

The Louisa County Building Dept. will use these standards as a guide for the design review and inspection of unvented, conditioned crawl spaces.

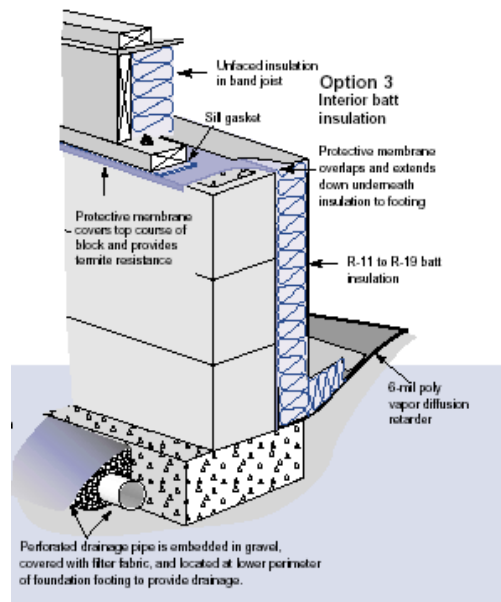
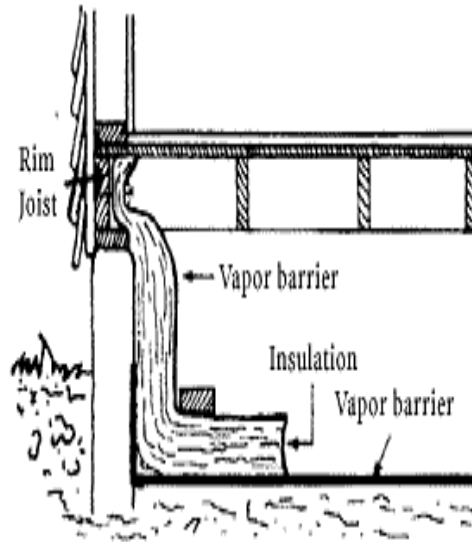
CODES AND STANDARDS

1. To utilize the most recent updates in technology, the design of these crawl spaces is based on the following standards and design information.

- International Residential Code / 2006 (IRC) with any applicable Virginia Uniform Statewide Building Code Amendments
- U.S. Department of Energy (DOE)
- Dominion Virginia Power Company (DVaP)

WHAT ARE MY OPTIONS?

- Vented Crawl Spaces with or without a vapor barrier covering the ground surface
- Unvented Crawl Spaces with continuous, mechanical ventilation, including return air
- Unvented Crawl Spaces supplied with conditioned air, including return air
- This pamphlet will deal exclusively with the last option, the unvented crawl space with conditioned air supplied and provided with a return air pathway.



The illustrations to the left show the use of fiberglass insulation. Rigid insulation may also be used, although it may not be used on the outside of the foundation walls for this purpose.

Taken from the IRC

Tables N1102.1: Crawl space walls shall have a minimum thermal performance of R-10/13 (continuous/ framing cavity).

§N1102.2.8: As an alternative to insulating floors over crawl spaces, insulation of crawl space walls when the crawl space is not vented to the outside is permitted. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches. Exposed earth in unvented crawl space foundations shall be covered with a continuous vapor retarder. All joints of the vapor retarder shall overlap by 6 inches and be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches up the stem wall and shall be attached to the stem wall.

R408.3 (1)(2.2): Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where subsection 1 AND one of the conditions listed under subsection 2 is met.

A CHANGE IN THE 2006 IRC NOW REQUIRES A RETURN AIR PATHWAY TO THE COMMON AREA, SUCH AS A DUCT OR TRANSFER GRILLE.

FREQUENTLY ASKED QUESTIONS

What mil plastic must go on the ground?

6-mil is recommended. The IRC states a maximum of 1.0 perm is acceptable and this is true, but the DOE and DVaP have done extensive studies and both agree 6-mil plastic should be used on the ground surface with all seams overlapped a minimum of 1' to 2' and taped or sealed. Additionally, the outside edge should be lapped up the foundation wall a minimum of 6" and sealed to the wall using adhesive, mastic, or a pressure treated nailing strip.

What type of insulation goes on the walls?

The IRC calls for minimum continuous R-10, or cavity filled R-13, with a covering on the crawl space side with a vapor retarder rating of 1.0 perm maximum. All joints in the insulation shall be sealed or taped. The outside band joist shall be insulated, also.

How tight should the crawl space be sealed?

As tight as possible. All penetrations through the exterior walls shall be sealed or gasketed. The access door(s) shall be insulated with 2" rigid insulation and the edges shall be gasketed. All penetrations and openings in the floor above shall be closed with approved materials and sealed.

How many duct openings are required?

The IRC requires enough ventilation to provide a minimum of 1.0 cfm per every 50 square feet of space. Vents should be distributed evenly when more than one is required. **Return air is NOW required.**

Who do I contact with questions?

Please feel free to contact the Louisa County Department of Building Inspections at any time. The office is open from 8:30 a.m. to 5:00 p.m., Monday through Friday.

Mail correspondence to:

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Additional information may be found at:
<http://www.louisacounty.com>

Department of



Bldg. Inspections



CONDITIONED CRAWL SPACES