

# BURKINA FASO

La patrie ou la mort, nous vaincrons

PROJET DE CONSTRUCTION D'UN BATIMENT  
RDC A USAGE D'UN CENTRE D'INNOVATION  
AGROECOLOGIQUE DE GORGO A (KOUPELA)

## MAITRE D'OEUVRE



Afrik Studio & partners

Tel: 71 93 90 17

Tel: 75 45 34 93

## ETUDES

Sayouba GUIRE

Tel: 70 71 07 63

## MAITRE D'OUVRAGE

## CONTROLE TECHNIQUE

DOSSIER D'EXÉCUTION

**CARNET DE FERRAILLAGE**  
**semelles-Poteaux-Longrines-Poutres**

Mars 2026

ECH: 1/VAR

CARNET N°2 pour coupes et details

Indice: A

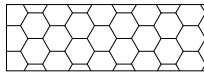



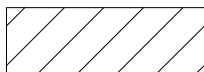
Voir plans de coffrage

Vérifier par:

Yiziah Arnaud BADO (Architecte)

Sayouba GUIRE (Ingénieur)

# INDICATIONS GENERALES

CHARGES	D'EXPLOITATION	LEGENDE		DOSAGE Sauf qualité précisée sur plan
Dallage	250 daN/m <sup>2</sup>		Gros beton	200 kg/m <sup>3</sup>
Dalle	100daN/m <sup>2</sup>		Beton de propreté	150 kg/m <sup>3</sup>
Toiture	100daN/m <sup>2</sup>		Beton armé	350 kg/m <sup>3</sup>
			Agglos pleins	Type B80
			Agglos creux	Type B40
Taux de travail du sol = 1.50 bars à -100 cm/TN sous réserve de l'études de sol du LNBTP				

**BETON ARME** dosé à 350 kg/m<sup>3</sup> de ciment CPA 45  
 $F_{c28}=20\text{MPa}$  ; sauf indication particulière  
 précisée sur le plan. Enrobage=3 cm

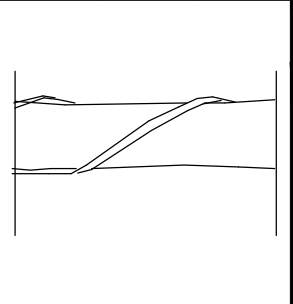
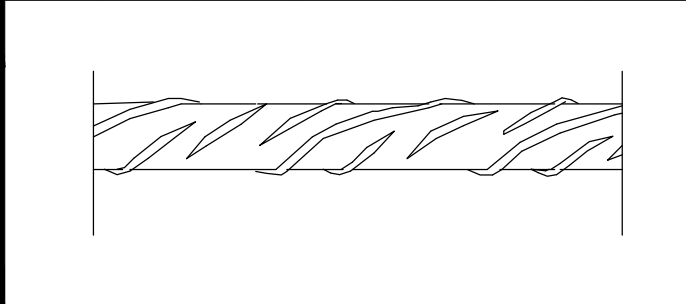



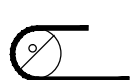

Fissurations sur éléments	Peu préjudiciable <input checked="" type="checkbox"/>	Préjudiciable <input checked="" type="checkbox"/>	Très préjudiciable <input type="checkbox"/>
	en général	En fondation	

# INDICATIONS GENERALES

## ACIERS

Aciers doux lisses nuance FeE215 type 1 indiqués par  $\emptyset$   
 Aciers à haute adhérence nuance FeE500 indiqués par HA  
 conformes aux fiches d'identification CPC fascicule 4 titre 1.  
 Aciers treillis soudés indiqués par TS - Type 4  $f_e=500$  MPa

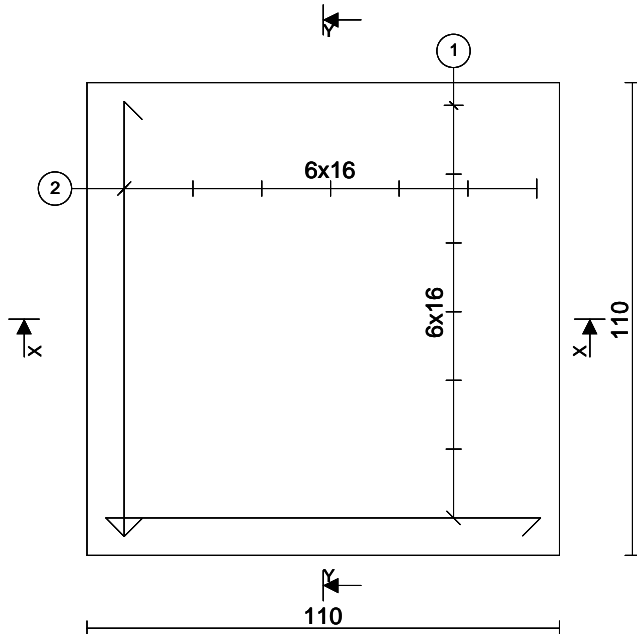
## FACONNAGE DES ACIERS A HAUTE ADHERENCE

Barres: $\emptyset$ nominaux en mm	6	8	10	12	14	16	20	25	32	40		
												
Diamètre des mandrins de cintrage en mm	A la main ou à la machine				A la machine							
Etriers et cadres	30	40	60	80							 	
Ancrages	60	80	100	120	140	170	200	250	400	400	 	
Coudes			140	170	200	250	320	400	600			

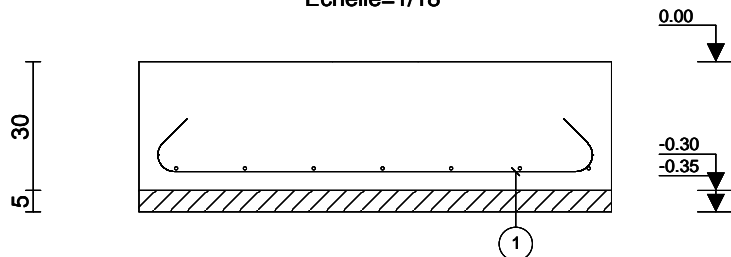
# FERRAILLAGE DES SEMELLES

KOUELA(GORGO)

Elévation  
Echelle=1/18



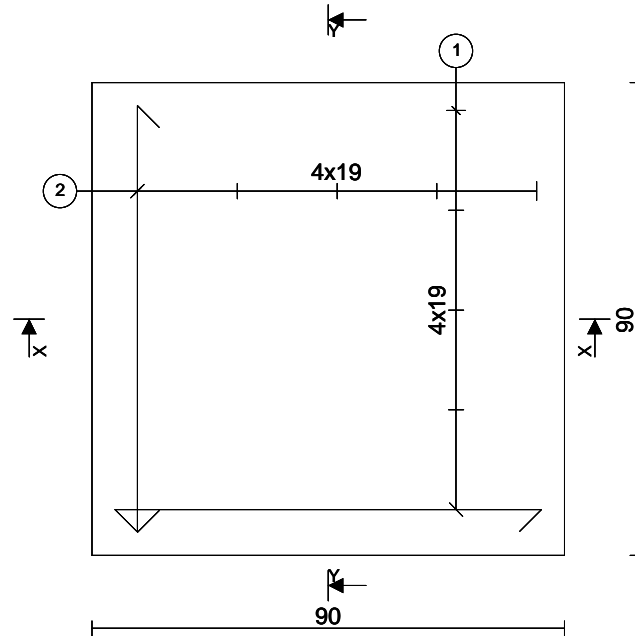
Coupe XX  
Echelle=1/18



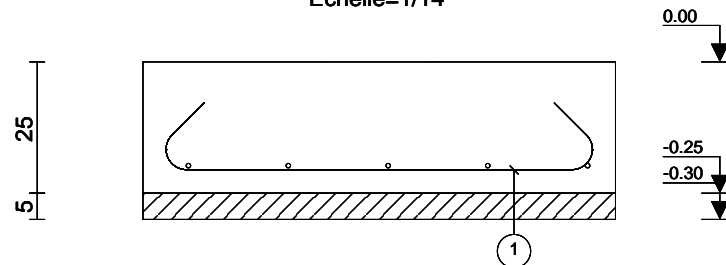
Barre	Lg	Forme
1	7HA8	128  135° 102 135°
2	7HA8	128  135° 102 135°
<b>Barre</b>		<b>Lg/Poids</b>
HA8		17.9/7.1

KOUELA(GORGO)

Elévation  
Echelle=1/14



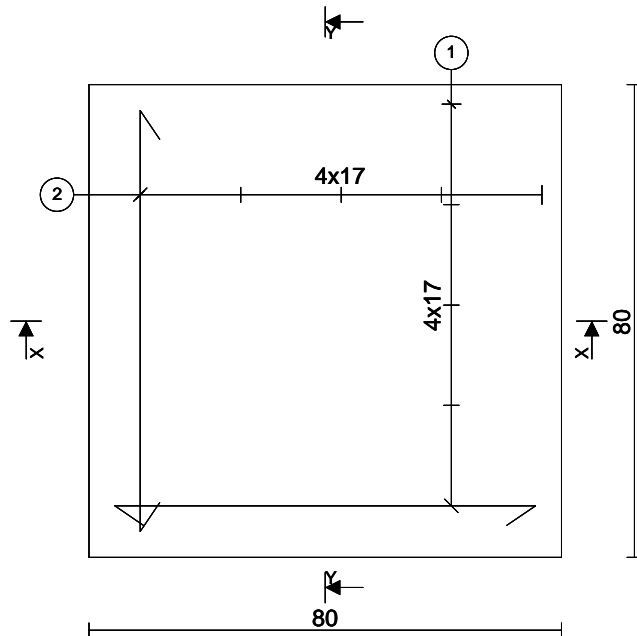
Coupe XX  
Echelle=1/14



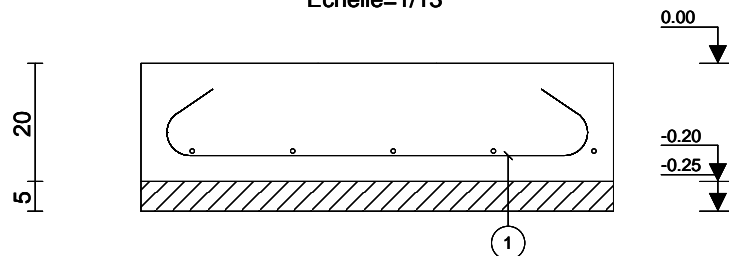
	Barre	Lg	Forme
1	5HA8	109	135° 82 135°
2	5HA8	109	135° 82 135°
Barre		Lg/Poids	
HA8		10.9/4.3	

KOUELA(GORGO)

Elévation  
Echelle=1/13



Coupe XX  
Echelle=1/13

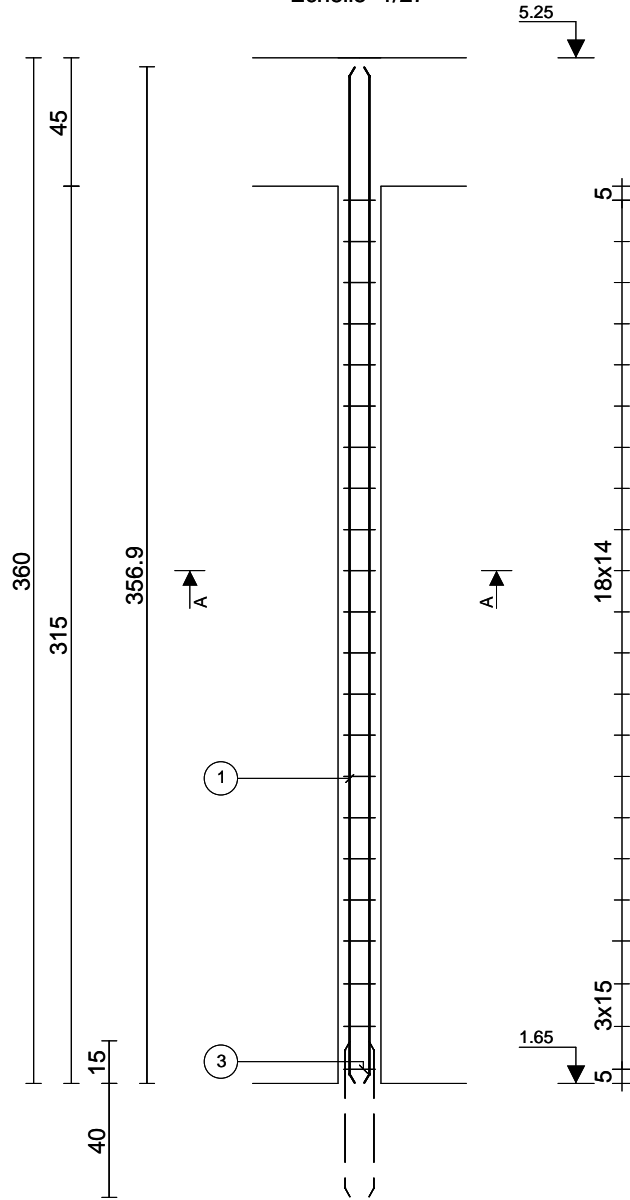


Barre	Lg	Forme
1	5HA8	98 146° 72 146°
2	5HA8	98 146° 72 146°
Barre		Lg/Poids
HA8		9.8/3.9

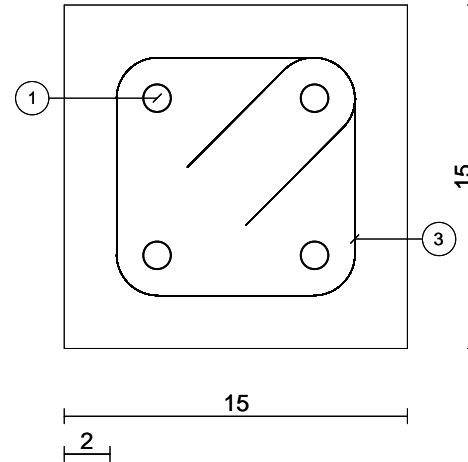
# FERRAILLAGE DES POTEAUX PLOTS ET RAIDISSEURS

KOUELA(GORGO)

Elévation  
Echelle=1/27



Coupe AA Courante  
Echelle=1/3



Barre		Lg	Forme
1	4HA12	357	357
3	22HA6	56	11
Barre		Lg/Poids	
HA6		12.4/2.7	
HA12		14.3/12.7	

Arche Poteau BAEL Version 16.1

Poteau n02 Niveau n01  
PH-RDC

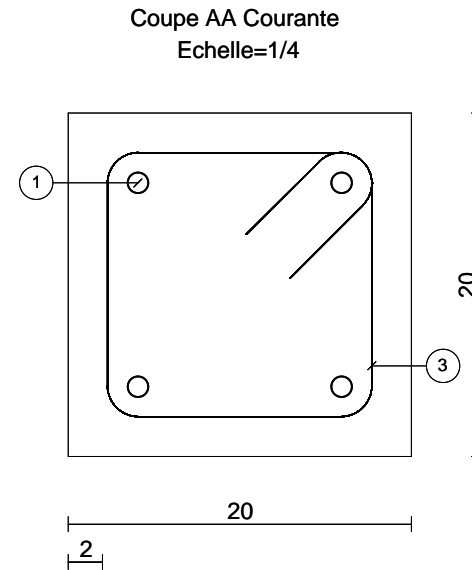
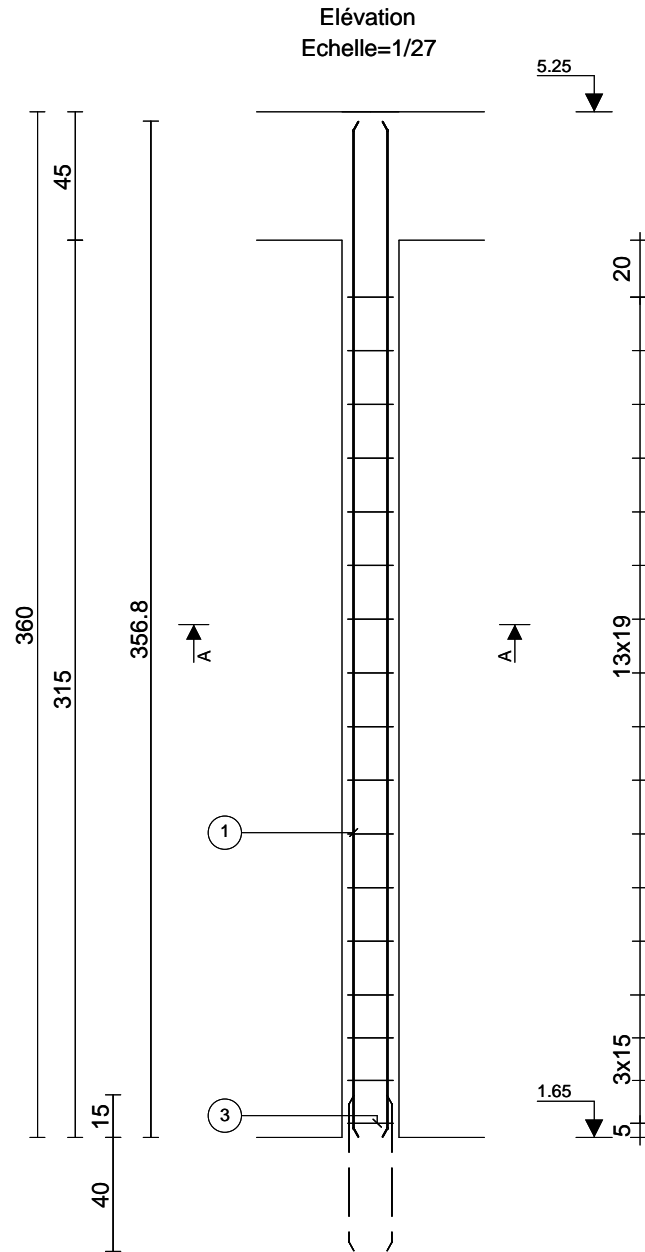
P 2

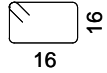
Béton=0.13 m3 Cof=2.5 m²  
Acier=15.5 kg d=123.4 kg/m3

En=2.0 cm

KOUELA(GORGO)

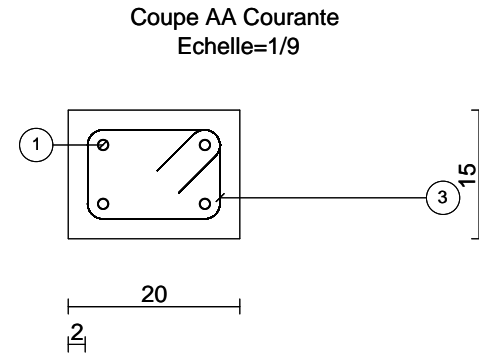
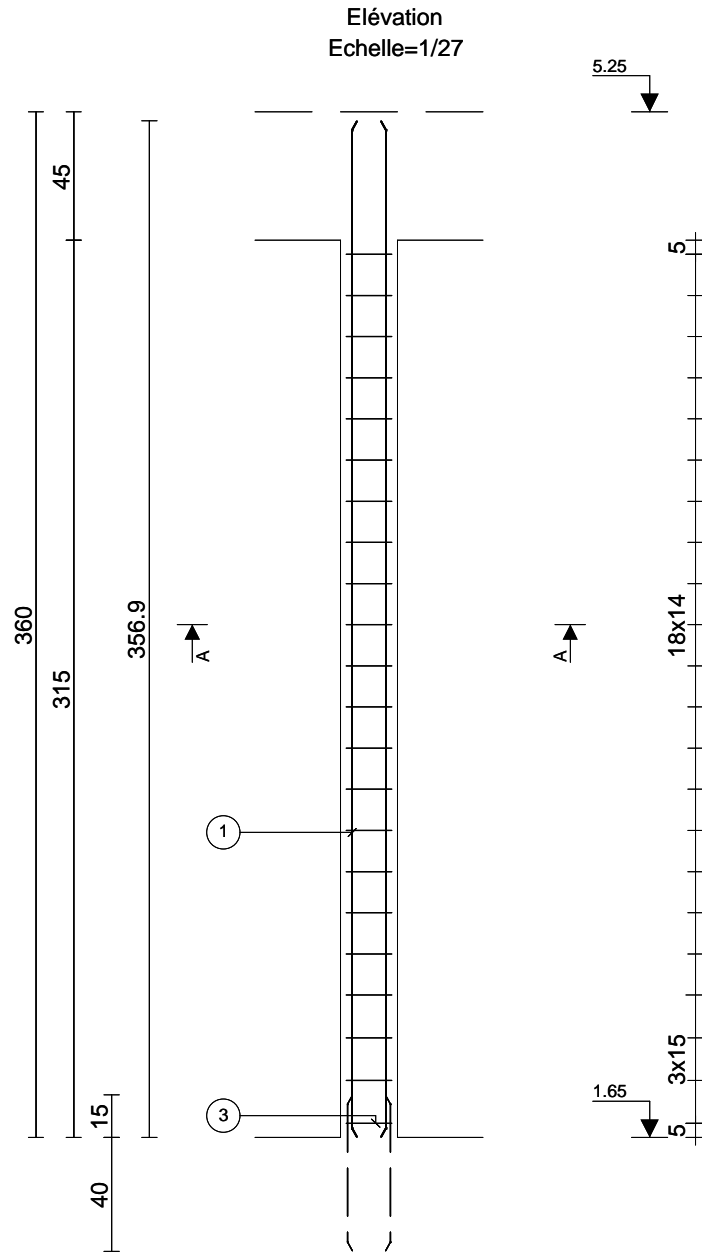
Fi=9.8 mm

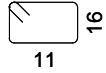


Barre		Lg	Forme
1	4HA12	357	357
3	17HA6	76	
Barre		Lg/Poids	
HA6		12.9/2.9	
HA12		14.3/12.7	

KOUELA(GORGO)

Fi=9.7 mm



Barre		Lg	Forme
1	4HA12	357	357
3	22HA6	66	
Barre		Lg/Poids	
HA6		14.6/3.2	
HA12		14.3/12.7	



Arche Poteau BAEL Version 16.1

Poteau n02 Niveau n01  
PH-RDC

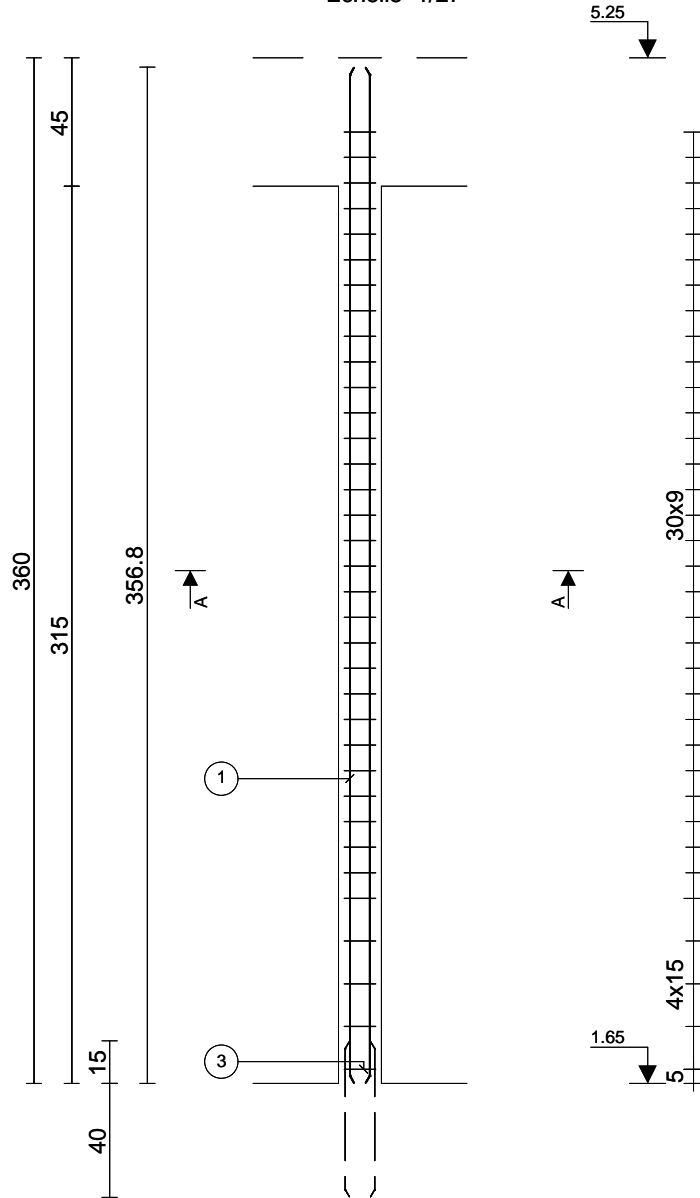
R 2

Béton=0.05 m3 Cof=1.6 m<sup>2</sup>  
Acier=12.4 kg d=262.1 kg/m3  
Fi=8.3 mm

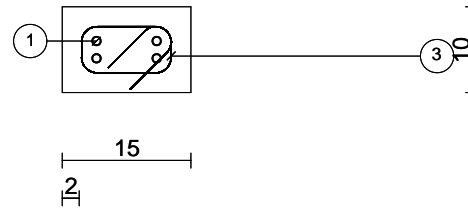
En=2.0 cm

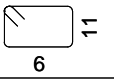
**KOUELA(GORGO)**

Elévation  
Echelle=1/27



Coupe AA Courante  
Echelle=1/9

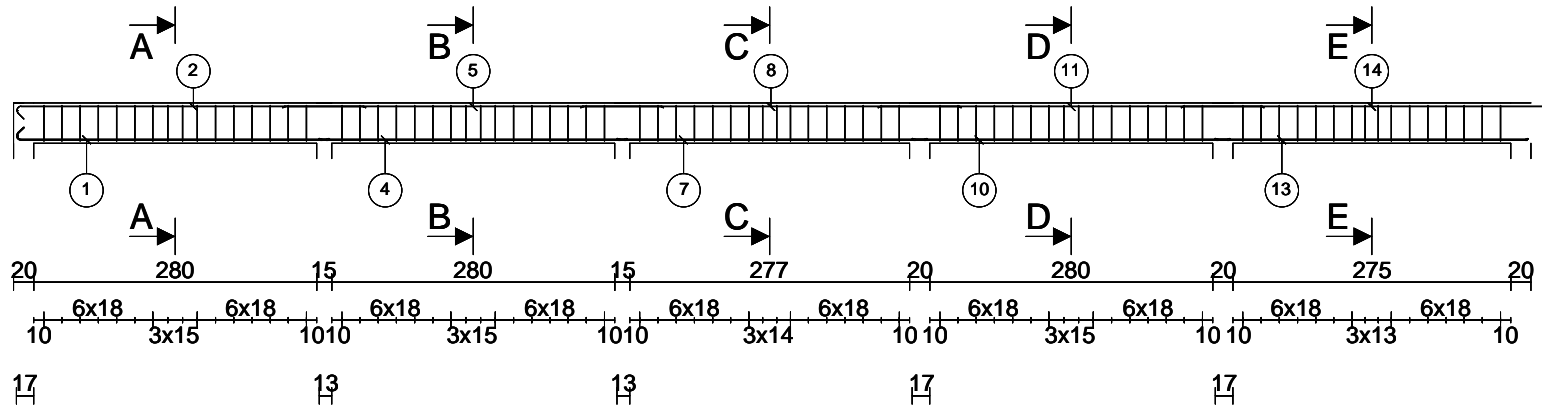


Barre		Lg	Forme
1	4HA10	357	357
3	35HA6	46	
Barre		Lg/Poids	
HA6		16.2/3.6	
HA10		14.3/8.8	

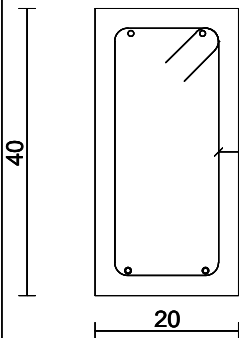
# FERRAILLAGE DES LONGRINES

KOUELA(GORGO)

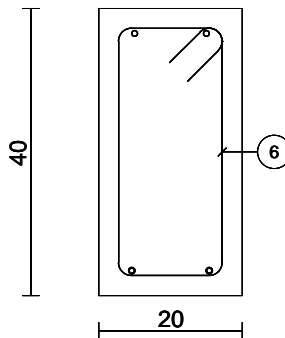
Elévation  
Echelle=1/75



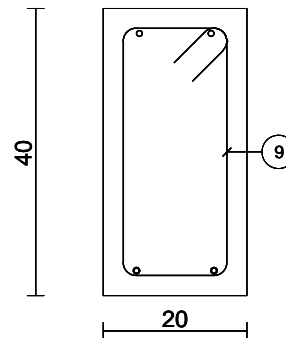
Coupe A-A  
Echelle=1/11



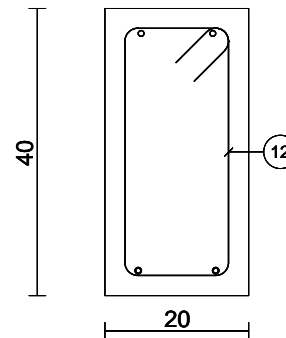
Coupe B-B  
Echelle=1/11



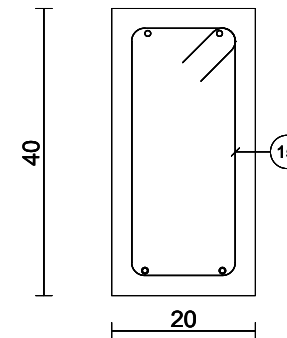
Coupe C-C  
Echelle=1/11



Coupe D-D  
Echelle=1/11



Coupe E-E  
Echelle=1/11



Barre	Lg	Forme
1	2HA8	322 135° 310
2	2HA8	359 346 135°
3	16HA6	112 35 15
4	2HA8	305
5	2HA8	377
6	16HA6	112 35 15
7	2HA8	307
8	2HA8	377
9	16HA6	112 35 15
10	2HA8	315
11	2HA8	382
12	16HA6	112 35 15
13	2HA8	310
14	2HA8	377
15	16HA6	112 35 15
Barre		Lg/Poids
HA6		89.7/19.9
HA8		68.6/27.1

Arche Poutre BAEL Version 16.1

Poutre n01 Niveau n01  
fondations

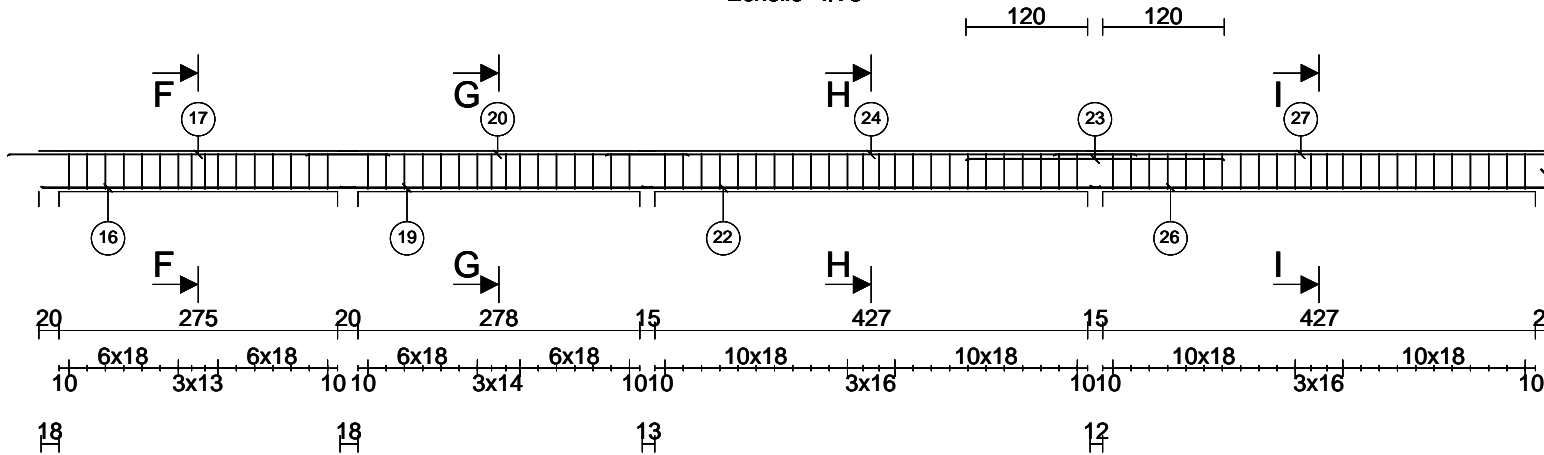
LG1.6 A LG1.9

Béton=1.22 m3  
Acier=54.9 kg d=46.5 kg/m3  
Fi=7.4 mm Cof=14.1 m²

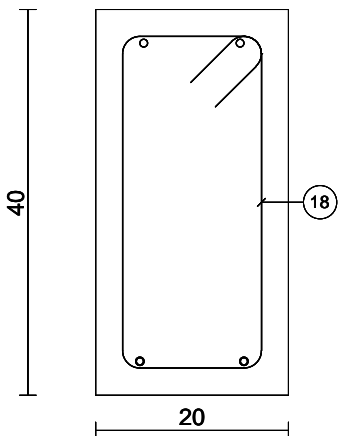
Eb=2.5 cm  
Eh=2.5 cm  
El=2.5 cm

KOUELA(GORGO)

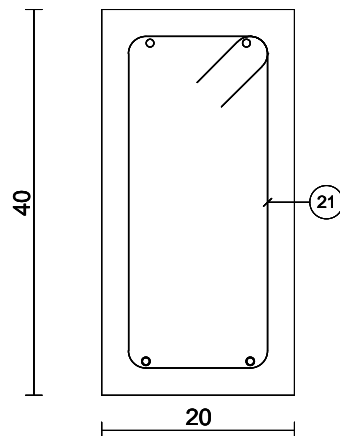
Elévation  
Echelle=1/75



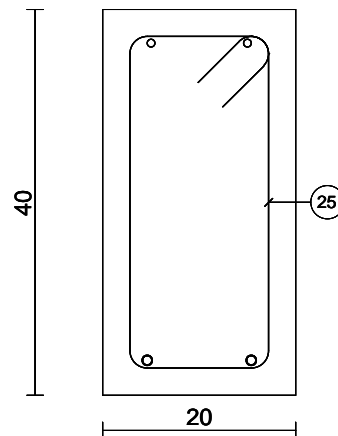
Coupe F-F  
Echelle=1/8



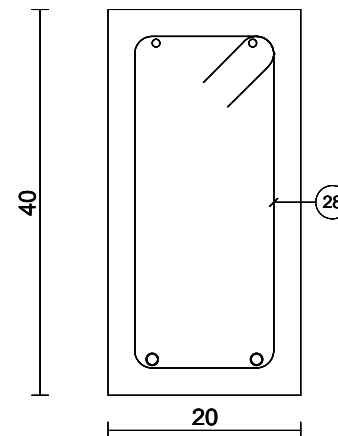
Coupe G-G  
Echelle=1/8



Coupe H-H  
Echelle=1/8



Coupe I-I  
Echelle=1/8



Barre	Lg	Forme
16	2HA8	310
17	2HA8	377
18	16HA6	112 15
19	2HA8	308
20	2HA8	378
21	16HA6	112 15
22	2HA10	452
23	2HA8	255
24	2HA8	524
25	24HA6	112 15
26	2HA12	475 456 135°
27	2HA8	506 135° 493
28	24HA6	112 15
Barre		Lg/Poids
HA6		89.7/19.9
HA8		53.2/21.0
HA10		9.0/5.6
HA12		9.5/8.4

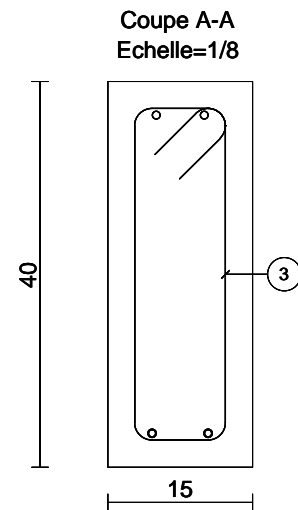
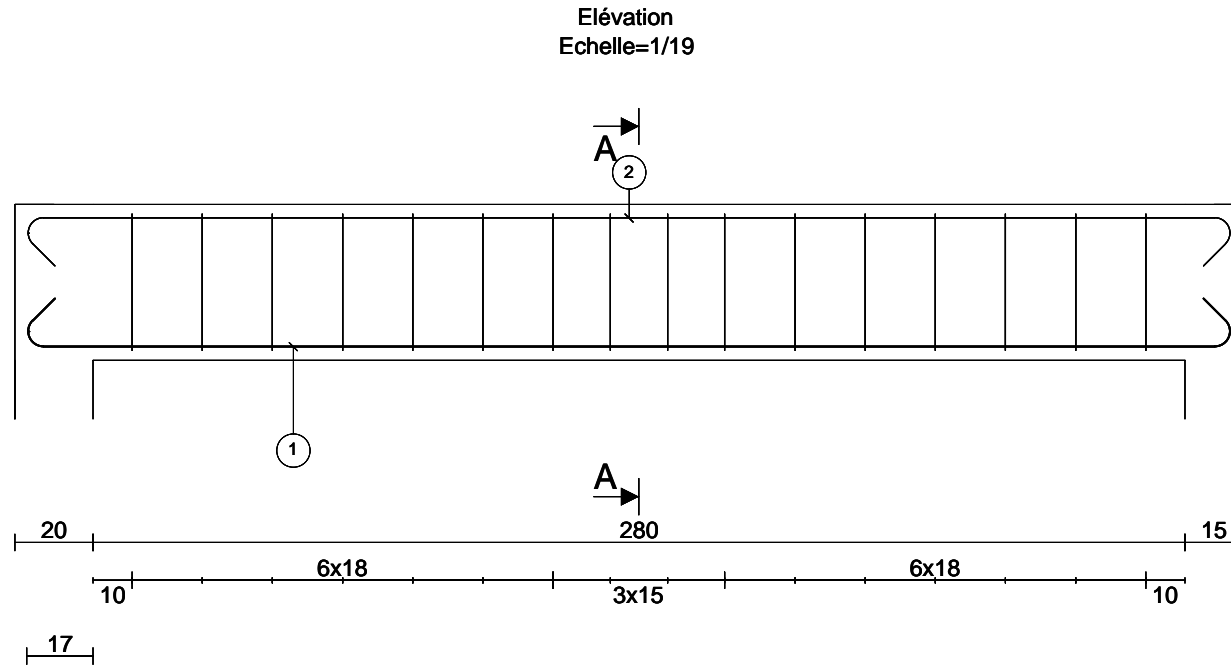
Arche Poutre BAEL Version 16.1

**Poutre n01 Niveau n01  
fondations**  
**KOUELA(GORGO)**

**LG2.1**

Béton=0.19 m3  
Acier=8.9 kg d=49.9 kg/m3  
Fi=7.0 mm Cof=2.7 m<sup>2</sup>

Eb=2.5 cm  
Eh=2.5 cm  
El=2.5 cm



	Barre	Lg	Forme
1	2HA8	335	135° 309 135°
2	2HA8	335	135° 309 135°
3	16HA6	102	35 10
Barre		Lg/Poids	
HA6		16.3/3.6	
HA8		13.4/5.3	

Arche Poutre BAEL Version 16.1

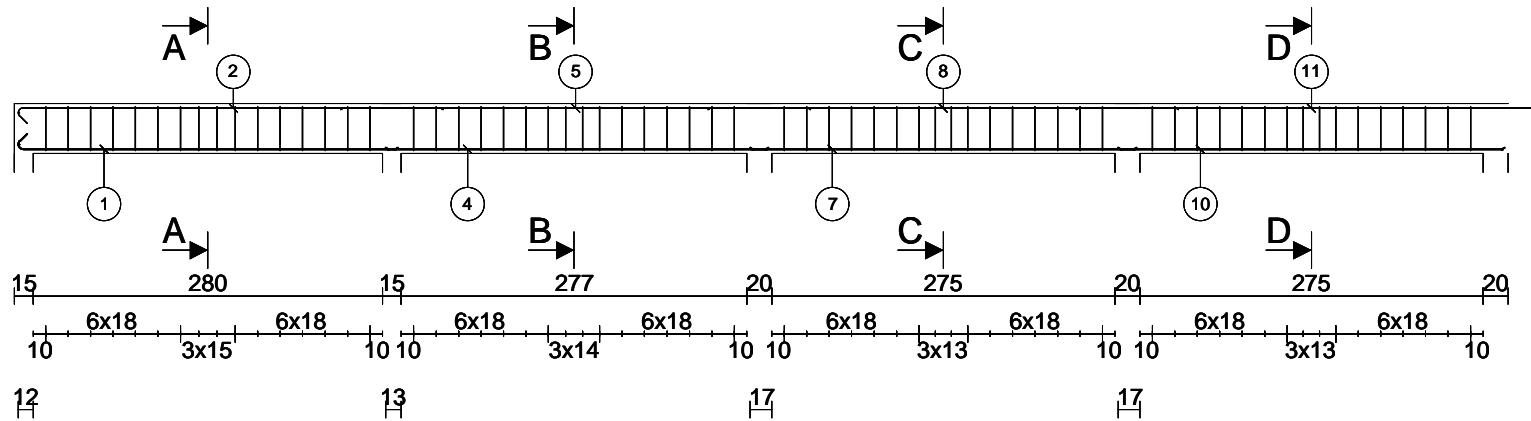
Poutre n01 Niveau n01  
fondations  
**KOUELA(GORGO)**

**LG3.1 A LG3.4**

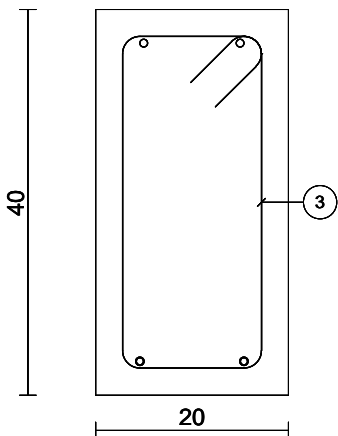
Béton=0.95 m3  
Acier=37.5 kg d=39.7 kg/m3  
Fi=6.9 mm Cof=11.1 m²

Eb=2.5 cm  
Eh=2.5 cm  
El=2.5 cm

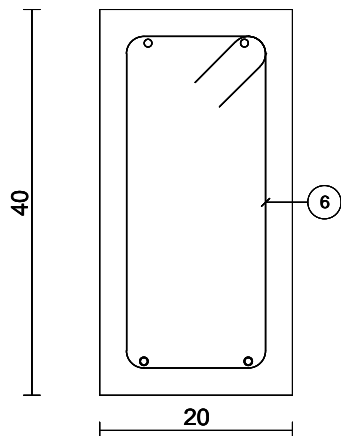
Elévation  
Echelle=1/61



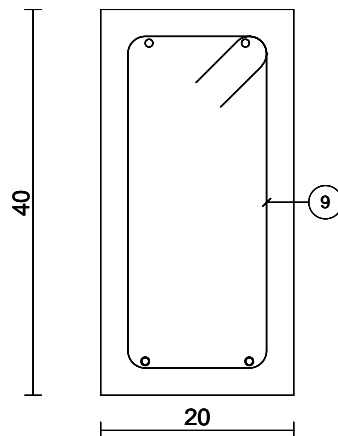
Coupe A-A  
Echelle=1/8



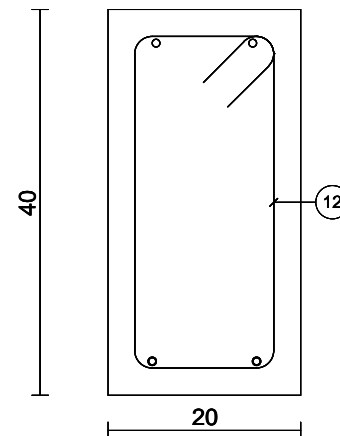
Coupe B-B  
Echelle=1/8



Coupe C-C  
Echelle=1/8



Coupe D-D  
Echelle=1/8



Barre	Lg	Forme
1	2HA8	317 135° 305
2	2HA8	354 341 135°
3	16HA6	112 35 15
4	2HA8	307
5	2HA8	377
6	16HA6	112 35 15
7	2HA8	310
8	2HA8	377
9	16HA6	112 35 15
10	2HA8	310
11	2HA8	377
12	16HA6	112 35 15
Barre		Lg/Poids
HA6		71.8/15.9
HA8		54.6/21.6

Arche Poutre BAEL Version 16.1

Poutre n01 Niveau n01  
fondations

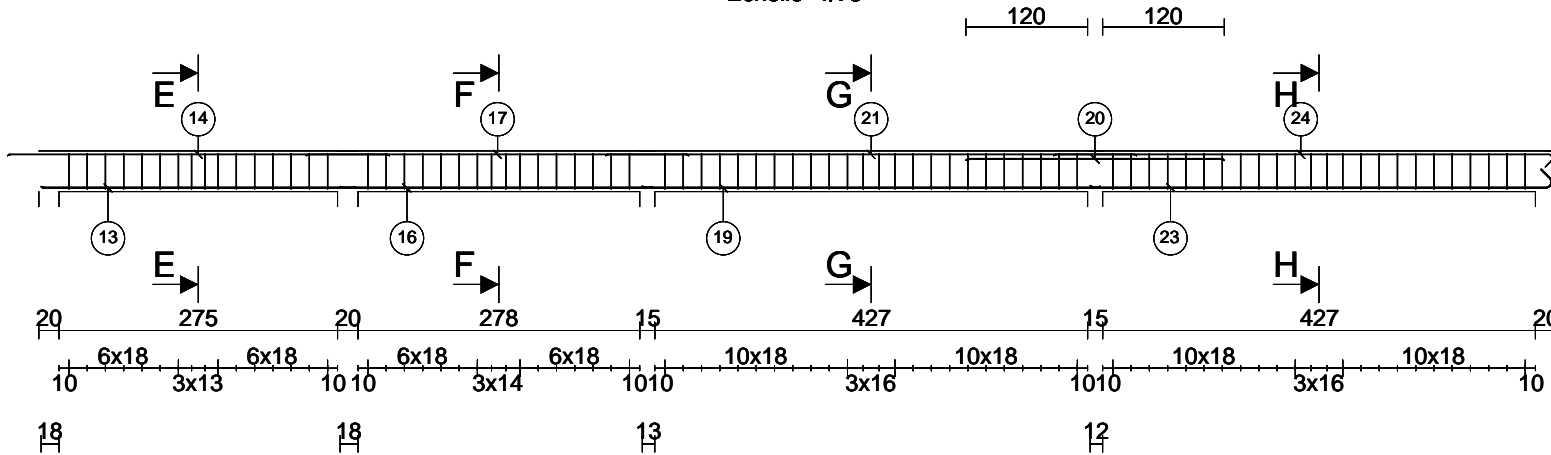
LG3.5 A LG3.8

Béton=1.22 m3  
Acier=54.9 kg d=46.5 kg/m3  
Fi=7.4 mm Cof=14.1 m²

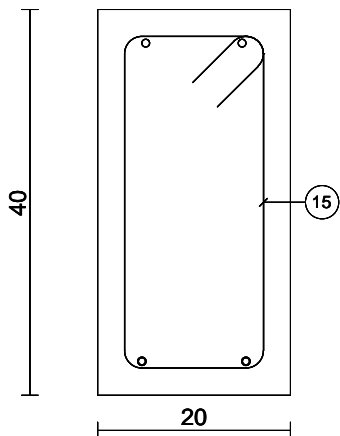
Eb=2.5 cm  
Eh=2.5 cm  
El=2.5 cm

KOUELA(GORGO)

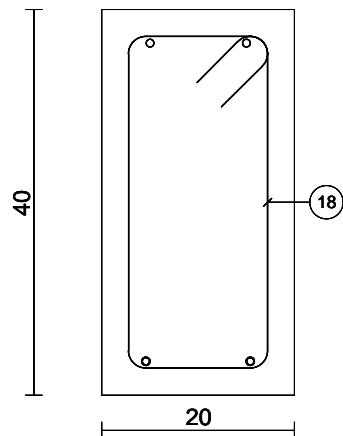
Elévation  
Echelle=1/75



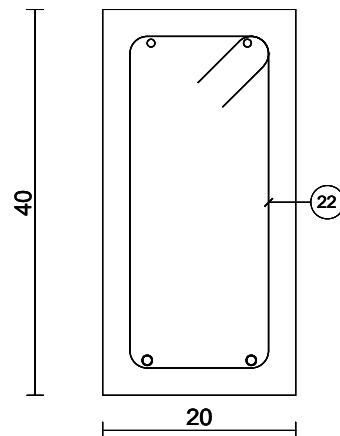
Coupe E-E  
Echelle=1/8



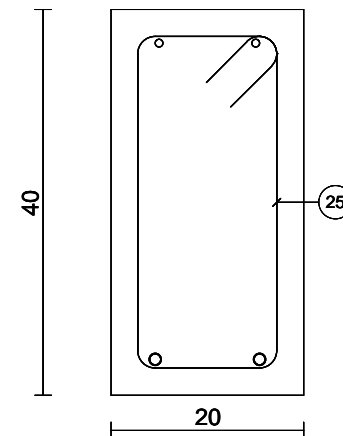
Coupe F-F  
Echelle=1/8



Coupe G-G  
Echelle=1/8



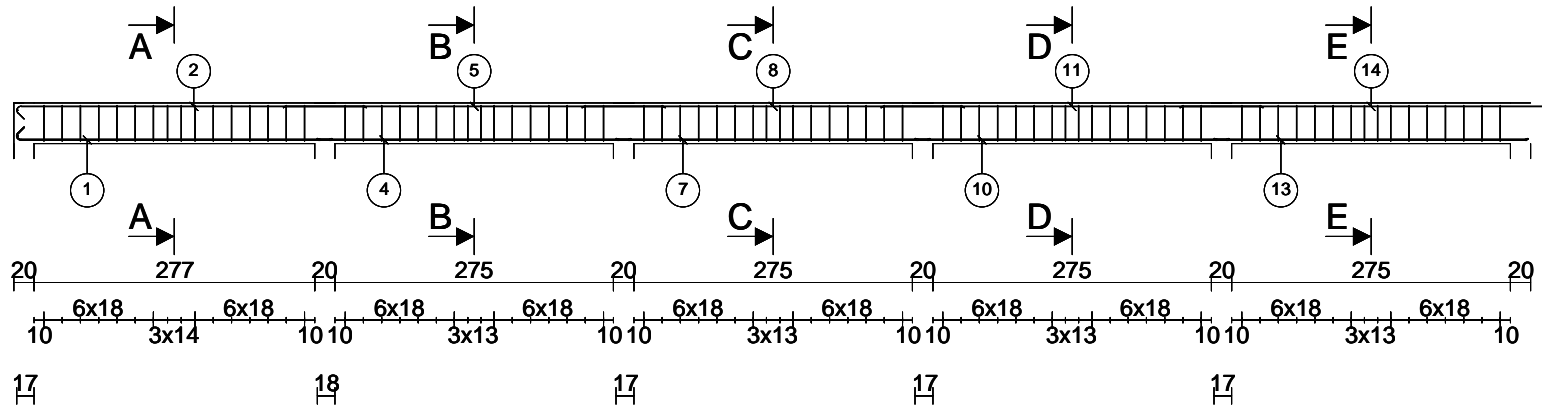
Coupe H-H  
Echelle=1/8



Barre	Lg	Forme
13	2HA8	310
14	2HA8	377
15	16HA6	112
16	2HA8	308
17	2HA8	378
18	16HA6	112
19	2HA10	452
20	2HA8	255
21	2HA8	524
22	24HA6	112
23	2HA12	475
24	2HA8	506
25	24HA6	112
Barre		Lg/Poids
HA6		89.7/19.9
HA8		53.2/21.0
HA10		9.0/5.6
HA12		9.5/8.4

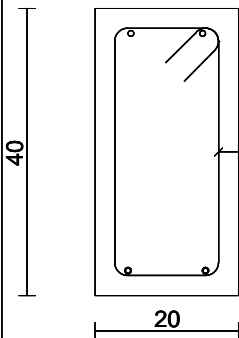
KOUELA(GORGO)

Elévation  
Echelle=1/75

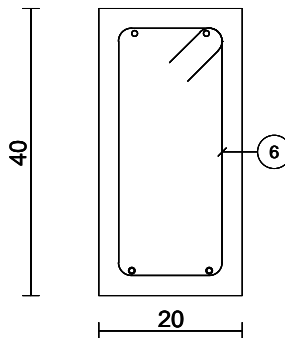


Barre	Lg	Forme
1	2HA8	324 135° 312
2	2HA8	358 345 135°
3	16HA6	112 35 15
4	2HA8	310 310
5	2HA8	377 377
6	16HA6	112 35 15
7	2HA8	310 310
8	2HA8	377 377
9	16HA6	112 35 15
10	2HA8	310 310
11	2HA8	377 377
12	16HA6	112 35 15
13	2HA8	310 310
14	2HA8	377 377
15	16HA6	112 35 15
Barre		Lg/Poids
HA6		89.7/19.9
HA8		68.6/27.1

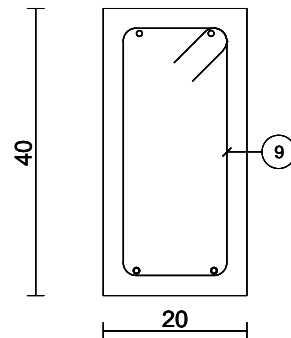
Coupe A-A  
Echelle=1/11



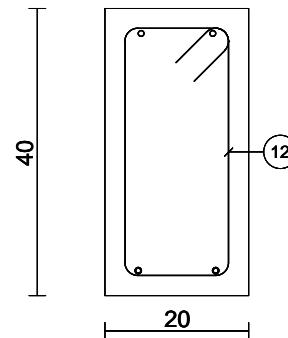
Coupe B-B  
Echelle=1/11



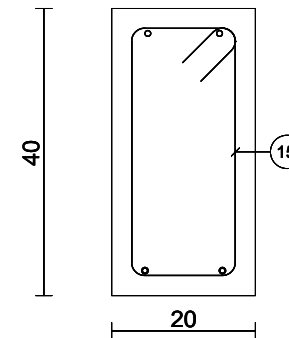
Coupe C-C  
Echelle=1/11



Coupe D-D  
Echelle=1/11



Coupe E-E  
Echelle=1/11



Arche Poutre BAEL Version 16.1

Poutre n01 Niveau n01  
fondations

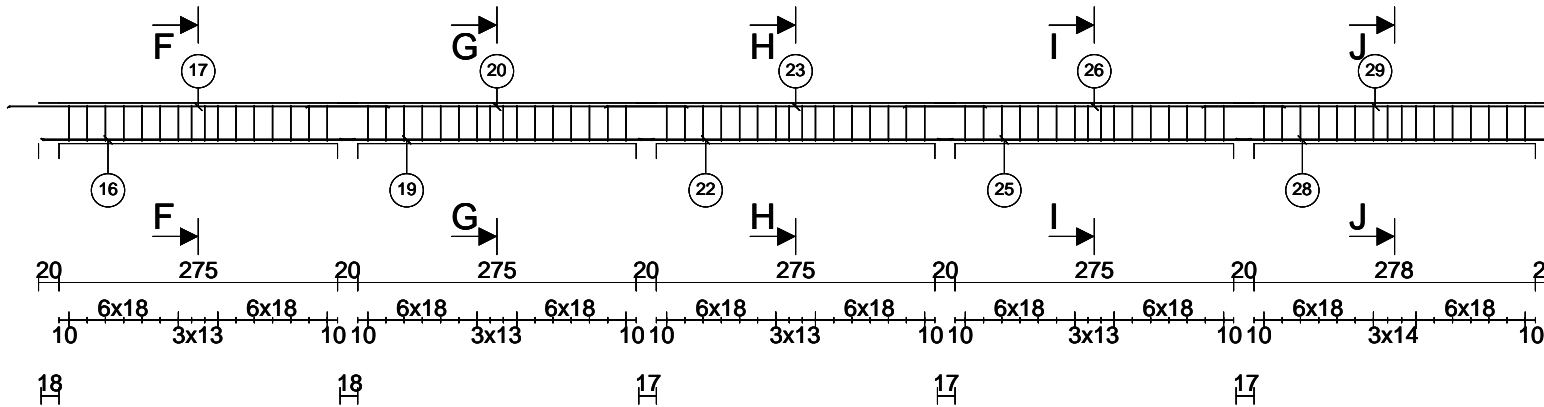
LG4.6 A LG4.10

Béton=1.23 m3  
Acier=47.0 kg d=39.8 kg/m3  
Fi=6.9 mm Cof=13.8 m²

Eb=2.5 cm  
Eh=2.5 cm  
El=2.5 cm

KOUELA(GORGO)

Elévation  
Echelle=1/75



Barre	Lg	Forme
16	2HA8	310
17	2HA8	377
18	16HA6	112 35 15
19	2HA8	310
20	2HA8	377
21	16HA6	112 35 15
22	2HA8	310
23	2HA8	377
24	16HA6	112 35 15
25	2HA8	310
26	2HA8	377
27	16HA6	112 35 15
28	2HA8	325 312 135°
29	2HA8	359 135° 346
30	16HA6	112 35 15
Barre		Lg/Poids
HA6		89.7/19.9
HA8		68.7/27.1

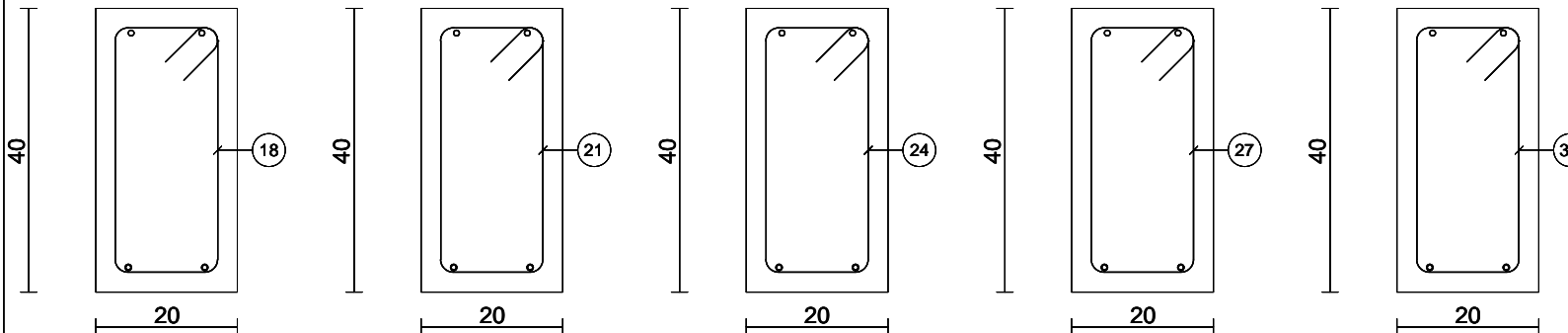
Coupe F-F  
Echelle=1/11

Coupe G-G  
Echelle=1/11

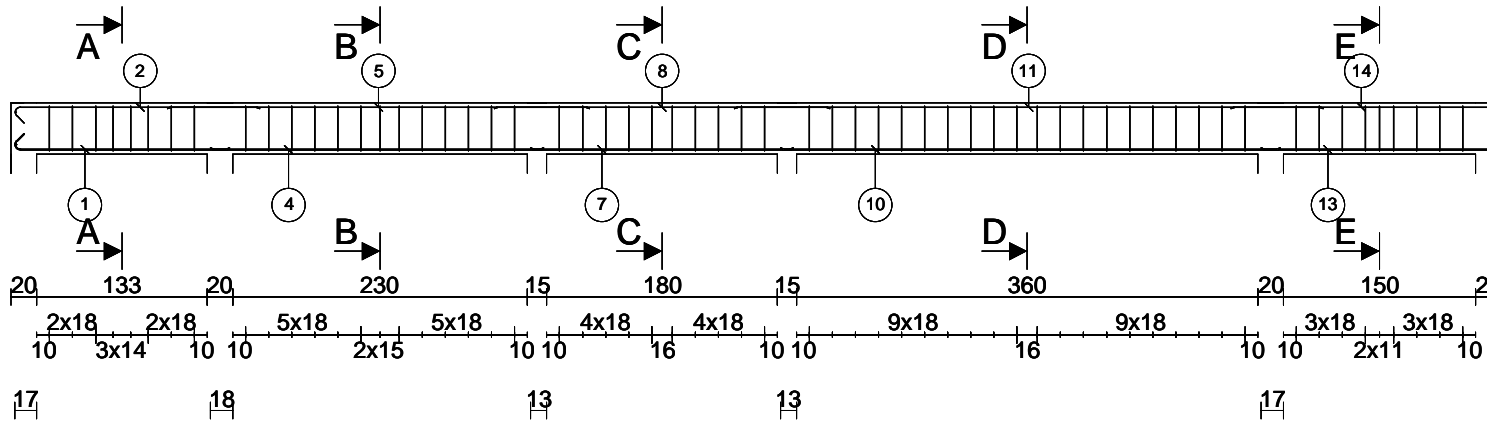
Coupe H-H  
Echelle=1/11

Coupe I-I  
Echelle=1/11

Coupe J-J  
Echelle=1/11



Elévation  
Echelle=1/59



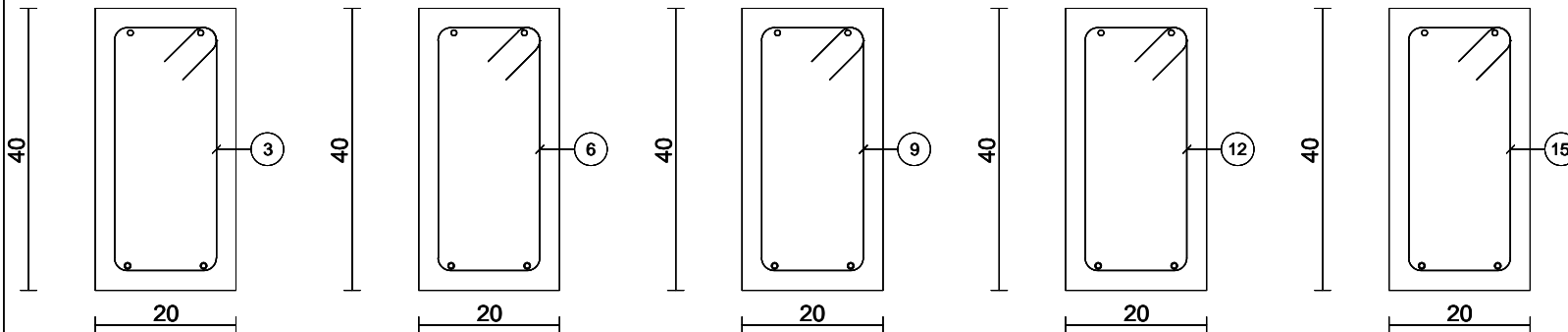
Coupe A-A  
Echelle=1/11

Coupe B-B  
Echelle=1/11

Coupe C-C  
Echelle=1/11

Coupe D-D  
Echelle=1/11

Coupe E-E  
Echelle=1/11

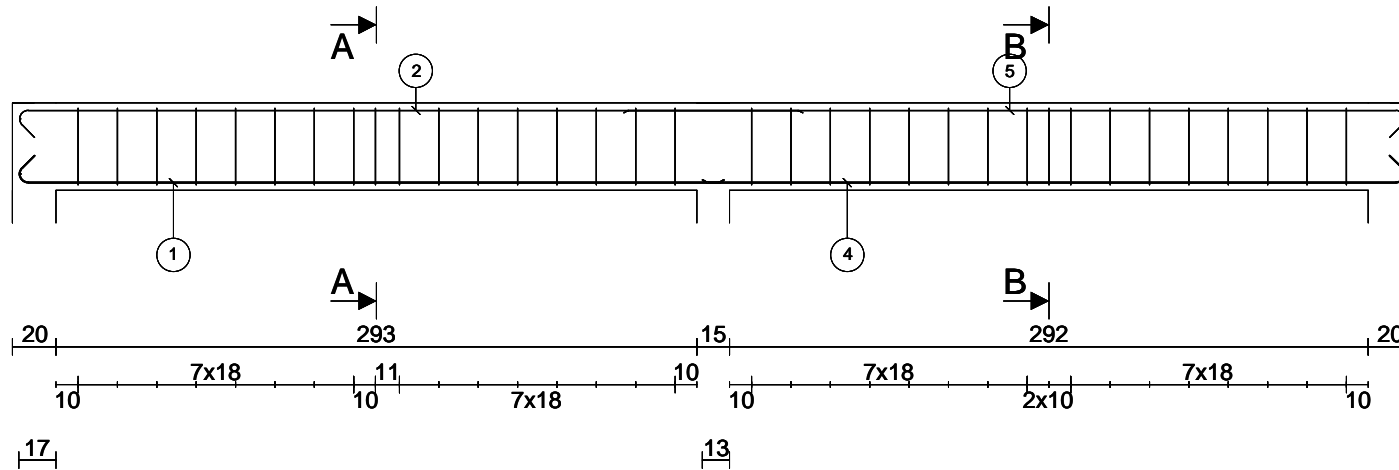


Barre	Lg	Forme
1	2HA8	180 135° 168
2	2HA8	204 191 135°
3	8HA6	112 35 15
4	2HA8	260
5	2HA8	330
6	13HA6	112 35 15
7	2HA8	205
8	2HA8	262
9	10HA6	112 35 15
10	2HA8	390
11	2HA8	460
12	20HA6	112 35 15
13	2HA8	197 184 135°
14	2HA8	221 135° 208
15	9HA6	112 35 15
Barre		Lg/Poids
HA6		67.3/14.9
HA8		54.2/21.4

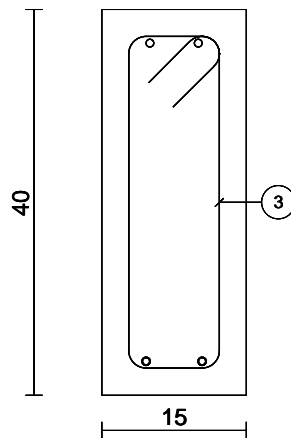


**KOUELA(GORGO)**

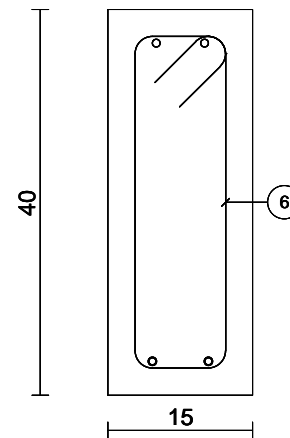
Elévation  
Echelle=1/35



Coupe A-A  
Echelle=1/8

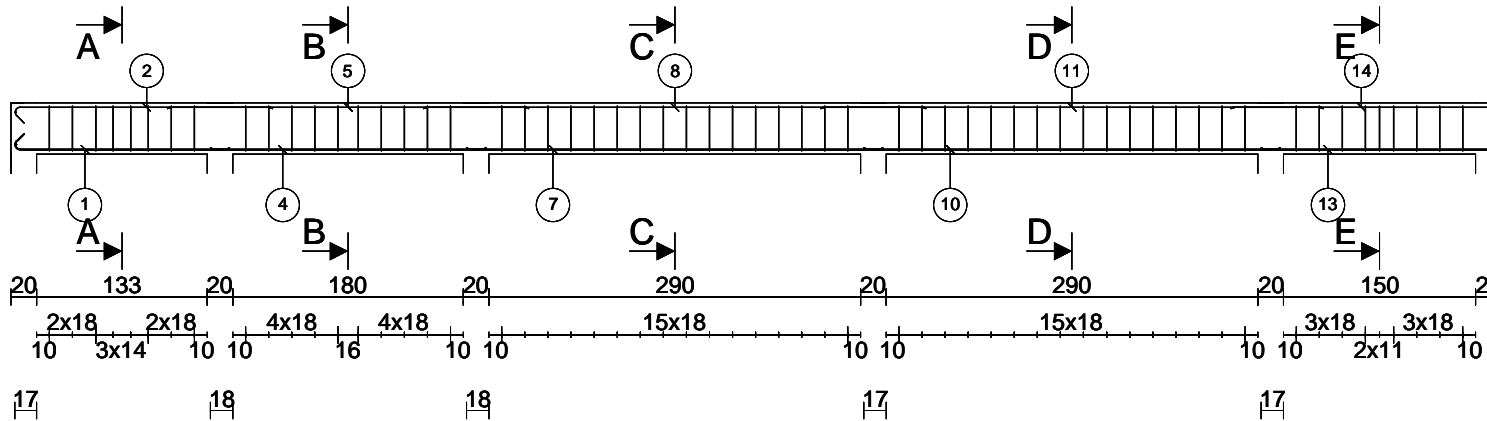


Coupe B-B  
Echelle=1/8



Barre	Lg	Forme
1 2HA8	335	135° 323
2 2HA8	372	359 135°
3 17HA6	102	35 10
4 2HA8	334	322 135°
5 2HA8	371	135° 358
6 17HA6	102	35 10
Barre		Lg/Poids
HA6		34.7/7.7
HA8		28.2/11.2

Elévation  
Echelle=1/59



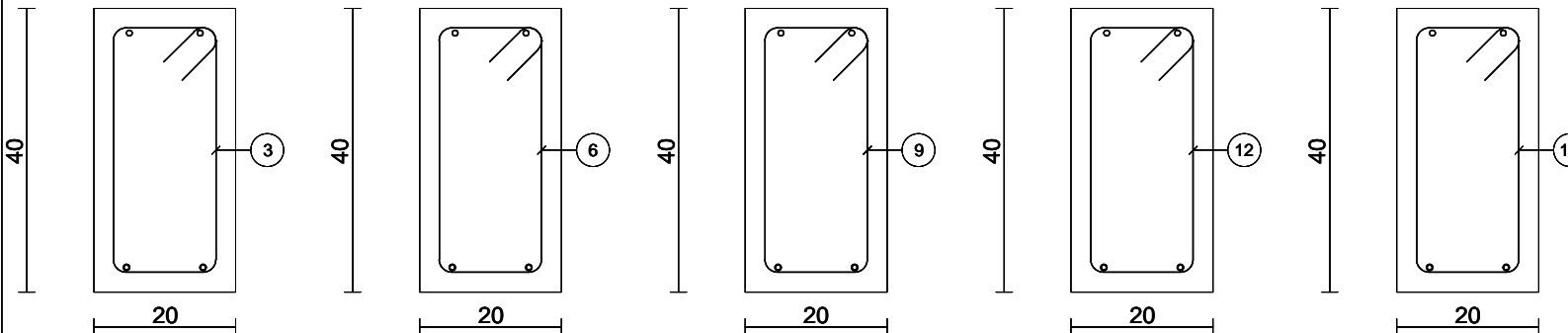
Coupe A-A  
Echelle=1/11

Coupe B-B  
Echelle=1/11

Coupe C-C  
Echelle=1/11

Coupe D-D  
Echelle=1/11

Coupe E-E  
Echelle=1/11



Barre	Lg	Forme
1	2HA8	180 135° 168
2	2HA8	214 201 135°
3	8HA6	112 35 15
4	2HA8	215
5	2HA8	282
6	10HA6	112 35 15
7	2HA8	325
8	2HA8	392
9	16HA6	112 35 15
10	2HA8	325
11	2HA8	392
12	16HA6	112 35 15
13	2HA8	197 184 135°
14	2HA8	221 135° 208
15	9HA6	112 35 15
Barre		Lg/Poids
HA6		66.2/14.7
HA8		54.9/21.7