



DEPARTMENT OF  
GENERAL SERVICES

BUREAU OF CAPITAL OUTLAY MANAGEMENT

Serving Government. Serving Virginians.

# BCOM Newsletter

Issue # 8

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## Top 10 Ways to *Expedite* Design Reviews & Inspections

1. Submit complete drawings & specs
2. Get the basics correct
3. Ensure documents are coordinated
4. Consult with BCOM technical staff
5. Use current forms and formats
6. Understand and adhere to CPSM requirements
7. For applicable projects, follow the Pool Process
8. Assure changes during construction are properly approved and communicated
9. Ready the project for substantial completion inspection
10. Provide complete close-out documentation

For more details on the above, [click here](#) to view a brief slideshow on the BCOM FAQ webpage.

## CPSM Forms Update

The following CPSM forms have been added or revised since the last BCOM Newsletter advisory:

- [DGS-30-197 \(CO-18a\) Sole Source Procurement Disclosure Statement](#) (New. 08-15)
- [DGS-30-198 \(CR-2\) Cost Review Questionnaire](#) (Rev. 08-15)

Download Form DGS-30-000, [Capital Outlay Management 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 contact [capout@dgs.virginia.gov](mailto:capout@dgs.virginia.gov).

## Useful Links

[DGS](#)

[DEB](#)

[BCOM](#)

[BITS](#)

[eVA](#)

## Atrium Smoke Control Systems

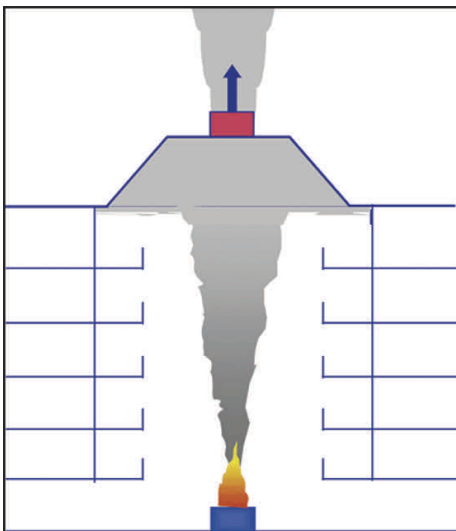
The purpose of an Atrium Smoke Control System is to maintain the environment for the building occupants to safely evacuate through and/or from the Atrium. Smoke is a major cause of deaths during fire events. The Atrium Smoke Control System is intended to keep the smoke layer, resulting from a fire within the Atrium, a minimum of six feet above the highest walking surface for a specific time period to give occupants time to evacuate the Atrium.

The Atrium Smoke Control System is a technically sophisticated integration of many of the building's Architectural, Fire Protection System, and Mechanical System components. The integration of these numerous components to result in a repeatable and reliable system that 'Operates As Intended' is what makes a successful installation and acceptance test challenging.

The University of Mary Washington's new Campus Center features a three story Atrium with a sculptural monumental three story stair.

The components of the Campus Center Atrium Smoke Control System include:

- Two large roof mounted Smoke Exhaust Fans to remove smoke from the top of the atrium,
- Automatic Door Operators that open ten pairs of doors at the Lobby to supply make up air for the fans,
- Automatic Door Operators that close fire rated accordion doors, overhead fire shutters, and Magnetic Door Holders that when released permit swinging fire doors to close. When these doors are closed the 1 hour fire rated separation between the Atrium and the remainder of the building is achieved.



The operation of these components is accomplished in a specific order which is referred to as the "Sequence of Operations".

The Atrium Smoke Control System is activated automatically through the Fire Alarm System upon detection of Smoke or upon flow of the Atrium Fire Sprinkler System. The Fire Alarm System notifies the building occupants to evacuate the building by Visible Alarm (strobes) and the Emergency Voice/Alarm Communications System (voice messaging). The Atrium Smoke Control System also causes the Atrium HVAC systems to be shut down.

The operation of the Smoke Exhaust Fans and operation of the respective Doors of the Atrium can be accomplished manually by the responding fire department via the Fire Fighter's Smoke Control Panel located in the Campus Center's Lobby.

Control System was demonstrated to 'Operate As Intended' on BCOM's first visit to observe the system. To have accomplished this, a well-coordinated and concerted effort by the Agency, the Architect, the Engineers, the Construction Manager, the Mechanical Contractor, the Fire Alarm Contractor, the Electrical Contractor and the Commissioning Agent was required.

Typically multiple tests and adjustments are required before it can be demonstrated that the Fire Alarm System/Atrium Smoke Control System operate per the Sequence of Operations, or 'Operate As Intended'.



### Utility Required Electrical Service Inspection

Most project owners, project managers, and many electricians are surprised when they are required by an electrical utility to provide an inspection report of the user equipment for a new service before the electrical utility will provide the service connection. The requirements for this inspection vary among projects and electrical utilities. This can be confusing and cause coordination issues. A basic understanding of the background may be helpful.

There are 28 electrical utilities in the Commonwealth of Virginia: 3 investor owned, 13 cooperative, and 12 non-jurisdictional. Electrical utilities are exempt from the NEC, and instead follow the National Electrical Safety Code (NESC ANSI-C2), their own directives, and other established publications such as those developed by the Institute of Electrical and Electronics Engineers (IEEE). These electrical utilities exercise jurisdictional authority over all electrical service distribution from the generation of electrical power to the service point of the consumer. Electrical utilities own or lease properties for their own use, but also use easements and right of ways for access to public and private lands where they provide electrical distribution. Electrical utilities have no jurisdiction over any distribution system located after the users service point other than those which impact the electrical utility or are legally required to be addressed by the utility. Some examples where the electrical utilities have jurisdictional authority include: on-site power generation, emergency electrical services, and electric vehicle charging stations.

Whenever a service is connected, upgraded, or in other ways modified, the upstream utility feed is impacted and may cause disruption to the utility and adversely impact their ability to provide electrical services. Since the authority of the electrical utility does not extend past the service point, they likewise have no means to ensure that the new service characteristics will not adversely impact the utility. Due to this, the utility may, at their discretion, require third-party inspections, letters of acceptability, or documented conditions of the installation to assure that the service is acceptable and meets their requirements prior to providing the connection.

The best way to ensure that electrical utility requirements do not impact your project is by planning ahead and preparing.

The electrical engineer shall confirm all requirements with the utility in the design phase, and the contractor shall engage the utility as early as is possible during the construction phase to account for the following possible requirements:

- ✓ Third-party inspection of new and modified services
- ✓ Time in the project critical path for the contractor, third-party inspector, and for the utility to coordinate the new service as required
- ✓ Cost of the required inspection
- ✓ Coordination and release of account information by the owner - as utilities cannot provide information to a third party without prior approval of the owner.

Inspection considerations:

- ✓ Use a third-party inspector not associated with the owner or contractor
- ✓ Assure that the inspector is familiar with the requirements of the utility
- ✓ Require that the inspector provide written check lists, approved by the utility, prior to installation of electrical service equipment to the owner and electrical contractor



While these inspections are difficult to predict, this information and suggestions can better prepare you when you encounter this task.

## Schematic Cost Reports for Pool Projects

Cost reviews for Pool Projects occur at the following phases:

- Capital Budget Request (CBR) Phase.
- Schematic Design Phase.
- Preliminary Design Phase (AKA “The Funding Phase”).

As projects progress to the next phase, the level of accuracy of the associated cost estimates generally increase.

A topic in BCOM Newsletter #3 was *Why Schematic Cost Reviews are Important*. This article will focus on the **Schematic Cost Report** and what to do with the information it provides.

The Schematic Cost Report for Pool Projects is usually two pages long. The first page outlines the agency’s requested budget and BCOM’s recommended project budget based upon the results of the cost review. The second page provides additional detail identifying any differences based upon the Uniformat categories and standard categories utilized by the Commonwealth of Virginia capital outlay process. The report further discusses the items that could be contributing to any differences and offers suggestions for resolving any differences.

**What does it mean if the amount recommended by BCOM for a Pool Project is more (or less) than the amount requested by the agency?**

If BCOM’s recommended amount is more than the amount requested by the agency, is that a green light to add additional features or higher grade finishes to the project? No. The most likely reason for a higher recommended amount is differences in estimates. Projects should be designed to the program with budget in mind. The BCOM estimate may be identifying areas that are currently underestimated or items that may not be included in the current estimate that will be required to complete the project or fully meet the program. If the program is met and the project is under budget, that’s great. Saving public funds is a good thing!

**What if BCOM’s recommended amount is lower than the amount identified by the agency?** This may be an indication that one or more of the following conditions exist:

- The design exceeds the project’s target “scope” (i.e., gross area).
- The design exceeds the appropriate “extent” (i.e., all of other project requirements and features that constitute the broader definition of scope apart from square footage).

BCOM’s cost recommendation considers the program and intent of the project. The amounts recommended reflect a balance between design and cost.

Options for over-budget projects are as follows:

- Explore cost saving solutions through VE.
- Reduce the extent of the project.
- Reduce the scope of the project.

If none of the above options offer a solution, the agency may need to identify additional sources of funding for the project.

The goal of the Schematic Report is to give agencies early feedback about the BCOM’s understanding of the project costs so appropriate steps can be taken as the Agency moves to the Preliminary phase to address possible cost over-runs, funding shortfalls, or to discuss the project features with BCOM to ensure that the project scope and constraints are fully understood by all.

For additional information, please contact the [BCOM Cost Reviewer assigned to your agency](#).

