

Fire Safety Code Requirements

SolarAPP_Fire_v1.3

27. Disconnecting Means

- 27.1. PV system disconnecting means shall be provided in accordance with the 2017 National Electrical Code® (NEC), NFPA 70.(R) [690.13]
- 27.2. A Rapid Shutdown switch shall be provided at a readily accessible location outside the building in accordance with the 2017 National Electrical Code® (NEC), NFPA 70(R) [690.12(C)]

28. Signs, Placards, Directories, and Marking

- 28.1. General - All labeling shall comply with Articles 690 and 705 of the 2017 National Electrical Code® (NEC), NFPA 70 and Section 324 of the 2018 International Residential Code.
- 28.2. Rapid Shutdown Label - A label shall be installed not greater than 3ft from the electric utility service location that includes the location of all identified Rapid Shutdown switches if not at the same location. [NEC 690.56(C)(1)]
- 28.3. The label shall indicate which type of Rapid Shutdown system is installed, and include a simple diagram with sections in red designating areas that are not controlled by the rapid shutdown switch. [NEC 690.56(C)(1)]
- 28.4. Buildings with more than one rapid shutdown type - A detailed plan view diagram showing each PV system and a dotted line around areas that remain energized after the rapid shutdown switch is operated. [NEC 690.56(C)(2)]
- 28.5. Rapid Shutdown (PV Hazard Control) switch - this switch shall have a label not greater than 3 feet from the switch that states the following: [NEC 690.56(C)(3)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

29. Roof Access, Egress, and Ventilation

Access and minimum spacing shall be provided for access to specific areas of the roof, emergency egress from the roof, and opportunities for smoke ventilation in accordance with the 2018 International Residential Code .[IRC R324.6]

Exceptions:

1. Detached, non-habitable structures
2. Access pathways and setbacks need not be provided if the code official has determined rooftop operations will not be employed
3. Requirements shall not apply to low-slope roofs. (< 2:12)

1.1. Access Pathways - [IRC R324.6.1]

1.2. Ridge Setbacks - [IRC R324.6.2]

1.2.1. Sprinklered Occupancies - [IRC R324.6.2.1]

1.3. Emergency escape and rescue openings [IRC R324.6.2.2]

31. CO and Smoke Detectors [IRC R314.2.1, R314.2.2, R315.2.1, R315.2.2]

32. Fire Classification

1.4. Rooftop-mounted PV systems shall have the same fire classification as the roof assembly required in Section R902. [2018 IRC R324.4.2]

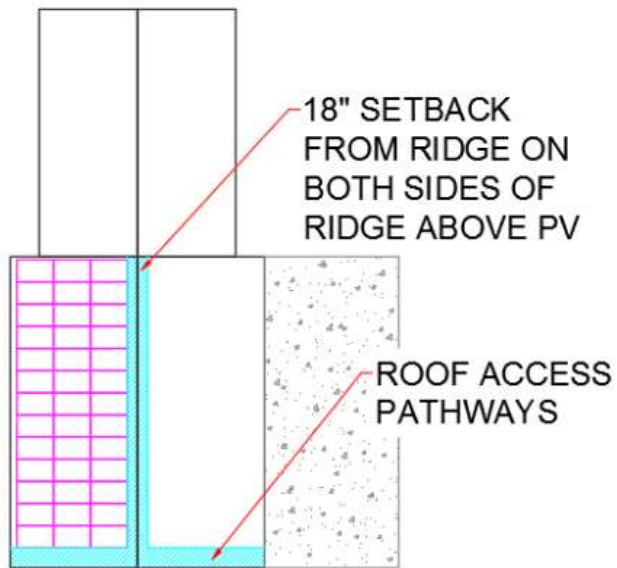
33. Product Certifications

1.5. PV panels and modules shall be listed and labeled to UL 1703 and/or UL 61730 [NEC 690.4(B). IRC R324.3.1]

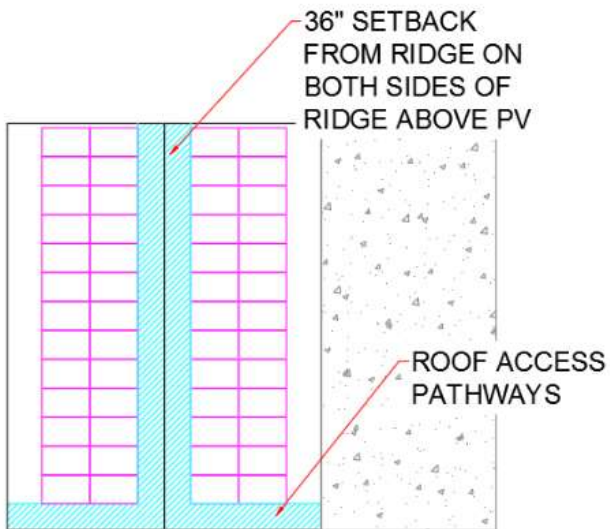
1.6. Inverters shall be listed and labeled to UL 1741 [NEC 690.4(B), IRC R324.3.1]

34. Roof Access and Ventilation Diagrams

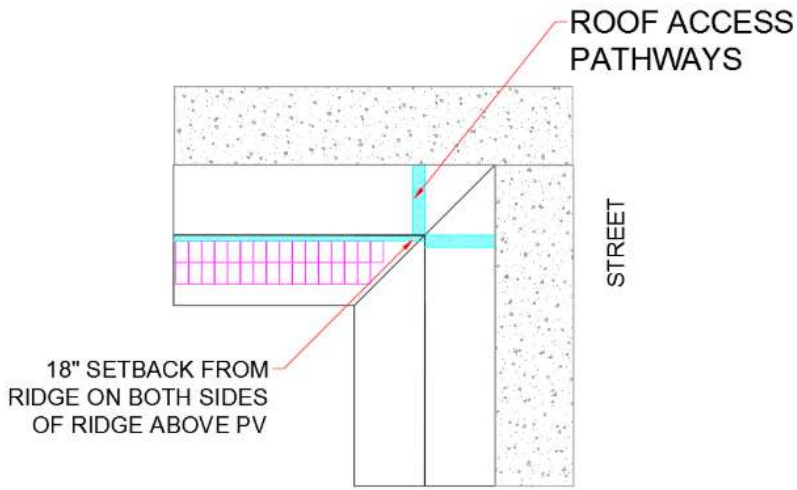
Ridge Setbacks - PV Less Than 33% Roof Area (66% for homes with sprinkler systems)



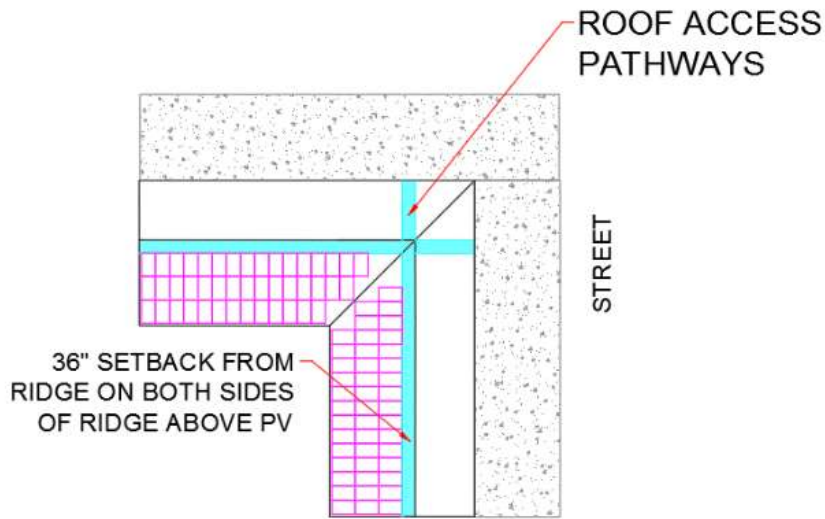
Ridge Setbacks - PV More Than 33% Roof Area (66% for homes with sprinkler systems)



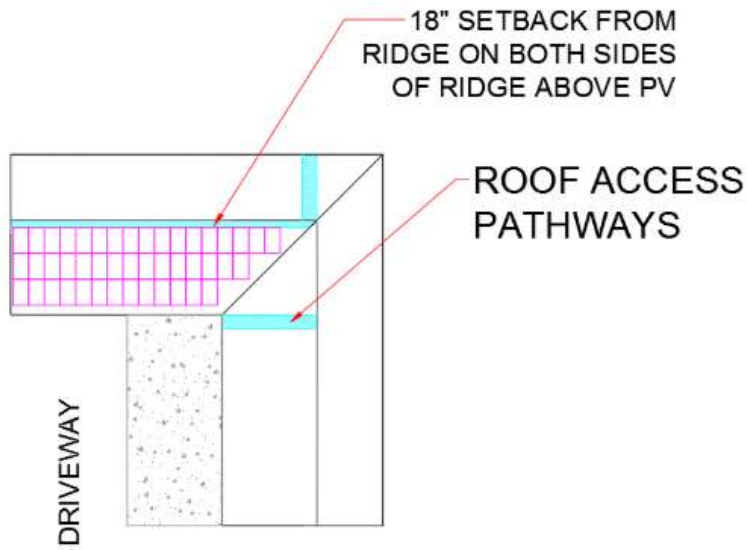
Hips & Valley Setbacks - PV Less Than 33% Roof Area - Street Access (66% for homes with sprinkler systems)



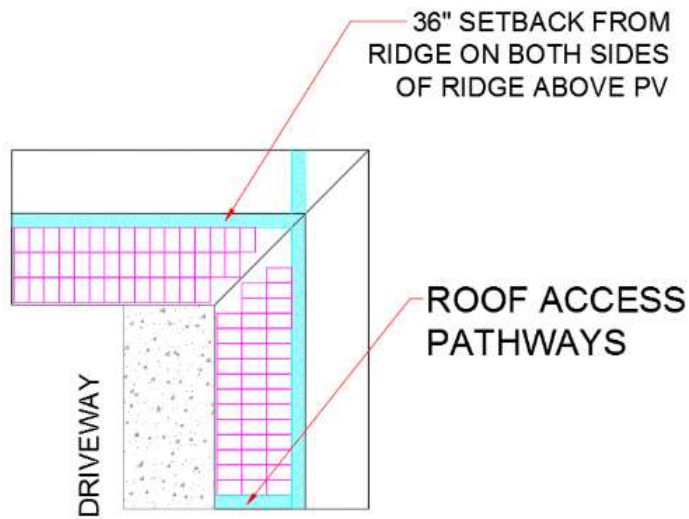
Hips & Valley Setbacks - PV More Than 33% Roof Area - Street Access (66% for homes with sprinkler systems)



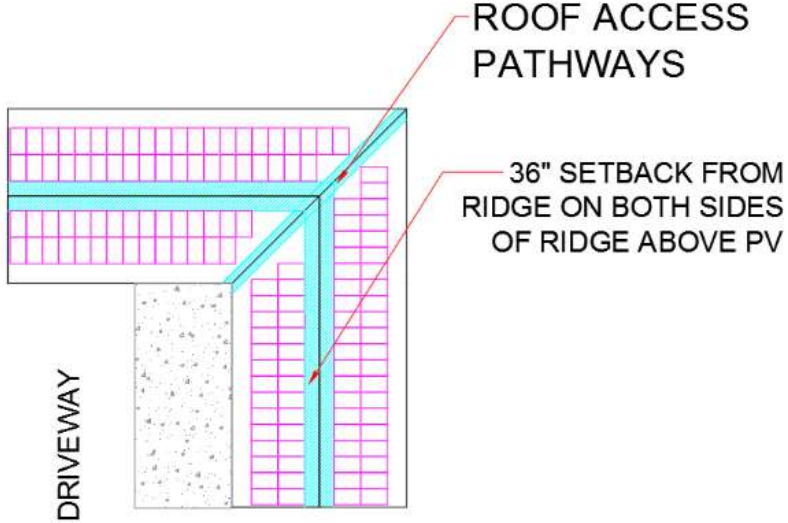
Hips & Valley Setbacks - PV Less Than 33% Roof Area - Driveway Access (66% for homes with sprinkler systems)



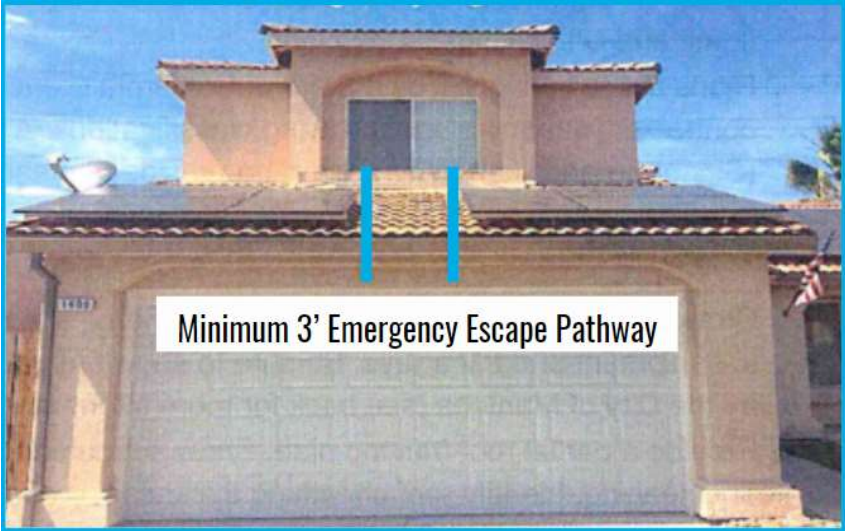
Hips & Valley Setbacks - PV More Than 33% Roof Area - Driveway Access (66% for homes with sprinkler systems)



Hips & Valley Setbacks - Alternative Pathway - Driveway Access



Emergency Escape & Rescue Opening



30. Signs, Placards, Directories, and Markings

30.1. PV System Disconnect (May be AC or DC) [690.13(B)]



30.2. DC Circuits and Equipment

30.2.1. DC Circuit Raceways and Enclosures [690.31(G)(3)]



30.2.2. DC Disconnecting Means [690.13(B)]



30.2.3. Direct-current PV System Disconnecting Means and/or DC Equipment Disconnecting Means [690.53]

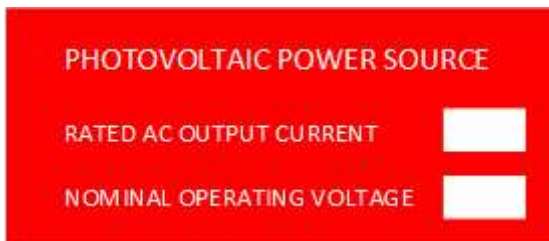


30.2.4. DC Disconnecting Means where terminals on both line and load side may remain energized. Example language or equivalent. [690.13(B)]



30.3. AC Circuits and Equipment

30.3.1. Interactive System Point of Interconnection [690.54]



- 30.3.2. Electrical Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources [705.12(B)]



- 30.3.3. Utility Service equipment location(s) and location(s) of all system disconnects for interconnected power production sources.[705.10], [690.56(B)]



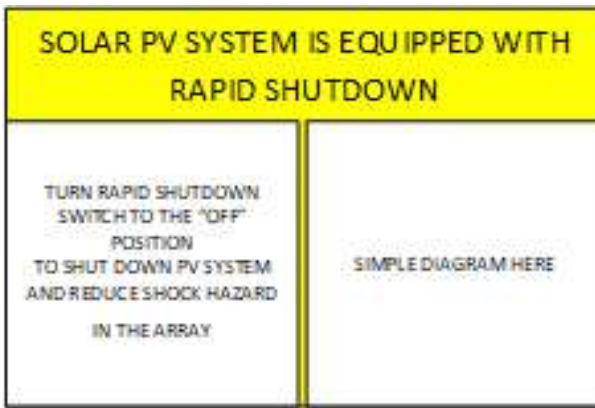
- 30.3.4. Interactive system point of interconnection if made at busbar. [705.12(B)(2)(3)(b)]



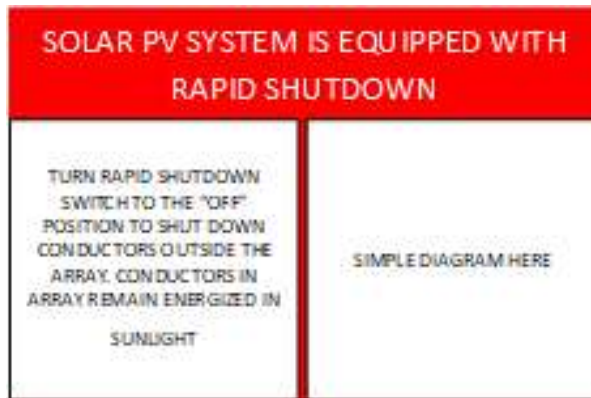
- 30.3.5. Interactive system point of interconnection if made at busbar. [705.12(B)(2)(3)(c)]



- 30.3.6. Building with Rapid Shutdown [690.56(C)]
- 30.3.6.1. Type of Rapid Shutdown [690.56(C)(1)]
 - 30.3.6.1.1. Systems that shut down the array and conductors leaving the array [690.56(C)(1)(a)]



30.3.6.1.2. Systems that only shut down conductors leaving the array [690.56(C)(1)(b)]



30.3.6.1.3. Buildings with more than one Rapid Shutdown type shall be provided with a detailed plan view diagram that includes each PV system and dotted lines around areas that remain energized after the rapid shutdown switch is operated. [690.56(C)(2)]

30.3.6.1.4. On or within 3ft of the Rapid Shutdown Switch [690.56(C)(3)]

