

# Knox County Code Administration & Inspection

## IRC – Under-Floor Space Information

REV. 112012



### SECTION R408 UNDER – FLOOR SPACE (Partial readings of code section)

#### R408.1 Ventilation

The under-floor space between the bottom of the floor joists and the earth under any building (except such space occupied by a basement) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet of crawl space area, unless the ground surface is covered by a class 1 vapor retarder material (with approved retarder, the minimum ventilation shall be 1 square foot of ventilation per 1500 square feet of under floor space area). One such ventilating opening shall be within 3 feet of each corner of the building.

#### R408.2 Openings for Under-floor Ventilation

Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4".

1. Perforated sheet metal plates not less than 0.070 inch thick.
2. Expanded sheet metal plates not less than 0.047 inch thick.
3. Cast iron grill or grating.
4. Extruded load bearing brick vents.
5. Hardware cloth of 0.035 inch wire or heavier.
6. Corrosion Resistant wire mesh, with the least dimension being 1/8 inch.

#### R 408.3 Unvented Crawl Space (Requires approval of submitted plans)

1. Exposed earth must be covered with a continuous vapor retarder with joints overlapped by 6" and sealed or taped. The vapor retarder must extend at least 6" up the stem wall where it must be attached and sealed to the wall, and one of the following is provided;
2. Install continuously operated mechanical exhaust ventilation at a rate of 1 cfm for each 50ft<sup>2</sup> of crawl space floor area with an air pathway to the common area with the perimeter walls insulated.
3. Conditioned air supply sized to deliver a rate equal to 1 cfm for each 50 ft<sup>2</sup> of under – floor area, with a return air pathway to the common area (by a duct or grill) with perimeter walls insulated.
4. Plenum complying with section M1601.4, if the under-floor space is used as a plenum.

#### Access

An access crawl hole 18" by 24" shall be provided to the under-floor space or in accordance to section R408.4.

#### Removal of Debris

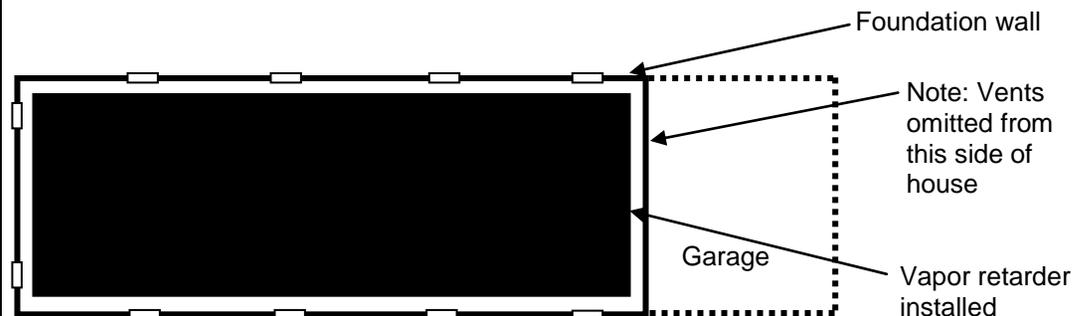
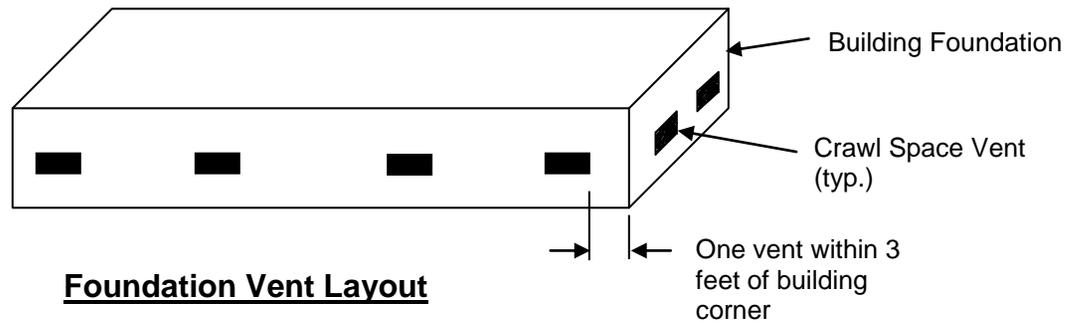
The under-floor grade shall be cleaned of all vegetation and organic material. All wood forms used for placing concrete shall be removed before a building is occupied or used for any purposes. All construction materials shall be removed before a building is occupied or used for any purpose.

#### Finish Grade

Grade may be located at the bottom of the footings; however, if there is evidence that the groundwater table can rise to within 6" of the finished floor (and does not readily drain, the grade of the under-floor space shall be as high as the outside finished grade and an approved drainage system is provided.

#### IMPORTANT:

*Because of the recent awareness of fungus growth issues in crawl spaces and due to the lack of good airflow within them, a mechanical humidistat controlled fan(s) may be required by the Knox County Code Administration & Inspection Department. Call the codes office for details of installation.*



**Foundation Plan View**



Example of a mechanical power vent for a crawl space. Needs to be controlled by a humidistat or comparable means.