

# City of Cambridge

*Richard C. Rossi • City Manager*



# Executive Department

*Lisa C. Peterson • Deputy City Manager*

January 11, 2016

To the Honorable, the City Council:

Please find attached a communication received from Public Works Commissioner Owen O'Riordan, City Engineer Katherine Watkins, Inspectional Services Commissioner Ranjit Singanayagam and Assistant City Manager for Community Development Iram Farooq relative to the Barrett, et al., Zoning Petition.

Very truly yours,

A handwritten signature in cursive script that reads "Richard C. Rossi".

Richard C. Rossi  
City Manager

RCR/mec  
Attachment(s)



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Department of Public Works

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*Owen O'Riordan, Commissioner*

Voice: 617 349 4800  
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January 11, 2016

**To:** Richard C. Rossi, City Manger

**From:** Owen O'Riordan, Commissioner, DPW  
Katherine Watkins, City Engineer, DPW  
Ranjit Singanayagam, Commissioner, Inspectional Services Department  
Iram Farooq, Assistant City Manager, Community Development Department

**Re:** Council Order 11, dated December 7, 2015  
Barrett, et al., Zoning Petition

Because a number of issues of concern have been raised by City staff, we are transmitting additional information regarding the Barrett, et al., Zoning Petition, which was passed to a second reading by the City Council on December 7, 2015 and could be adopted by a vote of the Council any time prior to February 17, 2016. Because of the concerns set forth below, City staff recommend that the Petition not be passed in its current form. This would allow additional time for study and development of a proposed zoning amendment that could better address the likely adverse impacts of development of basement and cellar space for usable and habitable space. In the alternative, if it is the will of the City Council to adopt the Petition, we recommend that the attached alternate version of the Petition, which is explained in detail below, be adopted in lieu of the Petition in its current form, as the alternate version includes measures designed to mitigate the adverse impacts of such development.

**The Petition**

There are two parts to the Petition:

- Part A would allow the creation of new "accessory apartments" by special permit from the BZA within single-family and two-family homes throughout the city. In current zoning, accessory apartments are only allowed in exceptionally large single-family homes in Residence A-1 and A-2 zoning districts. We recommend that these amendments apply only to single-family homes.
- Part B would allow all basement space to be excluded from Gross Floor Area calculations on a lot, either by right (in single-family and two-family homes) or by special permit (in multifamily, non-residential or mixed-use buildings). In current zoning, basement space is exempt from Gross Floor Area only if it is less than seven feet in ceiling height, or if it is used for parking or mechanical systems.

The information below addresses issues with the State Sanitary and Building Codes; concerns regarding encouraging greater use of basement space that is susceptible to flooding, which is a recurring problem throughout Cambridge that will be exacerbated by the effects of climate change; and other issues raised by City staff and the Planning Board and discussed by the Petitioner during the hearing process (see attached letter). It should be noted that the proposed zoning changes would apply to every property in the city, and therefore it is not possible to consider its full range of impacts without undertaking a more comprehensive study.

## **State Code Issues**

The State Building Code imposes requirements for multi-family dwellings, such as sprinklers and handicapped accessibility requirements, which are not applicable to two-family homes. Therefore, if an accessory apartment were created in an existing two-family dwelling, the Building Code requirements for multifamily dwellings would be triggered. The Petitioner's letter suggests limiting the scope of accessory apartments to single-family homes, which would be accomplished by retaining the current definition of accessory apartments. This would avoid having the requirements for multi-family homes apply to existing two-family homes that add an accessory apartment.

It should also be noted that the State Sanitary Code requires a minimum basement or cellar height of seven feet for all habitable uses. Building permits cannot be issued for habitable space in basements with a height of less than seven feet.

## **Increased Risk of Flooding**

The intent of Part B of the Petition is to encourage more usable space, both residential and non-residential, to be created below-grade in both existing and new buildings throughout the City. When Part A and Part B of the Petition are considered together, it raises the potential that additional below-grade apartment units might be created in neighborhoods that have predominantly single-family and two-family dwellings. DPW is concerned about the proposal to encourage greater use of basement space that is susceptible to flooding, especially in light of the recently completed Climate Change Vulnerability Assessment (CCVA). DPW recommends that any zoning changes associated with increased use of basement space not proceed independent of the Climate Change Preparedness and Resilience Plan, which is currently being developed by the City based on the findings of the CCVA.

Some of the common risks associated with basement living space include overland flooding, sewer backups, and moisture leading to mold or other health concerns. These issues have all been the subject of discussion related to the Basement Housing Overlay Zoning in recent years. In some cases, appropriate measures can be taken to mitigate the risks. For instance, the Basement Housing Overlay Zoning requires separated sewer / drainage lines and backflow prevention for all basement units within the overlay district, and various measures can be taken to prevent moisture or remove mold if it occurs.

However, little can be done to avoid impacts on basement spaces when overland flooding occurs. This type of flooding is already a problem in many parts of the City and may be exacerbated over time with the effects of climate change.

These issues were identified in the Basement Housing Overlay Zoning discussion, resulting in the inclusion of the following measures as requirements for any special permit authorizing basement housing units in the overlay district:

- All health and safety codes must be complied with, and the special permit may include conditions meant to mitigate risks to occupants;
- Buildings must have fully separated sanitary sewage and storm drainage;

- Basement units must include backflow prevention devices and other measures deemed advisable by the City Engineer; and
- An engineering report that assesses the history and risk of overland flooding must be submitted by an applicant and reviewed by the City Engineer in connection with any special permit application. The assessed risk would be a factor in the decision made by the special permit granting authority.

In addition, through the Climate Change Preparedness and Resilience Plan, resiliency recommendations for new buildings and existing buildings will be developed. These recommendations will include:

- Measures to reduce the likelihood of flooding; backwater valves, barriers for floodwater entering below grade areas, etc.; and
- Measures to reduce the impacts of flooding; raising mechanical equipment, using mold resistant building material, etc.

The Petitioner's letter presented to the Ordinance Committee on November 19, 2015 suggests modifying the Petition to "Provide guidelines for safe use and design and limit applicability to non Fema flood zone areas." Staff strongly agrees that flood risk factors should be a major consideration when new habitable basement space is created; however, there is no language to this effect in the Petition currently before the Council. We therefore recommend that if it is the will of the Council to adopt the Petition, the Council adopt the attached alternate petition language which includes provisions that address mitigation of adverse flooding impacts.

### **Additional Zoning Issues**

The Petitioner's letter to the Ordinance Committee also responded to some issues that were raised by CDD staff and addressed in the Planning Board's recommendation, which was to not adopt the Petition in its current form. The following issues mostly relate to conflicts between the proposed zoning language and the application of current provisions in the Zoning Ordinance.

One key issue is how "accessory apartment" is defined. In Cambridge's current zoning, and for other municipalities that allow accessory apartments, an accessory apartment is a separate dwelling unit contained within a single-family home. We recommend retaining the current limitation that allows for an accessory apartment only in single-family homes. Another issue raised was how the accessory apartment provisions would be applied to more newly constructed buildings, because the intent is to provide for more efficient use of existing, larger homes, rather than encourage new homes to be built with accessory apartments in them. At this time, we recommend continuing to limit the provision to homes that were first built prior to 1940.

There are also issues with how accessory apartments are factored into other zoning requirements, particularly the lot area per dwelling unit (which controls the number of units allowed on a lot of a given size) and parking requirements. Current zoning requires at least 3,000 square feet of lot area per dwelling unit, meaning that a single-family home with an accessory apartment would only be allowed on a lot of at least 6,000 square feet. The Petition proposes changing that requirement, which raises a question about how the lot area per dwelling unit requirement would be applied to accessory apartments. The Petitioner's letter to the

Ordinance Committee suggests that accessory apartments should not be counted in determining lot area per dwelling unit requirements. We recommend that the Council reject this proposed change. Current zoning also requires one off-street parking space for an accessory apartment, just like other dwelling units, and the Petition proposes removing that requirement. The Petitioner, however, has suggested in his letter to the Council that the existing provision in the ordinance pertaining to the requirement of one parking space for each accessory apartment be retained, which we agree with. We therefore recommend that the Council adopt the attached alternate Petition language.

Another issue is that the Petition would amend the definition of the term Gross Floor Area (GFA) in a way that relies on special permit approval. It would be inadvisable to have a defined term that changes its meaning based on whether or not a special permit is granted on a case-by-case basis, because in the absence of a special permit, that definition would not have a consistent meaning. If the Council wishes to exempt basement or cellar GFA from zoning limitations in certain cases, we recommend adding the proposed provisions of Article 5.000 in the attached alternate version that would set forth the circumstances under which a special permit granting authority could waive GFA or Floor Area Ratio (FAR) requirements and limitations for basement or cellar GFA. We also recommend that a special permit be required to exempt basement or cellar GFA in two-family homes as well as larger buildings.

### **Summary of Issues**

In summary, City staff believe that the following issues would greatly benefit from further consideration before the Council s adopts the proposed zoning.

1. Flood risk in basement spaces
  - Requirements for sanitary/storm separation, backflow prevention and compliance with other applicable health and safety codes.
  - Requirements to assess flood risks and consider other mitigating factors in the review of any proposal requiring a special permit to exempt basement space or to create housing units below grade.
  - Future measures that may be recommended as part of the Climate Change Preparedness and Resilience Plan.
2. Unresolved issues and inconsistencies in proposed zoning
  - Limiting accessory apartments to single-family dwellings (accomplished by retaining the current definition of Accessory Apartment).
  - Resolve whether accessory apartments are included or excluded from lot area per dwelling unit calculations.
  - Resolve whether accessory apartments would require off-street parking.
  - Avoid creating a definition for Gross Floor Area that would rely on special permit approval to determine its meaning.

In the alternative, if it is the will of the Council to proceed with adoption of the Petition, we strongly recommend adoption of the alternate Petition language submitted with this memorandum.

RE: Barrett Petition

Dear Cambridge Ordinance Committee,

Prior to our meeting I would like to address some of the questions and concerns brought forward by CDD and during my Planning Board ("PB") hearing. First and foremost I wish to express my gratitude toward both CDD, PB, and this body for giving me the opportunity to state my case. The PB seemed daunted by some of the issues presented in the petition and suggested that bifurcating the petition, among other suggestions, was the best course of action. I completely agree with their logic on this point. Further, the majority felt that these issues presented changes that would be too impactful to consider outside of the master planning process. It is on this point that I disagree and in the following paragraphs will proceed through both CDD's critique and the PB's apprehension in an attempt to allay some of those concerns.

#### PART A

Jeff Roberts has provided an over view of my petition with some interesting critiques. CDD, through Robert's memo, brought five major points of concern under Part A of the petition; The distinction between an "accessory dwelling unit" and an actual unit of housing, difficulty in regulations of the "owner occupant requirement", elimination of the "lot per dwelling unit" calculation, parking, and long term effects on neighborhoods.

#### DISTINCTION BETWEEN ACCESSORY AND REGULAR HOUSING UNIT

The first complication Robert's memo foresees is that the petition includes both one and two family structures, where the current ordinance only allows their creation in one family structures. Two family buildings were included to increase the potential number of units this petition could create. Primarily CDD's concern is that without a proper distinction "an accessory apartment could simply be a mechanism to expand the number of units on a lot without triggering other zoning limitations." Roberts is correct in the assumption however this is a weakness of definition only and one that could be easily resolved by creating a clear definition and guideline for what an "accessory apartment" is. The model by-law comments briefly on this issue:

"The limitations on accessory dwelling units that are identified in the bylaw will strengthen the distinction between two-family dwellings, and single-family dwellings with accessory dwelling units. However, it is recommended that a community review its other definitions and residential bylaws to ensure the distinction."<sup>1</sup>

**Recommendation: Amend the petition to limit its scope to single family homes only, until we are able to properly define "accessory unit" to accommodate the full intent of this**

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<sup>1</sup> [http://www.mass.gov/envir/smart\\_growth\\_toolkit/bylaws/ADU-Bylaw.pdf](http://www.mass.gov/envir/smart_growth_toolkit/bylaws/ADU-Bylaw.pdf) (pg. 3)

**petition. This may be a matter for the Master Plan.**

#### DIFFICULTY ENFORCING OWNERSHIP REQUIREMENT

The second major issue Roberts indicated arose through the petition requiring an owner affidavit for those who wished to create an accessory apartment. This caveat was introduced simply as a means to limit abuse. However in the state guidelines for accessory housing, from which the basis of Part A was derived, the introduction of such a measure was placed as mere suggestion with the actual recommended language from the model bylaw being to encourage language that "reduce[s] the administrative burden on municipalities."

**Recommendation: Amend the petition to eliminate the requirement for an owner affidavit.**

#### ELIMINATION OF THE "LOT PER DWELLING" CALCULATION

Roberts memo mentioned some concern regarding the elimination of the so called "lot per dwelling unit" calculation ("LPD"). This was done to eliminate one tier of regulation on creating accessory apartments that is currently the most problematic for residents. The overarching goal of this petition was to free up some of the "ice" that limits development in this city or leads to costly hearings and litigation. There are many other regulations that prohibit unwanted changes to the character of neighborhoods that already add multiple challenges and layers to any project that I felt, and maintain, that the elimination of the LPD was absolutely necessary to creating homes within homes in this city. 51% of all homes this petition would affect are already "non-conforming" as to floor area ratio (FAR), thus I felt it imperative to remove an obstacle that would further exacerbate one's chances at the board of zoning appeal.

**Recommendation: No Change**

#### LONG TERM EFFECTS AND PARKING

Lastly, Roberts mentions the unknown long term effects the changes this petition proposes in relation to greater household density, parking, transportation, and public resources. To date few permits have been sought under the current zoning. I cannot speak to the long term effects of this petition, only that the current ordinance has done virtually nothing to speak to the importance of this issue. I have heard on many occasions that our goal as a community is to create more housing, and this petition does just that. It does so without changing the look any existing neighborhood or requiring one additional square foot be built. Further it allows flexibility for families over housed, under housed, and elderly folks in need of in home care. Thus any long term effect could be managed against the great amount of good it will create. I believe the group tasked with creating the master plan for the city called it "live tv planning."

The parking restriction was removed primarily because I felt its requirement was unnecessary and this comported to the model by-law recommendations. Further, one is required to seek a special permit for any accessory dwelling unit built, thus the BZA or PB could require parking as a restriction of use. The goal of the petition was to create housing, not more off street parking.

**Recommendation: Amend the petition to require one parking spot per accessory dwelling unit and allow for its removal by special permit.**

### Part B

Part B of the petition deals with basement spaces and eliminates their inclusion as gross floor area ("GFA") in spaces with heights above 6' 11" for single and two family homes by right, and for all else by special permit. The purpose of this section was to create parity between the sanitary code, building code, and our zoning ordinance. Under the current building code existing basement spaces in one or two family homes may be finished and used at 6' 8" or greater. Under the current sanitary code basement spaces with heights below 7' are considered unlivable and uninhabitable. Under our current zoning ordinance spaces above 6' 11" are considered against the overall build of one's home or total GFA. This petition seeks to recognize that the building code for one and two family homes is different than it is for larger residential and commercial structures and that we shouldn't be encouraging homeowners to finish spaces that are uninhabitable or unlivable. I also wanted to recognize that homeowners have rights and that given the expense of all square footage in Cambridge there is logic in encouraging development that is safe and makes efficient use of space.

The Planning Board's primary concerns were categorized as; unforeseen consequences and a lack of a definition of basement spaces. There were a few concerns about flooding in CDD's memo, mostly from so called "top flooding."

### UNFORSEEN CONSEQUENCES

The biggest concern with Part B was the unforeseen consequences that releasing GFA would cause. I have spent many hours contemplating this one point and while I was unable to address this during planning board discussion I hope to allay some of their concerns herein.

First, there are many restrictions on land use that govern setbacks, height, open space, and floor area ratio (FAR). All of these guidelines greatly limit what one is able to build on their land and would continue to restrict a homeowner no matter how much GFA he would unlock due to my petition. For instance, if I had 2000sqft in my basement, which I could now use above ground in a C-1 zone, I'd still be limited by FAR, height, side setbacks, and open space. Thus I may be able to get additional GFA, I'd have no place to put it. Granted, there will be instances where a homeowner might get additional GFA in an existing structure, but they are severely limited by article 5 and article 8 of our ordinance.



Secondly, in the case of new structures, people will almost certainly design with this newly unlocked space in mind. Thus a new home in that same C-1 zone would max out their GFA above ground, as they do now, and still be subject to the same setback, height, FAR, and open space limitations that older structures would have. The point is that we already have significant dimensional regulations on properties that this "unforeseen consequence" will be mostly anomalous. In the rare instance where a single or two family homeowner unlocks GFA down below and has FAR to build above ground he will be able to add to an existing structure, still subject to Article 8, and in the case of a new building simply be able to max the appropriate design and function of the home.

Lastly, the inclusion of larger residential spaces and commercial spaces was of some concern as well. Typically they are in zones that do not require setbacks or have significantly less limitations on construction and design than a typical residential district. However, a special permit was recommended as a means to curtail any abuse. Part of the failed recommendations of the C2 study in Central Square had such a caveat:

"4. FAR Exemption for Community-Desired Ground (First) Floor Uses Upon the granting of a special permit, the Planning Board may approve the exemption of any portion of Gross Floor Area (GFA) located on the ground floor or basement of a building from the calculation of GFA permitted on the applicable lot..."

This language provided the impetus to include similar language in my petition. Commercial space is an extremely expensive at the ground floor level and increasingly rare. Retailers, restaurateurs, and other merchants or often squeezed out of districts due to this. Thus it makes sense try to find alternative spaces for local retailers, makers, or other commercial interests that will be more resilient to market pressure and allow for a more robust local selection of spaces. Further, as we contemplate the redesign of our squares and commercial zones it makes sense to loosen regulations that may force local business out of existing basement spaces to create more lucrative above ground commercial frontage or stunt the creativity in the reuse of existing spaces.

**Recommendation:**

- 1) Limit the scope of Part B to single and two family homes only**
- or**
- 2) Limit the residential scope to single and two family structures only, and allow for existing commercial buildings to exempt GFA by special permit.**

FLOODING

There was concern voiced by CDD, the PB, and a few especially concerned citizens

about flooding. Climate change is real and effects us all, however I do not feel that this is an issue that should preclude rational use of below grade spaces residential or commercial. The building code already allows a homeowner to finish off below grade spaces in one or two family homes. Adoption of this petition would only make those spaces safer. We provided extensive guidelines for the so called Basement Apartment Overlay District, it makes sense to employ the same strategy for this petition. Anecdotally there are many spaces in Cambridge that this type of development would not work for and there are just as many if not more that it would be appropriate. This petition seeks to allow the homeowner to make this decision and encourages the creation of safer modern spaces that the city is aware of and is compliant with current building code standards.

**Recommendation: Provide guidelines for safe use and design and limit applicability to non Fema flood zone areas.**

Lastly, on a personal note, I would have taken the full recommendations of the C2 Advisory Board and applied them citywide. This would have included GFA exemptions for rooftop use above the third floor for private/public use, balconies, and ground floor retail spaces with frontage at or less than 30'. The need for space is truly great, and often commercial uses are ignored in favor of residential. However the spaces I'm suggesting we use are already built and simply waiting in plain sight. Some of what I have put here may be best vetted against a master plan for the city, however I feel most of this is well within the scope of the Planning Board and with my suggested amendments, even easier to disseminate. We do not have to throw touchdown passes in order to get good effective changes in zoning, sometimes it is the short yardage gained on the ground that gets us across the line. Thank you for your time.

Regards,

Patrick W. Barrett

## PART A

1. *Retain the current definition of Accessory Apartment in Article 2.000:*

**Accessory Apartment.** An accessory use with one or more rooms with separate kitchen and bathroom facilities, constituting a dwelling unit, located within and under the same ownership as a single family detached dwelling and designed for the occupancy of a single family.

2. *Amend Section 4.22.1 consistent with the overall intent of the original petition, but to limit the scope to single-family dwellings and to include provisions for basement housing units.*

**4.22 Accessory Apartments.** The purpose of this Subsection 4.22 is to allow for the creation of accessory apartments in Residence A all districts. ~~These districts contain a number of~~ Many existing large single family homes that are underutilized. Alteration of these homes to provide additional dwelling units would be prohibited in most cases due to the existing floor area ratio and/or lot area per dwelling unit requirements of Subsection 5.31. Given contemporary life styles, housing needs and energy and maintenance costs, it is beneficial to the City to allow greater flexibility in the use of such dwellings without substantially altering the environmental quality of ~~such residential districts~~ their surrounding neighborhoods. This Subsection 4.22 gives the Board of Zoning appeal authority to relax such requirements in certain instances as enumerated below.

**4.22.1** ~~In a Residence A District~~ all districts the Board of Zoning Appeal may grant a special permit for alteration of a single family, detached dwelling legally in existence as of the effective date of this ~~Subsection 4.22, (6/29/84)~~ Ordinance to provide one accessory apartment if the following conditions are met:

1. The dwelling was constructed prior to June 1, 1940, and has not been substantially enlarged since that date. The addition in the aggregate of two hundred and fifty (250) square feet or more of gross floor area shall be considered a substantial enlargement.
2. Prior to alteration the dwelling contains at least ~~three thousand five hundred (3,500)~~ one thousand eight hundred (1,800) square feet of gross floor area.
3. The lot on which such accessory apartment is located contains at least ~~three thousand (3,000)~~ five thousand (5,000) square feet of the ~~the~~ accessory unit shall be included in ~~calculating~~ the lot area per dwelling unit.

The "Part A" changes below retain the intent of the Barrett, et al., Petition to expand the allowance of accessory apartments to all districts in the City. However, staff would suggest continuing to limit the provision to existing single-family housing stock, to clarify that the creation of accessory apartments would not be allowed to further violate district FAR or lot area per dwelling unit requirements, and to retain the existing requirement of an off-street parking space for any accessory apartment.

4. Such accessory apartment shall not occupy more than nine hundred (900) square feet or thirty-five (35) percent of the gross floor area of the principal dwelling, whichever is less, in existence prior to the effective date of this Subsection 4.22 and shall not be located in a garage.
5. Any alteration which would increase the floor area ratio beyond that permitted in the district or which would further increase an existing violation of the applicable floor area ratio shall not be permitted.
6. Where an accessory apartment is created in a basement or cellar, the following additional requirements shall apply.
  - a. Dwellings must contain, or install, full separation between storm water and sanitary sewer lines from the building to the connection in the street regardless of whether the street in which the building is connected currently is separated.
  - b. Adequate, properly installed, backflow prevention devices that comply with all building code and other applicable requirements must be installed for all dwelling units located in a basement or cellar.
  - c. A special permit granted pursuant to this Section shall be conditioned upon full compliance with all applicable building and sanitary code requirements to be approved by the Superintendent of Buildings at the time of application for a building permit. As a condition of the special permit, the BZA may require reasonable measures as are deemed necessary for the adequate health, safety and privacy of occupants.
  - d. An application for a special permit to create an accessory apartment in a basement or cellar shall include a report on historical occurrences and future likelihood of basement flooding in the area of the property, prepared by a registered professional engineer, with a functional scope determined by the City Engineer to be appropriate to the location of the project. In general, the report shall assess the likelihood of flooding in the basement or cellar by way of sewer system backups or overland flooding and identify proposed mitigation to prevent any such flooding. The Applicant shall obtain approval of the report and proposed mitigation, if any, from the City Engineer prior to submitting a special permit application. As a condition of the special permit, the BZA may require preventive measures to safeguard against future flooding of the accessory apartment as recommended by the City Engineer.

The suggested added requirements would help to mitigate impacts associated with basement housing units.

e. A special permit shall not be issued for a basement or cellar accessory apartment if the property falls within a special flood hazard area designated as Zone A or AE on the Middlesex County Flood Insurance Rate Maps (FIRMs) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program.

In granting a special permit the Board may impose such conditions, including requirements for off street parking and limitations on other accessory uses of the premises, as it may deem appropriate to avoid detriment to the neighborhood or to nearby persons or property. The Board of Zoning Appeal shall evaluate each special permit application which involves exterior changes with the appearance of and character of the neighborhood and may require that there be no change or minimal change to any face of a building oriented toward a public way or visible from a public way.

No certificate of occupancy shall issue for any dwelling which contains any such basement or cellar dwelling units until the City Engineer has certified that all requirements of Section 4.22.1 (a) and (b) have been fully complied with and the Superintendent of Buildings has certified that all requirements of this Section have been fully complied with.

**4.22.2** The requirement for an off street parking space specified in Article 6.000 shall apply for the addition of one accessory apartment in a single family, detached dwelling in a ~~Residence-A~~ district.

**PART B**

3. Amend the definition of Gross Floor Area in Article 2.000 by adding (15) as follows:

**Gross Floor Area shall include:**

[...]

- (f) basement and cellar areas not excluded in (1), (3), and (9) and (15) below;
- (g) area of parking facilities in structures except as excluded in (2) below; and
- (h) any accessory parking spaces not in above ground structures if in excess of the maximum number permitted on the premises as set forth in Section 5.25 and 6.30.

**Gross Floor Area shall not include:**

- (1) areas used for off street loading purposes;
- (2) area of parking facilities in structures located underground and the area of on grade open parking spaces outside the building footprint at or below the maximum number permitted on the premises as set forth in Sections 5.25 and 6.30;
- (3) basement and cellar areas devoted to the operations and maintenance of the building such as heating and cooling equipment, electrical and telephone facilities, and fuel storage;

[...]

- (9) basement and cellar spaces with less than seven (7) feet of ceiling height measured from the floor to the line of the bottom of the floor joists, or to any subfloor or finished surface above any floor joists that are spaced not less than four (4) feet on center, and further provided that the basement or cellar is not a Story Above Grade as defined in the State Building Code.

[...]

- (15) Any basement or cellar living space in any single-family home.

The approach suggested would exclude basement GFA from the definition only in single-family homes. The following page suggests a preferred approach to allowing a more general exemption of basement GFA by special permit.

4. Create the following Section 5.29 in Article 5.000:

5.29 General GFA Exemption for Basement or Cellar Spaces. Any basement or cellar space that meets the definition of Gross Floor Area (GFA) in Article 2.000 of this Zoning Ordinance, and is not otherwise exempt as-of-right from GFA or FAR limitations, may be exempted from GFA and/or FAR limitations upon issuance of a special permit by the Board of Zoning Appeal (BZA). Prior to granting a special permit pursuant to this Section the BZA shall determine that the following requirements have been met along with the general special permit criteria in Section 10.43: prior to the issuance of a certificate of occupancy the City Engineer shall certify that all requirements of Section 5.29 (b) and (c) have been fully complied with, and the Superintendent of Buildings shall certify that all requirements of this Section have been fully complied with:

- a. Any exempted basement or cellar GFA shall comply with all applicable building, health, and accessibility codes. A special permit granted pursuant to this Section shall be conditioned upon full compliance with all applicable building and sanitary code requirements to be approved by the Superintendent of Buildings at the time of application for a building permit. As a condition of the special permit, the BZA may require reasonable measures as are deemed necessary for the adequate health, safety and privacy of occupants.
- b. Buildings must contain, or install, full separation between storm water and sanitary sewer lines from the building to the connection in the street regardless of whether the street in which the building is connected currently is separated.
- c. Adequate, properly installed, backflow prevention devices that comply with all building code and other applicable requirements along with any additional measures recommended by the City Engineer and required by the BZA as a condition of the special permit must be installed for all exempted basement or cellar GFA.
- d. An application for a special permit pursuant to this Section shall include a report on historical occurrences and future likelihood of basement flooding in the area of the property, prepared by a registered professional engineer, with a functional scope determined by the City Engineer to be appropriate to the location of the project. In general, the report shall assess the likelihood of flooding in the basement or cellar by way of sewer system backups or overland flooding and identify proposed mitigation to prevent any such flooding. The Applicant shall obtain approval of the report and proposed mitigation, if any, from the City Engineer prior to submitting a special permit application. The City Engineer may recommend

This framework would allow consideration of basement GFA exemptions by special permit without adding ambiguity to the definition in Article 2.000. The suggested criteria are meant to mitigate flood impacts, but other criteria could be considered as well.

- and the BZA may require as a condition of the special permit preventive measures to safeguard against future flooding of the exempted basement or cellar GFA.
- e. A special permit shall not be issued pursuant to this Section if the property falls within a special flood hazard area designated as Zone A or AE on the Middlesex County Flood Insurance Rate Maps (FIRMs) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program.