



Division of Engineering & Buildings

DEB Newsletter

#81

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2024

2023 CPSM Issued December 15, 2023

The 2023 edition of the [Construction and Professional Services Manual](#) (Rev. 0) was issued on December 15, 2023. A PDF of the current [CPSM](#) edition along with [DEB Notice 121523](#) summarizing the significant changes from the prior Manual version are both available on the DEB website.

CPSM changes were made to reflect recent legislative changes, updated legal interpretations and administration initiatives, and to improve communication and business operations. Because some changes are a result of changes to the *Code of Virginia*, these changes require immediate compliance. Therefore, a CPSM revision is effective on the date issued for all projects that do not have an approved CO-6 or working drawings approved by DEB. See CPSM Section 3.2.5.1 for how these changes impact A/E services and contracts.

Some of the more notable changes to the CPSM are summarized in this article. Building Commissioning Systems will be discussed in more detail in a separate newsletter article.

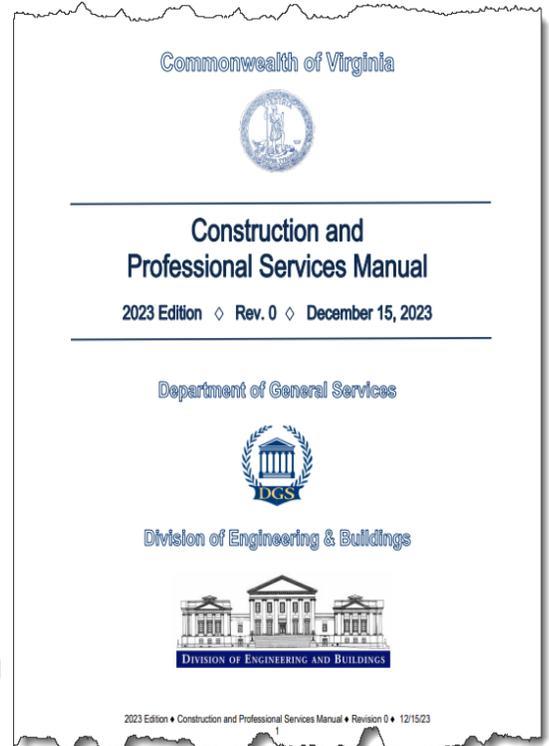
Terminology for Individuals with Disabilities

As a result of legislative changes to the definition of “Persons with physical disabilities”, terms such as handicap and similar variations have been replaced with disability or accessibility.

Construction and Professional Services Manual – 2023 for State Public Bodies

To clarify applicability of specific CPSM requirements for Authorities and Tier 3 Institutions of Higher Education that have a Memorandum of Agreement with DEB for Building Official services, the *Construction and Professional Services Manual - 2023 for State Public Bodies* has been defined.

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Update to Baby Changing Facilities

As a result of a study commissioned by the Secretary of Administration, the requirement to provide baby changing facilities in both existing and new state-owned or leased buildings was added in the 2020 edition of the CPSM with a requirement for agencies to develop and execute a comprehensive plan for complying with this legislation in existing buildings by July 1, 2023. The 2023 CPSM has been updated to require renovations of existing buildings to include installation of baby changing facilities in accord with the agency's comprehensive plan.

Electronic Submission of Approved Shop Drawings

DEB has transitioned to issuing Approved Shop Drawings electronically; therefore, space for the State Building Official's approval stamp is required to be provided on each drawing and also on the cover of the shop drawing Product Data in accord with Appendix S.

Industrialized Buildings

Because the design of industrialized buildings is reviewed and construction of industrialized buildings is inspected by third-party Compliance Assurance Agencies (CAA) approved by DHCD's State Building Codes Office (SBCO), the industrialized building permit issued by DEB (CO-17IND) applies only to the installation (e.g., site work, foundation, and accessibility to the building,) utilities, and utility connections of the industrialized building delivered to the site. Changes to any component of the industrialized building regulated by the VCC after the Virginia Registration Seal is applied by the CAA requires a separate building permit (CO-17) issued by the State Building Official.

Towers

To clearly describe permitting requirements for towers, equipment added to an existing tower, and addition of buildings or structures to an existing tower site, revisions have been made to 2023 CPSM Chapter 4. Submission of the [Statement of Special Inspections & Structural Observations](#) form and inspection & permit closeout requirements are described. Additionally, clarification of AARB review and approval required for various project types prior to submission to DEB for an Application for Permit (CO-17TWR) has been provided.

Existing Building without a Certificate of Use and Occupancy Issued by the State Building Official

To provide agencies with specific options for demonstrating code compliance of an existing building in order to obtain a Certificate of Use and Occupancy issued by the State Building Official, CPSM section 4.19.3.8 has been added.

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To subscribe, visit the self service [DEB Newsletter Subscription](#) webpage.

Violations of the Prevailing Wage Payment Requirements

To facilitate submission of violations of the prevailing wage payment requirements to the proper agency, CPSM Section 7.0.1.3 has been modified to include Virginia Department of Labor and Industry contact information.

Appendix S

Appendix S *DEB Electronic Document Review (EDR) Process Document Submittal Requirements* has been further refined to address electronic permit documents, addenda, shop drawings, and those drawings identified as “For Reference Only” and identifies the appropriate BITS upload designations for approved documents that are being submitted for State Building Official stamp and signature.



Code Requirements for Functional Performance Testing and Commissioning of Building Systems

Commissioning is a process that verifies and documents that building systems are planned, designed, installed, tested, operated, and maintained to meet the owner's project requirements. Functional performance testing is an integral part of the commissioning process and is performed to ensure that building systems meet the intended design performance. In addition to the many benefits of testing and commissioning of building systems, there are also code requirements for these processes. This article summarizes the requirements for functional performance testing and commissioning of building systems.

The 2021 Virginia Energy Conservation Code (VECC) provisions for functional performance testing and commissioning of building systems are found in Section C408 *Maintenance Information and System Commissioning*. This section is limited to requiring commissioning of mechanical systems and service water-heating systems when the total mechanical equipment cooling capacity is 40 tons or greater or when the combined capacity of the service water-heating and space-heating systems is 600 MBH or greater. There is an exception for commissioning of systems that serve individual dwelling units and sleeping units. Section C408 of the VECC also requires functional testing of automatic lighting controls.

ASHRAE 90.1 is an alternate compliance path for the VECC. The provisions for functional performance testing and commissioning in the 2019 edition of ASHRAE 90.1 have significantly increased from previous versions. Section 4.2.5.1 *Building Systems Verification and Testing Requirements* requires verification or functional performance testing of building systems, controls, and the building envelope. Section 4.2.5.2 *Building Commissioning Requirements* requires commissioning of building systems when the conditioned space work area is 10,000 square feet or greater or when the combined capacity of the heating, cooling, and service hot-water systems is 960 MBH or greater. The requirements include commissioning of the energy performance of the building envelope and MEP systems. There are exceptions for commissioning of projects that use the Simplified Approach Option for HVAC Systems and for dwelling units and nonrefrigerated warehouses. Sections 4.2.5.1.1 and 4.2.5.2.1 require the verification, testing, and commissioning work to be incorporated into the construction documents and requires a review of the documents by the commissioning and testing providers prior to building permit application and issuance. Also, projects that elect to follow the Section 11 *Energy Cost Budget Method* or Appendix G *Performance Rating Method* compliance paths must comply with the verification, testing, and commissioning requirements of Section 4.2.5 *Verification, Testing, and Commissioning*.

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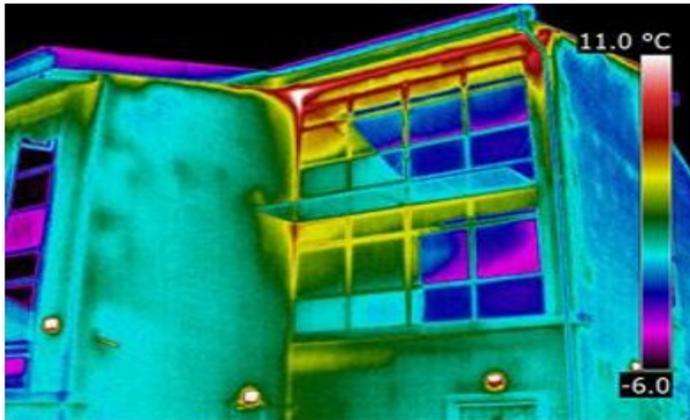
The High Performance Buildings Act is applicable to certain projects. Projects that choose to follow the Virginia Energy Conservation and Environmental Standards (VEES) path for compliance shall comply with the functional performance testing and commissioning provisions included in Chapter 10 *Construction and Plans for Operation* of the IgCC as amended by CPSM Appendix V VEES. Chapter 10 requires functional performance testing of building systems that exceed certain capacities and requires commissioning for building systems when the project is greater than 10,000 square feet in gross floor area.



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Thermal imaging and blower door testing are tools used for commissioning of the building enclosure.

CPSM Section 4.21 Building Systems Commissioning requires commissioning on projects that may not be identified by the VECC. The policy is applicable to state owned buildings and requires commissioning for building systems when the new construction project or renovation project is greater than 10,000 square feet in gross floor area.

A comparison of the commissioning provisions in the 2021 VECC, ASHRAE 90.1-2019, 2018 IgCC, and CPSM Section 4.21 shows that the VECC has the least stringent requirements because it only mandates commissioning for mechanical and service water-heating systems. The commissioning provisions of ASHRAE 90.1-2019 are the most stringent. In addition to the 10,000 square feet threshold, when the combined capacity of the heating, cooling, and service hot-water systems exceeds the capacity listed in the standard, commissioning is required for all systems and equipment for which the provisions of the standard apply, including the building envelope. The commissioning provisions of the 2018 IgCC and the CPSM are closely aligned in that they both have the same threshold for requiring commissioning for projects that are greater than 10,000 square feet in gross floor area, and both are more stringent than the 2021 VECC since they require commissioning of other building systems in addition to mechanical systems.

Discussions regarding the functional performance testing and commissioning process for building systems shall be discussed at the DEB Pre-design Meeting. It's very important in the Schematic Design and the Preliminary Design phases of the project to determine the requirements for functional performance testing or commissioning of building systems so that providers can be retained to perform design phase activities and requirements are incorporated in the construction documents.

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Marc Edwards and Brandi Claxton Join DEB



Marc Edwards is a Registered Architect who has recently joined the DEB team as a State Review Architect. Marc earned his Bachelor's of Architecture degree from Virginia Polytechnic Institute and State University (Virginia Tech), and has over 20 years of experience in design, construction administration, and project management.

Most recently, Marc worked with Dwell Design Studio designing mixed use and multi-family facilities. Please refer to the DEB website for the list of agencies that Marc is now supporting as DEB Lead Reviewer.



Brandi Claxton is a Business Operations Specialist who has recently joined the DEB team. Brandi earned her Bachelor's of Science degree in Information Systems with a Minor in Information Assurance from Liberty University. She also has an Associates degree from Colorado Technical University in General Studies. Brandi has over 11 years of experience in non-emergency transportation management and 10 years experience in healthcare insurance.

VCCO Updates

The following individuals recently passed the Virginia Construction Contracting Officer (VCCO) certification examination:

- George "Nate" Jellerson - Virginia Department of Transportation
- Tyler Linkenhoker - Virginia Polytechnic Institute & State University
- Barbara Little - Jamestown-Yorktown Foundation
- Angela Bland - MCPS
- Barry Briere - Department of Aviation
- Paul Shope - Virginia Museum of Fine Arts
- LaChelle Elliott - Norfolk State University

Virginia Construction Contracting Officers are state and local government employees who have completed the necessary training and successfully passed a multi-part examination focused on state procurement law, policy and procedures. VCCOs perform several key functions in delivering projects including the procurement of professional services; the receipt, opening and review of bids; and in some cases the approval of CO-8 forms for recommending the award of construction contracts.

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DEB Notices

The following DEB Notices were issued between December 2023 and January 2024:

[121523](#) - 2023 - Edition Construction & Professional Services Manual - Revision 0

The purpose of this notice is to announce the issuance of Revision 0 of the 2023 Edition of the Construction and Professional Services Manual (CPSM) and to summarize the changes which have been incorporated since Revision 1 of the 2022 Edition was issued on 02-14-23.

[011824](#) - Applicable Building Code for State-Owned Buildings and Structures

Effective January 18, 2024, the current applicable building code is the [Virginia Uniform Statewide Building Code, 2021 Edition \(2021 VUSBC\)](#). Refer to this DEB Notice for information as to when the 2021 VUSBC shall be applied and when the 2018 VUSBC may be applied.



Employment Opportunities

Looking for an exceptional career opportunity? Consider joining the DEB team here in Richmond. Our employees enjoy a comprehensive benefits package, flexible work schedules with teleworking potential, and the chance to be involved in a wide variety of projects all across the Commonwealth. Come and make a difference with us! See below for current opportunities:

[Capital Outlay Program Manager - EE061](#)

The Department of General Services, Division of Engineering and Buildings is seeking a qualified Capital Outlay Program Manager. As an experienced construction professional, the Capital Outlay Program Manager exercises their knowledge, skills, and abilities to set policies and provide guidance to agencies and institutions of higher education across the Commonwealth on project budgets, procurement, and contracting methodologies for a wide variety of project types and sizes. In addition to providing specific project guidance, the Capital Outlay Program Manager plays a critical role in the overall management of the Commonwealth's capital programs through tracking, forecasting, and reporting regarding the overall status and potential future needs for capital funding.

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State Review Mechanical Engineer - EE011

We are seeking a qualified licensed Engineer to perform tasks related to Mechanical Engineering Review of building construction plans and specifications and inspection of construction. As experienced design professionals, State Review Architect/Engineers exercise their knowledge, skills, and abilities to improve the design of large and small public institutional and academic structures throughout the Commonwealth. This position ensures building code compliance, best practices for design development, construction detailing, and the proper use of public funds are addressed through reviews, comments, and collaboration in meetings. In addition, unique alternative technical design solutions are researched, evaluated, and accepted or rejected. Field work provides the opportunity to travel throughout the Commonwealth and observe and inspect construction at all stages and solve problems in the field.

State Review Architect - EE059

DEB is seeking a qualified licensed Architect to perform all tasks related to Architectural Review of building construction plans and specifications and inspection of construction. As experienced design professionals, State Review Architects exercise their knowledge, skills, and abilities to improve the design of large and small public institutional and academic structures throughout the Commonwealth. In addition to ensuring building code compliance, best practices for design development, construction detailing, and the proper use of public funds are addressed through reviews, comments, and collaboration in meetings. Unique alternative technical design solutions are researched, evaluated, and accepted or rejected. Field work provides the opportunity to travel throughout the Commonwealth and observe and inspect construction at all stages and solve problems in the field. These professional activities occur in a collaborative work environment that encourages a healthy work-life balance, flexible hours, a consistent workload, and up to two days of telework per week with a competitive salary and excellent benefits.

For more information check the [DGS Job opportunities](https://www.jobs.virginia.gov) on Jobs.Virginia.gov



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