

**Nombre:**  
**Jose Gabriel Mérida Nájera**

**Docente:**  
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**MATERIA:**  
**Costos y presupuestos**

**CUATRIMESTRE:**  
**5**

**FECHA:**  
**23/01/2024**

Contratrabe

$$F'c = 200 \text{ kg/cm}^2$$

$$V = .35 \times 4 \times 30 = .42$$

$$\text{Cemento} = 7 \times .42 = 2.94$$

$$\text{Arena} = .504 \times .42 = .21168$$

$$\text{Grava} = .756 \times .42 = .31752$$

Total  
10%

10%

3.234

0.232848

0.399168

Total  
10%

10%

$$V = .15 \times 3 \times .20 = 0.09$$

$$\text{Cemento} = 7 \times .09 = .63$$

$$\text{Arena} = .504 \times .09 = .04536$$

$$\text{Grava} = .756 \times .09 = .06804$$

Total  
10%

10%

0.693

0.049896

0.074844

Cadena de desplantante

$$V = .15 \times 3.8 \times .20 = .114$$

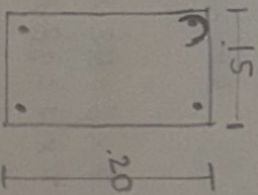
$$\text{Cemento} = 7 \times .114 = .798$$

$$\text{Arena} = .504 \times .114 = .057456$$

$$\text{Grava} = .756 \times .114 = .086184$$

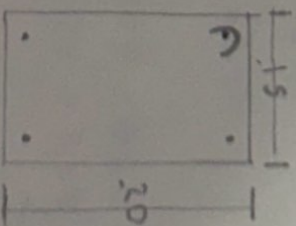
Cadena de desplante  
de 15x20 cm

4  $\phi$  #3, E#2 @ 15 cm



Castillo

4  $\phi$  #3, E#2 @ 15 cm



$$\text{Costo} = 15 \times 16.735 = 2510.25$$

Varilla	ML	kg/m	Peso	15%	Total
3	16	0.56	8.96	1.344	10.304
2	19.6	0.25	4.9	0.735	5.635
Total	—	—	—	—	15.939
Alambre de amarre	—	—	—	—	0.796

16.735

Material	Cantidad	Unidad
Concreto $f'c=100 \text{ kg/cm}^2$		
Cemento	5	Bultos
Arena	0.63	$\text{m}^3$
Grava	0.72	$\text{m}^3$

Grava = 8

Arena = 7

$$5 \times 8 = 40 \times 0.018 = 0.72$$

$$5 \times 7 = 35 \times 0.018 = 0.63$$

Material	Cantidad	Unidad
Concreto $f'c=200 \text{ kg/cm}^2$		
Cemento	7	Bultos
Arena	0.504	$\text{m}^3$
Grava	0.756	$\text{m}^3$

Grava = 6

Arena = 4

$$7 \times 6 = 42 \times 0.018 = 0.756$$

$$7 \times 4 = 28 \times 0.018 = 0.504$$

Planchilla

$$f'c = 100 \text{ kg/cm}^2$$

$$V = .05 \times 4 \times .80 = .16 \text{ m}^3$$

$$\text{Cemento} = 5 \times .16 \text{ m}^3 = 0.80$$

$$\text{Arena} = .63 \times .16 = 0.1008$$

$$\text{Grava} = .72 \times .16 = 0.1152$$

Total  
10%

0.88  
0.11088  
0.122672

Zapata

$$f'c = 200 \text{ kg/cm}^2$$

$$V = .15 \times 4 \times .80 = .48$$

$$\text{Cemento} = 7 \times .48 = 3.36$$

$$\text{Arena} = .504 \times .48 = .24192$$

$$\text{Grava} = .756 \times .48 = .36288$$

Total  
10%

3.696  
0.266112  
0.399168
