



SMALL BUILDING ACCESS POLICY B19-04

For Part 9 buildings and one-storey Part 3 buildings not exceeding 600 sq m in building area

PURPOSE:

This document was developed in conjunction with Edmonton Fire Rescue Service (FRS) and provides guidance for design of acceptable emergency access in Edmonton, as referenced in Division B of the National Building Code - 2019 Alberta Edition (NBC2019(AE)) and applicable to Part 9 buildings and one-storey Part 3 buildings up to 600 sq m in building area. Typical necessary minimum access provisions for a variety of projects are outlined. Examples include, but are not limited to:

- a house with a secondary suite entrance that is inaccessible through the house front door common area
- a garden suite
- a home-based business using a separate isolated house entrance or accessory structure
- a row house, stacked row house or apartment with dwelling entrances remote from the street
- a temporary school portable module placed behind an existing school.

In contrast to the prescriptive NBC(AE) Part 3 Access Route Design requirements for firefighting and emergency response purposes, Part 9 requirements are more general and descriptive. There are more Part 9 buildings than Part 3 buildings in Edmonton. This, in conjunction with fewer fire protection requirements in NBC2019(AE) for Part 9 buildings, constitutes a greater risk in terms of frequency and consequence of a fire event for these types of buildings.

In Edmonton, similar fire trucks are used to respond to most building fire calls, so the access route for any building needs to have common characteristics. Access routes must be arranged so that a responding fire truck can stop no more than 45m from the building principal entrance, in alignment with the distance for unsprinklered buildings per 3.2.5.5.(2)(c), taking into account 3.2.5.4. for Access Routes and 3.2.5.7. for Water Supply, which distinguish requirements based on building size aligned with Part 9.

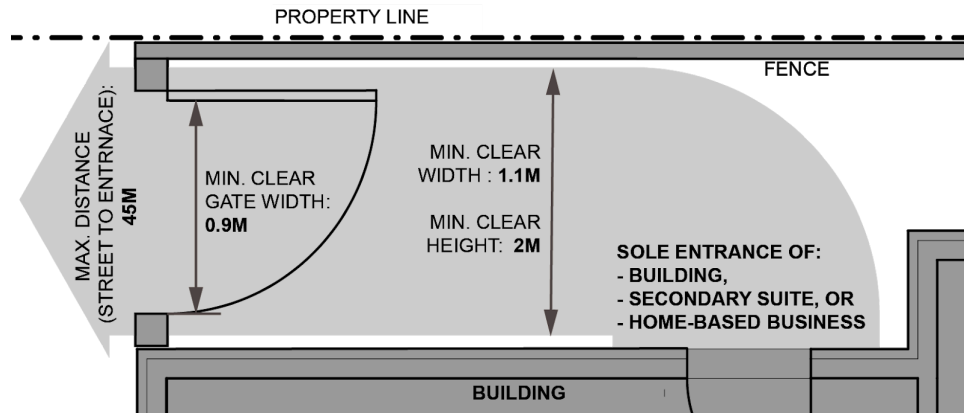
This policy does **not** address or stipulate hydrant distance, commonly addressed in a Development Permit, nor represent relaxation of any code provisions - e.g., sprinklering and requirements arising from - that may apply.

POLICY:

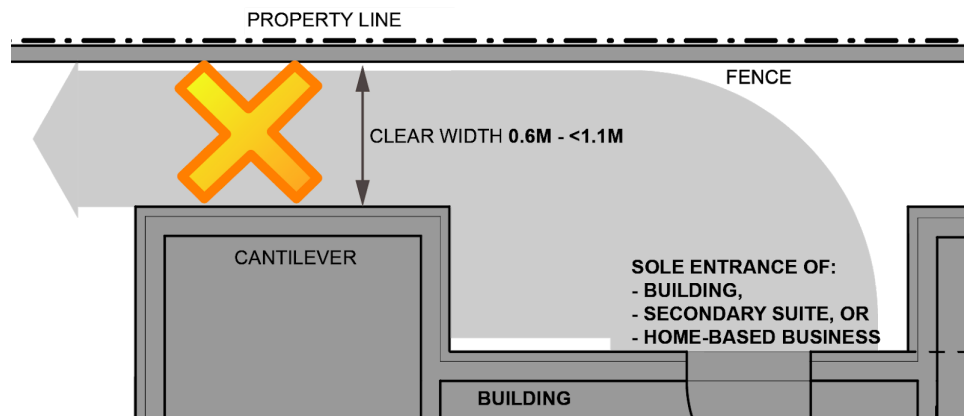
The minimum access provisions discussed in this document, some of which are currently incorporated into bylaws, standards and guidelines for development in Edmonton, shall be applied to Part 9 buildings and one-storey Part 3 buildings not exceeding 600 sq m in building area.

1. Except for a detached garage or accessory building serving a single dwelling or house with a secondary suite, every building shall be served by an acceptable access path of travel for emergency responders from a street or fire department access route constructed in accordance with NBC2019(AE):B:3.2.5.6. and 9.10.20.3.
2. A building shall be located so that a path of travel for the responders from their vehicles to the principal entrance of the building is not more than 45m. If a portion of a building is completely cut off from the remainder of the building resulting in no interior access to that portion of the building, the access route shall be located so that the path of travel for the responders from their vehicles to one entrance of each portion of the building is not more than 45m.
3. A restrictive covenant that cannot be discharged without written permission of the City of Edmonton shall be established between the property owner and an adjoining property owner, where an easement between adjoining properties to provide an acceptable access path of travel in perpetuity is created.

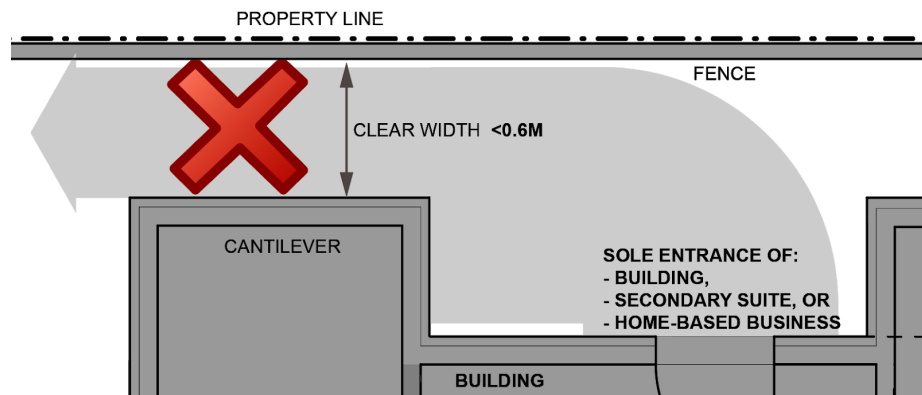
Acceptable Access via Side Yard: The path of travel referred to above must have an unobstructed clear width of at least 1.1m, with any gates installed on the path of travel capable of being opened to provide a clear width of at least 0.9m and an unobstructed clear height of at least 2.0m.



Obstructed Side Yard: A path of travel with a clear width less than 1.1m but not less than 0.6m is deemed obstructed, and an alternative solution for the building (e.g., automatic sprinkler system or other) may be required for the obstructed path of travel to be acceptable to the permit office and the fire department.

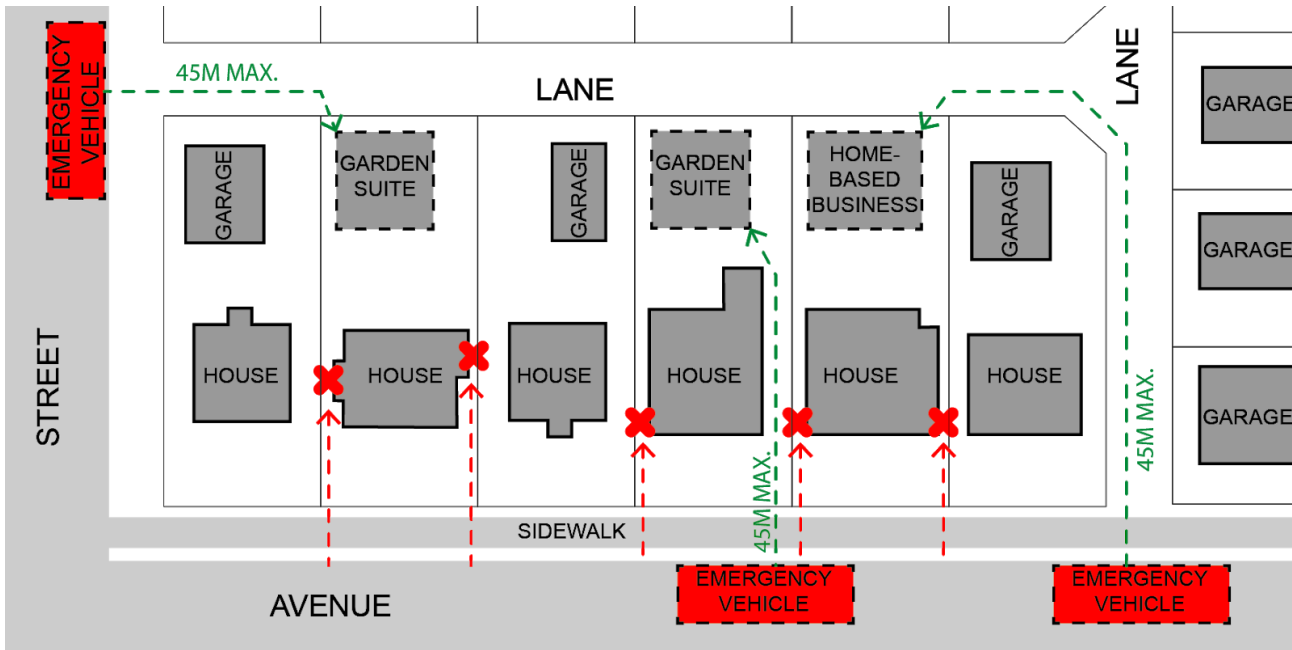


Unacceptable Configuration: A path of travel with a clear width less than 0.6m is deemed impractical and is not an acceptable path of travel for firefighter or emergency responder access.

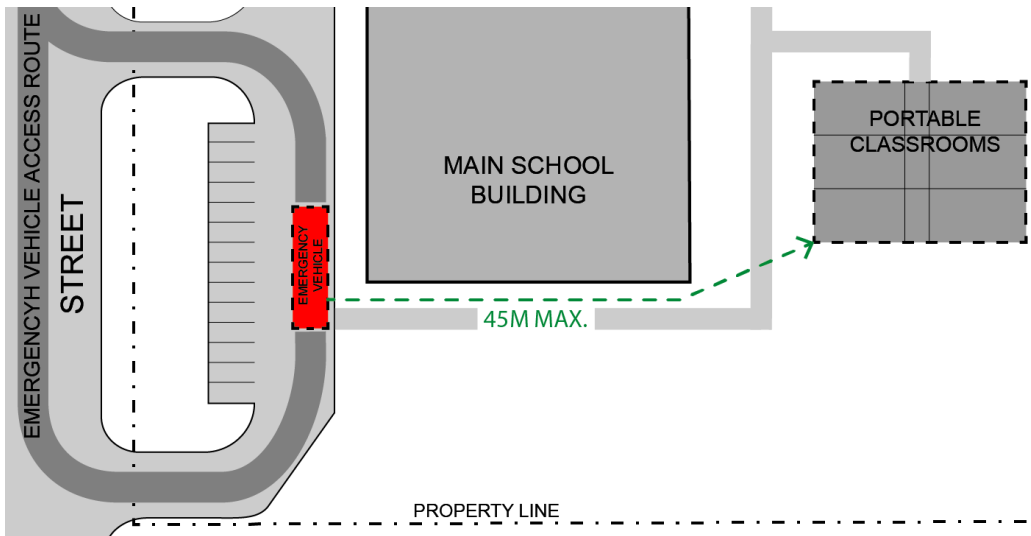


Examples:

Access to garden suite or home-based business in backyard of mid-block house, where the lane does not meet the minimum requirements for access route (NBC(AE):3.2.5.6., 9.10.20.3.):



Portable school classrooms behind a school:



To avoid risk of having to change plans after submission, deviation from this policy should be discussed with the permit office before submitting the permit application. An alternative solution may be required to achieve at least the minimum level of performance required by Division B of NBC(AE) in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions.

Notes:

9.10.20.3. Fire Department Access to Building

1) Access for fire department equipment shall be provided to each building by means of a *street*, private roadway or yard.

2) Where access to a building as required in Sentence (1) is provided by means of a roadway or yard, the design and location of such roadway or yard shall take into account connection with public thoroughfares, weight of firefighting equipment, width of roadway, radius of curves, overhead clearance, location of fire hydrants, location of fire department connections and vehicular parking.

A-9.10.20.3.(1) Fire Department Access Route Modification. In addition to other considerations taken into account in the planning of fire department access routes, special variations could be permitted for a house or residential building that is protected with an automatic sprinkler system. The sprinkler system must be designed in accordance with the appropriate NFPA standard and there must be assurance that water supply pressure and quantity are unlikely to fail. These considerations could apply to buildings that are located on the sides of hills and are not conveniently accessible by roads designed for firefighting equipment and also to infill housing units that are located behind other buildings on a given property.

A-3.2.5.6.(1) Fire Department Access Route. See below.

3.2.2.10. Streets

1) Every building shall face a *street* located in conformance with the requirements of Articles 3.2.5.4. and 3.2.5.5. for access routes.

2) For the purposes of Subsections 3.2.2. and 3.2.5. an access route conforming to Subsection 3.2.5. is permitted to be considered as a *street*.

...

6) Enclosed spaces, tunnels, bridges and similar structures, even though used for vehicular or pedestrian traffic, are not considered as *streets* for the purpose of this Part.

3.2.5.4. Access Routes

1) A building which is more than 3 storeys in building height or more than 600 m² in building area shall be provided with access routes for fire department vehicles

a) to the building face having a principal entrance, and

b) to each building face having access openings for firefighting as required by Articles 3.2.5.1. and 3.2.5.2. ...

3.2.5.5 Location of Access Routes

...

2) Access routes shall be provided to a building so that ...

b) for a building not provided with a fire department connection, a fire department pumper vehicle can be located so that the length of the access route from a hydrant to the vehicle plus the unobstructed path of travel for the firefighter from the vehicle to the building is not more than 90 m, and

c) the **unobstructed path of travel for the firefighter from the vehicle to the building is not more than 45 m.**

3) The unobstructed path of travel for the firefighter required by Sentence (2) from the vehicle to the building shall be **measured from the vehicle** to the fire department connection provided for the building, except that if no fire department connection is provided, the path of travel shall be measured **to the principal entrance** of the building.

4) If a portion of a building is completely cut off from the remainder of the building so that there is no access to the remainder of the building, the access routes required by Sentence (2) shall be located so that the unobstructed path of travel from the vehicle to one entrance of each portion of the building is not more than 45 m.

3.2.5.6. Access Route Design

1) A portion of a roadway or yard provided as a required access route for fire department use shall

a) have a clear width not less than 6 m, unless it can be shown that lesser widths are satisfactory,

b) have a centre-line radius not less than 12 m,

c) have an overhead clearance not less than 5 m,

d) have a change of gradient not more than 1 in 12.5 over a minimum distance of 15 m,

e) be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions,

f) have turnaround facilities for any dead-end portion of the access route more than 90 m long, and

g) be connected with a public thoroughfare.

A-3.2.5.6.(1) Fire Department Access Route. The design and construction of fire department access routes involves the consideration of many variables, some of which are specified in the requirements in the Code. All these variables should be considered in relation to the type and size of fire department vehicles available in the municipality or area where the building will be constructed. It is appropriate, therefore, that the local fire department be consulted prior to the design and construction of access routes.

In relation to 9.10.2.3. and 3.2.5.6., the fire department requires a *street*, access route, private roadway or yard to provide

- a satisfactory turning facility where a dead-end route spur exceeds 90m, and
- support for turning movements and vehicle weight of FRS Model apparatus with:

- Overall Mass: 36,000kg

- Overall length: 15.1m X Overall width: 2.6m X Wheelbase (tandem rear; to centre of axle group): 6.3m

- Rear overhang: 4.8m and Front overhang: 4.0m

- Steering lock angle: 44° and Lock to lock time: 6 seconds

The information in this letter is not intended to provide professional design advice and may not address all conditions on a project. If professional expertise is required with respect to an issue or circumstance, the services of a professional should be sought.