COUNCILLOR KELLEY
COUNCILLOR ZONDERVAN

WHEREAS: Flat roofs and associated central drains on residential three-story homes can lead to more storm water entering Cambridge’s sanitary sewer; and

WHEREAS: These flat roofs may be on homes that have been insulated or otherwise improved for energy efficiency with the result that snow and/or ice during the winter may build up amounts unanticipated by the original building designers; and

WHEREAS: Climate change appears to be bringing more episodes of heavy snow and rainfall during winter months, as experienced during the winter of 2014-2015 and again in 2017-2018, and with clogged drains this results in more buildup of snow, ice, and water on flat roofs than may be safe, especially with an energy-efficient building which helps keep rooftop ice and snow from melting away; and

WHEREAS: Retrofitting flat roofs to allow angled drainage to the side of residential three-story houses would alleviate snow, ice, and water buildup safety concerns and would decrease the amount of storm water going into Cambridge’s sanitary sewer system; and

WHEREAS: The expensive alteration of putting a pitched roof on a flat roof could be offset by the added value of increasing interior space in the existing home and possible improving other options for room use; and

WHEREAS: The extra height and living space created as a result of installing a pitched roof may negatively impact neighbors; and

WHEREAS: The Special Permit process used for other challenging zoning situations may be appropriate in this case; now therefore be it
ORDERED: That the City Council refer to the Ordinance Committee and the Planning Board, for hearing and report, the proposed amendments to Article 5.000 of the Cambridge Zoning Ordinance:

Proposal for converting flat concave roofs to a kind of greenhouse/glass porch

Z.O. 5.55

In an effort to enhance the City’s commitment to mitigating environmental impacts of certain older types of residential buildings, namely so-called “triple-deckers”, while improving the City’s storm-water management, modifications to the applicable dimensional requirements of this Article 5.000, in particular regarding FAR and height limitations, may be authorized under the following circumstances:

Residential buildings with a flat (concave) roof which may have poor upper-level thermal insulation and/or contribute to important heat island effects, or may suffer from the secondary effects of over-insulation, and on which a drain pipe collects water from the roof and combines it with household waste-water, discharging into a single outflow pipe to the municipal sewer line

Provided that the resulting construction will:

- significantly increase the thermal efficiency of the building
- entirely eliminate rain water entry from the concerned roof into the sewer system, and
- said rain water is harvested on the property at the rate of 1/8 gallon per square foot of roof area, with the remainder dispersed at the ground to follow its natural path without direct encumbrance onto abutting properties,

the construction of a partial structure relieved from the applicable FAR and height limit may be permitted within the following limits:

- Additional height not to exceed 10 ft. above the existing roof line of the building
- Footprint to be no closer than 3 feet from either long edge or rear side of the building, no less than 6 feet from front/street-side of building, and
- Additional FAR not to exceed 20% of the existing FAR of the building.

Furthermore, in enhancing alternative energy sources (Article 22), additional positive consideration will be given to projects that improve the:

- installation of solar panels (impractical on residential flat roofs)
- use of passive solar heating, convective cooling, seasonal shading with natural plants,
- using rainwater at the roof level or floors below,
- planting flowering bushes and vegetation attractive to pollinating insects at the roof level, and
- harmonization of the new roof profile with the neighborhood architecture.