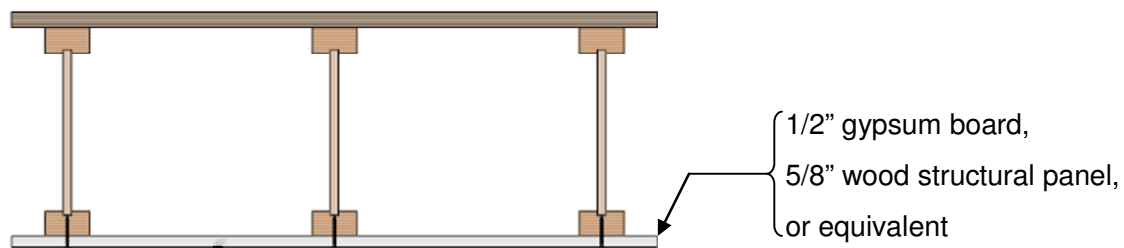




## Membrane Protection of Floor Assemblies

The performance of all structural building materials and systems degrade when exposed to fire and wood is no exception. Society's concern for fire safety is reflected in limitations and design requirements mandated in various national building codes. It is widely recognized that real structure fires are highly variable in their size, rate of growth and intensity. Building contents (furniture, window coverings, electronic equipment, and personal belongings) are the primary source of fuel in structure fires. Given all possible variations, there is no known way to determine how the fire will grow; therefore, each fire scenario is unique. If there is a fire in a structure there is no "safe" amount of time that one can remain within the structure, even if everything was designed in accordance with all applicable codes. Significant improvement in material and building performance can be realized with knowledge of fire safety design and evaluation involving prevention, detection, evacuation, and containment.

The ability to contain the fire within a certain space is dependent upon the fire resistance of the walls, doors, ceiling, and floors. For residential basement ceilings, a simple, inexpensive yet significant increase in fire resistance can be achieved by simply adding a single layer of 1/2" gypsum wallboard or 5/8" wood structural panel to the underside of floor framing systems. The use of these materials will increase the fire resistance for all commonly used floor framing systems.



WIJMA supports the addition of a 1/2-inch gypsum wall board or 5/8-inch wood structural panel membrane, or equivalent, to the underside of floor framing systems, as required by Section R501.3 of the 2012 International Residential Code. The designer and builder shall consult with the local building department or authority having jurisdiction for specific requirements of fire protection in any building.