

# BUILD WISELY – REACH FOR RISE



New construction homes and exterior remodeling in fire prone areas are often built to code regarding the level of fire resistance required. But weather, the settling of the structure and seasonal shrinking and swelling can alter the structure's design to resist wildfires. In some designs, these changes can lower the level of fire protection, potentially leaving the structure more exposed than when originally built. It is important to build not only to code, but to choose the system that can provide the protection needed for years to come. In the case of fire protection, there are several ways to achieve code compliance, but some systems are superior in terms of long-term protection.

With exterior wall assemblies, many jurisdictions in fire-prone areas call for a 1-hour fire resistant wall. This can be achieved in several ways, but the most common are to use a fire-resistant sheathing or rely on fire-resistant claddings. But there is a difference between these two approaches in terms of long-term protection.

Don't be misled by the notion of fireproof exterior cladding. Employ a robust fire-rated assembly and protect that fire-rated assembly with a premium cladding system that delivers superior resistance to hail, termites, fungal decay, hurricane force winds, climate-changes, installation and handling damage and UV.

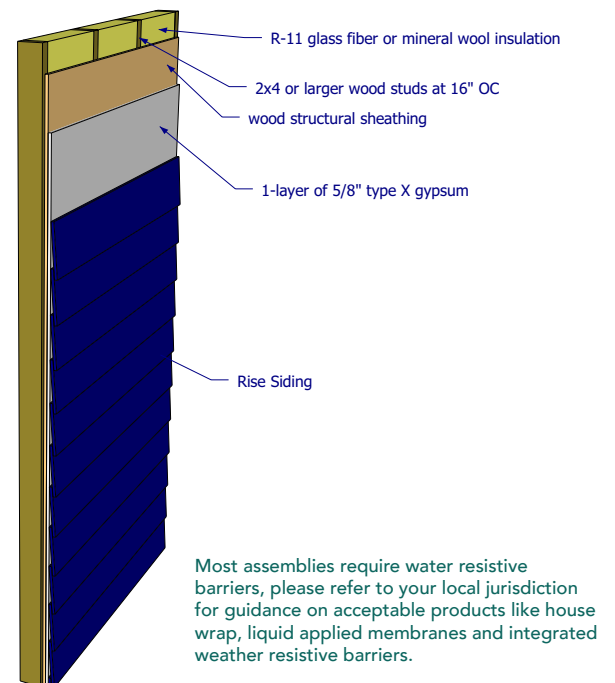
For long term protection, a flat and consistent sheathing of 5/8" gypsum behind any cladding provides better protection than relying on overlapped pieces of siding alone to resist fire. With the fluctuation and aging process of siding, lap siding can become loose, joint sealings can shrink/crack and movement in general can create multiple openings in a lap siding wall that degrade its ability to resist fire across the entire wall surface.

In assemblies where a layer of gypsum panels is attached directly to the structural framing, those panels can resist movement better and inherently have fewer opportunities for openings to develop over time than lap siding. Relying on a consistent layer of gypsum, behind any siding, is considered by many to be a better long-term fire-resistant assembly than those that rely on fire resistant lap siding alone.

**1-hour fire rated assemblies are code recognized and widely accepted to protect structural assemblies.**

Chapter 5 of the 2021 International Urban Wildland Urban Interface code states that "materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side" are permitted in extreme fire hazard severity zones with conforming water supply and conforming or non-conforming defensible space. This is also correct for moderate and high fire zones, but the water supply and defensible space are not required. RISE Building Products recommends defensible spaces and conforming water supply as responsible practices when these two factors are present in moderate fire hazard severity zones. (Refer to the [IWUI code](#) for complete details.)

An illustration of a 1-hour fire assembly on the exterior side is provided below. Apply the 5/8" type-X gypsum according to the manufacturer's instructions for fire-rated assemblies.



Section [707A.4](#) of the 2022 California Building Code states that exterior wall assemblies of building or structures shall be "suitable for exterior fire exposure containing one layer of 5/8-inch type-X gypsum sheathing applied behind the exterior wall covering or cladding on the exterior side of the framing. Gypsum panel and sheathing products, listed in the Gypsum Association Fire Resistance Design Manual as complying with an exterior 1-hour fire-resistance rating (per ASTM E119 or UL 263), are also permitted.