



To calculate the length of the LSL block (transfer shear to joist flange):

1. Find

$$L_1 = \frac{0.75(P/K)d}{C_D V_A - [V_{DL} + (0.75V_{LL})]}$$

2. Find

$$L_2 = \frac{3}{2}(n) + 3, \text{ where } n = \frac{P}{V_n C_D}$$

3. Compare  $L_1$  and  $L_2$ . Use maximum of the two values for the length of the LSL block.

- $C_D$  = Load duration factor
- $d_1$  = Distance to axial load (in.) from top of joist
- $L_1, L_2$  = Length of block (in.)
- $K$  = 1.0 for wind; 1.4 for seismic (accounts for strength-based seismic load)
- $n$  = Number of nails
- $P$  = Axial Load (lbs)
- $V_A$  = Allowable shear load (lbs) for joist
- $V_{DL}$  = Shear load due to gravity dead loads (lbs)
- $V_{LL}$  = Shear load due to gravity live loads (lbs)
- $V_n$  = Nail shear capacity; see table below

### 16d Nail Shear Capacity

Joist Web Thickness	$V_n$ (100%) in lbs
$\frac{3}{8}$ "	164
$\frac{7}{16}$ "	169
$\frac{1}{2}$ "	175