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**Barney S. Heath**  
Director

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**DATE:** February 22, 2019

**TO:** Councilor Susan Albright, Chair  
Members of the Zoning and Planning Committee

**FROM:** Barney Heath, Director of Planning and Development  
James Freas, Deputy Director of Planning and Development  
Rachel Nadkarni, Long Range Planner/Zoning Specialist

**RE:** #518-18 - DIRECTOR OF PLANNING requesting review, discussion, and direction relative to the draft Zoning Ordinance.  
**Build Out Analysis.**

**MEETING DATE:** February 25, 2019

**CC:** City Council  
Planning and Development Board  
Jonathan Yeo, Chief Operating Officer  
John Lojek, Commissioner of ISD  
Alissa O. Giuliani, City Solicitor  
Marie Lawlor, Assistant City Solicitor  
Jonah Temple, Assistant City Solicitor

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On Monday, February 25<sup>th</sup>, the Planning Department staff will present the Build Out Analysis that compares the current zoning ordinance and the October first draft ordinance. Staff are here to work with the City Council to create an ordinance that has not only the City Council's policy goals at the forefront but also the best data analysis possible to understand the range of potential outcomes of the proposed draft.

The standards in the October draft were based on the highest conformity that we thought was possible/practicable at that time in consideration of the broader goals of this project:

- Rules that match the city as it is (increase conformity)
- Rules that reduce the city's vulnerability to speculative teardown/replacements of homes
- Rules that advance the City on several key issues like climate change and housing affordability and diversity

This project has required an extensive amount of time and thought to develop; there has never before been an analysis of the City's development potential at this scale or level of detail. The purpose of the buildout analysis was to test if the standards in the October First Draft were in fact achieving the goals, and to guide a recalibration of the standards for the second draft. After analyzing the standards from the initial October draft, staff determined that a number of changes would be necessary. Staff put together a set of "February Adjustments" based not only on achieving the goals above but also on additional feedback we have been hearing from the Committee and the public.

These February Adjustments are meant to spark discussion described in the attachment to this memo. Looking ahead to the second full draft at the end of May, staff is looking to the committee for guidance on how to further adjust each of the dials in order to narrow in the rules that will best serve the goals of this effort.

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This comparative build-out analysis represents the first of its kind for Newton. The project could not have been done without the master database created as part of the Pattern Book work and required the development of a complex model and related GIS based mapping.

### **What is a build out analysis model?**

This model is a series of Excel tables that describe the potential maximum build out of the current ordinance, the October draft, and the February adjusted draft. Like all models, this model makes assumptions about what could happen in the future and charts out the potential effects of the choices made by future decisionmakers, in this case, the decisions made by property owners (homeowners and developers alike).

The Zoning Ordinance sets out the rules of the game – what can and cannot be done with private property, but it does not specify what will happen. In Massachusetts, property owners have the right to develop their property in any way that is permitted within the limits set by state building codes and municipal zoning requirements. So, the zoning ordinance articulates the range of outcomes acceptable to the City of Newton.

The model allows comparison between different iterations of a draft zoning ordinance and the existing ordinance, not a prediction of what will happen under these different zoning ordinance versions. The model is limited in its predictive ability - it cannot gauge what property owners will choose to do, but the model can tell us about the upper bound of that range – the maximum possible. We will be as clear as we can that the numbers presented represent "maximum possible" by-right scenarios. By definition, maximum possible is the outside limit – above and beyond what is likely to happen. As you will see in the analysis of the current ordinance, the "maximum possible" build out today represents almost double the amount of buildable square footage in the neighborhood residential districts and more than 2000 more units than have been built after more than 60 years since the 1953 zoning ordinance was adopted for the neighborhoods.

Predicting exactly how Newton would develop over time if the standards of the October Draft ordinance were put in place is difficult, if not impossible. The build-out analysis tells us how many lots,

how much square footage, and how many units would be allowed by the zoning, not how much is likely to be built. That distinction between what would be allowed and what would actually be built, and over what time period, is important to keep in mind.

The likely build-out scenario is dependent on several factors:

- Willing seller – how many property sales will occur
  - It is difficult to estimate how many properties will be sold in a given year. Demographics play a major role, but certainly are not the only factor. Many older adults are selling and moving into homes for the next stage of their life; while this is not the case with all members of that generation, it is a trend that has been ongoing for the past 10 years. This trend is likely to continue for the next several years, but the generational tipping point where more homeowners are of the younger Gen-X and Millennial generations will occur at some point.
- Market for the final product – how strong is the market for the type of development
  - One of the February Adjustments made is to make the 2-Unit Building Type exactly the same size as the House B, meaning that the units in the 2-Unit Building will be at most half the size of the largest House B. Now, a key question that we cannot answer is how the market will view these two products of equal size. Will the market want more 1-unit House Bs or more 2-Unit buildings? At the moment, our understanding is that there is a trend of converting existing 2-unit buildings into 1-unit buildings. Will this trend continue? Probably. For how long? No one knows.
- Zoning allowing the product – the range of options allowed
  - The model can show the “maximum possible” on a series of criteria, but it cannot predict which of the allowed building types, and what specific uses and unit mix will be constructed, or if the existing buildings will stay exactly as they are. Without predicting the likelihood of sales and the market shifts in housing demands, it is very difficult to gauge what the predictive “likely” scenario will be.

For a property to be developed, there must be simultaneous alignment of favorable market conditions, land and capital availability, and zoning; a set of conditions that have only periodically lined up in Newton’s history to produce significant levels of development. The last major occurrence was in the 1940s and 50s driven by government subsidies and encouragement for a significant portion of the population (with notable exceptions) to move to suburban neighborhoods. In Newton developers found open land for sale and a zoning ordinance that encouraged large homes on large lots.

In some ways, the standards in the October first draft represent what might have happened if the traditional development patterns, which represent the majority of the city, had continued without the lot size requirements put in place in the 1941/1953 zoning rules that mandated lower residential densities. Only 20% of all 1-2 family homes in the neighborhoods were built after the 1953 rules went into effect, and a full 2/3rds of all 1-2 family homes were built prior to 1941. While we cannot know exactly how the City might have developed differently, it is probable that there would have been a modestly higher number of residential units of smaller sizes on a greater number of residential lots.

The last 10 to 20 years have represented a time period in which Newton has once again seen strong development pressure as the Boston region has emerged as a global center for innovation drawing major technology and science related employment with high incomes. With Newton's optimal location relative to both Boston and Route 128, transit access and good schools, the City has drawn this growing affluent population. At the same time, with the aging of the baby boomer generation, one of the largest age cohorts in US history, there are a large number of homes coming up for sale, creating the land availability necessary to spur development. Thus, the confluence of these three factors, a strong market, availability of land and capital, and zoning, have spurred redevelopment activity in Newton's neighborhoods. However, even with this period of more intense development, and more than 60 years under the 1953 zoning ordinance, the City is far from "built-out" under existing zoning, highlighting again that zoning alone is not destiny and that full build-out under the standards of the new zoning ordinance, whatever they might be, will likely occur incrementally over decades.

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As detailed and extensive as this model is, it suffers from the weakness of all models in that it is only a model. It makes a set of assumptions about future human behavior and then charts out the potential ramifications of that behavior over a large population and land area. However, every single number in the various tables that make up this model represents a series of potential decisions made by one or more individuals – a set of decisions that we cannot possibly predict. The results of this model represent a possible, maximized outcome, not a prediction of what will happen nor even what is likely to happen.

There were a number of assumptions and guideposts that helped to direct this work:

1. By-Right Only – The build-out analysis task was to understand, to the extent possible, the implications of the October 1<sup>st</sup> Draft ordinance and the implications of greatest interest are those by right projects that conform with the written ordinance but are not subject to additional discretionary review. Development of any type that requires a special permit introduces a degree of complexity that was beyond the capacity of our modeling ability. The reason these types of projects require a special permit is because their feasibility depends on a range of aspects unique to a project requiring a discretionary review and conditioning. Unique factors are difficult to model.
2. Residence Districts Only – Similarly, the Village Districts introduce a very high level of complexity as lot patterns, ownership patterns, and other factors are far more complex than typically found in the Residence Districts. We are developing tools to investigate and model these districts further, but for now, there is already a significant series of results to cover just in the Residence Districts.
3. Maximum Build Analysis – Build Space (total sq. ft.) and Number of Lots – A central premise of the 1<sup>st</sup> Draft ordinance is that we are directly regulating the top concerns about residential lots: the size of the buildings and the placement of those buildings. The current ordinance focuses on lot size, and then building size is determined based on the size of the lot. By focusing directly on building sizes, frontage (width of a lot), and the setbacks (how far the building needs to be from neighboring properties and the street), the ordinance can directly regulate the placement of the buildings on a property. The current lot size-based rules, given Newton's highly varied physical environment, has resulted in disruptive new buildings in Newton's neighborhoods.

This does not mean that lots can be infinitely small. The standards for each building type combined with the setbacks and maximum lot coverage for each district result in an effective minimum lot size for every building type allowed by-right in each of the residence districts. Staff used this methodology to investigate two “full build scenarios:” one in which the maximum building size allowed is anticipated and one that minimizes building size in an effort to maximize lot creation. In the presentation on February 25<sup>th</sup> we will demonstrate this methodology in detail and walk through the resulting ranges in lot creation, unit creation, and building bulk (sq. ft.).

4. Lot Split Analysis – The lot split analysis was done by taking frontage and effective minimum lot sizes, as described in #3 above, and identifying the number of residential lots citywide that met the size requirements necessary to be split. From there the maximum possible number of new units was calculated along with an estimate of the largest building types that could be created on those new lots.
5. Number of Units Analysis – The overall maximum possible number of units was calculated by estimating the maximum units possible for the largest building type that could fit on an existing lot. For lots that could be split, the maximum units was estimated based on a maximum number of units that could be created in the largest building types on each possible new lot. As noted above, given the realistic rate of production in Newton and the range of market factors involved, it is unlikely that the maximum number of units would ever be reached.
6. Teardown Vulnerability Analysis – The teardown vulnerability analysis assesses the risk of a property being of interest to speculative residential developers. These are the projects that involve a teardown and rebuild without a specific client but are simply completed on the assumption that the final product can be sold for a profit.

The teardown vulnerability analysis compares the maximum potential value and the maximum potential square footage of a property to the existing value and square footage. It is our understanding that there are two criteria a speculative builder looks for: first can they build at least 3800 sf (inclusive of an attached 2-3 car garage) and can the resulting new construction be sold for 2.4-2.5 times the purchase price of the property.

In this analysis, we estimated that the value of new construction is approximately \$600/square foot. We arrived at this number with the help of the City’s assessing department, and some residents testing the math on recent teardowns in their neighborhoods. The model finds that a speculative teardown occurs when both the 3800 square foot and the 2.4 times the final value triggers are met.

## **Results**

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In developing the 1<sup>st</sup> Draft Zoning Ordinance, our working hypothesis was that by tying the dimensional standards for lots and buildings to the dimensions found in the existing patterns of development and buildings in the city, we could create an ordinance that met the overall goals of the project. The build out analysis showed that we need to make some adjustments to the standards in order to achieve the stated goals.

- Rules that match the city as it is (increase conformity)

- Rules that reduce the city's vulnerability to speculative teardown/replacements of homes
- Rules that advance the City on several key issues like climate change and housing affordability and diversity

Attached you will find results pages for each district, which include:

- Key Takeaways from the Build Out Analysis
- Explanation of the February Adjustments package as applies in the district
- Options for additional changes and the implications for changing in one direction or another

Each district is meant to be readable as a standalone set of ideas, and some repetition occurs.

## **Conclusion and Next Steps**

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The build out analysis has been a substantial amount of work and incredibly informative to the development of the proposed ordinance standards. Our objective in this memo and the presentation is to help the Committee to develop a deeper understanding of how the proposed mechanisms work and the interplay between the standards, the level of conformity, and the potential results for development in the future.

Based on the feedback we get from the Committee on Feb 25<sup>th</sup> and following, as well as ongoing public feedback, staff will continue to assess potential changes to the draft ordinance. The next round of recommended zoning text and standards will be presented in the 2<sup>nd</sup> draft zoning ordinance at the end of May / beginning of June.