS SOBRE VIGAS

ESCALA 1/12.5

### SOBRE VIGA COMUN



### SOBRE VIGA INVERTIDA



#### NOTA CARRERAS:

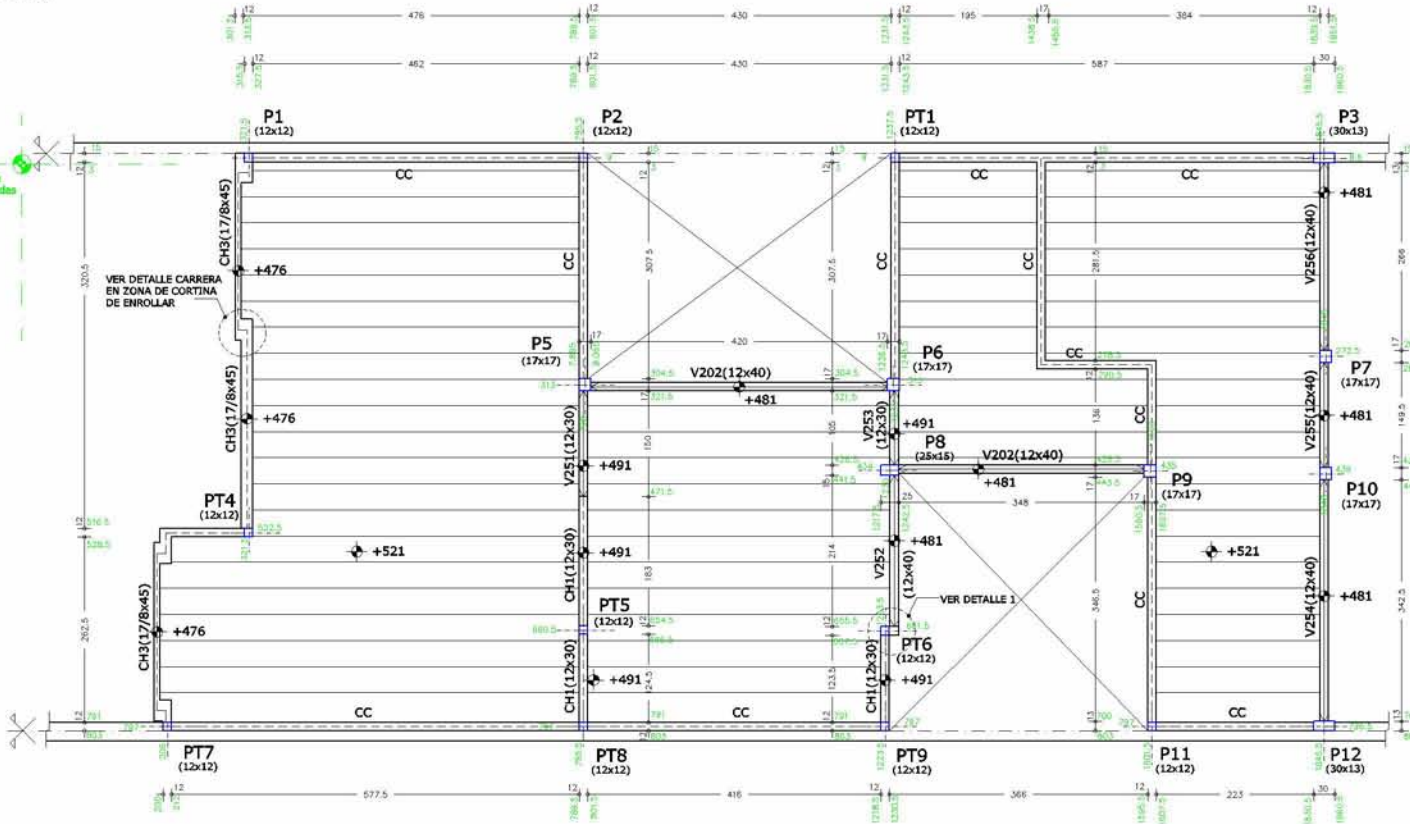
- CH1 (12x30), A 2Ø8, E 2Ø8, ESTRIBOS Ø6c/25.
- CH2 (12x40), A 2Ø8, E 2Ø8, ESTRIBOS Ø6c/25.

#### IMPORTANTE:

ENTREPOSIS DE VIGUETAS Y BOVEDILLAS PREFABRICADAS SEGUN ESPECIFICACIONES DEL FABRICANTE.  
(EN PLANTA SE INDICA DIRECCION DE VIGUETAS)

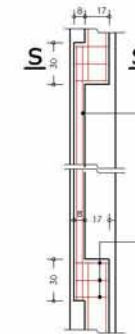
# ESTRUCTURA SOBRE PLANTA ALTA

ESCALA 1/50



## DETALLE CARRERA (CH) EN ZONA DE CORTINA DE ENROLLAR

PLANTA  
ESCALA 1/25



CORTE S-S  
ESCALA 1/12.5

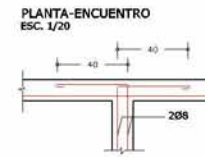


NOTA:  
EN LA ZONA DE CORTINA DE ENROLLAR LA CARRERA SE DEFASARA DE SU PLANO.

**IMPORTANTE:**  
ENTREPIOS DE VIGUETAS Y BOVEDILLAS PREFABRICADAS SEGUN ESPECIFICACIONES DEL FABRICANTE.  
(EN PLANTA SE INDICA DIRECCION DE VIGUETAS)

## DETALLE CARRERA DE CERAMICA ARMADA - CC

ESCALA 1/12.5



## DETALLE 1

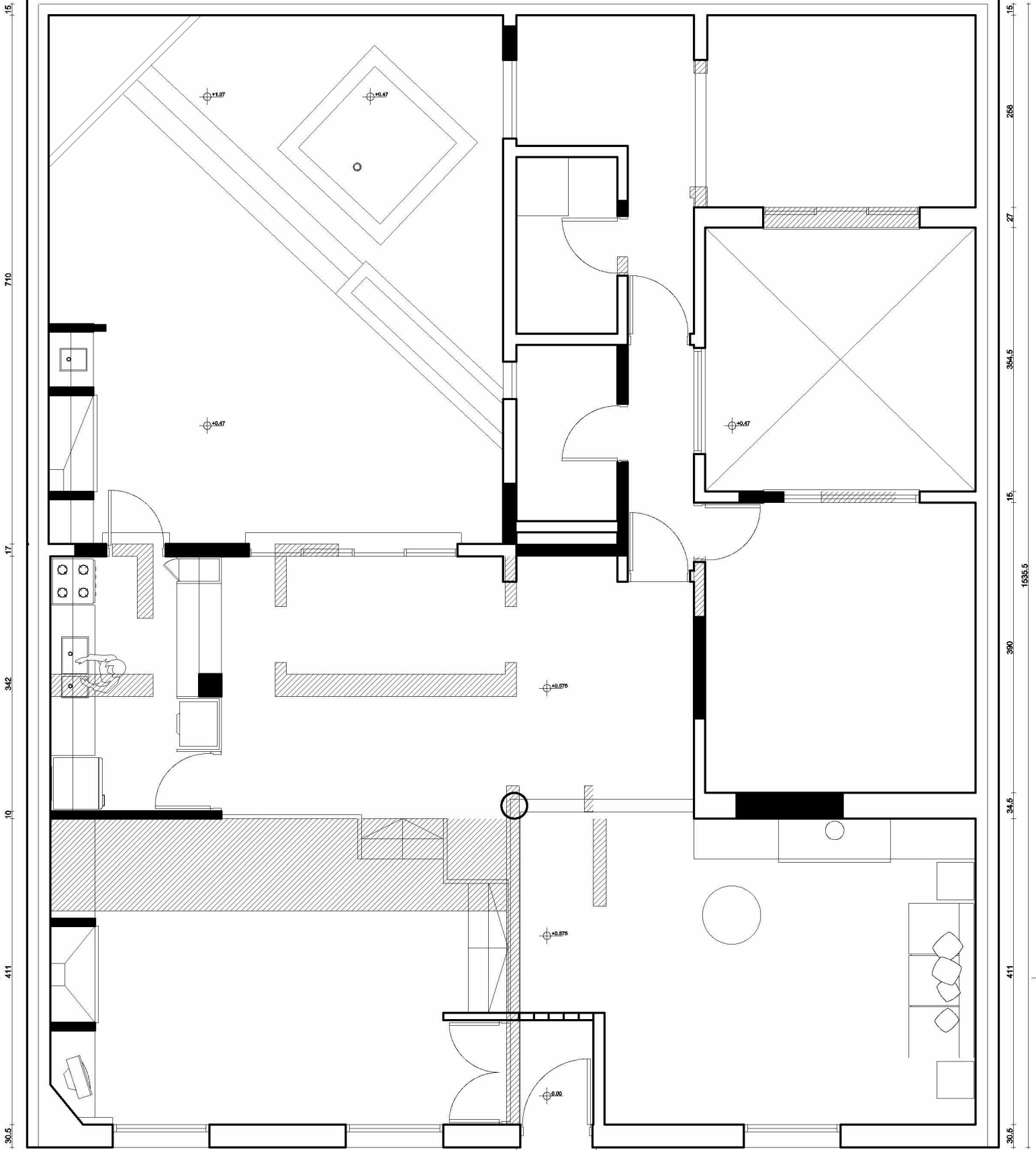
ESCALA 1/12.5



# REFORMA EN COLONIA

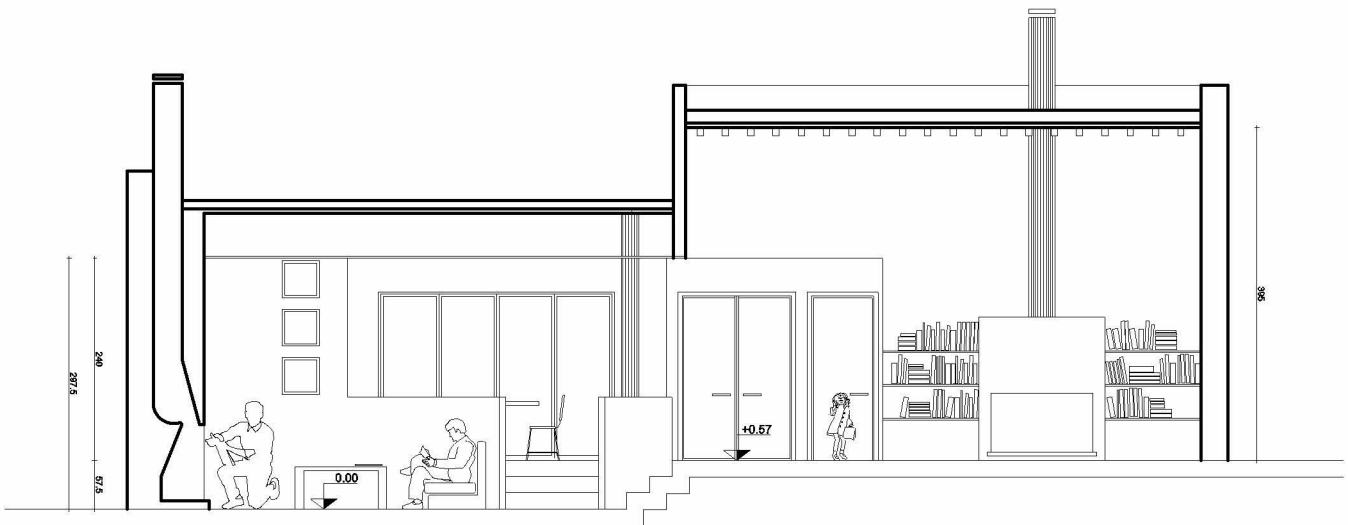
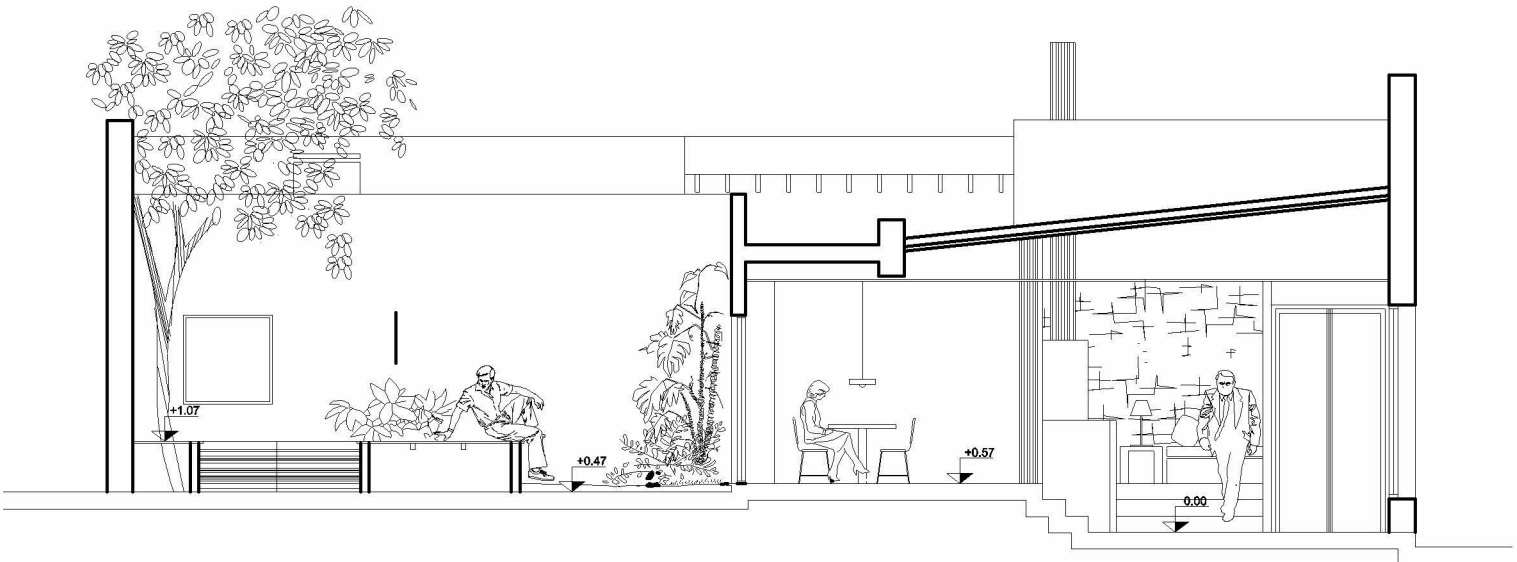
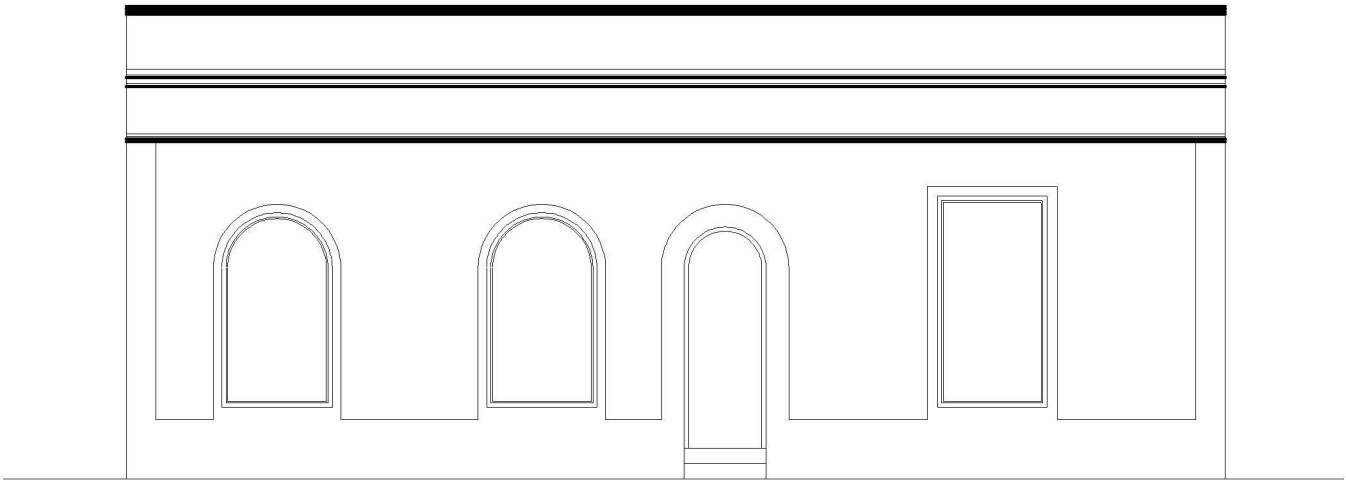
B

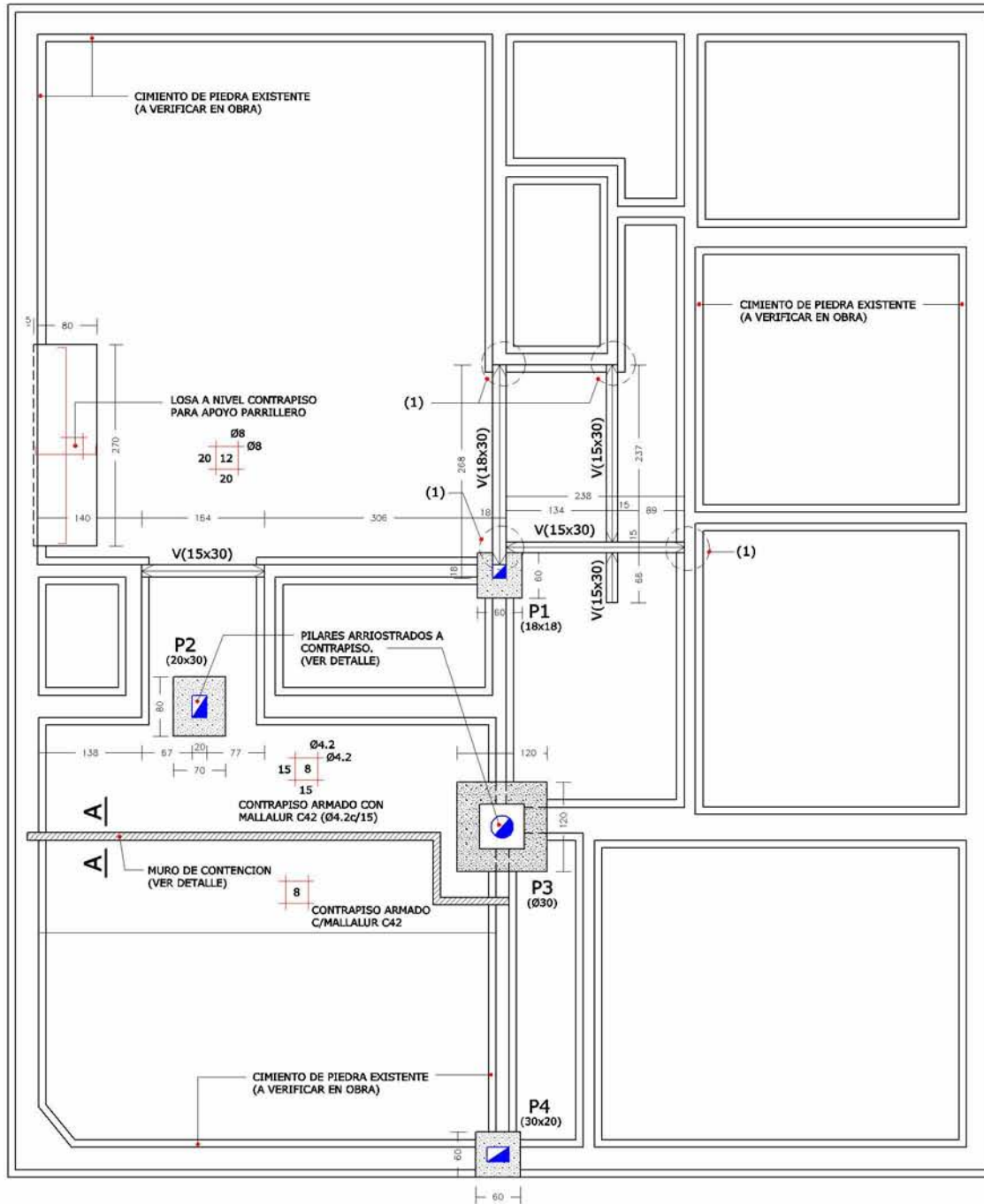
14.5 624.5 18 149.5 89 18 360 16.6



B

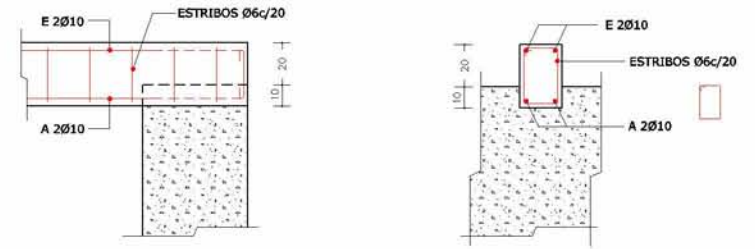
A





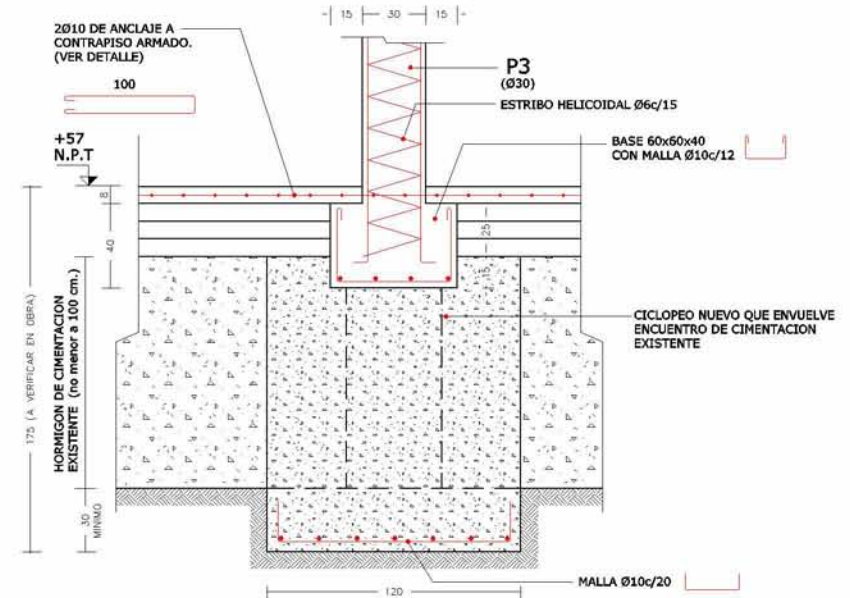
VIGAS DE CIMENTACION  
4Ø10, ESTRIBOS Ø6c/20

(1) EN GENERAL, LOS APOYOS DE LAS NUEVAS VIGAS SOBRE CIMIENTO EXISTENTE SE REALIZA ENCAJONANDOSE EN EL MISMO, LO CUAL SE VERIFICARA EN CADA CASO EN OBRA.



**DETALLE BASE P3**

ESCALA 1/20





## PLANILLA DE PILARES

		P1	P2	P3	P4
PILAR		18 x 18 4 Ø 12	20 x 30 4 Ø 12	Ø 30 6 Ø 10	30 x 20 4 Ø 12
BASES	A x B	60 x 60	70 x 80	60 x 60	60 x 60
	H	30	30	40	30
	Armaduras	Ø10c/15	Ø10c/20	Ø10c/12	Ø10c/15
		APOYO SOBRE CIMENTACION EXISTENTE (detalle idem P4)	(ver detalle)	APOYO SOBRE DADO Y CIMENTACION EXISTENTE (ver detalle)	APOYO SOBRE CIMENTACION EXISTENTE (ver detalle)

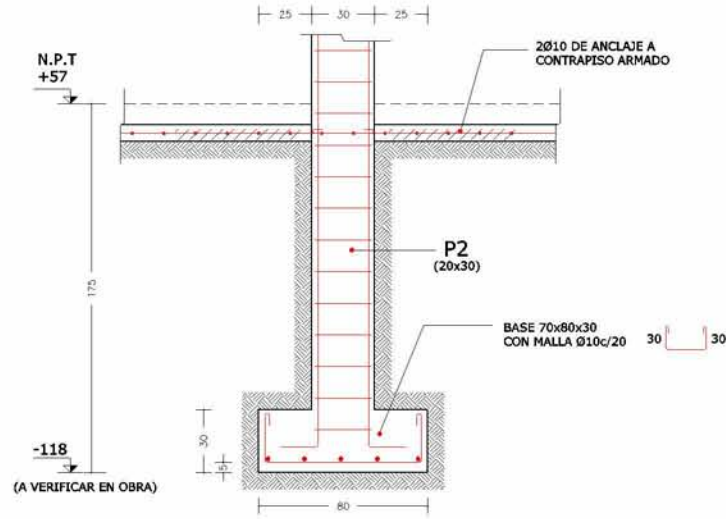
ESTRIBADO GENERAL DE PILARES Ø6c/15  
P3 ESTRIBO HELICOIDAL Ø6c/15

### NOTACION DE PILARES

- PILAR QUE NACE
- PILAR QUE CONTINUA
- PILAR QUE TERMINA

## DETALLE BASE PILAR 2

ESCALA 1/20

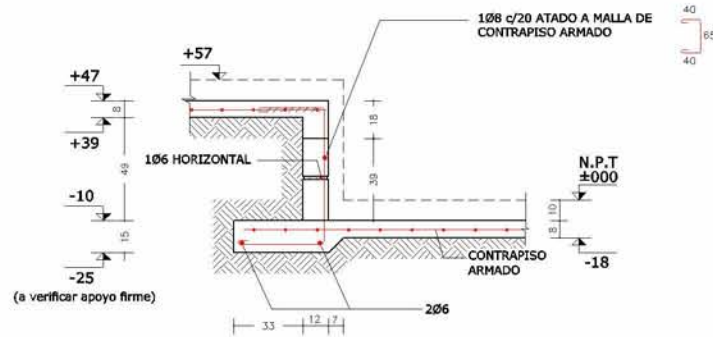


EN CONTRAPISO ARMADO CON MALLALUR C42, LOS PILARES SE ARRIOSTRAN AL MISMO



## CORTE A-A DETALLE MURO DE CONTENCIÓN

ESCALA 1/20

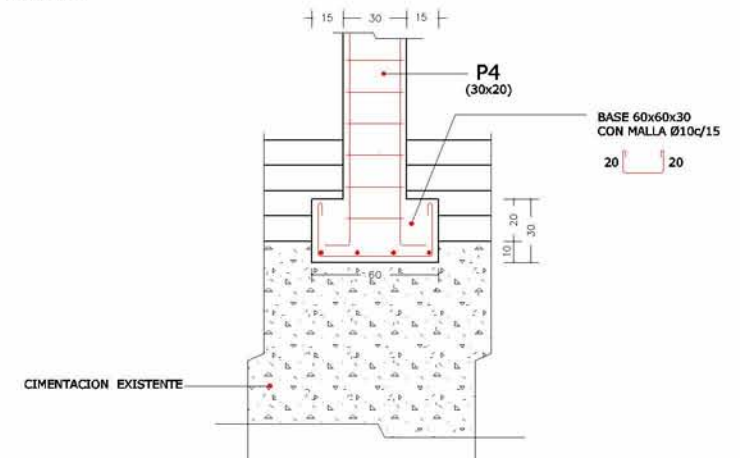


### NOTA:

SE UTILIZARAN BLOQUES DE HORMIGON DE BUENA CALIDAD, TODOS LOS HUECOS IRAN ARMADOS SEGUN DETALLE Y SE RELLENARAN CON HORMIGON O MORTERO ESTRUCTURAL (ARENA Y PORTLAND 4x1)

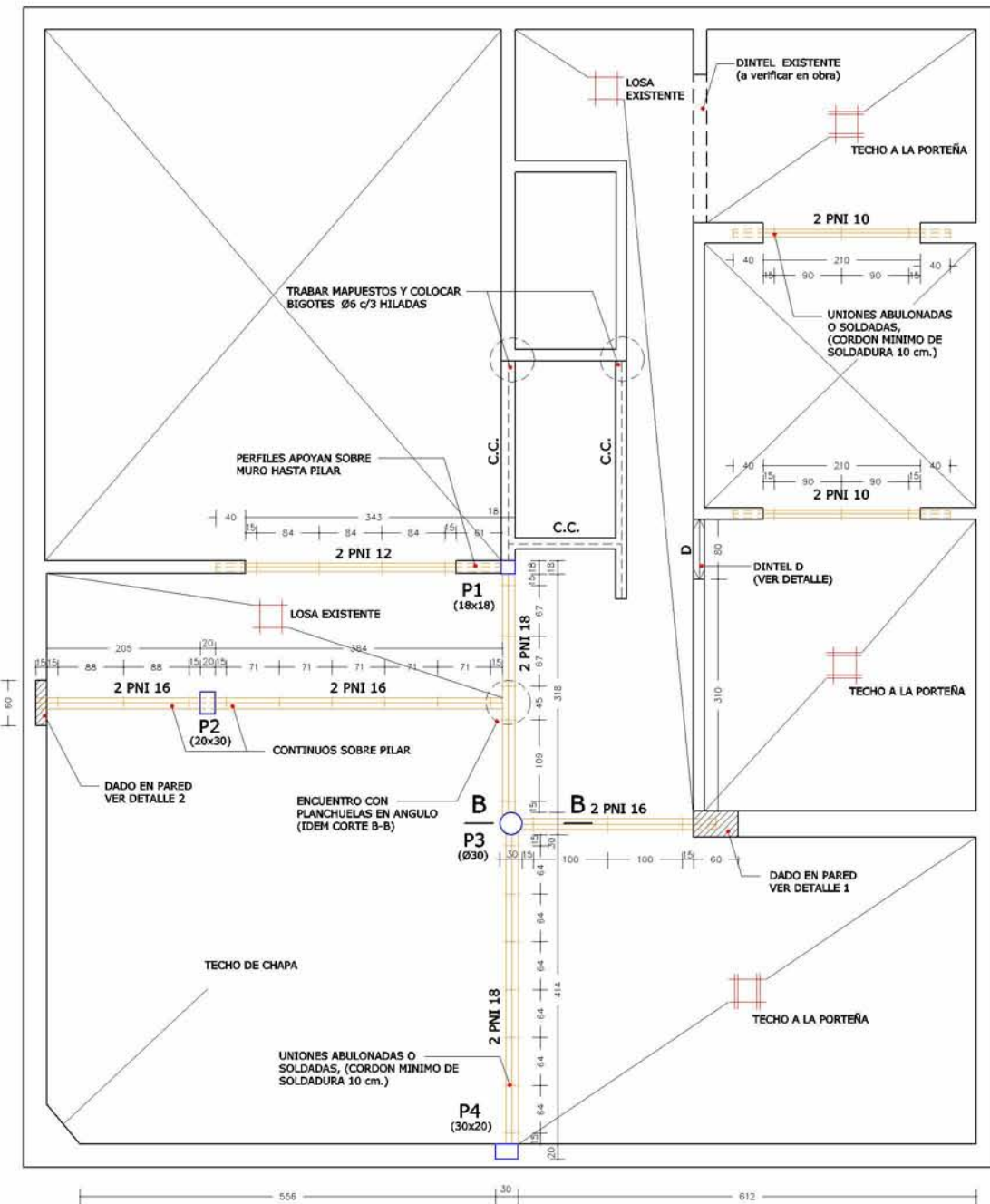
## DETALLE BASE PILAR 4

ESCALA 1/20



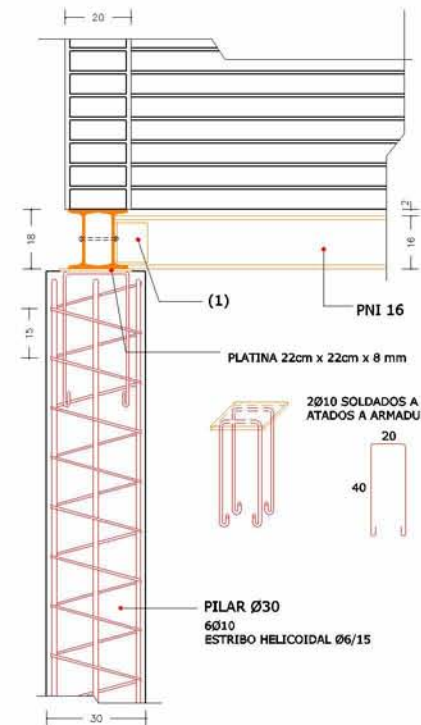
# ESTRUCTURA SOBRE PLANTA BAJA

ESCALA 1/50



## CORTE B-B DETALLE P3

ESCALA 1/12.5



NOTA:

(1) LOS ENCUENTROS DE PERFILES SE REFORZARAN CON PLANCHUELAS DE 8 mm. BILATERALES EN ANGULO CON SOLDADURA CONTINUA.

CROQUIS



PLANCHUELAS BILATERALES SOLDADAS EN ANGULO (MEDIDAS MINIMAS)

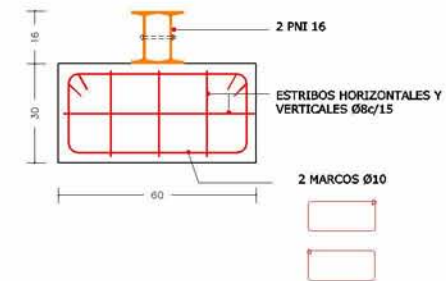
## DETALLES APOYO PERFILES SOBRE DADO DE HORMIGON EN PARED

ESCALA 1/12.5

### DETALLE 1



### DETALLE 2

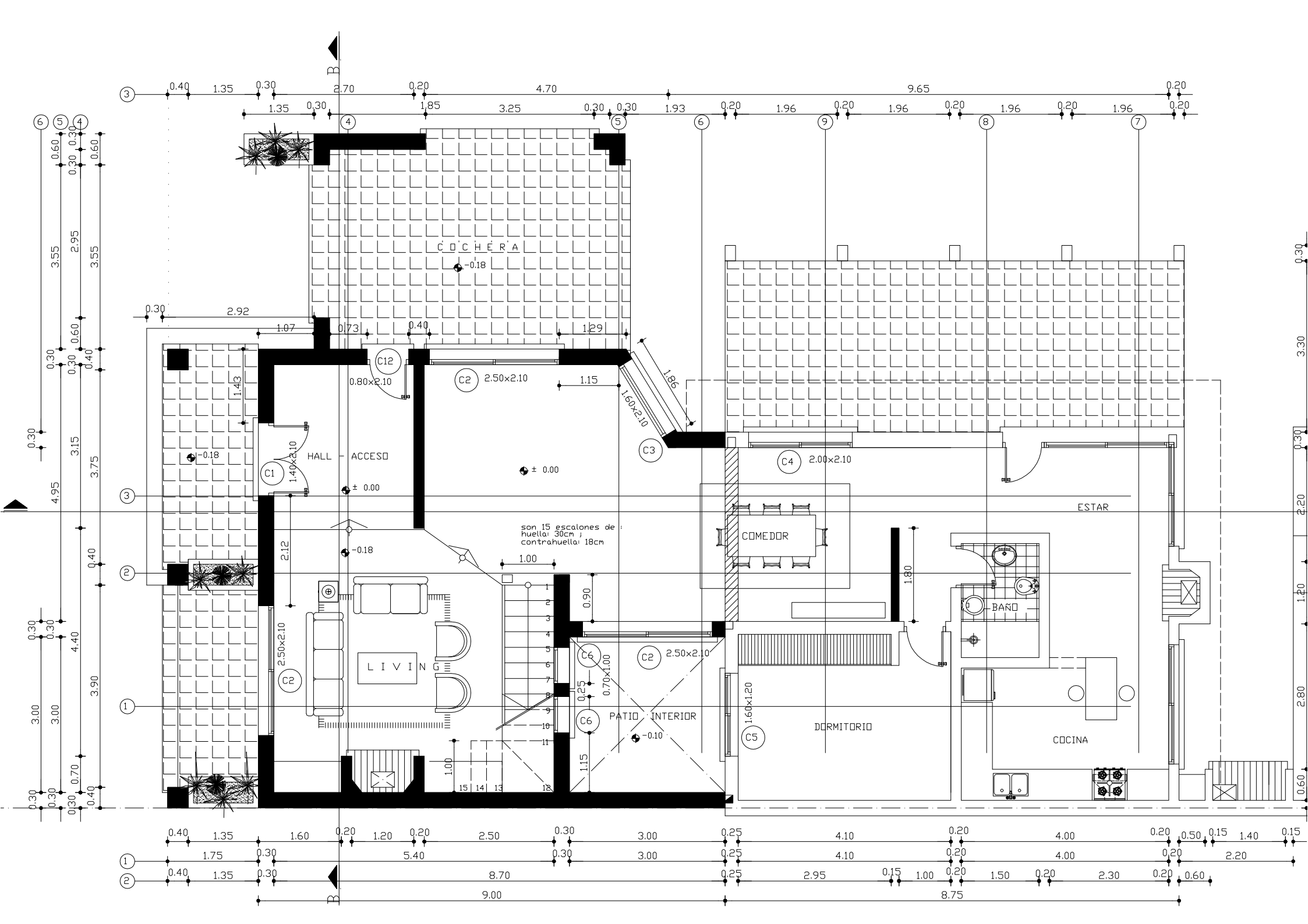


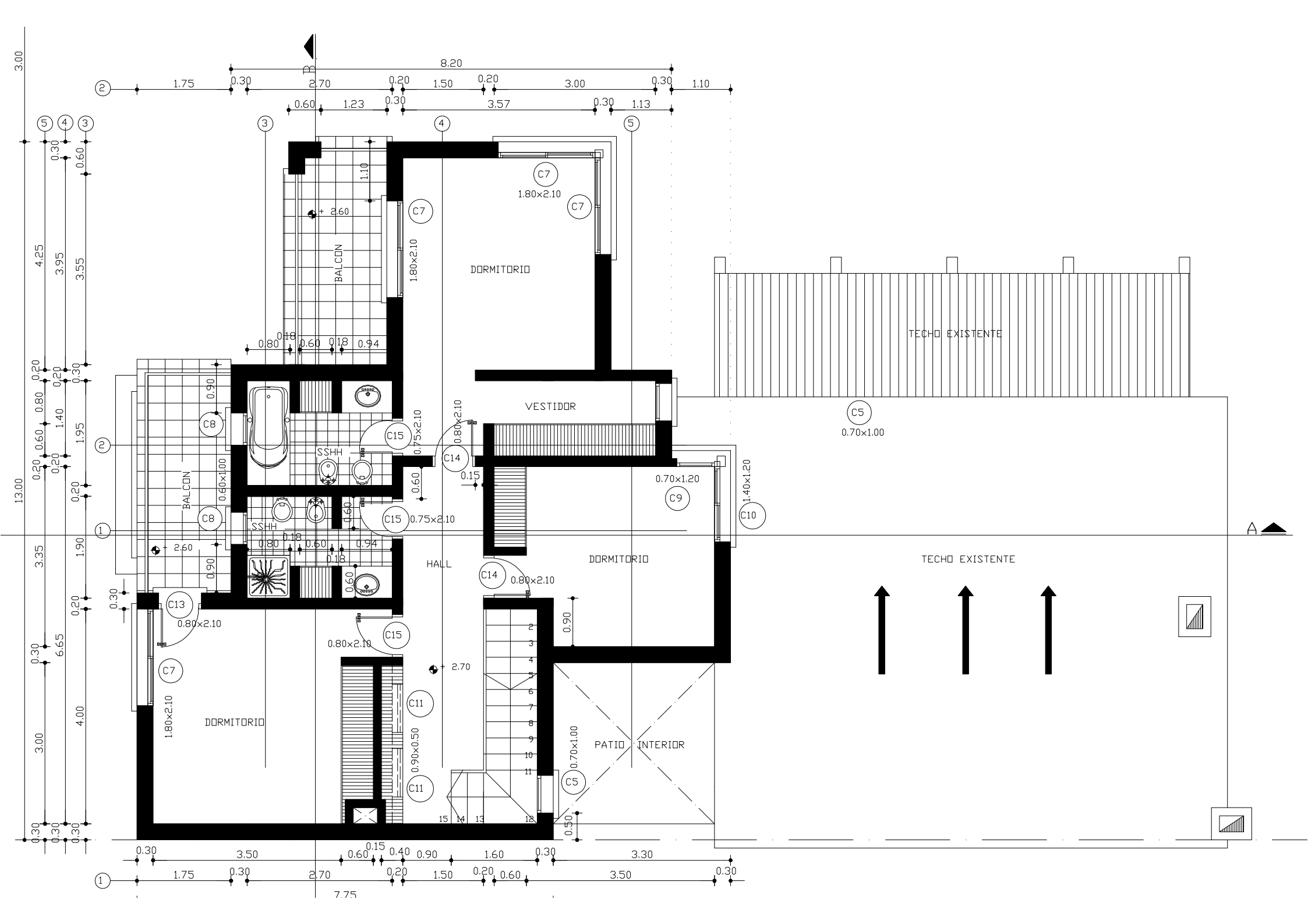
NOTAS:

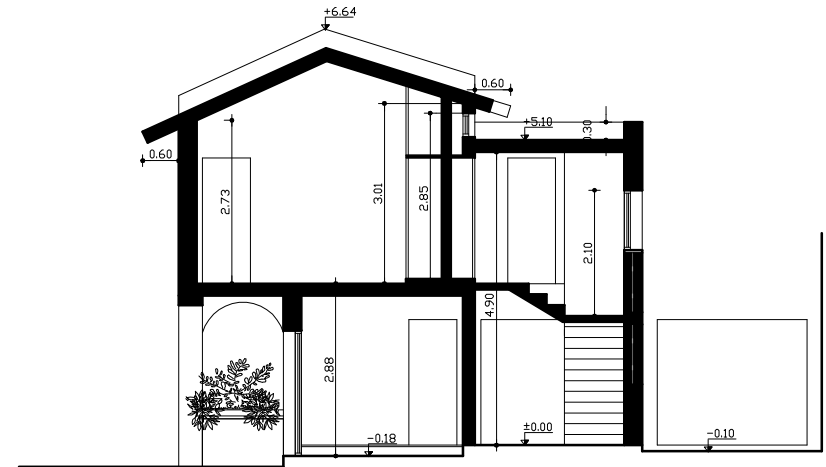
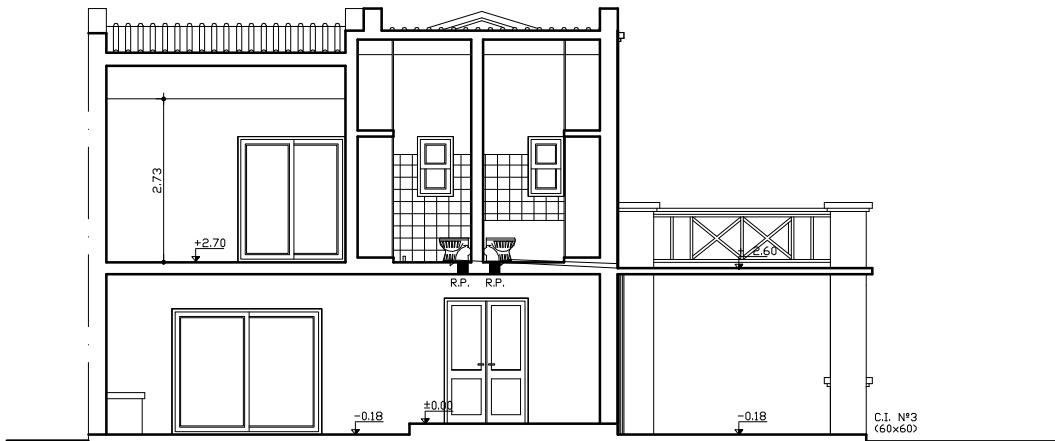
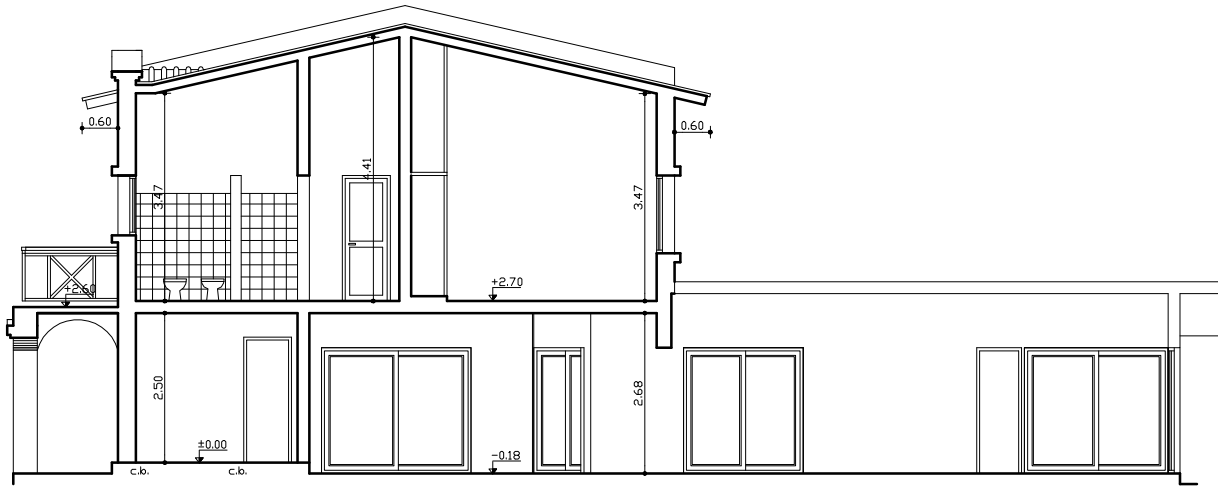
- LONGITUD "L1" DE SEPARACION ENTRE UNIONES INDICADAS EN PLANTA. UNIONES ABULONADAS O SOLDADAS (CORDON MINIMO 10cm.)

- ANCHO DADO = ANCHO DE MURO (15cm. EN PARED MEDIANERA)

AMPLIACION c/TECHO INCLINADO

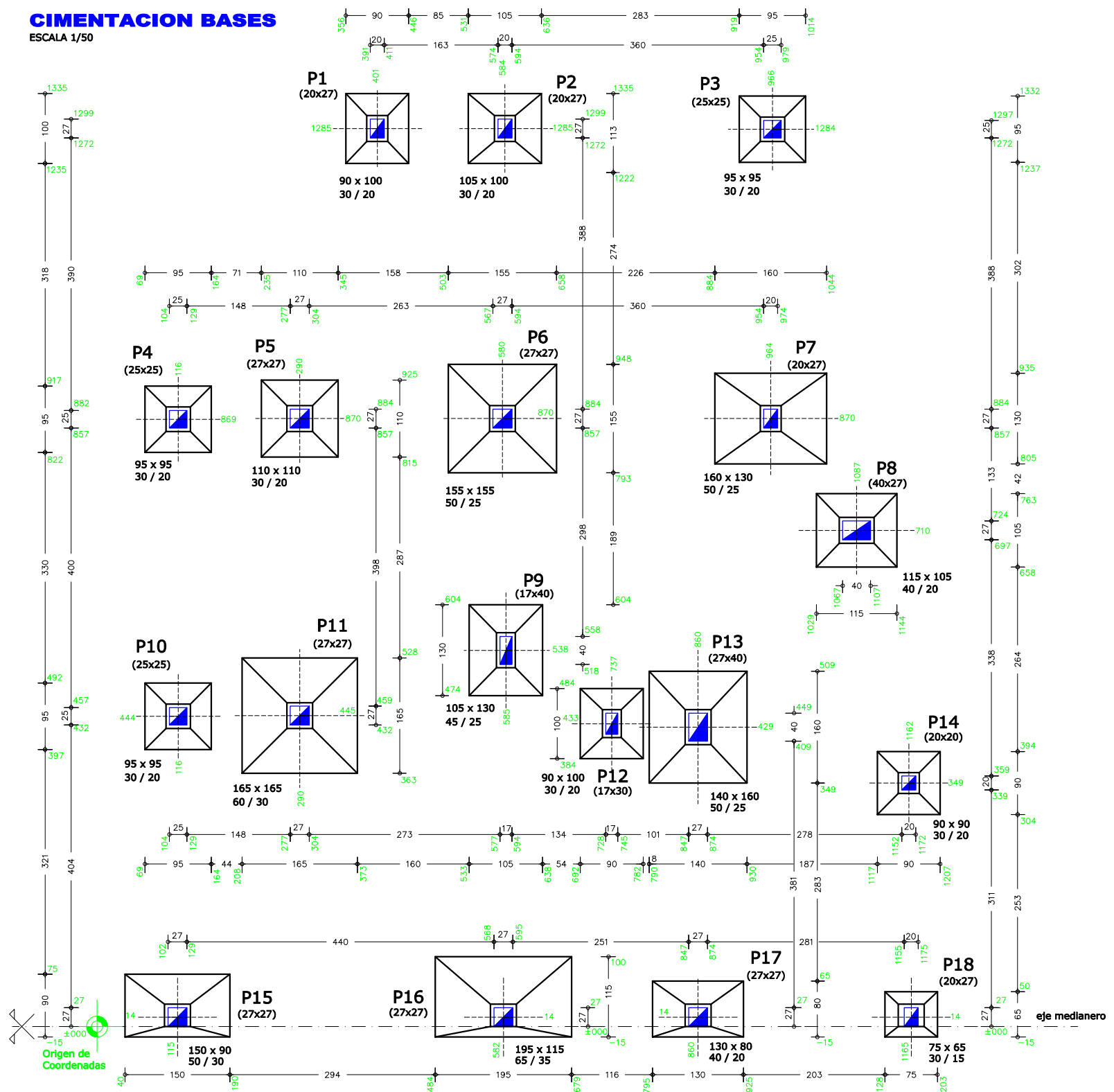






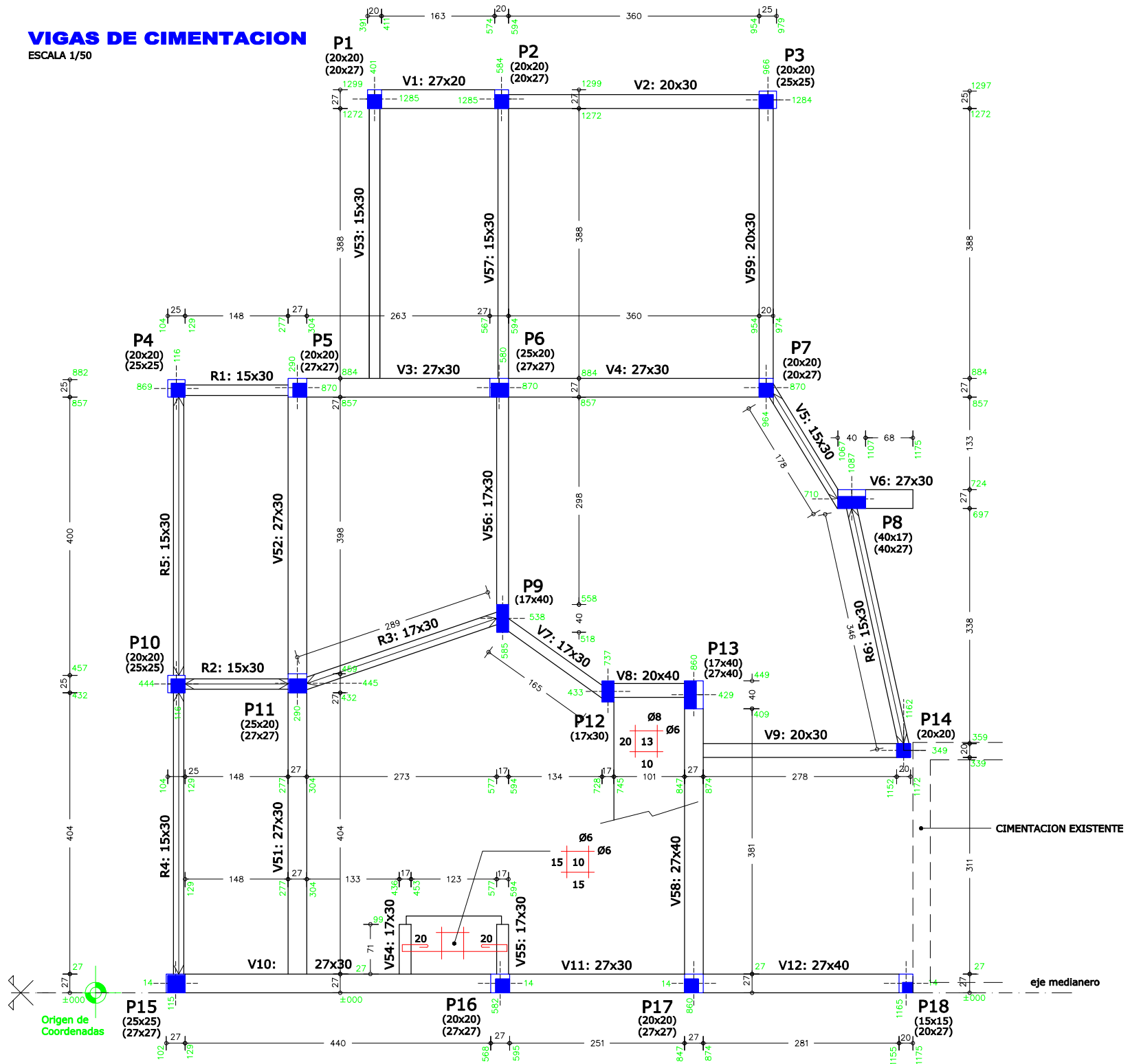
# CIMENTACION BASES

ESCALA 1/50



# VIGAS DE CIMENTACION

ESCALA 1/50

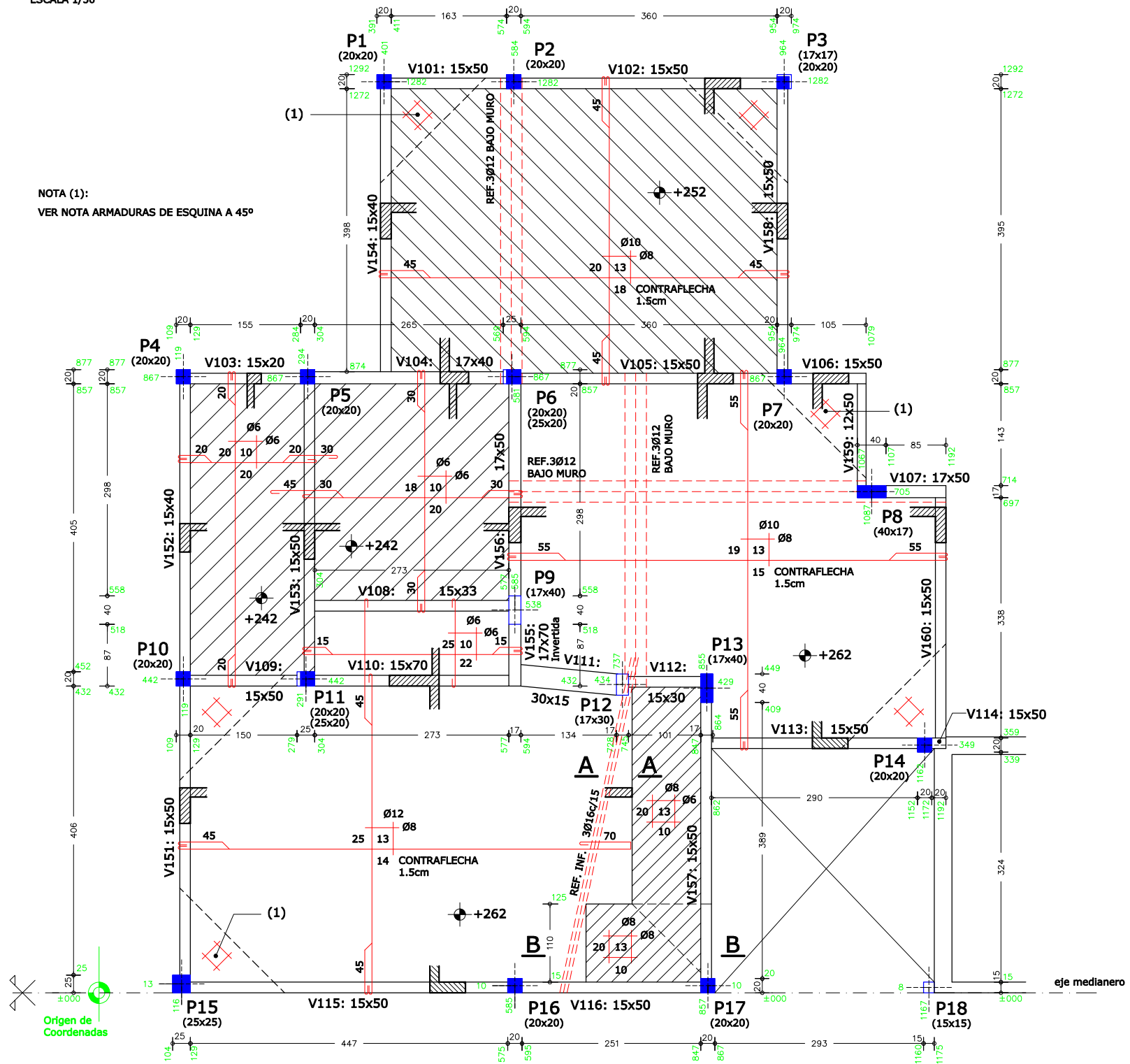




# ESTRUCTURA SOBRE PLANTA BAJA

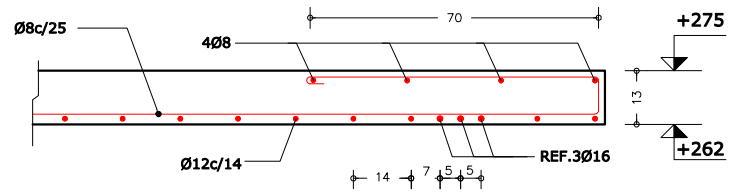
ESCALA 1/50

NOTA (1):  
VER NOTA ARMADURAS DE ESQUINA A 45°



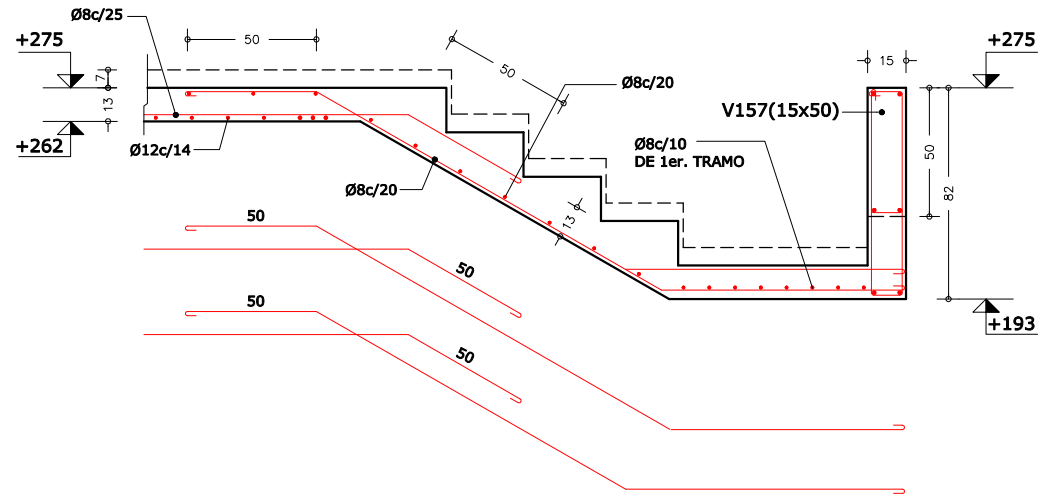
### CORTE A-A DETALLE BORDE LIBRE

ESCALA 1/12.5



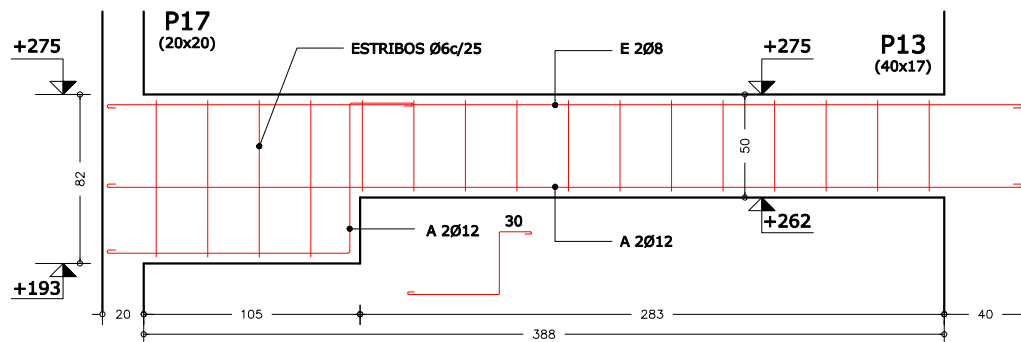
### CORTE B-B DETALLE LLEGADA ESCALERA

ESCALA 1/20



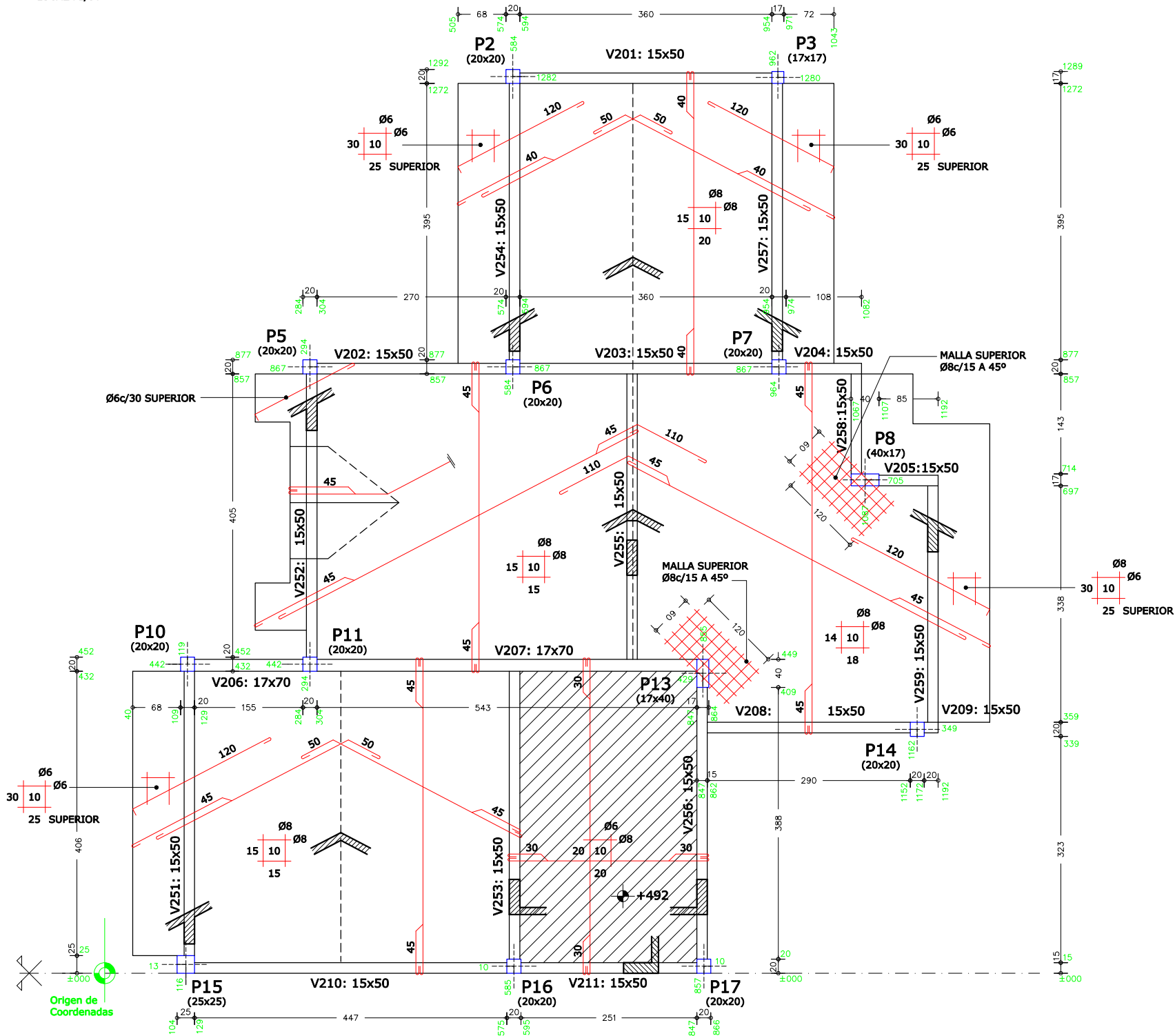
### DETALLE V157

ESCALA 1/25



# ESTRUCTURA SOBRE PLANTA ALTA

ESCALA 1/50

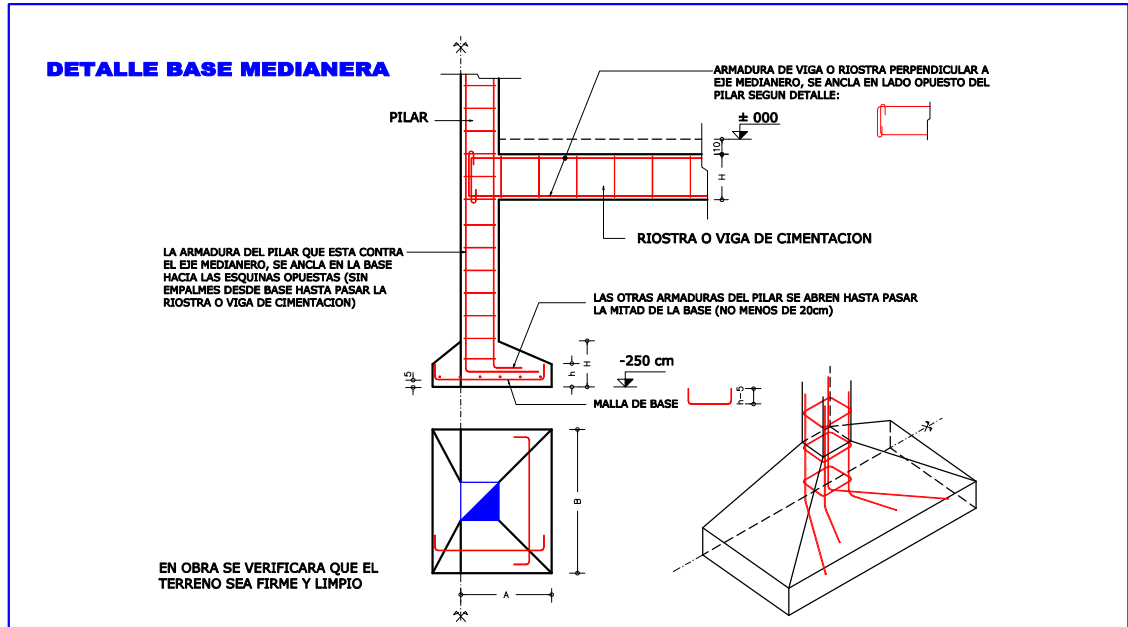


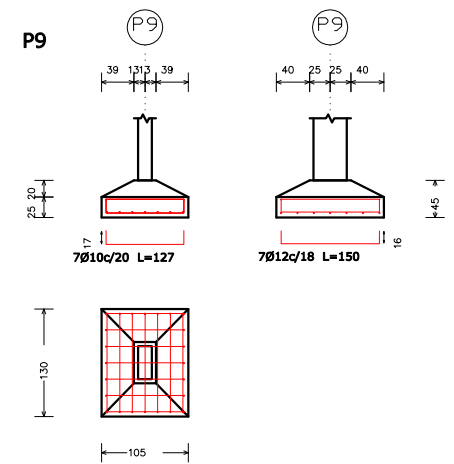
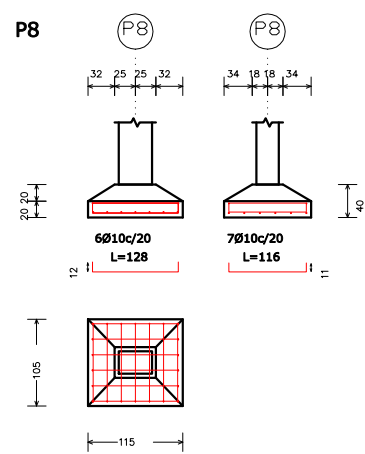
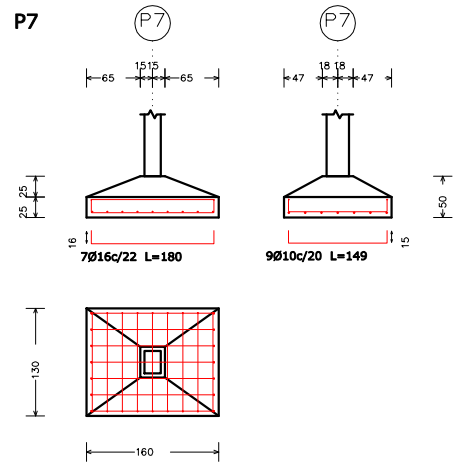
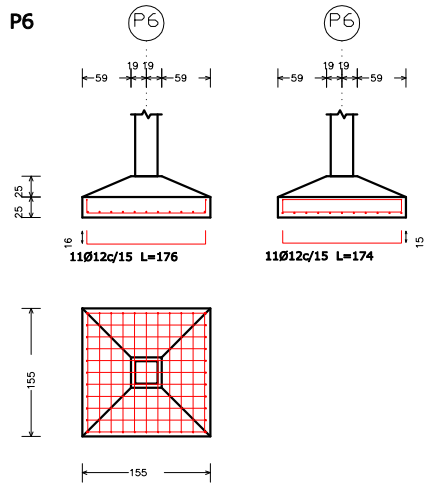
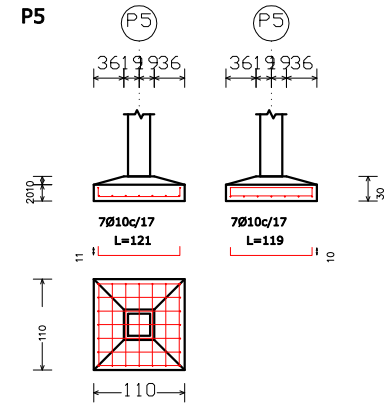
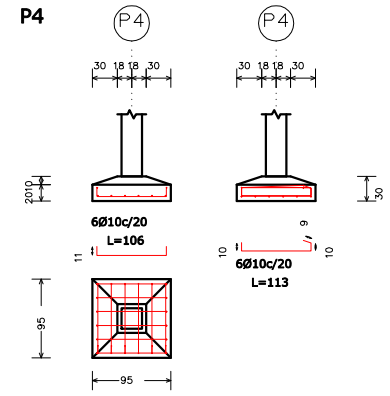
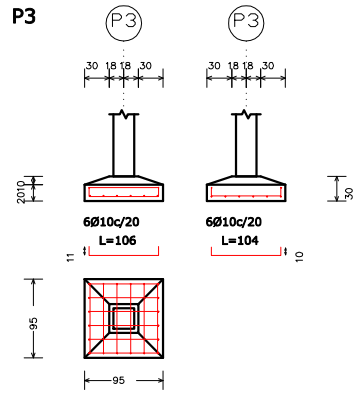
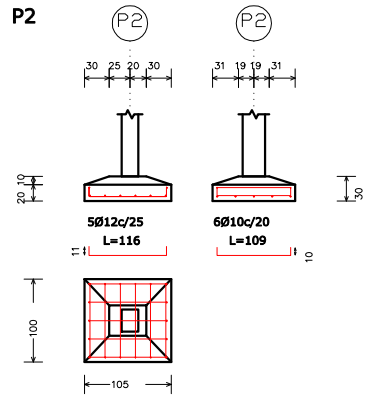
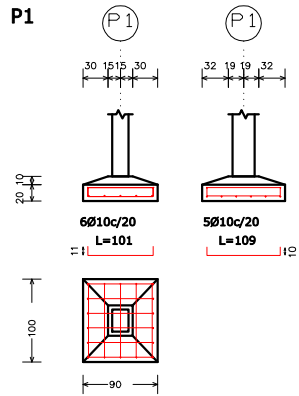
**PLANILLA DE PILARES**

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15 (*)	P16 (*)	P17 (*)	P18 (*)	
																		Sobre P.Alta
	4Ø10 36Ø6c/12 L=82	4Ø10 36Ø6c/12 L=70		4Ø10 34Ø6c/12 L=82	4Ø12 27Ø6c/15 L=83	4Ø12 27Ø6c/15 L=83	6Ø10 34Ø6c/12 L=116 34Ø6c/12 L=31		4Ø12 27Ø6c/15 L=83	4Ø12 24Ø6c/15 L=83		6Ø10 33Ø6c/12 L=116 33Ø6c/12 L=31	4Ø10 34Ø6c/12 L=82	4Ø12 27Ø6c/15 L=103	4Ø12 27Ø6c/15 L=83	4Ø10 34Ø6c/12 L=82		Sobre P.Baja
																		Vigas cimentación
23Ø6c/12 L=82	4Ø12 19Ø6c/15 L=83	4Ø12 19Ø6c/15 L=83	4Ø10 23Ø6c/12 L=82	4Ø12 20Ø6c/15 L=83	6Ø12 20Ø6c/15 L=93	4Ø16 15Ø6c/20 L=84	6Ø12 20Ø6c/15 L=117 20Ø6c/15 L=33	6Ø10 30Ø6c/12 L=116 30Ø6c/12 L=31	4Ø12 20Ø6c/15 L=83	4Ø16 18Ø6c/20 L=94	4Ø10 26Ø6c/12 L=96	6Ø12 21Ø6c/15 L=117 21Ø6c/15 L=33	4Ø12 20Ø6c/15 L=83	4Ø12 20Ø6c/15 L=103	4Ø16 15Ø6c/20 L=84	4Ø12 20Ø6c/15 L=83	15Ø6c/12 L=62	
																		Cimentación
4Ø12 17Ø6c/15 L=97	4Ø12 17Ø6c/15 L=97	6Ø12 17Ø6c/15 L=103	4Ø12 17Ø6c/15 L=103	4Ø12 17Ø6c/15 L=111	6Ø12 17Ø6c/15 L=111	4Ø16 13Ø6c/20 L=98	8Ø12 17Ø6c/15 L=137 17Ø6c/15 L=43	6Ø12 17Ø6c/15 L=117 17Ø6c/15 L=33	6Ø12 17Ø6c/15 L=103	6Ø16 13Ø6c/20 L=112	4Ø12 17Ø6c/15 L=97	8Ø12 17Ø6c/15 L=137 17Ø6c/15 L=43	4Ø12 17Ø6c/15 L=83	4Ø16 13Ø6c/20 L=112	6Ø16 13Ø6c/20 L=112	4Ø12 17Ø6c/15 L=111	4Ø12 17Ø6c/15 L=97	

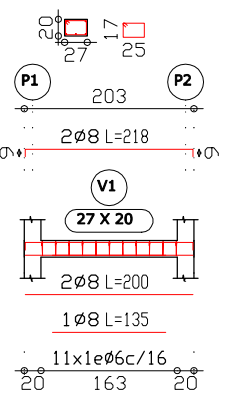
LOS P15, P16, P17 Y P18 SON MEDIANEROS. VER DETALLE

CUADRO DE ELEMENTOS DE CIMENTACIÓN				
Referencias	Dimensiones (cm)	Canto (cm)	Armado inf. X	Armado inf. Y
P1	90x100	30 / 20	6Ø10 c/ 20	5Ø10 c/ 20
P2	105x100	30 / 20	5Ø12 c/ 25	6Ø10 c/ 20
P3 y P10	95x95	30 / 20	6Ø10 c/ 20	6Ø10 c/ 20
P4	95x95	30 / 20	6Ø10 c/ 20	6Ø10 c/ 20
P5	110x110	30 / 20	7Ø10 c/ 17	7Ø10 c/ 17
P6	155x155	50 / 25	11Ø12 c/ 15	11Ø12 c/ 15
P7	160x130	50 / 25	7Ø16 c/ 22	9Ø10 c/ 20
P8	115x105	40 / 20	6Ø10 c/ 20	7Ø10 c/ 20
P9	105x130	45 / 25	7Ø10 c/ 20	7Ø12 c/ 18
P11	165x165	60 / 30	8Ø16 c/ 24	8Ø16 c/ 24
P12	90x100	30 / 20	6Ø10 c/ 20	5Ø10 c/ 20
P13	140x160	50 / 25	8Ø12 c/ 22	7Ø16 c/ 24
P14	90x90	30 / 20	5Ø10 c/ 20	5Ø10 c/ 20
P15	150x90	50 / 30	7Ø10 c/ 15	11Ø10 c/ 15
P16	195x115	65 / 35	7Ø12 c/ 18	12Ø12 c/ 18
P17	130x80	40 / 20	5Ø10 c/ 18	8Ø10 c/ 18
P18	75x65	30 / 15	4Ø10 c/ 20	5Ø10 c/ 20

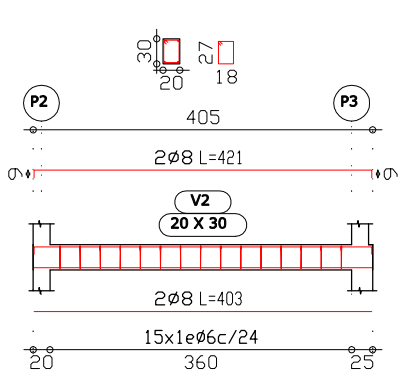




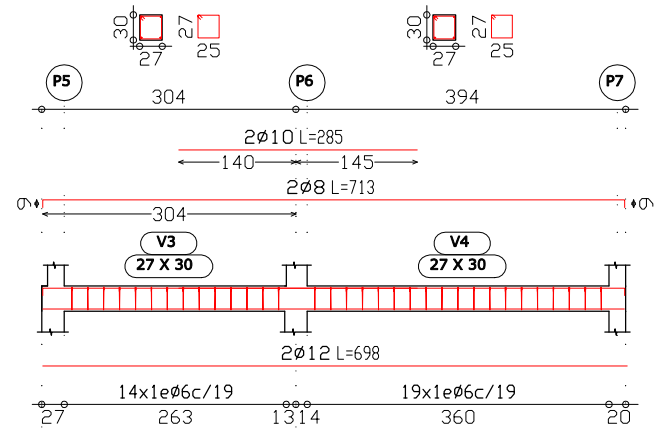
V1



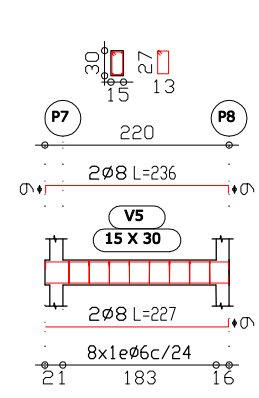
V2



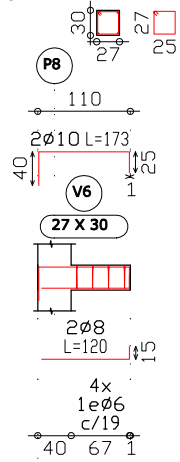
V3-V4



V5

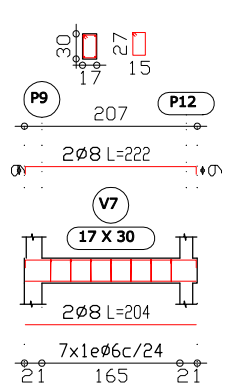


V6

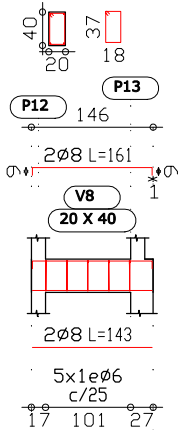


MENSULA

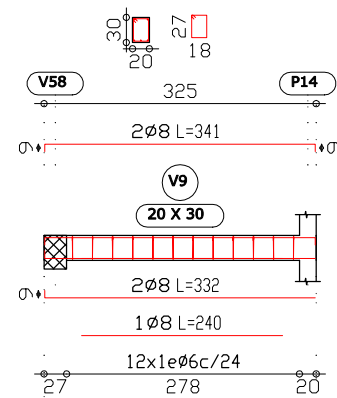
V7



V8



V9



V10-V11-V12

