

4.6-6 Select a rectangular (not square) HSS for the conditions of [Problem 4.6-4](#).

$$K = 0.8 \quad \lambda = KL = 0.8(15\text{ ft}) = 12\text{ ft} \quad F_y = 50\text{ ksi}$$

LRFD $P_u = 1.2D + 1.6L = 1.2(42\text{ k}) + 1.6(42\text{ k}) = 117.6\text{ k}$

TABLE 4-3 (4-63) HSS 5x4 x 3/8	$\phi_c P_n = 128\text{ k}$	19.82 lb/ft
HSS 6x4 x 5/16	129 k	19.08 lb/ft
HSS 6x5 x 1/4	146 k	17.32 lb/ft
<u>HSS 7x5 x 3/16</u>	125 k	14.53 lb/ft

ASD $P_u = D + L = 42\text{ k} + 42\text{ k} = 84\text{ k}$

TABLE 4.3 (4-63) HSS 5x4 x 3/8	85.1 k	19.82 lb/ft
HSS 6x4 x 5/16	85.8 k	19.08 lb/ft
HSS 6x5 x 1/4	97.0 k	17.32 lb/ft
<u>HSS 8x6 x 3/16</u>	104 k	17.08 lb/ft