



ZC 17-18

SUPPORT & COMMENTS 02-22-2018

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1. Inclusion. Permit applications MUST include *graphic representations* of all relevant defined zoning terms on one sheet as part of the zoning analysis.

2. Basements and Cellars - Revise definitions of to include *stories* above and below natural or finished grade (grade plane).

3. Finished Grade Key Points

- a. Must always be measured at the ground abutting structures (not on top of walls)
- b. Areaways could be excluded, but not as proposed. See Mean Finished Grade.

4. Mean Finished Grade

- a. Expand as a defined term in B-100.2 Definitions to measure height,
- b. Increases accuracy in established methods outlined in **B-300 Rules of Measure**
- c. Clarify understanding of ground and how to measure/ calculate

5. GFA grade calculation wording – B-304.4 and B-304.5

- a. Use defined terms to simplify wording and ensure clarity of regulations
- b. Sections should define area that counts towards GFA, rather than what is omitted.

- c. Include revisions to GFA calculations of stories or portions of stories above grade by **Perimeter Wall** and **Grade Plane Methods**.

6. Revision of Habitable Room can only happen if **Habitable Area/ Story** is included

DEFINITIONS SUBTITLE B § 100.2

Basement: Any story or portion of a story partly below grade where the finished floor of the ground floor is five feet (5 ft.) or more above the adjacent natural or finished grade, whichever is lower in elevation as calculated in Subtitle B, Rules of Measurement.

Cellar: Any story or portion of a story partly below grade where the finished floor of the ground floor is less than five feet (5 ft.) above the adjacent natural or finished grade, whichever is lower in elevation as calculated in Subtitle B, Rules of Measurement.

Primarily, the definitions for Basements and Cellars describe portions of stories above and below grade, traditionally understood in relation to the Floor Area Ratio (FAR). But as modified above, the definitions could specifically account for zones that limit GFA by story and in the number of stories in relation to grade.

Specific reference to Habitability could be explored as a separate discussion and proposed text amendment.

Primarily, the definitions for Basements and Cellars describe portions of stories above and below grade, traditionally understood in relation to the Floor Area Ratio (FAR). But as modified above, the definitions could specifically account for zones that limit GFA by story and in the number of stories in relation to grade.

Specific reference to Habitability should be explored as a separate discussion and proposed text amendment.

GRADE SUBTITLE B § 100.2

Grade, Finished: The elevation of the **ground directly abutting*** the perimeter of a building or structure.

**To ensure consistent application of the regulations, measurement must always be about the structure as currently defined.*

Top of wall measurements allow for manipulation of what is above and below grade.

The ZA power point suggests the grade will be measured appropriately at the ground in front and that discussion on how areaways could be restricted for width rather than unlimited width across a façade and resultant ability to affect discounted development that is actually above grade.

Exceptions to finished grade could be properly handled with a Mean Finished Grade Calculation.

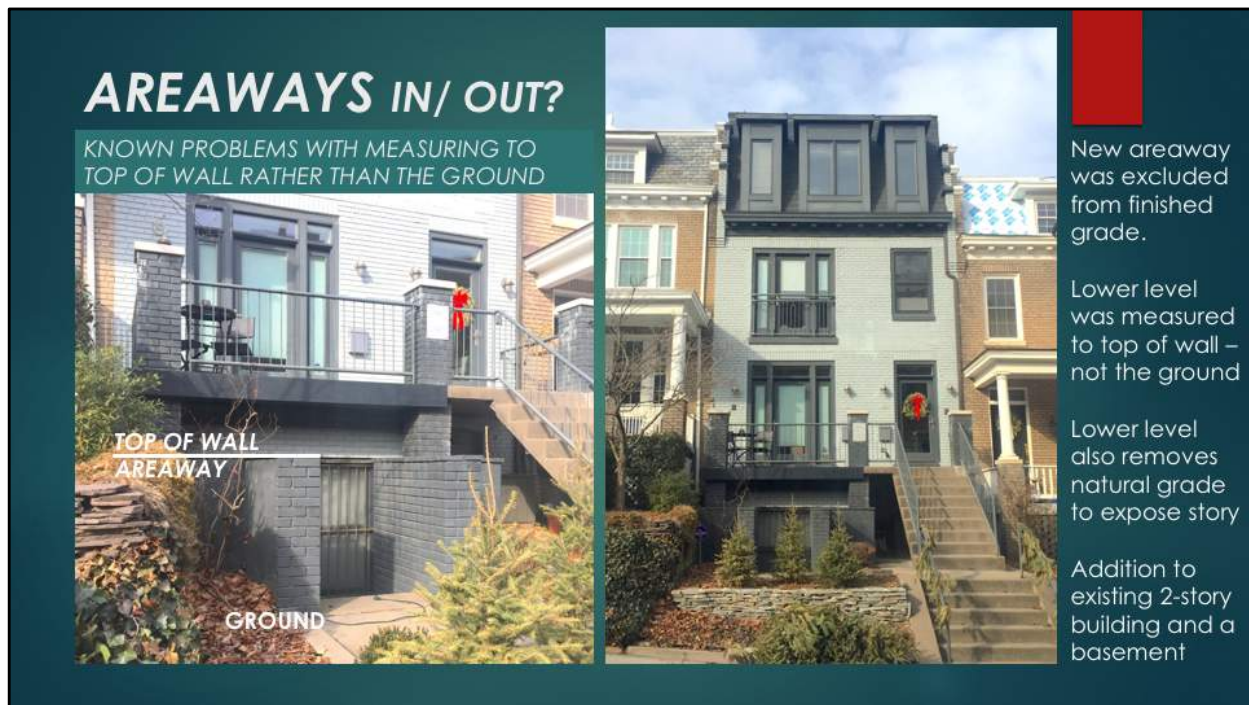


Grade, Finished: The elevation of the **ground directly abutting*** the perimeter of a building or structure ~~or at the top edge of a window well~~—**Exceptions to finished grade area:**

- (i) **a window well that projects no more than four feet (4 ft.) from the building face; and**
- (ii) **an areaway that provides direct access to an entrance and projects no more than five feet (5 ft.) from the building face.**

TOP OF WALL SHOULD NEVER BE USED TO DETERMINE IF A LEVEL IS ABOVE OR BELOW GRADE. FINISHED GRADE SHOULD REMAIN DEFINED AT THE GROUND ABUTTING THE PERIMETER OF THE BUILDING OR STRUCTURE.

Areaways could be excluded from finished grade without contradicting the existing definition, but perhaps more effective as a ratio of the façade they exist on [1:3? 1:2?] There are many examples around town where a wall has been used to determine a measurement to discount GFA from a project to allow for new GFA above. .



KNOWN PROBLEMS WITH MEASURING TO TOP OF WALL RATHER THAN THE GROUND

This example shows an illegal addition to existing 2-story building and a basement allowed by DCRA.

A new areaway has been excluded from finished grade and defined by a wall that serves no purpose (not a retaining wall) other than to have a point of measure higher than the ground plane. Cellar determination was made by excluding the areaway from finished grade and by measuring to the top edge of the areaway wall (the rear walks out at grade) and thus excluded the basement from GFA. This allowed the addition of an entire story (0.55 FAR) for a total FAR of 2.2 -- a full 0.4 FAR above the allowed.

Also, the front grade was further excavated to expose more of the lower level level below what was existing grade when the project began. This problem should be eliminated with the inclusion of language that measures to the lower of natural or adjacent finished grade.

MEAN FINISHED GRADE SUBTITLE B § 100.2

Grade, Mean Finished: The mean finished grade shall be established by a minimum of three (3) grade points adjacent to a Building Façade that represent all level changes: one at the midpoint and one at each corner or property line.

*Mean Finished Grade needs to be explored further and not taken away as suggested in the ZA's presentation. While Cellar levels below grade **can** include habitable rooms and areaways for light and access, areaways excluded from finished grade calculations will encourage the use of "moats" / excavation around the building contrary to the language of the existing and proposed regulations.*

The ground at an areaway (well or entry access), properly measured in relation to all ground abutting a building façade in question, will accurately inform whether or not levels below the ground floor are sufficiently above finished grade to be considered part of the GFA or story count. If a story or portion of a story is sufficiently above grade, it can be properly counted towards GFA.

MEAN FINISHED GRADE SUBTITLE B § 100.2

Grade, Mean Finished: The mean finished grade shall be established by a minimum of three (3) grade points adjacent to a Building Façade that represent all level changes: one at the midpoint and one at each corner or property line.

*Mean Finished Grade needs to be explored further NOT removed from 17-18. Exceptions to Finished Grade are hard to administer or enforce. The current problem exists mainly due to basements that applicant "certify" as cellars and only create issues when neighbors intervene. Cellar levels below grade **can** include habitable rooms and therefore areaways for light and access, areaway exclusions will encourage the use of "moats" / excavation around the building without width restrictions. And should at least be restricted as a % (49) of the façade.*

PERIMETER WALL METHOD SUBTITLE § B-304.4

For a building entirely detached from any other building, GFA for the portion of a **story below the ground floor** and **above adjacent natural or finished grade** shall be calculated by the perimeter wall method as follows:

(a) Measure the portions of the perimeter below **the finished floor of the ground floor** that **are five feet (5 ft.) or more above the adjacent natural or finished grade, whichever is lower in elevation**;

(b) Measure the total perimeter of the **story** located below **the ground floor**;

(c) Divide the resulting **length** of paragraph (a) by the result of paragraph (b); and

(d) Multiply this result **from (c)** by the total floor area of the **story** located below the **ground floor**.

These are the proposed changes to both sections (B304.4 and B-304.5) that calculate GFA. Calculations for GFA for stories below the ground floor need to be described in relation to what is above the adjacent natural or finished grade – not "partially below".

Changes to the wording are meant to include defined terms to avoid confusing and repetitive language.

PERIMETER WALL METHOD

PROPOSED CHANGES TO LANGUAGE

For consistency, this calculation could also be used to determine the BHMP to measure stories and height as they are all interrelated. The applicant would need to indicate the natural or finished grade elevation and the elevation at which one counts GFA. (see B-304.4 (a)). Currently, spot elevations are not verified by a surveyor, which exacerbates enforcement problems.

SUBTITLE B § 304.4 For a building entirely detached from any other building, GFA for the portion of a **story** ~~located partially [below the ground floor]~~ and ~~partially below [above]~~ **adjacent natural or** finished grade shall be calculated by the perimeter wall method as follows:

- (a) Measure the portions of the perimeter ~~of the story located partially below [the finished floor of the ground floor]~~ **adjacent natural or finished grade** that **are five feet (5 ft.) or more above** the **adjacent natural or** finished grade, **whichever is lower in elevation;** ~~and the ground finished floor of the story above ground floor;~~
- (b) Measure the total perimeter of the **story** located ~~partially below [the ground floor]~~ **adjacent natural grade or finished grade, whichever is lower in elevation;**
- (c) Divide the ~~distance of the~~ result **[ing length]** of paragraph (a) by ~~the distance of~~ the result of paragraph (b); and
- (d) Multiply this result **[from (c)]** by the total floor area of the **story** located ~~partially below [the ground floor].~~ ~~adjacent natural or finished grade, whichever is lower in elevation.~~

GRADE PLANE METHOD SUTITLE B § 304.5

For a building attached at any point to a neighboring building, GFA for the portion of a story *below the ground floor*, partially *above adjacent natural or finished grade* shall be calculated *by the grade-plane method* as follows:

(a) *In section*, establish a line between the *mean finished grade* at the building facade facing the nearest street, and the *mean finished grade* of the opposite facade *of the building*;

(b) *The mean finished grade shall be determined by a minimum three (3) points at the adjacent natural or finished grade, whichever is lower along the building facades referenced in paragraph (a): one at the midpoint and one at each corner or property line.*

(c) Determine the portion of this line *that is five feet (5 ft.) or more below* the *finished floor of the ground floor*,

(d) Project a perpendicular line from the point along the line described in paragraph (c), to the exterior walls of the building; and

(e) Measure the floor area *(of the story below the ground floor)* that is between the projected perpendicular line and the other portions of the *story that are five feet (5 ft.) or more below the finished floor of the ground floor.*

GRADE PLANE METHOD (using Mean Finished Grade)

These are the proposed changes to both sections (B304.4 and B-304.5) that calculate GFA. Calculations for GFA for stories below the ground floor need to be described in relation to what is above the adjacent natural or finished grade – not “partially below”. Changes to the wording are meant to include defined terms to avoid confusing and repetitive language.

For grade plane method, the use of mean finished grade is suggested, rather than measuring at the midpoint. Proposed changes are presented in the following slide.

SUBTITLE B § 304.5

For a building attached at any point to a neighboring building, GFA ~~of~~ **for** the portion of a story ~~located~~ **[below the ground floor]**, partially ~~below~~ **[above]** **adjacent natural or finished grade** shall be calculated **by the grade-plane method** as follows:

(a) In section, establish a line between the ~~midpoint of a~~ **[mean finished grade]** at **the** building facade facing the nearest street ~~at the adjacent natural or finished grade, whichever is lower~~, and the ~~midpoint~~ **[mean finished grade]** of the opposite façade **of the building; at the adjacent natural or finished grade, whichever is lower;**

(b) [The mean finished grade shall be determined by a minimum three (3) points at the adjacent natural or finished grade, whichever is lower along the building facades referenced in paragraph (a): one at the midpoint and one at each corner or property line.]

(c) Determine the portion of this line **that is five feet (5 ft.) or more below** the **finished** floor of **the ground floor** ~~story directly above~~,

(d) Project a perpendicular line from the point along the line described in paragraph **(c)**, to the exterior walls of the building; and

(e) Measure the floor area **(of the story below the ground floor)** that is between the projected perpendicular line and the other portions of the **story that are five feet (5 ft.) or more below the finished** floor of the **ground floor**.

HABITABLE SUBTITLE B § 100.2

Habitable Room: An undivided enclosed space *within a Story* used for living, sleeping, or kitchen facilities. Unless otherwise specified, the term "habitable room" shall not include: ~~attics, cellars,~~ corridors, hallways, laundries, serving or storage pantries, bathrooms, or similar space; neither shall it include mechanically ventilated interior kitchens less than one hundred square feet (100 sq. ft.) in area, nor kitchens in commercial establishments

Habitable Story/ Building Area: *a Story or Building Area with adequate ceiling height and sufficiently above adjacent natural or finished grade to count towards GFA as defined and calculated in Subtitle B, suitable for living, sleeping, or kitchen facilities. Unless otherwise specified, the term "Habitable Story or Building Area" shall not include attics, cellars, or similar space;*

The regulations include a definition of Habitable Room that suggests a correlation between habitability and inclusion in GFA or allowed stories. The deletion of attics and cellars is not supported without their inclusion in a new definition (potential solution above) that speaks to what constitutes habitable areas. Logically, non-habitable area can include habitable rooms. It could be considered much cleaner to add habitability to the definition of cellar and basement if there was consistent measurement required and enforced by the Office of Zoning

HABITABLE SUBTITLE B § 100.2

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FLOOR LEVEL ALTERATION

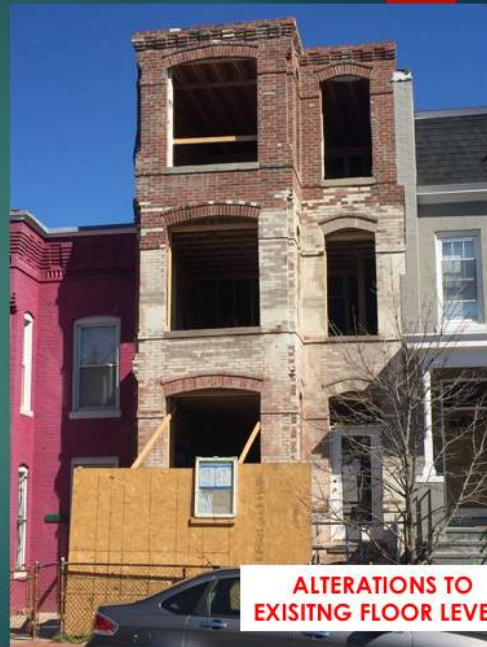
17-18 REVISIONS NEED ADDITIONAL LANGUAGE TO REGULATE HOW MUCH THE FLOOR LEVELS CAN BE ALTERED IN ELEVATION RELATIVE ADJACENT PROPERTIES.

NEED TO ADDRESS THE BHMP DETERMINATION WITHOUT THE CONFUSION OF AREAWAY EXCLUSIONS. (MEAN FINISH GRADE)

REVISIONS TO DEFINITIONS AND MEASUREMENT PROCEDURES BELOW THE GROUND FLOOR MUST ALSO INCLUDE PROVISIONS FOR STORIES

NEW LANGUAGE CORRECTLY PREVENTS EXPOSURE OF LOWER LEVELS DISCOUNTED FROM STORY LIMIT.

NEW LANGUAGE WILL INEVITABLY ENCOURAGE THE SHIFTING OF FLOOR ELEVATIONS.



Restricting measurements to finished floor does run the risk of shifting floors and window and doors opening as above. It also runs the risk of more razed properties, especially when a developer secures 2 or more connected properties. It may be useful to consider language that limits floor shifting as with language that considers adjacent properties or a block.

STORY BHMP B-308.2

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