
Crawlspace Guidance

Revised August 2020

Crawlspace accessibility

Crawlspaces are evaluated for accessibility as part of the energy audit process.

- a. A crawlspace is determined to be accessible if there is sufficient space for a person to safely enter the entire area to conduct required work such as: energy audit procedures, installation of measures, and a final inspection.
 - i. In cases where the access point does not exist, or is too small for a person to safely enter the crawlspace, an access point can be created or increased in size provided that the process does not compromise the structural integrity of the building.
- b. A crawlspace is determined to be inaccessible when any of the above conditions cannot be met.

Crawlspace pressure boundary

Crawlspaces are evaluated to determine the location of the pressure boundary as part of the energy audit process.

- a. A crawlspace is determined to be within the pressure boundary of a dwelling when the measured pressure in the crawlspace changes by 5 pascals or more when the dwelling is pressurized or depressurized to 50 pascals beyond the baseline pressure.
 - i. In cases where a crawlspace is clearly open to the conditioned space it can be assumed to be within the pressure boundary.
- b. A crawlspace is determined to be outside the pressure boundary of a dwelling when the measured pressure in the crawlspace changes by less than 5 pascals when the dwelling is pressurized or depressurized to 50 pascals beyond the baseline pressure.

Course of Action (when to proceed & when to defer)

Based on the evaluation of the conditions of the crawlspace, Auditors must determine the course of action. They can either proceed with weatherization and determine the allowable measures to address the crawlspace or recommend deferral when the situation warrants.

1. **Accessible basements and crawlspaces within the pressure boundary**

In cases where basements and crawlspaces are accessible and within the pressure boundary. In addition to the normal energy audit procedure, the following steps must be taken:

- a. All exposed soil and sump systems will be covered in accordance with the SWS.
- b. Ventilation will be installed in accordance with the ASHRAE 62.2-2016 standard.

2. **Inaccessible crawlspaces within the pressure boundary.**

In cases where the crawlspace is not accessible, and it is within the pressure boundary additional evaluation is required to determine the appropriate course of action. The energy auditor must inspect the interior areas surrounding the crawlspace and the exterior grading for signs of bulk moisture entry and mold. Where possible, the inaccessible area must be evaluated via camera or borescope for similar conditions. Then the auditor must take one of the following courses:

- a. In cases where a small percentage of the footprint of a home is an inaccessible crawlspace (i.e. the size of a small bedroom ~120 sq. ft.) and the condition of the surrounding area is dry, work may proceed with work on the home following the steps outlined in #1 for all accessible basements and crawlspaces. If signs of minor or past moisture are present, the auditor will proceed using the approach described in 2b.
- b. In cases where a moderate portion of the footprint of the home is an inaccessible crawlspace (i.e. the size of 1-3 rooms ~360 sq. ft.) and the condition of the surrounding area is dry or shows signs of minor or past moisture, the auditor will call for an ASHRAE 62.2-2016 ventilation system to be installed that negatively pressurizes the inaccessible space by drawing air from the crawlspace and exhausting it outside. The flow rate of the fan must be variable, and a negative pressure must be measurable in the crawlspace when the fan is activated (>-2 pa with reference to the house). Air sealing between the inaccessible crawlspace and the rest of the house may be needed in some cases to create a sufficient negative pressure. All other accessible basements and crawlspaces will be treated as described in #1.
- c. In cases where a large portion of the home's footprint is an inaccessible crawlspace (i.e. more than half of the footprint) or there is a situation that is beyond the scope of allowable weatherization activities to correct, the home must be deferred. Some examples of deferral conditions include: moderate to severe moisture, mold, drainage, or other issues are in the judgement of the auditor cannot be corrected with allowable measure (Allowable Measures Chart – Appendix C)

d. As a best practice, if in any of the situations described in 2a-2c. a portion of an inaccessible crawlspace can be accessed a partial ground moisture barrier will be installed even if not all aspects of the SWS cannot be met. (i.e. the case of a very low clearance crawl space that persons cannot safely enter, but a vapor barrier can be spread across the area with a long pole or tool.)

3. **Any crawlspaces not within the pressure boundary**

In cases where pressure diagnostic tests demonstrate that a crawlspace or foundation is not within the pressure boundary, it is not part of the house as a system and does not constitute a deferral. Examples include:

- a. Foundation under a small entryway
- b. Cantilevered floor with vented skirting (site built or mobile home).