



GUIDELINES FOR COMPLIANCE WITH 2012 INTERNATIONAL FIRE CODE (IFC) PROVISIONS PERTAINING TO RESIDENTIAL PHOTOVOLTAIC (PV) SOLAR SYSTEM INSTALLATIONS

This guide serves to inform solar installers and homeowners about what items need to be addressed in a solar application submittal proposing alternate compliance with the 2012 IFC provisions. Installers should use this guide to discuss potential solar roof layouts with clients before applying. These guidelines are intended to provide for the best possible outcome for fire fighter safety, as well as homeowners and local business economic feasibility of photovoltaic solar panel systems.

New provisions of the 2012 IFC pertaining to residential solar photovoltaic power system installations are intended to provide for reasonably safe roof access and ventilation points for fire fighters should it become necessary to perform vertical ventilation by cutting one or more holes, generally at the highest point of the roof area, during a fire event.

City of Golden recognizes the paramount importance of fire fighter safety, while also seeking a balance with various factors of importance in our community, including but not limited to:

- Efforts to meet Renewable Energy goals under City of Golden’s Sustainability Initiative;
- Homeowner demand for PV and thermal solar power systems; and
- Economic imperatives of local businesses engaged in the sale and installation of PV solar systems.

Homeowners and contractors seeking a City of Golden permit for solar photovoltaic power system installations have two options regarding the Site Plan required with a permit application packet for a rooftop installation on a surface with greater than 2:12 pitch.

1. Submit a Site Plan reflecting compliance with the prescriptive roof access provisions section 605.11 of the 2012 IFC as adopted, specifically noting the following characteristics:

- For homes with hip roof layout, single 3’ wide clear access pathway—located at a structurally strong location capable of supporting the live load of fire fighters—from the eave to the ridge on each roof slope where modules are located;
- For homes with hip and valley layout, modules located no closer than 18” to any hip or valley when modules are placed on both sides of the hip or valley;
- For homes with single-ridge layout, two 3’ wide clear access pathways—located at structurally strong locations capable of supporting the live load of fire fighters—from the eave to the ridge on roof slope where modules are located.

2. **Submit a site plan along with the solar photovoltaic power system design along with a request consideration of approval under the Alternate Methods and Materials provisions of section 104.9 of the adopted 2012 IFC. The Alternate Methods and Materials provisions are considered on a case-by-case basis.**

The main goal of the site plan is to illustrate an alternate plan for fire fighters to conduct safe roof ventilation operations for the structure with a via aerial ladder apparatus or ground ladders. To this end, the scaled site plan must be submitted to the Fire Department through the Building Division permit process by illustrating:

- Location of surrounding streets, alleys and overhead power lines to indicate fire apparatus access and placement;
- Safe and practicable primary and secondary access points to roof for ground and/or aerial apparatus ladders as well as secondary egress options;
- Surrounding topography, showing potential impacts to ground ladder placement to the roof;
- Highest point of roof and high ridges supported by structural roof members to the peaks of all roof slopes where ventilation locations may be considered;
- Existence of contiguous or multiple attic spaces; and
- Locations of rooftop hips and valleys.

As part of the Alternate Methods and Materials approval process, the applicant must include all pertinent details regarding safe fire fighter access and provide prompt response to any follow-up inquiries from the Fire Department and/or the Building Division. Seeking an approval for Alternate Methods and Materials may create delays in the review of permit application.

For questions, please contact the City of Golden Fire Department Fire Marshal at 303-384-8094, or the Deputy Fire Marshal at 303-215-8887.