



DENVER AMENDMENT PROPOSAL FORM FOR PROPOSALS TO THE 2019 DENVER BUILDING CODE AMENDMENTS AND THE 2021 INTERNATIONAL CODES

DENVER
THE MILE HIGH CITY

2021 CODE DEVELOPMENT CYCLE

Modified April 6, 2022

1) **Name:** Antonio Caro, PE **Date:** August 31, 2021
Email: Antonio.caro@denvergov.org **Representing (organization or self):** Denver FD

2) One proposal per this document is to be provided with clear and concise information.

Is a separate graphic file provided (“X” to answer): Yes or No

3) Highlight the code and acronym that applies to the proposal

<u>Acronym</u>	<u>Code Name</u>	<u>Acronym</u>	<u>Code Name</u>
DBC-AP	Denver Building Code–Administrative Provisions	IPC	International Plumbing Code
IBC	International Building Code	IRC	International Residential Code
IECC	International Energy Conservation Code	IFGC	International Fuel Gas Code
IEBC	International Existing Building Code	IMC	International Mechanical Code
IFC	International Fire Code	DGC	Denver Green Code

AMENDMENT PROPOSAL

Please provide all the following items in your amendment proposal.

Code Sections/Tables/Figures Proposed for Revision:

Instructions: If the proposal is for a new section, indicate (new), otherwise enter applicable code section.
 New

Proposal:

Instructions: Show the proposal using ~~strikeout~~, underline format.

Place “X” next to choice that best defines your proposal: Revision New Text Delete/Substitute Deletion

Section 903.3.12 Pressure reducing valves in high-rise buildings is added as follows:

903.3.12 Pressure reducing valves in high-rise buildings. Where pressure reducing valves are utilized, each sprinklered level shall be provided with an individual pressure reducing valve. ~~are used at the base of riser or manifold locations, they shall incorporate a redundant PRV arrangement in accordance with NFPA 14.~~

Exception: Multiple sprinklered levels may be supplied by a pressure reducing valve on a system riser where all of the following conditions are met.

1. A method to isolate the pressure reducing valves shall be provided for maintenance & repair.
2. To provide redundancy, pressure reducing valves shall be arranged in series so that failure of any single device does not allow downstream pressure in excess of 10 psi (0.7 bar) below the minimum rated pressure of any component within that portion of the system
3. An equally sized bypass around the pressure reducing valves, with normally closed control valves, shall be installed.
4. The pressure reducing valve(s) arrangement shall be installed not more than 7 ft 6 in (2.31 m) above the floor.
5. The pressure reducing valves shall be provided with inlet and outlet pressure gauges.
6. The pressure reducing valves shall be provided with a pressure relief valves of not less than 3/4 in. (20 mm) in accordance with the manufacture’s recommendations.
7. Means shall be provided downstream of all pressure reducing valves for flow tests at sprinkler system demand.
8. The system riser does not supply any fire hose connections.

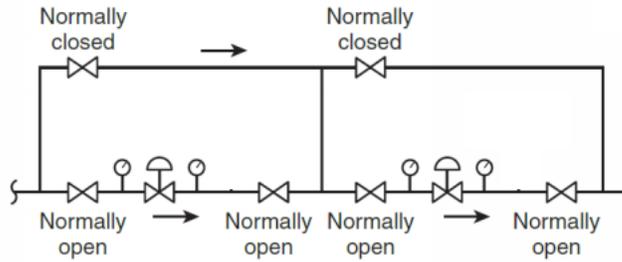


Figure 903.3.12 One example of a master PRV arrangement

Supporting Information (Required):

All proposals must include a written explanation and justification as to how they address physical, environmental, and/or customary characteristics that are specific to the City and County of Denver. The following questions must be answered for a proposal to be considered.

- Purpose: What does your proposal achieve?

This allows IT&M to occur without placing many zones or entire buildings out of service to conduct such scope. If the PRV fails, it allows an alternate route to continue properly protecting the zone/building without the need for incorporating a firewatch condition. This scenario is most applicable to highrise buildings. This is in-line with DFD's approach for firewatch reductions with the intent of reducing operating costs for Building Ownerships & property managers by improving system reliability.

- Reason: Why is your proposal necessary?

The traditional single PRV design method has cost reductions at install but creates challenging situations for Ownerships/Building Management companies through time with much higher cost implications and reduced system reliability (reducing safety to building occupants). DFD has undertaken initiatives to reduce the amount & complexity of firewatches dictated by system impairments due to fire department staffing limitations.

- Substantiation: Why is your proposal valid? (i.e. technical justification)

The outlined approach already exists in NFPA 14 but has yet to be migrated to NFPA 13.

Bibliography and Access to Materials (as needed when substantiating material is associated with the amendment proposal):

Other Regulations Proposed to be Affected

***For proposals to delete content from the 2019 Denver Green Code in conjunction with adding it to other mandatory Denver codes and/or regulations, only.**

Please identify which other mandatory codes or regulations are suggested to be updated (if any) to accept relocated content.

Referenced Standards:

List any new referenced standards that are proposed to be referenced in the code.

Impact:

How will this proposal impact cost and restrictiveness of code? ("X" answer for each item below)

Cost of construction: ___ Increase ___ Decrease x No Impact

Cost of design: ___ Increase ___ Decrease x No Impact

Restrictiveness: ___ Increase ___ Decrease x No Impact

Departmental Impact (City use only):

This amendment proposal increases/decreases/is neutral to the cost of plans review.

This amendment increases/decreases/is neutral to the cost of inspections.

Neutral & Neutral