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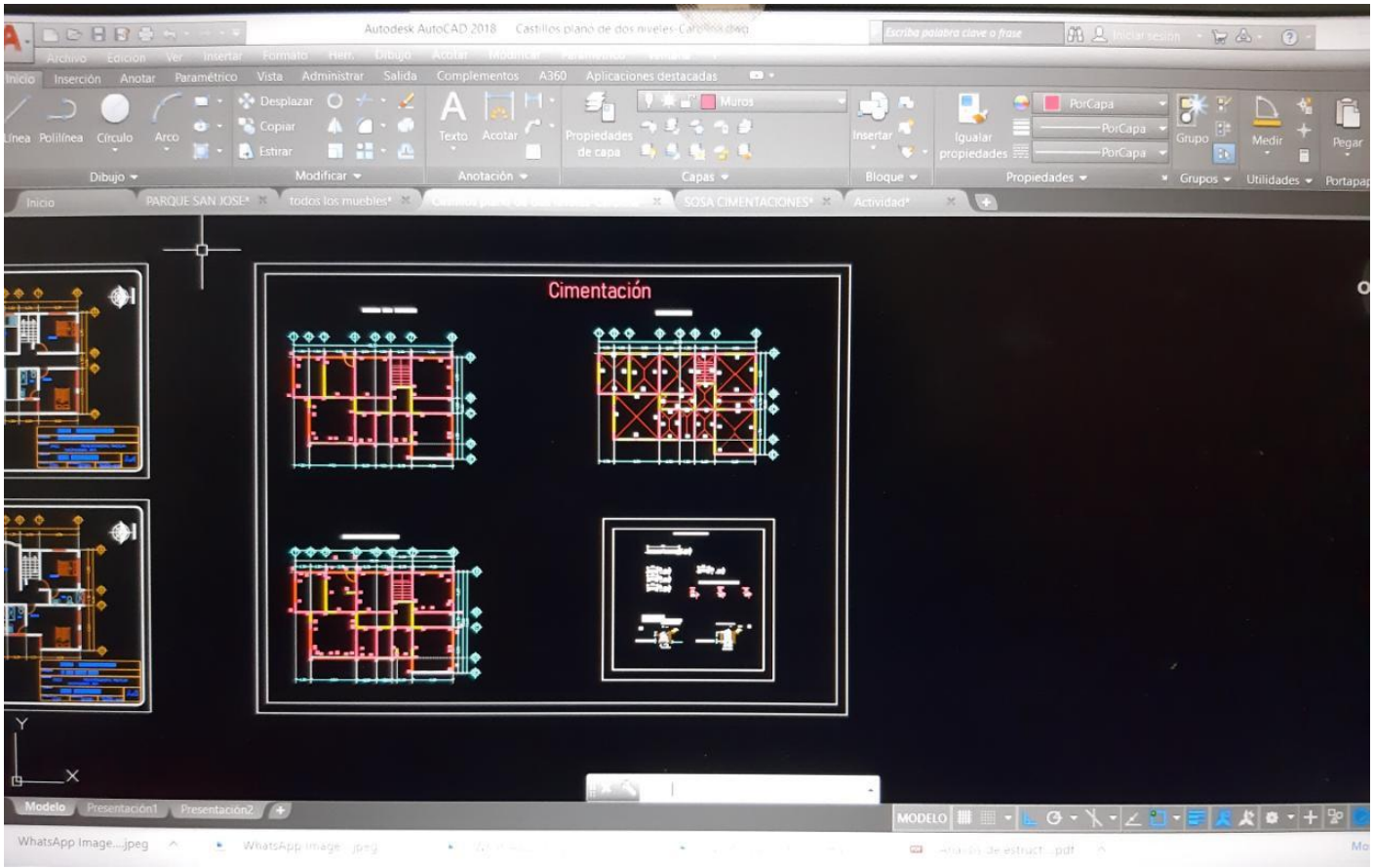
Nombre del trabajo: Zapata de piedra dimensiones

Materia: Análisis de procesos constructivos

Grado: 5° cuatrimestre

Grupo: Arquitectura

Comitán de Domínguez Chiapas a 15 de marzo de 2021.


Autodesk AutoCAD 2018
Inicio
Inserción
Anotar
Paramétrico
Vista
Administrar
Salida
Complementos
A360
Aplicaciones destacadas
Dibujo
Modificar
Anotación
Capas
Bloque
Propiedades
Grupos
Utilidades
Inicio
PARQUE SAN JOSE*
todos los muebles*
SOSA CIMENTACIONES*
Actividad*
Cimentación
Modelo
Presentación1
Presentación2
MODELO

Zapata de Piedra braza

> Eje 1: (Tablero I) Σ FCO = 3.37588471134

Losas = 3.6375 (1.580 t/m²) = 2.109975 t/m
3.6375 (.610 t/m²) = 2.218875 t/m
> 4.328625 / 3.9250
1.102834394491

Muros = 2.5 (0.27 t/m) (2) = 1.35 t/m Σ = 2.596834394491 x 1.3 =

Cerramiento = .15 x .20 x 2.4 = .072 (2) = .144 3.37588471134

> Eje 2 = (Tablero VI)

Losas = 5.0625 (.580 t/m²) = 2.93625 t/m
5.0625 (.610 t/m²) = 3.088125 t/m
> 6.024375 / 4.5 = 1.33875

Muros = 2.5 (0.27 t/m) (2) = 1.35 Σ = 2.832375 t/m x 1.3 =

Cerramiento = .15 x .20 (2.4) (2) = .144 t/m 3.682575 t/m

> Eje 3 = (Tablero II)

Losas = 3.6375 (.580 t/m²) = 2.109975 t/m
3.6375 (.610 t/m²) = 2.218875 t/m
> 4.328625 / 3.9250
1.102834394491

Muros = 2.5 (0.27 t/m) (2) = 1.35 t/m Σ = 2.596834394491 x 1.3 =

Cerramientos = .15 x .20 (2.4) (2) = .144 t/m 3.37588471126

> Eje 4: (Tablero VI)

Losas = 5.0625 (.580 t/m²) = 2.93625
5.0625 (.610 t/m²) = 3.088125
> 6.024375 / 4.5
1.33875

Muros = 2.5 (0.27 t/m) (2) = 1.35 t/m Σ = 2.832375 t/m x 1.3 =

Cerramientos = .15 x .20 x 2.4 x 2 = .144 t/m 3.682575 t/m

> Eje 8 = (Tablero XIII)

Losas 4.83 (.580) = 2.813
4.85 (.610) = 2.9585
> 5.7715 / 4.125 =
1.3042527855

Muros = 2.5 (0.27 T/m) (2) = 1.35 t/m

Cerramientos = .15 x .20 x 2.4 x 2 = .144 t/m

Σ = 2.798293785 t/m x 1.3 = 3.637781920 9

> Eje A = (Tablero V)

Losas = 3.9986 (.580) = 2.319188
3.9986 (.610) = 2.439146
> 4.758534 / 4
1.189 = 835

Muros = 2.5 (0.27 t/m) (2) = 1.35 t/m

Cerramientos = .15 x .20 x 2.4 x 2 = .144 t/m

Σ = 2.683583 5 x 1.3 = 3.488658 55

> Eje B = (Tablero VI)

Losas = 5.0625 (.580) = 2.93625
5.0625 (.610) = 3.088125
> 6.024375 / 4.5
1.33875

Muros = 2.5 (0.27 t/m) (2) = 1.35 t/m

Cerramientos = .15 x .20 x 2.4 x 2 = .144 t/m

Σ = 2.832375 t/m x 1.3 = 3.682575 t/m

> Eje C = (Tablero XIII)

4 (.580) = 2.32
> 4.76 / 4 =

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m Σ = 2.59683439 49 x1.3 =

Cerramientos = .15x.20(2.4)(2) = .144 t/m 3.375884 7126

> Eje 4: (Tablero VI)

Losas = 5.0625 (.580 t/m²) = 2.93625 / 5.0625 (.610) = 3.088125 > 6.024375/4.0 = 1.33875

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m Σ = 2.832751 t/m x 1.3 =

Cerramientos = .15x.20x2.4x2 = .144 t/m 3.68257 51 t/m

> Eje 5 = (Tablero XI)

Losas = 2.025 (.580 t/m²) = 1.1745 / 2.025 (.610 t/m²) = 1.23525 > 2.40975/3.0250 = 0.7965853566 t/m

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m Σ = 2.277658 5366 x1.3 =

Cerramientos = .15x.20x2.4x2 = .144 t/m 2.960956 0976

> Eje 6 = (Tablero III)

Losas = 3.2062 (.580 t/m²) = 2.207596 / 3.2062 (.610 t/m²) = 2.321782 > 4.529378/3.9250 = 1.153981656 t/m

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m Σ = 2.647981 65 61 x 1.3 =

Cerramientos = .15x.20x2.4x2 = .144 t/m 3.442376 1529

> Eje 7 = (Tablero XIII)

Losas = 4.85(.580) = 2.813 / 4.85 (.610) = 2.9585 > 5.7715/4.1250 = 1.39942987 t/m

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m Σ = 2.798293785 3 t/m x 1.3 =

Cerramiento = .15x.20x2.4x2 = .144 t/m 3.637781 9209

> Eje B = (Tablero VI)

Losas = 5.0625(.580) = 2.93625 / 5.0625 (.610) = 3.088125 > 6.024375/4.0 = 1.33875

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m

Cerramientos = .15x.20x2.4x2 = .144 t/m

Σ = 2.832751 t/m x 1.3 = 3.68257 51 t/m

> Eje C = (Tablero XIII)

Losas = 4(.580) = 2.32 / 4(.610) = 2.44 > 4.76/4 = 1.19

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m

Cerramientos = .15x.20x2.4x2 = .144 t/m

Σ = 2.6841 t/m x 1.3 = 3.4893 t/m

> Eje D = (Tablero VI)

Losas = 5.0625 (.580) = 2.93625 / 5.0625 (.610) = 3.088125 > 6.024375/4.0 = 1.33875

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m

Cerramientos = .15x.20x2.4x2 = .144 t/m

Σ = 2.832751 t/m x 1.3 = 3.68257 51 t/m

> Eje E = (Tablero XIII)

Losas = 4(5.80) = 2.32 / 4(.610) = 2.44 > 4.76/4 = 1.19

Muros = 2.5(0.27 t/m)(2) = 1.35 t/m

Cerramientos = .15x.20x2.4x2 = .144 t/m

Σ = 2.6841 t/m x 1.3 = 3.4892 t/m

Sobrecarga maxima de cimentacion en zapata intermedia

$\Sigma F_c Q = 3.6825751 t/m$

Datos =

$\Sigma F_c Q = 3.6825751 t/m$

Corona min = 1.20m = 30cm

$r = 8 ton/m^2$

$L = 100cm = 1m$

Formula

$\frac{\Sigma F_c Q}{A} z_1 = \frac{\Sigma F_c Q}{r} = A$

$B = \frac{A}{L}$ $B \geq 60cm$

$T = \frac{B-c}{2}$

$H = tang(60°)(Vuelo)$

Sustitución:

$\frac{3.6825751 t/m}{8 ton/m^2} = 0.46$

$A = 0.46m$

$B = \frac{0.46m}{1m} = 0.46m = .50$

$B = 0.60m$

$T = \frac{.60 - .30}{2} = .15$

$T = 0.15m$

$H = tang(60°)(.25) = .25$

$H = 0.60$

Medidas minimas de zapata intermedia:

$0.60 \times 0.60 \times 0.30$

Ciudad = 0.15

Sobrecarga maxima en cimentación de zapata de colindancia
3.6377819209 t/m

Datos

$\Sigma FCQ = 3.6377819209\ t/m$

Corona min = 0.30m = 30cm

$r = 8\ ton/m^2$

$L = 100cm = 1m$

Formula

$\frac{\Sigma FCQ}{A} < r = \frac{\Sigma FCQ}{r} = A$

$B = \frac{A}{L}$ $B \geq .60m$

$T = \frac{B - C}{2}$

Sustitución:

$\frac{3.6377819209\ t/m}{8} =$

$A = 0.4547$

$B = \frac{0.4547}{1m} = 0.4547$

$B = 0.60m$

$T = \frac{0.60 - 0.30}{2} = 0.15$

$T = 0.15m$

Medidas minimas de zapata de colindancia

$0.60m \times 0.60m \times 0.30m$

Talud = 0.15m

$H = tang(60)(vuelo)$

$H = tang(60°)(15) = 25$

$H = 0.60m$