



Bryan Fire Department Access and Fire Protection/Utility Equipment Identification Requirements



Revision Date: 8/9/2023

Fire Department Connection Sign (FDC) Requirements

FDC Sign Design Requirements

- Red Background with white lettering.
- Lettering and font shall be sized to maximize the available space on the sign while maintaining legibility.
- Signs shall be made of durable weather/UV resistant material such as aluminum, acrylic, Dibond or Alupalite (Vinyl and PVC signs not permitted for outdoor use).
- Signs shall be maintained in good condition.



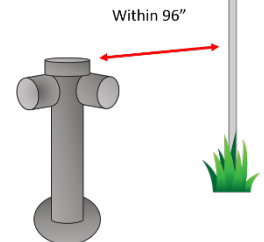
Sizing of FDC Signs

On existing buildings, wherever the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" not less than 10 inches high and an arrow to indicate the location. Such signs shall be subject to the approval of the fire code official.

Location and Quantity of Signs

Wherever the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. FDC sign shall be placed in a conspicuous place readily viewable from roadway/entry point(s).

- **FDC on Address Side:** FDC's located on the address side of building shall have sign placed directly above FDC
- **FDC NOT on Address Side:** FDC's not located on the address side shall have sign(s) with an arrow indicating direction of travel to FDC.
- **Remote FDC's:** Remote Type FDC's shall have a sign mounted in a conspicuous location within 96" of FDC that does not obstruct access or use of the FDC and is readily viewable.
- **Multiple Entries from Roadway:** Buildings that have multiple entry points from roadways may be required to have additional signs. The need for additional signs is determined by the fire code official.
- **Additional Signs May Be Required:** Based on location of the FDC and accessibility, additional signs may be required. The need for additional signs is determined by the fire code official.
- **Obstructions:** FDC sign location(s) shall take into account obstructions to include, but not limited to parked vehicles and landscaping (including the anticipated size of mature landscaping)





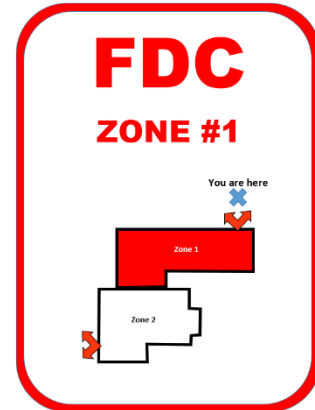
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Zone Signs

- **Zone Sign Required:** Where the fire department connection does not serve the entire building, a sign(s) shall be provided indicating the portions of the building served. *IFC 2021 912.5*
 - Zone Map signs shall be a minimum of 6"x9"
 - Signs should include system zone maps to indicate when appropriate. Signs shall be approved by fire code official.
 - Signs shall be mounted in a conspicuous and readily viewable location that does not obstruct access to the FDC.
 - Signs shall be made with approved materials. See "FDC Sign Design Requirements"



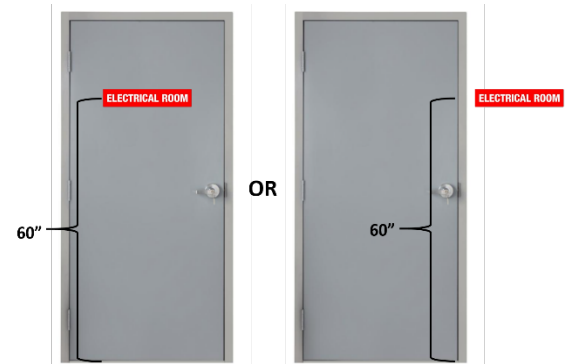
Utility Equipment Sign Requirements

The following locations require signage:

- Riser Rooms (fire sprinkler equipment)
- Fire Alarm Control Panel(s) a.k.a "FACP"
- Electrical Rooms
- Mechanical Rooms (HVAC equipment access)
- Elevator Equipment Rooms

Interior Doors

- Red Background with white lettering; Minimum 2" high lettering
- Signs used on interior can be made from any durable material.
- Signs shall be mounted 60" above the ground on OR next to door



Exterior Doors

- Red Background with white lettering; Minimum 3" high lettering
- Durable Weather/UV resistant material such as aluminum, acrylic, Dibond or Alupalite, (Vinyl and PVC signs not permitted for outdoor use)
- Signs shall be mounted 60" above the ground on OR next to door



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Access to Fire Department Connections

Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object. Access to fire department connections shall be approved by the Fire Chief. *IFC 2021 912.4*

Locking Fire Department Connection Caps

The fire code official is authorized to require locking caps on fire department connections for water-based fire protection systems where the responding fire department carries appropriate key wrenches for removal.

Approved Locking Caps

- KNOX 2.5" with Swivel Guard #3111
- KNOX 2.5" Standpipe Lock #4011



Clear Space Around Connections

A working space of not less than 36 inches (914 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided and maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections, except as otherwise required or approved by the Fire Chief. *IFC 2021 912.4.2*

Physical Protection

Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with IFC 2021 Section 312

Fire Department Access Requirements

Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the fire code official

Who is Required to Have a Key Box?

- Anyone who has Monitored Alarm and/or Automatic Sprinkler Systems
 - **Exception:** Business's with Commercial Cooking Hoods NOT connected to Monitored alarm systems do not require KNOX key boxes.
- Buildings with Elevators that do not utilize approved *Standardized Fire Service Elevator Keys*





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Where are Key Boxes Mounted?

- At the primary point of entry. This is typically the address side of the building. Key box locations shall be at the discretion of the fire code official.
- Riser rooms with exterior access and are not located within a reasonable distance of the primary key box are required to have a key box installed next to riser room door. The determination of "reasonable distance" shall be determined by fire code official on a case by case basis.
- Fire Service Elevators with non-standardized keys.
- Additional locations based on size of building and hazards may be required at the discretion of fire code official.

What Belongs inside the Key Box?

Required Keys

- Keys shall be provided where immediate access is necessary for life-saving or fire-fighting purpose to include, but not limited to: FACP, Mechanical, Electrical, Elevator Equipment, Riser rooms
- Fire Service Elevator Keys shall comply with *607.8 Standardized fire service elevator keys for FD Emergency Operations*.

Labeling of Keys

- Each set of keys shall be placed on a durable key ring not less than 1" and labeled using water resistant methods and indicate what the key is for.
 - Label makers utilizing thermal tape shall not be used, temperatures inside key boxes can reach levels that make labels illegible.
 - Keys shall be labeled by the address AND most appropriate description such as "Master", "Riser Room", "Room#", "Suite#" etc.....
- Based on size of building multiple sets of keys may be required.
- Labeling methods shall not prevent keys from fitting inside key box (Key boxes requiring multiple keys or sets of keys may need to be upgraded to larger key box)



Electrically Controlled Access Systems (Key Cards)

- If the door has traditional keyed access, a traditional type key shall be provided (extreme temperatures inside key boxes can damage electronic keys)
- Electrically controlled doors without traditional keyed access shall provide keycard/fob.

Key Box Maintenance Requirements

- Key Box maintenance 506.2. The operator of the building shall immediately notify the fire code official and provide the new key where a lock is changed or rekeyed.



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- Please make sure all keys provided have been tested to ensure they work as intended in locks.
- When the contents of key box's need to be updated the new keys should be brought to the fire marshal's office. Keys should be labeled according to guidelines provided and placed in an envelope and labeled with the address and locations of key box(s) along with contact information for site representative.

Elevator Key Requirements

- New Construction Elevator Keys shall comply with IFC 2021 Section 604 Elevator Operation, Maintenance and Fire Service Keys. Including, but not limited to:
 - Responsibility to provide keys. The building owner shall provide up to three standardized fire service elevator keys where required by the fire code official, upon installation of a standardized fire service key switch or switches in the building
 - Elevators without standardized keys: The owner shall be permitted to place the building's non-standardized fire service elevator keys in a key box installed in accordance with IFC 2021 Section 506.1.2.

Key Boxes for Apartment Complex's

Apartment complexes with components requiring key boxes shall comply with the following guidelines.

Apartments with Security Gates

- Option #1:
 - Key box installed at the building with FACP and/or other fire code official designated location *AND* outside each riser room
- Option #2:
 - Key box at *ALL* access gates with an approved gate override switch installed inside key box.
 - ALL areas where immediate access is necessary for life-saving or fire-fighting purposes shall be keyed alike (i.e. Riser, Mechanical, Electrical Rooms)
 - A minimum of 2 sets of keys shall be provided for key boxes located at FACP locations and gated entrance key boxes. More may be required at the discretion of the FMO.

Non-Gated Apartments

- A key box shall be installed at the building with FACP *and* outside each riser room.
- Exceptions: Based on travel distance and visibility, the fire code official may allow a reduced number of key boxes for riser rooms.

Security Gates



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Electrically Operated Security Gates

All access control systems shall comply with IFC 2021 Section 503 Fire Apparatus Access Roads, D103.5, 503.6 AND the following criteria:

- The installation of security gates across a fire apparatus access road shall be approved by the fire code official.
- Security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200
- Methods of locking shall be submitted for approval by the fire code official.
- Security gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
 - All electrically operated gates are required to have a KNOX Gate Switch.
- Security gates shall be equipped with an approved "Fail-safe" system to allow manual operation of the gate in the event of power failure or equipment malfunction.
- Construction of gates shall be of materials that allow manual operation by one person.



Manually Operated Security Gates

All access control systems shall comply with Section 503 Fire Apparatus Access Roads, D103.5, 503.6 AND the following criteria:

- Methods of locking shall be submitted for approval by the fire code official.
- Security gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
- Construction of gates shall be of materials that allow manual operation by one person.

Locks and Chain Requirements

- All chains and padlocks controlling access to premises shall be less than 3/8" in diameter OR the use of a KNOX padlock.
- If KNOX Padlock is not used, the chain will be cut to gain access to the premises. Chain will be replaced at the owner's expense.

Fire Lane Design Information

(Fire lanes need to meet both sections below to be approved)

1. Where fire lanes are required ALL curbs and ALL curb ends along the fire lane shall be painted red with four inch (4") white lettering stating "FIRE LANE – NO PARKING – TOW AWAY ZONE" Each phrase should be spaced no more than 15ft apart. Ex: FIRE LANE (15ft space) NO PARKING



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(15ft space) TOW AWAY ZONE (15ft space) FIRE LANE (15ft space). Lettering shall be repeated throughout the entirety of the fire lane.

Exceptions Per IFC 2021 Section D103.6.2

Exception 1: If the fire lane width (driving surface) is >26ft marking is only required on one side of the road.

Exception 2: If fire lane width (driving surface) is >32ft no marking is required.

- For Fire Lanes where there is no continuous curbing, along a level surface, or behind parking spaces there are two options. Either option is acceptable.

Option 1: A sign twelve inches (12") wide and eighteen inches (18") in height stating "FIRE LANE DESIGNATED PARKING ONLY" with a companion sign twelve inches (12") wide and six inches (6") in height stating "TOW AWAY ZONE" shall be mounted in a conspicuous location at each entrance to the property. The top of the sign shall be mounted no more than 6ft above grade. (See Sign Detail at right and Figure 1 below for painting detail)

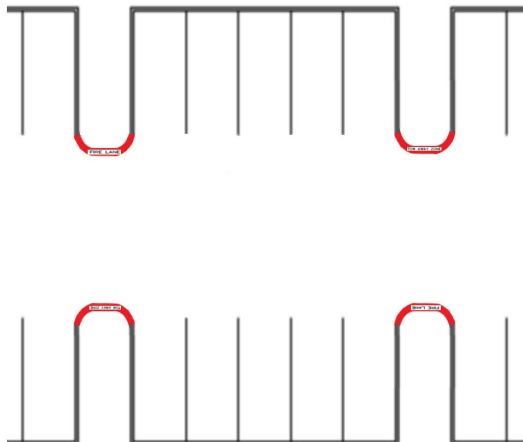


Option 2: Where there is no curb including behind parking spaces a continuous 8 inch red stripe with 4 inch (4") white lettering stating "FIRE LANE – NO PARKING – TOW AWAY ZONE" Each phrase should be spaced no more than 15ft apart. Ex: FIRE LANE (15ft space) NO PARKING (15ft space) TOW AWAY ZONE (15ft space) FIRE LANE (15ft space).

Lettering shall be repeated throughout the entirety of the fire lane. (See Figure 2 below for painting detail)

Option #1

FIRE LANE WITH DESIGNATED PARKING ONLY SIGN



Option #2

TYPICAL FIRE LANE WITHOUT SIGN AT ALL ENTRANCES

