

Plywood, OSB, and other panel materials may be used as structural sheathing or as finish siding (in single-wall construction, these functions are combined in one layer, as in 80A, B, and C). Structural-sheathing panels resist lateral loads and contribute to the overall stiffness of the building, thereby eliminating the need for let-in bracing. In earthquake or hurricane zones or where walls are very tall or penetrated by many openings, structural sheathing may require engineering, or shear walls (see 82) may be required.

Panels may be installed either vertically or horizontally. Vertically applied sheathing does not usually require blocking because all edges are aligned with framing members. Horizontally applied plywood sheathing is stronger than vertically applied sheathing because the highest-quality veneers and the most plies are oriented with the length of the plywood panel. This horizontal strength acts in concert with the vertical strength of the studs. Horizontal orientation is used when the stiffness of plywood is required for the backing of siding materials, such as shingles or stucco.

The capacity of plywood panels to span between studs is related to thickness and to the orientation and number of plies. The spanning capacity of composite panels, like OSB, is generally slightly less than plywood and is related only to panel thickness. The following chart applies as a rule of thumb:

| Stud spacing | Panel thickness |
|--------------|-------------------|
| 16 in. o.c. | $\frac{3}{8}$ in. |
| 24 in. o.c. | $\frac{1}{2}$ in. |

Nails or other approved fasteners should be sized and spaced according to the following schedule. Verify with manufacturer and local codes.

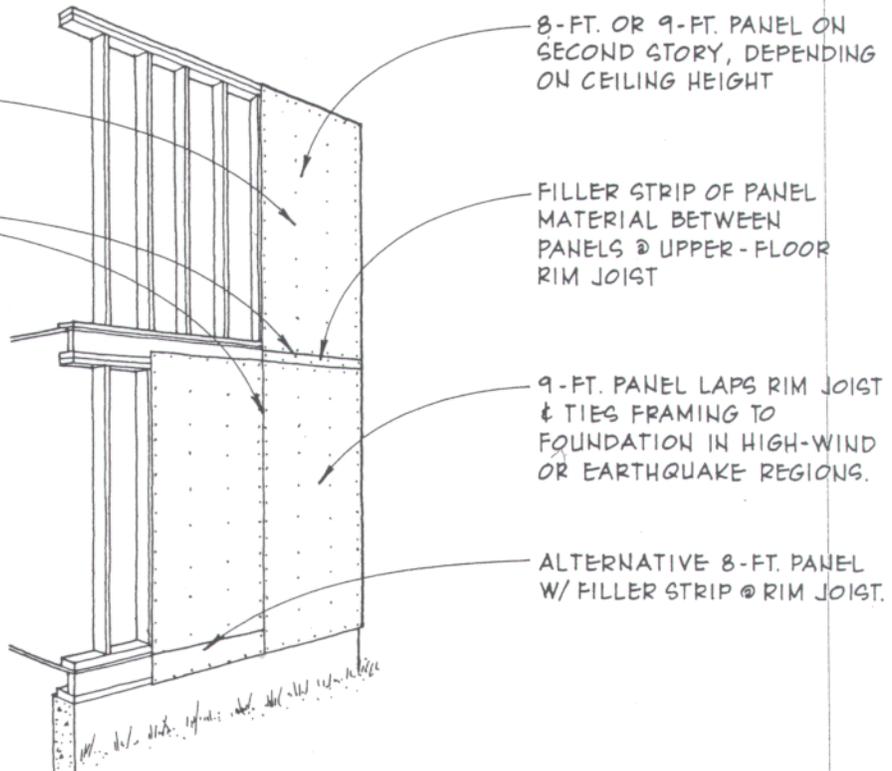
| Panel thickness | Nail size | Panel edge nailing | Field nailing |
|---------------------------|-----------|--------------------|---------------|
| $\frac{1}{2}$ in. or less | 6d | 6 in. o.c. | 12 in. o.c. |
| over $\frac{1}{2}$ in. | 8d | | |

A STRUCTURAL SHEATHING
NOTES

PANEL NAILING SCHEDULE see 78A

$\frac{1}{8}$ -IN. SPACING BETWEEN ALL PANEL EDGES

NOTE:
IN CERTAIN CASES, SUCH AS WHEN MOST OF A WALL IS COVERED W/ DOORS & WINDOWS, STRUCTURAL SHEATHING MUST BE PROFESSIONALLY ENGINEERED AS BRACING. TYPE OF SHEATHING, SIZE & SPACING OF NAILS &/OR TIE-DOWNS SHOULD BE SPECIFIED.



B STRUCTURAL SHEATHING
MULTIPLE-STORY BUILDING