



Converting a Garage to Residential Use (2018 Code)

I want to convert my garage into living space. What should I do?

First step is to conduct your research. There are many components that play a role for conversions, especially if you are converting the space into an Accessory Dwelling Unit (ADU).

- Speak to a planner to verify the zoning district your property is located in. You can call (360) 754-3355 ext. 6299 or email planning@co.thurston.wa.us.
- Inquire with Environmental Health to verify you can connect to the existing septic system and water system. Call (360) 867-2673 or email EH_tech@co.thurston.wa.us.
- If you are proposing an ADU, visit www.thurstoncountybdc.com for additional information. Link to ADU on the left side of the page.

Do I need a permit?

Yes. A Residential Building Permit application will need to be submitted to the Building Development Center (BDC) to convert the garage into living space.

Are construction drawings needed?

Yes. Construction drawings must meet the current Washington State Energy Code and the Residential, Mechanical, and Building Codes as adopted by Thurston County Ordinance Title 14. Below is general information that will need to be included with your construction drawings. Projects are unique therefore the information below may not address all construction code requirements.

- **Floor Framing (when used)** – To achieve the R-30 insulation requirement, the floor may be framed or insulate the stem walls to R-5 minimum with 2 x 4 sleepers (treated for nailers) with R7.5 minimum on slab. Floors may use untreated wood when 6 mil plastic is laid on the slabs with 12" seams and 12" upward or the height of the stem wall whichever is less. Positive post to beam and connection of the joist to the sill or ledger is required. Block all bearing points.
- **Garage Door infill framing** - There are two methods to address infill of the garage.
 1. Anchor a 4x or a 6x pressure treated sill to the slab at the opening. Siding cannot be installed within 6" of soil or concrete subject to water splash. Metal flashing can be used for the first 6" adjacent to grade.
 2. Build a 6" stem wall from concrete or concrete masonry units (CMU). Drill and epoxy #2 bar 1" deep at 24" on center to connect the stem wall to the slab. The rebar shall extend 5" into the stem wall and CMU shall have the cells, containing rebar, filled with concrete.

Install a ½" horizontal rebar within 1½" of the top of the wall and at the top of the CMU bond beam or form block. Where a stem wall exists for the return panels, the concrete should be roughed before pouring concrete.

- **Window U-values** - Windows must meet the prescriptive vertical window U-value of U.30, overhead window U-value of U.50 or submit a Washington State Energy code, alternate performance calculation. If the window sizes will change, provide a scaled floor layout, noting the window sizes, any the window header sizes. The inspector will verify compliance with egress and window safety requirements on site.
- **Insulation R-values for the walls, ceiling and slab** - Prescriptive insulation values or the Thurston County specified alternate must be used unless a Washington State Energy code, alternate performance calculation is submitted. Please visit www.energy.wsu.edu for information on energy credits, heating system sizing and forms required for compliance.

- Walls: R-21 Walls that were previously sheet rocked are required to comply unless a component performance calculation is used. Add wood 2x's to increase the depth of the existing wall(s) to add rigid insulation.
- Ceiling: R49. Where full depth insulation at the exterior walls cannot be achieved, R-60 is required.
- **Ventilation** - Additions and conversions of garage to living space must meet the space ventilation requirements at the time the home was constructed. This provision is under consideration by the State Building Code and is subject to change in the future.
- **Equipment Combustion Air** - When an existing appliance is located in a garage, outside ventilation is not required. If installed in a living space, liquid- and solid-fuel-burning appliances need air for fuel combustion, draft hood air dilution and ventilation.

Each opening shall have a free area of not less than 1 square inch per 4,000 Btu/h of the total input rating of all appliances in the enclosure within 12 inches of the ceiling and within 12 inches from the floor. Check the vent for actual free area; if not mark use the outside dimension x.75 for metal and .25 for wood to determine the actual free area.

Example: A 65,000 BTU furnace would require 16.25-inch area of opening total. Roughly, a 4.5-inch square metal louver is required to obtain the roughly 4-inch square of free area required. A metal eight-inch square vent will provide adequate air for an 115,200 BTU furnace.

- **Water Heater Pressure Relief** - The pressure and temperature relief piping must be extended to the outside. The pipe must terminate not more than 2 feet or less than 6 inches from finished grade.
- **Separation Requirements for Accessory Dwelling Unit** – Refer to the [ADU One hour Fire Resistive Walls and Ceiling Handout located online at www.thurstoncountybdc.com](http://www.thurstoncountybdc.com). Link to Accessory Dwelling Units on the left side of the page.

How do I apply?

Submit a Master Application and Residential Building Permit Application to the BDC. Applications are available online at www.thurstoncountybdc.com. Submittal requirements are outlined in the application package.

How long will the review take?

Timelines vary depending on the proposal.

How much are the permit fees?

Building permit, building plan review, and department review fees will apply. The Residential Fee Guide is located online at www.thurstoncountybdc.com. You can also email permit@co.thurston.wa.us for an estimate of the permitting fees. Your email must include the property tax parcel number, description of the proposal, and total cost of the project (materials & labor).

I still have questions...

The Building Development Center is here to help. You can visit us during normal business hours, call, or send an email. Visit www.thurstoncountybdc.com for permitting information, applications, contact information, and hours of operation.