



I am building a new detached, heated workshop on my residential lot. My workshop does not include kitchen or sleeping facilities. How does the WSEC-R apply to my project?

Per Section R101.2 “Scope,” [WSEC-R](#) applies to “all residential buildings and the building sites and associated systems and equipment,” so the code **does** apply to detached garages and workshops like your project. However, a few sections pertain only to dwelling units, defined in the code as a “single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.” Because your workshop does not include all of these provisions, those sections that apply *only to dwelling units* would not apply to your project.

In reading the WSEC-R, pay attention to the phrase “dwelling unit.” Wherever a requirement is “per dwelling unit” or applies to “each dwelling,” it does not apply to your workshop.

Do I need to achieve energy credits and fuel normalization credits for my workshop?

No, you do not need to achieve the credits specified in Section R406 “Additional Energy Efficiency Requirements.” This is because Section R406.3 refers to “each dwelling unit in a residential building” as needing to achieve the minimum number of credits. Because your workshop does not include a dwelling unit, this section does not apply.

What are the insulation and fenestration requirements for my workshop?

Because your workshop has a heating system – even if you intend to heat it infrequently – it is considered a conditioned space and is required to meet the envelope insulation and fenestration requirements for building thermal envelopes in Sections R402.1.1 through R402.1.6. If you are following the prescriptive path, these baseline code requirements are summarized in Table R402.1.1.

Does the heating system for my workshop need to meet all requirements of Section R403?

The heating system for your workshop will need to meet **most** requirements of Section R403. But again, a couple of those requirements are “per dwelling unit.” For example, each separate heating and cooling system is required to have at least one thermostat per Section R403.1. However, thermostats are only required to be *programmable* for dwelling units, per R403.1.1.

Another requirement that applies only to dwelling units is Section R403.7.1, which requires a ductless heat pump in the largest zone of dwellings heated primarily by electric resistance.

Does my workshop require a mechanical ventilation system?

Requirements for a whole-house mechanical ventilation system are given in the [International Residential Code](#). Section M1505.4 says, “Each *dwelling unit* shall be equipped with a ventilation system.” So again, this requirement does not apply to your workshop.

My workshop building includes an unheated garage. Does the garage need to be insulated, too?

Only the building’s thermal envelope must meet the insulation and fenestration requirements in Section R402. The thermal envelope consists of the “below-grade walls, above-grade walls, floors, ceiling, roofs, and any other building element assemblies that enclose conditioned space or provide a boundary between conditioned space and exempt or unconditioned space.” The garage, being unheated, is therefore not part of the thermal envelope and its exterior building components do not need to be insulated. The heated workshop needs to be fully insulated, however, including the partition between the workshop and the garage. The perimeter of the slab along the partition must be insulated to minimum code requirements, too. As a general principle, treat an adjacent unheated space in the same manner as the outdoors when considering insulation requirements.



What if I am altering an existing workshop that is heated?

Alterations to an existing heated building must comply with the code for new construction, with several exceptions as summarized in Section R503. Our [Alterations \(Remodel\) Worksheet](#) guides you through these exceptions. Alterations are not required to achieve energy credits and fuel normalization credits, regardless of whether it is a dwelling unit or not.

What if I am converting an existing unheated workshop to a heated space?

Converting an unheated space to a heated space is considered an Addition and must meet requirements of Section R502 with a few exceptions. The responses to all of the questions above (except for the one on alterations) apply when converting an unheated workshop to heated workshop.