

COLORADO SPRINGS FIRE DEPARTMENT, DIVISION OF THE FIRE MARSHAL

Fire Apparatus Access Road Markings

Requirements from Chapter 5 and Appendix D of the 2015 International Fire Code, with local amendments regarding the installation of fire apparatus access road markings.



Technical Services



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Purpose

This document outlines the Colorado Springs Fire Department's policies, procedures, requirements and local fire code interpretations pertaining to the approved methods of marking fire apparatus access roads. It is not the intent of this document to reiterate fire code requirements. Fire code requirements can be viewed by visiting www.iccsafe.org. Local amendments to the fire code can be found at www.coloradosprings.gov and searching for "Fire Code Amendments" in the search field.

Scope

This document applies to any and all roadways that are designated as fire lanes. This includes but is not limited to private roadways, driveways and some public streets.

Definitions

Fire Apparatus Access Road. A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.

Fire Lane. A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

IFC. International Fire Code

Permitting, Plans, Fees, and Inspections

Permitting

No permits are required for the marking of fire department apparatus access roadways.

Plans and Required Documentation

The following, as applicable, is required to be submitted for review and acceptance of fire department apparatus access roadway marking:

For New Construction: See the Fire Department Access Information Document for submittal requirements.

For Existing Sites: This is to be used when a community/subdivision wishes to determine, re-determine, modify and/or establish fire apparatus access roads/fire lanes within the community.

- a. Office address and/or address of lot within subdivision
- b. Contact information from HOA President or Property Manager/Owner
- c. Written formal request from HOA or Property Manager asking for determination of fire lane
- d. Site plan showing proposed/desired locations of markings
- e. Indicate whether signage and/or striping will be utilized

Attach the above information to an email and send everything to CSFDDevelopmentSMB@coloradosprings.gov. In the subject line enter the following: "Fire Lane Request."

Conversely, the above information may be submitted in person at the Division of the Fire Marshal located at 375 Printers Parkway, Colorado Springs, CO 80910.

Fees

For existing sites, there are no fees associated with fire apparatus access road marking installations. This is a service that the Colorado Springs Fire Department provides for the citizens and city of Colorado Springs.

Fees are applicable for new construction. Please see the Fire Department Access information document for additional information.

Inspections

For existing sites, an inspection is performed to ensure the fire apparatus access road markings have been installed in an approved manner (per this document). After the markings are installed, call 719-385-5978 and follow the prompts to schedule the inspection. A representative for the site must be present during the inspection.

Guidelines

Fire Apparatus Access Road Markings, Where Required

Generally speaking, markings are required along fire apparatus access roads that are required to reach the 150-ft access around a given building or buildings. For more on that, please see the Fire Department Access document. Markings are installed in different ways depending upon the land-use zone and/or location of the site and/or roadway. The locations will vary depending upon whether the development is within the Wildland Urban Interface (WUI)/Hillside Overlay, a Traditional Neighborhood Development (TND) zone or remaining areas throughout the city. Markings are also required for certain fire apparatus access features such as turnarounds.

WUI/Hillside Overlay

When a parcel is located within the WUI/Hillside Overlay Zone, the following provisions are required.

- On both sides of fire department access roadways twenty feet (20') wide or less
- On one side of fire department access roadways with widths greater than twenty feet (20') up to and including twenty-four feet (24')
- Follow general standards when fire department access roadways are wider than twenty four feet (24')

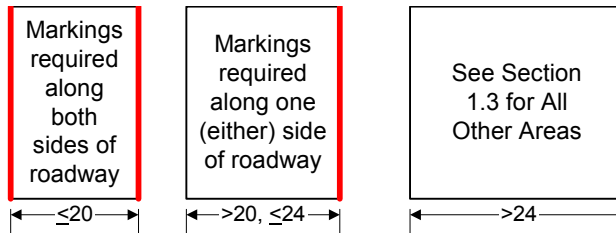


Figure 1 – WUI/Hillside fire apparatus access road requirements illustration

Traditional Neighborhood Developments (TNDs)

When a parcel is zoned as a TND or is zoned Planned Urban Development (PUD) but designed as a TND or similar, the following provisions are required.

- On both sides of fire department access roadways less than twenty two feet (22') wide.
- On one side of fire department access roadways with widths of twenty two feet (22') or more but less than twenty eight feet (28').
- No markings are required for fire department access roadways twenty eight feet (28') in width or more.

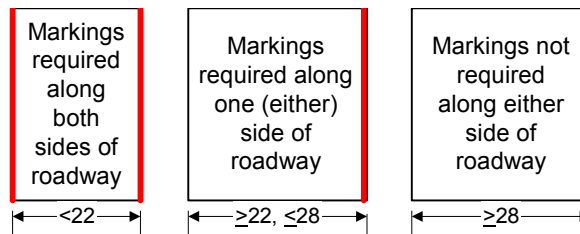


Figure 2 - TND fire lane requirements illustration

All other areas

When a parcel is zoned other than those listed in 1.1 and 1.2 above, the following provisions are required.

- On both sides of fire department access roads less than twenty-eight feet (28') wide.
- On one side of fire department access roads with widths of twenty-eight feet (28') or more but less than thirty-four feet (34').
- No signage is required for access roads thirty-four feet (34') or more in width.

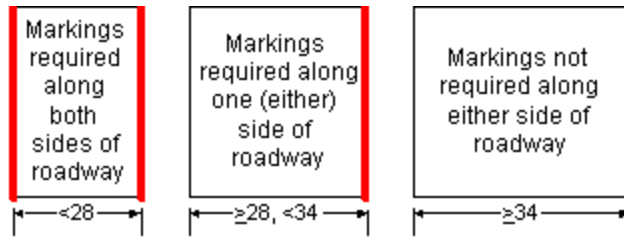


Figure 3 - General fire lane requirements illustration

Fire department apparatus turnarounds

When a fire department turnaround is required and/or provided for a given site, the turnaround shall be marked as indicated in Figure 4. Note that both fire lane signage and fire lane striping is shown. This is for illustration purposes only. Either the signage or striping is required. However, both methods may be used if along private drives.

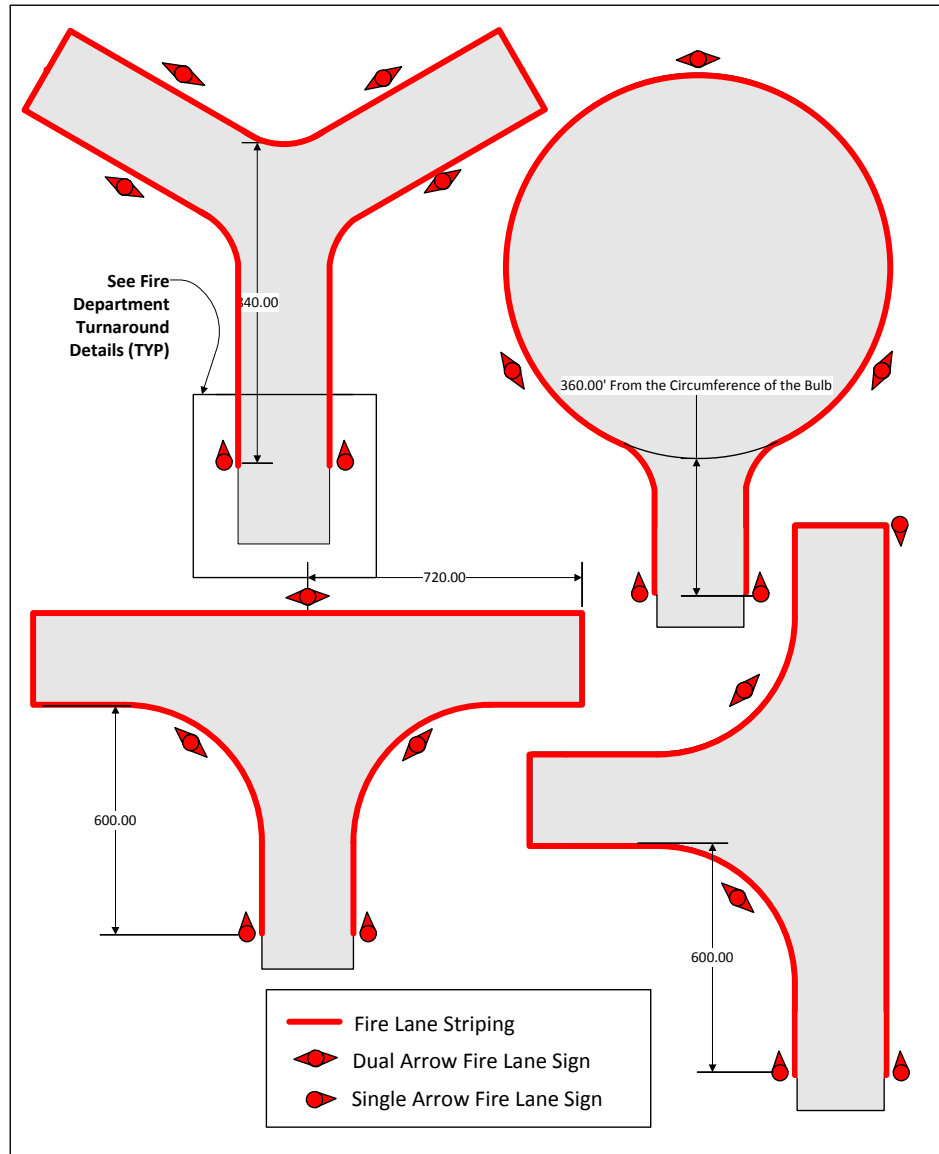


Figure 4 - Fire lane marking requirements for various FD turnarounds

The entrance to a fire department turnaround will be marked differently depending upon the width of the roadway entering into the turnaround which may or may not be based on the zone of the site. Figure 5 illustrates how an entrance to a fire department turnaround shall be marked given the width of a street and/or zone of the site.

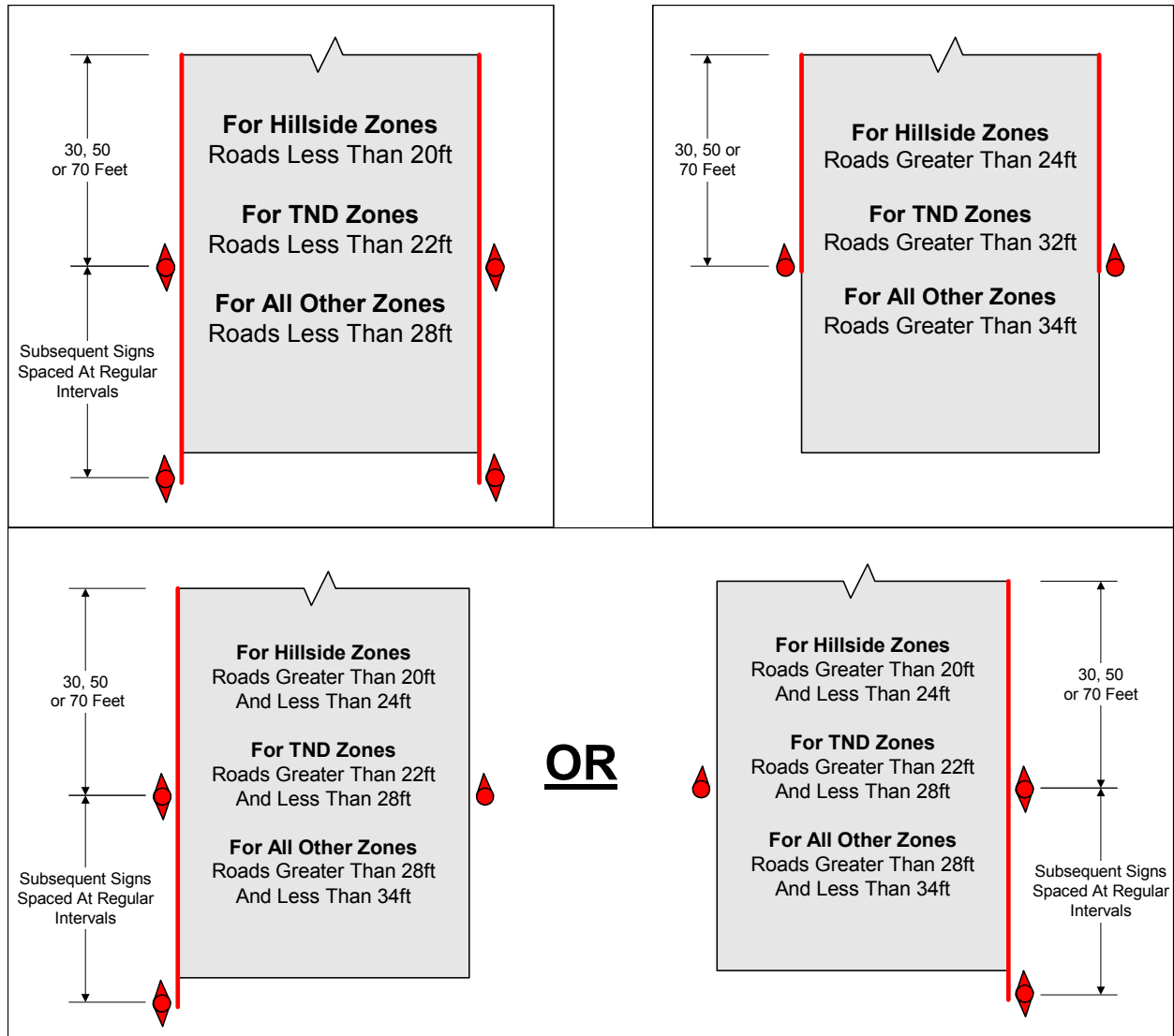


Figure 5 - Markings for entrances to fire department turnarounds

Theory behind markings

The IFC requires a minimum 20-ft clear width for fire department access roads. Therefore, a fire department access road without parking may be 20-ft wide. When parking is desired, the width of the access roadway increases to accommodate the parking. The amount of roadway width needed for parking along one side of an access road is 8-ft. In order to provide a minimum 20-ft clear width for fire department use, the access road must then be a minimum of 28-ft. 8-ft for the parking and 20-ft for the clear width.

When parking on both sides of the access roadway is desired, the roadway width for parking is reduced to 7-ft. The thought for this reduction is that vehicles will park closer to the curb when parking along both sides of an access road. This results in an access road of 34-ft in width overall. 7-ft each for parking along both curb lines, which totals to 14-ft, plus 20-ft for the clear width. See Figures 6 through 8 for illustrations of this theory.

It is important to remember, that parking requirements are different within WUI/Hillside and Traditional Neighborhood zones. Therefore, the clear width required by the fire code will be reduced to allow for the different parking scenarios within these zones.

It is also important to remember that these are the minimum requirements for fire apparatus access road markings. There may be circumstances in which additional markings are required. These circumstances are evaluated on a case-by-case basis. Please contact the Division of the Fire Marshal if it's felt that a situation might call for different marking arrangements.

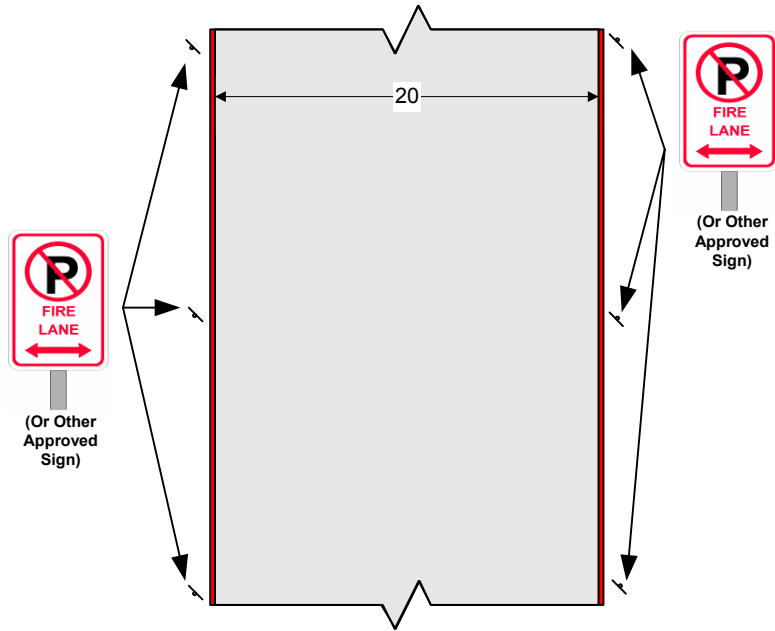


Figure 6 - Access road with no parking permitted

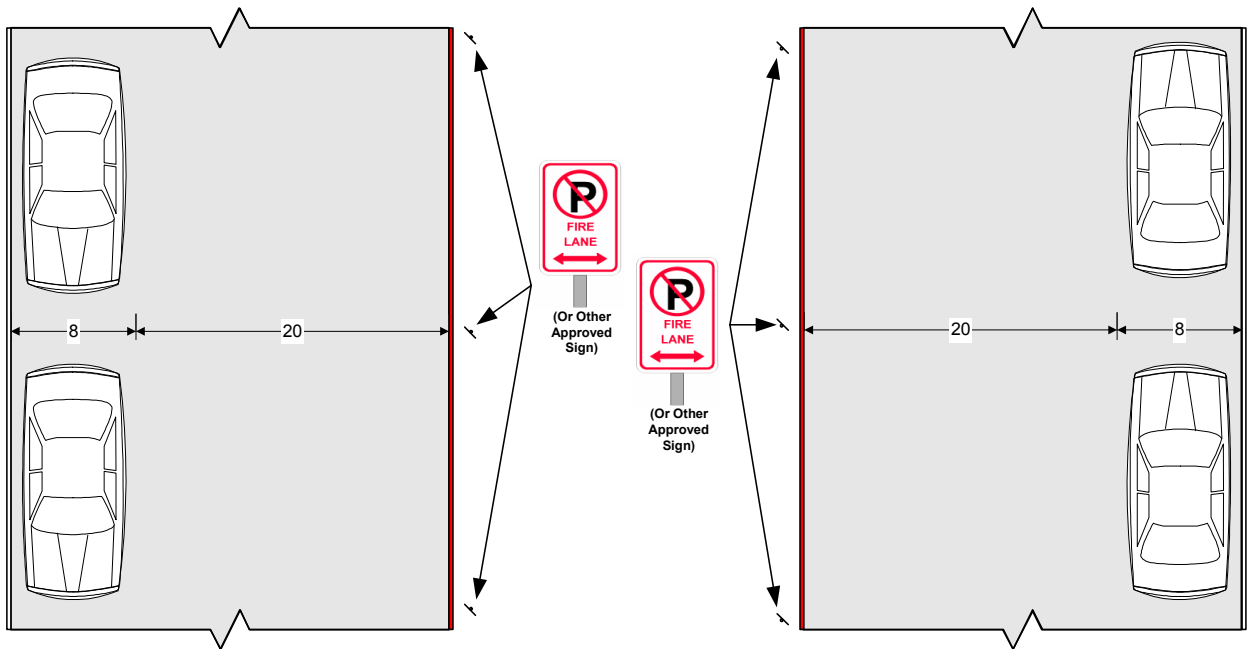


Figure 7 - Access roads with parking along one side

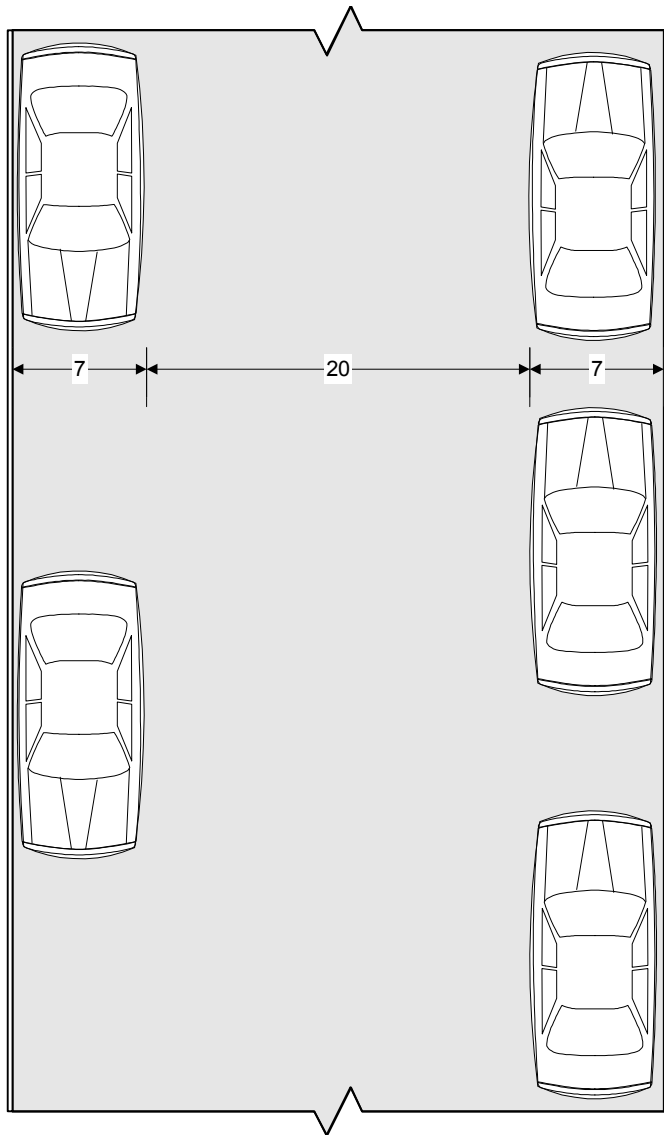


Figure 8 - Access roads with parking along both sides

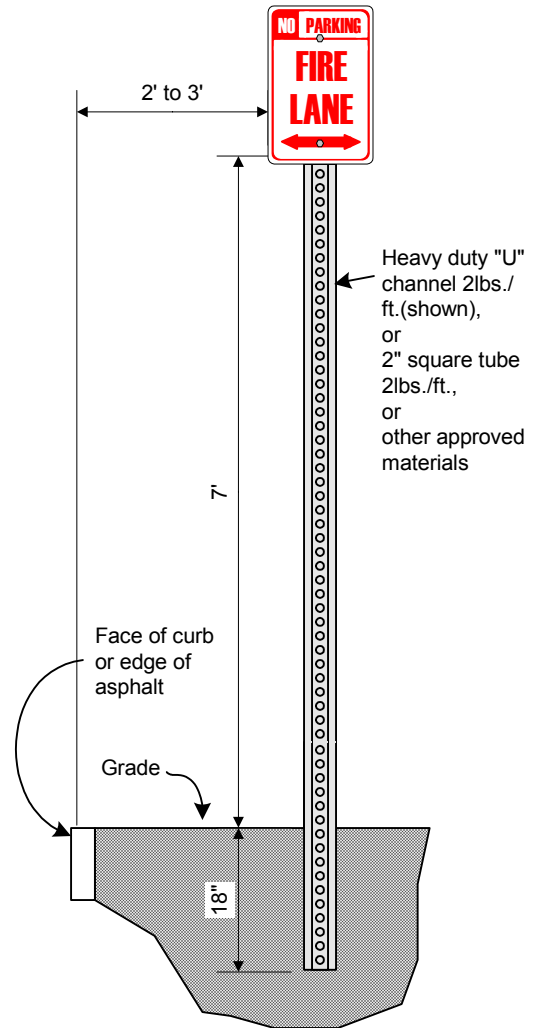
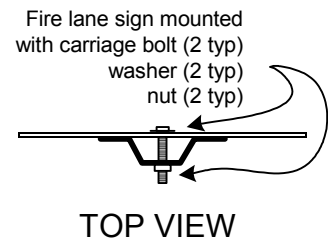


Figure 9 - Typical fire lane signage installation

Signage Requirements

Design

When signs are used to identify fire apparatus access roads, the signs shall comply with Figure 9. All signs used for marking of fire lanes must meet the following criteria:

- Be permanent bearing the words “No Parking Fire Lane”
- Have a white reflective background with letters and borders in red, using not less than two inch (2”) lettering and have a minimum dimension of twelve inches (12”) wide by eighteen inches (18”) high
- Provide directional arrows as applicable unless otherwise permitted
- Meet applicable requirements of the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD)

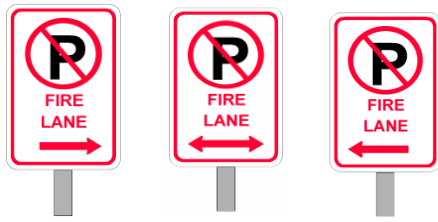


Figure 10 - Fire lane signage example



Figure 11 - Fire lane sign alternatives

Although the crossed out "P" sign is referenced in Figure 10, the signs shown in Figure 11 are also acceptable fire lane signs. See attachment for specific wording design for signs. Fire lane signs not identified here may be submitted for review and approval. These signs must be readily identifiable as an enforcement sign that a driver may have encountered during driver lesson classes. Proposed signs that do not meet this will not be accepted. All signs must meet the R7 series sign criteria set forth by MUTCD.

Visit <http://mutcd.fhwa.dot.gov/> for more information.

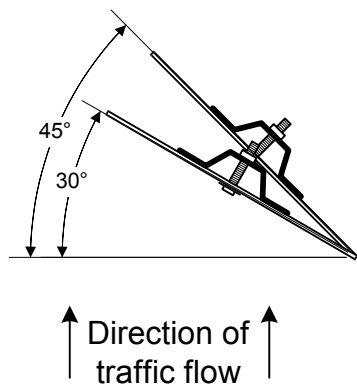


Figure 12 - Angle of signs to oncoming traffic



Figure 13 - Photo of typical fire lane sign installation

Installations

When signs are used to indicate the extent of the fire lanes, the posts for the signs shall be set into solid ground at a minimum depth of 18-inches.

The height of the bottom edge of the sign shall be no less than 7-ft from grade and the edge of the sign closest to the roadway shall be between 2- and 3-feet from the face of curb or edge of asphalt. The signs shall be affixed to heavy duty U-channel or other approved materials, with two carriage bolts, two washers and two nuts. Signs should be set at an angle of not less than 30 degrees or more than 45 degrees with the line of traffic flow in order to be visible to approaching traffic. See Figures 9, 12 and 13 for illustrations of these requirements.

Spacing

Fire lane signs shall be spaced approximately every 100 feet and at every change of roadway direction. If spacing at every 100 feet places a sign in an undesirable location such as in the middle of a driveway, the sign should be placed on the side of the driveway closer to the previous sign. A fire lane sign must be visible in the direction of vehicular travel, from any point along the curb of a fire lane.

Striping Requirements

Design

When striping is used to identify fire apparatus access roads, the striping shall comply with Figures 14 and 17. All striping used for marking of fire lanes must meet the following criteria:

- 6-inch red traffic paint stripe
- 4-inch white reflective lettering/wording with 3/4-inch stroke stating "No Parking Fire Lane"
- Lettering/wording spaced every 25 feet
- See attachment for additional striping design criteria



Figure 14 - Fire lane striping example

Installations

The striping must be placed along the entire length of the fire lane. When no curb is available, the red stripe is placed directly on the roadway along the edge of asphalt or concrete. When curbing is available, the red stripe is placed on the curb face and top of curb. It is important to note that the use of striping for fire lane markings is limited to private roadways. The use of striping noted here is not permitted for use on public roadways.

Important Note: Striping for marking of fire lanes is permitted for private roadway use only. Striping for fire lane marking is currently not permitted for public roadways.

Signage combined with striping

When striping with the required lettering is provided, signage is not required. However, if the red striping *without* the required lettering is installed, approved fire lane signage is required. The marking must identify the zone as a fire lane. The red striping alone does not do this, hence the requirement of the signage. Therefore, when marking a fire lane, the required lettering is typically provided with the red striping to prevent additional costs from signage installations.



Figure 15 - Typical fire lane striping installation

Fire Apparatus Road Marking Considerations

Coordination with fire hydrants. The placement of fire lanes should be coordinated with the placement of fire hydrants. This is particularly true when only one side of the roadway requires fire lane marking. By placing the fire lane on the same side of the road as the fire hydrants, the fire hydrants are then provided with an increased level of protection from obstruction-by-parking.

Fire lanes behind parking. For most instances, when perpendicular and/or parallel parking is provided along both sides of a drive, fire lane markings are not required behind such parking. There are of course, some instances in which markings are required and it's the fire lane striping that is used for marking. This is most commonly required when the drive lane, narrower than normal is accompanied with perpendicular parking. In this situation, care must be taken to ensure vehicles parking do not overhang into the already narrow fire lane.

Single points of access. When a site is provided with a single point of access, that single point of access may require fire lane markings along both sides regardless of the width of the access. This is determined on a case-by-case basis and a sites use plays a significant role in this determination. Higher risk uses will typically drive marking both sides of single access points over lower risk hazards.

Additional fire lane markings. There may be other instances in which additional fire lane markings are required. Some of these instances include, but are not limited to, adequate room for turning maneuvers or providing access to special hazards.

Attachments

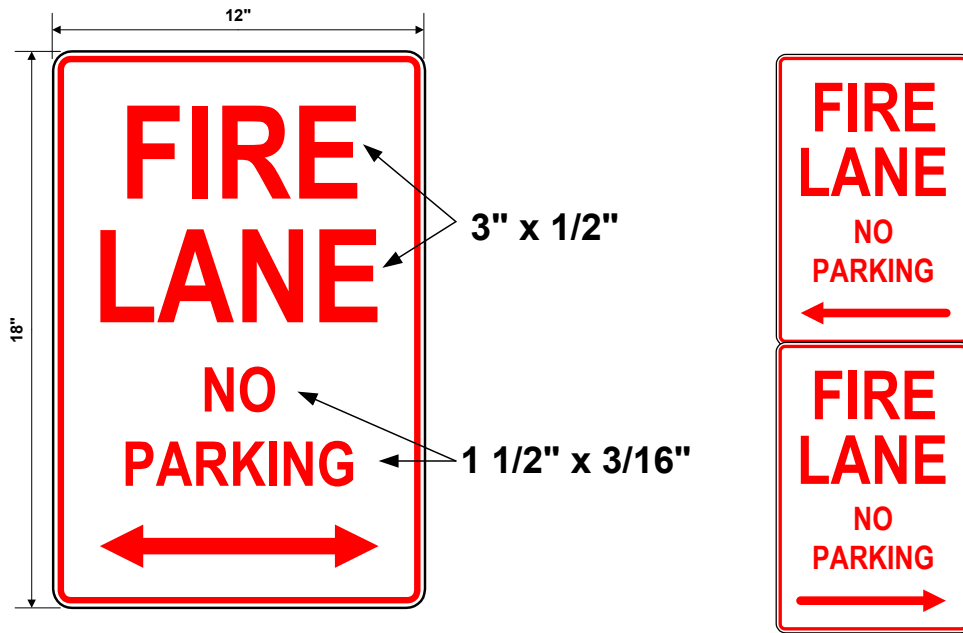


Figure 16 - Detailed fire lane signage design



Figure 17 - Detailed fire lane striping design

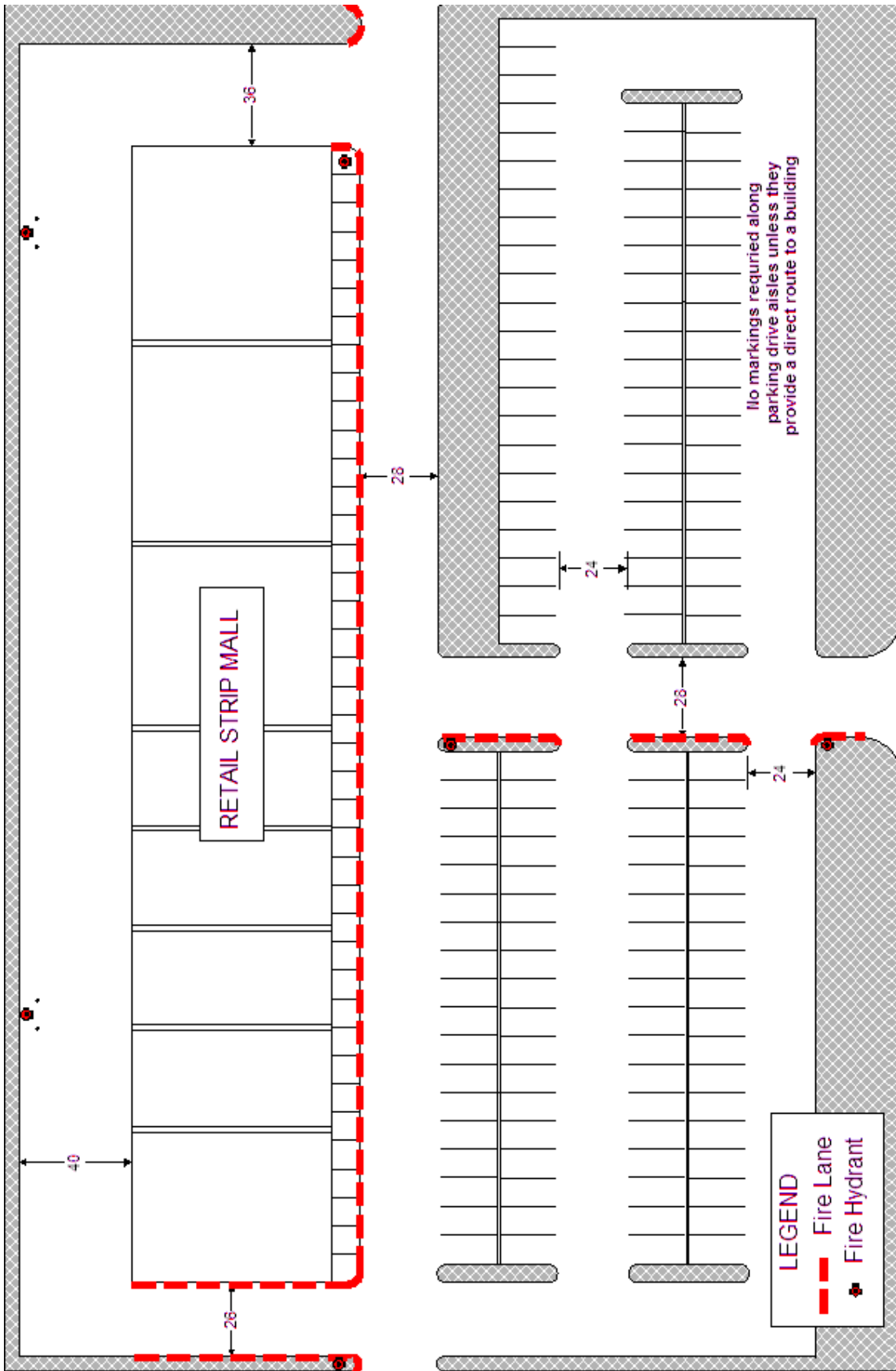


Figure 18 - Example of fire lane markings for a site plan