

**Mono County
Community Development Department**

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Building Division

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CODE APPLICATIONS AND INTERPRETATIONS

DATE: February 25, 2026

SUBJECT: Alternative methods of construction for snow loads

CODE CYCLE: 2025 California Building Codes Standards

APPLICABLE CODES: 2025 California Building Code; ASCE 7-22

Section 104.2.3 of the 2025 California Building Code (CBC) allows the Building Official to approve alternative materials, designs, and methods of construction that is not specifically prescribed in the code so long as the alternative material, design, or method of construction is not less than the equivalent of that prescribed in the code with respect to strength, durability, effectiveness, and safety.

Chapters 7 and 12 of ASCE 7-22 requires the usage of the ASCE Design Ground Snow Load Geodatabase (also known as the ‘Hazard Tool’) to determine design snow loads for the conterminous United States and Alaska. Additionally, design factors (such as the thermal factor, snow importance factor, and snow load contribution to seismic design) have been substantially changed or eliminated from previous versions of ASCE 7.

DISCUSSION:

The above-mentioned changes in ASCE 7-22 compared to previous versions of ASCE 7 present significant changes to the topic of structural snow load design. With regards to the Hazard Tool, it has been discovered that there are flaws with it, such as elevation smoothing issues and unrealistic recurrence intervals. It appears that the Hazard Tool algorithm is not ready to replace existing case study snow loads since extreme local variations in ground snow loads preclude mapping on a large scale. As a result, the Hazard Tool produces ground snow load values that are much higher than existing local ground snow load values which can be as much as a 135% increase in some cases.

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POLICY AND PROCEDURE FOR ALTERNATIVE METHODS OF CONSTRUCTION FOR SNOW LOADS:

If an alternative method of construction is to be used to determine snow loads, it is permissible to use the County's existing ground snow load criteria in lieu of the Hazard Tool. In this case, provisions of ASCE 7-22 must be used in conjunction with the County's existing ground snow load criteria. Roof snow loads shall not be less than what has historically been used in the past. Use of County's existing snow load criteria with ASCE 7-22 is considered an alternate means of design.

One possible alternative method could be dividing the County's existing ground snow load by 0.7 to factor the existing snow loads to the appropriate level for use with the ASD design method in ASCE 7-22 (alternatively if the LRFD design method is to be used multiplying the existing County snow loads by 1.6 will appropriately factor the loads for use with ASCE 7-22).. Risk categories as per Figures 7.2-1A, 7.2-1B, 7.2-1C, and 7.2-1D in ASCE 7-22 shall be considered when establishing the ultimate ground snow load (P_g). The resulting ultimate ground snow load will then be converted into an ultimate roof snow load (P_f) by using Equation 7.3-1 in ASCE 7-22 that uses a thermal factor as per Tables 7.3-2 and 7.3-3 in ASCE 7-22. The snow load contribution to the seismic design shall be no less than 15% of the ultimate roof snow load as per ASCE 7-22. An example of this alternative method can be found [here](#). To fill out a new AMMR, click [here](#).

Other alternative methods could include elevation-matching proposed by the Tahoe Truckee Engineers Association (TTEA) provided they do not result in roof snow loads lower than the Town's historical roof snow loads. Additional guidance on the TTEA alternative method can be found [here](#).

All proposed alternative methods of construction requests (AMMRs) shall be considered on a case-by-case basis and be submitted in writing to the Building Official.

Please contact Building Official Tom Perry at (760) 965-3635 or at tperry@mono.ca.gov should there be any questions.