



## CITY OF BLACK DIAMOND

Community Development Dept.

24301 Roberts Drive / PO Box 599  
Black Diamond, WA 98010  
(360) 851-4447

# SOLAR SYSTEM PERMITS SUBMITTAL CHECKLIST

## ABOUT THE SOLAR SYSTEM PERMITS CHECKLIST:

This submittal checklist identifies minimum application elements for the City to accept an application. Any applications that are missing one or more of the items listed below may be considered incomplete and may delay the permit review process.

NOTE: An L & I electrical permit is required and must be approved by L & I before final inspection by the City of Black Diamond.

## SUBMITTAL REQUIREMENTS

1. ☐ Completed, signed Building Division Master Application form
2. ☐ Parcel number and legal description of the property.
3. ☐ Proof of a valid State Contractor's License – by issuance
4. ☐ City of Black Diamond Business License, if applicable
5. ☐ Specification Sheets
6. ☐ Installation Manuals
7. ☐ Site Plan
8. ☐ Checklist for Residential Solar Photovoltaic Systems: Rooftop Mounted.
  - a. PV system description (include manufacturer and model # of PV modules and inverters)
  - b. PV system is designed and proposed for a detached one- or two-family dwelling or townhouse not more than three stories above grade or detached accessory structure that is code compliant to setbacks and height, or code allows expansion of nonconformity for solar modules. [IRC 101.2]
  - c. Rooftop is made from lightweight material such as a single layer of composition shingles, metal roofing, lightweight masonry, or cedar shingles. 324.4.2, 902
  - d. The installation shall comply with the manufacturer's instructions. [IRC 324.3]
  - e. The installation shall meet the requirements of NFPA 70 National Electric Code, and all required electrical permit(s) must be obtained from the Authority Having Jurisdiction to administer the electrical code. [IRC 324.3]
  - f. The installation shall meet the requirements of the International Fire Code as amended by WA State. [IRC 324.3]
  - g. The PV system is designed for the wind speed of the local area, and will be installed per the manufacturer's specifications. [IRC 324.4]

## Code References

Black Diamond Municipal Code  
2018 IRC  
2018 IBC

## Resources

Building Division  
Permit Center  
Permit Status

## Questions?

Permit Technician:  
360-851-4447

## Submittal

Email to:  
[permits@blackdiamondwa.gov](mailto:permits@blackdiamondwa.gov)

## City of Black Diamond

24031 Roberts Drive  
PO Box 599  
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[www.ci.blackdiamond.wa.us](http://www.ci.blackdiamond.wa.us)



**Detached Garage Checklist**

- h. The ground snow load does not exceed 70 pounds per square foot. [IRC 324.4
  - i. Total dead load of modules, supports, mountings, raceways and all other appurtenances weigh no more than four pounds per square foot. [IRC 324.4
  - j. Enter total dead load of system (lbs/ft<sup>2</sup>):
  - k. To address uplift, modules are mounted no higher than 18" above the surface of the roofing to which they are affixed. IRC 324.4
  - l. Supports for solar modules are installed to spread the dead load across as many roof- framing members as needed to ensure that no point load exceeds fifty (50) pounds. 324.4
  - m. The photovoltaic modules and supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to that required for the roof construction. [324.4.2]
  - n. Roof and wall penetrations shall be flashed and sealed to prevent entry of water, rodents, and insects. [IRC 324.4.3, 703.1.1, 703.4, 903.2 ]
  - o. PV modules are listed and labeled with a fire classification in accordance with U L 1703. IRC 324.3.1]
9. ☐ Application fee



## **MOUNTAIN VIEW FIRE AND RESCUE CITY OF BLACK DIAMOND FIRE DEPARTMENT**

# **Solar System Permit**

Occupancy: Residential Single Family Home  
22472 SE 300<sup>th</sup> Street  
Black Diamond WA (Alan Finkelstein)

Occupancy Classification: R (Single Family Residence)

Plan Review Completed: 01/13/2020

### **COMMENTS: (Based on submitted Plans)**

**See the attached document:**

Plans for this project were received by the Fire Marshal's office for review. A careful review was conducted based upon the International Fire Code, 2015 Edition, the City of Black Diamond Code and applicable national standards.

This list is provided as information only, and includes the items that have been identified as deficiencies or needing to be addressed during the plan review; and shall not be construed as an all-inclusive list of code requirements that may be applicable or required to construct this project. Please note that not all items or issues may have been identified during the plan review process. If any item or issues are discovered or identified during construction or at the time of field inspections these will need to be addressed and corrections made so that code compliance is achieved. Please contact the Fire Marshal's Office before deviating from approved plans or proceeding with any changes in construction.

If you have any questions regarding these comments or noted corrections on the provided plans, please feel free to contract me at any time.

***GM Smith***

Greg Smith, Fire Chief

Mountain View Fire & Rescue / City of Black Diamond Fire Department

Office: 253-735-0284 Cell: 253 569 7770 Fax: 253-735-0287



**FIREFIGHTER ACCESS FOR  
ROOF MOUNTED SOLAR ARRAY  
RESIDENTIAL SYSTEMS (IFC 605.11)**

32316 148th AVE SE

Phone: 253 735 0284 • FAX: 253 735 0287 www.mvfire.org  
info@mvfire.org

**Firefighter Access for Roof Mounted Solar Array Residential Systems (IFC 605.11)**

**Roof Access Points**

- Roof access points are required to be located in areas that do not require the placement of ground ladders over openings such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.
- The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

**Hip Roof Layout (Roof slope greater than 2/12)**

- Panels/modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide clear access pathway from the eave to the ridge on each roof slope where panels/modules are located.

**Single Ridge Layout (Roof slope greater than 2/12)**

- Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide (914 mm) access pathways from the eave to the ridge on each roof slope where panels/modules are located

**Roof Hip and Valley Layout**

- Where panels/modules are to be placed on both sides of a hip or valley, the panels shall be located no closer than 18 inches (457 mm) to a hip or a valley.
- Where panels are to be located on only one side of a hip or valley, the panels shall be permitted to be placed directly adjacent to the hip or valley.

**Smoke Ventilation**

- When solar arrays are installed on roofs, there should be a minimum of 18" of clearance at the ridgeline to allow for smoke ventilation.

**Exceptions.**

- Where any of the following conditions exist, the access requirements listed above are not required:
  - Residential dwellings with an approved automatic fire sprinkler system installed.
  - Residential dwellings with an approved mechanical or passive ventilation system.
  - Where the Fire Code Official determines that the slope of the roof is too steep for emergency access.
  - Where the Fire Code Official determines that vertical ventilation tactics will not be utilized.
  - These requirements shall not apply to roofs where all of the following conditions are met:
    - a. The total combined area of the solar array does not exceed 33% as measured in plan view of the total roof area of the structure and,
    - b. The solar array will measure 1000 sq. ft. or less in area and,
    - c. A minimum 18" unobstructed pathway shall be maintained along each side of any horizontal ridge.

## EXAMPLES OF SOLAR ARRAY FIREFIGHTER PATHWAYS

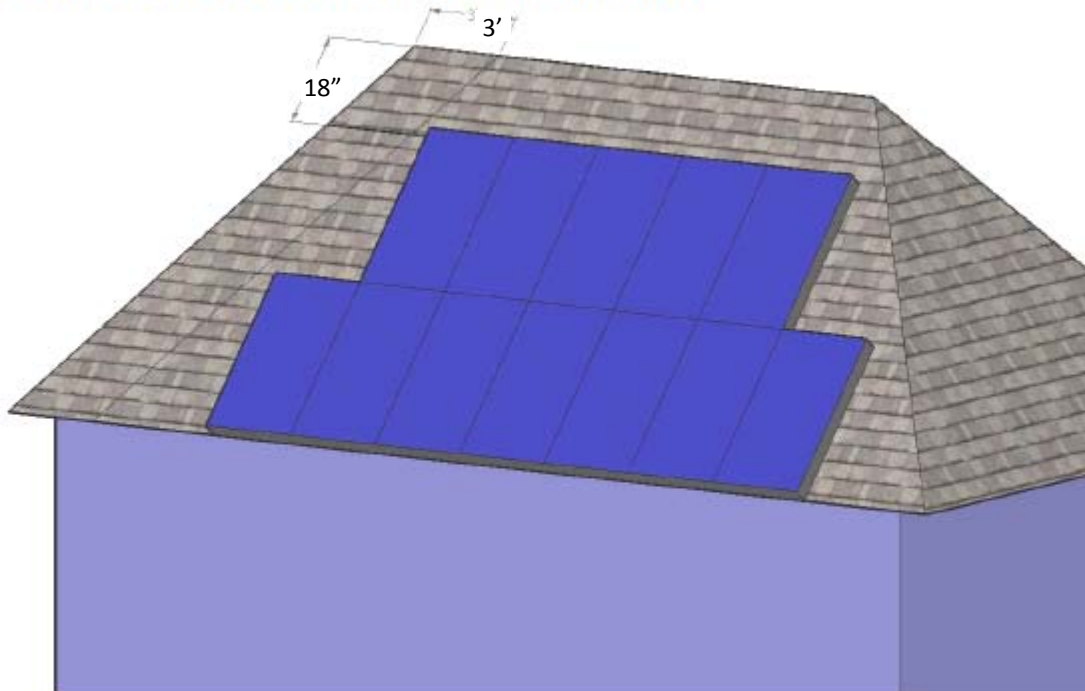


Figure 1 – Hip Roof

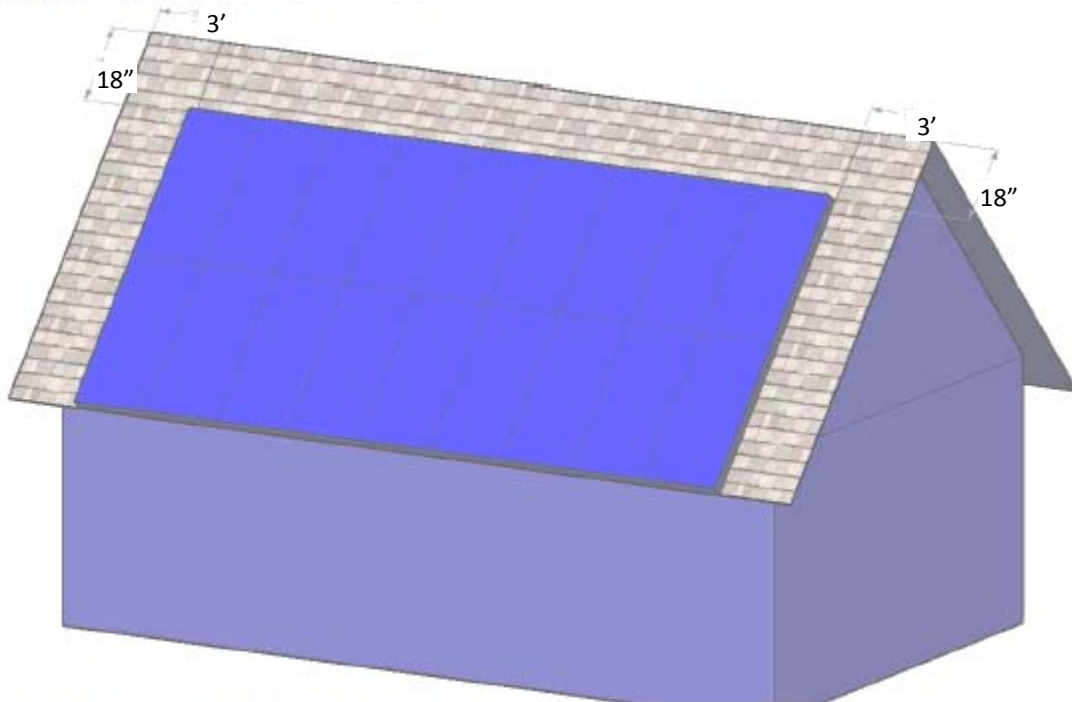


Figure 2 – Single Ridge

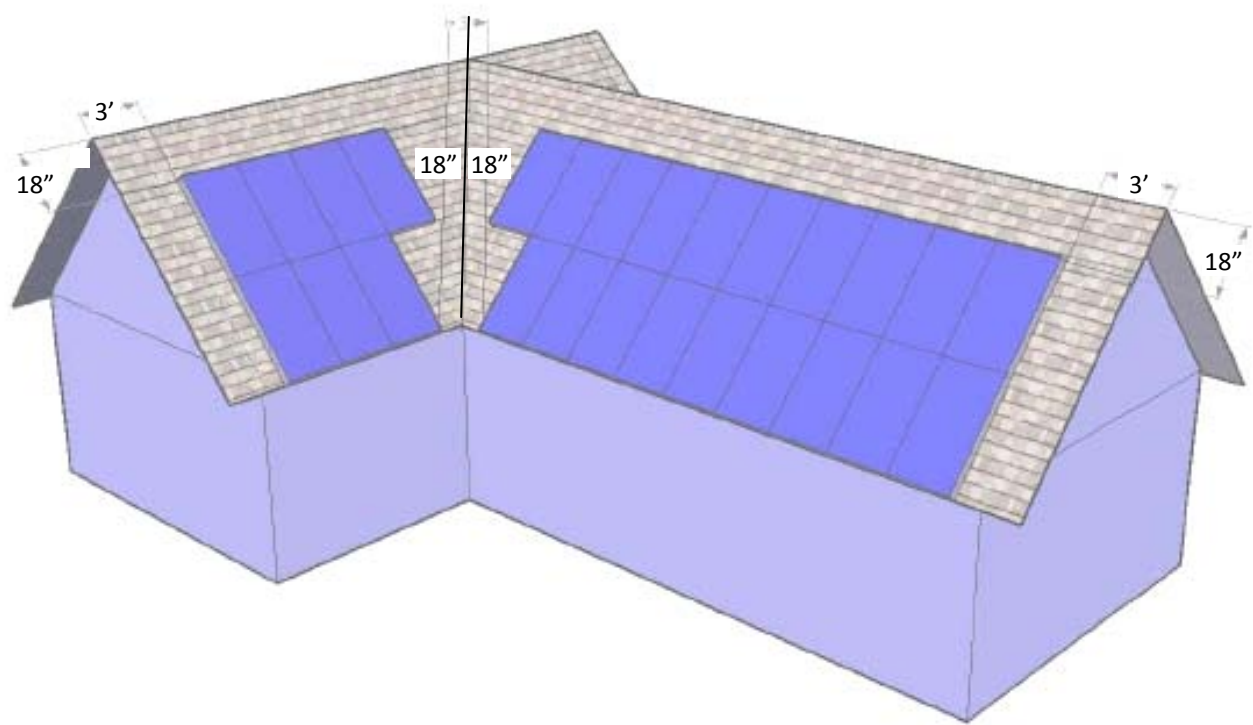


Figure 3 – Roof Hips and Valleys