

For Light (one story)  
Residential only

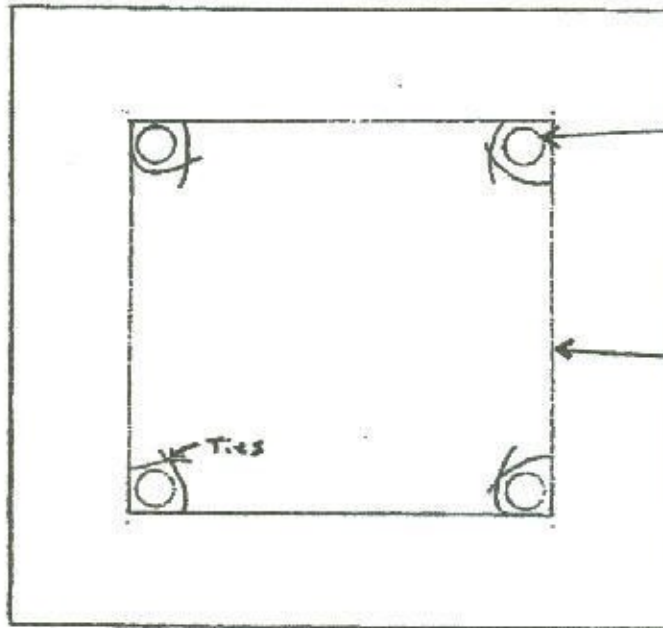
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Spandrel or Exterior / Perimeter  
Wall Beam - Support for Pier  
Footings on Single Story Residential

All 4 corners  
3" min. (ACI 318 7.7)

3" min.

Compacted  
Fill



Longitudinal Four  
No. 4 Rebar Grade 60

Shear Reinforcement  
Vertical stirrups  
No. 3 Rebar "ties"  
7.5" O.C.  $s = d/2$   
(ACI 11.5.4)  
\* Use 15" stirrup spacing

18" min.  
Depth & width  
uniform Building Code  
3000 psi min. (28 Day)

$b =$  width  
 $d =$  top to bottom C.S.

Natural  
Fill (Compacted)

$$V_c = 2\sqrt{f'_c} bd = 2\sqrt{3000} (18)(15) = 29,577 \text{ lbs}$$

$$\text{IS } \phi V_c \leq V_u \quad (0.85)29,577 = 25,140 \text{ lbs} \quad \text{NO Light Residential}$$

Now add shear strength from  
stirrups,  $V_{st}$

$$V_{st} = 50 bd = 50 (18)(15) = 13,500 \text{ lbs}$$

$$A_v = 2(.11) = .22 \text{ in}^2$$

$$s = \frac{(A_v f_y)}{V_{st}} = \frac{(.22)(60,000)}{13,500}$$

$$s = 15" \text{ stirrup spacing OK}$$



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