



Expert Tips

Determining FRR Ratings When There's No Matching UL Assembly

Options for determining fire resistance ratings of assemblies.

Q: What if I can't find the right UL assembly for my project?

A: This situation isn't uncommon when detailing shallow framing at floors/ceilings, using structural composite lumber members or at exterior lateral resisting walls. According to the 2012 International Building Code (IBC) Section 703, fire-resistance ratings can be determined multiple ways.

- Follow the prescriptive designs of IBC 2012 Section 721 and Tables 721.1(2) and 721.1(3).
- Perform calculations in accordance with IBC 2012 Section 722. IBC Section 722.6 can be used for assemblies requiring 1-hour ratings or less. Calculations following the *National Design Specification® (NDS®) for Wood Construction* Chapter 16 can be used for wood construction with up to a 2-hour rating.
- Use fire-resistance designs documented in approved sources such as the American Wood Council's [DCA3: Fire-Rated Wood-Frame Wall and Floor/Ceiling Assemblies](#) or APA's [Form W305 – Fire-Rated Systems](#).
- Perform testing and analysis according to ASTM E119 or UL 263.