

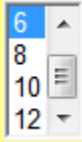
Define

Parameters

$f'_m := 1500\text{psi}$

Masonry Compressive strength

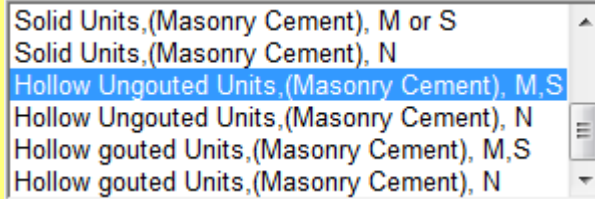
Nominal_Masonry_Thickness_t :=



$t := \text{Nominal_Masonry_Thickness_t} \cdot \text{in}$

$t = 5.625 \cdot \text{in}$

$f_r\text{_normal_bedjoints} :=$



CMU Modulus of Rupture

$f_r\text{_normal_bedjoints} := (f_r\text{_normal_bedjoints}) \cdot \text{psi}$

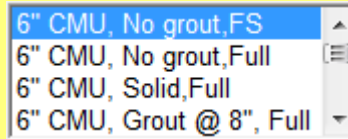
$f_r\text{_normal_bedjoints} = 51.000 \cdot \text{psi}$

$f_r\text{_cmu_v} := f_r\text{_normal_bedjoints}$

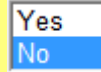
$f_r\text{_cmu_v} = 51.000 \text{ psi}$

Wall Weight for concrete Density of 125

Masonry_Weight_per_ft2 :=



Neglect_Self_Weight :=



$MasonryWeight_per_ft2 := (Masonry_Weight_per_ft2) \cdot \frac{\text{lbf}}{\text{ft}^2}$

$Neglect_Self_Weight = \text{"No"}$

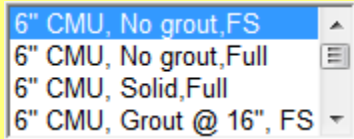
$MasonryWeight_per_ft2 = 28.000 \cdot \frac{\text{lbf}}{\text{ft}^2}$

$MasonryWeight_per_ft2 := \begin{cases} 0 & \text{if } Neglect_Self_Weight = \text{"Yes"} \\ MasonryWeight_per_ft2 & \text{if } Neglect_Self_Weight = \text{"No"} \end{cases}$

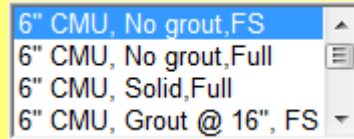
$MasonryWeight_per_ft2 = 28.000 \cdot \frac{\text{lbf}}{\text{ft}^2}$

CMU Spanning Vertically Section Properties

$Masonry_A_n :=$



$Masonry_S_{n_v} :=$



$CMU_A_n := (Masonry_A_n) \cdot \text{in}^2$

$CMU_S_{n_v} := (Masonry_S_{n_v}) \cdot \text{in}^3$

$CMU_A_n = 24.0 \cdot \text{in}^2$ / ft strip of wall

$CMU_S_{n_v} = 46.3 \cdot \text{in}^3$ / ft strip of wall

$r_{avg.} :=$

$r_{avg} := (r_{avg.}) \cdot in$ $r_{avg} = 2.08 \cdot in$ / ft strip of wall