



CODE COMPLIANCE GUIDELINE

FIRE PROTECTION SYSTEMS

Bureau of Fire Prevention

111 Basin ST / P.O. Box 884

Hebron, Ohio 43025

Telephone: 740-928-4721

Fax: 740-928-2726

fireprevention@hebronfd.org

<http://www.hebronfd.org>

**** PERMIT REQUIRED ****

This publication outlines the *State of Ohio Fire Code* (i.e. OFC) installation permit and fire safety requirements for the installation, alteration, and/or removal of a fire sprinkler, fire suppression, and/or fire alarm system within the Village of Hebron and Union Township. This publication does not address those requirements necessary for the continued maintenance and testing of the system to receive an annual operational permit. As a reminder, unless otherwise specified, anything that requires you to obtain this permit will also require you to obtain a permit issued by the Licking County Building Code Department. Their office is located at 675 Price Road, Newark, OH 43055 and can be contacted at (740) 349-6671.

*** PLEASE REVIEW THIS ENTIRE PUBLICATION BEFORE TAKING ACTION ***

Questions regarding the content of this publication should be directed to the Bureau of Fire Prevention at (740) 928-4721 ext. 111 during regular office hours, Monday thru Friday

OVERVIEW

The installation, alteration, and/or removal of any fire protection system shall be approved by the Bureau of Fire Prevention of the Hebron Fire Department and be in accordance with Chapter 9 of the most current version of the OFC and the version referenced in the OFC for the most applicable NFPA standard referenced. Any work performed in this manner shall receive a Fire Protection System Permit (FPSP) prior to the start of work.

APPROVAL REQUIRED. As outlined in OFC Section 105.4.2.1, shop drawings for the fire protection system/s shall be submitted to indicate compliance with this code and the construction documents, and shall be approved prior to the start of installation. Shop drawings shall contain all information as required by the referenced installation standards in rule 1301:77-09 of the Administrative Code.

OCCUPANCY OF STRUCTURE. As outlined in 901.5.2 of the OFC, it is unlawful to occupy any portion of a building or structure until the required fire detection, alarm and suppression systems have been tested, inspected and approved by the fire code official in accordance with section 901.5 of the Ohio Building Code (OBC) as listed in rule 1301:7-7-47 of the Administrative Code.

SITUATIONS REQUIRING A PERMIT. When it comes to the need for a permit in order to perform various types of work on a fire protection system, confusion commonly exists as to what work requires a permit and what type of work does not. The table following this paragraph outlines many, but not all, examples of what types of work do and do not need to receive a FPSP prior to the start of work. If you have any questions concerning the type of work you need to have performed on a fire protection system, we urge you contact our Bureau of Fire Prevention for guidance.

THE APPROVAL PROCESS -- GETTING STARTED

Approval of a fire protection system includes a plan review and life safety inspection. Final approval is granted only after a site inspection by the Fire Marshal.

THREE STEP PROCESS. The following steps form the procedural framework for obtaining approval for the installation, alteration, and/or removal of a fire protection system.

- STEP 1 - Submit permit application, certified plans, and documents to be reviewed.
- STEP 2 - Revision and resubmission of construction plans, as necessary.
- STEP 3 - Schedule a fire marshal inspection.

STEP 1 - SUBMIT PERMIT APPLICATION, PLANS, AND DOCUMENTS

The responsible party shall submit an application for a Fire Protection System Permit (FPSP) to the Fire Marshal. Applications may be obtained by calling the Bureau of Fire Prevention at 740-928-4721, ext. 111, or online at: www.hebronfd.org/forms/fpsp.pdf

PERMIT FEE. A **\$0 FPSP fee is due** at the time of the permit application or at the time approved plans are retrieved. This fee generally covers the cost of the plan review and inspection(s) associated with the permit and is authorized by Section 112.1 of the Ohio Fire Code.

APPLICATION SUBMITTAL INSTRUCTIONS. The following documentation must be submitted along with the completed FPSP application to the Bureau of Fire Prevention for review and approval at least 5 business days prior to the event:

- One (1) copy of the building plans that are stamped and approved by a Fire Protection Engineer certified in the State of Ohio.
- One (1) copy of specifications for each device/component being installed or replaced.
- One (1) copy of the building's Owner's Certificate *(See Page 3 for Details)*

Submit the completed permit application and a copy of the required documents in PDF form via email to fireprevention@hebronfd.org OR you may mail them to:

Village of Hebron, Division of Fire/EMS
ATTN: Bureau of Fire Prevention (Permits)
P.O. Box 884
Hebron, OH 43025

Plans submissions can also be dropped off at the firehouse Monday through Friday, between 8:00 a.m. and 4:00 p.m.

Plans will be processed in the order they are received. Actual review time varies and is dependent upon on the complexity of the plan. If plan information is incomplete, or if existing records are incomplete or inconclusive, review may take longer. The bureau attempts to provide same day reviews or, at least, prior to the applicant's desired start of use. However, these are not guaranteed.

STEP 2 - RETRIEVE APPROVED COPIES OF PLANS

After the plans are reviewed and approved, you may retrieve the approved plans, if necessary, by visiting the firehouse during regular business hours or by receiving a PDF version via email. Please note that any plans submitted that are larger than 11" x 17" cannot be scanned digitally and will need to be retrieved in person. The Fire Prevention Bureau will retain one set digitally. Plans will only be released after the required permit fee has been paid in full.

Notice regarding Fire Marshal Plan Approval. In accordance with Section 105.4.4 of the Ohio Fire Code, plans approved by the fire official are approved with the intent that they comply in all respects to the Fire Code. Any omissions or errors on the plans do not relieve the applicant responsible party of complying with all applicable requirements. Final approval is granted only after a site inspection by the Fire Marshal.

STEP 3 - SCHEDULE A FIRE MARSHAL INSPECTION

Fire Marshal Inspections. Approval of a fire protection system is finalized through a site inspection, which must be scheduled by the responsible party for a date at least three business days prior to the use and/or occupancy of the building. The approved plans must be available at the inspection location. To schedule an inspection, call the Bureau of Fire Prevention at (740) 928-4721, ext. 111 during business hours.

OTHER LOCAL GOVERNMENT AGENCIES

When installing, altering, or removing any portion of a fire protection system, particular attention should be given to notification and coordination with the following county agencies and local governments:

- Licking County Building Code Department - (740) 349-6671

Important Notice about Building Requirements. The Fire Marshal will not issue a permit for a fire protection system until proper notification has been made to the Licking County Building Code Department and after the necessary permit applications have been filed with said agency, if required. Please note that receiving any one permit prior to the reception of other required permits does not provide approval to begin erecting the structure. ALL permits must be in hand prior.

OWNER'S CERTIFICATE

The owner's certificate is a document that should have been provided to the building owner by the fire sprinkler installer at the time the sprinkler system was installed. The owner's certificate outlines exactly what the building will be used for, so that the engineer that designed the system could be sure that the system would provide the appropriate amount of protection. The situation that we see far too commonly is that this document gets filed away or not transferred from owner to owner. As the building changes ownership, the use of the building also changes and, at times, begins to be used in a manner requires more fire protection than what the current system can provide.

When submitting an FPSP to the Bureau of Fire Prevention, this owner's certificate must be attached. If this certificate is unavailable, your sprinkler contractor should be able to assist you in creating a new one. This owner's certificate must be updated as the building changes use and the fire protection systems must be enhanced, as needed, to protect the building.

FIRE ALARMS. The following are specific requirements relating to the installation, alteration, or removal of fire alarm systems within the jurisdiction of the Hebron Fire Department.

NFPA Standards. The Hebron Fire Department promotes the use of the most recent edition of all NFPA standards, as they relate to the project. Any use of a more recent NFPA standard in a project, above what is referenced in the current edition of the Ohio Fire Code, shall then require that the entire project be applicable to the most recent NFPA standards. In other words, if you use a more recent NFPA standard for one part of your project, then the entire project must comply with the most recent NFPA standards. You are not permitted to pick and choose what versions of an NFPA standard you wish to apply.

Standpipe Identification. In buildings where standpipe systems exist, a strobe device shall be placed on the wall directly above each standpipe. The strobe shall emit a blue light, which will help firefighters to locate the standpipe during a fire. No other strobe device shall be permitted to emit a blue light. The height of the strobe device shall be determined by the Fire Marshal

Zoned Panels. When non-addressable alarm panels are being installed, the following requirements shall be met.

- Each alarm and annunciator panel shall have a map of the building that indicates the location of each alarm point, sprinkler riser, sprinkler shutoff, roof access, Knox Box, and any other information deemed necessary by the Fire Marshal. This map shall be easy to use and be mounted on the wall near the panel.

- Each alarm and annunciator panel shall have a list of all alarm points and their descriptions. This list shall be mounted on the wall near the alarm panel.



- Each alarm point shall have a label affixed to it that coincides with the alarm programming. In other words, I should find a pull station with the number 14 on it when the alarm panel indicates "PULLSTATION 14".

Additionally, fire alarm systems that are connected to fire sprinklers shall have their alarm point number match the designation of the sprinkler riser. So, for example, if there are five (5) sprinkler risers, alarm points 1-5 shall be designated for these risers' flow switches. We should not see an alarm that reads "Waterflow 47" or something similar.

Roof Top Units (RTU's). When a building is equipped with an RTU that contains a duct detector, the RTU shall have the number that coincides with the fire alarm system affixed to the outside of each unit. The number shall be a minimum of 3" tall, reflective, and be placed in a location that will easy to see by approaching firefighters. In other words, if the roof access is north of the RTU's, do not place the number on the side of the units facing south.

Emergency Contacts. All fire alarm panels and annunciator panels shall have a minimum of two (2) emergency contacts. These contacts may be placed inside the door of the alarm panel if discretion is preferable. The emergency contact info does not need to be placed near the panel when the panel is located in an area accessible by the public AND does not have a cover that can hide the information.

Panel Location. When a new alarm system is being installed, the main panel shall be located within the lobby, or similar area, near the main entrance used by the public. When the alarm system is being installed in a secondary building that transmits its alarms to another, more centralized building, the building receiving the new alarm system shall have at least one (1) annunciator panel located near the main entrance.

When access and control of an alarm panel or annunciator is locked out by a key, a copy of the key shall be located in the Knox Box.

When the installation of a fire alarm control panel is permitted to be installed in another location besides the main point of entry, such as the case when replacing a current system's alarm panel, the exterior man door closest to this panel shall have a "FACP" sign affixed to the door. This sign shall meet the requirements outlined in the sign section of this document.

Annunciator Panels. In general, one (1) annunciator panel is required per 100,000 sq. ft. for newly installed systems, dependent upon the need. Since every building is designed differently some buildings may need these panels, while a reduced amount may be permitted in other buildings that have limited access points. As a result, the Fire Marshal will determine the amount and location of annunciator panels during the plans review.

Notification Devices. A minimum of one (1) strobe device is required on the street side exterior of the building, must be visible to approaching fire apparatus, and must be placed in a location approved by the Fire Marshal. This strobe must activate during any alarm and is designed to assist firefighters in locating the building easier. This device shall also emit an audible signal when required by any applicable code, such as the Ohio Fire Code, Building Code, or NFPA 72.

For buildings that contain a water-based fire sprinkler system, one (1) strobe shall be located on the exterior of the building, opposite any sprinkler riser that is located along a wall. This device shall only strobe upon the activation of the respective riser's flow switch. When multiple risers are placed side-by-side, it is permissible to install only 1 indicating device for all of the risers located in that immediate area.

For example, if a warehouse has 16 risers, divided up evenly into four exterior riser rooms, there should be a strobe located on each of the riser rooms. Should a water flow switch activate, the strobe for that room shall activate in addition to the building's normal alarm operation. None of the other three riser room strobes should activate.

Sprinkler Systems. The information outlined in this section shall define the requirements necessary for the installation, alteration, and/or removal of a water-based fire sprinkler system:

FDC. All fire department connections (FDC) shall be installed in the following manner:

- 1) Remote from the building on the street side, unless determined to be insufficient to meet the needs of the fire department.
- 2) Have a 5" Storz connection and cap, in lieu of the NST Siamese.
- 3) Have an elbow adapter directing the hose connection downward at a 45 degree angle.
- 4) Have a fire hydrant within 15 FT of the FDC that is capable of providing a water supply adequate enough to support the sprinkler system. When municipal or private fire hydrants are not available, the area of the FDC shall be designed to accommodate easy access to fire department tanker shuttle operations.
- 5) Shall be located within 5 FT of a fire department access road.
- 6) Shall be installed between 30" - 40", measured from the finished grade to the bottom lip of the Storz adapter.
- 7) A sign shall be placed in an approved location identifying it as an FDC. The sign shall meet the requirements set forth on page 8 of this document.



Photo shows a correct FDC, except that the piping up to the 45 degree adapter should have been painted OSHA Safety Red

Identification. Sprinkler systems components shall be identified properly to ensure that the fire department is able to address the needs of the building's emergency and do so in a rapid manner. The following components of a fire sprinkler system shall be identified and done so as required in this document.

Exterior Plumbing. All black iron piping and valves on the exterior of the building shall be painted OSHA Safety Red with an oil based paint, unless otherwise indicated by another requirement or the Fire Marshal. Any system component that is typically left unpainted or is designed to be decorative in nature may be left unpainted.

Interior Plumbing. All riser and feeder piping that provides water to the sprinkler system shall be labeled as such and have arrows indicating the direction of water travel. Markings shall meet the specifications on page 14, be spaced no greater than 100' apart, and be marked directly before and after any wall, ceiling, or floor penetration. In factories, warehouses, and other similar structures where the plumbing is visible from the factory and/or warehouse floor, the riser and feeder pipes shall be painted OSHA Safety Red.

When a sprinkler system is installed directly above an acoustical ceiling, there shall be a label matching the specifications on page 14 that is affixed to the ceiling support rail directly above each point of entry.

Sprinkler Risers. All sprinkler risers shall have an identification sign affixed to them that matches the specifications outlined on page 9 of this document. When the riser is installed in a room or smaller area, the sign may be affixed to the riser just above the check valve, as long as it does not impede the operation of the riser. For risers located on factory or warehouse floors, including those in their own interior riser rooms, the sign shall be affixed 20"-30" below the 90 degree bend. This is so that firefighters can identify the riser from a distance. The riser designation must coincide with the alarm system's programming.

Structures that have riser rooms located on the exterior walls of the building shall have a sign on the room, facing the fire department access road, that indicates what risers are locating within that room. The sign must be visible and legible from the fire apparatus. When the distance between the two is too great to see a sign, it is acceptable to mount the sign on a post closer to the roadway.

The riser identification signs shall also indicate that the riser belongs to a dry system, when applicable, per NFPA 13.

PIV. Post Indicator Valves (PIVs), both wall mounted and remote, must have a sign meeting the specifications on page 9 that identifies its use. For example, a wall PIV opposite Riser #3 should simply say "RISER #3." A remote PIV that isolates a portion of the fire service main should say "FIRE MAIN ISOLATION VALVE."

Standpipes. When a facility have a standpipe connection, the exterior door closest to the standpipe shall have a sign indicating such.

Rooms & Buildings Intended for Fire Protection Use. Areas such as pump houses, riser rooms, etc. shall have a sign indicating such that meets the specifications listed on page 9. The signs used to identify what risers are located in a room will serve this purpose. The intent of this rule is to identify those interior locations that house fire protection equipment, such as a sprinkler riser located inside a restroom, etc.

Fire Suppression Systems. All fire suppression systems that utilize carbon dioxide, Halon, or any other substances that may harm the health of someone shall have a warning sign, that meets the specifications outlined on page 15, mounted at every point of entry. The sign must be large enough and of a color that does not blend in with its surroundings. The sign should be visible, not hidden.

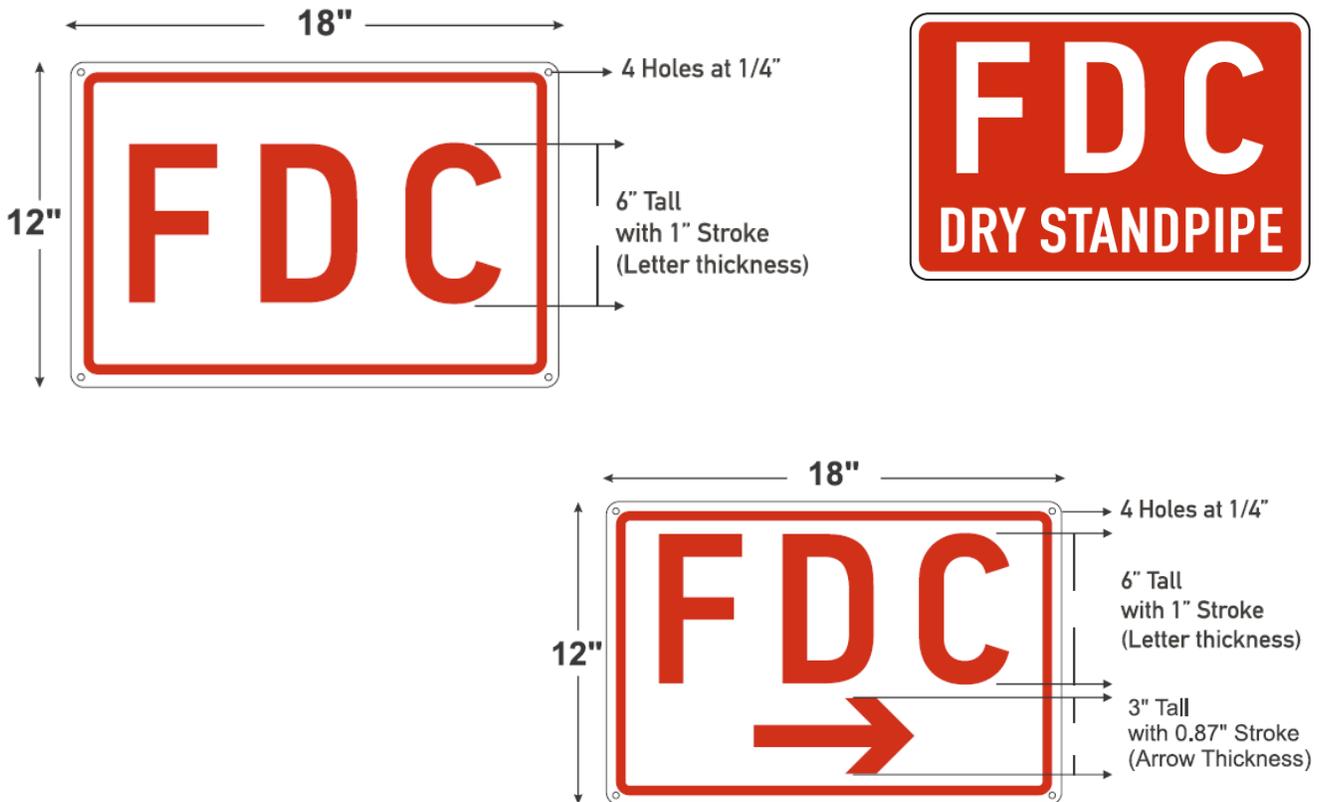
These systems shall also have a horn strobe, that is easily distinguishable from that of the standard fire alarm system, mounted outside the room at every point of entry. Additionally, when the system is installed in a location that is not frequented by others very often, a horn/strobe shall be installed in a location that is.

When the building that a suppression system is installed in does not require a fire alarm system, a sign shall be mounted at the pull station indicating such, similar to the example on page 15.

Signs. All signs used in conjunction with a fire protection system shall adhere to the specifications outlined within this section, unless otherwise approved by the Fire Marshal.

FDC Sign. FDC signs shall be:

- Constructed of rust free coated aluminum sheeting
- Directional: When necessary, the sign shall have an arrow pointing in the direction of the FDC's location.
- Have either: (1) White reflective block lettering on a red background or (2) Red reflective block lettering on a White background. The color combination shall be chosen by the Fire Marshal based on the surrounding background of the area it will be mounted
- Writing: Shall read "FDC", unless otherwise specified
- Add'l Writing: If the Fire Marshal required specific additional wording to be placed on the sign, the writing shall meet the same guidelines, except that this writing may be 1" tall or larger and be entered under the main writing.



Riser Identification Sign. Riser signs shall be:

- Constructed of rust free coated aluminum sheeting, unless mounted inside the building. Signs inside the building are permitted to be plastic or a vinyl decal if being affixed to a flat surface.
- Size: The size of the sign and its lettering are not specific in size, due to the many factors that play a part in its visibility. Therefore, as a general rule, the sign must be of an adequate size that it is identifiable and legible from at least 100' for factory and warehouse floors. For other areas, the size must be adequate for the location.
- Have either: (1) White reflective block lettering on a red background or (2) Red reflective block lettering on a White background. The color combination shall be chosen by the Fire Marshal based on the surrounding background of the area it will be mounted
- Writing: Shall say "RISER", followed by its designation/s., unless otherwise specified
- Add'l Writing: If the Fire Marshal required specific additional wording to be placed on the sign, such as "DRY SYSTEM" for those that are of such, the writing shall meet the same guidelines, except that this writing may be 1" tall or larger and be entered under the main writing.



Building Systems Identification Sign. Many problems that the fire department are called for are due to a buildings mechanical, electrical, or other type of systems. In order to investigate the cause of the problem, firefighters must be able to locate them quickly. This includes, but it not limited to: elevator control room, electrical room, HVAC, hot water heaters, boilers, and more. The specification of these signs are as follows:

- Constructed of aluminum, plastic, or a vinyl decal if being affixed to a flat surface. The material used for the signs can really be any material as long as it is permanent in nature. Laminating a piece of paper printed from a computer will not be accepted.
- Size: The size of the sign and its lettering are not specific in size, due to the many factors that play a part in its visibility. Therefore, as a general rule, the sign must be of an adequate size that it is identifiable and legible from at least 50' for factory and warehouse floors. For other areas, the size must be adequate for the location.
- Design: These types of signs may follow the aesthetic appeal of the building and the design of the other signs within it, as long as they are visible and legible.
- Writing: Shall be of the building owner's choosing.



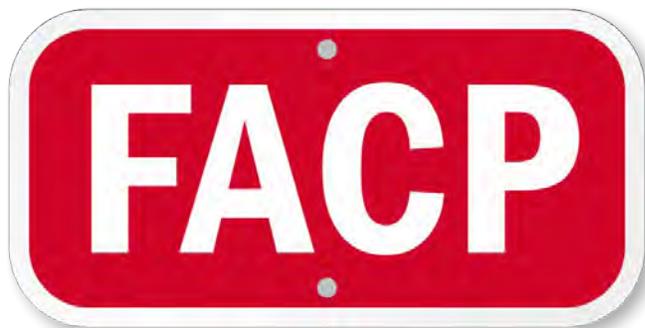
Roof Access Identification Sign. Many times, the fire department is called because the occupants smell smoke and upon our investigation, find that it is caused by the building's HVAC system. Many buildings have their HVAC units installed on top of their building to hide them from sight. The issue is that the access point to get to the roof is commonly hidden in a corner, in a closet, or can simply blend in with its surroundings. In order to assist firefighters in locating the roof access in a rapid manner, a sign is installed, where the Fire Marshal requires, that meets the following specifications:

- Constructed of aluminum, plastic, or a vinyl decal if being affixed to a flat surface. The material used for the signs can really be any material as long as it is permanent in nature. Laminating a piece of paper printed from a computer will not be accepted.
- Size: The size of the sign and its lettering are not specific in size, due to the many factors that play a part in its visibility. Therefore, as a general rule, the sign must be of an adequate size that it is identifiable and legible from at least 100' for factory and warehouse floors. For other areas, the size must be adequate for the location.
- Design: In factory and warehouse occupancies, the sign must be reflective, so it will catch a firefighter's eye when walking through the area with their flashlight. In all other locations, these types of signs may follow the aesthetic appeal of the building and the design of the other signs within it, as long as they are visible and legible.
- Writing: Shall say "ROOF ACCESS" or some variation of this. When a roof access is kept locked, the sign shall also state "KEY REQUIRED" so that firefighters know that they will need to retrieve the key from the Knox Box.



Fire Alarm Control Panel (FACP) Identification Sign. Fire alarm control panels not located in the main entrance area of a building can be almost impossible to find unless firefighters are directed to its location. However, if a firefighter cannot even see the sign to identify it, then it is as if the sign was not there at all. The following are the sign requirements for this type of sign:

- Construction: For interior mounting, constructed of aluminum, plastic, or a vinyl decal if being affixed to a flat surface. The sign must also be reflective if being mounted in a factory or warehouse area. For exterior mounting, the sign must be constructed of aluminum and must be reflective.
- Size: The size of the sign and its lettering are not specific in size, due to the many factors that play a part in its visibility. Therefore, as a general rule, the sign must be of an adequate size that it is identifiable and legible from at least 100' for the interior of a factory and warehouse floor. When mounted on the exterior of the building, the sign must be legible clearly visible from the fire department access road. In other words, you should be able to see it and read it while driving by. For other interior areas, the size must be adequate for the location.
- Writing: Shall say "FACP" or "F.A.C.P."



Standpipe Identification Sign. Standpipes inside a building are an effective means of allowing firefighters to rapidly deploy fire suppression operations. When a firefighter has to use a standpipe, the building is not only on fire, but the smoke inside the building makes visibility significantly reduced. Therefore, the proper identification of a standpipe is important. When firefighters cannot locate a standpipe, it might as well not even be there. The following are the sign requirements for this type of sign:

- Construction: Inside identification shall be constructed of aluminum, plastic, or a vinyl decal, if being affixed to a flat surface, that is reflective. When a standpipe is not visible when looking down a hallway or corridor, a sign that is mounted perpendicular to the wall shall be installed and shall be located in an area that allows for the sign to be visible when looking down the hallway or corridor. For exterior construction, the sign shall be reflective aluminum.
- Size: The size of the sign and its lettering are not specific in size, due to the many factors that play a part in its visibility. Therefore, as a general rule, the sign must be of an adequate size that it is identifiable and legible from at least 100' for the interior of a factory and warehouse floor. For other interior areas, the size must be adequate for the location. For exterior use, the sign shall be large enough to be visible and legible from the fire department access road.
- Writing: Shall say "STANDPIPE CONNECTION".



Identification Tape Sign. When identifying piping or other items that require a label to be affixed to it, the following requirements shall be met:

- Construction: Vinyl labeling that is red on white or white on red, depending on the color of the piping or other background.
- Size: The size of the label shall be large enough that it can be legible from the standing at ground level.
- Writing: Fire sprinkler system labels on the riser and feeder piping shall say "FIRE PROTECTION WATER" or "FIRE SPRINKLER WATER" and indicate the sprinkler riser designation.



Examples of other approved signs/labels/markers. Shown below are some of the signs that have been approved for use in other buildings and may be approved in others as well:

