

## Why “gross volume” must be restored to the list of standards that protect Madison’s historic resources

The Alliance for Historic Preservation, June 29, 2015

**On June 25 LORC agreed to delete “gross volume” from the list of standards in 41.11 Creating Historic District Ordinance. Here is that section with gross volume highlighted in yellow:**

**41.11. CREATING HISTORIC DISTRICT ORDINANCE.** Each Historic District Ordinance adopted under sec. 41.10(3)(d) shall explain the basis for the designation, identify specific historic resources in the district, and provide specific standards and guidelines for reviewing development in the district. In any proposed ordinance under this section, the Landmarks Commission should consider including the following as standards or guidelines:

- (1) Any new structure proposed within 200 feet of historic resources shall be visually compatible with those historic resources in regards to:
  - (a) Height.
  - (b) **Gross volume.**
  - (c) In the street elevation(s) of a structure, the proportion of width to height in all facade(s).
  - (d) The proportions and relationships between doors and windows in the street and publicly visible facade(s).
  - (e) The proportion and rhythm of solids to voids, created by openings in the facade.
  - (f) Colors and patterns used on all facade(s).
  - (g) The design of the roof.
  - (h) The landscape treatment.
  - (i) The texture and materials used in all facade(s).
- (2) The existing rhythm created by existing structure masses and spaces between them shall be preserved.
- (3) The amount, shape, and pattern of open spaces shall be sensitive to the character of the district.
- (4) The landscape plan shall be sensitive to the individual structure, its occupants and their needs.
- (5) All street facade(s) shall blend with other structures via directional expression. When adjacent structures have a dominant horizontal or vertical expression, this expression shall be carried over and reflected.
- (6) Architectural details should be incorporated as necessary to relate the new with the old and to preserve and enhance the inherent characteristics of the area.

### LORC made its decision based on the following five arguments:

1. Gross volume is not relevant; what matters is *perceived* volume. In your discussion of this term on June 25 LORC members made the following points:
  - There is no clear definition of gross volume.
  - All references to gross volume should be deleted.
  - The amount of air that a building contains does not matter.
  - What matters are factors such as proportion, scale, pattern, look and feel, and style.
2. Other standards in 46.11 are sufficient to prevent inappropriately large buildings in historic districts, so dropping gross volume from the list of historic district standards is OK.
3. Gross volume has been used to stop projects and therefore should be dropped from the list of standards.
4. Nobody keeps track of a building’s gross volume, so we can’t include it as a standard.
5. Gross volume is only used in two of Madison’s five historic districts. Therefore, the term is not needed for any historic district.

We believe that LORC's decision to remove gross volume from ordinance standards *seriously jeopardizes* the ability of the ordinance to achieve its primary goal: the preservation of Madison's historic resources, and that the term must be restored. We will address each of the arguments you made below.

**Argument #1: Perceived volume is what matters, not gross volume.**

- Gross volume or mass—the two terms are used interchangeably—are time-tested and widely used as a standard in American preservation ordinances. Amy Scanlon noted on June 25, that gross volume is “commonly” used in American preservation ordinances. Will Cook, a highly respected attorney who specializes in American preservation ordinances at the National Trust for Historic Preservation, backs up Scanlon. In a telephone interview with one of our members, he said that “height, scale and mass (or gross volume)” was “the state-of-the-art standard” for ensuring appropriately sized buildings in historic districts.

- Gross volume is *the only standard that accurately captures a fundamental quality of a structure: overall size.*

- Volume can only be defined as having three dimensions. This is the standard dictionary definition. In the United States the most widely accepted metric for buildings is cubic feet.

- This definition was challenged by proponents of a massive project proposed for the 100 block of West Gilman. A calculation of the gross volume of this building showed that it was 17 times larger than the buildings within its visually related area (VRA). Confronted by this fact, SBA proponents argued that volume only has *two dimensions* and that the standard should really be *perceived volume*. Using this interpretation, they argued that this massive building was a great addition to the Mansion Hill Historic District because its *perceived* volume was visually compatible with nearby buildings. Happily, the Common Council rejected this tortured definition of volume and voted the SBA project down.

- Remove gross volume or mass from the list of standards and you dramatically increase the amount of subjectivity and its first cousin, vagueness, in the ordinance. All of you LORC members know that the loudest and most frequently voiced criticisms of today's landmarks ordinance are its lack of clarity and its use of vague, undefined terms. Therefore, our drafting goal should be to increase *objectivity* by using quantitative metrics wherever possible. Height and gross volume are the two best opportunities to achieve this goal.

- The inevitable consequence of removing gross volume from the list of historic district standards is to invite the incremental destruction of Madison's historic resources by allowing subjective interpretations, such as *perceived* volume, to determine whether a new building meets the local district standard. Therefore, gross volume must be restored as a standard for historic districts.

**Argument #2: Other standards in 46.11 are sufficient to prevent inappropriately large buildings in historic districts, so dropping gross volume from historic district standards is OK.**

- Gross volume or mass is an irreducible generic quality of a structure. No other factor can so fully and accurately denote a building's three dimensional size!

- Not height
- Not proportions
- Not rhythms
- Not scale
- Not the pattern of open spaces

Not the design of the roof  
 Not directional expression of the building  
 Not architectural details  
 Nor any of the other standards in Madison's ordinance!

●Gross volume is one of the few qualities of a structure other than height that is capable of being precisely measured! We studied definitions of gross volume and mass from preservation ordinances around the country and from trade associations such as the National Renewable Energy Laboratory that specializes in measuring the energy efficiency of buildings, and came up with the following definition of gross volume:

**gross volume**

The entire volume measured in cubic feet enclosed by a structure including attached structures, dormers, attics, crawl spaces, penthouses, etc. Gross volume is measured from the outside surface of the exterior walls including any portions above existing grade to the roof line. It does not include open covered walkways, courtyards with no roof, balconies, canopies, or portions below grade. Decorative or structural features that extend beyond the plane of the outside face of the exterior wall such as trim, cornices, pilasters, buttresses, and overhangs are not included.

We believe this definition is *clear, inclusive, accurate, and fair* and that it should be used as the definition of this critically important Madison standard. Therefore, it should be added to Chapter 41.02, Definitions.

**Argument #3: Gross volume is often used to stop projects and therefore should be dropped from the list of standards.**

●An inappropriately large building, measured in gross volume, is and should continue to be a legitimate reason to stop a project! A moment ago we referred to the West Gilman Street project and noted that its gross volume was 17 times greater than other buildings within its VRA. There can be no question that gross volume was one of the major reasons why this project was rejected by the Common Council, and rightly so. Here is the excerpt from 33.19 on this point:

"The gross volume of any new structure shall be visually compatible with the buildings and environment with which it is visually related."

●To allow a building 17 times larger in gross volume than other buildings within 200 feet, mocks the clear standard noted above in 33.19! In fact, had this standard *not* been in effect and applied, this huge SBA building may have been built because, as SBA proponents argued, it satisfied nearly all of the other 33.19 standards tied to "visual compatibility." Happily, the Common Council applied the correct definition of volume and refused to set an insidious precedent based on "perceived volume."

**Argument #4: Nobody keeps track of a building's gross volume, so we can't include it as a standard.**

●The calculation of gross volume will be necessary *only* when an applicant wants a certificate of appropriateness (COA) to increase the size of a structure in a historic district. This will require the need to calculate the gross volume of buildings within a 200 foot radius of the subject property, that is, within its visually related area (VRA).

●For city employees such calculations can be done relatively quickly using city assessor data (square footage by floor), GIS data, three-dimensional CAD programs such as Sketch Up, and laser measuring devices. In fact, cubic footage calculations have already been done and entered into a data base for all

buildings in the Mansion Hill Historic District, and this is the district where most gross volume calculations will surely have to be made.

- Will this calculation require staff work? For sure. Will it take a lot of time? No, it won't. Should it be done? Absolutely. The fact that staff must do several simple calculations for a few COA applications should never be construed as a reason to delete gross volume as a district standard.
- The huge advantages of using gross volume are to increase objectivity, clarity, predictability, consistency and fairness in the administration of the ordinance.

**Argument #5. Examination of Madison's five historic districts showed that only two used the term "gross volume." Therefore, the term is not needed for any historic district.**

- Mansion Hill and Third Lake Ridge use gross volume as a standard, but University Heights, First Settlement, and Marquette Bungalows do not now use it. Do these facts mean that gross volume can therefore be deleted? No!
- As districts age, market pressures in all five of Madison's districts will increase demand for larger replacement buildings, and this trend will cause gross volume to become a more important size-regulating tool. This can only mean that gross volume needs to be retained for districts that have it now, and that other districts will want to add it in the future. Therefore, this critically important quantitative metric must remain a part of Madison's historic preservation toolkit.

## **CONCLUSION:**

Madison's historic resources cannot be effectively protected without the inclusion of the gross volume standard.

The lack of a clear definition can only lead to confusion and conflict. Common sense dictates that gross volume must be clearly defined as a physical volumetric measurement in the definitions section. This ordinance should not weaken existing historic district standards by imposing a tortured, subjective definition of the term.

Gross volume must be restored to its rightful place in the "checklist" of possible standards for historic districts.