



DEPARTMENT OF
GENERAL SERVICES

BUREAU OF CAPITAL OUTLAY MANAGEMENT

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BCOM Newsletter

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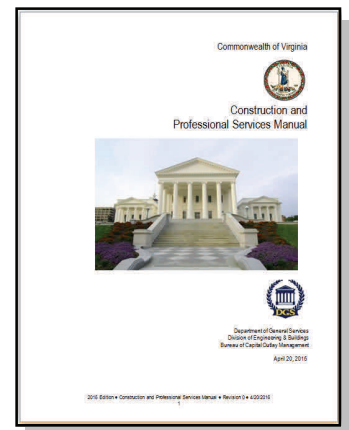
2016 Construction & Professional Services Manual - Rev 0

The 2016 Edition of the **Construction & Professional Services Manual** has been issued with an effective date of April 20, 2016. DEB Notice 042016 provides the formal notification and a summary of the significant revisions. Both documents are available on the BCOM website:

- [2016 CPSM - Rev 0](#)
- [DEB Notice 042016](#)

The new CPSM edition incorporates revisions to a variety of topical areas, including, among others:

- Increased contract limits for certain A/E procurements
- VEES and the High Performance Buildings Act
- Accessible parking spaces
- Assistive listening systems
- Asbestos abatement permitting
- Communications tower permitting
- Project manual front-end documents
- Mandatory requirement for newspaper advertisement of RFPs
- Structural requirements for reroofing



Please refer to the DEB Notice for the specific CPSM section references and for more detailed information regarding these changes. □

CPSM Forms Update

The following CPSM form was recently revised and is available for download:

- [DGS-30-100](#) **A/E Contract Change Order** (Revised 04-16)

Please download Form **DGS-30-000**, [Capital Outlay Forms Master List](#) for a complete listing of the latest version of each CPSM form. All current forms may be downloaded from the [DGS Forms Center](#). If a prior version of a form is required, please contact capout@dgs.virginia.gov. □

Fire Protection Standpipe Design

The Virginia Construction Code (2012) section 905.2, *Installation Standard* (for standpipe systems per NFPA 14), has a confusing exception that deletes the requirement for most remote residual pressures of 100 PSI and 65 PSI.

Sprinkler/standpipe system designers have, in several instances, misunderstood the exception to mean that there is no pressure or flow requirement; therefore, no calculations were deemed necessary or provided. The error has resulted in undersized pipe, changes to installed work and construction delays.

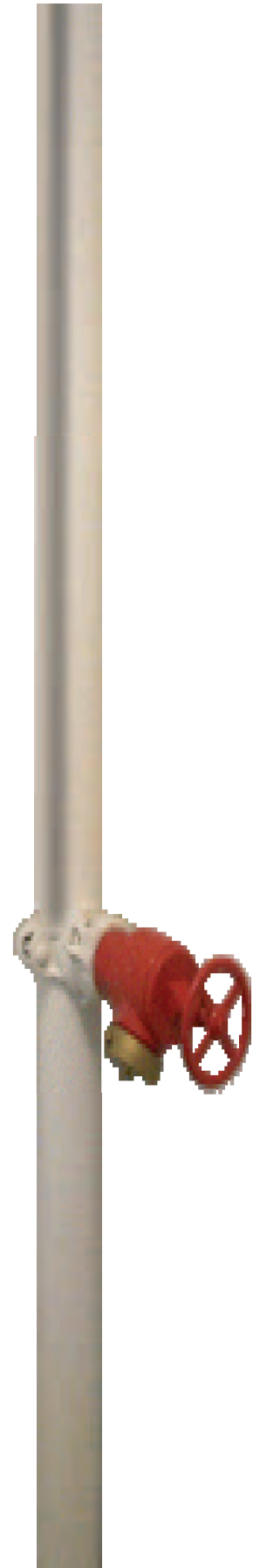
The VCC exception refers to NFPA 14 (2010) 7.8.1, minimum design pressures for hydraulically designed systems, and is intended to allow standpipe designs to reflect actual fire department operations.

Typically, firefighters connect their pumper truck between a city hydrant and the fire department connection (FDC, Siamese) and are ready to pressurize the system prior to hoses being carried to and connected at the fire floor.

Essentially, the VCC exception recognizes that there is no need for a wet standpipe to be pressurized automatically by the building water supply and it allows the wet standpipe to be manually charged by the fire fighters instead. The exception eliminates unnecessary pumps and other means to accommodate an automatic (pressure) wet standpipe system.

Standpipe calculations are to be based on fire pumper service at the fire department connection providing the required flow rate at 150 PSI. Anecdotal reports from fire fighters and operational plans of various departments indicate a reluctance to exceed 150 PSI where pipe systems are assumed to include standard 150 WOG (water, oil, gas) fittings that allow 175 PSI max operating pressure.

A closely related standpipe design issue is the flow rate required. Both class I and III standpipes require 500 GPM (250 GPM each at the two highest connections) at the most remote standpipe. Each additional standpipe requires 250 GPM with a maximum 1000 GPM for fully sprinklered buildings and 1250 GPM max for non-sprinklered buildings. The issue is the capacity of the fire department connection. This is almost always based on the standpipe, rather than the sprinkler, system demand. The fire department connection capacity is based on 250 GPM per 2-1/2" inlet connection. In the case of a 1000 GPM demand, four 2-1/2" inlets will be required at the fire department connection. □



Fire Sprinklers and Shelving With Storage

Understanding and coordinating the requirements of shelving with storage in spaces protected with an automatic fire sprinkler system is a source of much discussion and confusion.

NFPA 13 (2010 Edition) Section 8.6.6.1 requires that pendent and upright sprinkler deflectors to be at least 18" above storage.

NFPA 13 Appendix Section A.8.6.6 clarifies this requirement by indicating that shelving and storage located on or against a wall can extend above the 18" horizontal plane where no sprinklers are located directly above the storage.

When these two Sections are taken together; shelving and storage is not permitted to extend above the 18" horizontal plane below the sprinkler deflector **except where** this shelving and storage is located on or against a wall and where sprinklers are not located directly above the shelving and storage.

The theory behind this application is that a wall will already obstruct sprinkler discharge patterns, so shelving along a wall is not going to make the situation worse. However storage that is too close to a sprinkler pendant could indeed impact the sprinkler discharge pattern, thus the 18 inch clearance requirement.

The next part of this discussion is the classification of NFPA 13 Hazard Occupancy of the space containing storage. The Hazard Occupancy Classification establishes the basis for the fire sprinkler system design. The fire sprinkler system may be required to be designed as a Light Hazard Occupancy Classification, an Ordinary Hazard Classification, or even an Extra Hazard Classification. The Hazard Classification depends upon the combustibility, quantity, and arrangement of the building contents. The Hazard Classification influences system design and installation considerations, such as sprinkler discharge criteria, sprinkler spacing, and water supply requirements.

NFPA 13 views typical library bookshelves with aisles wider than 30 inches approximately 8 feet in height that contain books stored vertically that are held in place in close association with each other as Light Hazard Classification.

NFPA 13 defines Miscellaneous Storage as storage that is less than 12 feet in height, is incidental to another occupancy group and does not exceed 1000 sqft in one area. NFPA 13 establishes the Hazard Classification for Miscellaneous Storage through NFPA Table 13.2.1 based on commodity class, type of storage and storage height. Miscellaneous Storage will typically require an Ordinary 1 Hazard Classification or an Ordinary 2 Hazard Classification.

Establishing the appropriate NFPA 13 Hazard Classifications for the various spaces within the building is the responsibility of the Project's Design Team's Fire Protection Engineer with review and acceptance by the BCOM Fire Safety Reviewer.

For further information, please contact your BCOM representative. □



BCOM Fire Safety Reviewer
Dustin J. Wakefield, P.E.

BCOM welcomes Dustin J. Wakefield to our staff. Dustin is the newest member of the Fire/Safety Review Team. Dustin holds Bachelor's and Master's Degrees in Architectural Engineering, with an emphasis on structural engineering, from the Pennsylvania State University. Dustin's background in structural engineering and project management compliments BCOM's contingent of Fire Safety Reviewers who have diverse backgrounds in general engineering, mechanical engineering, aerospace engineering and architecture.

Dustin's current agency assignments include:

- Virginia State Police (156)
- Virginia Military Institute (211)
- Longwood University (214)
- Jamestown-Yorktown Foundation (425)
- Virginia Department of Transportation (501)
- Rail and Public Transportation (505)
- Metropolitan Washington Airports Authority (MWAA) □

BITS Security Reminder

Agency Access Coordinators (AACs), and not BCOM, are responsible for:

- approving their agency users' access to the BITS system
- approving their users' permissions for processing the various types of CO forms

AACs must notify BCOM BITS Administrators when a user's access should be disabled (for example, if user is terminated, retires, or changes job duties to no longer require BITS access).

To notify BCOM to disable a user's BITS account, the Agency Access Coordinator must submit an updated User Account Request (UAR) form to bits@dgs.virginia.gov. Copies of UAR and AAC forms are available for download from the [BITS page](#) on the BCOM website. □



A/E Contracts and MOUs Reminder

Submit copies of A/E Contracts (i.e., forms CO-3, CO-3.1, or CO-3.2) to BCOM within 10 days after the contract is executed. Include a copy of the associated Memorandum of Understanding (MOU).

For CO-3.1 Contracts, also include a copy of the initial Project Order (CO-3.1a). □