

$$990 \times 44' / 1000 = 43.560 \text{ k}$$

$$313 \times 18' / 1000 = 5.634 \text{ k}$$

Floor Loads

Live 100  
 Slab on Deck 45  
 Mech/Elec 10  
 Ceiling 5  
 Floor Finish  $\frac{5}{18} +$   
 $= 165 \text{psf}$   
 $= 990 \text{plf}$

Stone Blocks

150 lbs/block  
 x30 blocks  
 4500 lbs  
 $\frac{4500}{18} = 250 \text{ lbs/ft}$

Lintels

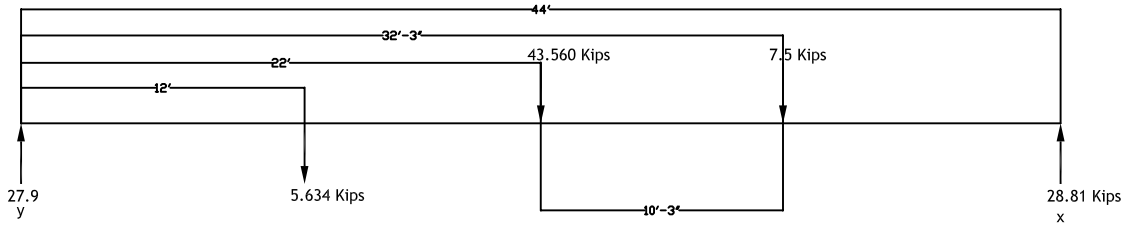
(4) L6x3 @ 22' = 264lbs  
 (12) W6x15 @ 1.5' = 270lbs  
 (10) WT10.5x22 @ 2.75' = 605lbs +  
 $\frac{1139 \text{lbs}}{18}$   
 $= 63.3 \text{ lbs/ft}$

Hanging Load

250 lbs/ft - Blocks  
 $63.3 \text{ lbs/ft} - \text{Lintel}$   
 $313.3 \text{ lbs/ft}$

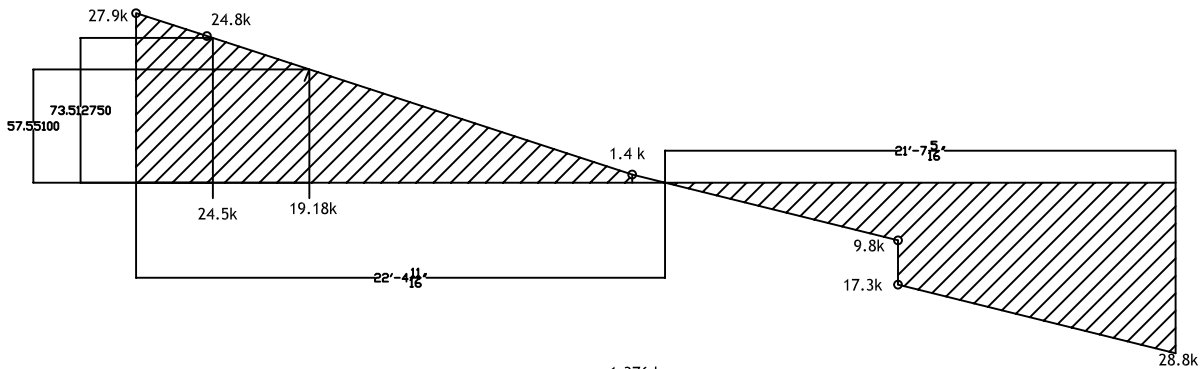
Point Load

Tributary Length  
 $32.25 / 2 + 5.875 = 22'$   
Tributary Width = 6'  
Tributary Area  
 $22' \times 6' = 132 \text{ft}^2$   
Load  
 $132 \text{ft}^2 \times 57 \text{psf} = 7.5 \text{ k}$

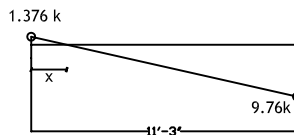


$$\begin{aligned} \text{SUM}(M) &= 43.56 \text{k}(22') + 5.634(12') + 7.5 \text{k}(32.25') - 44(x) \\ &= 958.32 \text{ 'k} + 67.61 \text{ 'k} + 241.875 \text{ 'k} - 44x \text{ 'k} \\ &= 1267.81 \text{ 'k} - 44x \text{ 'k} \\ x &= 28.81 \text{ k} \end{aligned}$$

$$\begin{aligned} \text{SUM}(F_y) &= y - 5.634 - 43.56 - 7.5 + 28.81 \\ y &= 27.884 \end{aligned}$$



Moment Capacity  
 $.75 \times 12 = 9"$   
 $M = 9" \times 32" = 288$   
 $[.5 \times 3] \times \frac{1}{6} = 6$   
 2% Moment Capacity at center of beam mid span



$$\begin{aligned} 1.376/x &= 9.76 / (11.25 - x) \\ 15.48 - 1.376x &= 9.76x \\ 15.48 &= x(9.76 + 1.376) \\ 15.48 &= 11.14x \\ x &= 1.39' \end{aligned}$$