DEPARTMENT OF GENERAL SERVICES
BUREAU OF CAPITAL OUTLAY MANAGEMENT
Serving Government. Serving Virginians.

BCOM Newsletter

Issue # 17

May 2016

In this Issue:

BCOM Organizational Changes

Les Harcum, RA, retired from the Bureau effective May 31, 2016. Les, a graduate of Virginia Tech's College of Architecture, worked for several private architectural firms in Richmond prior to his employment with the Commonwealth. Les originally began his State career in the Maintenance Review Section of BCOM, and subsequently held positions with the Bureau of Facilities Management and the Department of Conservation and Recreation, before becoming an Architectural/Lead Reviewer with BCOM. Les advanced to the role of Architectural Review Group Supervisor, and until recently also supervised the Fire/Safety Reviewers. Les' expertise and knowledge will be missed.

Les' agencies have been reassigned as follows:

136 – Virginia Information Technologies Agency – Anne Hooker

161 – Department of Taxation – Anne Hooker

181 – Department of Labor and Industry – Matt Duerksen

191 – Virginia Workers Compensation Commission – Matt Duerksen

206 – VCU Health System – Anne Hooker

238 – Virginia Museum of Fine Arts – Mary Hom

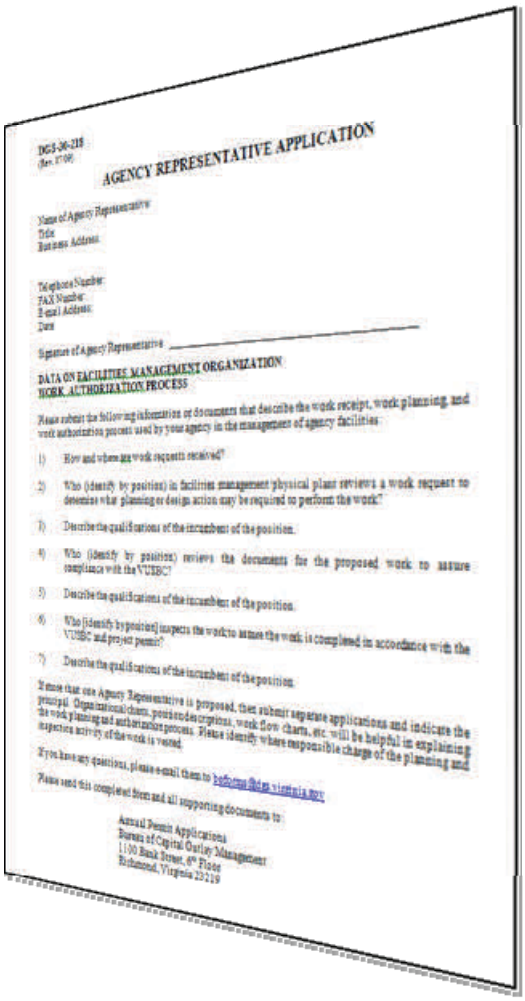
799 – Department of Corrections – Matt Duerksen

841 – Department of Aviation – Matt Duerksen

938 – New College Institute – Mary Hom

Annual Permits for Construction

Annual Permits for Construction are issued by the State Building Official, at the State Building Official's sole discretion, to Agency Representatives in accord with the Virginia Construction Code Section 110.2, *Types of Permits*.


DGS-30-218

AGENCY REPRESENTATIVE APPLICATION

Name of Agency Representative
Title
Business Address

Telephone Number
FAX Number
E-mail Address
Date

Signature of Agency Representative

DATA ON FACILITIES MANAGEMENT ORGANIZATION
WORK AUTHORIZATION PROCESS

Please submit the following information or documents that describe the work receipt, work planning, and work authorization process used by your agency in the management of agency facilities:

1) How and where are work requests received?
2) Who (identify by position) in facilities management physical plant reviews a work request to determine what planning or design action may be required to perform the work?
3) Describe the qualifications of the incumbent of the position.
4) Who (identify by position) reviews the documents for the proposed work to assure compliance with the VUSBC?
5) Describe the qualifications of the incumbent of the position.
6) Who (identify by position) inspects the work to assure the work is completed in accordance with the VUSBC and project permit?
7) Describe the qualifications of the incumbent of the position.

In case that one Agency Representative is proposed, then submit separate applications and indicate the principal. Organizational charts, process descriptions, work flow charts, etc. will be helpful in explaining the work planning and authorization process. Please identify where responsible charge of the planning and inspection activity of the work is vested.

If you have any questions, please e-mail them to buildingbureau@dgs.virginia.gov

Please send this completed form and all supporting documents to:

Annual Permit Applications
Bureau of Capital Outlay Management
1100 Bank Street, 6th Floor
Richmond, Virginia 23219

To receive unrestricted authority, an Agency Representative applicant must be either a registered architect or professional engineer in the Commonwealth of Virginia. Agency Representative applicants who are not registered architects or professional engineers may apply, but must demonstrate knowledge of building construction, building design, experience in building design, and a current knowledge of the Virginia Uniform Statewide Building Code. Agencies are typically limited to one Agency Representative. Alternate Agency Representatives may be added, but report to the primary Agency Representative. The Agency Representative Application (DGS-30-218) is available on the DGS Forms Center.

It's important to note that Agency Representatives are not the Building Official. Their authority is limited, as defined by the *Building Permit Policy for Construction – State Owned Buildings & Structures* (CPSM Appendix P). Project Permits are issued under Annual Permit authority. This is to distinguish from Building Permits issued by the State Building Official.

A record of all Project Permits is to be kept be the Agency Representative. Items to record include: project start & end dates, location of work, a brief characterization of work, project permit number, Project Manager name, inspections performed, etc.

During January, records of the prior year's projects are compiled and submitted as an Annual Permit Activity Report to capout@dgs.virginia.gov. BCOM reviews the reports and determines whether the Annual Permit will be renewed. Random audits of the Annual Permit procedures may be performed. Work performed under the Annual Permit is subject to inspection by the Building Official at the Building Official's discretion. Deficiencies noted during the Building Official's inspection shall be corrected to the Building Official's satisfaction.

If unclear on whether a particular scope of work should be performed under a Building Permit or a Project Permit, contact your lead reviewer. The lead reviewers for each agency are listed on the BCOM website.

The Annual Permit process was developed to allow Agencies to permit specific small projects in an efficient manner. If you have any comments to improve Annual Permit procedures, email Steven Matsko at steven.matsko@dgs.virginia.gov ❑

Are We Ready for a Substantial Completion Inspection ?

Are we ready for a Substantial Completion Inspection? This is a key question for Agency Project Managers, Design Consultants and Construction Superintendents. To answer this question, consider the many types of questions the BCOM team would ask themselves during the inspection.

What is Substantial Completion? What is Beneficial Occupancy?

Substantial Completion is the date on which the project (or a specific part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the project (or the specific part thereof) can be utilized by the Owner for the purpose for which it is intended. The Owner may request approval from the Building Official for state buildings to take Beneficial Occupancy at this time or may choose to wait until final completion to occupy. ***Beneficial Occupancy*** is the condition after Substantial Completion but prior to Final Completion of the project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use.

To approve Beneficial Occupancy, the BCOM inspection team looks at the entire project, with special focus on:

- Means of Egress circulation (lobbies, pre-function spaces, waiting areas, corridors, hallways, stairs, elevators, escalators, exit signs to building rooms /spaces and to building exit egress for exterior access towards the public way.
- Toilet rooms and other service spaces.
- Functional rooms/spaces that house the main and secondary building functions (e.g., classrooms, offices, laboratory spaces, etc.).
- Installation and operation of HVAC and plumbing systems.
- Installation of electrical equipment.
- Fire alarm appliance placement.
- Building construction (fire barriers, fire walls, penetrations, etc.).
- Egress lighting.

Building Interior

First impressions when observing interior spaces are important. Are the spaces relatively clean and without construction equipment, materials and debris in corridors and rooms, especially those that could affect safe egress? Are the finishes - floors, bases, wainscots, partitions, windows, doors, cased openings, walls cornices and ceiling systems - all in-place? Do the doors have necessary and code compliant hardware installed? Do fire doors and frames bear the required labels? Are finishes complete, with only minor touch-ups required? Are thresholds and floor transition strips installed? Are the ceiling system tiles/panels, lighting fixtures, HVAC, sprinkler heads, exit lights, fire alarms, signs and other items affixed to the ceiling in-place and complete? Are required functional and code/accessibility-required furnishings and equipment installed and fully functioning? Are exit signs present? Do they properly lead to exits from a floor and from the building? Are spaces large enough to require more than one exit? Are occupancy signs posted inside of entrances to assembly spaces? Are fire ratings posted for partitions, wall and floor/ceiling assemblies? Are through-penetrations of these items fire-sealed as required? Are panels, switches, disconnects and other equipment items properly labeled or tagged? Is there sufficient clear space above electrical panels to the floor structure above? Is sufficient clear space provided in front of electrical panels and equipment per the code and for servicing requirements?

Are We Ready for a Substantial Completion Inspection ?

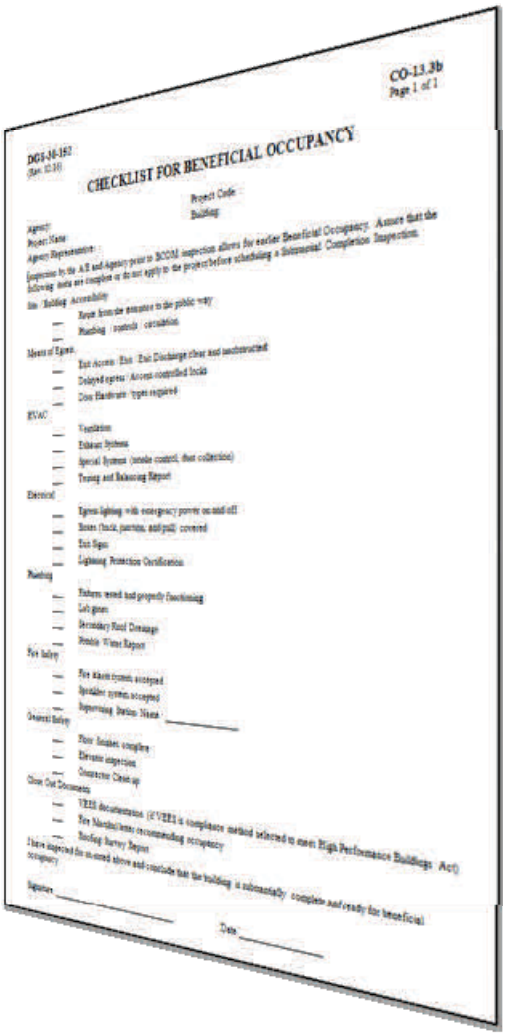
(continued)

Roof Systems and Accessories

Is roof access provided as required? Are roof and roof-top items complete and without visible defects? Are roof top items securely flashed and fastened to roof structures? Are roofs relatively dry, clean and free from construction items that may damage the roof? Are roof walk pads or other access for equipment service provided? Are roof guards provided where required at roof edges near serviceable equipment and around roof hatches? Are gravel stops of sufficient height? Are roof emergency drains and scuppers in the proper locations and properly installed? Are gutter and downspout systems securely fastened and complete to a drain receptor or splash block below?

Building Exterior

Upon completing the interior inspection journey, it is necessary to exit the building towards the public way. Are automatic dusk-to-dawn lights present at building exits? Do exit doors swing in the required direction? Are surfaces present and appropriate for pedestrian and vehicular traffic to reach the public way or an appropriate distance from the exterior of the building to await rescue assistance? Are the walks, stairs, ramps, lifts and drives present? Are the conditions of these items safe (e.g., do barriers provide separation from on-going construction, are the paths not slippery, not subject to being under water, etc.)? Are compliant edge protection, guards and handrails present where required? Are exterior stair coverings and entry canopies/porches provided where required, as indicated in the construction documents? Do gates promote site egress to a street or open land connecting to a drive or street? Are nearby signed handicap parking places available, with required paved cross slopes present? From a building walk-around, do the walls, windows, doors, required light fixtures and other items appear well-installed and weather-tight. Do any exterior building items require adjustment, cleaning, further work or replacement?


CO-13.3b

CHECKLIST FOR BENEFICIAL OCCUPANCY

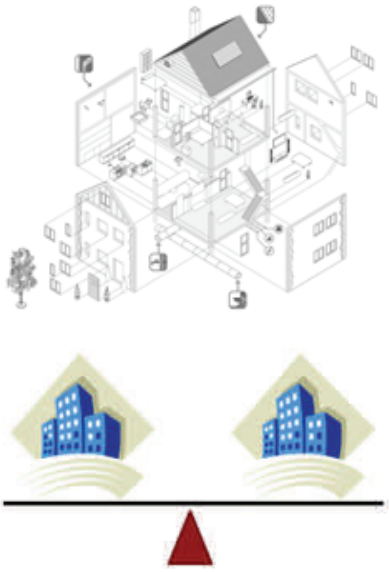
General

When is first occupancy necessary? What are safety factors to consider? Are there mitigating actions that can be taken to provide temporary / partial occupancy? Are separation barriers necessary from construction operations or other exterior dangers?

Documentation

Have complete forms and required reports been submitted to boforms@dgs.virginia.gov to allow the CO-13.5, CO-13.4, CO-13.3 or CO-13.3TMP forms to be processed in BITS? (Reports usually applicable include: State Fire Marshal's Inspection Report & Occupancy Opinion, Test & Balance Summary Report, Elevator Inspection Report and Certificates and Potable Water Report – as applicable to the project.) ❑

Methods of Construction Cost Analysis



Construction cost analysis for capital projects may utilize the **components** method or the **program** method.

Analyzing the construction cost of a capital project based on **components** involves quantifying all of the elements comprising the project's design (e.g., structure, HVAC, sitework, etc.), summing the associated element costs to produce a total construction cost.

Analyzing the construction cost of a capital project based on **program** involves quantifying all of the program spaces comprising the project's design (e.g., classroom, lab, office, etc.), identifying the costs and apportionment of each type of space to producing a total construction cost. This method, also referred to as the "Comps" (comparable projects) Method, requires adjustments for any unique project requirements, such as: unsuitable soils, unusual building requirements, and project phasing.

The BCOM cost reviewers utilize both methods when analyzing construction costs but favors the Program Method in the early stages of design and the Components Method in the later stages. Analyzing cost based on the Components Method is ideal after the project's design has been finalized. While it will show that a component's estimated unit cost is in line with industry standards, it will not show if the component has been over utilized by the designer. For example, a designer may specify six (6) different exterior skin types with the premium skin specified for all parts of the exterior when four (4) premium skin types applied to just the public sides would capture the desired aesthetic. In this example, the Components Method might show that the unit costs of each skin is in-line with industry standards but only the Program Method would reveal that overall the cost of the shell is higher than comparable projects.

With Capital Budget Request (CBR) season upon us, agencies may wish to re-familiarize themselves with the **CR-3 Form**. This form was developed by BCOM to assist agencies in developing CBRs. The CR-3 helps agencies identify their project's construction cost either based on components, with it's "OME" (order-of-magnitude estimate) tabs, or based on program with its "Comps" tab. The Comps tab may also be copied to identify the cost of each programmatic part of a project being planned. For example, if the programmatic breakdown of a project is classroom 50%, office 20%, and lab 30% of the new building, an agency may copy the Comps tab for each programmatic part of the building. For example:

Tab 1 – Classroom Buildings:	$298/sf x 50%	Aggregate Unit Cost = $296/sf
Tab 2 – Office Buildings:	$232/sf x 20%	
Tab 3 – Lab Buildings:	$334/sf x 30%	

For more information on using the CR-3, see BCOM Newsletter #5. Other useful resources for planning your project include the Virginia Building Construction Cost Database (VBCCD) and asking your BCOM Cost Reviewer to query BITS for a particular building type over a certain date range to produce a list of comps. ❑