



**VIRGINIA DEPARTMENT OF HOUSING
AND COMMUNITY DEVELOPMENT**



Partners for Better Communities ¹

In-Building Emergency Communications Study Group

December 1, 2021 Meeting

2021 Code Development Cycle



Cindy Davis, Deputy Director of Building and Fire Regulations

Jeff Brown, State Building Codes Office Director

Richard Potts, Code Development and Technical Support Administrator

Paul Messplay, Code & Regulation Specialist

Florin Moldovan, Code & Regulation Specialist

Study Group members



- Jamie Wilks, VBCOA
- Jonah Margarella, AIA-VA
- Gerry Maiataco, VFPA
- Tread Willis, IAEI-VA
- VFCA
- Jay Davis, VDFP
- Jim Crozier, VACO
- Dwayne Tuggle, VML
- Steve Shapiro, AOBA
- Dana Buchwald, Backhaul Engineering
- Debbie Messmer, VDEM
- Patrick Green, VSP
- Troy Knapp, DGS
- Tammy Breski, DHCD
- Robert Melvin, VRLTA
- Jodi Roth, VRF

2021 code development cycle (tentative dates)



October 1st cdpVA was opened for submission on code change proposals for the 2021 Code Development Cycle

November 2021: Notices of Intended Regulatory Action (NOIRAs) Published

December 2021: Study Groups begin meeting

February 2022: Sub-Workgroups begin meeting

March-June 2022: Stakeholder Workgroup meetings

September 2022: BHCD meets to consider proposals

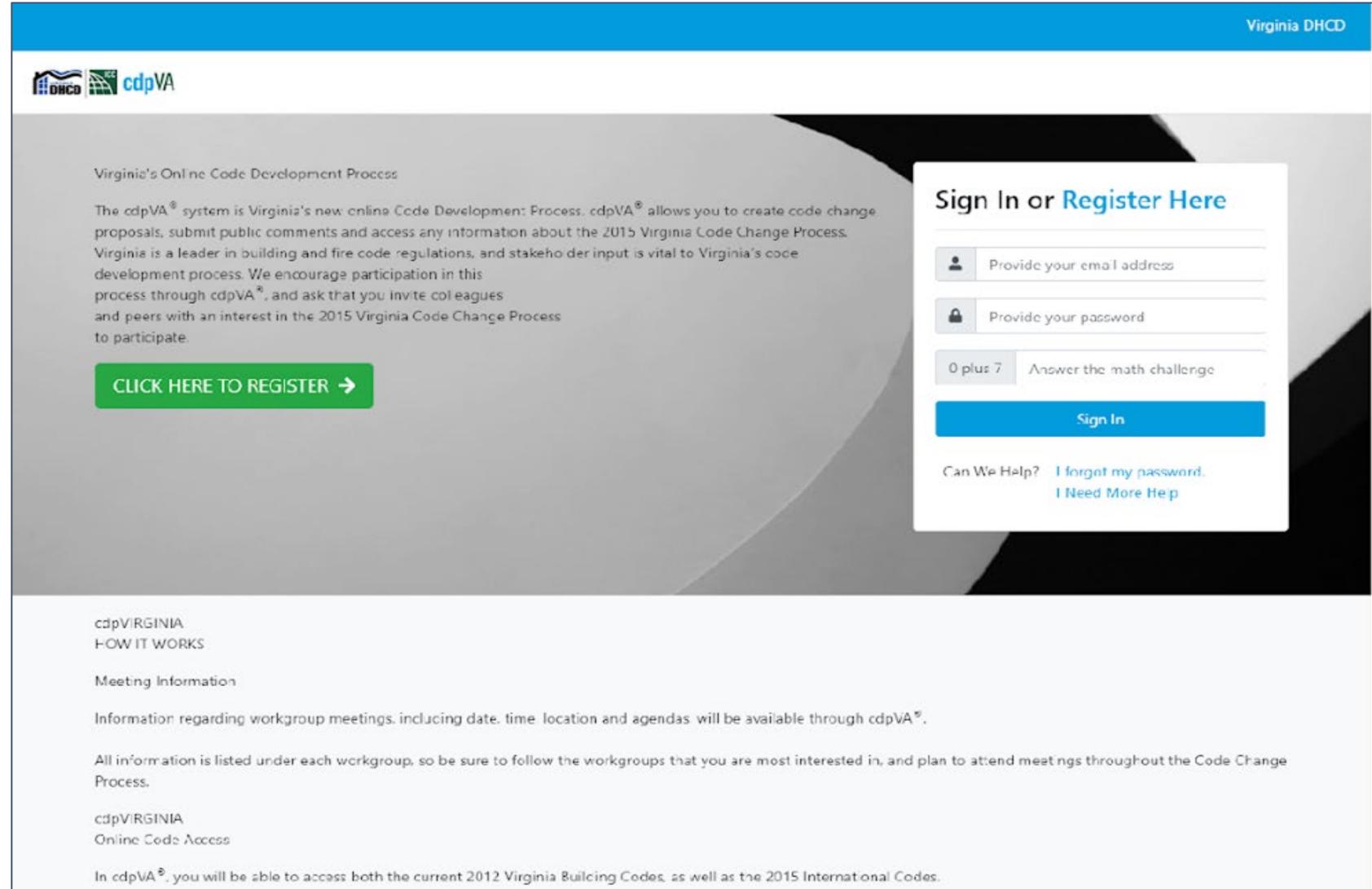
December 2022: BHCD considers proposed regulations

Fall/Winter 2023 = 2021 Virginia Codes Effective (Tentative)



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Virginia's online code development System (cdpVA)



Virginia DHCD

Virginia's Online Code Development Process

The cdpVA[®] system is Virginia's new online Code Development Process. cdpVA[®] allows you to create code change proposals, submit public comments and access any information about the 2015 Virginia Code Change Process. Virginia is a leader in building and fire code regulations, and stakeholder input is vital to Virginia's code development process. We encourage participation in this process through cdpVA[®], and ask that you invite colleagues and peers with an interest in the 2015 Virginia Code Change Process to participate.

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HOW IT WORKS

Meeting Information

Information regarding workgroup meetings, including date, time, location and agendas, will be available through cdpVA[®].

All information is listed under each workgroup, so be sure to follow the workgroups that you are most interested in, and plan to attend meetings throughout the Code Change Process.

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Online Code Access

In cdpVA[®], you will be able to access both the current 2012 Virginia Building Codes, as well as the 2015 International Codes.

- Study specific topics that require additional review and discussion
- Identify areas of consensus and disagreement
- Determine if code change proposals or other solutions are appropriate
- May review proposals, provide analysis, make recommendations, and/or develop code change proposals
- Proposals and recommendations of Study Groups are reviewed by the General Workgroups prior to BHCD consideration

- Review all code change proposals within their subject topics, prior to the proposals being considered by the General Workgroups
- Make recommendations on each proposal, including negotiating compromises where appropriate
- May also develop new code change proposals, or support proposals submitted by others by joining the proposal as a proponent

- All meetings are open to attendance and participation by anyone
- Review and discuss all submitted code change proposals, including all proposals and recommendations from Study Groups and Sub-Workgroups
- A workgroup recommendation is determined for each proposal and the recommendation is provided to the Board of Housing and Community Development
- Workgroup recommendations are classified as follows:

Consensus for Approval: No workgroup participant expressed opposition to the proposal

Consensus for Disapproval: Any workgroup participant expressed opposition to the proposal and no workgroup participant, other than the proponent, expressed support for the proposal.

Non-Consensus: Any workgroup participant expressed opposition to the proposal

Q: What is In-Building Emergency Communications?

A: Two-way emergency responder communication coverage inside of buildings.

- Earlier editions of the IBC/IFC (and the current VCC) refer to it as “In-Building Emergency Communications”
- The 2021 IBC refers to it as “Emergency Responder Communication Coverage”

Emergency Responder Communications Enhancement Systems



Q: What is an ERCES?

A: A system installed to ensure “Emergency Responder Communication Coverage” is commonly referred to as an “Emergency Responder Communications Enhancement Systems, or “ERCES”.

ERCES are typically made up of:

- A donor antenna that receives external radio signals from the local emergency responder tower
- A bi-directional amplifier/repeater that boost the radio signal
- A coaxial cable or fiber medium that distributes the radio signal throughout the building
- Coverage antennas that transmit and receive radio signals within the building for reception by handheld radios used by emergency responders.

January 2003: House Bill 2529 resulted in § 36-99.6:2. Installation of in-building emergency communication equipment for emergency public safety personnel.

“The Board of Housing and Community Development shall promulgate regulations as part of the Building Code requiring such new commercial, industrial, and multifamily buildings as determined by the Board be (i) designed and constructed so that emergency public safety personnel may send and receive emergency communications from within those structures or (ii) equipped with emergency communications equipment so that emergency public safety personnel may send and receive emergency communications from within those structures.”

“HJR588 Task Force”

January 2003: Virginia Department of Fire Programs, with the assistance of VDEM and DHCD, was requested to study the feasibility of adopting requirements within the commonwealth that will ensure buildings are constructed and equipped to permit effective and reliable public safety radio communications for emergency personnel operating within them.

2004 - 2007: “Ad-Hoc Committee on In-Building Emergency Communication Systems”

- Ultimately a compromise proposal was approved by the Board of Housing and Community Development in 2007, for inclusion in the 2006 edition of the Virginia Construction Code (VCC)
- The language approved for the 2006 edition remains (mostly unchanged) in the current VCC

During the 2018 Code Development Cycle, the Board of Housing and Community Development (BHCD) considered the following proposals to amend the VCC in-building emergency communications requirements:

- B916.1-18 (Approved)
- B916-18 (Not approved)
- B918.1-18 (Not approved)

The BHCD also determined that additional discussions were needed and directed DHCD staff to convene a group of interested stakeholders to continue the discussions during the 2021 Code Development Cycle.

- Gather information and data for review and discussion
- Identify issues with current requirements
- Identify areas of agreement and/or disagreement
- Identify areas of support and/or opposition
- Identify possible improvements to current requirements
 - Submit proposal(s) to update existing requirements (if applicable)
- Summarize findings or recommendations
- Review any related proposals submitted during the 2021 cycle (if applicable)

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SECTION 918

EMERGENCY RESPONDER COMMUNICATION COVERAGE

[F]918.1 General. In-building two-way emergency responder communication coverage shall be provided in all new buildings in accordance with Section 510 of the International Fire Code.

510.1 Emergency responder communication coverage in new buildings.

Approved in-building, two-way emergency responder communication coverage for emergency responders shall be provided in all new buildings. In-building, two-way emergency responder communication coverage within the building shall be based on the existing coverage levels of the public safety communication systems utilized by the jurisdiction, measured at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Where approved by the building official and the fire code official, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained instead of an approved radio coverage system.
2. Where it is determined by the fire code official that the radio coverage system is not needed.
3. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency responder radio coverage system.

SECTION 918

IN-BUILDING EMERGENCY COMMUNICATIONS COVERAGE

918.1 General.

For localities utilizing public safety wireless communications, dedicated infrastructure to accommodate and perpetuate continuous in-building emergency communication *equipment* to allow *emergency public safety personnel* to send and receive emergency communications shall be provided in new *buildings* and *structures* in accordance with this section.

Exceptions:

1. *Buildings* of Use Groups A-5, I-4, within *dwelling units* of R-2, R-3, R-4, R-5, and U.
2. Buildings of Types IV and V *construction* without basements, that are not considered unlimited area *buildings* in accordance with [Section 507](#).
3. Above grade single story buildings of less than 20,000 square feet (1858 m²).
4. *Buildings* or leased spaces occupied by federal, state, or local governments, or the contractors thereof, with security requirements where the *building official* has *approved* an alternative method to provide emergency communication equipment for *emergency public safety personnel*.
5. Where the *owner* provides technological documentation from a qualified individual that the *structure* or portion thereof does not impede emergency communication signals.
6. *Buildings* in *localities* that do not provide the additional communication *equipment* required for the operation of the system.

918.1.1 Installation.

The *building owner* shall install radiating cable, such as coaxial cable or equivalent. The radiating cable shall be installed in dedicated conduits, raceways, plenums, attics, or roofs, compatible for these specific installations as well as other applicable provisions of this code. The *locality* shall be responsible for the installation of any additional communication *equipment* required for the operation of the system.

918.1.2 Operations.

The *locality* will assume all responsibilities for the operation and maintenance of the emergency communication *equipment*. The *building owner* shall provide sufficient operational space within the *building* to allow the *locality* access to and the ability to operate in-building emergency communication *equipment*

918.1.3 Inspection.

In accordance with [Section 113.3](#), all installations shall be inspected prior to concealment.

918.2 Acceptance test.

Upon completion of installation, after providing reasonable notice to the *owner* or their representative, *emergency public safety personnel* shall have the right during normal business hours, or other mutually agreed upon time, to enter onto the property to conduct field tests to verify that the required level of radio coverage is present at no cost to the *owner*. Any noted deficiencies in the installation of the radiating cable or operational space shall be provided in an inspection report to the *owner* or the *owner's* representative.

- **B916.1-18 (Approved)** - Added exception “6. Buildings in localities that do not provide the additional communication equipment required for the operation of the system.”
- **B916-18 (Not approved)** - Proposed adding technical requirements (system monitoring, installation per NFPA 1221 and NFPA 72, testing per NFPA 1221 and NFPA 72, critical areas), and changing responsibility for installation of all minimum system installation from the locality, to the building owner.
- **B918.1-18 (Not approved)** - Proposed referencing the IFC for all requirements, while maintaining the five existing (2015 VCC) Virginia exceptions.

ANY
QUESTIONS

?

Prior to the next meeting, please:

- **Research information provided today**
 - Reach out to other members and/or DHCD staff with any questions
- **Identify areas of interest or concern that you would like to discuss at the next meeting**
 - Provide to DHCD by December 14th
- **Identify and provide helpful/relevant information (reports, data, etc.) for the group to review**
 - Provide to DHCD by December 14th

Note: If any member wants to share information with the group between meetings, please send it to DHCD staff and we will distribute it to our email list to make sure we do not miss any interested parties that might be added to our list as we go along.

Next Meeting (Virtual)

December 29, 2021

9:00 am - 3:00 pm

(lunch break 12:00 pm -1:00 pm)

Link: <https://vadhcd.adobeconnect.com/va2021cdc/>



Division of Building and Fire Regulations

State Building Codes Office

sbco@dhcd.virginia.gov

804-371-7150



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