Residential Photovoltaic (PV) Building Permit Checklist

Updated *11/2022*

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25 W Main St
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Webpage & Application Submittal:
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www.mybuildingpermit.com

Phone and Email:
Phone: (253) 931-3090
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Expedited Process

In an effort to embrace and streamline permit decision making in support of solar technology, the City of Auburn has established an expedited permit process for the installation of residential photovoltaic (PV) systems on existing one- or two-family dwellings or structures accessory to such dwellings.

Projects that meet the minimum requirements outlined in the checklist below may qualify for a "Fast Track" permit which will typically allow a process time of three business days from application to approval. After approval notification and upon payment, the permit will be issued and construction/installation can occur immediately thereafter.

Note that these "Fast Track" permits will be subject to field inspection and corrections may result if it is determined that any of the below items have not been met.

PV systems that do not comply with the prescriptive requirements of the checklist below may still be authorized through a typical permitting process requiring plan review. Such applications will require additional time and fees.

In addition to confirmation of the checklist items below, it is advised that you consult with any Home Owner's Association and/or meets the requirements of State Law RCW 64.38.055.

Permit Application

To apply for an expedited process, submit this checklist form along with your complete application materials via MyBuildingPermit.com using the following application information options:
Application Type: Building → **Project Type**: Single Family Residential → **Activity Type**: Remodel → **Scope of Work:** Residence

Under the Project Details application screen, select "Photovoltaic Array" as the "Structure Type"

Checklist

Requirement Details	Yes	No
1. Photovoltaic (PV) system is designed for rooftop installation and proposed for a detached one- or two-family dwelling not more than three stories above grade or detached accessory structure. (IRC 101.2)	☐	☐
2. PV system will be installed by a licensed contractor.	☐	☐
3. PV system will meet the requirements of NFPA 70 National Electrical Code and be permitted by Washington State Department of Labor & Industries Electrical Division. (IRC 324.3)	☐	☐
4. PV panels and modules are listed and labeled in accordance with UL 1703 and inverters are listed and labeled in accordance with UL 1741. (IRC 324.3.1)	☐	☐
5. The mounting system is engineered and designed for PV panels and are in accordance with UL2703. (IRC 902.4)	☐	☐

Requirement Details	Yes	No
6. Rooftop mounted PV systems are of the same fire classification as the roof assembly required in IRC 902. (IRC 324.4.2)	☐	☐
7. The PV system is designed for a wind speed of 110-mph and appropriate exposure category based on surrounding terrain characteristics. (W IRC 324.4 Ex.1)	☐	☐
8. To address uplift, panels are mounted no higher than 18-in above the surface of the roofing to which they are affixed. (W IRC 324.4 Ex.4)	☐	☐
9. Total dead load of panels, supports, mountings, raceways, and all other appurtenances weigh no more than 4-psf. (W IRC 324.4 Ex.3)	☐	☐
10. Supports for solar panels are installed to spread the dead load across as many roof-framing members as needed to ensure that no point load exceeds 50-lbs pounds. (W IRC 324.4 Ex.5)	☐	☐
11. The installation will comply with the manufacturer's instructions. (W IRC 324.4 Ex.1)	☐	☐
12. Roof and wall penetrations will be flashed and sealed in accordance with IRC Chapter 9 to prevent entry of water, rodents, and insects. (IRC 324.4.3)	☐	☐
13. Structure is code compliant to setbacks and height per the Auburn Zoning Code, ACC 18.07.	☐	☐
14. At least <u>two</u> minimum 36-in pathways from the lowest edge of roof to the ridge are provided for dwellings. At least <u>one</u> of these must be located on the street or driveway side of the roof (IRC 324.6.1 / IFC 1204.2.1.1)	☐	☐
15. Each roof plane with a PV array is provided with a minimum 36-in pathway from lowest edge of roof to the ridge on the roof plane, adjacent to the roof plane, or straddling the same and adjacent roof planes for dwellings. (IRC 324.6.1 / IFC 1204.2.1.1)	☐	☐
16. Panels and modules shall not be placed on a portion of a roof that is below an emergency escape and rescue opening. A minimum 36-in pathway is provided to the emergency escape and rescue opening (IRC 324.6.2.2 / IFC 1204.2.2)	☐	☐
17. All pathways are capable of supporting fire fighter access and are located in areas with <u>minimal obstructions</u> such as vent pipes, conduit, or mechanical equipment. All pathways are accessible by a ladder based on the ground and are not blocked by trees, overhangs, or other obstructions (IRC 324.6.1)	☐	☐
18. Clear setbacks are provided on <u>both</u> sides of a horizontal ridge for dwellings as follows: a. A minimum 18-in clear setback is provided for dwellings with arrays occupying <u>not more than 33%</u> of the plan view total roof area. (IRC 324.6.2 / IFC 1204.2.1.2) b. A minimum 36-in clear setback is provided for dwellings with arrays occupying <u>more than 33%</u> of the plan view total roof area. (IRC 324.6.2 / IFC 1204.2.1.2) c. For dwellings with an automatic sprinkler system installed per NFPA 13D, a minimum 18-in clear setback is provided for arrays occupying <u>not more than 66%</u> of the plan view total roof area (IRC 324.6.2.1.1 / IFC 1204.2.1.3.1) d. For dwellings with an automatic sprinkler system installed per NFPA 13D, a minimum 36-in clear setback is provided for arrays occupying <u>more than 66%</u> of the plan view total roof area (IRC 324.6.2.1.2 / IFC 1204.2.1.3.2)	☐	☐

Requirement Details	Yes	No
19. Panels are mounted no higher than the roof ridge or apex of roof (applies to pitched roofs).	☐	☐
20. Rapid shutdown initiation device is readily accessible outside the building and labeled in accordance with IFC 1204.5.1 through 1204.5.3 are provided. (IFC 1204.5, NFPA 70 690.12)	☐	☐

Access Pathways and Setbacks

The Interstate Renewable Energy Council (IREC) has published the following guidance on access pathways and setbacks.

Access Pathways and Setbacks

The following information is based on 2021 International Residential Code (IRC)
First version, December 2020
Section R324 Solar Energy Systems
Subsection 6 Roof Access and Pathways
Printed with permission from ICC
Visit the International Code Council for the most current version of the IRC: https://codes.iccsafe.org/

Roof access and pathways (R324.6)

Roof access, pathways and setback requirements shall be provided in accordance with Sections R324.6.1 through R324.6.2.1. Access and minimum spacing shall be required to provide emergency access to the roof, to provide pathways to specific areas of the roof, provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof. *See code text for four exceptions.*

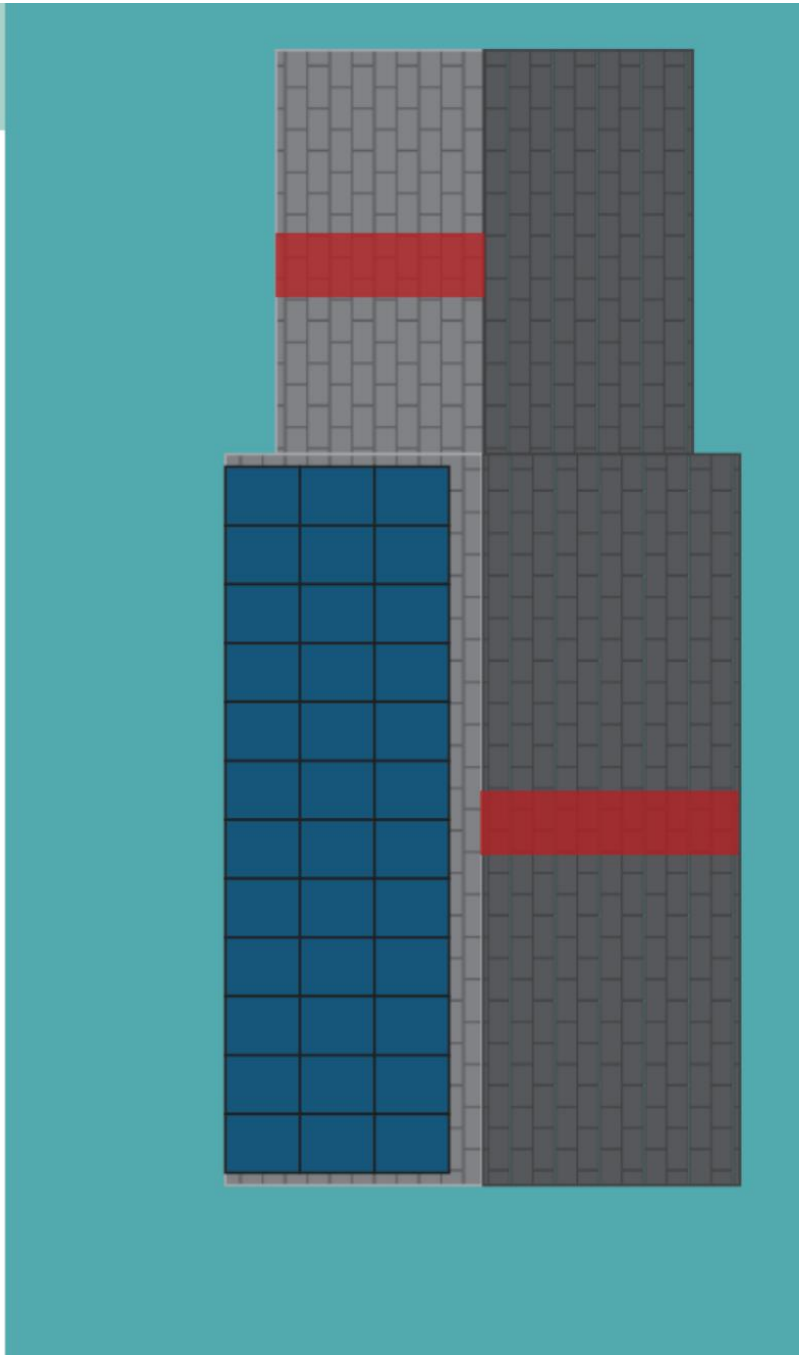
Pathways

Regardless of the size of the array, there must be pathways from the lowest roof edge to the ridge on each roof plane.

Pathways to Ridge and Street Access (R324.6.1)

All buildings must be provided with at least two pathways on each roof plane, from the lowest roof edge to the ridge. The pathways must be:

- at least 36 inches (914 mm) wide
- be over areas capable of supporting firefighters accessing the roof
- located in areas with minimal obstructions, such as vent pipes, conduit, or mechanical equipment.



Setbacks at Ridge

Setbacks for a dwelling with no sprinklers (R324.6.2)

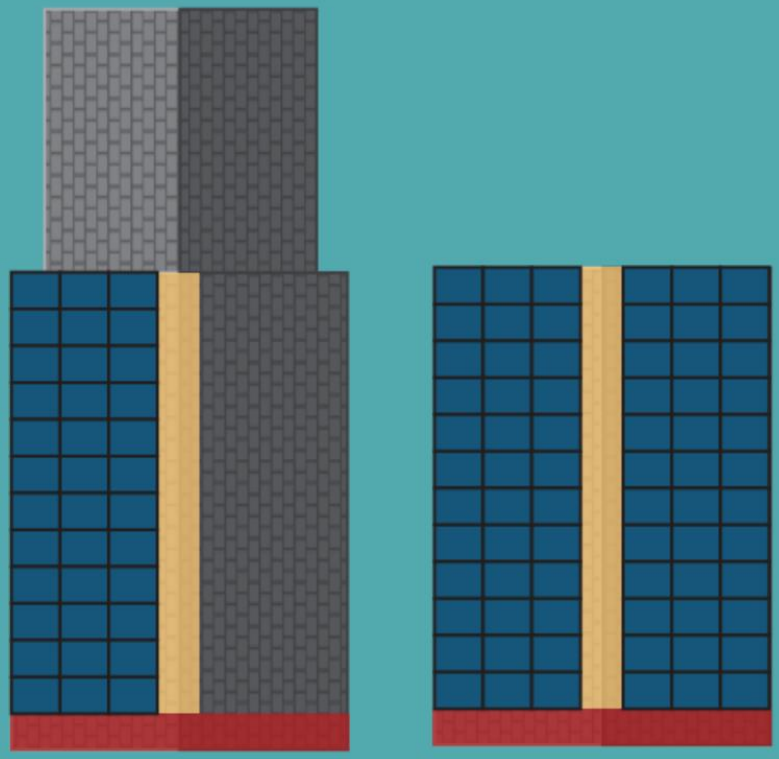
For PV arrays occupying **less than 33%** of the total roof area:

- A minimum 18-inch clear setback is required on both sides of a horizontal ridge

For PV arrays occupying **more than 33%** of the total roof area:

- A minimum 36-inch clear setback is required on both sides of a horizontal ridge

The distance the array must be setback from the ridge depends upon 1) if the dwelling has an automated sprinkler system and 2) the size of the array with respect to the area of the roof.



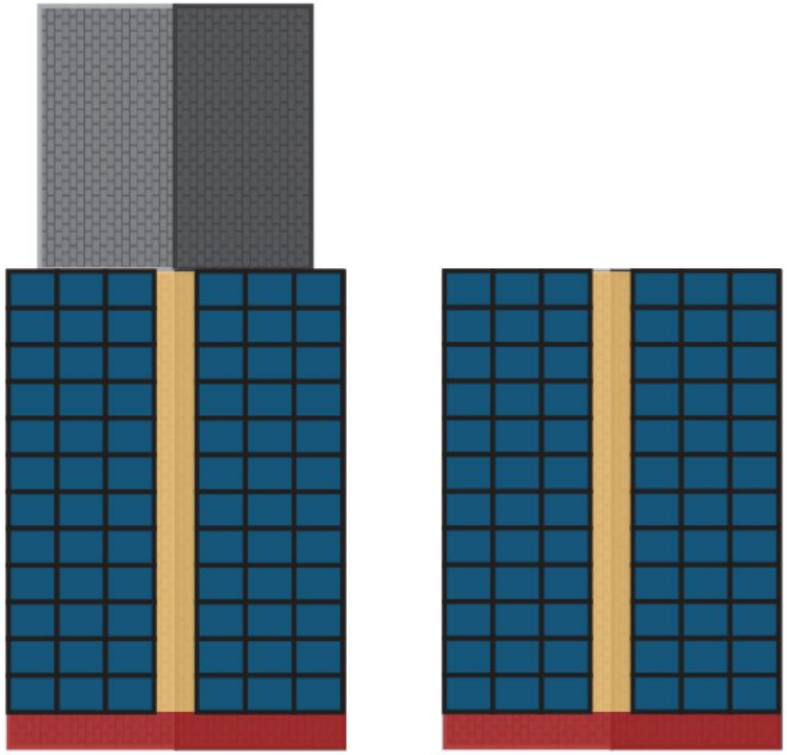
Alternative setback at ridge for a dwelling with an automated sprinkler system (R324.6.2.1)

For PV arrays occupying **not more than 66%** of the total roof area

- A minimum 18-inch clear setback is required on both sides of a horizontal ridge

For PV arrays **greater than 66%** of the total roof area

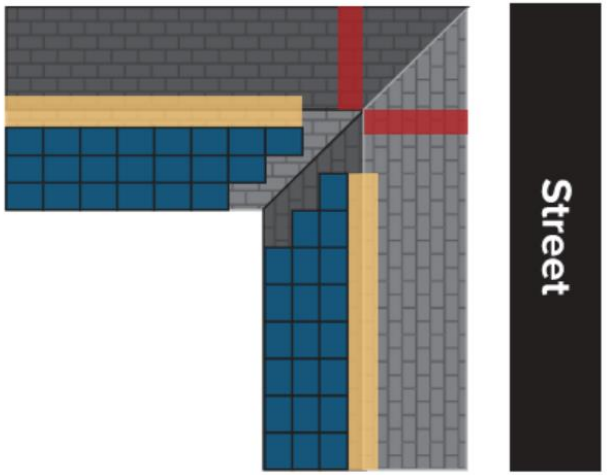
- A minimum 36-inch clear setback is required on both sides of a horizontal ridge

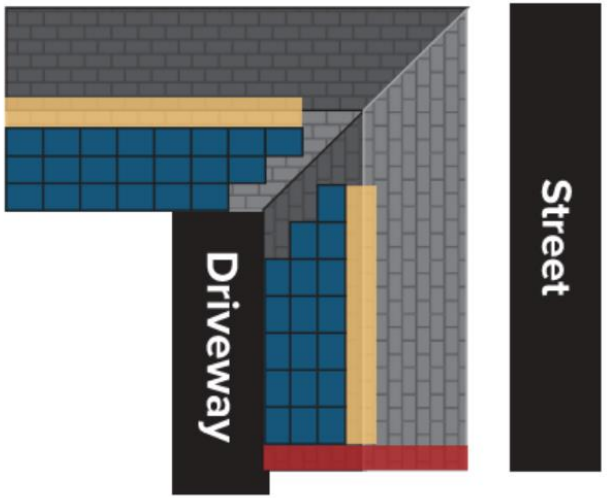


Hips and Valleys

Dwellings with a hip and valley roof are subject to the same code requirements. Below are some ways to visualize compliance.

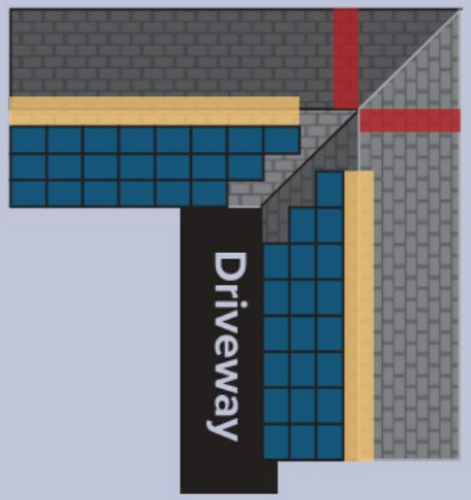
Not fewer than one pathway shall be provided on the street **or** driveway side of the roof.

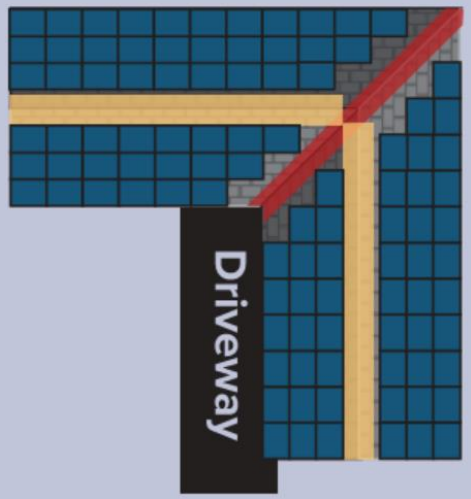




Each roof plane with a PV array must have:

- a pathway from the lowest roof edge to the ridge **or**
- the pathway must be on an adjacent roof plane **or**
- straddling the same and adjacent roof planes.





Emergency Escape and Rescue Opening (R324.6.2.2)

Modules installed on dwellings must NOT be placed on the portion of a roof that is below an emergency escape and rescue opening. There must be a pathway not less than 36 inches (914 mm) wide to the emergency escape and rescue opening.

Exception: BIPV systems listed in accordance with Section 690.12(B)(2) of NFPA 70, where the removal or cutting away of portions of the BIPV system during firefighting operations has been determined to not expose a firefighter to electrical shock hazards.