

SUPPLEMENTAL MEMORANDUM

TO: District of Columbia Zoning Commission

FROM: Brandice Elliott, AICP, Project Manager
JLS
Jennifer Steingasser, AICP, Deputy Director, Development Review & Historic Preservation

DATE: March 19, 2020

SUBJECT: ZC Case 19-21 – Supplemental Report for a Proposed Text Amendment to the Zoning Regulations: Subtitles D, E and U – Roof Top or Upper Floor Elements

I. RECOMMENDATION

The Office of Planning recommends that the Zoning Commission **approve** the text amendments, as proposed in the Attachment to this report.

II. BACKGROUND

At its February 13, 2020 public hearing, the Zoning Commission discussed and received testimony regarding the proposed and advertised text amendment. Based on exhibits in the record and discussion during the public hearing, it became clear that there was general misunderstanding regarding the objectives of the proposed amendment. As a result, the Zoning Commission has requested that the Office of Planning clarify the intent and purpose of the text amendment and respond to comments provided in the record and at the hearing.

III. PURPOSE

The general purpose of the proposed text amendments is to apply solar energy system protections that already apply to additions in the RF zones to new construction in the RF zones, and to require these solar energy protections be applied to new construction and additions in the R zones for semi-detached and row buildings. In addition, the text amendment would remove redundant sections in Subtitle U in favor for those already provided in Subtitle D. The following is a summary of the proposal:

1. Revise Subtitle D, **R zones**, to:
 - a. Include solar energy system protections for attached and semi-detached residential buildings;
 - b. Specify the requirements for all applications for additions and new construction to include one of the following: 1) an affidavit by the applicant stating that there is no abutting solar energy system; 2) a comparative solar shading study meeting the requirements specified by DCRA and the Zoning Administrator; or 3) a written agreement executed by the owner of the impacted solar energy system accepting interference posed by the construction; and

- c. Include Special Exception relief criteria for solar energy system protections.
2. Revise Subtitle E, **RF zones**, to:
 - a. Exempt the modification of roof top architectural elements from BZA review when the modifications are subject to review by the Historic Preservation Review Board or the U.S. Commission of Fine Arts;
 - b. Allow for repairs to a roof top architectural element as a matter-of-right when the repair is visually indistinguishable;
 - c. Expand solar energy system protections to apply to new construction;
 - d. Specify the requirements for all applications for additions and new construction to include one of the following: 1) an affidavit by the applicant stating that there is no abutting solar energy system; 2) a comparative solar shading study meeting the requirements specified by DCRA and the Zoning Administrator; or 3) a written agreement executed by the owner of the impacted solar energy system accepting interference posed by the construction; and
 - e. Include Special Exception relief criteria for solar energy system protections.
 3. Revise Subtitle U, **Conversions of Residential and Non-residential Buildings**, to:
 - a. Remove conversion requirements related to the retention of roof top architectural elements, as the same requirements are in Subtitle E (RF Zones) and would apply to all development in the RF zones, including conversions;
 - b. Remove conversion requirements related to height, as the same requirements are in Subtitle E (RF Zones) and would apply to all development in the RF zones, including conversions;
 - c. Remove conversion requirements related to the rear wall extension, as the same requirements are in Subtitle E (RF Zones) and would apply to all development in the RF zones, including conversions; and
 - d. Remove conversion requirements related to solar energy systems, as the same requirements are in Subtitle E (RF Zones) and would apply to all development in the RF zones, including conversions.

Although Subtitle U (Uses) would be significantly reorganized by eliminating several sections, these sections are duplicated in Subtitle E (RF Zones) and would still apply to all development in the RF zone. In particular, testimony provided in the record and at the public hearing expressed concern regarding the removal of the rear wall extension provision from the conversion requirements in Subtitle U. Subtitle E § 205, which provides the rear yard requirements for the RF zone, including the provision limiting a rear wall extension to ten-feet beyond adjoining rear walls, would not be revised with this text amendment and would remain as currently written. However, the Zoning Commission has requested that OP review this requirement for potential future revisions, and it is anticipated that any proposed text amendment would be a separate case.

IV. ANC AND PUBLIC COMMENTS

The following comments were provided by ANCs and the public. OP responses are provided below each comment.

1. Projects located in historic districts.

The proposed text amendment would exempt proposals to modify architectural elements from BZA review when the property is already subject to review by the Historic Preservation Review Board or the U.S. Commission of Fine Arts.

The District of Columbia historic preservation law establishes the basic purposes and standards for the treatment of the city's historic properties, which include: 1) to retain and enhance historic properties; 2) to encourage their adaptation for current use; and 3) to ensure that alterations are compatible with their historic character.

The final purpose, which ensures that additions and alterations are compatible with historic character, is parallel to the intent of the special exception criteria, which requires that proposed construction shall not substantially visually intrude upon the character, scale and pattern of houses along the subject street or alley. Although the historic review and BZA review would not be entirely duplicative, both intend to preserve the character of the neighborhood. As such, requiring two reviews for these types of projects is cumbersome for homeowners, substantially increasing time and costs.

OP has proposed to exempt properties located in historic districts from BZA review because the intent of the historic review is similar. In addition, removing the duplicative review would be removing barriers to housing and improvements to housing, which is a priority of the District.

OP continues to recommend exempting historic properties from this provision.

2. The current shading study standards should be kept and the Zoning Administrator should not set the standards.

As testified by DCRA at the public hearing on February 13, 2020, the current regulations are difficult to administer. In the present regulations, a homeowner must demonstrate that the performance of the abutting solar energy system is not impacted by more than 5%. Measuring output, however, is difficult, because it is based on the precise parameters and design details of the specific solar energy system to estimate the effect of the shading on output. Since there is variability between solar energy systems, the calculations lack consistency and create studies that are not verifiable or repeatable. As a result, DCRA is unable to conduct inspections with confidence.

The proposed text amendment would require a study demonstrating the percentage that the abutting solar energy system would be shaded, which is a much more attainable and understandable measurement. This particular study would be easier to understand, easier to share with impacted neighbors, and enforceable. Creating certainty in the Zoning Regulations removes barriers to homeowners, which is a priority of the District.

DCRA enforces the Zoning Regulations and it is within the agency's jurisdiction, under the Zoning Administrator's authority, to determine how to administer the regulations. The technology regarding solar energy systems is not static, and DCRA needs to respond to new technologies as they are presented. The Zoning Regulations are not flexible and cannot be modified quickly to respond to a changing environment. As such, the appropriate location for rules regarding a solar shading study is in DCRA.

OP and DCRA continue to recommend this provision.

3. Concern over elimination of the 10-foot limitation or rear wall extensions on conversions of houses into multiple-family dwellings.

The regulation regarding the 10-foot rear wall extension is located in Subtitles E and U. In Subtitle U, it is located under the rules for residential to residential conversions and nonresidential to residential conversions.

The proposed text amendment would remove the provision from Subtitle U and keep it in Subtitle E. This reorganization simplifies the requirements of conversions, while still requiring that all development in the RF zones comply with this requirement as provided under the development standards in Subtitle D. While it is not specifically listed as a requirement in the conversion criteria, conversions are still required to comply with development standards in Subtitle E that include rear yard, side yard, lot occupancy, etc. The regulation regarding the 10-foot rear wall extension would continue to be a requirement, the same as other development standards and regulations.

OP continues to recommend deleting the duplicative language from Subtitle U and notes deleting the language from Subtitle U would not change the rear extension requirements.

4. The proposed changes would appear to remove provisions related to the preservation of rooftop architectural elements.

The regulations regarding the protection of rooftop architectural elements are located in Subtitles E (RF Zones) and U (Uses). In Subtitle U, the regulation is located under the rules for residential to residential conversions and nonresidential to residential conversions.

The proposed text amendment would remove the provisions from Subtitle U (Uses) and keep them in Subtitle E (RF Zones). Similar to the elimination of the 10-foot rear wall extension criteria from Subtitle U (see number three above), this reorganization simplifies the requirements of conversions, while still requiring that all development in the RF zones comply with this requirement as provided under the development standards in Subtitle E. All development in the RF zone is required to comply with the development standards in Subtitle E, from detached dwellings to apartment conversions. The proposed reorganization would not remove or change this requirement and would avoid confusion between the two subtitles.

OP continues to recommend deleting the duplicative language from Subtitle U and notes deleting the language from Subtitle U would not change the rooftop architectural element requirements.

5. Regulations that govern the building height of residential houses zoned RF-1 through RF-3 should not be changed.

OP has not proposed modifications to the building height regulations as they relate to residential buildings in the RF zones. The reorganization of Subtitle U under the conversion requirements has resulted in the removal of this requirement from that section, similar to other sections as discussed above in numbers three and four. The development standards in Subtitle E will continue to include the building height requirement. All development in the RF zones, whether it be a row building or apartment house conversion, is required to comply with the development standards, which also include rear yard, side yard, and lot occupancy requirements. As such, building height would still be limited to 35-feet, and a special exception will be required for heights up to 40-feet.

- 6. The special exception criteria for solar energy systems could allow for substantial impairment of an adjacent solar energy system as long as the proposed construction meets the visual and aesthetic requirements of the criteria. The request to adversely impact a solar energy system should be held to a higher standard than the proposed special exception criteria.**

OP agrees with ANC 6C comments that the current special exception criteria proposed for the assessment of impact on solar energy systems is not relevant to the regulation. The proposed criteria is: 1) The light and air available to neighboring properties shall not be unduly affected; 2) The privacy of use and enjoyment of neighboring properties shall not be unduly compromised; and 3) The proposed construction, as viewed from the street, alley, and other public ways, shall not substantially visually intrude upon the character, scale and pattern of houses along the subject street of alley. This criterion addresses the aesthetics of solar energy systems as opposed to their functionality.

OP proposes revised language to address this issue in Subtitle D § 208.2 and Subtitle E § 206.4. The revised proposed language would require an applicant to show “good cause” why the Board should permit an impact on an adjoining solar energy system and if approved the special exception would have no adverse impact:

Subtitle D § 208.2

For good cause shown, relief from the requirements of Subtitle D § 208.1 may be approved by the Board of Zoning Adjustment as a special exception upon demonstrating that the shading impact to abutting solar energy systems has been mitigated to the extent possible.

Subtitle D § 206.4

For good cause shown, relief from the requirements of Subtitle E § 206.3 may be approved by the Board of Zoning Adjustment as a special exception upon demonstrating that the shading impact to abutting solar energy systems has been mitigated to the extent possible.

Requiring relief for impact on solar panels by variance would create a high threshold for new construction or additions, as there are few instances in which a practical difficulty could be demonstrated. In addition, the impact that shading could have on the output of a solar energy system varies from one installation to the next. The special exception option creates a path for the homeowner to present the individual circumstances to the Board of Zoning Adjustment for analysis and decision.

- 7. The regulations regarding the functioning of a chimney or other external vent should not be removed from the text.**

The Zoning Administrator has indicated that the provisions protecting the functioning of a chimney and other external vents have been difficult to administer because the regulations are duplicative and sometimes contradictory to the Building Code.

DCRA’s Chief Building Official has provided several citations in the Building Code that require review of chimneys and vents. The following regulations demonstrate that chimneys are required to be of varying heights in different scenarios.

2012 International Residential Code (One- and Two-Family Dwellings and Townhomes) (IRC)

- **M1804.2.4 Type L vent.** Type L venting systems shall conform to UL 641 and shall terminate with a *listed* and *labeled* cap in accordance with the vent manufacturer's installation instructions not less than 2 feet (610 mm) above the roof and not less than 2 feet (610 mm) above any portion of the building within 10 feet (3048 mm).
- **G2427.5.3 (503.5.4) Chimney termination.** *Chimneys* for residential-type or low-heat *appliances* shall extend at least 3 feet (914 mm) above the highest point where they pass through a roof of a building and at least 2 feet (610 mm) higher than any portion of a building within a horizontal distance of 10 feet (3048 mm) (see Figure G2427.5.3). *Chimneys* for medium-heat *appliances* shall extend at least 10 feet (3048 mm) higher than any portion of any building within 25 feet (7620 mm). *Chimneys* shall extend at least 5 feet (1524 mm) above the highest connected *appliance draft hood* outlet or *flue collar*. Decorative shrouds shall not be installed at the termination of factory-built *chimneys* except where such shrouds are listed and labeled for use with the specific factory-built *chimney* system and are installed in accordance with the manufacturer's installation instructions.

2012 International Fuel Gas Code (IFGC)

- **503.5.4 Chimney termination.** Chimneys for residential-type or low-heat appliances shall extend at least 3 feet (914 mm) above the highest point where they pass through a roof of a building and at least 2 feet (610 mm) higher than any portion of a building within a horizontal distance of 10 feet (3048 mm). Chimneys for medium-heat appliances shall extend at least 10 feet (3048 mm) higher than any portion of any building within 25 feet (7620 mm). Chimneys shall extend at least 5 feet (1524 mm) above the highest connected *appliance* draft hood outlet or flue collar. Decorative shrouds shall not be installed at the termination of factory-built chimneys except where such shrouds are *listed* and *labeled* for use with the specific factory-built chimney system and are installed in accordance with the manufacturer's installation instructions.

2012 International Mechanical Code (IMC)

- **802.5 Type L vent terminations.** Type L vents shall terminate not less than 2 feet (610 mm) above the highest point of the roof penetration and not less than 2 feet (610 mm) higher than any portion of a building within 10 feet (3048 mm).

2013 NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances

- **4.2 Termination (Height).** Chimneys and vents shall terminate above the roof level in accordance with the requirements of this standard and as illustrated in Figure 4.2(a) and Figure 4.2(b).

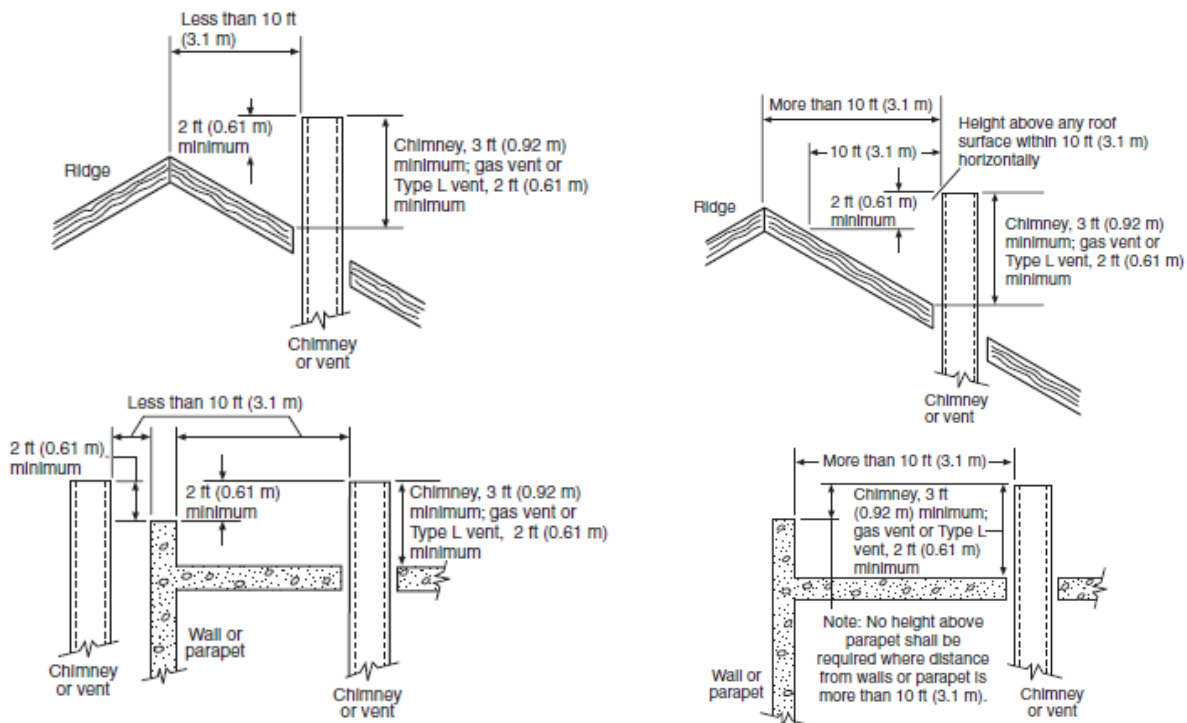


FIGURE 4.2(a) Chimney or Vent Termination Less Than 10 ft (3.1 m) from Ridge, Wall, or Parapet.

FIGURE 4.2(b) Chimney or Vent Termination More Than 10 ft (3.1 m) from Ridge, Wall, or Parapet.

OP and DCRA continue to recommend that the regulations regarding the functioning of a chimney or other external vent be removed from the text.

8. Renderings of the proposed text amendment should be provided.

During the public hearing, there was discussion regarding the inclusion of graphics in the proposed text amendment, although it was unclear what the graphics should depict. There was extensive discussion regarding the Department of Energy and Environment’s Solar Tool, which identifies the solar potential for each property located within the District of Columbia. The website (<https://www.mapdwell.com/en/solar/dc>) is an interactive site that resulted from extensive research to provide details regarding each property, including the size of solar energy system that a building can support, the cost savings of using renewable energy, and how to maximize energy through the placement of panels on the roof. This research project goes beyond the capacity of the Zoning Regulations, which is intended to provide development standards for each zone but does not provide potential site plans illustrating how to develop every property within the District of Columbia. Due to the interactive nature of the website, it does not lend itself to being inserted as an illustration or rendering.

DCRA is in the process of developing guidance that would summarize the regulations for building permit applicants. The guidance document would include renderings of how to provide a solar shading study and its components, which would be helpful to applicants. Given that DCRA would be enforcing this regulation and intends for it to be flexible so that it can respond to changes as necessary, graphics would be most appropriate in this document.

V. CHANGES SINCE THE PUBLIC HEARING

Since the public hearing, OP has continued to work with OAG to refine the text, including clarifications and conforming references within the title. In addition, OP recommends the substantive revision relating to the special exception for solar energy systems based on a showing of “good cause” rather than aesthetics as discussed in number 6. above.

Attachments:

Clean Proposed Text Amendment Without Strikethrough

Redline Proposed Text Amendment With Strikethrough

JS/be