

## Fire-Rated Glass

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## Fire-Rated Glass for Exteriors

Fire-rated glass is typically used in the interior of a building to protect people and property in the event of a fire. It does this in two ways—by compartmentalizing the fire to prevent it from spreading to other areas and by protecting paths of egress so building occupants can safely exit the building. It has become an increasingly popular build-

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ing material because it meets the requirements of many life safety codes while offering clear view areas. Gypsum or masonry can meet the fire requirement, but doesn't afford clear views like fire-rated glass.

The bigger news, however, is the fact that there's been an increase of fire-rated glass for exterior applications. Especially now that fire-rated glass and framing assemblies can do so much more than just protect against fire and they can be made to match all the non-rated glazing systems.

Following are some of the most common situations where the threat of fire comes from the outside, thus, the opportunity for employing fire-rated glass:

**Meet property line requirements.** This can be between two different properties in close proximity or two buildings in the same property that are also in close proximity of each other. With owners increasing their building's footprint without having to sacrifice clear views, this is a great solution.

**Area adjacent or leading into a parking garage.** Vehicles are perceived as a possible threat for fire because they are full of fuel, so these areas need to be protected.

**Areas prone to wild fires.** In areas prone to wild fires, fire-rated glass has been used in the windows and openings to prevent the fire from coming inside the building. Exterior fire-rated glass can do double-duty as well. Here are some project examples where it needed to be fire rated:

**Energy efficiency.** In the case of Sapphire Towers in San Diego, SAFTI FIRST provided NFRC certified, 45-minute assemblies for the entire south facing façade, thus meeting the property line requirements, as stated above. These assemblies were also tested for air and water infiltration, wind load deflection, structural load testing and forced entry testing.

**Hurricane rated.** In the case of the Veterans Affairs Medi-



cal Center (VAMC) in Orlando (pictured above), some of the locations exterior fire rated assemblies specified were exposed to the elements. Not only were these assemblies rigorously tested and certified for fire and radiant heat protection for up to two hours, but because of its Florida location, it also had to be certified vs. large missile impact, air and water infiltration and cyclic wind loading. Energy-efficiency-wise, it also needed to meet certain U-values and SHGC.

In both cases, SAFTI FIRST was involved early on in the project working with architect to help design and provide a system that met all their needs. SAFTI also worked with the contractors to make sure that the products were delivered on schedule.

The bottom line is that new-technology fire-rated glass and framing systems make it possible for architects to have it all—meet code requirements and have the clear views and the abundant natural light that they desire. Clearly, it can be beneficial to seek manufacturer's expertise. Whether it's questions about product performance, allowed applications or understanding the code requirements, resources are available. They can help you understand your options and choices to ensure that the glazing product chosen is the best-suited, code-compliant solution for the project. □

### Fire and Hurricane-Rated Solution for Veterans Case Study: VAMC Orlando

**ARCHITECT:** RLF / Ellerbe Becket Joint Venture

**OWNER:** U.S. Dept. of Veterans Affairs

**CONTRACTOR:** Harmon Inc.

**PRODUCTS:** Fire and Hurricane Rated SuperLite II-XL 60 and 120 in SAFTI fire Hurricane Framing (Exterior); SuperLite II-XL 60 and 120 in SAFTI fire GPX Framing (Interior)  
**PERFORMANCE DATA:** For Fire Performance: Fire rated up to 2 hours meeting ASTM E119/NFPA 251/UL 263 with hose stream. For Hurricane Performance: TAS 201, TAS 202, TAS 203, ASTM E1996, ASTM E330, ASTM E1886, ASTM E283-99, ASTM E331-00 and AAMA 1304-02.

The New Orlando VA Medical Center, a revolutionary medical facility serving America's veterans, required glazing that provides more than expansive views and plenty of natural light. The energy-efficient, fire and hurricane rated assemblies that combine transparency and safety in various locations throughout the facility are made in the USA, at SAFTI FIRST's state-of-the-art manufacturing facility in California. SAFTI FIRST's products are listed with UL and/or WHI.