

MEMORANDUM

TO: George Proakis, AICP, Director of Planning
FROM: Judi Barrett
Eric Halvorsen, AICP
Jahangir Akbar
RE: Inclusionary Zoning Ordinance
DATE: April 11, 2016
CC: Kyle Talente

1. INTRODUCTION

RKG Associates, Inc. has completed the analysis of the impact of proposed changes to the City's inclusionary zoning (IZ) ordinance on development feasibility in Somerville. As we understand it, the Board of Aldermen has received a citizen petition to change the current affordable housing requirement from 12.5 percent of the total units constructed in any structure with eight or more housing units to 20 percent of total units in any structure with six or more housing units. If approved, the new policy would take effect immediately. It would also carry over to the proposed zoning ordinance should it be adopted in the future, unless the new code involves a different IZ policy.

To determine the impact of the proposed IZ amendments, RKG constructed an Excel-based financial feasibility model designed to perform iterative analyses of various development types while accounting for changes in market conditions. The model framework includes a series of construction cost and market value assumptions that can change depending on property location within Somerville. The model is also sensitive to changes in the percentage of affordable units in a project and changes to the target income group. (e.g., 50 percent of AMI, 80 percent of AMI, etc.). A more detailed explanation of the model, RKG's approach, and our methodology can be found in Section 3, Methodology. Below are a few preliminary key findings from our analysis. The findings are expanded upon in Section 4 of this memorandum.

2. PRELIMINARY KEY FINDINGS

- Increasing the required percentage of affordable units from 12.5 percent to 20 percent city-wide produces a lower rate of return for smaller multi-unit projects, with particular emphasis on projects under fifteen units.
- Smaller projects have a harder time absorbing a change in the rate of return than larger projects due to the overall size of the development budget. A 1 percent change in the rate of return on an eight-unit project could make a significant difference in the financial feasibility of the project.

- Assessed land values vary widely across the City. Where land values are higher, a change in the inclusionary housing policy will have a greater impact on financial feasibility and rate of return. A city-wide increase in the inclusionary housing policy could push development to parts of Somerville where land values are lower. In addition, it could continue to escalate sale prices and rents in locations where land values are higher in order to maintain the required rate of return.
- Increasing the required percentage of affordable units could have the unintended consequence of effectively lowering property values across the City. This is because developers will not pay as much for land if they have to designate more market-rate units as affordable housing. If the assessed value of land declines, it will not only affect city tax revenue but also diminish value from private property owners.
- The zoning district in which a development parcel is located has a significant impact on financial feasibility. The more restrictive the dimensional requirements, the harder it is to achieve a residential density which provides a high enough rate of return.
- Parking costs, especially if underground parking is required, create a major barrier to the financial viability of a project.

3. METHODOLOGY

RKG has developed a financial feasibility model for the City of Somerville to test the impact of changes in both inclusionary housing percentages and targeted income groups, on the financial performance of eight different building types. RKG's approach was to develop a dynamic model that reacts to changes in zoning, parking requirements, land values, construction costs, and achievable sale and rental prices based on parcel location. The model uses a series of default values or inputs to construct a baseline scenario of costs and revenues, but users can make manual overrides for a variety of factors using the model's interface page. These overrides are important because different developers may use alternative assumptions for the same building type, which in turn could affect financial feasibility.

3.1. Scenario Factors

The primary challenge in developing the model was to account for the variety of assumptions and factors that can change depending on where a developer may build within the City. Our task was to measure the financial viability of a particular development based on the inclusionary housing policy the model user chooses. The model allows the user to choose from the following inclusionary housing percentages, as requested by City staff:

- 12.5 percent;
- 14.8 percent;
- 15 percent;
- 16.67 percent;
- 17.5 percent; and
- 20 percent.

The model user can also redefine the household income threshold for pricing the affordable units. These choices include, also as requested by City staff:



- 40 percent of AMI;
- 50 percent of AMI;
- 60 percent of AMI;
- 65 percent of AMI;
- 70 percent of AMI;
- 80 percent of AMI;
- 100 percent of AMI; and
- 110 percent of AMI.

The financial feasibility of a project is also affected by other regulations the City has (or may) put in place through its own regulatory authority, which include:

- Zoning district (current or proposed);
- Parking district (current or proposed);
- Type of parking required;
- Special permit requirements; and
- Building type and allowable uses.

Each one of these model components and others are described below in Section 3.3, Model Components.

3.2. Data Collection

To obtain model assumptions based on the present real estate realities of Somerville, RKG conducted a series of interviews with local developers who have recently constructed residential and mixed-use projects in the City. During the two-day interview process, RKG interviewed developers to better understand the development climate within the City and obtain cost and revenue data for use in the model. These data points included, but were not limited to:

- Site development costs;
- Land acquisition costs;
- Construction costs;
- Permitting costs;
- Cost of operations for larger projects;
- Land and building values; and
- Projected rents and sales prices.

RKG conducted additional interviews with several small banks in Somerville that provide construction and end financing for development projects within the City. These interviews helped inform assumptions for:

- Exit cap rates;
- Lending terms;
- Interest rates;
- Expected rates of return;
- Discount rates; and

- Construction period.

Information about the current and proposed zoning ordinances was obtained from the Somerville Planning Department. RKG worked closely with planning staff to develop assumptions for building types, zoning districts, parking districts, and building dimensions. RKG relied on interviews with developers and banks to develop assumptions for land values across Somerville. Originally the model relied on assessing data to determine land values, but with the escalating cost of land, assessing data did not reflect the true market value of land in the city.

3.3. Model Components

As noted above, the model has to account for numerous factors in determining the financial viability of a development proposal. This section discusses some of the key components of the model, what they are, how they work, what impact they have on feasibility, and how they were developed.

Geographic Subareas

Somerville is a complex real estate environment where block-to-block values can swing in one direction or the other. When RKG interviewed local developers, they noted that land value (which is an important factor in financial feasibility) changes dramatically as one moves from eastern Somerville to western Somerville. To account for the variation in land values, RKG split the city into five distinct sub-areas based on parcel-level assessor's data reflecting assessed land values. The model then uses a sliding scale for land values that is dependent upon the number of units proposed as part of a development project. Within the model, assumptions such as land values, rent prices, and sale prices vary to make the model more realistic and geographically accurate. See Appendix 1, Figure 1 for a map of the five sub-areas.

Zoning

Zoning is a key model assumption and input. Zoning provides the framework that regulates what can be constructed on a parcel of land. It regulates the use of the property and the dimensions with which a structure must comply. The financial feasibility of a development relies heavily on the number of units that can be constructed on a parcel of land. If the zoning district's use and dimensional restrictions are too stringent, it makes it more likely that a project will not be economically feasible.

The model takes into account two zoning scenarios. For each development scenario, the model user can choose the current zoning district or the proposed zoning district, depending on which condition the user wants to test. A maximum developable building area (in square feet) was developed for each zoning district, taking into account open space requirements, building dimensions, and parking. The model responds to the size of the development parcel. In many cases, a larger parcel can yield more units, which can help with project feasibility.

Parking and Parking Districts

In addition to sub-area and zoning districts, the model also takes into account parking ratios for six different parking districts (three under the existing ordinance, three under the proposed ordinance). The primary variation between each of the districts is namely under commercial

parking ratios. This becomes important when looking at the feasibility of mixed use buildings that have both commercial and residential components. Under the current zoning ordinance, parking ratios for retail development can be as low as 0.67 spaces per 1,000 square feet of retail area to as high as 3.33 spaces per 1,000 square feet of retail.

Model users can also select the construction method for off-street parking. RKG assigned costs for surface parking, above ground parking structure, and below ground parking. The cost of parking is significant, especially when a developer is looking to utilize below-ground parking for a building. A single space can cost as much as \$36,000, compared to a surface parking lot space which is closer to \$5,500.

Building Types

In order to create consistency between the assumptions made under the current zoning and the proposed zoning, City staff provided RKG with eight building types to use within the model. These range from a small cottage-style single family home to a large mixed use building akin to Assembly Row. Each building type has a maximum allowable floor plate which helps to dictate the total number of units that could be constructed on a parcel of land. The model user can select from the eight building types on the interface page of the model and see how changes in the inclusionary percentage affects buildings of different scales.

Retail Space

Retail space comes into play when the model user select the mixed-use building type on the interface page. RKG created an assumption in the model that all first floor commercial space in a mixed use building would be leased out as retail and/or a restaurant. This also carries a higher parking ratio compared to office space, making the assumptions in the model a bit more conservative. The relatively high retail rent values in Somerville help with the financial feasibility of mixed use projects.

Construction Costs and Materials

RKG designed the model to represent an individual construction cost for each of the eight building types that can be selected by the model user. Marshall and Swift construction cost data was used to develop cost assumptions based on the type of construction materials, exterior finish, fit out of units, and if the building will include a commercial component on the first floor. The stick and stick-over-podium construction methods are the most common in Somerville, but taller buildings could be constructed in locations like Assembly Square, Union Square, or Innerbelt/Brickbottom using concrete/masonry stack methods.

Inclusionary Zoning and Triggers

The City's IZ policy is broken down into two distinct pieces: the percentage of total residential units which must be provided as affordable to a household meeting the target income threshold; and the number of units at which a development triggers the IZ requirement. Currently, the City's policy states that any development with eight or more residential units must make 12.5 percent of those units available as affordable housing to qualifying households. While there is a petition on the table to increase the percentage of affordable units to 20 percent in buildings with six or more units, the RKG model includes a number of choices to test various inclusionary policies. The model

allows the user to choose between six different inclusionary percentages and three different unit trigger (applicability) values. This was done in order to weigh the impact of potential changes and to better understand what inclusionary percentage will best balance the need for affordable housing production while not discouraging private investment in the City.

Target Income Thresholds

As discussed above, the model accounts for target income thresholds at which households would qualify for affordable housing units. RKG designed the model interface with eight different income thresholds ranging from 40 percent of area median income (AMI) up to 110 percent of AMI. This was necessary because different housing finance programs such as LIHTC or those offered through an organization like MassHousing have different income thresholds for affordability. The City also has a set of thresholds for establishing affordability for units. The model interface allows the user to choose from a variety of thresholds and percentages of affordable housing to visualize the financial impact of different affordability scenarios.

Treatment of Fractional Units

With the City's current IZ percentage set at 12.5 percent in most parts of Somerville, it is likely that a development over eight units will wind up with a fractional percentage of a unit. For example, if some developers constructed a ten-unit residential building, they would be required to provide 1.25 affordable units. The current ordinance would require one unit to be constructed, with the fraction of .25 to be made as a payment in lieu to the City. If the resulting fraction is 0.5 or greater, the developer is required to round up, resulting in construction of an additional affordable unit.

City staff asked RKG to design two additional fractional unit choices that could be tested in the model. The first is that *any* fraction of a unit would be rounded up to a whole unit, resulting in a new affordable unit. The second scenario is any fractional unit results in a payment in lieu to the City, meaning any fraction between 0.000001 and 0.999999 would result in a payment. These two additional scenarios will have a significant impact on the financial feasibility of a project, particularly if any fraction of a unit is to be rounded up to a whole unit.

Each of these model components, along with many others, are used as assumptions to run the financial feasibility pro forma. By constructing the model in a way that allows the user to make different choices based on location, building type, or income threshold it is easy to test the impact of these choices on financial feasibility.

4. FINDINGS

To test the model and the underlying development assumptions, RKG ran four test case scenarios using two different inclusionary zoning percentages to determine which variables have the greatest impact on financial feasibility. Table 1 (next page) highlights some of the key variables that comprise each of the eight scenarios.

Table 1: Scenario Variables

Scenario	Subarea	Zoning	Building Type	Parcel Size	Parking District	Inclusionary Percent	Unit Threshold
1	2	TOD-135	Large MU	45,000	Non-TOD	12.5%	8
2	2	TOD-135	Large MU	45,000	Non-TOD	20%	6
3	2	CCD-55	Medium MU	28,000	Non-TOD	12.5%	8
4	2	CCD-55	Medium MU	28,000	Non-TOD	20%	6
5	5	BA	Apartment	15,000	Non-TOD	12.5%	8
6	5	BA	Apartment	15,000	Non-TOD	20%	6
7	5	BA	Apartment	7,300	Non-TOD	12.5%	8
8	5	BA	Apartment	7,300	Non-TOD	20%	6

4.1. Inclusionary Percentage

Based on the model scenarios, a change in the IZ policy from 12.5 percent to 20 percent has an impact on the internal rate of return (IRR) which is used as an indicator of a project's financial feasibility. Through interviews with both developers and lending institutions, RKG was provided with an acceptable rate of return of 15 percent. A project with an IRR in this range would likely be considered profitable enough that lenders would invest in a project in Somerville. Based on the preliminary set of assumptions in the model, the eight different scenarios above generated an IRR range of between 13.4 percent and 17.5 percent. The impact of changing the inclusionary percentage was most prominent in the smaller projects (those under 15 units), where IRR dropped below 15 percent. It is worth noting that the current inclusionary percentage of 12.5 percent does impact smaller projects, but not to the point where lenders are likely to walk away. There may be other financial or risk factors that cause a lender to invest elsewhere, but it does not appear that the scenarios run under the 12.5 percent IZ requirement create returns that are below acceptable levels of local lenders.

Building permit data from the City show that a large number of residential projects in Somerville fall below the eight-unit trigger under the existing IZ policy. RKG also heard from developers that many try to keep their projects under eight units in order to avoid having to provide one affordable unit because of the impact to their financial return. Smaller residential projects will have a more difficult time absorbing a change in the inclusionary policy without some other cost offset or form of zoning relief. A 1 percent change in IRR on an eight unit project could mean the difference between moving forward on a development or not. This is likely the reason the City is seeing many smaller projects under eight units, and several very large projects (Assembly Row, Maxwell Green) that can spread the loss of income on affordable units across a larger project.

4.2. Land Values

As discussed above in the Model Components section, land values vary greatly based on a parcel's location in the City. As one moves from east to west, land values tend to increase. The amount of money a developer can pay for a piece of land is a critical component to the financial feasibility of a project. The higher the land value, the more a developer needs to offset their costs through things like higher density, lower parking, or increased sales prices and rents. RKG's model simulations have shown that land value is one of the key factors determining change in IRR. For a project that is on the financial margin, land cost is an important factor and one that private property owners may not be willing to negotiate.

The challenge for land values comes into play if the affordable housing requirement is increased from the current 12.5 percent because property owners will still want the same amount of money for their land as they can get today, but developers cannot afford to pay the same amount. If the IZ percentage increases without any cost offsets, developers will still have to pay the same price for the land with the same number of buildable units but will have to restrict additional market rate units as affordable. This has a significant impact on the amount of revenue the development can generate, which in turn affects the IRR.

Increasing the IZ percentage could also have an impact on private property values across the City. Under a scenario where the inclusionary percentage is increased, developers will likely no longer be able to pay the current market value for land because their rate of return on a development will decrease. If land is purchased at a lower value, it will affect the assessed valuation of not only the purchased property, but similar properties surrounding it (comps). This not only decreases the value of property owners' investments, but it also impacts tax revenue generated by the City which is a function of assessed valuation. It will be up to City policy makers to determine if the public good of producing additional units of affordable housing outweighs the potential loss of tax revenue.

4.3. Zoning

The zoning district which a parcel is located in can also affect the financial viability of a development proposal. While the current and proposed zoning ordinances differ in the way they regulate the built form on a parcel of land, they both still restrict the amount of built space a developer can construct. RKG created a value for maximum buildable area for each zoning district based on the current and proposed ordinance as a way to calculate the number of units a parcel of any given size could reasonably accommodate. It takes into account open space requirements, parking requirements, lot dimensions, and building height. This provides an effective building envelope, similar to how the proposed zoning ordinance is structured.

Under the current ordinance, zoning districts vary from restrictive to liberal in the way the district regulates land development. Not surprisingly, the less restrictive the zoning district's regulations are the more likely it is a development proposal will have a reasonable rate of return. For example, the Residence C zoning district has high setback requirements and a minimum lot size of 7,500 square feet. In a compact city, it is difficult to find many lots that match these minima within the district and valuable land can be taken up by generous setbacks. Open space and parking requirements also reduce the buildable area of the lot. Ensuring that these minimum requirements are in line with the character of the neighborhood is very important, but it is also important to be sure they are not restricting the creation of housing units.

4.4. Parking

Parking costs can have an impact on the financial feasibility of a development, particularly when there is a requirement (or need) to place parking in a structure or below ground. The typical cost of a surface parking space is around \$5,500. This cost increases to around \$28,000 for above-ground structured parking, and \$36,000 for below-ground parking. In some cases, in order to achieve a financeable unit yield, developers have to place parking underground to maximize building space.

This is especially true in a city like Somerville where average parcel sizes tend to be small, creating the dense compact built form that exists today. The building modeled under Scenario 1 produced sixteen units and would require twenty-seven parking spaces. If these parking spaces were to be provided in an underground structure, it would cost nearly one million dollars. If the parking were provided on a surface parking lot, it would save the developer close to \$800,000. On a small parcel of land, it can be very challenging to find the space for a sixteen unit building and a surface parking lot large enough to hold twenty-seven spaces. Where possible, the City should work with developers and residents to make parking ratios realistic and responsive to the needs of today's population.

4.5. Summary

From the results of the updated model and the new set of development scenarios tested, the primary impact of the increase to the IZ policy will be felt by smaller developments. More specifically, RKG believes a more substantial impact is likely for projects under 15 units in size when taking into account an increase in the IZ percentage. In addition to increased costs for providing additional affordable units, developers are also encouraged to place parking underground to mitigate the visual and physical impacts of surface parking. This too adds to the cost of development, as the price of underground parking is roughly six times higher than that of a surface parking space.

From a financial perspective, the model calculates a number of different outputs that can be helpful when determining whether a developer or a lender will choose to go forward with a project. Of these outputs, both the Internal Rate of Return (IRR) and Net Present Value (NPV) are industry standard financial viability metrics for a given project. While these are important metrics, they are not the sole arbitrators of financial viability, as project risk assessment and developer track record are also important factors. The IRR and NPV when examined together, offer significant insight to both a lender and developer. The IRR is the calculated annual return on investment, taking into consideration net operating income, investment holding period, and sales value. The NPV, is the present value of all future cash flows (both revenues and expenditures) for the project based on the holding period. Based on the size of the initial upfront capital investment in a project, small percentage changes in the IRR can have dramatic effects on the net present value. In smaller, less capital intensive scenarios, a hypothetical decrease in IRR of 2.5 percent may yield a loss of \$100,000 in calculated NPV which represents a significant percent decrease in the overall value of the project.

There are many projects that have been constructed across the city where developers have made the conscious choice to stay below the eight unit affordable housing threshold. If the inclusionary percentage is increased to 20 percent and the threshold dropped to six units, it is likely that this trend will continue with the possibility of discouraging private investment. This could have the opposite effect the City wants by creating a situation where residential development is slowed, resulting in the production of fewer residential units, including affordable units. RKG recommends that the City consider providing clear, meaningful cost offsets if the inclusionary percentage is to be increased in order to mitigate the financial impacts of producing additional affordable units. This could come in the form of a density bonus, tax incentives, zoning or parking relief, cash subsidies from City resources, and other mechanisms. If a density bonus is recommended, the city



should ensure the bonus is not illusory and that developers and the neighborhood are able to accept additional units on a given parcel.

Creating more affordable housing options for residents in Somerville is important, especially at a time when market rents and sale prices are increasing dramatically. At the same time, it is important to understand that policy changes can reduce financial feasibility and create regulatory barriers to future development.

Appendix 1: Supplemental Maps

Figure 1: Somerville Subarea Map

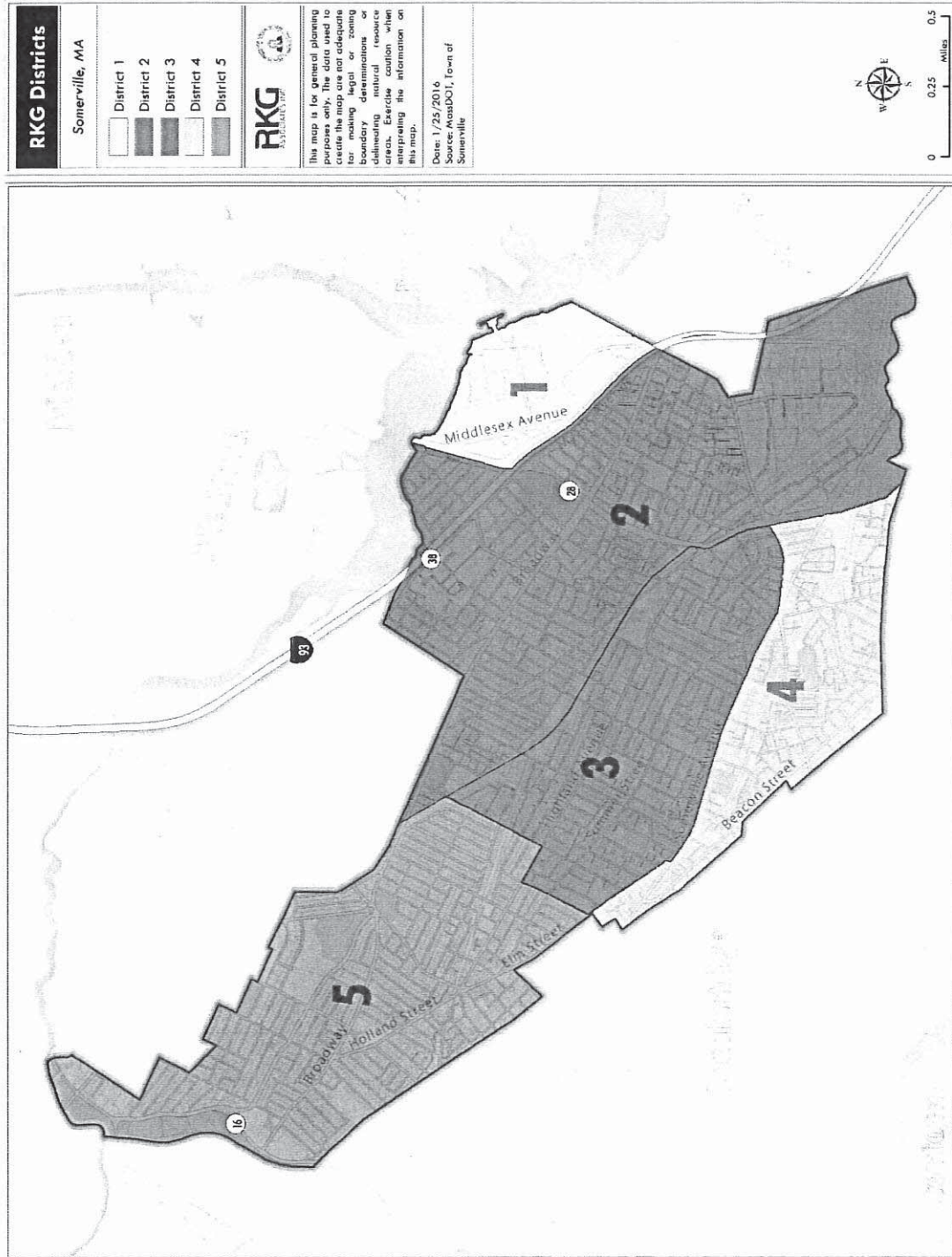


Figure 2: Current Zoning Districts Map



Figure 3: Proposed Zoning Districts Map



Figure 4: Proposed Transit Orientation Districts Map

