

POLICY BRIEF

# How Have Recent Rezoning Actions Affected the City's Ability to Grow?

In October 2009, the Bloomberg Administration celebrated its 100th rezoning, a significant milestone for a massive and unprecedented rezoning agenda that has affected more than one-fifth of the City and has significant implications for the City's development landscape.<sup>1</sup> These rezonings reflect a wide range of goals: advancing the City's economic development agenda; accommodating expected population growth (PlanNYC 2030 estimates the City will grow by one million new New Yorkers by 2030 over its 2000 population); and responding to the varied needs and preferences of the City's diverse neighborhoods.

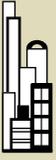
Some of these rezonings apply to only a few blocks, while others cover large stretches of land and have major implications for development at a neighborhood and even borough level. As individual rezonings were proposed and debated, each faced scrutiny, and sometimes a great deal of controversy, within the communities they would affect. Yet despite the close attention local stakeholders paid to each rezoning, there has been no comprehensive analysis of the net impact these land use decisions have had on the City's overall ability to accommodate

new growth, or on how the outcomes of these rezoning actions square with the City's stated development, environmental and transportation goals. The Furman Center has filled this gap by conducting the first statistical analysis of the cumulative impact of New York City's recent rezonings. We set out to answer several key questions:

- How have the rezonings changed the City's capacity for new residential development?
- Where has new residential capacity been added? Where has existing capacity been lost?
- What are the characteristics of communities that gained capacity? Of those that lost capacity?
- How does the location of new/lost capacity relate to the City's public transportation infrastructure?
- Does the location of new/lost capacity correspond to market demand and population growth?
- How likely is it that new capacity will be developed for residential use?

This policy brief summarizes our findings for each of these questions, and identifies areas where researchers and policymakers ought to explore these issues in greater detail.

<sup>1</sup> The "one-fifth" calculation excludes the City's park land. See press release, celebrating the 100th rezoning for more detail: <http://nyc.gov/html/dcp/html/about/pr102809.shtml>.



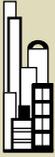
## Overview of rezoning activity in NYC

The current Zoning Resolution, which sets the parameters for what can be built in the City, was enacted in 1961. It replaced the City's original zoning ordinance, adopted in 1916, which was the first comprehensive municipal zoning ordinance in the nation. Many have criticized the Resolution as being indifferent to whether and how existing neighborhood context should determine what else can be built. Since 1961, there have been several amendments to the Resolution as well as some more ambitious attempts to rewrite and update it to address this concern. The most recent such attempt was the Unified Bulk Program proposed by the New York City Department of City Planning (DCP)<sup>2</sup> in 1999. It proposed a rewrite that would require new development to be more consistent with existing neighborhood characteristics, but it faced significant opposition from real estate developers and was never adopted.

Since Mayor Bloomberg took office in 2002, the City has eschewed a comprehensive rewrite of the Resolution and focused instead on using its existing powers to initiate neighborhood rezonings. While previous administrations have had the authority to propose neighborhood rezonings, they used this power less frequently, instead generally focusing on proposals that private developers submitted to rezone small areas. The DCP can propose zoning changes either as a result of its own planning activities or in response to a request from Community Boards, elected officials, or other local stakeholders.

For each individual rezoning initiative, the DCP cites specific planning goals, ranging from protecting existing residential neighborhoods against out-of-context development to encouraging economic and residential development. Inherent in this process is some tension between the localized goals of individual zoning changes and the City's overall development strategies and goals. One of DCP's key challenges is balancing those competing interests.





**Figure A: City-Initiated Rezoning**



## Data and methodology

Our research looks at the impact of 76 rezonings that took place between 2003 and 2007, the most recent year for which we had data when we began this research. We focus only on lots that already were, or would be (by 2007), zoned to permit residential use. To provide a sense of the scale of the rezoning activity: of the 816,000 lots that existed in 2003, approximately 188,000 were subject to a City-initiated rezoning action by the end of

2007.<sup>3</sup> Figure A reveals how these rezonings were distributed throughout the City.

To measure residential development capacity, we use the lot's Floor Area Ratio (FAR), which limits a building's size to a multiple of the area of the lot. For example, a building on a 10,000 square foot lot that is in a zoning district with a FAR of 2.0 would be

<sup>3</sup> We exclude streets, parks, airports and other large public facilities.

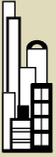
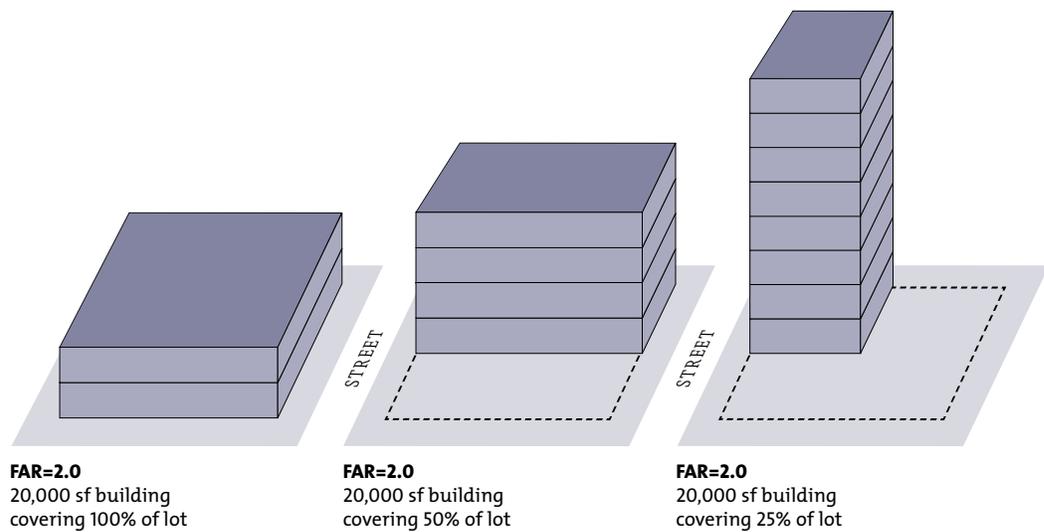


Figure B: An Illustration of How a Lot's FAR Corresponds to Built Area

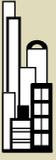


allowed to have 20,000 square feet of usable floor area (2.0 FAR x 10,000 sq. ft. lot area). As illustrated in Figure B, a developer could choose to use that allowable buildable area by constructing a 20,000 square foot single story building, a two-story building with 10,000 square feet on each floor, a four-story building with 5,000 square feet on each floor, and so on, depending on other regulations for that lot, such as height limits. While these other restrictions may affect the size of a development, a lot's FAR is the primary determinant.

For the 188,000 lots that were rezoned between 2003 and 2007, we first determine what the residential development capacity was for each lot in 2003. To do so, we begin with the default maximum FAR for the zoning district the lot was in as of 2003 and then adjust it based on other lot characteristics the Zoning Resolution takes into account, such as whether the lot is on a wide street or a side street, whether it is on a waterfront, or whether it was in a "special purpose district" (an area with special zoning regulations that may change the allowable building form, use, and floor area). We then multiply the lot's maximum FAR by

the lot's size to calculate its maximum buildable area as of 2003. By following these same steps for the lot as of 2007, we can measure the change in that lot's residential development capacity over our study period. Based on the change we measure, we then classify the lot as either "upzoned," "downzoned," or "contextual-only rezoned." Specifically, we define each of those categories as follows:

- **Upzoned.** We define a lot as upzoned, if the rezoning increased its residential development capacity to at least 10% more than its pre-rezoning capacity.
- **Downzoned.** We define a lot as downzoned if the rezoning decreased its residential development capacity to less than 90% of its pre-rezoning capacity.
- **Contextual-only rezoned.** We define a lot as "contextual-only rezoned" if the rezoning changed some aspects of what can be built on the lot, but did not significantly change its residential development capacity (specifically, by more than 10%). A more complete discussion of contextual-only rezonings can be found on page 5.



## WHAT IS A CONTEXTUAL-ONLY ZONING CHANGE?

Our analysis classifies as “contextual-only” any zoning change to a lot that does not increase or decrease its residential development capacity by more than 10%. Most of the lots rezoned between 2003 and 2007 fall into this category (particularly in Staten Island and Queens).

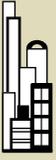
Our estimates of residential development capacity are based on the maximum FAR that the Zoning Resolution assigns to different lots. But the Zoning Resolution regulates development in a number of other ways as well, through height limits, front, side and rear yard requirements, lot coverage limits and minimum off-street parking requirements, for example. FAR limits the total size of a new building, but these other regulations help determine its shape and placement on its site. If a zoning change doesn't alter a lot's maximum FAR, it is likely changing some of these other types of regulations. We call these zoning changes “contextual-only” because these kinds of changes are usually enacted to ensure that new development more closely matches the existing context of a neighborhood.<sup>1</sup> DCP's strategic plan identifies “protecting neighborhood character” as one of its key goals; contextual-only rezonings can be thought of as responding to that goal.

<sup>1</sup> Zoning changes that increase or decrease a lot's maximum FAR also may impose regulations intended to ensure that new development is sensitive to neighborhood context, but because the lot's residential development capacity changed, we classify these as upzonings or downzonings.

For example, the 2005 City-initiated rezoning of Cambria Heights in eastern Queens placed hundreds of mostly single-family homes into new zoning districts. While the maximum FAR remained the same, the rezoning imposed deeper front yard requirements, reduced the maximum height of the front-facing wall of homes, and capped total building height.

Other “contextual-only” zoning changes restrict the building types that can be developed, even if the resulting density is no different. As part of the 2007 Dyker Heights rezoning in southwestern Brooklyn, for example, several blocks were rezoned to permit only detached and semi-detached homes, the predominant existing building types on the blocks. While in most cases the new zoning didn't explicitly change the amount of residential capacity, by restricting new buildings to detached and semi-detached homes, it barred the construction of row houses and apartment buildings, both of which were previously permitted.

In some cases, the changes that result from a “contextual-only” zoning likely have a practical impact on development capacity that we currently are unable to measure because we focus only on maximum FAR. The combined impacts of height limits and required yard dimensions, for example, could make it practically impossible to develop some lots to their full FAR. We will continue to analyze the contextual zoning districts to better understand the role these non-FAR regulations may play in determining how intensely lots in New York City are developed.



We conduct this research on a lot-by-lot basis, because most rezonings include different types of changes—upzoning or downzoning some lots while contextualizing others. In order to understand the net impact on the City, therefore, we needed to aggregate the changes made to individual lots.

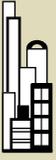
The City’s Zoning Resolution is massive and complicated. While our calculations represent the first attempt to systematically map cumulative changes in residential capacity, our methodology has some limitations. We simply could not adjust for every development and regulatory characteristic that may affect what can be built on a lot. In some cases, our capacity calculations may overstate capacity because we can’t adjust for parking requirements and other development requirements that would reduce the actual buildable area. On the other hand, we are also unable to adjust for regulations that might increase the actual buildable area, at least for certain owners, such as community facility or inclusionary zoning bonuses. It is also important to note that our residential development capacity calculations are estimating the “paper” capacity of lots. Whether or not that capacity can or is likely to be used depends on a number of other factors,

which we discuss later in the report. So, for example, a downzoning may remove capacity from a lot that was unlikely to have been used, perhaps because the lot was already developed with a high-value home. In such cases, our calculation of lost “paper” capacity will overstate the practical impact of the zoning change on that area’s ability to accommodate new development.

## Why rezone a neighborhood?

Rezonings have the potential to dramatically change the City’s development landscape, and the nature and quality of life of different kinds of neighborhoods. But whether a particular type of rezoning will benefit or burden local residents is not always clear. There are pros and cons to any kind of rezoning, and the way a rezoning ultimately affects a neighborhood will likely depend upon market demand, developer behavior, the City’s investment in local infrastructure and economic development, and many other factors. Below we outline typical justifications for rezonings, and the potential benefits and burdens various kinds of rezonings might bring.





### **Upzonings**

DCP frequently cites economic development as a rationale for upzoning an area. Allowing the land to be developed more intensely, the logic goes, will bring new investment to the area. The benefits of such investment may include new housing stock, businesses, jobs, and retail services, all of which could improve the quality of life for existing residents. Of course, new housing and new businesses also may bring increased traffic and congestion—potential burdens for residents. In addition, if such improvements make an area more desirable, rents and housing prices may increase, and the neighborhood may become less affordable for the current residents.

### **Downzonings**

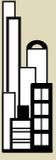
One of the most commonly cited reasons for downzoning an area is neighborhood preservation. As discussed above, many critics of the Zoning Resolution claim that it pays insufficient attention to neighborhood context; downzonings are seen as a way to amend the Resolution at a neighborhood

level to ensure that new development will not be at a scale much larger than the existing context. Limiting future development can be seen as a benefit because it preserves the existing character of the neighborhood, and prevents new uses that may be undesirable or tax a neighborhood's existing infrastructure. For the same reasons, however, preservation can be seen as a burden because it limits the growth of new housing or businesses and may limit owners' ability to capitalize on the development capacity of their lots.

### **Contextual-only rezonings**

Like downzonings, contextual-only rezonings often are motivated by a desire to preserve a neighborhood's existing character by preventing other uses or development styles from being introduced. Residents who do not want change are likely to see a contextual-only rezoning as a boon. Residents more interested in, or accepting of, seeing their neighborhood accommodate diverse kinds of development, on the other hand, may see the rezoning as a drawback.





## What is the net impact of these rezonings on the City’s residential capacity?

We estimate that in 2003, the Zoning Resolution allowed for approximately 6 billion square feet of residential development capacity citywide; Brooklyn had the highest capacity, followed by Manhattan, then Queens. Between 2003 and 2007, the City rezoned almost 18% of the City’s total lot area. Of the 188,000 lots that were included in a City-initiated rezoning action, almost 63% were subject to a contextual-only rezoning, 23% were downzoned and 14% were upzoned.

Even though they made up only 14% of all the rezoned lots in the City, the new residential capacity added to upzoned lots outweighed the capacity lost from lots that were downzoned or contextual-only rezoned. As a result, the net effect of these rezonings was to increase the City’s total residential development capacity “on paper” by about 1.7%. This represents almost 100 million additional square feet of residential development capacity—or enough space, at least “on paper,” for about 80,000 new units or 200,000 new residents.

Outside of the large-scale City-initiated rezonings that we analyze, there are dozens of other, smaller rezonings proposed

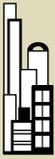
every year, many of which successfully navigate the City’s complex land use process. Landowners propose rezonings in order to develop buildings that are larger or would be a different use than the current zoning district permits. Community groups or individual City council members also propose rezonings. While our focus is on the City-initiated rezonings, in order to provide some context, we estimated the impact of these other non-DCP actions. Between 2003 and 2007, we found that rezonings resulting from applicants other than DCP increased the City’s residential development capacity by less than one percent.

## How is the new capacity distributed? What are the characteristics of the residents of communities that gained capacity, compared to those of neighborhoods that lost capacity?

The capacity added by the rezonings varied a great deal among the boroughs. As Table A shows, Queens and Manhattan accounted for three-quarters of the City’s net gain in residential capacity. Specifically, residential capacity in Queens and

**Table A: Residential Development Capacity and the Impact of Rezonings, by Borough (2003–2007)**

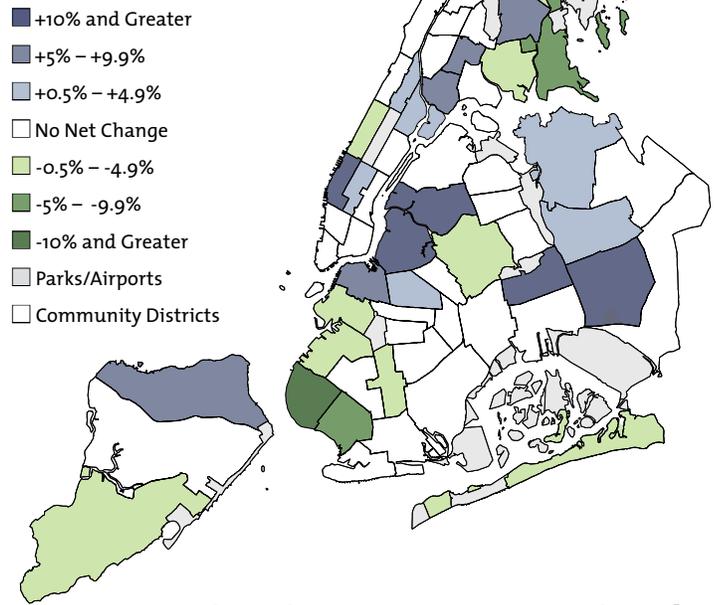
	<i>Residential Capacity, by Sq Ft (2003)</i>	<i>% Land Area Rezoned</i>	<i>Change in Residential Capacity, by Sq Ft (as of 2007)</i>	<i>% Capacity Change</i>
The Bronx	980,000,000	18.4%	290,000	0.0%
Brooklyn	1,606,000,000	13.9%	19,950,000	1.2%
Manhattan	1,466,000,000	5.3%	34,150,000	2.3%
Queens	1,342,000,000	19.0%	37,850,000	2.8%
Staten Island	435,000,000	22.9%	5,980,000	1.4%
<b>NYC</b>	<b>5,829,000,000</b>	<b>17.7%</b>	<b>98,220,000</b>	<b>1.7%</b>



Manhattan increased by 2.8% and 2.3% respectively, while Staten Island and Brooklyn saw more modest net increases (1.4% and 1.2% gains, respectively).<sup>4</sup> Residential capacity in the Bronx was static. We have looked at these changes at the community district level as well. As seen in Figure C, there was a significant range among community districts: those in South East Queens had the biggest gains in residential capacity and those in South West Brooklyn had the greatest declines.

But looking at the borough or even the community district totals does not tell us enough about what kinds of neighborhoods gained or lost capacity or the characteristics of the residents of the communities that gained or lost residential capacity. To do this, we studied the socioeconomic characteristics of the census tracts in which the rezoned lots were located, and compared them to the characteristics of

**Figure C: Change in Residential Capacity**



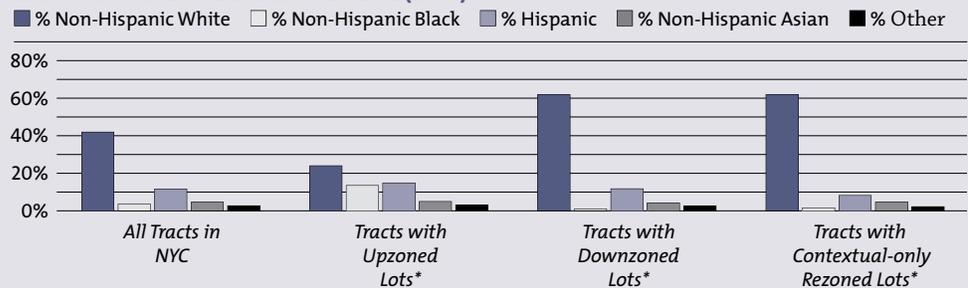
the median census tract in New York City.<sup>5</sup> We found several significant differences.

First, as Figure D shows, upzoned lots tended to be located in census tracts with a higher proportion of non-white residents than the median tract in the City. Downzoned lots, on the other hand, were more likely to be located in tracts with a higher share of non-Hispanic white residents than the City median, and contextual-only rezoned lots were located in areas with still higher shares of non-Hispanic white residents.

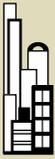
<sup>4</sup> In 2004, the City adopted changes to the Zoning Resolution designating much of Staten Island a "Lower Density Growth Management Area." This action added or enhanced several requirements for new residential development in affected areas, such as minimum off-street parking and rear yard dimensions. This resulted in an effective net decrease in capacity in Staten Island that is not reflected in our results, because the changes did not move lots into different zoning districts or explicitly alter their maximum FAR.

<sup>5</sup> We use median values rather than mean values because of the great variation among New York City neighborhoods. Using a mean value for some of these variables skews the values upwards or downwards depending on the variable. For information about how we calculate socioeconomic and demographic characteristics of tracts where rezoned lots were located, see the methodological notes at the end of this document.

**Figure D: Median Racial/Ethnic Demographics of Residents in All NYC Census Tracts and Census Tracts Where Rezoned Lots Were Located (2000)**



\*Weighted by the number of indicated type of lots in each census tract. See the methodological notes at the end of the document for more information.



The opposite trend exists for both black and Hispanic residents. Upzoned lots were more likely to be in areas that have a higher share of black and Hispanic residents than the City median, while downzoned and contextual-only rezoned lots both were in areas with smaller shares of black and Hispanic residents than the City median. The share of Asian residents did not vary greatly from one kind of rezoned area to another.

Table B compares the average median income for the census tracts in which rezoned lots were located to the City's median income. It shows that on average, upzoned lots were located in areas with significantly lower income than the City median (\$44,444 compared to \$53,724). Downzoned lots also were located in areas with lower median income than the City, though they were more affluent than upzoned areas. On average, contextual-only rezoned lots were in areas with a median income much higher than that of the City (\$65,489 compared to \$53,724).

Finally, we looked at the homeownership rate of rezoned areas, and found a pattern similar to that of household income. As Table C shows, upzoned lots were located in areas with a much lower homeownership rate than the City median (30.8% compared to 44.8%). Downzoned lots also

were in areas with homeownership rates that were lower than the City median, but slightly higher than the rate for upzoned areas. Again, the biggest difference was for the contextual-only rezoned lots, which were located in areas with very high rates of homeownership (65%).

Unpacking all of the causes and implications of these socioeconomic differences is beyond the scope of this paper, but the differences between the populations of areas subject to the different types of rezonings raises important questions about public participation in the land use process that the Furman Center plans to address in future work.

## How well does the location of new capacity relate to the City's public transportation infrastructure?

The City's PlaNYC 2030 articulates a goal of creating housing by "continu(ing) publicly-initiated rezonings (that) pursue transit-oriented development." As Table D reveals, for the most part, it looks like the upzonings have done just that: 73% of upzoned lots are

**Table B: Median Income for Census Tracts Where Rezoned Lots Were Located (2007 \$)**

All Tracts in NYC	Tracts with Upzoned Lots*	Tracts with Downzoned Lots*	Tracts with Contextual-only Rezoned Lots*
\$53,724	\$44,444	\$51,195	\$63,550

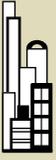
**Table C: Median Homeownership Rate for Census Tracts Where Rezoned Lots Were Located (2000)**

All Tracts in NYC	Tracts with Upzoned Lots*	Tracts with Downzoned Lots*	Tracts with Contextual-only Rezoned Lots*
44.8%	30.8%	35.7%	63.5%

**Table D: Percent of Rezoned Lots Within 1/2 a Mile of a Rail Station Entrance (2007)**

All NYC Lots	Upzoned Lots	Downzoned Lots	Contextual-only Rezoned Lots
49.5%	73.4%	58.9%	29.0%

\*Weighted by the number of indicated type of lots in each census tract. See the methodological notes at the end of the document for more information.



within half a mile walk of an entrance to a rail station operated by New York City Transit Subway, Staten Island Railway, Metro North or Long Island Rail Road. These results indicate that the upzonings seem to be in keeping with the City's broader sustainable development goals of increasing density in areas accessible by public transit.

The downzonings, however, are less consistent with those goals, because in most cases, they took capacity away from communities well-served by rail transit: a majority of downzoned lots (59%) were within a half mile of a rail station entrance. It is possible that these areas had other impediments to development, or other infrastructure challenges, that would make future growth undesirable or that some of this lost capacity was not practically usable because of the existing building patterns in these areas. But just looking at rail transit access, the fact that a majority of the downzoned lots were in transit rich areas seems inconsistent with the principles the City articulated in PlaNYC 2030.

Finally, only about 29% of the lots that were contextual-only rezoned were within a half mile of rail transit. These rezonings appear to be consistent, by and large, with the City's long-term goals of not increasing residential capacity in areas poorly served by transit.

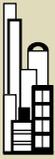
Even though most downzoned lots were located near transit stations, the overall impact of the rezonings we studied appears consistent with the City's stated goal, because the upzonings near transit added much more capacity than the downzonings near rail stations took away. Specifically, upzoned lots near transit gained about 181 million square feet of residential capacity

and downzoned lots near transit lost only about 89 million square feet of capacity. As a result, rezoned lots near transit accounted for a vast majority of the citywide net increase in capacity. Furthermore, of the capacity added to upzoned lots further away from rail stations, a large portion was in the proposed Hudson Yards project area in Manhattan, where an extension of the 7 line subway is currently underway. If we exclude the Hudson Yards rezoning, the rezonings we studied actually resulted in a small net decrease in residential development capacity in areas further away from rail stations, consistent with the City's goals.

## How well does the location of new capacity correspond to population growth and market demand?

In deciding where to channel growth, another key criteria policymakers should use is the strength of market demand to live in these neighborhoods. Market demand is one (if not the most) important signal about how likely it is that new capacity actually will be developed. To better understand whether the City's rezonings created new capacity in areas primed for growth, we look at three measures of demand prior to the rezonings: population growth, the number of new certificates of occupancy issued, and the rate of house price appreciation.

Looking first at population growth, we find that less than 25% of all upzoned lots were among the top quartile of all New York City lots in terms of census tract-level population



**Table E: Change in Population in Census Tract Surrounding Rezoned Lot (1990–2000)**

All NYC Lots	Upzoned Lots	Downzoned Lots	Contextual-only Rezoned Lots
25.0%	23.0%	19.3%	20.8%

**Table F: Median House Price Change in Community Districts Where Rezoned Lots Were Located (1998–2003)**

All CDs in NYC	CDs with Upzoned Lots*	CDs with Downzoned Lots*	CDs with Contextual-only Rezoned Lots*
58.4%	62.5%	54.9%	59.9%

**Table G: Median Certificates of Occupancy Issued in Community Districts Where Rezoned Lot Was Located (1998–2003)**

All CDs in NYC	CDs with Upzoned Lots*	CDs with Downzoned Lots*	CDs with Contextual-only Rezoned Lots*
757	723	546	968

\*Weighted by the number of indicated type of lots in each community district. See the methodological notes at the end of the document for more information.

growth between 1990 and 2000<sup>6</sup> (see Table E). In other words, upzoned lots were slightly less likely than the average City lot to be located in a high growth area. Even smaller percentages of downzoned lots and contextual-only rezoned lots were among the City's top quartile in terms of population growth, meaning these lots were even less likely to be in high growth areas. The implications of this finding are mixed. On the one hand, it might show that upzonings are not particularly targeted to areas seeing unusual population growth. On the other hand, given that the upzoned lots weren't particularly concentrated in high growth areas, it may suggest that many upzoned areas were appropriate targets for the City's economic development initiatives. Ultimately, it is unclear whether rezonings are driving or responding to growth.

Next, we look at house price appreciation between 1998 and 2003 in the community districts where rezoned lots were

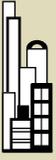
located. As Table F shows, upzoned lots were located<sup>7</sup> in areas with slightly stronger house price appreciation than the City as a whole, but there was not a great deal of difference between areas containing upzoned, downzoned or contextual-only rezoned lots. Again, the lack of variation between the lots upzoned, downzoned or contextual-only rezoned makes the implications ambiguous. It indicates that unusually rapid price appreciation isn't signaling consumer demand for the upzoned areas, but nor are those areas lagging so far behind that the upzoning can be explained by an unusual need for economic development.

Finally, we look at demand by examining the rate of new construction in the community districts where rezoned lots were located. Specifically, we look at the number of certificates of occupancy—the final permit issued by the City before a residential building can be occupied—issued between 1998 and 2003.<sup>8</sup> As Table G reveals, upzoned lots were

<sup>6</sup> Unfortunately, we are limited by population estimates at census tract level from the decennial census, so we are only able to look at population changes from 1990 to 2000. For information about how we calculate population growth of tracts where rezoned lots were located, see the methodological notes at the end of this document.

<sup>7</sup> For information about how we calculate house price appreciation in community districts where rezoned lots were located, see the methodological notes at the end of this document.

<sup>8</sup> For information about how we calculate the number of certificates of occupancy where rezoned lots were located, see the methodological notes at the end of this document.



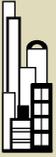
located in areas that had about the same level of development as the City during that time (as measured by the number of certificates of occupancy issued). Downzoned lots were in areas that saw significantly less building activity, while contextual-only rezoned lots were in areas that had much higher rates of development than the City median. These findings have several important implications. The fact the upzonings took place in areas with average levels of development may signal that the upzonings will have to lead, rather than follow, the market. It may be appropriate for upzonings to try to channel growth into areas where the market has not yet signaled interest if, for example, the City believes infrastructure in those areas is underused, or if the City plans to upgrade infrastructure it believes was holding development back. On the other hand, it could be that the average development patterns in the areas with upzoned lots signals that the market isn't interested in the area for reasons that City initiatives won't cure.

The fact that downzonings were in areas with lower building activity than the City median indicates that downzonings were not necessarily a response to particularly high rates of new building. Perhaps the most interesting finding is that the areas that saw the greatest demand were the areas that were contextual-only rezoned. As discussed above, the precise impact of a contextual rezoning can vary a great deal. It may not limit development, but it may limit developers' flexibility to provide building designs that the market prefers or that would be more affordable.

## How likely is it that new capacity will be developed for residential use?

The 100 million square feet increase in residential capacity we calculated was the net result of upzonings and downzonings in different types of neighborhoods and involving different types of zoning districts. In areas that were rezoned from various non-residential districts to residential-only districts, we identified an increase in capacity of about 40 million square feet. This increase was offset, however, by an approximately 40 million square feet *decrease* in traditionally residential areas (areas that were already zoned for residential only uses in 2003). The 100 million square feet net gain, then, was effectively concentrated in areas that were rezoned from a commercial or manufacturing district to a mixed-use district. While permitting residential development in mixed-use areas is consistent with many planning principles and may be an attractive way for New York City to grow, not all zoning capacity in mixed use areas will be used for residential development. To the extent that City policymakers are depending on mixed-used districts to accommodate residential growth, it is important to recognize that the amount of residential space that actually will be built in those districts will depend in part upon how the different uses will compete for finite land area.

While it is impossible to predict how much new growth will take place or what it will look like, we can look to the past for some clues as to what development patterns in these mixed-use districts might look like. Using building construction data, we identified more than 800 lots in districts permitting both residential and other types of uses that were developed between 2003 and 2007. We found that nearly half (47%)



were built for primarily residential use; about 12% were built for a combination of uses, and 41% were built for primarily non-residential use.<sup>9</sup> These results varied somewhat by borough. In Brooklyn, for example, 60% of buildings built in mixed-use areas during this time period were primarily residential and only 24% were primarily non-residential. In Manhattan, on the other hand, only 35% were primarily residential, and 51% were primarily non-residential.

Again, it is impossible to predict future development patterns. But the fact that 40% of recent development in mixed-use areas included almost no residential component indicates that the potential 100 million square feet resulting from the rezonings should be significantly discounted to estimate how many new residential units it might produce.

There are several other barriers that would influence the likelihood of this new capacity being developed, including available subsidies and “soft,” or underdeveloped sites. Soft sites are lots that are vacant or built out at far below what existing zoning would allow, and therefore tend to be the most viable lots for redevelopment (the Furman Center defines a site as soft if it is built out at less than 50% of its development capacity). About 80% of all new construction building permits issued between 2003 and 2007 were for soft sites, highlighting their crucial role in the City’s development pipeline.<sup>10</sup> But when we compare the soft sites in 2003 to the soft

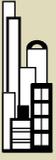
<sup>9</sup> We define “primarily residential” as buildings where more than 90% of the building’s square footage was used for residential purposes; “multi-use” is defined as buildings with 10-90% of the square footage dedicated for residential use; and “primarily non-residential” is defined as building having less than 10% of residential space.

<sup>10</sup> The Furman Center is conducting research to better understand urban redevelopment by compiling and analyzing a large database of underdeveloped lots in New York City. In our initial analysis of our database, we identified about 200,000 soft sites as of 2003 that were built out at less than 50% of their zoning capacity, representing about 25% of all residentially zoned lots in the City. Of these 200,000, approximately 8% were subsequently redeveloped during the following four years. For more see: [http://furmancenter.org/files/publications/Underused\\_Lots\\_in\\_New\\_York\\_City\\_Small.pdf](http://furmancenter.org/files/publications/Underused_Lots_in_New_York_City_Small.pdf).



sites in 2007, we see only a 25 million square feet increase in residential development capacity. Some soft sites disappeared during this period because they were the location of new development. More significantly though, a lot of the capacity being added through upzonings was not enough to make the affected lots soft. In other words, even after being upzoned, some of these lots were still already developed at close to their full capacity, so were unlikely to be redeveloped with new housing in the near future. At the same time, by removing development capacity, the City’s downzonings made many other lots that had been soft in 2003 more or less fully developed as of 2007.

The existing subsidy framework, such as the availability of the 421-a tax abatement program, likely impacts the development potential of this new capacity as well. Evaluating the extent to which recent changes to the 421-a program might influence new development in affected areas is beyond the scope of this report. However, our research indicates that approximately 22% of the upzoned lots, and about 37 million of the 100 million square feet of net increase in residential development capacity, were located in parts of the City that were newly excluded from this frequently used program in 2008.



## Areas for future research

This research sheds new light on the net impact the City's recent rezoning activity has had on its capacity to accommodate new growth, and provides new detail on where new capacity has been added around the City. There are a lot of thought-provoking findings here, but in many ways, these findings raise more questions than they answer. With the foundation we've now built, the Furman Center is studying several questions we think are important to explore.

### **The impact of rezonings**

Earlier we discussed the potential benefits and burdens that upzonings and downzonings present for communities, but there is little empirical work examining how rezonings actually affect a neighborhood. With the data we've compiled about the zoning changes, coupled with the rich data the Furman Center has on New York City's housing and neighborhoods, we now have a unique opportunity to track impacts over time. We will examine such questions as: What effects do the rezonings have on the amount and type of development activity? How do the rezonings affect property values? Are rezonings followed by changes in the demographics or other characteristics of the neighborhood? We are particularly interested in the effects contextual rezonings will have on the amount, type, and price of new housing in the neighborhood, and in the effects such rezonings will have on the condition and price of existing housing.

### **Additional measures of infrastructure capacity**

The research we report here begins to explore whether new capacity is being added in areas that have the infrastructure to support growth (and whether capacity is being reduced in areas that had infrastructure

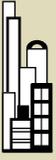
that could handle additional growth). We started this investigation by looking at access to transit, but transit is only one of the many types of infrastructure needed to support residential development. In future work, we will explore the relationship of rezonings to other critical infrastructure assets such as parks, school capacity and quality, and sewer capacity. We also plan to build on this analysis of transit access by looking not just at proximity, but also at the capacity of lines serving these neighborhoods, and to expand the analysis to include express buses.

### **The interplay between rezonings and parking requirements**

Some of the contextual-only rezonings add requirements for parking that effectively reduce the potential for new development. To better understand the interplay between minimum parking requirements and housing capacity in the City, the Furman Center is investigating the impact such requirements may have on the City's ability to accommodate new growth and on its ability to reduce pollution and other problems created by auto use.

### **The role of political and community participation**

Obviously, the Department of City Planning and the City Planning Commission are not alone in thinking about how land within the City should be used. The rezoning process involves community boards, Borough Presidents, the City Council and a wide variety of community and industry groups. To better understand the process, we need a better empirical basis for assessing the relationship between political activity and other forms of participation, and rezoning outcomes. That assessment also may provide guidance about how the rezoning process can be improved to ensure that the benefits and burdens of growth are fairly distributed.



## Policy Implications

This on-going research agenda will improve our understanding of how the recent rezonings have affected residential development, and point to ways in which the land use process might be improved to ensure efficient and fair zoning changes. But even these preliminary findings suggest some important lessons for policymakers.

### **Do not rely on rezonings alone to generate new housing**

Given competing development pressures in areas where new residential capacity has been added, there is good reason to be concerned that these types of rezonings may not generate adequate numbers of new units. Additional tools, such as subsidies, reforms to tax policy, reducing other regulatory barriers, and increasing City investment in housing may be required to produce the number of new housing units the City needs to grow.

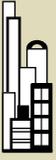
### **Rezoning decisions should be tied to a comprehensive plan for infrastructure development**

The fact that a majority of downzoned lots were located near transit, despite the City's announced goal of channeling growth to transit rich neighborhoods, raises questions about whether rezoning decisions are sufficiently coordinated with infrastructure planning. Such coordination can be difficult without a bird's eye view of the cumulative effect of each of these individual rezonings, but we hope this comprehensive analysis of the 2003 to 2007 rezonings will spur new thinking about the kinds of questions that must be asked during each individual rezoning study. The Mayor recently announced new efforts to improve interagency coordination; those efforts could provide an opportunity for the City to approach rezonings through more of a multi-agency lens.

Similarly, these findings raise questions about the appropriate timing of new infrastructure investment. Should upzonings lead or follow investment in infrastructure or other economic development activities? Should agencies like the Department of Environmental Protection, the Department of Education, the Metropolitan Transit Authority, or the Department of Transportation be required to develop infrastructure plans to accompany large-scale upzonings? Similarly, should agencies like the Department of Housing Preservation and Development and the New York City Economic Development Corporation be required to develop plans for investing in affordable housing and business development to ensure that the upzonings succeed in bringing development to the area?

### **Ensure that the benefits and burdens of growth are fairly distributed**

Rezonings involve some tension between the goals of an individual neighborhood and the needs of the City as a whole. If an individual downzoning preserves one neighborhood's character, for example, it may either limit the City's growth, or shift the burden of accommodating the City's growth to some other neighborhood. Our finding that the demographics of contextual-only rezoned areas differ dramatically from those of upzoned areas raises many questions. As discussed above, there is no general agreement on whether it is good or bad for one's neighborhood to be upzoned or downzoned. However, the variation in the pattern of rezonings among communities with different socio-economic characteristics calls for a larger conversation about how the benefits and burdens of development should be shared across the City.



## Notes on Methodology

We estimate changes in residential development capacity at the lot level. Accordingly, all estimates of capacity changes for the City, community districts, boroughs and other geographic areas, including area within and beyond a half mile walking distance from rail transit, are aggregations of lot-level data.

To estimate median values of socioeconomic characteristics (including racial/ethnic percentages, median income and homeownership rate) for areas where different types of rezoned lots were located (as reported in Figure D and Tables B, C and D), we use 2000 census tract boundaries and data. For our “baseline” median New York City tract, we report the median value of each characteristic for all census tracts in New York City. For the tracts in which upzoned, downzoned or contextual-only rezoned lots were located, we use the median for all tracts in which at least one of that type of rezoned lot was located, weighted by the number of lots of that type in the tract. For example, if a tract contains 10 upzoned lots, we include that tract’s value 10 times when calculating the median characteristic for tracts with upzoned lots.

We calculate median tract-level characteristics for each type of rezoned lot separately. Accordingly, a single tract’s data is included in the median characteristic calculation for upzoned lots, downzoned lots and contextual-only rezoned lots if the tract contains at least one of all three types of rezoned lots. As a result, the median characteristic of tracts containing upzoned lots is not affected if the tract also contains downzoned lots and vice versa.

To estimate the median percentage change in house prices and number of certificates of occupancy issued for community districts containing different types of rezoned lots (reported in Tables F and G), we use a weighting process similar to our calculations for census tract-level data. For our “baseline” median house price change we report the median community district-level percentage change in house prices between 2003 and 2007 for all 59 community districts, based on the repeat sales index maintained by the Furman Center. For our “baseline” number of certificates of occupancy issued, we report the median number issued in a community district between 1998 and 2003 for all 59 community districts. For the community districts in which upzoned, downzoned or contextual-only rezoned lots were located, we use the median price change or number of certificates of occupancy for all community districts in which at least one of that type of rezoned lot was located, weighted by the number of lots of that type in the community district.

We calculate median community district-level characteristics for each type of rezoned lot separately. Accordingly, a single community district’s data is included in the median characteristic calculation for upzoned lots, downzoned lots and contextual-only rezoned lots if the community district contains at least one of all three types of rezoned lots. As a result, the median characteristic of community districts containing upzoned lots is not affected if the tract also contains downzoned lots and vice versa.

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### THE FURMAN CENTER FOR REAL ESTATE AND URBAN POLICY

is a joint research center of the New York University School of Law and the Robert F. Wagner Graduate School of Public Service. Since its founding in 1995, the Furman Center has become a leading academic research center dedicated to providing objective academic and empirical research on the legal and public policy issues involving land use, real estate, housing and urban affairs in the United States, with a particular focus on New York City. More information about the Furman Center can be found at [www.furmancenter.org](http://www.furmancenter.org).