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#149-21 and #11-21

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Barney S. Heath
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MEMORANDUM

DATE: October 8, 2021

TO: Councilor Deborah Crossley, Chair, Zoning & Planning Committee
Members of the Zoning & Planning Committee

FROM: Barney Heath, Director, Department of Planning and Development
Jennifer Caira, Deputy Director Department of Planning and Development
Zachery LeMel, Chief of Long Range Planning
Cat Kemmett, Planning Associate

RE: **#149-21 Requesting a discussion with the Planning Department**
COUNCILORS LIPOF, CROSSLEY, RYAN AND ALBRIGHT, requesting a discussion with the Planning Department to address concerns relative to the trend of significantly raising grade elevations on lots, using retaining walls, terracing and other means to add soil to conceal a raised basement, which can lead to new buildings that are significantly taller than nearby existing houses in the area, cause denuding of wooded areas and increasing storm water runoff.

#11-21 Request for Ordinance requiring topographic data prior to building permit issuance
COUNCILORS CROSSLEY AND ALBRIGHT requesting an ordinance to require that topographic data be provided on surveys of existing and proposed conditions currently required for new construction and additions, prior to issuing construction permits.

MEETING: October 14, 2021

CC: City Council
Planning Board
John Lojek, Commissioner of Inspectional Services
Neil Cronin, Chief of Current Planning
Alissa O. Giuliani, City Solicitor
Jonathan Yeo, Chief Operating Officer
City Council

Overview

The subject docket items are intended to identify and address concerns regarding the significant altering of the existing grades when new single and two-family homes are built. Grading, terracing, and retaining walls are used to raise up the house, maximize areas that do not count towards floor area, build a full basement where there is a high-water table, and/or to create a flat yard. The effect of these grading alterations are homes that appear taller than those nearby, the potential for increased stormwater runoff, and aesthetic and safety concerns regarding retaining walls.

Existing Regulations

Height

The Zoning Ordinance sets maximum height and floor area limits for new single and two-family homes. Height is measured from the average grade plane (Section 1.5.4 F), which represents the average of finished grade elevations around the perimeter of the building. The maximum height is then measured from this plane. The average grade plane is based on finished grades, which may be very different from existing grades. For example, a site for a new single-family home could use soil and retaining walls to first build up the site prior to constructing the home. The new grades, which may be significantly higher than the existing grades of the site as well as the neighboring sites, are then used to set the baseline for the maximum height.

Grading and retaining walls

Prior to 2009 the Zoning Ordinance required a Special Permit to change the existing grades of a site by more than three feet. This was primarily intended to protect abutting properties from drainage problems caused by grade changes. While well intentioned, the three-foot regulation became difficult to implement. Strictly interpreted it would require a Special Permit any time a foundation was excavated, or a hole was dug, regardless of the size of the site and likelihood that the grading would result in stormwater runoff. The Commissioner of Inspectional Services issued interpretations over the years that this provision was not applicable to foundation excavations or to excavations leading to garages under residences. This resulted in developers attempting to use this interpretation to justify major driveway and hillside excavations that raised both aesthetic and engineering concerns.

In 2007 the zoning task force recommended that this provision be eliminated and be replaced by a Special Permit requirement for retaining walls over a certain height in setbacks and in 2009 the City Council adopted a Special Permit requirement for retaining walls greater than four feet located in a setback (Section 5.4.2). The intent was that limiting the height of retaining walls within the setback would limit the grade changes adjacent to abutting properties. Retaining walls outside of setbacks do not require a Special Permit and do not have any maximum height restrictions.

Stormwater

In 2009, along with the retaining wall regulations, the stormwater regulations section of the Zoning Ordinance (Section 5.3) was also amended to reference Engineering's thresholds for stormwater review (increase in impervious area by more than 4% of the lot size or 400 square feet) and to include language that the Commissioner of Inspectional Services and the City Engineer may reject a project if they believe it will cause runoff to or from abutting properties or the erosion of soil. The Engineering department is currently updating the Stormwater Ordinance, which will come before the City Council, and is expected to significantly expand the thresholds for stormwater review.

Issues

Height

Measuring height from the finished grade allows for significant altering of existing grades prior to construction. This can be seen in the homes that terrace or create a pedestal for the new home, resulting in a height that can be significantly higher than adjacent homes. This may be desirable in order to construct a full basement where there is a high-water table, create a walk-out basement, provide a garage under the home, or to maximize the area within the home that is exempt from the floor area ratio (FAR) calculation. Solutions to explore include requiring an existing topographic survey

(representing the grades on the site prior to any work) and measuring height from the existing grade or measuring height from a constant grade, such as the back of sidewalk.

Retaining walls

Retaining walls over four feet (the point at which they need to be designed by a licensed engineer) require a Special Permit if they are located in the setback, however retaining walls located outside of the setback are by-right and are not subject to a height maximum. Recently there have been examples of properties undergoing significant grading with very large retaining walls in order to provide a flat yard on a sloped lot or to allow construction of a home on a steep lot. These large retaining walls present aesthetic and safety concerns for adjacent properties.

Possible solutions to explore include requiring a Special Permit for all retaining walls over a certain height, capping the maximum height of individual or terraced retaining walls, and providing a clearer engineering review process to alleviate safety concerns.

Stormwater

While the Zoning Ordinance gives the Commissioner of Inspectional Services and the City Engineer the ability to reject a project that they believe will result in stormwater runoff to an adjacent property, the thresholds of an increase in impervious area more than 4% of the total lot area or 400 square feet (whichever is less) may no longer be sufficient as the City is mostly built out. Most sites are being redeveloped, either with new buildings or major renovations to existing buildings, and may not result in a large enough increase in impervious area on the site to trigger a review. The Engineering Department has been working on an updated Stormwater Ordinance that is expected to expand the scope of projects that automatically trigger stormwater review. Once a new ordinance is adopted, Section 5.3 of the Zoning Ordinance will also need to be updated to be consistent.

Next Steps

Planning staff will work with Inspectional Services and Engineering to identify possible solutions to the identified issues and will return to the Committee next term.