



CITY OF CAMBRIDGE

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OFFICE OF THE CITY MANAGER

MAY 15, 1995

To: Robert W. Healy, City Manager

From: Bob Bersani, Commissioner of Inspectional Services

Subject: Council Order #28, dated 5/8/95 RE: WHAT REGULATIONS GOVERN THE EXCLUSION OF MECHANICAL SPACES FROM THE ALLOWABLE FLOOR TO AREA RATIO CRITERIA FOR NEW BUILDING DEVELOPMENTS IN RESIDENTIAL AREAS.

1. Background: Floor Area Ratio (FAR), which is defined as the ratio of gross floor area of the structure to the total area of the lot, is a critical zoning control in determining the size/volume of structure that can be built on a particular lot. In residential districts, this floor area ratio (FAR) ranges from 0.5 in Residence A-1, A-2, and B zoning districts all the way up to 3.0 in Residence C-3 and C-3A districts.

Thus, for a 10,000 square foot lot in an A-1 district, a house with a gross floor area of 5000 square feet ($10,000 \times 0.5 = 5000$) could be built. On the same size lot in a C-3 district, a 30,000 square foot structure ($10,000 \times 3.0 = 30,000$) could theoretically be built assuming other zoning controls, e.g.; setbacks, open space, height, etc., could be met.

2. Discussion: In computing the gross floor area of the structure, the Cambridge Zoning Ordinance allows certain areas to be excluded from this calculation. Thus, using the house in the A-1 district on the 10,000 square foot lot, it may be permissible to build a house larger than the 5,000 square feet if spaces in the structure can be excluded from the gross square footage calculation. This could be an advantage to a developer in marketing the property and for the prospective owner if the floor area could be effectively increased.

The more significant examples of areas that are excluded from this gross square footage calculation by the Zoning Ordinance (definitions under pg. 2-4) are:

- a. basement areas (and attic spaces) devoted to operations and maintenance of the structure such as heating and cooling equipment, electric and telephone facilities, fuel storage, etc.;
- b. basement spaces with less than 7 feet, three inches of ceiling height;
- c. attic spaces with less than 5 ft. of ceiling height; and,
- d. garages.

A key point that should be noted here is that only one of the criteria need be met to qualify as an exclusion. Therefore, if the basement height were less than 7 ft., 3 in, the entire basement would be excluded from the gross floor area calculation regardless

of the amount of space devoted to operations and maintenance. Also, the Zoning Ordinance does not restrict how the excluded space can be utilized as that is controlled by the Building Code. In the example of a basement of 7 ft., 2 in. in height which would be excluded from the gross square footage calculation, the space could be used as a recreation room, kitchen, or bathroom as the Building Code only requires a 7 ft. ceiling for these areas whereas it requires 7 ft. - 3 in. in all other habitable areas.

My understanding is that in the past there have been proposals to lower the basement ceiling height to something below 7 ft. - 3 in. in order to qualify for the gross floor area exemption. Currently, the Planning Board Staff is considering proposing the basement height be lowered to 7 ft. - 0 in. This would be consistent with the Building Code and the result would be that, for new construction, basements would have to be less than 7 ft. in order to qualify for the exemption and these spaces could not be used for any type of habitable space.

3. Comparison with Surrounding City and Town Ordinances/By-Laws:

Excluded from Gross Floor Area

	<u>Mechanical Space</u>	<u>Basement Height</u>	<u>Attic Height</u>	<u>Garage</u>
Cambridge	yes	less than 7' 3"	less than 5' 0"	yes
Boston	yes	no mention	no mention	yes (for basement only)
Brookline	yes	non-habitable space (note 2)	non-habitable space (note 2)	yes
Newton (note 1)	yes	not applicable	not applicable	yes
Wellesley (note 1)	no	not applicable	not applicable	no

Note 1 - The size of buildings in Newton and Wellesley are controlled by the ratio of the building footprint to the lot size instead of the floor area ratio. Therefore, attic and basement heights are not significant.

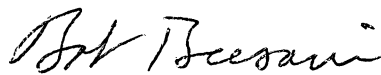
Note 2 - Brookline exempts from gross floor area basement and attic areas that are not used for human occupancy instead of using a height limitation as is done in Cambridge.

4. Discussion of Mechanical Space Exemption: As noted in para. 2 above, an exemption from gross floor area is allowed in the Cambridge Zoning Ordinance for areas in basements, cellars and attics that are **devoted** for mechanical equipment necessary for building operation and maintenance (heating, cooling, electrical, telephone, and fuel storage). Language in the ordinances and by-laws of surrounding cities and towns on this exemption is similar but not as specific. None of the ordinances designate area limitations for mechanical rooms and this would probably not be appropriate as each case would be dependent on design and engineering considerations for the particular building.

The procedure in Inspectional Services is for the applicant to demonstrate that the mechanical space for which an exemption is being requested is appropriate given size of equipment, clearance and safety considerations. If the space is larger than is deemed necessary by Inspectional Services, then the exemption would be reduced accordingly.

In order to insure that there is no question as to how the size of the mechanical space exemption is determined, I will recommend to the Planning Board staff that the changes now being proposed in the gross floor area definitions include the above procedure.

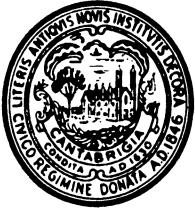
Very truly yours,



R. R. Bersani

cc

Russell B. Higley



CITY OF CAMBRIDGE
CAMBRIDGE, MASSACHUSETTS 02139

TEL. 349-4300
FAX. 349-4307

EXECUTIVE DEPARTMENT
ROBERT W. HEALY
City Manager

RICHARD C. ROSSI
Deputy City Manager

June 5, 1995

To The Honorable, The City Council:

Please find attached a response to Awaiting Report Item No. 47, regarding what regulations govern the exclusion of mechanical spaces from the allowable floor to area ratio criteria for new building developments in residential areas, received from Robert Bersani, Commissioner of Inspectional Services.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert W. Healy", is written over a horizontal line.

Robert W. Healy
City Manager

RWH/mev
attachment

Consent Agenda # 6

8-196

REsponse to Awaiting Report Item Number
Forty-seven regarding what regulations
govern the exclusion of mechanical spaces
from the allowable floor to area ratio
criteria for new building developments in
residential areas.

In City Council,

June 5, 1995

Placed on file