

## **Fire Safety with Structural Insulated Panel Construction**

Fire safety is an important and potentially life-saving issue for homeowners, fire fighters, and building code officials. When constructed to the requirements of the applicable building code, homes built with structural insulated panels (SIPs) provide occupants with adequate protection in the event of a residential fire.

### **Building Code Compliance**

The International Building Code (IBC) classifies buildings into various Types (I, II, III, IV, or V). Each Type has various construction limitations that include items such as building story height, square footage, and construction materials. Most wood frame buildings are classified as Type V.

Similar to conventional wood frame construction, SIPs with oriented strand board (OSB) facings are classified as Type V construction under the IBC. Type V construction permits the use of combustible materials such as OSB and wood framing. Both SIPs and conventional wood frame buildings present a manageable fire risk when their construction meets the fire precautions listed in the building code.

#### **Fire precautions for SIP homes include:**

- Application of a 15-minute fire-resistant thermal barrier on the interior, such as 1/2-in. thick gypsum board or a material of equivalent thermal performance
- Properly installed and protected electrical systems and appliances
- Properly installed and protected natural gas appliances
- Smoke alarms

Commercial and multi-family structures may be required to meet one-hour fire resistive standards. This can be obtained with the following:

- Two layers of 5/8" Type X gypsum attached vertically on Lamit SIP walls, and horizontally on Lamit SIP roof panels with either spline or lumber connections.
- One layer of 5/8" Type C gypsum attached vertically on Lamit SIP walls, and horizontally on Lamit SIP roof panels with dimensional lumber or solid engineered wood products at 48" on center or closer.

As with any fire resistive issue, make sure you check your local building department to determine the requirements.