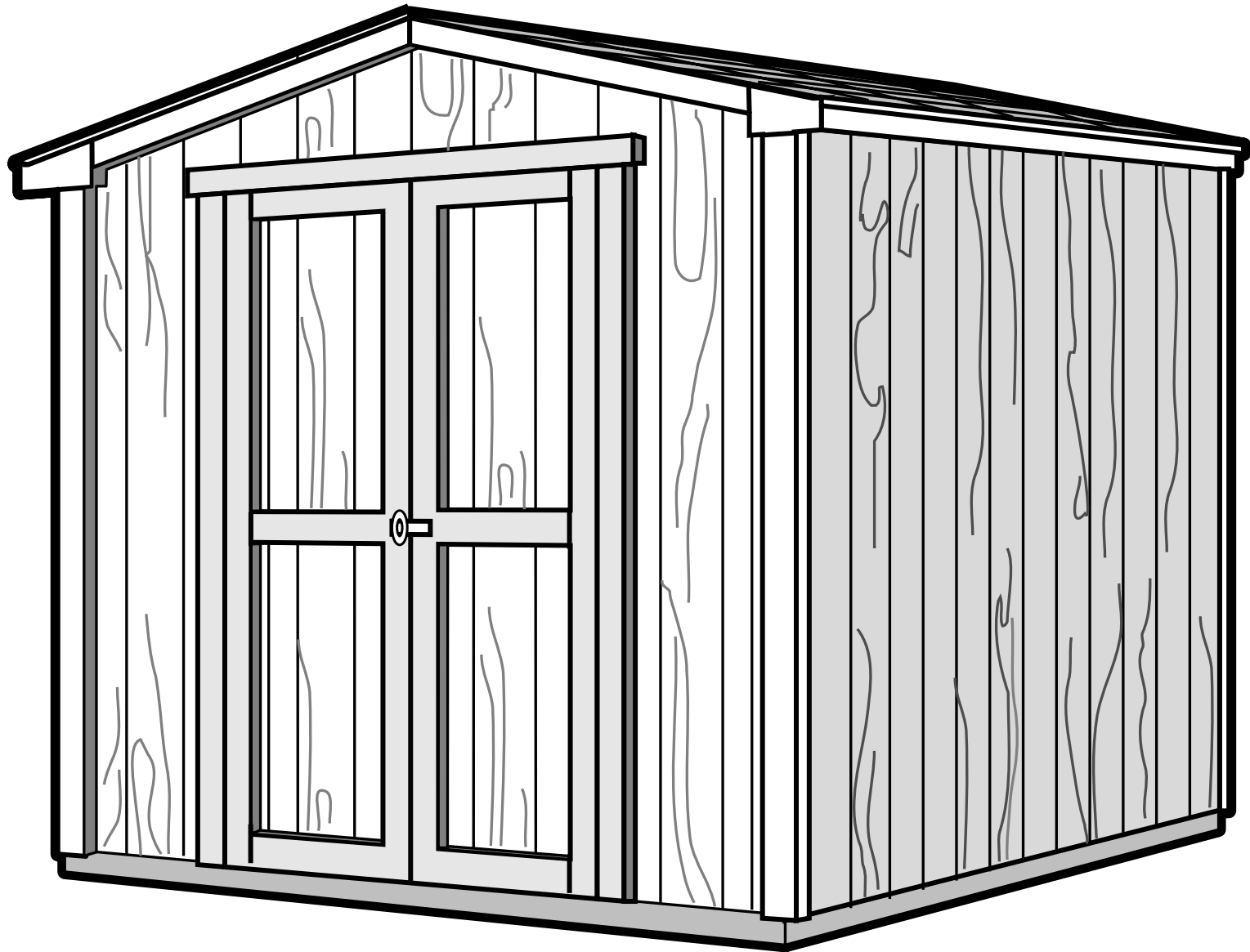
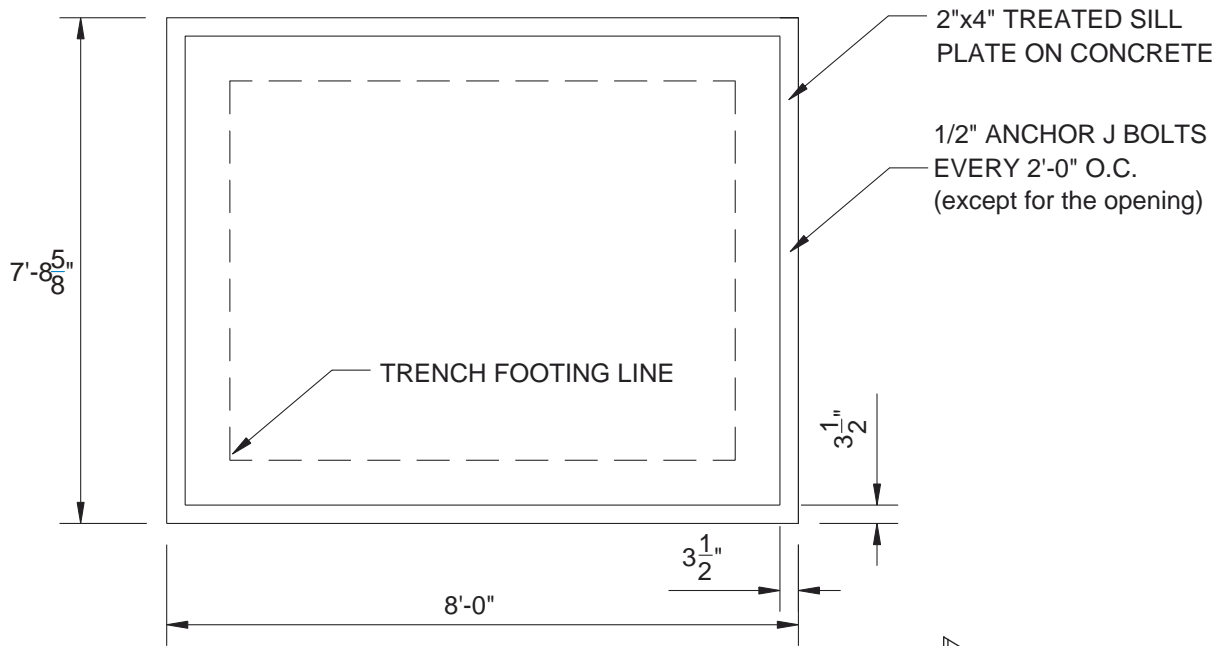


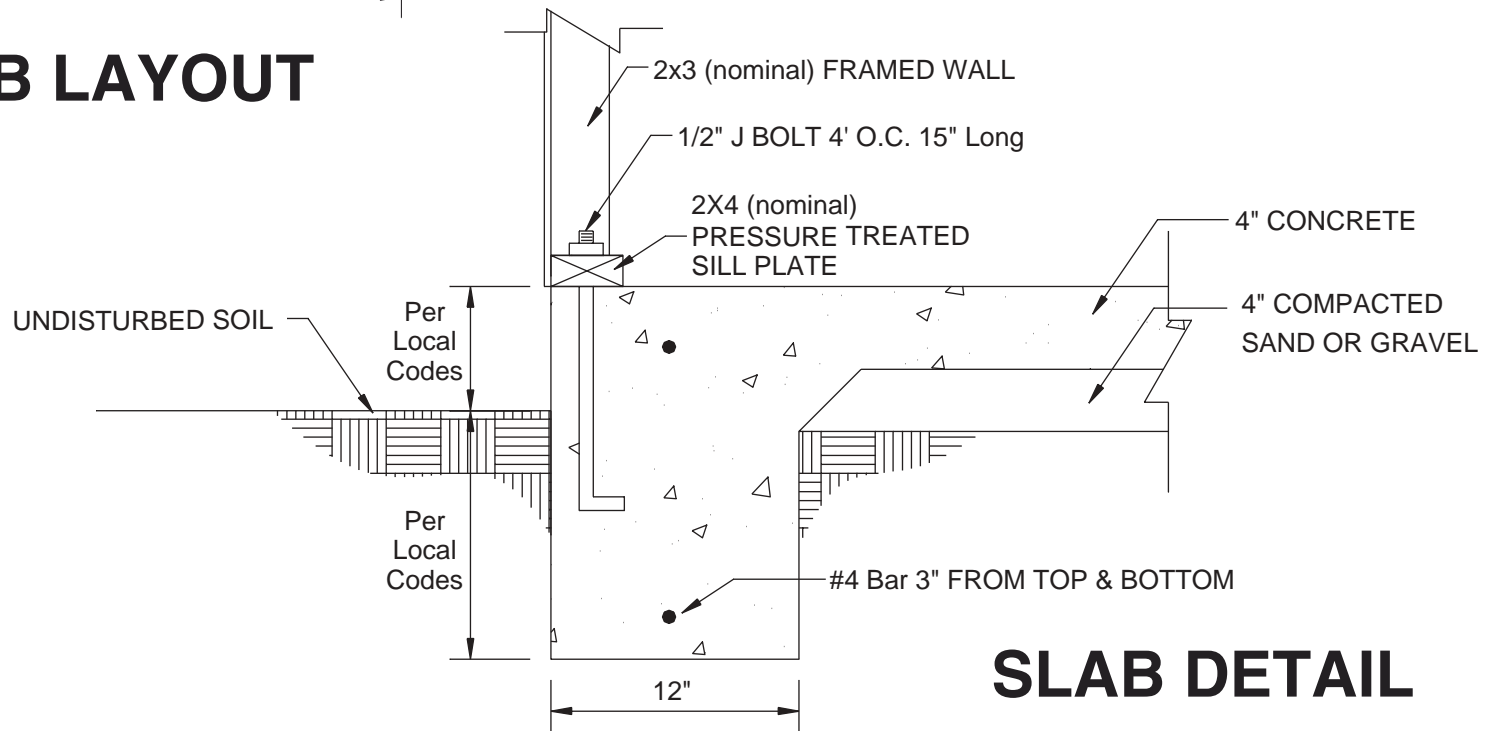
8' Marco Series Gable Building

Engineering Building
Plans

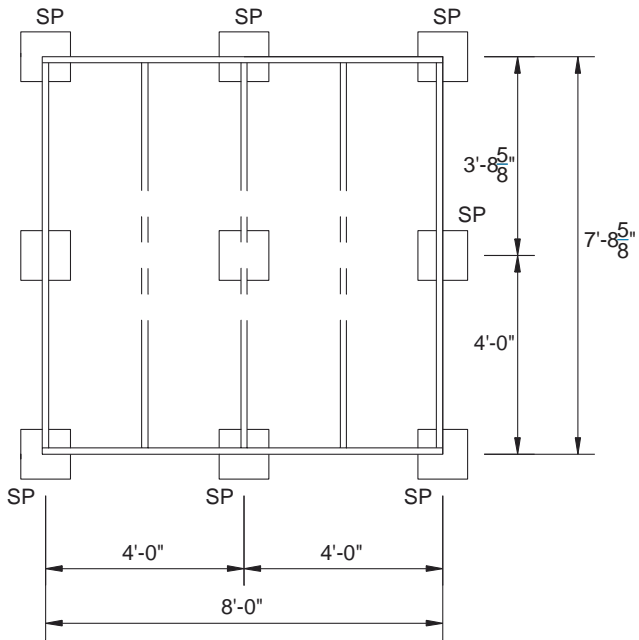




SLAB LAYOUT



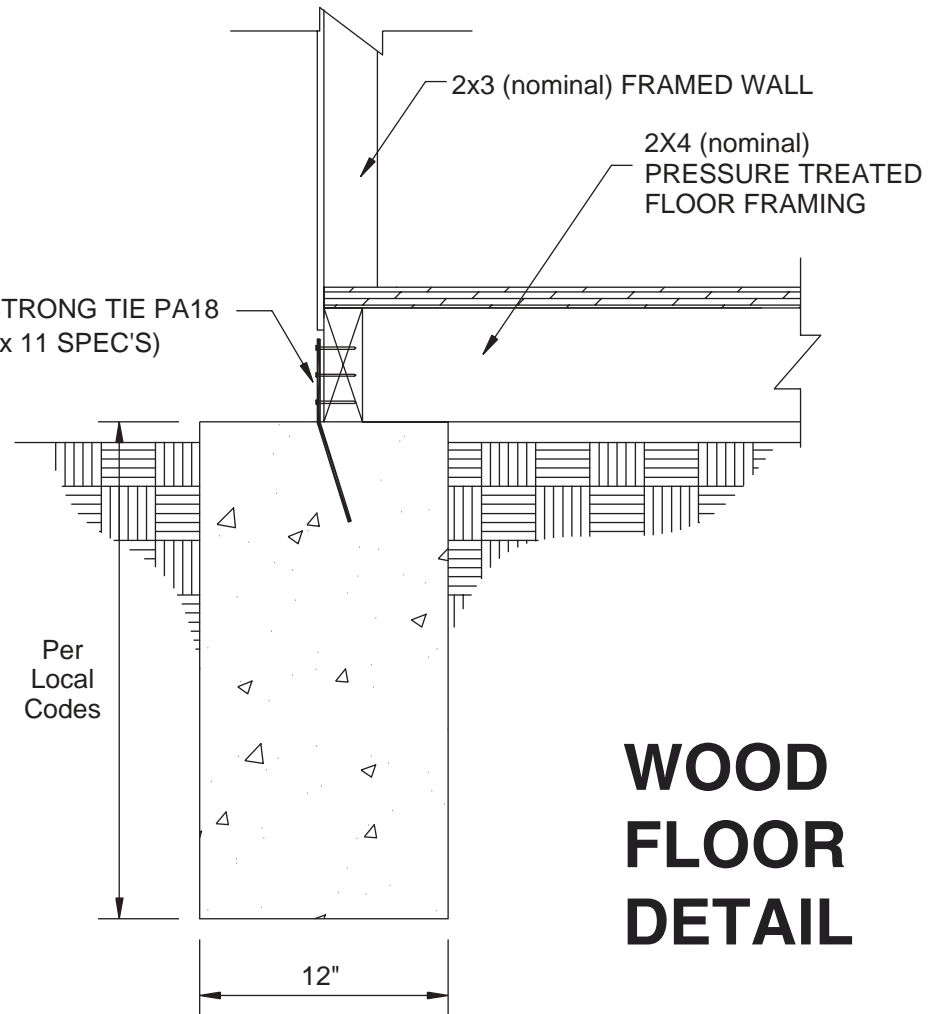
SLAB DETAIL



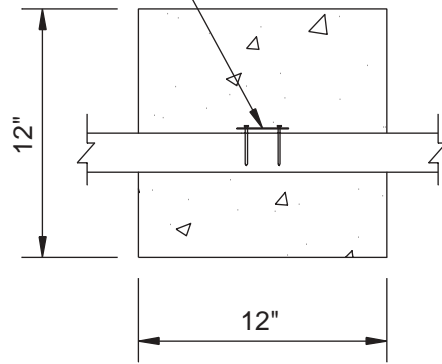
NOTE:
 1.) ONLY THE PIERS INDICATED WITH SP ARE
 REQUIRED TO HAVE SIMPSON STRONG TIES

WOOD FLOOR LAYOUT

SIMPSON STRONG TIE PA18
 (SEE 8 1/2" x 11 SPEC'S)

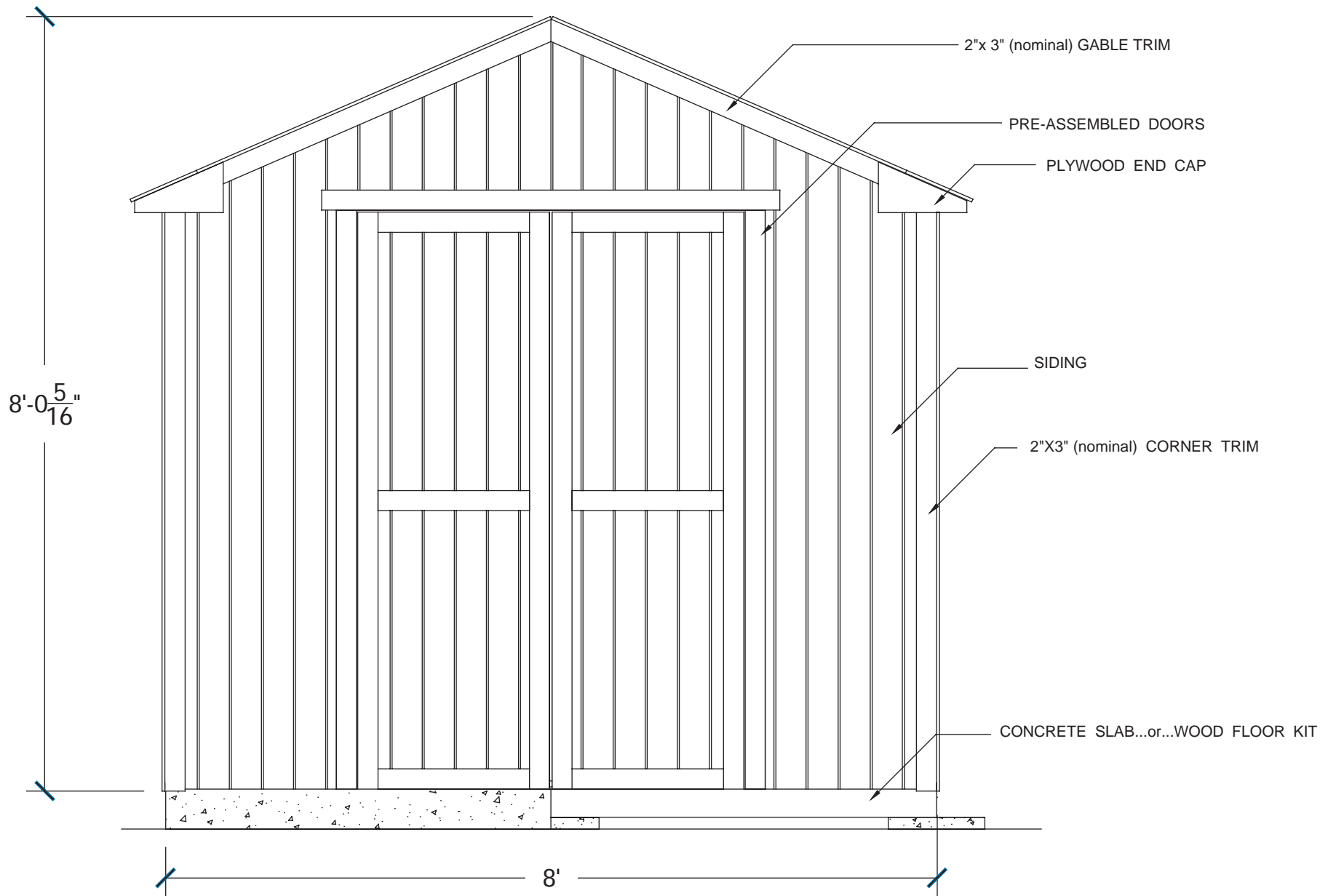


SIMPSON STRONG TIE PA18
 (SEE 8 1/2" x 11 SPEC'S)

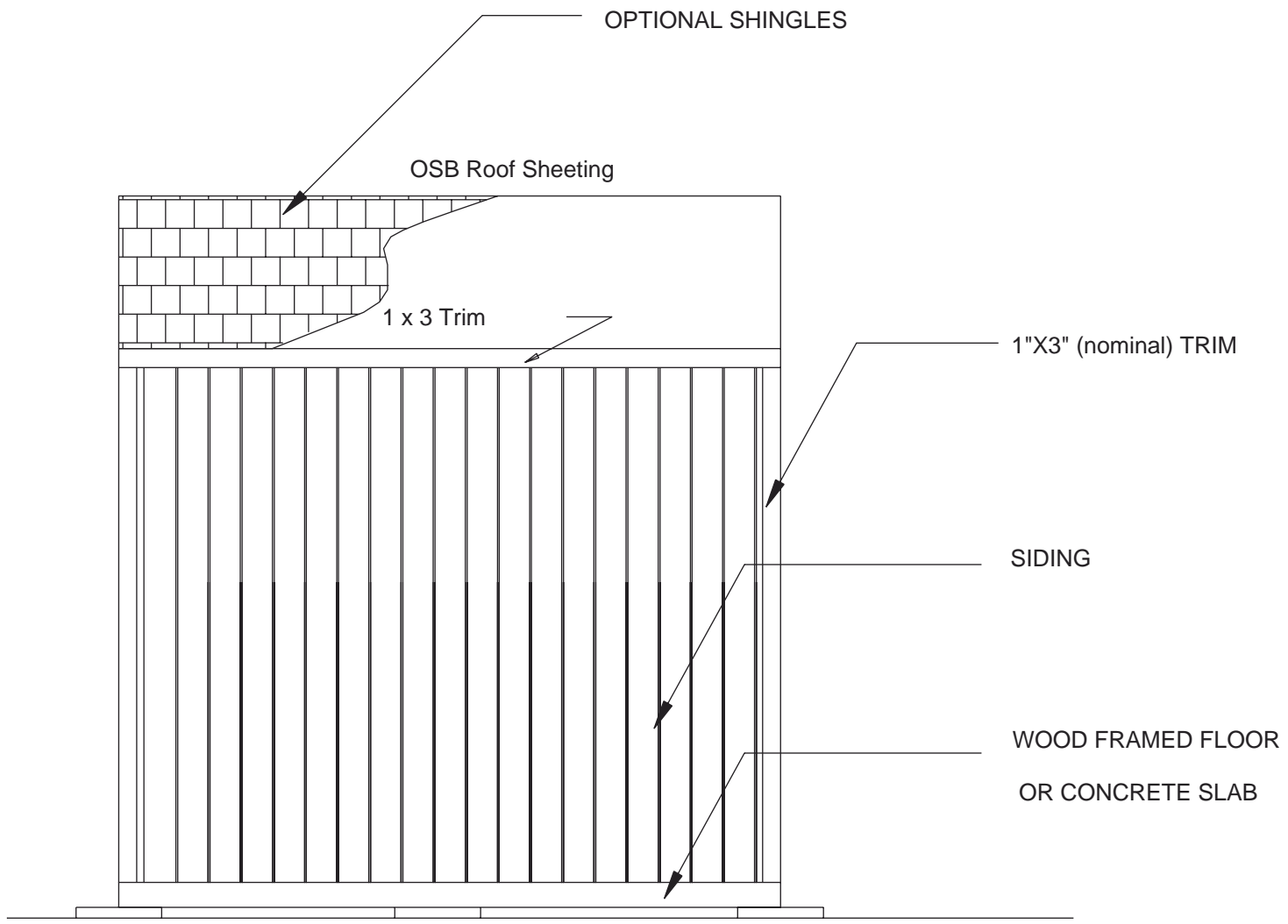


PLAN DETAIL

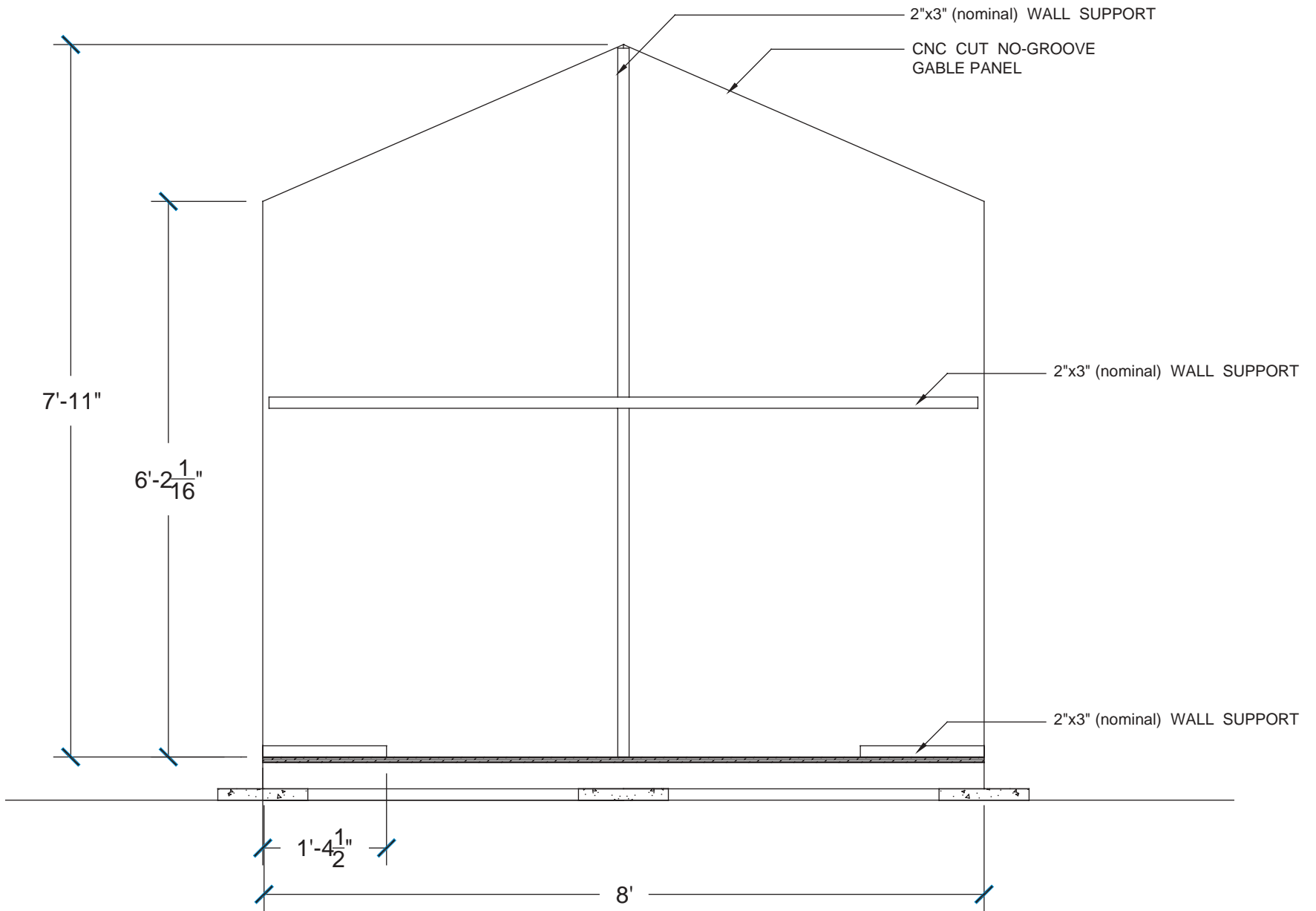
WOOD FLOOR DETAIL



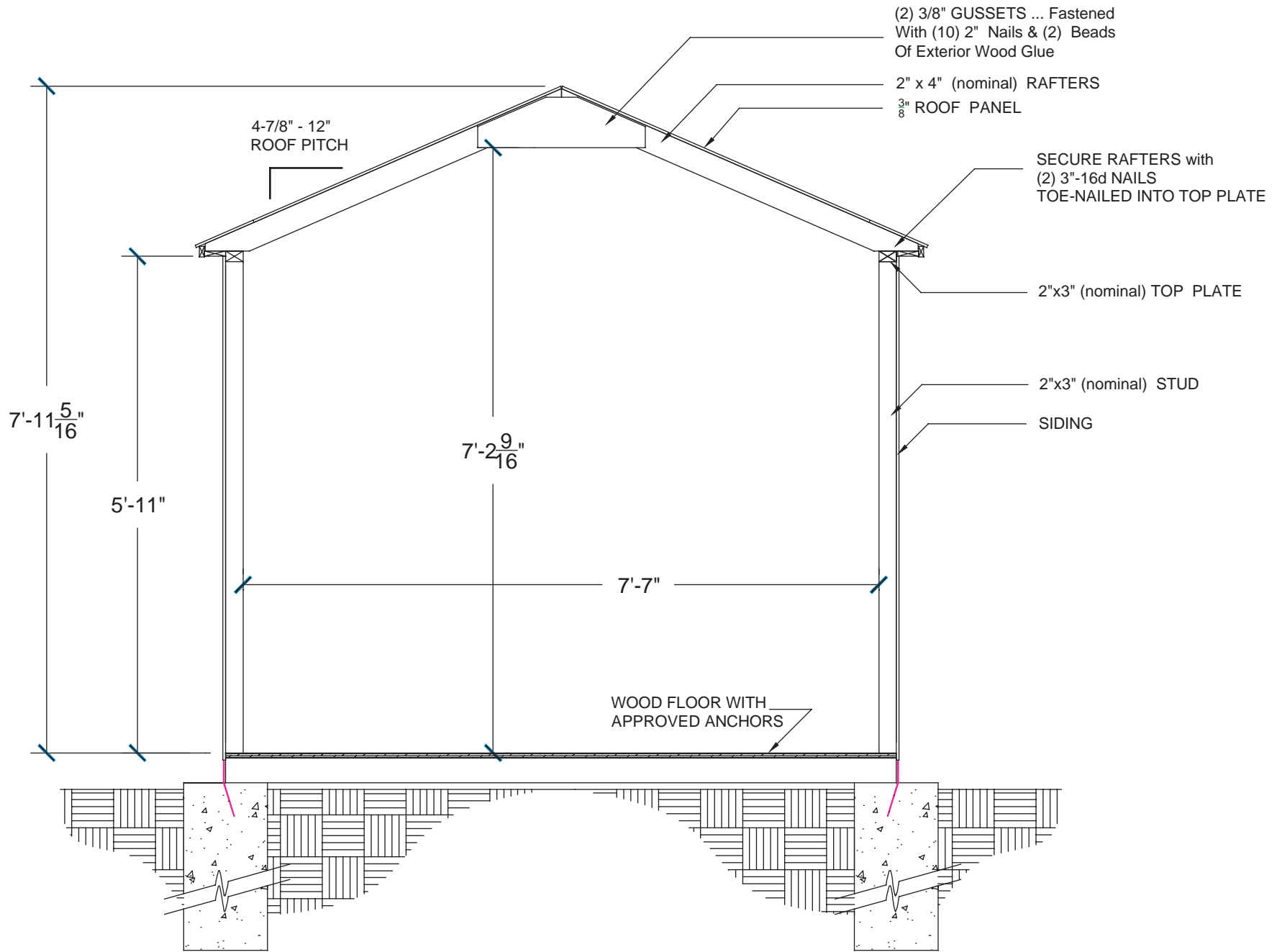
FRONT ELEVATION



LEFT ELEVATION



BACK WALL FRAMING



SECTION DETAIL

- NOTES: 1) The Roof System of this 8 ft. wide Gable style building has a live load capacity of 45 PSF.
 The equivalent ground snow load per ANCE 7-98 is 88 PSF which exceeds the 17.3 PSF pressure for a 110 mph wind per ASCE 7-98.
- 2) This plan supplements assembly instructions.

STRUCTURAL ANALYSIS:

$f_b = 1200 \text{ PSC}$
 $f_v = 80 \text{ psi}$
 $S_x \text{ 2"x3" } = 1.56 \text{ in Area} = 3.75 \text{ in}$
 Dead Load = 4 PSF (Roof)
 Max Rafter Moment = $f_b S_x / 12 = 306 \text{ ft.lb.}$
 Max Rafter Shear = $80 \times 3.75 = 300 \text{ lb.}$

Max Stud Moment = 156 ft. lb.

WALL SYSTEM:

1) Studs 2x3@24"cc L=3.3ft. $w = 8M/L^2 = 114 \text{ PLF} = 57 \text{ PSF}$
 2) Wind Loading $V = 110 \text{ mph EXP 1}$
 $K_z = 0.37 \quad G_h = 1.65 \quad G_{Cpl} = -0.25$
 $I = 0.95 \quad C_p = 0.8$
 Velocity Pressure = $q_z = 0.00256 K_z (IV) = 10.3 \text{ PSF}$
 Design Pressure = $P = q_f G_h C_p - (q_h G_{Cpl}) = 16.2 \text{ PSF}$
 ok < 57 PSF

ROOF SYSTEM:

1) Rafters 2x4@2'cc $w = 8M/L^2 = 76 \text{ PLF} = 45 \text{ PSF-4}$
 2) Rafter Shear $w = 2V/L = 117 \text{ PLF} = 92 \text{ PSF-4}$
 3) Sheathing $w = 45 \text{ PSF-4} = 45 \text{ psf}$
 4) Ground Snow Load: Ref ASCE 7-98
 $P_s = 45 \text{ PSF} \quad I = 0.8$
 $C_s = 0.95 \quad C_e = 0.8$
 $C_t = 1.2 \quad P_f = 45 / 0.95 = 47.4 \text{ PSF}$
 $P_g = P_f / 0.7 C_e C_t = 88 \text{ PSF Ground Snow Capacity}$