Build Profit with Wood Walls

In today’s housing market, being a builder means being an architect, engineer, green builder, code official and salesman.

Improve profit margins
Reduce callbacks
Grow customer referrals
Eliminate code issues
Maximize allowable changes
Improve safety and durability
Build green

Wall sheathing is your home’s single most important element. No other component plays such a beneficial role in the overall integrity. The sheathing contributes to the structure’s ability to handle uplift loads, lateral loads, and wind pressures while providing secure connection to the roof and protecting the occupants.

“With the implementation (of fully sheathed walls) we can provide the same structural stability as prefab shear walls and also keep our costs down so that the savings can be passed along to our customers.”
– Chris Channell, P.E., Chief Structural Engineer, M/I Homes

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“We switched to wood walls and watched our callbacks disappear.”
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Sheathing for Profits

Today you face challenges on multiple fronts. Can you meet energy codes and reduce your exposure to mold and moisture litigation? How about reducing warranty work and insurance claims on your projects across the board? How do you offer allowable customer changes, yet still meet code bracing requirements? You can do all these things profitably by fully sheathing with wood structural panels. Seventy-eight percent of U.S. builders know that plywood or OSB walls solve a majority of design, production, code, safety, energy, and green building issues they face each day. Take a look.
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1. Fully sheathed walls add stiffness and reduce flexing that can cause cracks in stucco and brick/stone mortar joints.

2. Plywood or OSB reduce wavy siding and provide a flat, solid nail base material for siding.

3. Tall wall demand is growing. Wood sheathing adds rigidity to the overall shell and permits the use of MSR lumber to construct walls that extend more than one story in height.

4. Code approved continuous sheathing as a nail base in order to resist wind pressures into and out of wall surfaces.

5. Most flexible sidings, including vinyl, require solid structural sheathing as a nail base in order to resist wind pressures into and out of wall surfaces.

6. Wood panels provide the greatest amount of design and structural latitude for all code bracing methods such as this 16-inch wall at the garage.

7. Wood panels provide the needed rigidity to prevent exterior problems under brittle surface siding.

8. Wood sheathing is the easiest and most economical way to meet IRC prescriptive bracing for gravity, lateral, transverse (wind pressure) and buckling.

9. Wood sheathing adds rigidity to the overall shell and permits the use of MSR lumber to construct walls that extend more than one story in height.

10. Most flexible sidings, including vinyl, require solid structural sheathing as a nail base in order to resist wind pressures into and out of wall surfaces.

11. Overlapping the floor joists with panels helps minimize air infiltration through the floor system. This brings work below grade and helps control and minimize potential problems associated with water vapor.

12. Wood has a proven durability record and will last for hundreds of years when properly protected from moisture.

13. Builders in any climate zone can easily take advantage of plywood or OSB wall sheathing to comply with stringent energy requirements, both code and beyond, using 2x4 or 2x6 framing.

14. Wood sheathing is a renewable and sustainable building material.

15. Wood has a proven durability record and will last for hundreds of years when properly protected from moisture.

Reference: Design for Combined Shear and Uplift from Wind, Form SR101
Reference: Brace Walls with Wood, Form G440
Reference: Brace Walls
Reference: ENERGY / GREEN / CODE / SAFETY / DESIGN / PRODUCTION
Reference: Build Energy Efficient Walls, Form J440
Reference: Wood Sustainable Building Solutions, Form F305
Reference: Wood Sheathing Builds Business, Form F125
Reference: Plywood and OSB are exempt from HUD and CARB formaldehyde regulations.
Reference: APA – The Engineered Wood Association
Reference: Industrial Noise Control, Form Y225
### Build Profit with Wood Walls

#### 1. Callbacks
- Wood panels provide the needed rigidity to prevent exterior problems under brittle surface siding and interior drywall cracking caused by humidity changes and uneven settling. Stiff walls reduce the potential for warranty work. *Reference: Wood Sheathing Builds Business, Form F125*

#### 2. Aesthetics
- Plywood and OSB are the most recommended nail base for lap and shake siding made of vinyl, cement-fiber, aluminum, steel and wood. Codes permit some siding to attach to wood sheathing in addition to studs. *Reference: IRC 2006, Table 703.4*

#### 3. Curb Appeal
- Whether high-end or starter home, during construction, wood sheathing leaves a lasting impression of strength and high quality at an affordable price. *Reference: Brace Walls with Wood, Form G440*

#### 4. Window Upgrades
- Wood structural panels offer the widest possible latitude to change window configurations, size and placement. Make money on upgrades, minimize downtime. *Reference: Brace Walls with Wood, Form G440*

#### 5. Quiet Interior
- The acoustical properties and tight construction of wood panels reduce unwanted exterior noise in urban environments. *Reference: Industrial Noise Control, Form Y225*

#### 6. Allowable Changes
- Make minor field changes without extensive redesign or lost time in code approvals. *Reference: Brace Walls with Wood, Form G440*

#### 7. Value Engineered
- Improve efficiency and avoid metal connectors interfering with siding fasteners. *Reference: Build Energy Efficient Walls, Form J440*

#### 8. Wall Height
- Tall walls offer spaciousness and increase the “wow” factor. Wood sheathing, available in 10-foot lengths and longer, provides strength and stiffness to handle the imposed loads of gravity, lateral, transverse (wind pressure) and buckling. *Reference: Wood Frame Construction Manual (AF&PA)*

#### 9. Code Required Wall Bracing
- Wood sheathing is the easiest and most economical way to meet IRC prescriptive bracing requirements. *Reference: Brace Walls with Wood, Form G440*

#### 10. Code Required Wall Strength
- Code requires wall sheathing and/or cladding to resist being sucked away during high wind events. Plywood or OSB meet this sheathing requirement for any siding. *Reference: Understanding the Importance of Structural Wall Sheathing as a Wall Covering, Form J430*

#### 11. Code Reports
- APA’s long history as a code developer and technical trade association provides your building department with a credible resource for up-to-date home design code options, including special applications. *Reference: Design for Combined Shear and Uplift from Wind, Form SR101*

#### 12. Insurance
- Minimize insurance losses with wood walls. Protect your customer’s home against airborne debris in high wind regions, while reducing vandalism and theft. Damage assessment studies prove time again that wood sheathing reduces property loss. *References: Midwest Tornadoes, Form SP-111, Hurricane Katrina, Form SP-1125; Fortified Builders Guide (IBHS)*

#### 13. Energy Conservation
- Builders in any climate zone can easily take advantage of plywood or OSB wall sheathing to comply with stringent energy requirements, both code and beyond, using 2x4 or 2x6 framing. *Reference: Build Energy Efficient Walls, Form J440*

#### 14. Green Building
- Wood walls are constructed with products from a renewable, sustainable, and readily available resource. Fossil fuel based sheathing will suffer price and supply problems as resources diminish. Plywood and OSB are exempt from HUD and CARB formaldehyde regulations. *Reference: Wood Sustainable Building Solutions, Form F305*

#### 15. Durability
- NAHB’s life expectancy study indicates a lifetime of service for wood sheathing if properly protected from moisture. To prevent moisture intrusion and its subsequent decay, mold and insect problems, APA offers step-by-step construction details for roof valleys, overhangs, window flashing, house wraps, rainscreens and other home preservation elements. *References: APA’s Build a Better Home series; Life Expectancy of Home Components (NAHB)*

#### 16. Sustainability
- Strong homes have long life cycles and wood has the highest Life Cycle Assessment ratings for any structural building material. Trees are a renewable resource. Wood waste is used to power plywood and OSB mills. *Reference: Wood Sustainable Building Solutions, Form F305*

*Unless otherwise noted, publications referenced are published by APA and may be downloaded from the Association’s website at www.apawood.org. Check the website for new and updated brochures on these topics.*
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