

ONTARIO FIRE DEPARTMENT

Fire Master Plans For Residential Development



Approved and Authorized by

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Deputy Chief / Fire Marshal

Standard #H-004 Revised 11-06-06

Fire Master Plans for Residential Development

SCOPE

These guidelines apply to new, remodeled, reconstructed, or relocated residential structures and developments to which emergency response may be necessary. The information contained in this document is intended to assist the applicant in attaining compliance and to ensure that privately owned roadways necessary for emergency response purposes will be available for use at all times. Some of the issues discussed within this document may be covered in more detail through other OFD guidelines, as referenced.

The following definitions are provided to facilitate the consistent application of this guideline:

Access Walkways – An approved walking surface leading from fire access roadways to exterior doors and other required opening in structures.

Bollards – Permanent or removable poles that are placed across a roadway for the purpose of restricting vehicular access to a portion of a site or to protect a piece of equipment from potential vehicular damage.

Fire Access Roadways – The means for emergency apparatus to access a facility or structure for emergency purposes. Roadways must extend to within 150 feet of all portions of the exterior of the first floor of any structure and must meet specified criteria for width, pavement characteristics, roadway gradient, turning radius, etc. Fire access roadways are also referred to as fire lanes.

Fire Lane Identification – Specific requirements that allow fire access roadways to be readily recognized so that they will remain unobstructed and available for emergency use at all times.

Gates and Barriers – Devices that restrict pedestrian and vehicle ingress and egress to and from a facility.

Gate and Barrier Locks – Devices that are installed on gates and barriers to secure a property or facility shall be required to have a key switch and electronically controlled switch to facilitate fire department and police access.

Premises Identification – The visual means used to readily identify a property or facility. It is also the numbering system that is placed on structures for the purpose of identification of separate buildings within a single facility.

Rescue Windows – Openings required in all sleeping rooms located below the fourth story of a building that allow rescue of trapped occupants.

Special Fire Protection Areas (SFPA) – A designated area in which the structure density and other relevant factors potentially increase the possibility of uncontrollable fire.

1. Fire Access Roadways

Fire access roadways, sometimes referred to as fire lanes, shall be provided for every facility or building when any portion of an exterior wall of the first story is located more than 150 feet from a public roadway, as measured along an approved route. Extenuating circumstances, increased hazards, and additional fire safety features may affect these requirements. CFC 902.2.1

Fire Access Roadway Construction – Fire access roadways must be engineered to support emergency response apparatus. Roadways must be designed to facilitate turning radii of apparatus and meet requirements for gradient, height clearance, and width. Specific criteria pertaining to the design of fire access roadways are detailed below.

- 1) **Fire Access Roads in SFPA** – To determine if a project is within a SFPA, contact the OFD Fire Prevention Bureau for information on the delineation of these areas.
- 2) **Number of Fire Department Access Roads Required:**
 - a) There shall be at least one fire access road provided if any portion of an exterior wall of the first story of a building is located more than 150 feet from a public roadway. That access is to be measured by an approved route around the exterior of the building.
 - b) There may be more than one access road required if it is determined that access by a single road may be insufficient due to terrain, location, travel distance, potential fire or life-safety hazards, or other factors that could limit access or if vehicle congestion, railways, or weather conditions could impair the single entry point.
 - c) There shall be a minimum of two vehicle access points located to facilitate evacuation and emergency operations is required for any development containing 150 or more residential units.
- 3) **Width of Fire Access Roads** – The minimum width of a fire access roadway is 20 feet. The minimum width in a Special Fire Protection Area (SFPA) is 24 feet. The width of the roadway is measured from curb face to curb face, flow line to flow line, curb face to flow line, or from the inside of a defining edge stripe. Where a raised center median

is included, the required width shall be provided on both sides of the median. (See attachment #1)

- 4) Parking adjacent to fire access roadways – Whenever the parking, stopping or standing of any vehicle would encroach into the minimum 20' foot (SFPA 24') clearance requirements for fire access roadways, said parking, stopping or standing shall be restricted by the use of signs or red curb markings (or both) in conformance with the requirements of the Fire Department Standards for private streets and the Engineering Department Standards for public streets.
- 5) Vertical Clearance – Fire access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. If trees are located adjacent to the fire access roadway, place a note on the plans stating that all vegetation overhanging the fire access roadway shall be maintained to provide a clear height of 13 feet 6 inches at all times. (See attachment #2).
- 6) Inside and Outside Turning Radii – The inside turning radius for an access road shall be 25 feet or greater. The outside turning radius for an access road shall be 45 feet or greater. (See attachment #3).
- 7) Private On-Site Turnarounds/Hammerheads – Terminating roadways in excess of 150 feet shall be designed and constructed with OFD approved turnarounds or hammerheads. Turnarounds shall meet OFD requirements. (See attachment #3).
- 8) Developments that exceed 300 feet on a cul-de-sac shall be residentially sprinklered.

2. Fire Access Roadway Identification

Fire lane identification will be required when it is necessary to restrict parking of vehicles in order to maintain the required width of fire access roadways for emergency vehicle use. Unlawful use of fire lanes will be enforced by the local law enforcement agency in accordance with the California Vehicle Code (CVC). CFC 901.4

Sign and Curb Marking Options – Areas designated as a fire lane require an acceptable method of marking that shall be approved prior to installation. Examples of dimensions and acceptable options for Public Street signage and markings are found in the Manual of Uniform Traffic Control Devices or contact the City of Ontario Engineering Department. The following methods are acceptable means of identifying designated fire lanes for Private Streets. Choose EITHER option A OR option B below.

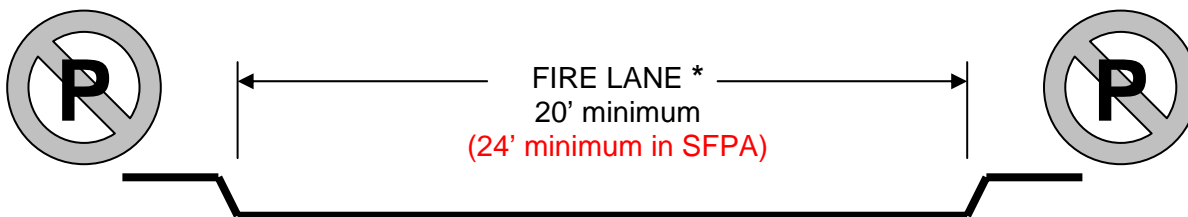
- A – Specific areas designated by the Ontario Fire Department as fire lanes must be marked with red curbs in accordance with the requirements specified by the City of Ontario Fire Department. In addition, where the number of entrances into the area marked

with fire lanes is limited, all such vehicle entrances to the designated area shall be posted with approved Private Fire Lane Entrance Signs. (See attachment #3).

- B – “Private Fire Lane–No Stopping” signs shall be posted immediately adjacent to each designated fire lane and at intervals to be determined by the Fire Department. In addition, where the number of entrances into the area marked with fire lanes is limited, all such vehicle entrances to the designated area shall be posted with approved Private Fire Lane Entrance Signs. (See attachment #3).

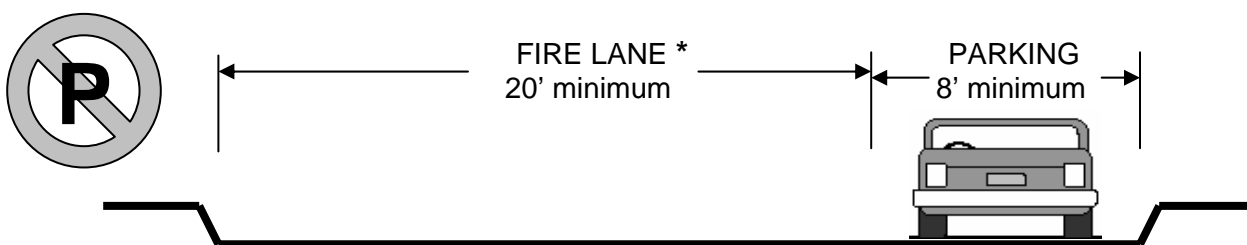
Note: All alternative signs must be approved through the OFD Alternate Methods and Materials process and by the city/traffic engineer as applicable.

ATTACHMENT 1



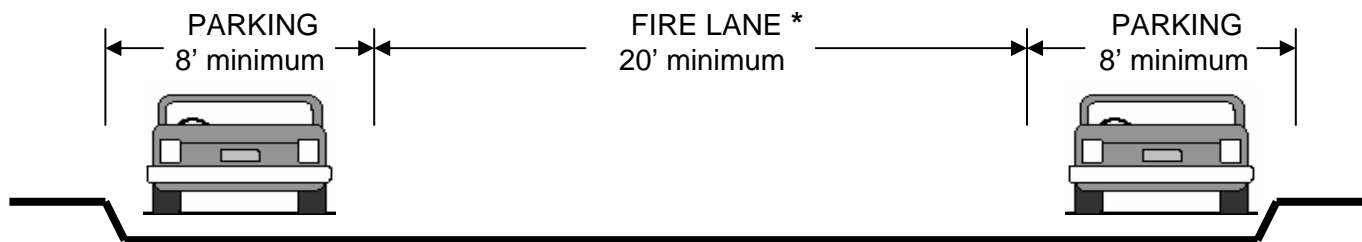
ROADWAY LESS THAN 28'

*Parking prohibited.
Roadway is required to be posted as a fire lane.*



ROADWAY AT LEAST 28' BUT LESS THAN 36'

Parking permitted on one side only.



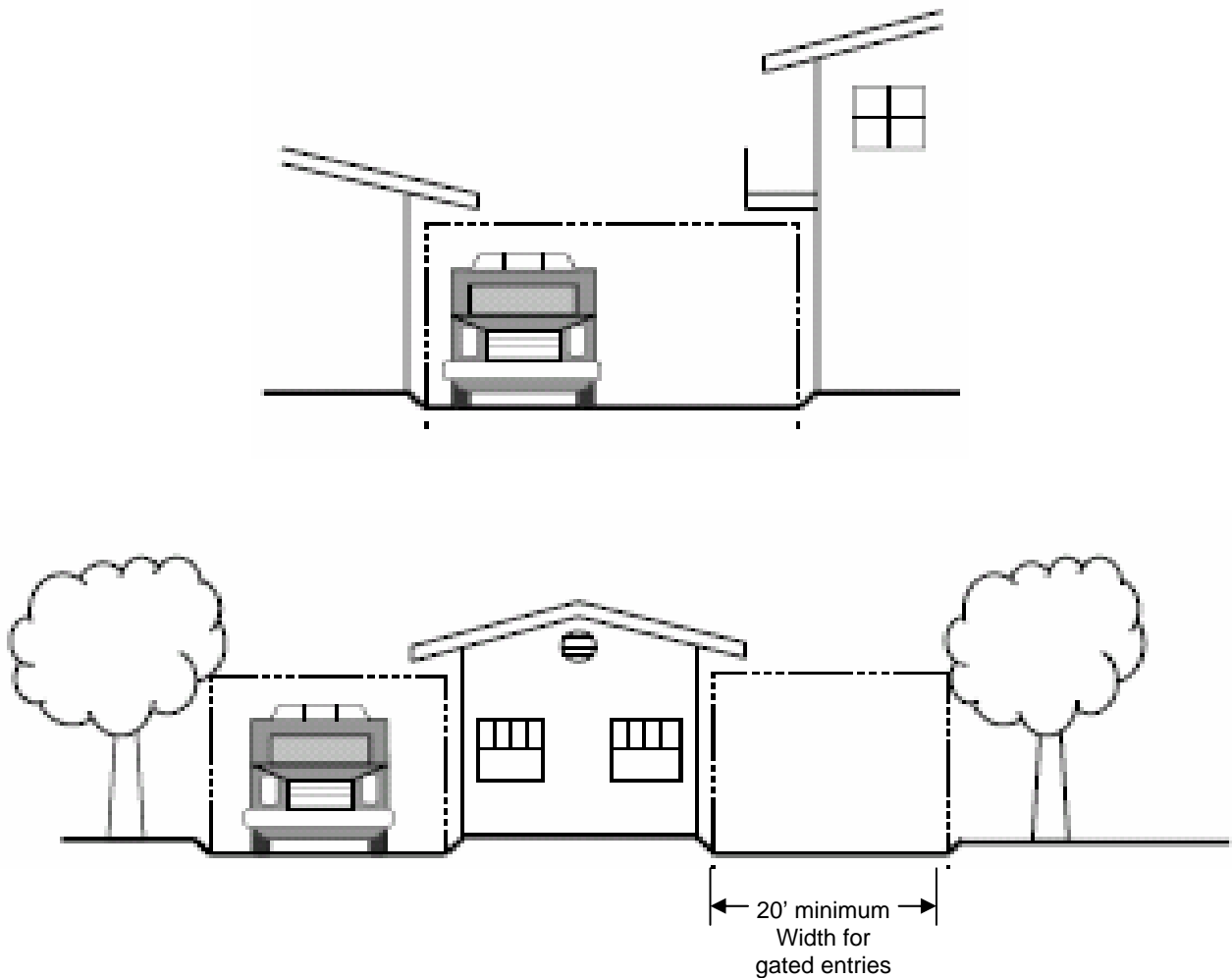
ROADWAY 36' OR WIDER

Parking permitted on both sides

* Special fire protection areas may require 24' foot access. Check with the Ontario Fire Department Fire Prevention Bureau for site-specific requirements.

ATTACHMENT 2

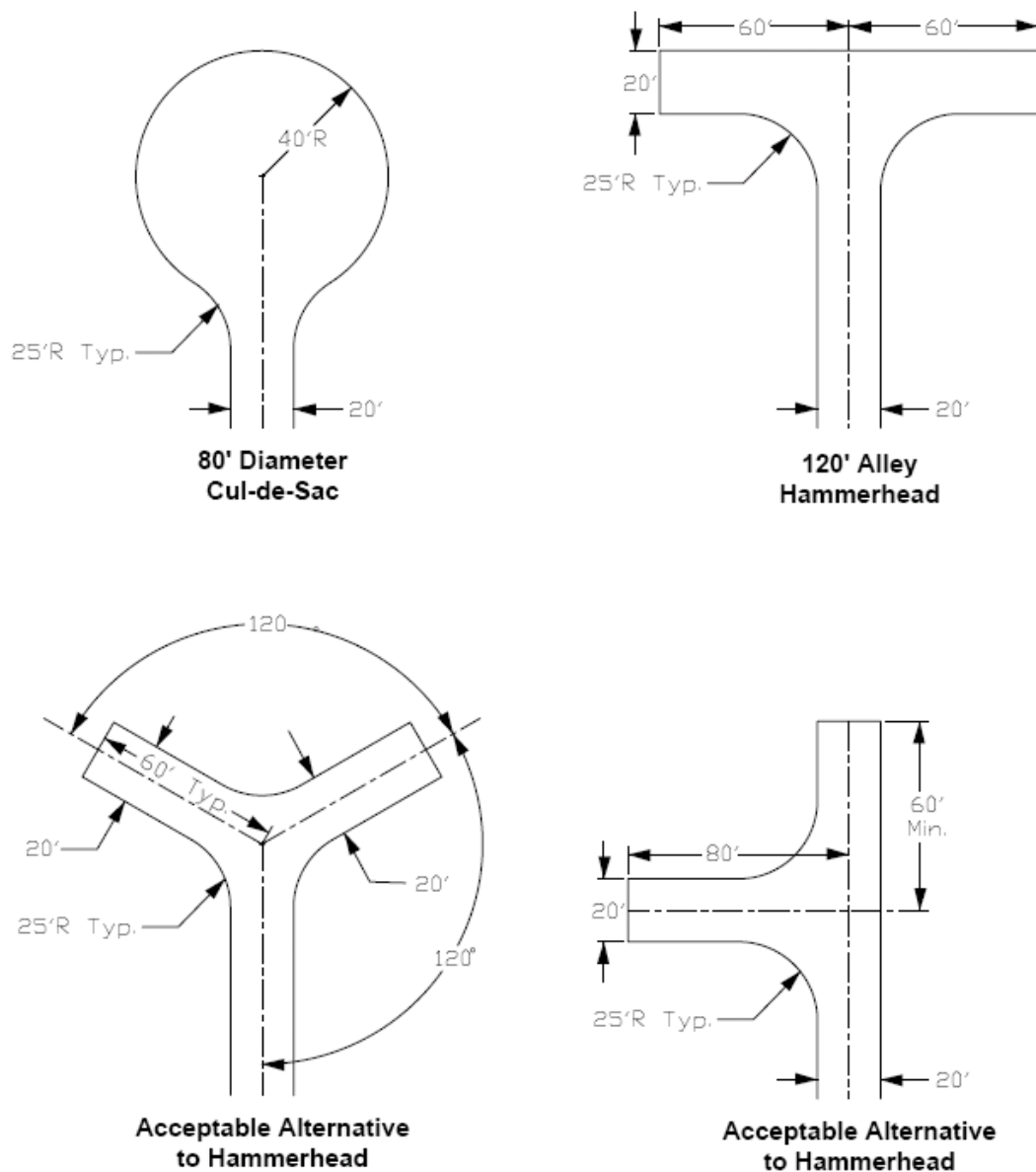
Fire Department Access Roadway Clearance For Typical Gated Community Security Post



PROPER CLEARANCE PROVIDED

Eaves and vegetation do not encroach upon the 20'– wide by 13'-6" high fire access roadway envelope required for gated entries.

ATTACHMENT 3

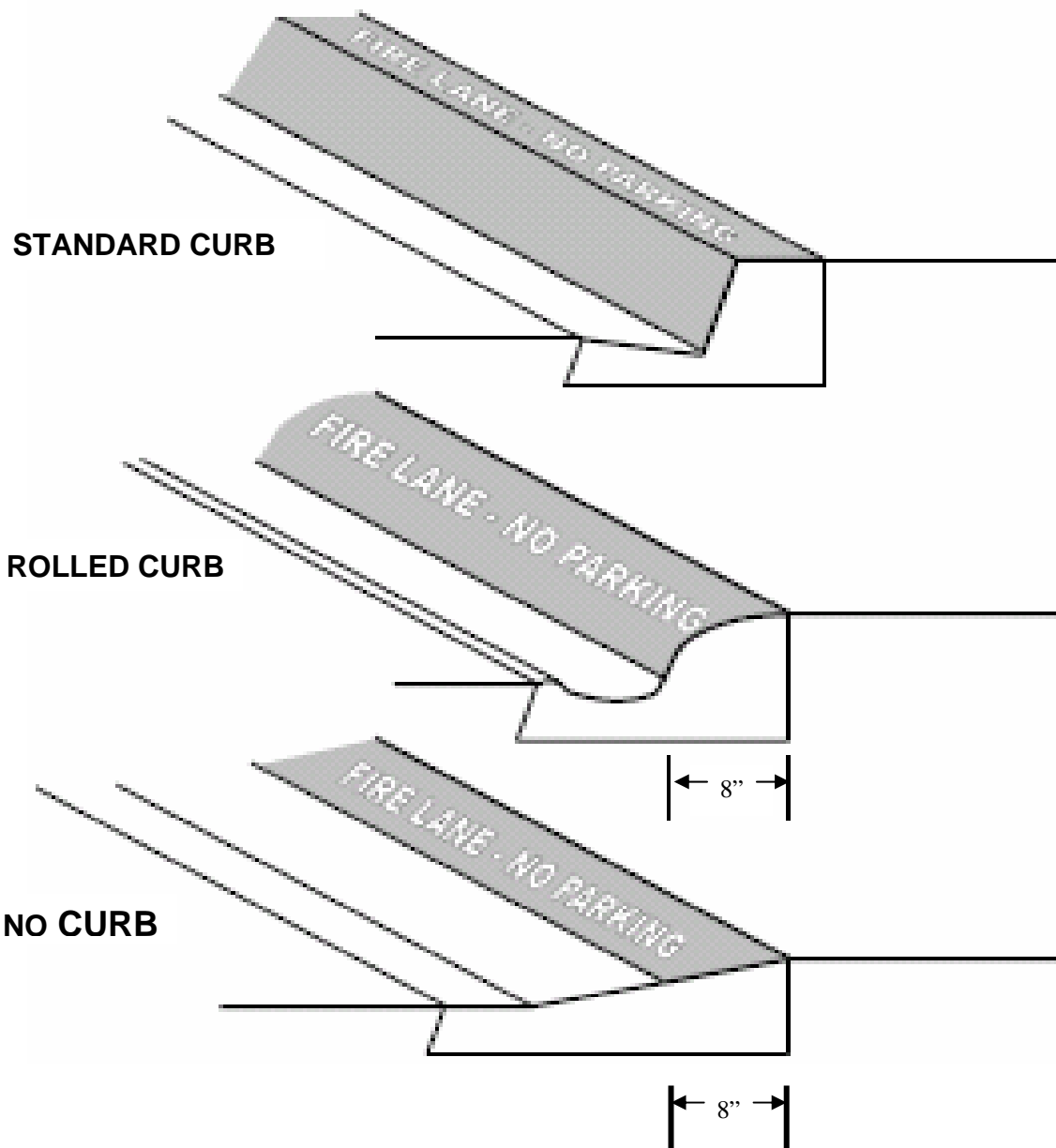


Acceptable turnarounds for all fire access roadways greater than 150' in length when non-circulating access is permitted.

Minimum turning radius: 25' FEET INSIDE
45' FEET OUTSIDE

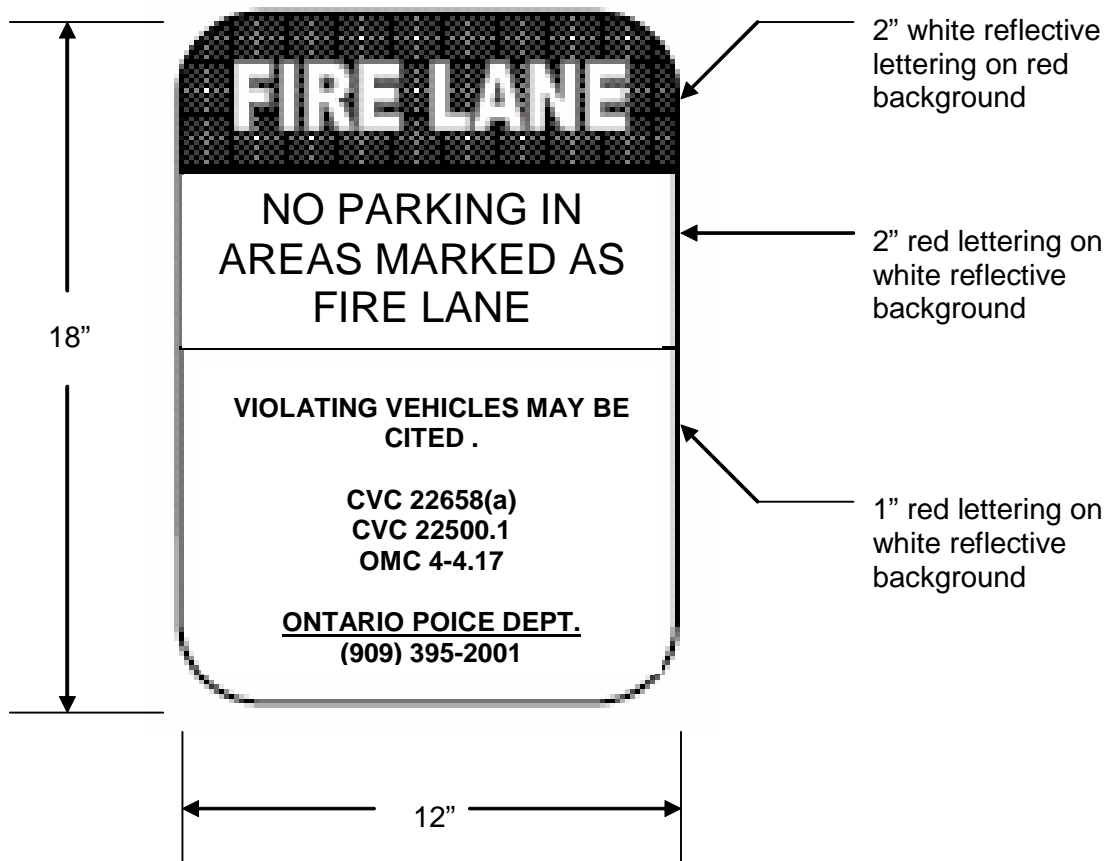
ATTACHMENT 4

PRIVATE FIRE LANE IDENTIFICATION



1. Fire Lane entrance sign(s) shall be provided per Attachment.
2. Curbs shall be painted OSHA "safety red".
3. "FIRE LANE – NO PARKING" shall be painted on top of curb in 3" white lettering at a spacing of 30' on center or portion thereof.

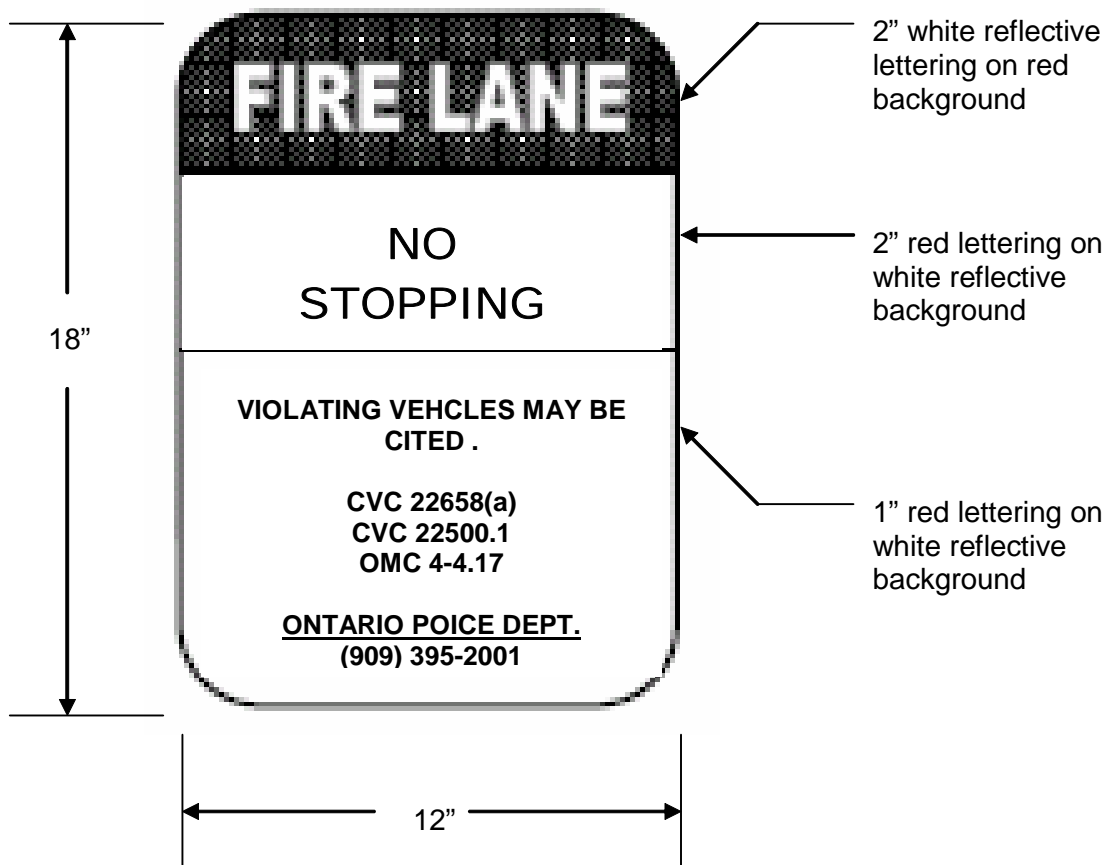
SPECIFICATIONS FOR PRIVATE FIRE LANE ENTRANCE SIGNS



All sign and lettering dimensions shown are minimums.

Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per OFD standard.

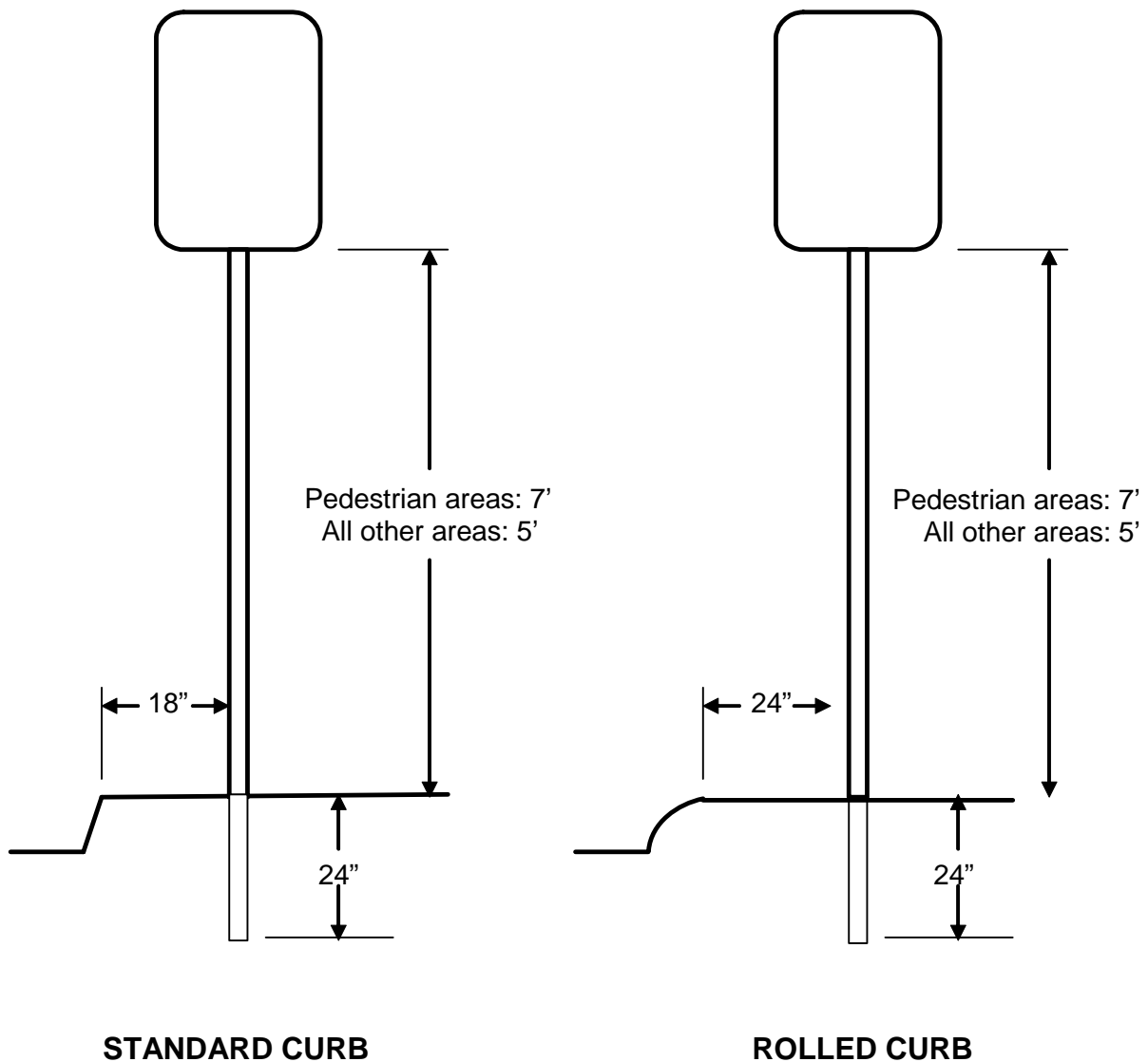
SPECIFICATIONS FOR PRIVATE FIRE LANE NO PARKING SIGNS



All sign and lettering dimensions shown are minimums.

Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per OFD standard.

MOUNTING SPECIFICATIONS FOR PRIVATE FIRE LANE ENTRANCE AND NO PARKING SIGNS



Signs shall be mounted facing the direction of vehicular travel.

Signs may be mounted on existing posts or buildings where the centerline of the sign is no more than 24" from the edge of the roadway.

Depth of bury shall be a minimum of 24"