



Alternative Materials, Designs, and Methods of Construction

This edition of the Code Outreach Program intends to provide guidance on the Uniform Fire Prevention and Building Code (Uniform Code) provisions that regulate approved alternatives such as the use of materials, equipment, appliances, designs, or methods of construction that are not specifically prohibited by the Uniform Code. While the sections referenced and the examples given in this document are specific to the Uniform Code, similar provisions apply to the Energy Code.

Alternatives

Section 104.3 of each of the 2020 NYS Uniform Code books allows for the use of alternative materials, equipment, appliances, designs, and methods of construction, with some stipulations:

The provisions of this code are not intended to prevent the installation of any materials, equipment, or appliances not specifically prescribed by this code, or to prohibit any designs or methods of construction not specifically prescribed by this code, provided that such alternative materials, equipment, appliances, designs, or methods of construction (1) are not specifically prohibited by any provision of this code, by any other provision of the Uniform Code, or by the Energy Code and (2) shall have been approved, in writing, by the building official.

When materials, equipment, appliances, designs, or methods of construction are specifically prohibited in the code, the Section does not allow the use of alternatives. For example:

- Section AJ401.2.1 of the 2020 RCNYS specifically prohibits the use of "hazardous materials that are no longer permitted, such as asbestos and lead-based paint;" therefore, the provisions of Section 104.3 do not allow the use of asbestos or lead-based paints.
- Section G2415.6 of the 2020 RCNYS prohibits underground penetrations of gas piping through building foundations. Piping materials, equipment, appliances, methods of construction, or standards of design found in codes other than those found in the 2020 Uniform Code, may include features that minimize the chance of a gas leak traveling into the building from the source. However, as underground penetrations of gas piping through building foundations are specifically prohibited, any proposed alternative for gas piping penetrating the foundation wall underground could not be authorized by Section 104.3.

If an alternative does meet the criteria of the Section, it needs to be "approved, in writing, by the building official," and approval can be granted only when the building official has determined that the alternative is:

1. *Satisfactory and complies with the intent of the provisions and requirements of the Uniform Code.*
2. *Not less than the equivalent of that prescribed in the Uniform Code in quality, strength, effectiveness, fire resistance, durability, and safety.*

Some provisions of the Uniform Code explicitly allow proposing alternatives by referring to an "equivalent." For example, Section R317.3.1 of the 2020 RCNYS indicates that, "In the absence of manufacturer's recommendations, not less than ASTM A653 type G185 zinc-coated galvanized steel, or equivalent, shall be used." (emphasis added). Proposed alternatives, by way of an "equivalent" allowance, are required to comply with the criteria set forth in Section 104.3.

Section 104.3 does not allow "any building official or any authority having jurisdiction to waive, vary, modify or otherwise alter any provision or requirement of this code or any other provision or requirement of the Uniform Code" (as indicated in the Section). Applicants may apply for a variance; variances are only authorized pursuant to 19 NYCRR Part 1205, see our Code Outreach Program titled "[Appeals and Variances](#)."

Updated Referenced Standards

Permit applicants are always allowed to design buildings that not only meet but exceed the requirements of the Uniform Code. If a permit applicant wishes to utilize an updated version or edition of a Uniform Code's referenced standard, applicants need to compare all applicable provisions of that updated standard to the provisions in the current Uniform Code and its incorporated version or edition of the reference standard. The comparison can then be used to justify that the provisions of the updated reference standard meet or exceed those of the Uniform Code. Section 1203.3(a)(2) of 19 NYCRR indicates that local code enforcement programs require that building permit applications, "request sufficient information to permit a determination that the intended work accords with the requirements of the Uniform Code." This allows the AHJ to request the information they deem reasonably necessary to make a determination.

If updated referenced standards provide for alternative materials, equipment, appliances, designs, or methods of construction not specifically prescribed or prohibited by the Uniform Code, then permit applicants can request the approval from the building official for such alternative in accordance with Section 104.3.

Please look for our next edition of the Code Outreach Program at the beginning of next month.

DBSC - A Division of Department of State
OFPC – An Office of the Division of Homeland Security & Emergency Services

If you have questions pertaining to the Code Outreach Program, email us at COP.codes@dos.nv.gov

If you have questions pertaining to the Uniform Code or Energy Code, email our technical support group at: codes@dos.nv.gov

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