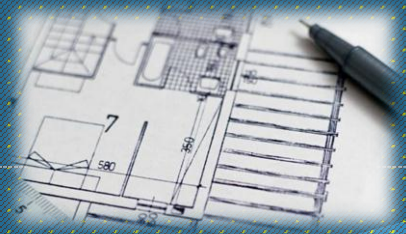
UNIVERSIDAD DEL SURESTE



Nombre del alumno:
Luis Fernando calvo Jiménez
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Nombre del docente:
Pedro Alberto García López
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Materia:
Analisis de estructuras

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ARQUITECTURA Tquinto
CUATRIMESTRE

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Calculo de Cimentación.

Eje A. Tramo 5-4.

losa de Azotea. $.635 \times 15.49 = \frac{9.8361 \text{ T/m}^2}{4.65}$

Losa de Intermedio $.658 \times 15.99 = \frac{10.1924 \text{ T/m}^2}{4.65}$

Cadena de cerramiento. $(0.15 \times 0.25)(2.4) = 0.09 \times 2 = 0.18$ t/m

muros a 2.70 m. de altura: $2.70 (0.27 \text{ ton}) = 0.729$ ton/m

$0.729 \times 2 = 1.458$ t/m.

Pesos totales.

losa Azotea = 2.115 T/m
Los Inter = 2.192 T/m
cadenas = 0.18 T/m
muros = 1.458 t/m

Total = 5.945 t/m. x 1.3
= 7.7285 T/m.

Resistencia del suelo = 8 ton/m^2.

Base = $\frac{7.7285 \text{ t/m}}{8 \text{ toneladas/m}^2} = 0.966$

= 1.00 m

Talud = $\frac{1 \text{ m} - 30 \text{ corona}}{2} = 0.35$ m

H = Tan 60° x 0.70 = 120 cm.
zapata Colindante.

Eje A. Tramo 6-5.

Losa de azotea = 0.730 ton x 10.5 = (1.665 ton/m2) / 3.15
losa Intermedio = 0.635 ton x 10.5 = (6.668 ton/m^2) / 3.15
Cadenas = 0.18 t/m
muros. = 1.458 t/m.

Pesos totales =

losa de azotea = 2.43 ton/m
losa Inter = 2.11 ton/m
Cadenas = 0.18 Ton/m
muros = 1.458 Ton/m

6.178 x 1.30

= 8.0314

$$\text{base} = \frac{8.0314 \text{ ton/m}}{8 \text{ ton/m}^2} = 1.0314 \text{ m}$$

$$\text{Talud} = \frac{1.0314 \text{ m} - 0.30 \text{ m}}{2} = 0.3657 \text{ m}$$

$$H = \text{Tan}(60)\,(0.3657) = 0.6334$$

$$= 0.64 \text{ m}$$

Eje F Tramo 5-3

Losa Azotea = 0.635 x 18.90 = (12.0567)/5.70
Losa Intermedio = 0.658 x 18.90 = (12.4434)/5.70
Cadenas = 0.18 ton/m
muros = 1.958

Pesos totales =

Losa Azotea = 2.11 ton/m
losa Inter = 2.19 ton/m
cadenas = 0.18 ton/m
muros = 1.4589 ton/m

5.938 x 1.30

= 7.7194

$$\text{base} = \frac{7.7194 \text{ ton/m}}{8 \text{ ton/m}} = 0.9649$$

= 1 m.

$$\text{Talud} = \frac{1 \text{ m} - 0.30 \text{ m}}{2} = 0.35 \text{ m}$$

$H = \text{Tan } 60^\circ (0.35) = 60 \text{ cm}$

Eje A. tramo 8-6.

L. azotea = 0.580 × 5.994 = (3.4765 ton/m) ÷ 1.80
L. Inter = 0.610 × 5.994 = (3.6563 ton/m) ÷ 1.80
Cerramientos = 0.18 ton/m
Muros = 1.458 ton/m

Pesos Totales

L. azotea = 1.931 ton/m
L. Inter = 2.0313 ton/m
Cerramientos = 0.18 ton/m
muros = 1.458 ton/m

5.5007 × 1.30

= 7.28091

Base = 7.28091 ton/m / 8 ton/m² = 0.9101 = 0.90

Talud = 0.90 - 0.30 / 2 = 0.30

H = Tan (60) 0.30 = 51.96 = 60cm