



# Ground Snow Load

## (Virginia Uniform Statewide Building Code 2021)

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Building Official

Effective: December 16, 2024

Revised: Not Applicable

### Statement/Background of Issue

To address and correct an error in the VCC 2021 regarding ground snow loads and ensure consistency with the intended design requirements of ASCE 7-22.

### Background

The 2021 Virginia Construction Code (VCC) Section 1608.2 specifies that ground snow loads for roof design shall be determined in accordance with either **ASCE 7** or **Figures 1608.2(1) and 1608.2(2)**. However, an error occurred during the update process:

1. The state intended to require the use of **ASCE 7-22** for all structural design elements, including snow loads, as reflected in the state's errata for the VCC 2021 reference standards.
2. The snow load figures currently included in the VCC 2021 are based on **ASCE 7-16**, not ASCE 7-22. These figures do not reflect the updated snow load maps in ASCE 7-22 and result in underestimations (e.g., ground snow loads 25 psf lower when applying ASCE 7-22 load combinations with the snow reduction factor)
3. If the snow loads are determined based on the figures and input into the ASCE7-22 formulas for combination loads, the structure may be unsafe.

### Policy

To ensure structural safety and compliance with the state's intent, Prince William County has established the following policy regarding ground snow load determination until the state corrects the error in VCC 2021 Section 1608.2:

1. **Design Based on ASCE 7-22:**
  - If a structural design is based on **ASCE 7-22**, all provisions and updates in ASCE 7-22 must be followed, including the updated snow load maps.
2. **Design Based on Figures 1608.2(1) and 1608.2(2):**
  - If the design uses the snow load figures referenced in VCC 2021 Section 1608.2, it must comply entirely with **ASCE 7-16** provisions, as these figures correspond to ASCE 7-16 maps.



**3. Prohibition on Mixing Standards:**

- Designers are not permitted to mix provisions from ASCE 7-16 and ASCE 7-22 in the same project. Using ASCE 7-22 provisions while relying on ASCE 7-16 snow load figures is not allowed.

**4. Future Compliance:**

- Once Virginia revises VCC 2021 Section 1608.2 to align with its intended enforcement of ASCE 7-22, the County will implement the updated code and no longer permit designs based on ASCE 7-16.