

## Section 9.18. Crawl Spaces

### 9.18.1. General

#### 9.18.1.1. Application

- 1) This Section applies to crawl spaces whose exterior walls have less than 25% of their total area above exterior ground level open to the outdoors.

#### 9.18.1.2. Foundations

- 1) *Foundations* enclosing crawl spaces shall conform to Section 9.15.

#### 9.18.1.3. Heated and Unheated Crawl Spaces

- 1) Crawl spaces shall be considered to be heated where the space
  - a) is used as a hot air *plenum*,
  - b) contains heating ducts that are not sealed and insulated to minimize heat loss to the space, or
  - c) is not separated from heated space in accordance with Section 9.25.
- 2) Heating of heated crawl spaces shall conform to Section 9.33.
- 3) Insulation, an *air barrier system* and a *vapour barrier* shall be installed in the walls of heated crawl spaces in accordance with Section 9.25.

### 9.18.2. Access

#### 9.18.2.1. Access Openings

- 1) An access opening of not less than 500 mm by 700 mm shall be provided to each crawl space where the crawl space serves a single *dwelling unit*, and not less than 550 mm by 900 mm for other crawl spaces.
- 2) Access openings shall be fitted with a door or hatch, except when the crawl space is heated and the access opening into the crawl space is from an adjacent heated space.

### 9.18.3. Ventilation

#### 9.18.3.1. Ventilation of Unheated Crawl Spaces

- 1) Unheated crawl spaces shall be ventilated by natural or mechanical means.
- 2) Where an unheated crawl space is ventilated by natural means, ventilation shall be provided to the outside air by not less than 0.1 m<sup>2</sup> of unobstructed vent area for every 50 m<sup>2</sup> of *floor area*.
- 3) Vents shall be
  - a) uniformly distributed on opposite sides of the *building*, and
  - b) designed to prevent the entry of snow, rain and insects.

#### 9.18.3.2. Ventilation of Heated Crawl Spaces

- 1) Heated crawl spaces shall be ventilated in accordance with Section 9.32.

### 9.18.4. Clearance

(See also Article 9.3.2.9.)

#### 9.18.4.1. Access Way to Services

- 1) Where equipment requiring service such as plumbing cleanouts, traps and burners is located in crawl spaces, an access way with a height and width of not less than 600 mm shall be provided from the access door to the equipment and for a distance of 900 mm on the side or sides of the equipment to be serviced.

## 9.18.5. Drainage

### 9.18.5.1. Drainage

- 1) Except where it can be shown to be unnecessary, the ingress of water into a crawl space shall be controlled by grading or drainage.
- 2) Drainage of *foundation* walls shall conform to Article 9.14.2.1.
- 3) Drainage of the ground cover or floor-on-ground in the crawl space shall conform to Subsection 9.16.3.
- 4) Drains shall conform to Section 9.14.

## 9.18.6. Ground Cover

### 9.18.6.1. Ground Cover in Unheated Crawl Spaces

- 1) Where a crawl space is unheated, a ground cover shall be provided consisting of not less than
  - a) 50 mm of asphalt,
  - b) 100 mm of 15 MPa Portland cement concrete,
  - c) Type S roll roofing, or
  - d) 0.10 mm polyethylene.
- 2) Joints in sheet-type ground cover required in Sentence (1) shall be lapped not less than 100 mm and weighted down.

### 9.18.6.2. Ground Cover in Heated Crawl Spaces

- 1) Where a crawl space is heated, a ground cover consisting of not less than 0.15 mm polyethylene sheet conforming to CAN/CGSB-51.34-M, "Vapour Barrier, Polyethylene Sheet for Use in Building Construction," shall be installed as part of an *air barrier system* in accordance with Subsection 9.25.3.
- 2) The ground cover required in Sentence (1) shall have its joints lapped not less than 300 mm, and
  - a) be sealed and evenly weighted down, or
  - b) be covered with concrete not less than 50 mm thick.
- 3) The perimeter of the ground cover required in Sentence (1) shall be sealed to the *foundation* wall.  
(See Notes A-9.13.4., A-9.25.3.4. and 9.25.3.6., and A-9.25.3.6.(2) and (3).)
- 4) All penetrations of the ground cover required in Sentence (1) shall be sealed against air leakage.  
(See Subsection 9.25.3.)

## 9.18.7. Fire Protection

### 9.18.7.1. Crawl Spaces as Warm Air Plenums

- 1) Only crawl spaces under 1-storey portions of *dwelling units* shall be used as warm-air *plenums*.
  - 2) Enclosing material in crawl spaces described in Sentence (1), including insulation, shall have a surface *flame-spread rating* not greater than 150.
  - 3) *Combustible* ground cover in crawl spaces described in Sentence (1) shall be protected beneath each register opening with *noncombustible* material.
  - 4) The *noncombustible* register protection described in Sentence (3) shall
    - a) extend not less than 300 mm beyond the projection of the register opening, and
    - b) have up-turned edges.
- (See Note A-9.18.7.1.(4).)