



Preface

FireWise Consulting provides these access standards based on the following:

- The National Fire Code of Canada (2020 Edition)
- The National Building Code (2020 Edition)
- Applicable industry standards

Agencies choosing to use this information should link it to the local authority's engineering standards and such local, provincial or national standards as may apply in that jurisdiction.

FireWise will review and update the Access standard to reflect changes in the National Fire and Building Codes or where changes in accepted industry standards occur.

Acknowledgements:

Many fire departments in Canada have developed variations of these standards and have informed our approach to developing this document. We appreciate the efforts of Canadian, New Zealand, and American Fire Departments in creating and sharing knowledge and strategies that improve the safety of firefighters and the communities they serve.



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Section 1 – Guiding Statements

1.1 Scope

This standard establishes a comprehensive method for installing and maintaining sufficient, functional emergency or secondary access routes. These routes are crucial for emergency vehicles and personnel to reach buildings, structures, complexes, subdivisions, or other developments effectively and promptly.

Furthermore, this standard facilitates the execution of emergency services response protocols in a manner that is both safe and efficient, ensuring timely intervention while prioritizing the utmost safety for life and property.

When this standard conflicts with the municipal bylaws, engineering standards, or other policies of a Local Authority, the requirements set forth by that Local Authority shall take precedence.

1.2 Purpose

This standard is a comprehensive guide for various entities, including agencies, departments, stakeholders, developers, registered professionals, and designers. Its primary aim is to assist those responsible for designing, installing, providing, and maintaining necessary emergency services access. This assistance aligns with the latest editions of the **National Fire Code (NFC 2020)** and the **National Building Code (NBC 2020)**.

The essence of this standard is to amalgamate the requirements outlined in the **NBC** and **NFC** while explicitly addressing aspects of emergency services access requiring implementation details not specifically identified in either Code. It is important to note that the directives of this standard complement, rather than supplant, existing federal, provincial, or municipal regulations, bylaws, engineering standards, or other regulatory frameworks.

1.3 Intent

The primary objective of this standard is to offer definitive guidance on the requirements for emergency vehicle access during the initial phases of subdivision and development design. This guidance should be implemented before the review of building permits, ensuring the integration of emergency access considerations from the outset.

The standard delineates and clarifies the concept of an emergency access route or secondary public access, making these terms applicable and clear for all developments under the jurisdiction of the Local Authority. It sets forth specific criteria for access and the safe setup and operation of emergency vehicles and personnel in response to an emergency or at an emergency scene.



Fire Departments should utilize this document as a resource, incorporating local engineering standards or other access requirements as necessary. This resource will enable them to effectively guide development professionals in aligning their projects with these critical emergency access standards and avoid future conflicts or inadequate access facilities.

1.4 Review and Updates

This standard is subject to periodic review and updates to accommodate changes in local requirements, nationally and internationally recognized standards, related technology, or where required by provincial or federal legislation and regulations.

1.5 Application

This standard principally applies to structures delineated in the National Building Code of Canada 2020 (NBC) and the National Fire Code of Canada (NFC), particularly addressing the necessity for emergency vehicle access included in industry practice and standards. The criteria for apparatus requirements draw upon internationally recognized standards and the real-world operational needs of fire apparatus.

The core aim of this standard is to ensure thorough consultation with local fire departments during the initial design, installation, and construction phases of a community subdivision, site, or building. This proactive engagement is crucial for aligning the development with the local fire department's operational needs, enabling them to deliver emergency services effectively and safely in compliance with Fire and Building Code requirements.

Furthermore, it underscores the importance of the fire department's role in actively guiding development professionals. This guidance specifies the requirements for sufficient access to firefighting equipment and personnel, ensuring consistent and professional application of these standards.

1.6 Disclaimer:

FireWise Consulting (FWC) does not provide any representation or warranty to recipients or readers of this document. FWC will not bear responsibility for any inaccuracies or oversights contained within this document nor for any usage of its contents. This document reflects assumptions related to standard engineering controls and norms; however, FWC strongly advises users to verify the compatibility of these assumptions with the specific standards or policies of their respective jurisdictions.

Regarding language and terminologies, FireWise adheres to conventional usage and definitions. The hierarchy for establishing these definitions is as follows: first, those contained within the legislation specific to the jurisdiction in question; second, those contained within the standards referenced within the document; and finally, those that are widely accepted Canadian definitions in cases where the first two are not applicable.



Section 2: Plan Submission Requirements

Plans for streets, emergency access routes, second public access and emergency access gates or bollards are to be submitted to the fire department for review and approval before the start of any projects.

The type of development permit applications that will require review by the local fire department include:

- Multi-residential developments
- Commercial developments
- Industrial sites
- Renovations, demolition, or upgrades to any building or site that may change access routes or risk profiles, including infill developments
- Modifications to existing emergency access routes, second public access or fire lanes
- Others, as required by local ordinances or fire department requirements
- Subdivision applications
- Building Permit applications
- Modifications to approved plans

Each application will undergo a thorough, individual assessment. It's important to note that these evaluations are unique to each case and do not establish a precedent or define an industry standard.

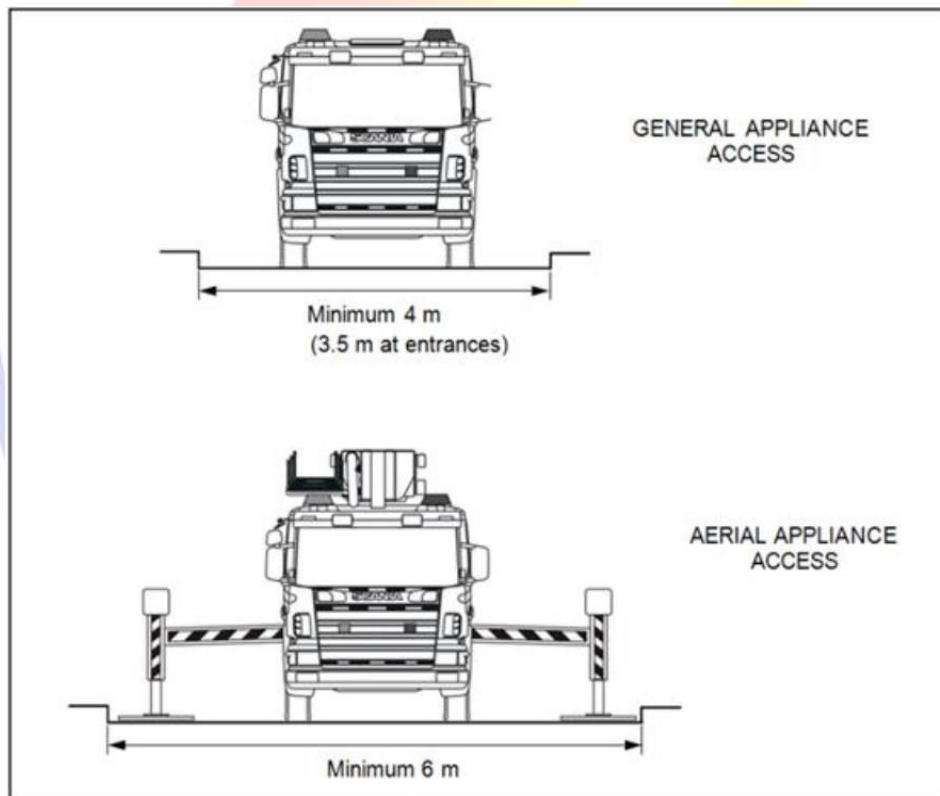


Section 3: Emergency Vehicle Setup and Operational Dimensions

A width of 6m is required for fire department apparatus to set up at an emergency scene and to provide a safe work area for emergency personnel performing their duties. The six-metre width includes:

- 3 metres for the vehicle
- 2 metres for non-restricted equipment and hose operations
- 1 metre for operation of doors, equipment and personnel

Aerial units require a minimum of 5 metres for engine operations and 6 metres for aerial apparatus setup and full deployment of outriggers, as illustrated below.



Section 4 Access

4.1 Primary Access

The primary access is the principal access to a site used daily by occupants of a development. The primary access must connect to a local roadway per the Local Authority's Engineering Standards.

4.2 Exemption

A temporary construction route can be used as emergency access provided the local authority determines, in its sole discretion, that:

- it is built to support the imposed loads of fire apparatus and
- is maintained as per **Section 4.6, Maintenance of Access**.

The granting of the exemption shall not preclude the local authority from imposing any requirement to construct a separate emergency access route at a later date.

4.3 Emergency Access Routes

An emergency access route is required when the distance from the centre line of the primary access street to the closest point of the access route at a building's principal entrance exceeds 120 m but is less than 200 m or where the total number of residential households exceeds 100 (**NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas**).

- The emergency route access shall be a minimum of 6 m wide, designed to support a fire apparatus vehicle weighing 38,556 kg (Fire Apparatus Load Limit) and to meet the access requirements set out in **NBC** Article 3.2.5.6.
- It is to be installed in the early stages of the development or in conjunction with the primary access.
- It shall provide an additional route into and out of building sites, complexes, developments, communities, or subdivisions.
- The owner or developer shall provide these routes for every building or portion constructed or moved into, full or partial, within the jurisdictional boundaries of jurisdiction. This requirement applies to public and private roads.
- Installing the emergency access route must be as remote from the primary access as possible or practical.
- The emergency access must be connected to a roadway navigable by fire



apparatus.

- The emergency access route will be available only for emergency services vehicles/personnel and restricted from unauthorized use through approved bollards (break-away style) or access gates. See **(Fig. K)** for an example.
- Installation of required no-parking signs must be **(Fig. B)** 20 metres apart and 2.3 metres above the surrounding grade.

4.4 Removal or Alterations to Emergency Access Points

Alteration, modification, removal or placing out of service of emergency access routes is not permitted without the local fire department's written approval.

This prohibition includes temporary obstructions for construction or demolition operations.

4.5 Second Public Access

A second public access must be provided per the Local Authorities' Engineering Standards.

- The second public access provides an additional route into and out of building sites, complexes, developments, communities or subdivisions. These streets are to remain accessible to all, be maintained and remain unobstructed.
- These streets shall be provided by the owner or developer for every building or portion hereafter constructed or moved into, full or partial, within the jurisdictional boundaries of the local authority. This requirement applies to public and private roads.
- The second public access, when installed, is to be as remote from the primary access as possible or practical.
- The emergency access must be connected to a roadway navigable by fire apparatus. **(See Fig. A)**

4.6 Maintenance of Access

It is unrealistic to assume that a municipality or a private owner can guarantee an operational year-round snow removal program to ensure routes are always clear of snow and debris. However, the design of access routes should readily allow for snow removal throughout the year. Emergency access routes should withstand typical climatic conditions. The property owner is responsible for maintaining access routes at all times.



Heavy rain conditions can reduce the ability of a road to bear the weight of heavy vehicles. It is reasonable that emergency access be useable 90% of the time for emergency use. Where rain conditions have made the emergency access temporarily unusable, the owner must have the emergency access repaired/functional within a reasonable timeframe as the Local Authority may require.

4.7 Access: General Information

4.7.1 Up to 90 Metre Length

- No turnaround is required.
- No other access is required.

4.7.2 More Than 90 Metres With a Dead-End

- A turnaround is required for any dead-end portion of the access route over 90m long.
- "Hammer-head" or turnaround.
- No other access is required.
- Turnaround can also be a parking lot meeting a 12.0m centre line of roadway radius at corners and a 6.0m minimum road width.

4.7.3 Between 120 Metres and 200 Metres Length

- Emergency access route required (minimum 6m wide and designed to carry fire apparatus load of 38,556 kg (Fire Apparatus Load Limit)
- Emergency access roads must connect to public thoroughfares.
- Installation of bollards or approved gates may limit access to emergency vehicles only is permissible.

4.7.4 Over 200 Metres Length

- Second public access is required.
- Designed to full public road standard, as per the Local Authority's Engineering Standards, connecting to public thoroughfares.

4.8 Additional Notes

- Residential projects with one to 100 households require one primary access point. Residential projects with more than 101 households require a Primary and an Emergency Access point(s).
- The AHJ reserves the right to require additional access points as emergency access routes or second public access depending on each site's operational requirements, topography, etc., as per ***NFPA 1141 "Standard for Fire Protection Infrastructure for Land Development in all Suburban and Rural Areas."***



- Access routes/streets design and construction standards to confirm **NBC Article 3.2.5.6.** and the Local Authority Engineering Design Standards.

4.9 Dead-End Access Route Requirements

- Dead-end access routes over 90 m shall be provided with the required turnaround as per **NBC Article 3.2.5.6.** and **(Fig. A)**

4.10 Split Entry Access

- A split-entry access (primary access divided by an island or boulevard feature creating an entrance and exit at the primary access location) will not be deemed the primary access on one side and an emergency access route or second public access on the other. An incident at this location would render the access inoperable for additional emergency vehicle access or occupants exiting the site. **(Fig. C)**

4.11 Access Through P-Loop, Place, or Close

- Access to a building by a street with a single access (such as the stem of a P-loop) is a single entry point, even if there is more than one entry point into the building site within the loop of the P-loop. Measurements to the principal entrance of each building will be taken from this single access start/choke point. **(Fig. D)**

4.12 Emergency Use Zone or Lay-by

- Should an emergency use zone/ lay-by be required or provided, it shall be designed and installed as per **(Fig. E)**.

4.13 Roundabout

- Should a roundabout be planned, it shall meet the minimum dimensions as per **(Fig. F)**.



Section 5 Signs and Notices

Approved signs shall be provided by the owner(s) or agents of the owner and maintained at all times. Required signage will clearly identify the building address, access gates, access routes, fire lanes, no parking zones, etc.

5.1 Posting of Load Limit Signs

Vehicle load limits shall be posted in conspicuous, clearly visible areas and maintained by the owner(s) at both entrances to a bridge or access over a below-grade structure.

Lighting may be required for illumination during night hours.

5.2 Removal of Required Signs, Gates or Barriers

Locks, gates, chains, signs, tags or seals installed as per this standard and for use by emergency personnel shall not be removed, unlocked, destroyed, tampered with or defaced in any manner and shall be maintained in proper working condition.



Section 6 Street Design Parameters

6.1 Acceptable Route/Street Surface Finish

The design of the street or route must support 38,556 kg (Fire Apparatus Load Limit) and be finished with concrete, heavy-duty asphalt, or other approved hard-surface material designed to permit accessibility. The owner or agent shall maintain the road or route under all weather conditions.

Path delineation is required where Turfstone, Structural Grass or similar products are used.

6.2 Grades

Access routes shall have a grade of not more than 8 percent. This grade is the maximum grade at which the fire department aerial units can position and function and reflects the requirements in NBC Article **3.2.5.6. (1) Access Route Design**.

6.3 Connections

All access routes, whether emergency or secondary, shall be connected to a public thoroughfare and not to a lane, alley or pedestrian pathway unless approved in writing by the fire department.

6.4 Entrance Points for Emergency Access Routes

Street entrances to emergency access routes shall provide the required curb structure or transition to allow fire department apparatus adequate space to turn from the adjoining thoroughfares. The transition from a thoroughfare to the emergency access route shall not be more than an 8 percent grade to prevent bottoming out of the fire apparatus bumpers or undercarriage.

6.5 Gated Communities

The main security entry gate into a gated community is required to have emergency vehicle access activation built into the gate operator as specified by the Authority Having Jurisdiction. The activation may use a specified siren application, emergency lights or a combination thereof. Signs identifying the opening methodology must be visible to emergency responders.

6.6 Streets

All streets are to be nine metres (9m) or more in width as described in this standard (**NBC-definition of a street**). This requirement does not supersede the minimum widths outlined in the Local Authority's Engineering Design Standards.



Street means any highway, road, boulevard, square or other improved thoroughfare 9m or more in width that has been dedicated or deeded for public use and is accessible to firefighting vehicles and equipment.

The drive aisle on private property must be a minimum of 7.0 metres wide and includes drive aisles in commercial developments with public use.

6.7 Roundabouts or Traffic Circles

The design of roundabouts must ensure that fire department vehicles, including aerial apparatus, can safely navigate through them. This design must facilitate unobstructed passage without requiring vehicles to mount curbs or maneuver around other obstructions.

6.8 Parking Restrictions on Access Routes

- **6.0M WIDE:** No parking of any kind. No-parking signs shall be posted on both sides of the access route. **(Fig. H)**
- **7.5M WIDE:** Parking on one side of the access route will be permitted. No parking signs must be posted on one side of the access route. **(Fig. I)**
- **9.0 M WIDE OR GREATER:** Parking shall be permitted on both sides of the access route. **(Fig. J)**
- **SINGLE ENTRANCE ACCESS ROUTE:** No-parking signs shall be posted on both sides of the access route as per **(Fig. G)**
- **DRIVING SURFACE MEASUREMENT:** The acceptable driving surface of an access route or street is the asphalt area measured between the concrete curb and gutter on each side of the route/street. The .25 m of the curb and gutter on each side of the access route are not to be included in the access route/street's required dimensions. **(Figs. G, H, I, and J)**

6.9 Variances

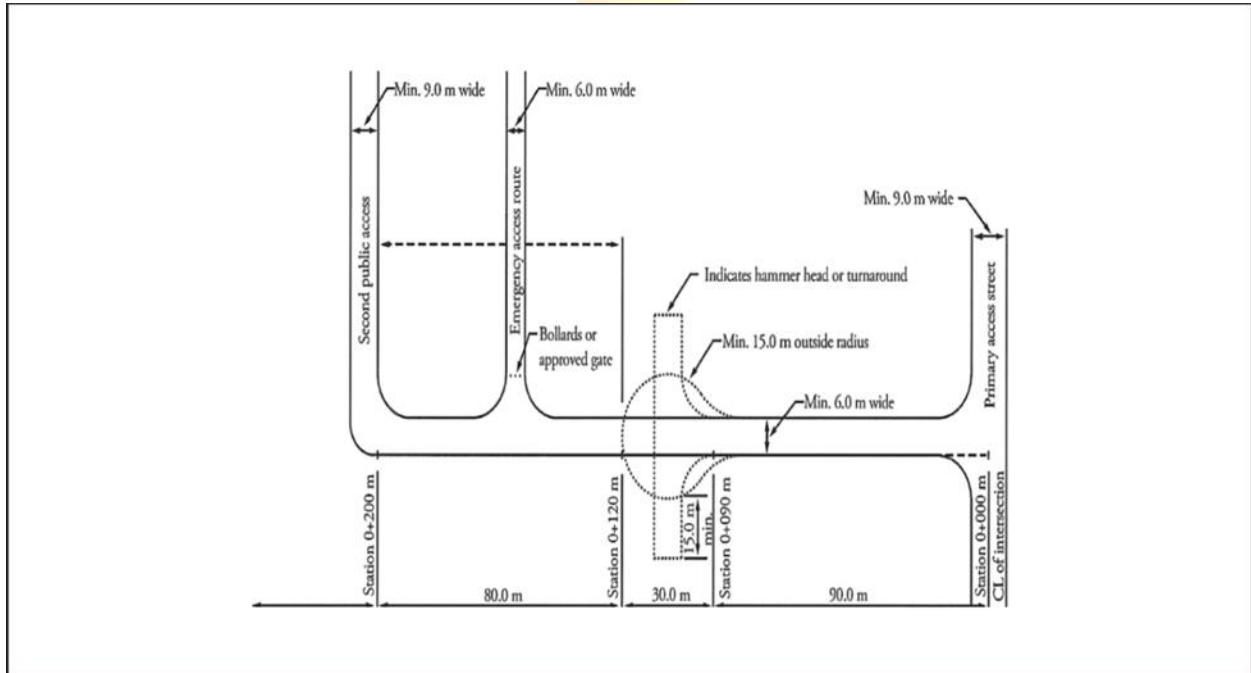
Any variance from this standard will require a written application to the fire department for review and approval. Any request could need a field test with fire department apparatus to demonstrate that the alternate design meets the fire department's requirements. Upon approval, the Fire Chief or designated fire department official will sign and accept the application.

Any variance will be site-specific to that application and not an industry standard or precedent-setting. The AHJ will assess fees and costs to any request for a field test of a proposal involving the fire department and is payable by the applicant before the field test.



Section 7: Figures

7.1 Figure A: Second Public Access

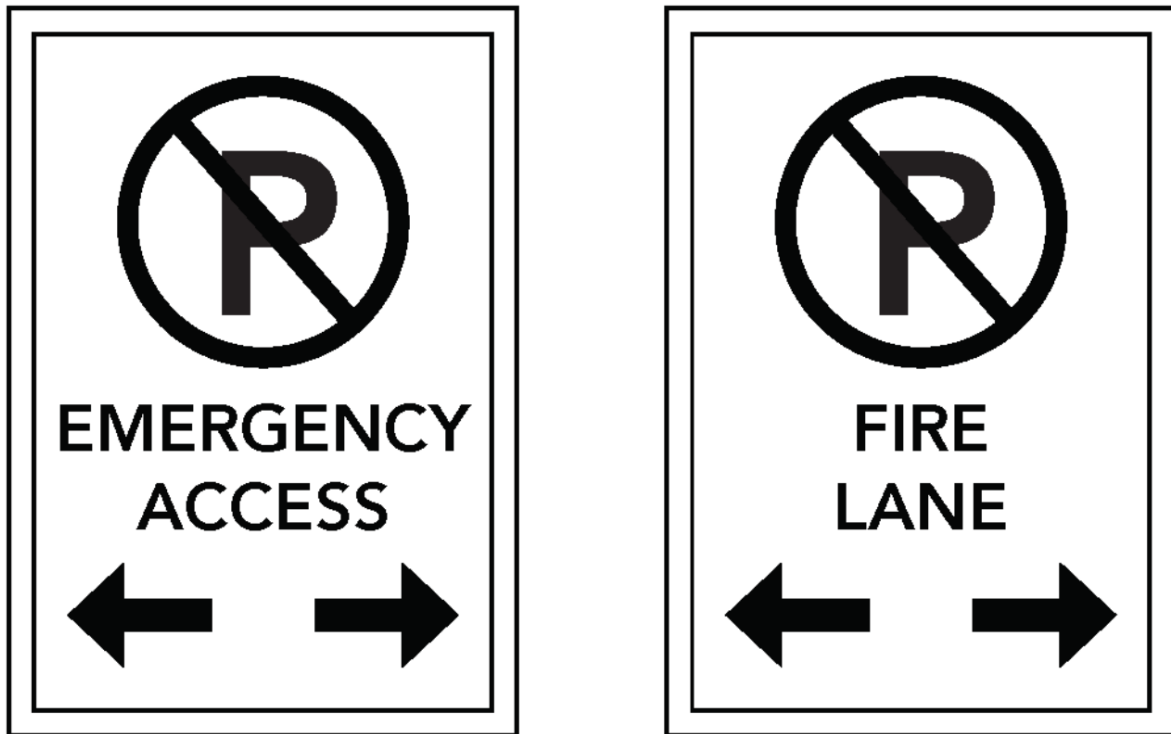


Notes:

- Stationing starts from the centre line or right-of-way at the intersection with public thoroughfare.



7.2 Figure B: No Parking

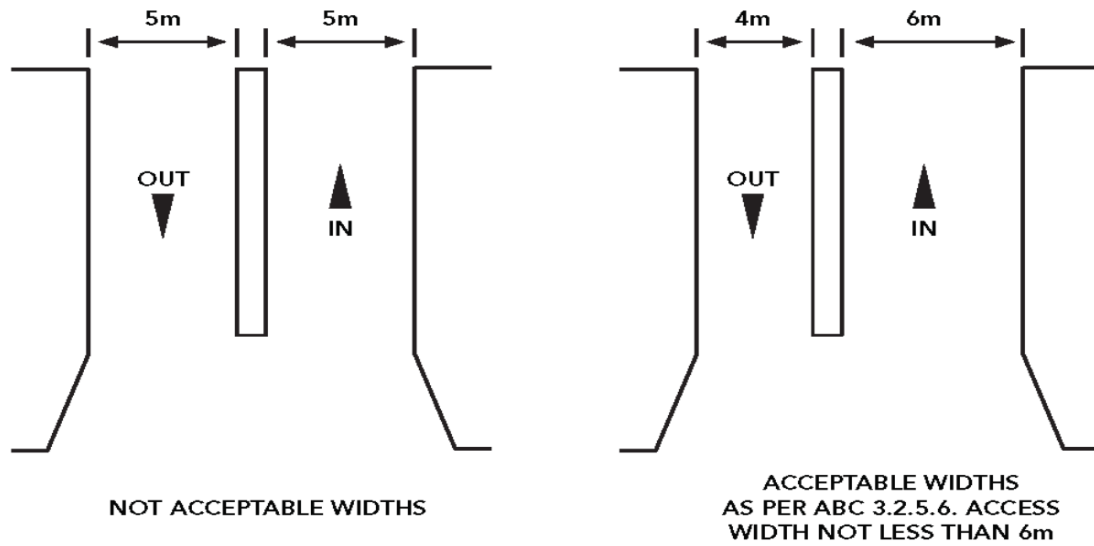


Notes:

- **Size:** 300 mm x 450 mm
- **Colour:**
 - Red – circle and slash
 - Black – lettering, arrows and border
 - Silver (White) – background
 - High-intensity grade reflective
- **Sign Design and Materials Standard:** Use AHJ's sign standard for materials or, where there is no local standard, use the applicable provincial or state road sign standards.
- Use the applicable arrow-right and arrow-left to indicate the limits of the zone and double arrows on mid-zone signs.
- Post signs 20 metres apart and 2.3 m above the surrounding grade



7.3 Figure C- Split Entry Access

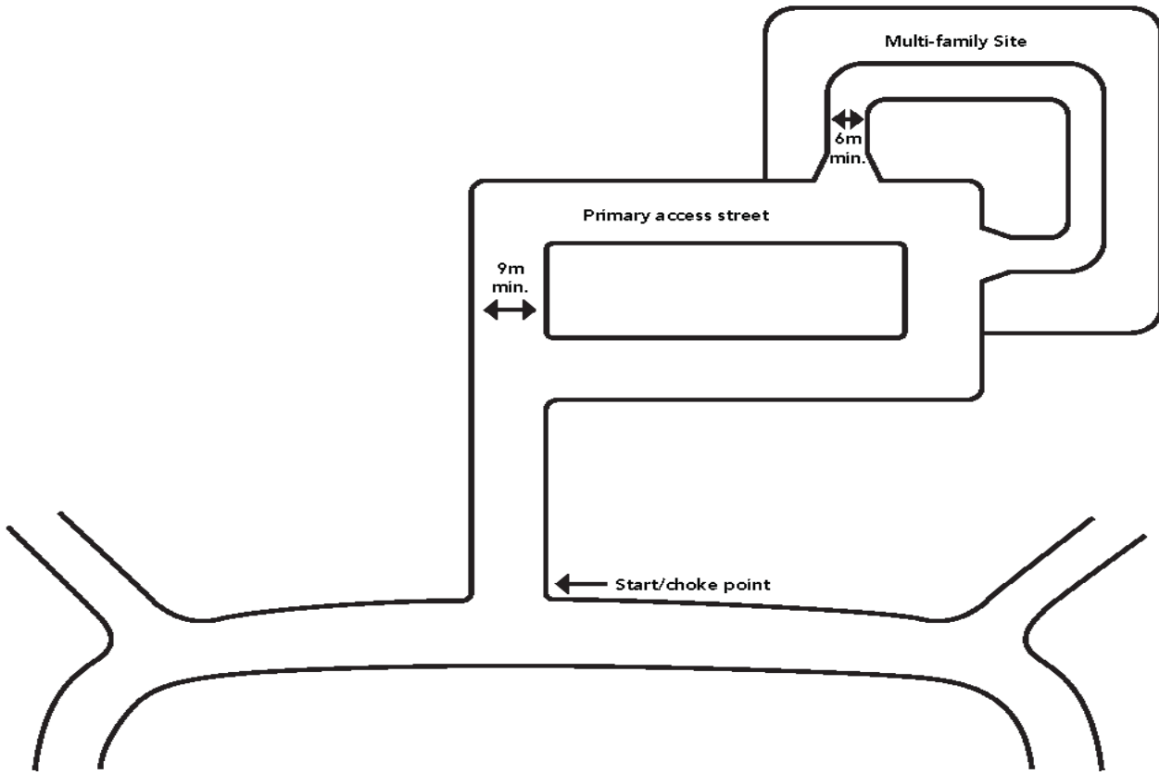


Notes:

- Split-entry access does not fulfill the requirements for emergency access routes or second public access.
- A split-entry access is deemed a single access point.



7.4 Figure D: Access Through a P-Loop, Place, or Close

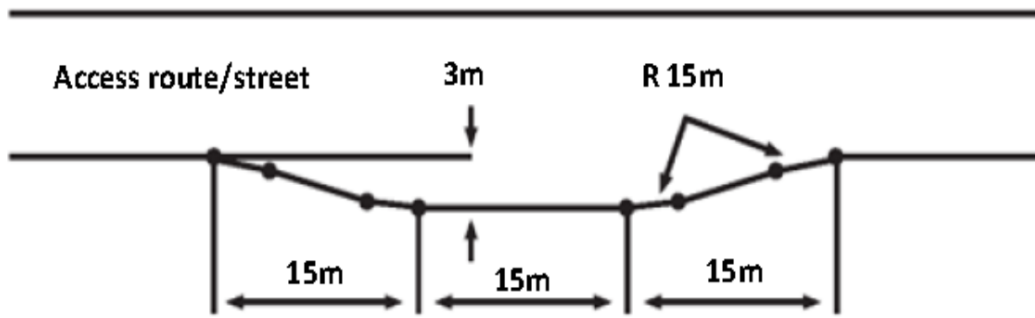


Notes:

- Emergency or second public access measurements are taken at the "start/choke point" to the building's principal entrance(s).
- There are two entrances to the multi-family site from within the P-loop, but only one access to the entire area.



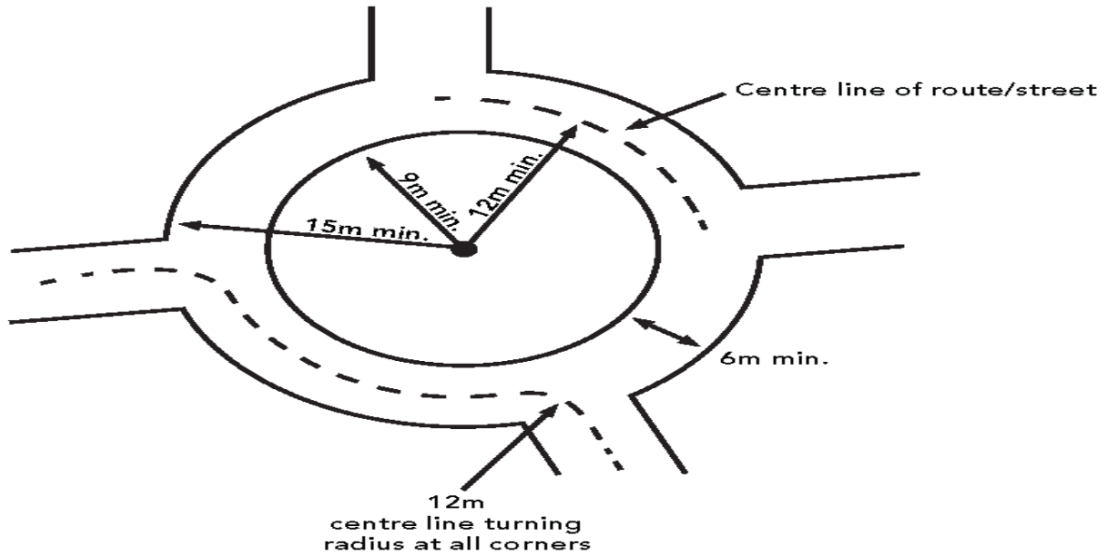
7.5 Figure E: Emergency Use Zone of lay-By



Notes:



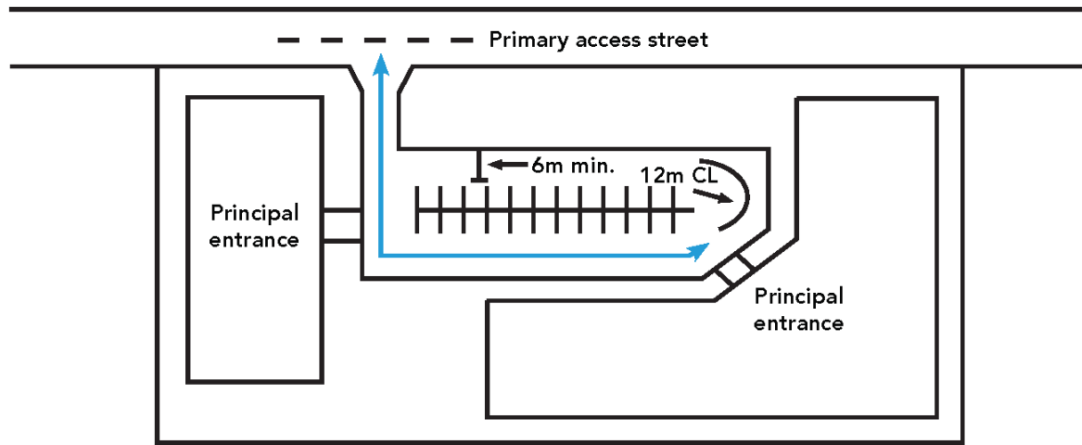
7.6 Figure F: Roundabout Minimum Dimensions



Notes:



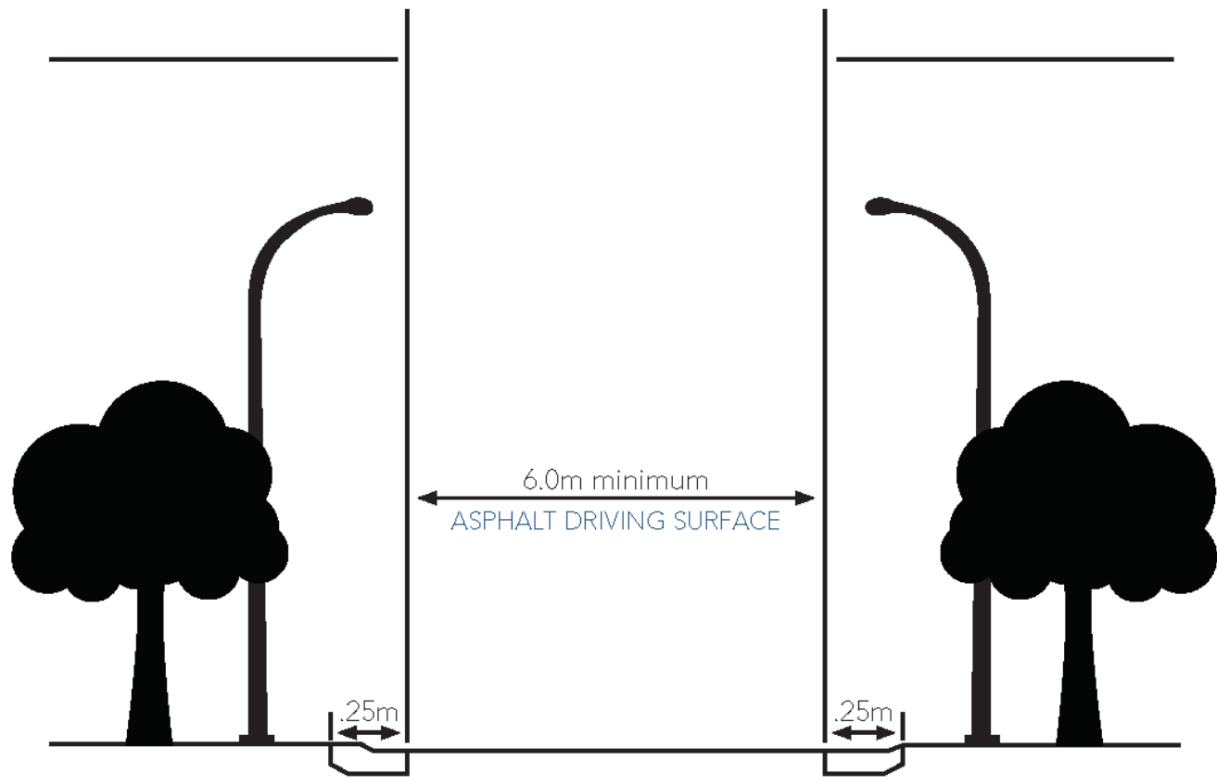
7.7 Figure G: Single Entrance Access Route



Notes:



7.8 Figure H: Emergency Access Route, One-Way or Two-Way Street

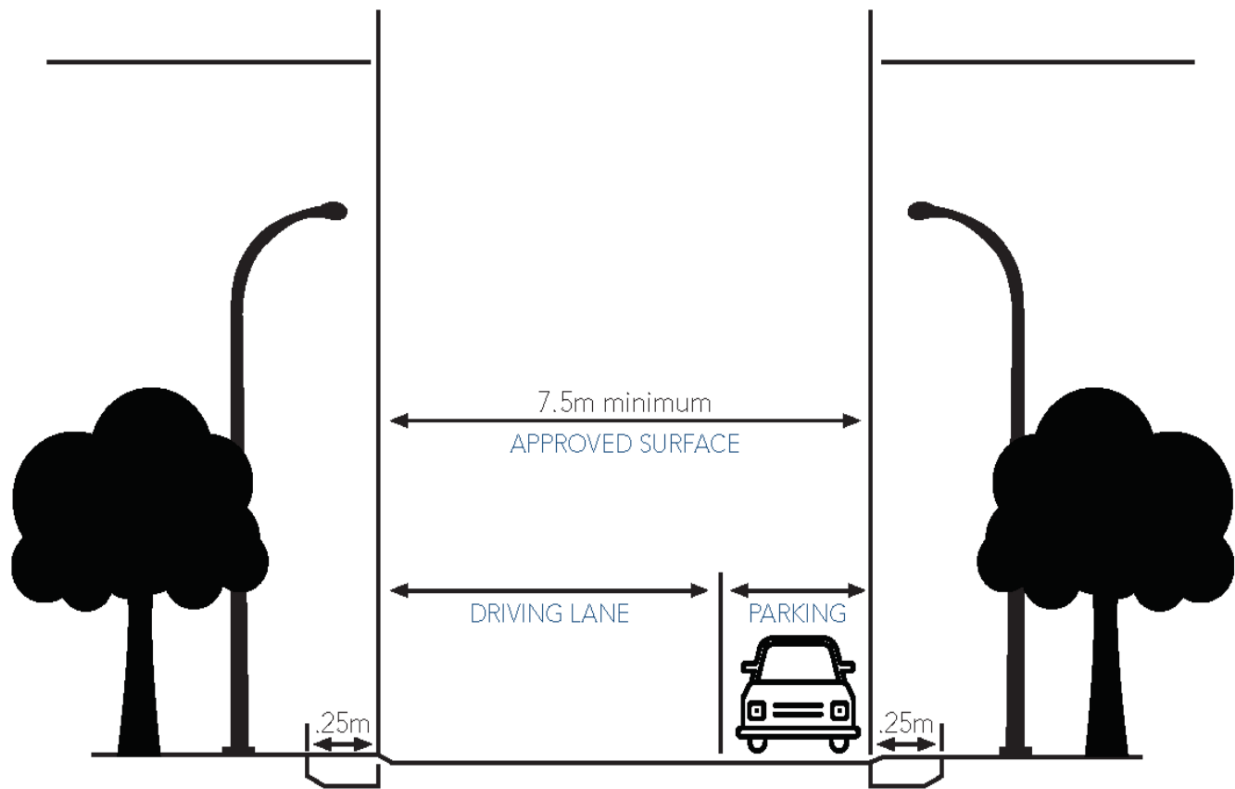


Notes:

- No parking is permitted, and no parking signs are required on each side 20m apart and 2.3m above the surrounding grade.



7.9 Figure I: Two-Way Road

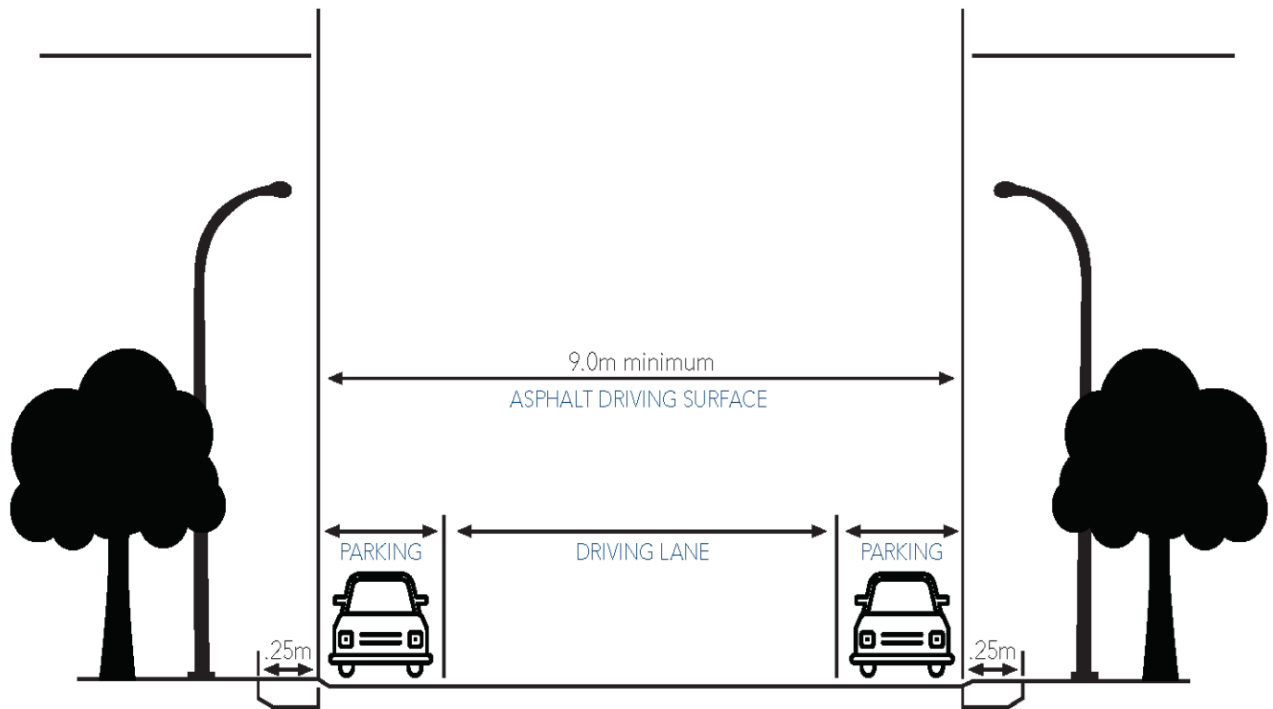


Notes:

- Parking on one side only, no-parking signs posted 20m apart, 2.3m above the surrounding grade.



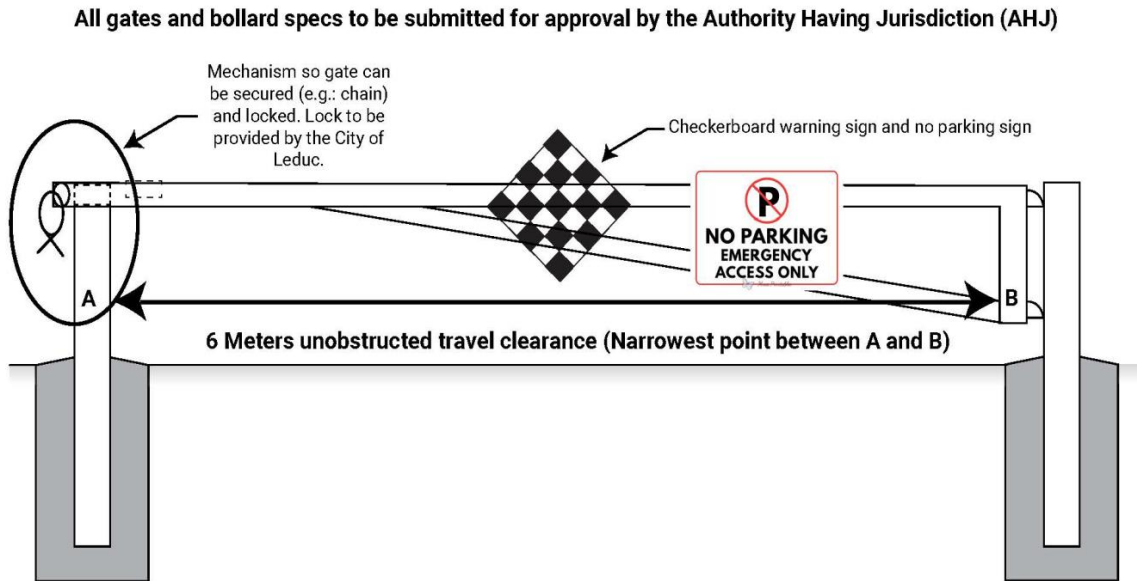
7.10 Figure J: Two-Way Road- Parking on Both Sides



Notes:



7.11 Figure K: Standard Emergency Vehicle Gate



Notes:



Section 8: Definitions

Access Gate:

- The access gate is any approved means of restricting access to an emergency access route. Access gate design and installation specs must be submitted for approval by the Authority Having Jurisdiction (AHJ).

Authority Having Jurisdiction (AHJ):

- The AHJ is the public official designated to enforce the National Building or Fire Code in a specific jurisdiction, exercising authority under relevant Provincial or State acts and regulations.

Building:

- A building is any structure used or intended for supporting or sheltering any use or occupancy.

Dead-Ends:

- Are access roads connected to a thoroughfare that does not include a turnaround area and is not over 90 m long.

Emergency Access Route:

- It provides a way into a building, complex, development, or community to facilitate, supplement, or assist emergency operational procedures, such as firefighting, and is used only by emergency services personnel. They are to be designed and implemented as outlined in this standard, following NBC Article 3.2.5.6.

Fire Lane:

- Is part of an access road adjacent to a building or structure marked and indicated, as per this standard, to be used by emergency vehicles and personnel in the event of a fire or emergency.

Lane or Alley:

- It is used in reference to "rear lanes" to avoid confusion with parking, driving, or fire lanes.



Load Limit:

- Load limit is the operational total weight of an aerial apparatus 38,555 kgs (85000lbs) with equipment and staffing assigned to the vehicle.
 - Axle weight distribution:
 - Rear Tandem Axle 23,496kg, (51,800lbs),
 - Steering Axle 9,393kg (20,708lbs).

Owner:

- "Owner" means a person who
 - Controls the property under consideration,
 - Holds themselves out as the person having the powers and authority of ownership or who, for the time being, exercises the powers and authority of ownership,
 - Is registered under provincial legislation as the owner of a freehold estate in possession of land or
 - Has purchased or otherwise acquired land, whether directly from a previous owner or another purchaser and has not yet registered his/her ownership.

Primary Access:

- The primary access is the principal access to a site used by occupants of a development daily.

Private Road:

- It is privately owned by one or more persons or groups (e.g., condo or strata boards) that provide and connect into, through or between one or more streets or any portion of a parking lot, shopping center, commercial area or development. All services related to maintenance, upkeep or snow removal for this type of road are the responsibility of the owner(s) or designated person(s).

Public Road:

- It is a designated public right-of-way that provides access to adjacent property built and maintained by public service business units. It may include above and below-ground services such as gas, power, telephone, etc.

Project:

- "Project" means any construction, alteration or demolition operation.

Public Way:

- Means a sidewalk, street, highway, square or other open space to which the public has access, as of right or by invitation, expressed or implied.



Registered Professional:

- Registered professional means a person who is registered or licensed to practice in the Province or State within which the project or building is located as
 - an architect
 - a professional engineer under the Engineering, Geological and Geophysical Professions Act.

Second Public Access:

- It is a street 9 m wide or more designed to the Local Authority's Engineering Standards and connected to a thoroughfare.

Stationing:

- It is the process of defining locations along the project by station numbers. Highway construction projects are divided into reference points spaced along the project. These points are called **STATIONS** and are designated by a number such as 755+50.00.

Street:

- "Street" means any highway, road, boulevard, square, or other improved thoroughfare 9 m or more in width that has been dedicated or deeded for public use and is accessible to fire department vehicles and equipment.

Thoroughfare:

- Thoroughfares meet the minimum design and dimension of a street.



Section 9: National Building Code References

NBC — 3.2.3.1. (8) Limiting Distance and Unprotected Openings

1. A limiting distance equal to half the actual limiting distance shall be used as input to Tables 3.2.3.1. (B) and 3.2.3.1. (C) where
 - a. The time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the building exceeds 10 minutes in 10% or more of all fire department calls to the building and
 - b. Any storey in the building is not sprinklered.

NBC – Notes 3.2.3.1.(8) and A-

The total time from the start of a fire until fire suppression by the fire department depends on the time taken for a series of actions. Sentence 3.2.3.1. (8) is only concerned with the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the building. It specifies a 10-minute time limit, which the fire department must be able to meet in more than 90% of the calls to the building served by the fire department. This reliability level and flexibility provision is consistent with NFPA 1710, "Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments."

Clause 4.1.2.1 of NFPA 1710 establishes "time objectives" for fire incidents as follows:

- 1 min (60 s) for turn-out of responders after receipt of notification of a fire, and
- 4 min (240 s) or less for the arrival of the first arriving engine company at a fire suppression incident and/or 8 min (480 s) or less for the deployment of a full first alarm assignment at a fire suppression incident.

The standard requires that the fire department establish a "performance objective" of not less than 90% for each response time objective. This reliability level is referred to in NFPA 1710 as a "performance objective."

Where the 10-min limit cannot be met by the fire department at least 90% of the time, Sentence 3.2.3.1. (8) specifies that a value corresponding to half the actual limiting distance be used in requirements that depend on limiting distance to define other criteria.

For new subdivisions, legal agreements may be made to construct fire stations to serve those areas. The fire department response time in those subdivisions may temporarily exceed 10 min until the fire station is built.

See also Sentences 9.10.14.3.(1) and 9.10.15.3.(1). (below)



NBC - A-3.2.3 Fire Protection Related to Limiting Distance versus Separation Between Buildings

Code provisions that address protection against fire spread from building to building use the limiting distance (see the definition in Article 1.4.1.2. of Division A) for a building rather than using the distance between adjacent buildings on separate properties, since this would result in situations where the design and construction of a building on one property affect the design and construction of a building on an adjacent property.

The Code requirements that reduce the probability of building-to-building fire spread were initially developed based on the assumption that the exposed building faces of adjacent buildings are of similar size and configuration and are equidistant from the shared property line. Where buildings are of different sizes, the smaller building may be subject to a higher heat flux in the event of a fire than the larger building. Where buildings are closely spaced and not equidistant from the property line, the construction of the building with the greater limiting distance does not recognize the proximity of the building with the lesser limiting distance.

The Code has more stringent requirements for buildings with reduced limiting distance as regards the maximum area and spacing of unprotected openings, as well as the construction, cladding, and fire resistance of walls. This increased stringency recognizes that the fire hazard is more significant where buildings are closer together and that adjacent buildings may have exposing building faces of different sizes, configurations or limiting distances, which could further increase the hazard.

The authority having jurisdiction may also address limiting distances through legal agreements with the parties involved that stipulate that the limiting distance be measured to a line that is not the property line. Such agreements would typically be registered with the titles of both properties.

NBC — 3.2.5.6. (1) 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 centreline 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 15m,
 - 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.



Appendix — 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 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 AHJ fire department be consulted prior to the design and construction of access routes.

NBC — 9.10.14.3. (1) Limiting Distance and Fire Department Response

1. Except for the purpose of applying Sentences 9.10.14.4.(2), (3), (8) and (9), and Sentences 9.10.14.5.(3), (8) and (13), a limiting distance equal to half the actual limiting distance shall be used as input to the requirements of this Subsection, where
 - a. the time from receipt of notification of a fire by the fire department until the first fire department vehicle arrives at the building exceeds 10 min in 10% or more of all calls to the building, and
 - b. any storey in the building is not sprinklered. (See Notes A-3.2.3. and A-3.2.3.1.(8).

NBC — 9.10.20.3 Fire Department Access to Buildings

1. Access for fire department equipment shall be provided to each building by means of a street, private roadway or yard. (See A-3.2.5.6.(1) and A-9.10.20.3.(1) in Appendix A.)
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.

NBC APPENDIX — 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



Section 10: National Fire Code References

NFC 2.5.1.1. (1) Access to a Building

Fire department vehicles shall have direct access to at least one face of every *building* by means of a *street*, yard or roadway in conformance with the NBC.

NFC 2.5.1.4.(1) Access to Fire Department Connections

Access to fire department connections for sprinkler or standpipe systems by firefighters and their equipment shall be maintained free of obstructions at all times.

NFC 2.5.1.5. Maintenance of Fire Department Access

1. *Streets*, yards and roadways provided for fire department access shall be maintained so as to be ready for use at all times by fire department vehicles.
2. Vehicles shall not be parked to obstruct access by fire department vehicles and signs shall be posted prohibiting such parking. (Fig. B)



Section 11: Referenced Documents and Organizations

1. The National Fire Code of Canada (2020 Edition) [nrc-publications.canada.ca/eng/view/ft/?id=d77ca42c-caef-4769-930e-2eb618111c8e](https://publications.canada.ca/eng/view/ft/?id=d77ca42c-caef-4769-930e-2eb618111c8e)
2. The National Building Code of Canada (2020 Edition) [nrc-publications.canada.ca/eng/view/ft/?id=515340b5-f4e0-4798-be69-692e4ec423e8](https://publications.canada.ca/eng/view/ft/?id=515340b5-f4e0-4798-be69-692e4ec423e8)
3. NFPA 1141 - Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas (2017)
4. Designers Guide to Firefighting Operations- Emergency Vehicle Access (F5-02_GD) <https://www.fireandemergency.nz/assets/Documents/Business-and-Landlords/Building-and-designing-for-fire-safety/F5-02-GD-FFO-emergency-vehicle-access.pdf>



Section 12: Notes

