THE NEW SCHOOL FOR PUBLIC ENGAGEMENT

Rethinking 421-a Real Property Tax Exemption

June, 2014

POLICY BRIEF

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TABLE OF CONTENTS

1 Executive Summary

New York City currently foregoes 1.1 billion in property tax from the 421-a Real Property Tax Exemption— a sum that has exponentially grown since its inception in 1971. Initially devised as a tax incentive to spur the new construction of residential housing, the 421-a tax exemption has evolved into an affordable housing program leveraged by the strength of New York City's real estate market. The impact of 421-a on new construction of affordable housing, however, remains minimal with a rough estimate of 14% of all 421-a tax-exempt units affordable to lower income households (30% AMI to 120% AMI). The construction of these units, specifically in Manhattan, arguably comes at the expense of subsidizing high-end luxury apartments to the tune of millions of dollars. Consequently, with its pending renewal in 2015, 421-a has come under scrutiny by public officials, housing advocates and an increasing population in need of affordable housing who weigh the "costs" of the program against its benefits.

The "costs" of the 421-a tax exemption however are difficult to determine— to equate it with forgone tax revenue is to assume those buildings built under 421-a would be built as-is with or without the tax exemption. Given the program's four decades of existence, 421-a has been deeply embedded in the real estate landscape and developers, specifically affordable housing developers, depend on 421-a for their ability to obtain capital from the private financial market. While the above assumption may be considerably vast, the assumption that none of these buildings would have been built if the developers did not have 421-a is also troublesome, noted by the recent awarding of five high-end luxury buildings post-construction in 2012.

At present, 421-a is associated with the construction of over 251,000 housing units, a significant share—approximately 35%-- of total new construction in New York City.[1] While presumably some development will persist without the tax exemption given a healthy market and a steadily increasing housing demand, the question remains whether property values would have increased substantially without the assistance of 421-a.

[1] Number of 421-a units sourced from IBO. Share of construction sourced from Rent Guidelines Board's *Housing Supply Report, 2014*.

The advantage of 421-a is its provision of mixed-income housing in a time of greater inequality in wealth and growing segregation between household incomes.[2] The need for affordable housing, noted in Mayor de Blasio's Housing Market Plan is on the rise with unemployment remaining stable and incomes flat from the slow economic recovery following 2008 Great Recession. Ultimately, the evaluation of 421-a's affordable housing program is timely.

The Policy Brief

This policy brief is prepared for the Manhattan Borough President's Office seeking advisement on the 421-a Real Property Tax Exemption prior to its pending renewal in 2015. The result of our research will provide the Borough President's Office a snapshot of 421-a's impact on new construction and an analysis of how 421-a may be amended to increase the construction of new affordable housing— a topic of import as noted by Mayor de Blasio's recent Housing Marketplace Plan announced May 2014. The main drive of our analysis focuses on how potential amendments to 421-a may affect developers' sensitivity to build and thereby impact the number of affordable units constructed under the program. We have also included how renewing 421-a "as-is" or eliminating 421-a may impact the overall number of affordable housing units in the city. Ultimately, we centered our analysis on the following question: *How can the 421-a Real Property Tax Exemption program be amended to increase the construction of affordable housing*?

We based our research on numerous qualitative and quantitative research methods. We initially approached the challenge by gaining an overview of the 421-a tax law as it has evolved from an "as-of-right" tax incentive in 1971 to an opt-in affordable housing program in 1985 with major amendments following the housing boom in 2008— the effects of which have been nebulous at best given the Great Recession that followed. We gathered relevant data regarding 421-a's impact on new construction, which was tracked with limited information the number of affordable housing units built under 421-a.

[2] Steglitz, Joseph. "Inequality Is A Choice." *The New York Times*. October 16, 2013.

Analytical Objectives

As a result of our research and discussions with stakeholders, we identified two key objectives important to evaluate when considering an amendment for 421-a: 1) maximizing affordability, measured against 421-a's current requirements for affordability as a baseline; and 2) maximizing developer participation, measured by the developer's projected return on equity. We utilized a developer's standard *pro forma* balance sheet to provide case studies for proposed amendments, tracking how changes to 421-a affordability requirements affect a developer's financial feasibility for a project. Given the opt-in nature of the program, developer participation is necessary for 421-a to be an effective tool for increasing the number of affordable housing units under the program. Ultimately, we evaluated how these two objectives interact together to determine which increases in affordability requirements under 421-a developers may be the least sensitive to financially.

Proposed Scenarios

In our analysis, we took the following scenarios into consideration: renewing 421-a without changes to the law, eliminating 421-a, and amending 421-a to increase affordable housing built under the program. Amending 421-a requires the close attention to what constitutes affordability under 421-a law using these dimensions as our baseline. We have categorized these dimensions of affordability by the following: 1) the percentage of affordable units to market-rate units; 2) the AMI ceiling allotted to affordable units; 3) the composition of affordable units; and 4) the length of time units remain affordable. These are the variables that we change in the sensitivity analyses to determine their effect on a developer's ROE.

<u>Proposed Scenarios for 421-a Tax Exemption Program</u>

1) *Renewing 421-a without changes*. This alternative mirrors the status quo with the assumption that developers in need of the 421-a tax exemption will continue to use the 421-a program. Consequently, the number of affordable housing units will rise or fall with market conditions that affect the current demand for 421-a; not due to any changes in the program. We assume therefore that the number of

affordable housing units currently built annually under 421-a, ceteris paribus, will equal the annual number built in future years.

2) *Amending 421-a.* This alternative encompasses our sensitivity analyses of the various dimensions of affordability to determine which may affect developer participation the least.

a) Amending the percentage of affordable units to market-rate units

b) Amending the area median income (AMI) ceiling

c) Amending the composition of the affordable units

d) Amending the length of time units remain affordable

3) *Eliminating 421-a.* This alternative proposes that the current number of affordable housing units built under 421-a will be lost given the assumption that developers will not build affordable housing without financial incentive. The gain may argumentatively be the recouping of the forgone tax revenue assuming new construction will remain the same with or without the 421-a tax exemption.

In analyzing these proposals against our objectives, *we recommend that the Manhattan Borough President's Office seek to increase the percentage of affordable units required under 421-a tax exemption with particular attention on the length of affordability.*

Further amendment to 421-a may significantly contribute to de Blasio's recently announced goal of 200,000 new affordable housing units by 2020. While the effects of the 2008 amendments have been difficult to discern given the economic downfall, the use of 421-a has significantly increased during the recent recovery. Argumentatively, when private market capital is difficult to obtain, needed subsidies such as the 421-a tax exemption may be better leveraged to increase the building of new affordable housing.

2 Introduction

This policy brief is prepared for the Manhattan Borough President's Office seeking advisement on the 421-a Real Property Tax Exemption prior to its pending renewal in 2015. Implemented in 1971, the 421-a Real Property Tax Exemption was enacted at a time of fiscal crisis— where neighborhood abandonment, mass population loss and stalled development left the city financially crippled. To incentivize development, 421-a of the Real Property Tax Law provided tax exemptions for any improvements made on property for the construction of multifamily buildings. After major amendments in 1985, 421-a evolved from a tax incentive for overall new construction to the first tax exemption program linking market-rate development to the creation of affordable housing.

While market conditions have significantly improved since 1971, 421-a continues to be a tax incentive for new housing construction with an opt-in component for affordable housing. Major amendments to 421-a's affordable housing program have been recent, borne out of the housing boom of 2006 and implemented in 2008. Acknowledging the roots of 421-a remains vital to the political context surrounding 421-a and predicting stakeholder reactions to proposed program changes. Our analysis therefore begins with an overview of the 421-a tax exemption law, specifically the evolution of the affordable housing component under 421-a, and how 421-a has impacted the city's housing market.

The Mandate

With the pending renewal of the 421-a Real Property Tax Exemption in 2015, Manhattan Borough President Gale Brewer has requested an evaluation of the program to weigh the advantages and disadvantages of 421-a with an emphasis on increasing affordable housing. With rent severity on the rise, the need for affordable housing is steadily increasing. The demand for housing in New York City also has continued to be strong, putting in question the need of 421-a as an as-of-right tax incentive for new development. Our goal is to evaluate 421-a in terms of its affordable housing component and analyze current requirements to assess how potential amendments to 421-a may impact affordable housing construction in the city.

Based on the goals of Manhattan Borough President's Office, we focused our research and analysis around the following question: *How can the 421-a Real Property Tax Exemption program be amended to increase the construction of affordable housing?*

Analytical Approach

We approached the central policy issue by initially evaluating the current impact to date for new construction and the construction of affordable housing under 421-a. We then evaluated the affordability requirements under 421-a's affordable housing program and conducted sensitivity analyses utilizing a developer's standard *pro forma*; functioning as case studies for proposed amendments, we tracked how changes to 421-a's affordability requirements affected a developer's financial feasibility for a given project. Given the opt-in nature of the program, developer participation is necessary for 421-a to be an effective tool for increasing the number of affordable housing units. We measured developer participation by a project's projected return on equity (ROE), which indicated how financially sensitive a developer might be to the changes proposed. Our ultimate goal was to find those changes in affordability requirements that had the least affect on a developer's ROE.

3 Research Methodology

Our methodology rests on a broad research frame, the cornerstones of which include an in-depth review of 421-a's past and current law, the political context surrounding the 1971 enactment and later amendments to the law, review of academic and industry studies on the use of 421-a, and interviews with key experts in the field. We utilized this research to pinpoint the importance of 421-a for new development in New York City's housing market and to provide context for the *pro forma* sensitivity analyses used to identify potential areas for amending 421-a's affordable housing program. These analyses are based off a proposed 421-a project with estimated figures in line with current market conditions to observe the *magnitude in changes* to ROE for our scenarios.

Initially, we conducted an in-depth review of current 421-a tax exemption law, relying on the expertise of Seiden & Schein P.C., a New York City real estate law firm with established credentials in the 421-a Tax Exemption program. We also reviewed analyses from government agencies, academic institutions, real estate professionals and major advocacy groups to understand the political context surrounding 421-a as it has evolved. This review provided an overview of the current perspectives on 421-a and how these perspectives may frame further amendment. Our research also provided 421-a's current impact on overall new construction and its contribution to the affordable housing market. A complete list of these resources is located in *Section 11: Bibliography*.

We also conducted interviews with stakeholders who were vital to understanding the need for and use of 421-a in new construction and the landscape in which 421-a may have a greater impact on the building of affordable housing. These include representatives from government authorities such as New York City's Department of Housing Preservation and Development (HPD) and Department of Finance (DOF), nonprofit agencies such as Housing Works! and Enterprise Community Partners, real estate professionals including the Real Estate Board of New York (REBNY), Seiden & Schein, P.C., and real estate housing developers. A complete list of interviewees is located in *Section 12: Summary of Stakeholder Interviews*.

In our quantitative research, we worked with data from reliable sources including the Independent Budget Office (IBO), the New York Rent Guidelines Board, the Furman Center for Real Estate and Urban Policy, and the Real Estate Board of New York (REBNY). This research allowed us to analyze up-to-date data to evaluate current use of 421-a, to locate and detail buildings receiving the 421-a tax exemption, and to track how the 2008 amendments to 421-a have initially taken affect. This last endeavor has been difficult to discern given complications brought about by the Great Recession.[3]

The culmination of our research resulted in performing sensitivity analyses of proposed case studies utilizing a developer's standard *pro forma* to determine where deeper affordability may be achieved. We defined affordability utilizing dimensions identified by 421-a law to situate a baseline and sought to determine how altering these individual dimensions may affect a developer's sensitivity to build. Given the opt-in nature of the 421-a program, we ultimately sought to increase the affordability requirements that would have the least affect on the developer's incentive to use 421-a to ensure developer participation is not negatively impacted.

[3] Given the housing bust of the Great Recession following the 2008 amendments and the subsequent drying up of financial markets, new housing development severely declined throughout the city. Consequently, only 4 buildings to date as per IBO have utilized 421-a benefits post 2008 amendments, while the majority of construction was grandfathered into the 421-a tax exemption program under law set prior to June 2008 when the amendments took affect.

4 421-a Background

The 421-a Tax Exemption program has become an increasingly complex program. Developers often insist that the combination of New York City's higher taxes and development costs make the tax exemption essential for even market-rate housing. City officials and housing advocates often defend the 421-a program by arguing that the tax exemption decreases rents by decreasing the often higher tax burden that is shifted onto rental units. These government authorities and advocacy groups however have noted in times of housing booms the substantial developer windfall that may come at the cost for a relatively small number of affordable housing units. As 421-a has evolved, market conditions often shape the usefulness of tax exemptions and have become an essential context from which to view the value of the 421-a program.

4.1 421-a Origins, 1971

For New York City, 1969 marked a significant decline in the issuance of residential building permits.[4] Starting in the 60s and throughout the 70s, New York City underwent a population loss that stalled development as city residents opted to relocate to surrounding suburbs.[5] Additionally, the city was experiencing an increasingly weak housing and job market as neighborhood abandonment rose in the wake of a fast declining manufacturing sector. Consequently, the city underwent a fiscal crisis due to the falling tax revenue. Areas of New York were coined "Dresden after the war" as abandoned and dilapidated buildings deteriorated neighborhoods and crime and poverty reached record highs.[6] Housing prices had deteriorated to the extent that often landlords fraudulently choose arson over selling in impoverished areas, the insurance valued higher than the property.[7] Ultimately, New York City's tax base was on the decline and construction considerably slowed— total new housing units completed during the 1970s consequently amounted to less than half the number of units completed a decade prior.[8]

[4] "Understanding the NYC 421-a Property Tax Exemption Program." Pratt Center for Community Development, 6 Dec. 2006. PDF. Web.
[5] American Census Bureau
[6] Curtis, Ric. "Crack, Cocaine and Heroin: Drug Eras in Williamsburg, Brooklyn, 1960-2000." *Addiction Research & Theory* 11.1 (2003): 47-63. Print.
[7] "Arson for Hate and Profit." *Time*. October 31, 1997. Web.
[8] Markee, Patrick. *Housing a Growing City: New York's Bust in Boom Times*. Coalition for the Homeless, July 2002. PDF. Web.

In response to the city's ongoing economic and physical decline, State and City Legislatures enacted the 421-a Real Property Tax Exemption in 1971 to stimulate construction and help drive growth. The city aimed to accomplish this by incentivizing new multi-family housing development through the use of 10-year, "as-of-right" property tax exemptions on all improvement made to the properties. In exchange for tax benefits, all rental units built under the 421-a program would be part of the rent stabilization system for the term of the tax benefit. From 1971 to 1984, an estimated 53,000 units were built under the 421-a program— approximately 30% of total overall construction at that time—as the city regained its population and entered the housing boom of the 1980s.[9]

Public criticism for the 421-a program developed during the housing market rebound in the early 1980s when several high-end luxury developments received 421-a tax benefits. This gave credence to the claim that the 421-a program supported developments that would have been built without the tax incentive.[10] A tarnished public perception of the 421-a program prompted Mayor Koch to deny benefits to several high-end luxury development projects resulting in a failed lawsuit and subsequent reinstatement by the city of over $50 million in tax benefits. The City and State Legislatures, however, responded to the public outrage and by 1985, the 421-a program had evolved.

4.2 421-a Amendments for Affordable Housing, 1985

By the 1980s, living in the core of Manhattan had become increasingly more expensive—the gap between rent stabilized apartments and market-rate apartments had substantially grown. Rent on a destabilized apartment in areas of Manhattan would often triple or quadruple to meet market demand and an increasing number of units under 421-a were due to fall from the rent stabilization system.[11] The City Council proposed an amendment to 421-a aimed to "ensure that a portion of new housing would be affordable to low- and moderate-income New Yorkers."[12] These amendments significantly changed how 421-a functioned in certain areas of the city and marked the start of 421-a as an

[9] Total number of 421-a units cited from HPD. Citizens Housing and Planning Council. "Reassessing Tax Incentives." *The Urban Prospect*. Vol 3:2, March/April 1997. PDF. Web.
[10] Citizens Housing and Planning Council. "Reassessing Tax Incentives." *The Urban Prospect*. Vol 3:2, March/April 1997. PDF. Web.
[11] Osar, Alan S. "Perspectives: J-51 and 421-a; Tax Benefits and Regulated Rents." *The New York Times*. 8 Dec. 1985. Web.
[12] Cohen, Seth B. "Teaching an Old Policy New Tricks: The 421-A Tax Program and the Flaws of Trickle-Down Housing." *Journal of Law and Policy* 16.2 (2008): 757-822. PDF. Web.

affordable housing program, the first tax exemption program to link the development of affordable housing with tax incentives for market-rate development.[13]

Lawmakers at the time re-evaluated the 421-a program to meet current market conditions, creating a specified Geographic Exclusion Area (GEA) at the core of Manhattan from the south of 96th Street to 14th Street (see Figure 4.1). Projects within the newly formed GEA were required to build on-site affordable housing, an 80/20 model in which 20% of the total number of units are allocated for affordable housing, or arrange to build off-site affordable units through the use of a negotiable certificate program. Under the negotiable certificate program, affordable housing developers receive 4 to 5 certificates for each unit they produce, which then can be sold to market-rate developers, qualifying the market-rate units for 10-year tax benefits. The 80/20 program, however, offered a 20-year tax exemption for the inclusion of on-site affordable housing, later extended to 25-years in the early 1990s to further incentivize affordable housing in the GEA.[14] Affordable units under Section 421-a of Real Property Tax Law were restricted to households ranging from 30% AMI to 100% AMI with an average AMI ceiling of 80%.

To spur housing creation outside the GEA, in neighborhoods still decimated from arson and abandonment, the city extended the “as-of-right” benefits from 10 to 15 years, adding an additional 10-year bonus for a total of 25 years if 80/20 on-site affordable housing was included. See *Figure 4.1: Chart of Tax Exemption Benefits by Program* below for a map of the GEA and breakdown in benefits by program type from 1985 to 2007. The mapping of the GEA for the Brooklyn waterfront area occurred in 2006 as the Greenpoint-Williamsburg District quickly gentrified and manufacturing sites were torn down or repurposed for high-end luxury apartments. This area was not seen in need of incentives for development and fell under specified GEA regulation to protect existing manufacturing.

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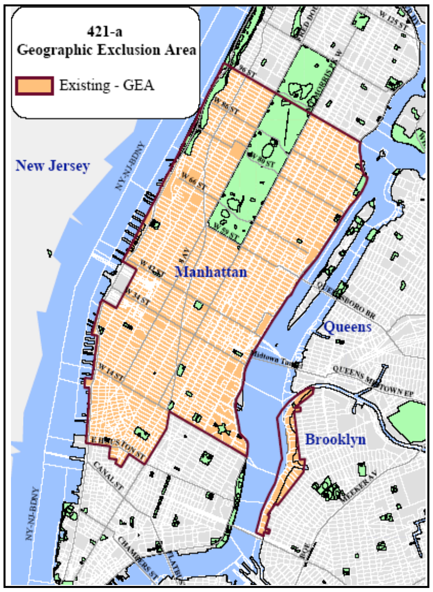
[13] Donovan, Shaun. Recommendations of the 421-a Task Force.” New York City Department of Housing Preservation and Development, October 2006. PDF. Web. Accessed 14 April 2014.

[14] Grawthol, John. “Tax Expenditure Reform: NYC’s 421-a Property Tax Expenditure Experience.” NYC Office of Management and Budget. 16 Sept. 2008. PDF. The early 1990s marked another period of significant decline in the issuance of residential building permits— low vacancy rates due to flat housing prices, population growth and a limited supply of housing caused significant hikes in rent. “Trends in New York City Housing Price Appreciation.” Furman Center, NYU. PDF. Web. Accessed 4 May 2014.

The mapping of the GEA proposed a new use of 421-a as an affordable housing program, while areas in further need of development continued to utilize the as-of-right tax incentive program to boost construction.

Figure 4.1: Map of GEA and Chart of Tax Exemption Benefit by Program



421-a Tax Exemption Benefits by Program, 1985-2007

Location	"As-of-right" Benefit	With Certificates (1 cert. per market-rate unit)	80/20 Program
Manhattan GEA	N/A	10-year	20-year
Manhattan Non-GEA South of 110th Street	10-year	N/A	25-year
Manhattan Non-GEA North of 110th Street	15-year	N/A	25-year
Outer Boroughs	15-year	N/A	25-year
Greenpoint Williamsburg GEA (Amended 2006)	N/A	15-year	25-year

4.3 Amendments to 421-a Affordable Housing Program, 2008

The housing boom of the early 2000s set the stage for another revamping of 421-a—continued strength of the housing market fostered criticism from public officials and housing advocates citing the many neighborhoods outside the GEA where incentive to build was not needed. City officials noted high-valued properties built in non-GEA areas that received disproportionately larger benefits and responded by proposing an expansion of the GEA to include all of Manhattan and certain strong market neighborhoods in the outer boroughs.[15] The extended GEA included high-valued waterfront areas in Brooklyn, Queens and Staten Island, and inland areas that had been heavily gentrified. For a map of the current GEA, see *Figure 4.2: 2008 Amendments to 421-a*.

[15] Grawthol, John. "Tax Expenditure Reform: NYC's 421-a Property Tax Expenditure Experience." NYC Office of Management and Budget. 16 Sept. 2008. PDF.

Additionally, the City evaluated the requirements for affordable housing under 421-a, extending the time affordable units remained affordable to 35 years, 10 to 15 years after the 80/20 program and 20 years after negotiable certificate program benefits expired. A citywide assessed value (AV) cap was enacted limiting the maximum benefits available to a unit by capping the exempt AV to $65,000 or below. Further amendments evolved under the initiative of Mayor Bloomberg's New Housing Marketplace Plan, a ten-year plan to create and preserve 65,000 affordable units for the City's growing population.[16]

In October 2005, Mayor Bloomberg announced a $200 million expansion of his affordable housing plan. Initiated in July 2003, Mayor Bloomberg's New Housing Marketplace Plan grew to be a $7.5 billion ten year endeavor to create affordable housing for over 500,000 New Yorkers, roughly the population of Atlanta at the time. Noted as "the largest municipal affordable housing plan in the nation," the plan called for among others the harnessing of the private market to create affordable housing. In February 2006, the mayor established a 421-a task force of professional developers, public officials and urban planning experts tasked to "moderniz[e] the tax incentive to better target it towards the creation of housing for lower- and middle-income families." While proposed amendments to 421-a went back and forth between City and State Legislatures, the task force was instrumental in establishing the cap, increasing the length of affordability, and eliminating the negotiable certificate program— to meet its goal of "generat[ing] hundreds of millions of dollars for affordable housing. [17]

Further amendments were made, strengthening not only the affordability requirements but also the community 421-a buildings were meant to serve, enforcing wage requirements for service workers and community preference for 50% of affordable units in the GEA. The negotiable certificate program was eliminated in exchange for a 421-a Affordable Housing Fund, under which a larger allocation of HPD financing would be earmarked specifically for financing affordable housing construction. The chart below details the current GEA map, taken from City of New York's website, and the many amendments to the 421-a program that took effect in 2008.

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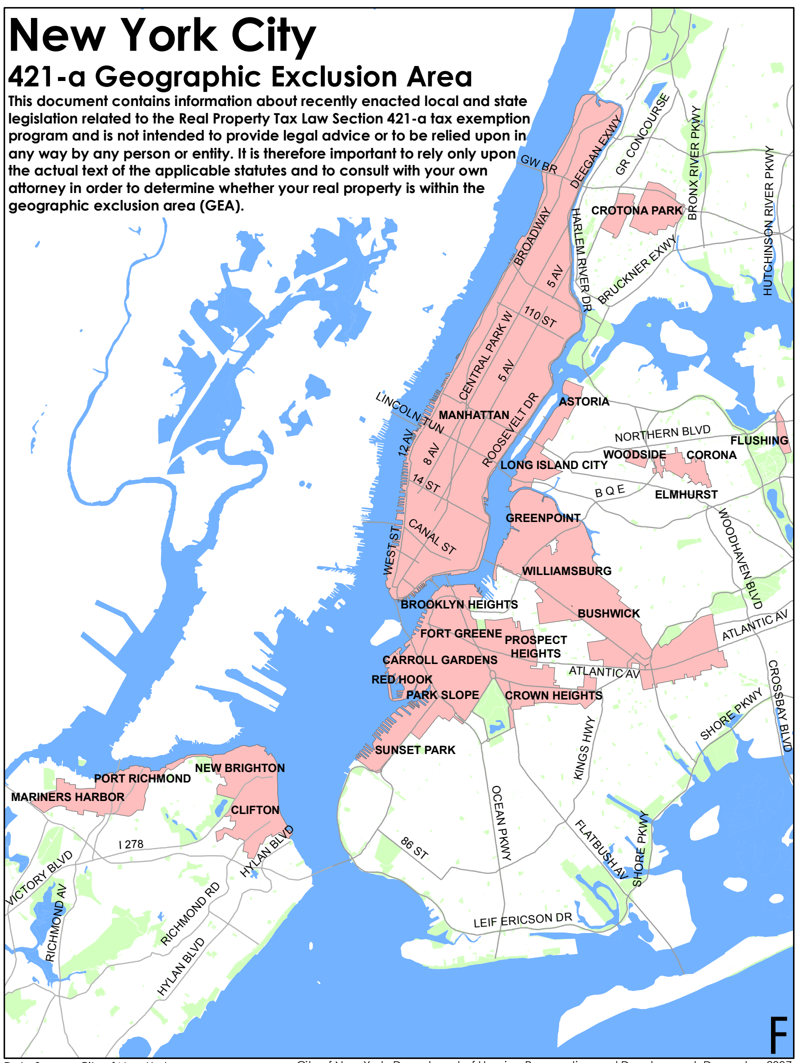
[16] City of New York. *The New Housing Marketplace, 2004-2013.* New York: Office of the Mayor. June 2003. PDF.
[17] Department of Housing Preservation and Development. "Mayor's Affordable Housing Plan." Press Release. December 2009. PDF.

Figure 4.2: Current Map of GEA and Chart of 2008 Amendments to 421-a

Effective Date	2008 Amendments to 421-a Tax Exemption Program
After 12/27/2007	Increase in minimum number of units eligible for benefits from 3 to 4 units
	Prevailing wage requirements for service workers
	Elimination of additional as-of-right bonuses for Neighborhood Preservation (NPP) and Rehabilitation Mortgage Insurance Corporations (REMIC) areas
	Elimination of Negotiable Certificate program. Existing certificates may continue in use.
After 6/30/2008	Expansion of GEA (see map below) and establishment of a boundary commission to reassess GEA every 2 years
	Citywide AV Cap of $65,000 for 421-a projects not receiving substantial government assistance
	Specified unit and bedroom mix in GEA
	AMI ceiling changed for affordable units, dependent upon substantial government assistance and size of the building
	Community preference to purchase or rent 50% of affordable units in GEA given to residents of the community board where the project is located
	Affordable units in GEA must remain rent stabilized for 35 years



Data Source: City of New York   City of New York. Department of Housing Preservation and Development. December 2007.

SOURCE: NYC Department of Housing Preservation and Development, December 2007

5 Current Operations of 421-a

The 2008 amendments to the 421-a Real Property Tax Exemption program have been to drive affordability, often the lens through which 421-a is currently evaluated. While the program works to reduce the taxable assessed value of any improvements made on the property by exempting the increase in assessed value, the complexity of 421-a falls under its designated requirements for affordable housing in restricted areas. Tax exemptions may range from 10 to 25 years depending on eligibility, where 10-year tax-exempt "as-of-right" projects are given a 10-year bonus for including affordable units on-site. Projects that are located in the newly expanded GEA receive a 25-year tax exemption with the required inclusion of on-site affordable units totaling 20% of the square footage with set AMIs and unit compositions. See Figure 5.1 for a breakdown in requirements by program.

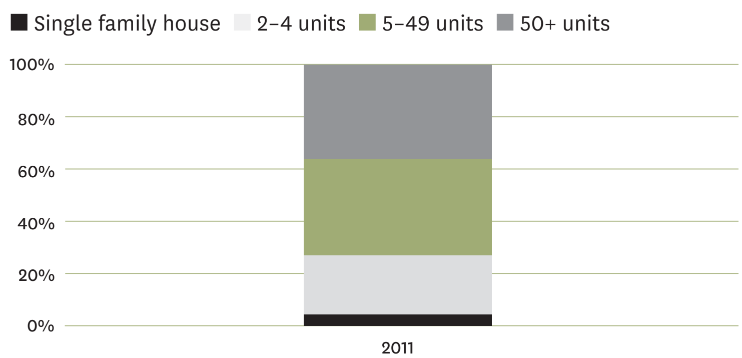
Figure 5.1: Current 421-a Benefits and Requirements by Program

Benefit Programs	"As-of-right" Benefit	Negotiable Certificates GEA Off-site Affordable Housing	80/20 Program On-site Affordable Housing, Required in GEA or Opt-in for Outer Boroughs
Length of Tax Exemption	15 years	10 years	20 years or 25 years
AV Cap on exempted added-value from the improvements made on the property	$65,000 or No AV Cap if use of substantial government assistance	$65,000 or No AV Cap if use of substantial government assistance	No AV Cap
Number of Affordable Housing Units Required	N/A	N/A	20% of total units, or 20% of residential sq. footage
Length of Rent Stabilization, Market-rate Units	15 years	10 years (Requires 1 cert./unit)	25 years
Length of Rent Stabilization, Affordable Units	N/A	35 years, off-site (Generates 4-5 cert./unit)	35 years
Composition of Affordable Units	N/A	For 100+ unit bldg, 10% of units must be 3-BDR and 15% 2-BDR	Affordable units mirror market-rate unit composition; for 100+ unit buildings, 10% of units must be 3-BDR and 15% 2-BDR
AMI Ceiling on Affordable Units, 421-a only	N/A	60%-80% AMI; dependent on number of certificates	60% AMI in GEA; 80% AMI outside GEA
AMI Ceiling on Affordable Units, Use of Substantial Government Assistance	N/A	For 25 unit or less bldg, affordable units must be at or below 120% AMI; 25+ unit bldg, units must be at or below 120% AMI and cannot exceed an average of 90% AMI; Homeowners units must be 125% AMI at time of initial sale	For 25 unit or less bldg, affordable units must be at or below 120% AMI; 25+ unit bldg, units must be at or below 120% AMI and cannot exceed an average of 90% AMI; Homeowners units must be 125% AMI at time of initial sale

6 Housing Overview: New York City and 421-a

Real estate is a significant factor in New York City's economy. As a thriving metropolis, New York City is the most densely populated major city in the United States with an estimated population of over 8.3 million distributed over a land area of 302.6 square miles.[18] This density allows for concentration in residential use compared to the national average with smaller homes in larger buildings and more shared spaces, yet comes with a significantly higher price tag than the national average. Most of New York buildings are older, however, and have significant room for improvement. Over 89% of housing units in New York City were built before 1980 with a significantly larger portion of residential property being multifamily buildings (see Figure 6.1). [19]

Figure 6.1: Share of New York City Households by Building Type[20]



Source: American Community Survey

A vast majority of the renters live within multifamily buildings. As 421-a decreases operating costs, increasing net cash flow on rentals, much of the subsidy is carried over into decreasing rents. Arguably, initial rents for market-rate rentals are lowered making development possible in some areas where the market cannot otherwise support the rents necessitated by new construction. Homeowners benefit given the increased value 421-a buildings contribute to the neighborhood. Ultimately, as the tax exemptions decline or expire, 421-a buildings increase New York City's property tax base.[21]

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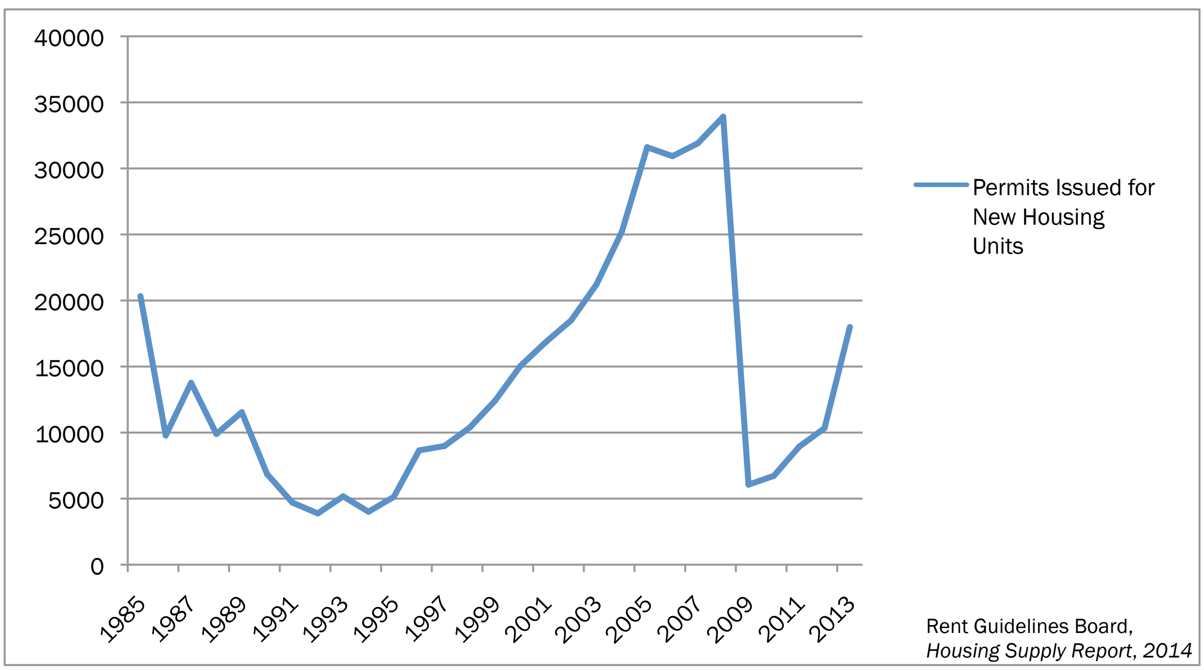
[18] "Annual Estimates of the Resident Population for Incorporated Places over 50,000, Ranked by July 1, 2012 Population: April 1, 2010 to July 1, 2012." (CSV). *2012 Population Estimates*. United States Census Bureau, Population Division. June 2012. Web.
[19] United States Census Bureau, American Fact Finder, 2012 American Housing Survey General Housing (New York City).
[20] Been, Vicki, et al. (2012) *State of New York City's Housing and Neighborhoods*. Furman Center for Real Estate and Urban Policy, New York University, New York: 29.
[21] The Urban Prospect

6.1 HOUSING OVERVIEW: NEW CONSTRUCTION AND 421-A

To date, 421-a is associated with the construction of over 251,000 housing units—approximately 35% of total new construction in New York City.[22] The use of 421-a, however, can vary from year-to-year. 421-a's share of construction has varied annually from as little as 7% to as high as 60%, affected by current housing market trends and the availability and cost of financing through private markets.[23]

The current rate of construction has changed considerably since the housing boom of mid-2000s. While construction in the city has increased for the past three years, the dramatic drop in 2009 following the Great Recession had a severe affect on housing construction. The number of housing permits issued to buildings for new construction fell by 140% from 2008 to 2009. At present, construction is on the rise, the number of housing permits issued increasing over 74% from 2012, yet current housing permits issued still remains significantly below those issued in 2008 prior to the recession.[24]

Figure 6.1: Total New Construction for Residential Housing, 1985-2013



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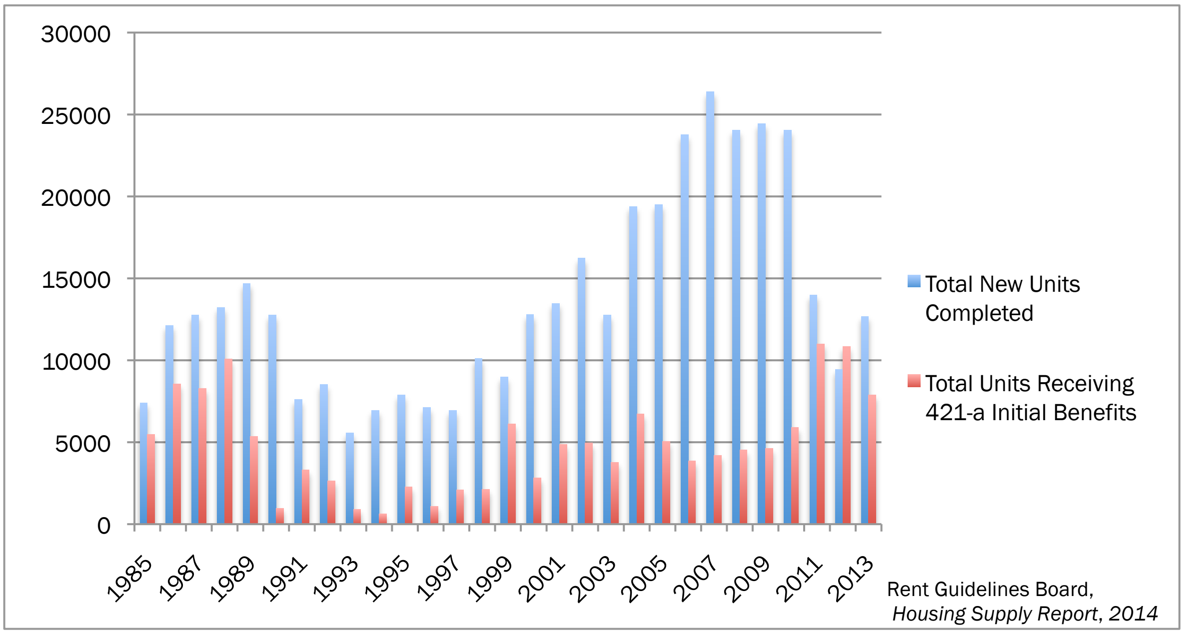
[22] Numbers sourced from IBO and Rent Guidelines Board's *Housing Supply Report, 2014*.
[23] Private financing institutions often calculate 20-30% of projected returns to be allocated for property taxes. REBNY.
[24] Rent Guidelines Board. *Housing Supply Report, 2014*. May 29, 2014. PDF. Web. Accessed May 29, 2014.

To understand the impact of 421-a on the New York City's housing market, we compared the number of housing units receiving 421-a benefits with total units constructed from 1985 to 2013 to align with the 421-a affordable housing program and determine 421-a's share of construction. We also sought potential patterns in the use of 421-a during housing booms and busts to note how market conditions may affect 421-a.

Figure 6.2: 421-a Share of Construction, 1985-2013[25]



When the housing market booms are in swing, use of the opt-in 421-a tax exemption significantly declines— particularly noted in 1990, 1999 and 2006. Given the estimated three-year construction period, these dates would align with the housing booms of the mid-80s, mid-90s and early 2000s. During the last housing boom, New York City housing prices appreciated rapidly, significantly higher than the national average. The U.S. Bureau of Labor's Regional Report noted that from June 2000 to June 2006, the price of residential housing in the New York City area doubled.[26] Following the Great Recession, however, the use of 421-a significantly increased and developer demand for 421-a became controversial when five large luxury buildings were awarded benefits by Governor Cuomo post construction after legally proving construction starts prior to 2008.[27]

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[25] Units receiving 421-a benefits may be understated as Rent Guidelines Board's numbers differed with number we obtained from HPD and IBO. We however did not have these numbers for the range in years presented here.

[26] Friedman, Rachel S., "Construction Boom and Bust in New York City." Regional Report: NYC Construction Jobs. *U.S. Bureau of Labor Statistics Monthly Labor Review*. Oct. 2011: 16-21. PDF. Web. Accessed 6 May 2014.

[27] Voien, Guelda. "The Tax Abatement-Gate Fallout." *The Real Deal*. December 2013. Web.

6.2 Housing Overview: Affordable Housing under 421-a

Affordable housing under 421-a typically addresses low- to moderate-income households ranging from 31% AMI to 120% AMI.[28] For projects utilizing 421-a subsidy only, the set AMI is at 60%. Recent amendments to 421-a have increased the average AMI ceiling for projects utilizing substantial government assistance from 80% AMI to 90% AMI during the negotiations that lead up to the 2008 amendments. This was to counter the extension in the length of time affordable units remained rent stabilized to 35 years. Other negotiations included set unit compositions for the affordable units under 421-a and an AV cap of $65,000 on market-rate units receiving 421-a subsidy only. Much of the complexity in Section 421-a of New York City Real Property Law comes from the use of additional substantial government assistance, which typically accompanies 421-a.

As of 2013, an estimated 37,400 affordable units located throughout the city have been created under the 421-a tax exemption program.[29] See Figure 6.3 for a breakdown of affordable units provided by program.

Figure 6.3 Estimated Affordable Housing Units by Program, 2013

Located in or Affiliated Borough	10-year Negotiable Certificate Program[30]	20-year 80/20 Developments in GEA	25-year 80/20 in GEA or opt-in Affordable Housing Program[31]
Bronx	--	--	< 2,850
Brooklyn	--	--	< 18,140
Manhattan	< 6,575 Located throughout all 5 boroughs	< 5,871	< 1,798
Queens	--	--	< 2,060
Staten Island	--	--	< 111
Total	**< 6,575**	**< 5,871**	**< 24,960**

[28] For further description of AMI Index, see Appendix.
[29] Number of affordable units determined from IBO statistics based on number of 421-a units by tax exemption program and length. This number however may be overstated given the 25-year tax exemption includes Rehabilitation Mortgage Insurance Corporation (REMIC) and Neighborhood Preservation (NPP) areas, which do not require the inclusion of on-site affordable housing.
[30] While a significant majority of units receiving the 421-a tax benefits are located within the pre-2008 GEA at the core of Manhattan (96th Street to 14th Street), the affordable housing units may be located in upper or lower Manhattan outside the pre2008 GEA or throughout the outer boroughs. These units are not tracked on an accurate and on-going basis under the 421-a program and therefore are extremely difficult to locate. The most up-to-date information we were able to obtain was from the Rent Guidelines Board, which oversees rent stabilization. As rent stabilization information is tracked by self-reporting measures from building owners, information on specific units may be inaccurate and/or is often unavailable.
[31] In the mid1990s, the 80/20 tax exemptions in the GEA were extended from 20 years (10-year as-of-right plus an additional 10 years for on-site affordable units) to 25 years to further incentivize on-site affordable housing.

7 Analytical Objectives

Based on our research and discussions with stakeholders, we identified two key analytical objectives when considering an amendment to 421-a's affordable housing program: 1) maximizing affordability, and 2) maximizing developer participation. While these two objectives are conversely related– an increase in affordability may negatively affect developer participation– we sought to find the optimal point between these two opposing poles. Ultimately, we addressed this by identifying potential amendments to increase affordability under 421-a's affordable housing program while also minimizing the negative effect on developer participation.

7.1 Maximizing Affordability

Amending 421-a requires close attention to what constitutes affordability under 421-a law given its multifaceted nature. We have categorized these dimensions of affordability by the following: 1) the percentage or share of units that are affordable; 2) the maximum AMI ceiling; 3) the composition of affordable units; and 4) the length of time units remain affordable. Changes in affordability may drive the number of affordable units in a given project via their influence on the project's financial feasibility and return. Our goal is to maximize affordability by enhancing those dimensions that provide the most benefits with respect to affordable housing while also maximizing the project's return on equity.

Figure 7.1: Dimensions of Affordability under 421-a law

Percentage of Affordable Units	Current 421-a law requires **20%** of the total units to be affordable, often referred to as the 80/20 program under 421-a.
Average AMI for Affordable Units	Affordable housing under 421-a requires a **60% AMI** with exception of substantial government assistance in which case AMI may range from 30% AMI to 120% AMI provided the average does not exceed **90% AMI**.
Composition of Affordable Units	For buildings under 100 units, the composition of affordable units will mirror the composition of market-rate units; For buildings with a 100+ units, **10%** of the affordable units must be 3-bedroom units and **15%** must be 2-bedroom units.
Length of Affordability	Current 421-a law requires affordable housing to remain affordable for **35 years**.

7.2 Maximize Developer Participation

The second analytical objective is to maximize developer participation, measured by a developer's return on equity (ROE). The opt-in nature of the 421-a tax exemption program requires voluntary participation from developers for the building of affordable housing under 421-a. We assume developers seek the highest rate of return on their projects and would not build affordable housing without incentive. By maximizing ROE and therefore developer participation, we arguably are maximizing the number of affordability units for those projects in the GEA or 80/20 projects incentivized by the 10-year tax exemption bonus for on-site affordable housing.

ROE measures the amount of net income returned as a percentage of the developer's equity. The formula for determining a developer's ROE is noted in Figure 7.2, where cash flow represents the revenue gained after covering the project's operating expenses and Developers' equity is the out-of-pocket capital developers invest into the project to fill any gaps remaining after debt financing. Ultimately, measuring ROE allowed us to observe how much cash flow developers would keep for each dollar of equity they put into the project, reflecting the cash-on-cash yield, or in other words, the effect of inflation and/or economic growth on the property's income stream and residual value. Expected ROE for real estate development typically ranges from 8% to 12%.[32]

Figure 7.2: Determining Return on Equity

ROE =	Cash flow / Developer's' Equity
Cash Flow	Revenue gained after operating expenses
Developer's' Equity	Equity invested by Developers

[32] Interview with J. Barahona, Developer, BFC Partners, April 15, 2014.

8 421-A PROPOSED SCENARIOS

Utilizing a standard *pro forma* offered by a professional affordable housing developer, we established the projected costs and revenues for a 100+ unit building to conduct sensitivity analyses on dimensions of affordability under 421-a's affordable housing program.[33] We initially established our baseline in *Scenario 1: Renewing 421-a without changes*, reflecting the current status quo. We then observed how manipulating one or more dimensions of affordability affected the developer's return on equity and thus their likelihood to develop the project through proposed amendments in Scenarios 2A-2D. These scenarios include the following: A) changing the percentage or share of units that are affordable; B) changing the maximum AMI ceiling; C) reconfiguring the composition of affordable units; and D) extending the length of time units remain affordable. We then compared the findings from our sensitivity analyses to determine the magnitude of change in a developer's ROE, which lead us to deduce the impact certain affordability requirements have on the financial strength of a project. Our final scenario, *Scenario 3: Eliminating 421-a,* assumes the lost impact of 421-a on total overall construction.

With so many moving parts, affordability under the 421-a law requires careful analysis that may vary based on a project's planning and design. While booms and busts in the market may result in a quickly changing landscape, we assumed steady economic conditions reflecting the current market. To evaluate our proposed scenarios, we make some arguably broad assumptions on what is held constant. The dependent variable used to evaluate a developer's sensitivity to the changes in 421-a is a project's ROE, defined in *Section 7.2: Maximizing Developer Participation*. ROE allows us to observe how amending one or more dimensions of affordability affected the net cash flow relative to the equity invested in the project. The financial framework for the baseline hypothetical project is structured for an 8% to 9% ROE, a standard minimum ROE for residential real estate development. Detailed assumptions made for the *pro forma* are outlined in the next section.

[33] *Pro forma* financial statements are used by developers to calculate projected financial feasibility during the planning and design phase of a project. HPD requires these documents for developers to receive 421-a's Initial Certificate of Eligibility. Updated financial statements reflecting final costs are required upon project completion to receive the Final Certificate of Eligibility and in accordance with receiving Temporary or Final Certificates of Occupancy for completed units.

Pro Forma Parameters

For running simulations using a standard *pro forma*, we positioned the dimensions of affordability as the input variables and ROE as the dependent variable. Variables such as building type and size, construction costs and the cost of principle and interest on debt are held constant to ensure that we can identify the relationship between the affordability components and ROE. Ultimately, we observed how manipulations to the dimensions of affordability affected a developer's ROE to indicate how financially sensitive developers may be to the changes presented in our scenarios. We utilized a large multifamily rental building totaling 130 units with development costs totaling $395,360 per unit. For more details on the pro forma used throughout our scenarios, see *Section 11: Baseline Pro Forma Detail*. Consequently, we made broad assumptions to guide our sensitivity analysis, delineated in Figure 8.1 below.

Figure 8.1: *Pro Forma* Assumptions

Building Type and Size[34]	130 unit multifamily building with total square footage of 154,160 sq. ft. and total residential square footage of 124,160 sq. ft. held constant
Rental vs. Homeownership[35]	Rental, all units will be rent stabilized in accordance with current 421-a law with the number of affordable units, situated here as an input variable
Construction Costs	Hard and soft construction costs per unit are held constant, including brick and mortar, projected costs for interior space, architectural design and legal fees among others
Affordability Program	With the elimination of the negotiable certificate program, scenarios will represent variations of the 80/20 model with on-site affordable units— required for projects in the GEA or for "as-of-right" projects opting into the affordable housing program
Substantial Government Assistance (SGA)	421-a is more often layered with other government subsidies, most notably the lower income housing tax credit (LIHTC); we assume the project uses SGA and receives LIHTC, which affects the affordability dimensions required by 421-a, denoted in our baseline

It is important to note that the financial projections used in the *pro forma* are not based on an actual development project; they are estimated figures based off current market conditions that allowed us to perform the sensitivity analysis and observe the ***magnitude in changes*** to ROE for our scenarios.

[34] 100+ unit buildings have specific affordability requirements under 421-a, which we wished to reflect in the use of our scenarios.
[35] Our analysis focuses on rental units and not co-op/condo units, which have a different set of regulatory guidelines and are more likely to mimic market rate development after initial sale. Rental units follow on-going regulatory requirements for affordable housing under 421-a and represent the majority of 421-a units in Manhattan, according to IBO's 2014 data.

8.1 RENEW 421-A TAX EXEMPTION WITHOUT CHANGES

This first alternative evaluates the impact of the 421-a Tax Exemption program without changes to the tax law, and ultimately allows us to set our baseline for the following scenarios in *Section 8.2: Amending 421-a*. Maintaining previously stated assumptions for the *pro forma*, Section 8.1.1 defines the input variables determined by current 421-a law and used for *Scenario 1: Renewing 421-a Tax Exemption without changes*. We use these dimensions of affordability as our baseline for comparison studies with Scenarios 2A-2D.

8.1.1 SCENARIO 1: ESTABLISHING THE *PRO FORMA* BASELINE

Percentage of Affordable Units	Current 421-a law requires **20%** of the total units to be affordable.
Average AMI for Affordable Units[36]	Assuming the use of substantial government assistance, AMI may range from 30% AMI to 120% AMI with an average ceiling of **90% AMI**.
Composition of Affordable Units	For buildings with 100+ units, affordable units must follow composition guidelines defined by 421-a law: **10%** three-bedroom units and **15%** two-bedroom units, with an assumed equal split of one-bedroom units and studios; market-rate units will reflect this same composition as the affordable units
Length of Affordability	Current 421-a law requires affordable housing to remain affordable for **35 years**

8.1.2 SCENARIO 1: CALCULATING BASELINE ROE, RENEWING 421-A WITHOUT CHANGES

Scenario 1: Renewing 421-a Without Changes to Tax Law	
Cash Flow	$ 383,970
Developer's Equity	$ 4,356,991
Return on Equity (ROE)	8.8%
Total number of affordable units	26 units

For *Scenario 1: Renewing 421-a without changes*, our analysis yields an 8.8% ROE, which falls within the expected range of 8% - 12% ROE.

[36] For 421-a projects that do not receive substantial government assistance, affordable units must be set at 60% AMI.

To further establish our baseline, we looked at what rents developers would charge to meet an 8.8% ROE, holding the return on equity constant.

8.1.3 A Summary of Rents Charged for ROE Yield

Unit Type	Number of Affordable Units, 60% AMI	Monthly Rent/Unit Affordable, 60% AMI	Number of Affordable Units, 100% AMI	Monthly Rent/Unit Affordable, 100% AMI	Number of Market-rate Units	Monthly Rent/Unit (Market-rate)
Studio	4	$ 837	6	$1,260	39	$ 1,838
1BR	4	$ 897	5	$1,575	39	$ 2,742
2BR	1	$ 1,077	3	$1,890	15	$ 3,563
3BR	1	$ 1,244	2	$2,182	10	$ 4,300
Super (2BR)	--	$ --	--	$ --	1	$ --
Total	**10**	$ 9,257	**16**	$ 25,469	**104**	$ 257,065

For Scenario 1, the total number of affordable units constructed is 26 out of a total of 130 units.[37] Market rate units therefore total 104. Assuming the affordable units are set at an average AMI ceiling of 90% and construction costs per unit remain constant, market-rate units must rent at the above monthly rent for cash flow to meet an 8.8% ROE, within our expected range of 8% - 12%. Market-rate rents for this project fall in line with median rents noted in GEA areas such as the East Village in Manhattan or Williamsburg in Brooklyn.[38] If the project was built in a more sought after neighborhood, the ROE may be higher given the developer may charge higher rents at market-rate. For a listing of median rents in GEA areas, see Appendix.

8.1.4 Summary of Analysis

In *Scenario 1: Renewing 421-a without changes*, we established the project's baseline of 26 affordable units at set rents for 60% AMI and 100% AMI for 90% AMI ceiling and a ROE of 8.8%. This model will serve as the baseline for the following comparative study.

[37] Total affordable units taken from 60% AMI and 100% AMI for an average AMI ceiling of 90% AMI.
[38] ENTER SOURCE

8.2 Amending 421-a Affordability Requirements

The proposed amendments to 421-a found under subsections 8.2.1–8.2.4 involve modifying the baseline variables set in *Scenario 1: Renewing 421-a without changes* to observe the sensitivity of the developer's ROE to changes in affordability requirements under 421. Sections 8.2.1–8.2.4 encompass a broad range of simulations in which one dimension of affordability or input variable is manipulated, holding all other variables constant. The dimensions of affordability that we delineate as our input variables include: A) the required percentage of affordable units to total units; B) the AMI ceiling, or AMI average not to be exceeded for total affordable units; C) the composition of affordable units; and D) the length of time units remain affordable. We conduct four separate scenarios to isolate the affect of each of these dimensions on ROE. Again, we wish to note that the financial projections resulting from our scenarios are not based on an actual development project, but provide us the ability to evaluate the magnitude in changes to ROE for comparative purposes.

8.2.1 Scenario 2A: Amending the Percentage of Affordable Units

Current 421-a law requires projects located in the GEA to produce on-site affordable housing at a minimum of 20% of total units often referred to as "80/20" program under 421-a. In running simulations for Scenario 2A, we increased the percentage of affordable units required incrementally, starting at our baseline of 20% and ending at 100% affordable housing. We assume the project receives not only 421-a tax benefits, but also uses SGA by receiving the low income housing tax credit (LIHTC).

Figure 8.2.1a: Calculating ROE, Amending Percentage of Affordable Units

Scenario 2A: Amending 421-a, Percentage of Affordable Units to Total Units						
	Baseline 20%	30%	40%	60%	80%	100%
Ratio to market-rate	80/20	30/70	40/60	60/40	20/80	All
Cash Flow	$ 383,970	$ 358,230	$ 332,387	$ 278,323	$ 226,225	$ 180,025
Developer's Equity	$ 4,356,991	$ 4,685,181	$ 5,021,395	$ 5,886,380	$ 6,590,899	$ 6,968,990
Variance from Baseline *Additional Equity Needed*	$ --	+ $ 328,190	+ $ 664,403	+ $1,529,389	+ $ 2,233,908	+ $ 2,611,998
Return on Equity (ROE)	**8.8%**	**7.6%**	**6.6%**	**4.7%**	**3.4%**	**2.6%**

Assuming construction costs per unit remain constant, an increase in the percentage of required affordable units to 40% subsequently increases the developer's equity or out of pocket investment by 13%. Consequently, ROE decreases over 33%. With additional SGAs, a required 40% of affordable units to total units may be financially feasible and achieved. Rents may also increase to meet our baseline ROE of 8.8% (see chart below).

Figure 8.2.1b Market-Rate Rents Charged to Achieve ROE Baseline

	Baseline 20% Affordable		30% Affordable		40% Affordable		60% Affordable		80% Affordable	
Unit Type	# of Market-rate Units	Monthly Rent/Unit	# of Market-rate Units	Monthly Rent/Unit	# of Market-rate Units	Monthly Rent/Unit	# of Market-rate Units	Monthly Rent/Unit	# of Market-rate Units	Monthly Rent/Unit
Studio	39	$ 1,838	34	$1,875	29	$ 1,950	19	$ 2,119	9	$ 2,700
1BR	39	$ 2,742	35	$2,800	30	$ 2,858	21	$ 3,150	12	$ 4,083
2BR	15	$ 3,563	12	$3,622	11	$ 3,721	7	$ 4,196	2	$ 5,383
3BR	10	$ 4,300	9	$4,400	7	$ 4,500	4	$ 5,100	2	$ 6,600
Super (2BR)	1	$ --	1	$ --	1	$ --	1	$ --	1	$ --
Total	104	$275,065	91	$244,814	78	$214,721	52	$156,183	26	$ 97,262

The chart above shows the effect that increased affordability has on market-rate unit rents. For a developer to maintain the baseline ROE of 8.8%, market-rate rents would have to increase to accommodate the loss of revenue from the lower rents for affordable units. With fewer market-rate units to subsidize the affordable units, rents increase at a significantly larger percentage of change after the 40/60 split. Ultimately, a larger percentage of affordability may work in neighborhoods with higher demand such as Tribeca, Battery Park and SoHo in Manhattan or Brooklyn Heights in Brooklyn. For a listing of median rents in GEA areas, see Appendix.

Figure 8.2.1c Scenario 2A: Percentage of Units Summary of Analysis

Objectives	Baseline 20%	30%	40%	60%	80%	100%
Maximize Affordability Total Affordable Units	26 units	39 units	52 units	78 units	104 units	130 units
Maximize Developer Participation ROE	8.8%	7.6%	6.6%	4.7%	3.4%	2.6%

8.2.2 Scenario 2B: Amending AMI Ceiling

The AMI ceiling under 421-a may vary depending on whether a project utilizes additional substantial government assistance (SGA). Without additional SGAs, all affordable units under 421-a are required to be at set 60% AMI for low-income households. SGAs, most notably LIHTC, allow affordable units rto ange from 30% AMI to 120% AMI with a required average AMI ceiling of 90% AMI, noted below as our baseline. Throughout our scenarios, we assume the project receives LIHTC in addition to 421-a. Holding all other input and controlled variables constant, we calculated the ROE for various AMI ceilings that range from very low income (31% - 50% AMI) to middle income (121% - 165% AMI).

Figure 8.2.2a: Calculating ROE, Amending AMI Ceiling

Scenario 2B: Amending 421-a, AMI Ceiling of Total Affordable Units					
	40% AMI	60% AMI	80% AMI	Baseline, With SGA 90% AMI	125% AMI
Cash Flow	$ 357,515	$ 369,432	$ 378,233	$ 383,970	$ 402,922
Developer's Equity	$ 6,435,035	$ 5,496,305	$ 4,806,298	$ 4,356,991	$ 2,864,651
Variance from Baseline *Additional Equity Needed*	+ $ 2,078,043	+ $ 1,139,313	+ $ 449,307	$ --	- $ 1,492,340
Return on Equity	5.6%	6.7%	7.9%	8.8%	14.1%

At higher AMIs, developers may charge higher rent on the affordable units, requiring less subsidization from the market-rate units. As the chart above shows, increasing the AMI ceiling on affordable units to 125% AMI increases the ROE significantly and allows for a reduction in the equity developers need to invest into the project. Decreasing the average AMI ceiling has the opposite effect, lowering the rent developers are able to change for affordable units and negatively impacting the developer's ROE. Incremental changes to the AMI ceiling from 90% AMI to 80% AMI— the AMI requirement prior to the 2008 amendments— has a significantly smaller affect on ROE. ROE for this scenario is 7.9%, close to our expected ROE range of 8% - 12%. Ultimately, decreasing the AMI ceiling by 10% however had a smaller affect on ROE than increasing the required percentage of affordable units by 10%– ROE moved from 8.8% to 7.9% and 8.8% to 7.6%, respectively.

To meet our baseline ROE of 8.8%, we held ROE constant to determine the market-rate rents that developers will need to charge to subsidize for the affordable units at lower AMI ceilings. We also note how rents decrease if the AMI ceiling is raised to 125% AMI for middle-income households.

Figure 8.2.2b: Market-rate Rents Charged to Achieve ROE Baseline

Unit Type	Number of Market-rate Units	Market-rate Monthly Rent/Unit Adjusted for Affordable Unit AMI Ceiling				
AMI Ceiling	--	40% AMI	60% AMI	80% AMI	Baseline 90% AMI	125% AMI
Studio	39	$ 1,978	$1,913	$1,838	$ 1,838	$1,763
1BR	39	$ 2,917	$2,858	$2,815	$ 2,742	$2,625
2BR	15	$ 3,800	$3,681	$3,642	$ 3,563	$3,365
3BR	10	$ 4,600	$4,400	$4,300	$ 4,300	$4,000
Super (2BR)	1	$ --	$ --	$ --	$ --	$ --
Total	**104**	**$ 293,905**	**$ 285,284**	**$ 279,097**	**$ 275,065**	**$ 261,607**

For Scenario 2B, the number of affordable units remains the same as our baseline with 26 affordable units and 104 market-rate units. Changing the AMI ceiling however may provide deeper affordability and allow for the construction of more housing for low-come or very low-income households. As noted in *Section 8.1: Renewing 421-a without changes*, the set 60% AMI and 90% AMI ceiling for 421-a projects with SGA address low-income and moderate-income households, respectively. Prior to the 2008 amendments, the AMI ceiling for 421-a projects receiving SGA was 80% AMI, noted at a 7.9% ROE.

Figure 8.2.2c Scenario 2B: AMI Ceiling Summary of Analysis

Objectives	40% AMI	60% AMI	80% AMI	Baseline 90% AMI	125% AMI
Maximize Affordability Total Affordable Units	26 units	26 units	26 units	26 units	26 units
Maximize Developer Participation ROE	5.6%	6.7%	7.9%	8.8%	14.1%

8.2.3 Scenario 2C: Amending Compositions of Affordable Units

For buildings over 100 units, developers are required to build 10% of the affordable units as three bedrooms, 15% as two bedrooms, and configure the remaining 75% to their own design. The baseline for our scenarios as noted in *8.1 Scenario 1: Renewing 421-a without changes*, splits the remaining 75% between 1-bedroom units and studios. We maintained this same combination in composition of 10%, 15% and 75% amongst unit types for all market-rate units, held constant here for this scenario. To see how composition for affordable units may affect a developer's ROE, we ran scenarios at the extreme, manipulating composition for all affordable units to fall under one of three possible unit types— 3-bedroom, 2-bedroom, and 1-bedroom.[39] While the total number of building units for all other scenarios has remained 130, in order to maintain our assumption that total residential square footage of the building remain constant, we adjusted the number of units in the building to account for the changes in unit size.

Figure 8.2.3a Calculating ROE, Amending Composition of Affordable Units

Scenario 2C: Amending Composition of Affordable Units			
	All 3-BDR	All 2-BDR	All 1-BDR
Cash Flow	$ 273,863	$ 285,112	$ 300,428
Developer's' Equity	$ 13,259,923	$ 12,246,455	$ 10,912,054
Variance from Baseline *Additional Equity Needed*	+ $ 8,902,932	+ $ 7,889,464	+ $ 6,555,063
Return on Equity	**2.1%**	**2.3%**	**2.8%**

Changing the composition of affordable units had a significant larger affect on ROE than changes made by the other dimensions of affordability. The inclusion of studios significantly increases cash flow. Although higher rents may be charged for units with larger compositions, the rent studio units yield within the same square footage is significantly higher. Conclusively, developers prefer to build smaller units to receive higher returns.

[39] We did not include a simulation for studio units. This scenario greatly increased cash flow, reducing Developer's Equity to zero. ROE therefore could not be calculated. Developers we interviewed noted a preference for studio units given the significantly higher return. Room count may have an affect— 1+ bedroom units often include a separate kitchen, hallways and entryways.

Assuming our baseline of 20% affordable units to total units and a constant total square footage for the building, the total number of affordable units will decrease for entirely 3-bedroom and 2-bedroom compositions. Total number of affordable units for 1-bedroom composition remains the same given our baseline originally included a significant portion of studios. To maintain the baseline ROE of 8.8%, a developer would need to charge significantly higher rents for market-rate rentals when the composition type of affordable units is greater.

Figure 8.2.3b Summary of Market-rate Rents Charged for Baseline ROE

	Baseline (10% 3-BDR; 15% 2-BDR)		All 3-BDR		All 2-BDR		All 1-BDR	
Unit Type	Number of Market-rate Units	Monthly Rent/Unit	Number of Market-rate Units	Monthly Rent/Unit	Number of Market-rate Units	Monthly Rent/Unit	Number of Market-rate Units	Monthly Rent/Unit
Studio	39	$ 1,838	39	$2,072	39	$1,969	39	$ 1,847
1BR	39	$ 2,742	39	$3,092	39	$2,917	39	$ 2,742
2BR	15	$ 3,563	15	$4,038	11	$3,800	15	$ 3,563
3BR	10	$ 4,300	1	$4,900	9	$4,600	10	$ 4,300
Super (2BR)	1	$ --	1	$ --	1	$ --	1	$ --
Total	104	$275,065	95	$266,866	98	$273,754	104	$275,416

Changing the composition of affordable units had a significant affect on ROE, indicating that smaller units subsidize the potential revenue loss for larger units. The standard composition under 421-a, noted in our baseline, falls in accordance with all 1-bedroom units. Given the developers strong sensitivity to this proposed amendment and current requirements for a percentage of 2- and 3-bedroom units, changing the composition of units currently delineated under 421-a may have more severe consequences.

Figure 8.2.3c Scenario 2C: Composition of Units Summary of Analysis

Objectives	Baseline	All 3-BDR	All 2-BDR	All 1-BDR
Maximize Affordability Total Affordable Units	26 units	23 units	24 units	26 units
Maximize Developer Participation ROE	8.8%	2.1%	2.3%	2.8%

8.2.4 Scenario 2D: Amending the Length of Time Units are Affordable

Increasing the length of affordability into perpetuity rests outside our *pro forma* sensitivity analyses. Interviews with professionals in real estate development revealed that residential projects tend to be refinanced approximately every 15 years, the proceeds from which typically cover the equity put into the project. We are therefore unable to determine the direct effect affordability in perpetuity would have on initial ROE. Currently, affordable units under 421-a are required to remain affordable for 35 years. Increasing the length of time has the effect of increasing destabilized market-rate rents to account for the limited gain the affordable units will provide as these units are at a set AMI ceiling and maintain small increases in rent under rent stabilization laws. Consequently, destabilized market-rate rents after 421-a benefits end must rise overtime to subsidize for the affordable units that remain under rent stabilization.

Developers seek to establish revenue streams to cover the project's maintenance and operation. With rent revenue from the affordable units projected to increase at a 2% rate each year and maintenance and operation costs projected to increase at a 3% rate, the affordable units over time, will cause non-restricted rents to increase significantly to cover overall costs, or if the former is not possible due to market conditions, maintenance will be deferred. While we are unable to determine an exact affect on ROE given developer behavior and market conditions are difficult to predict well into the future, initial market-rate units once destabilized after decades are known to double, even triple, in rent to meet current market-rates. Argumentatively, keeping the affordable units in perpetuity in strong market neighborhoods may be feasible.

8.3 Eliminate 421-a Tax Exemption

Scenario 3 entails allowing 421-a to expire in 2015. To determine the affect the elimination of 421-a may have on the project in our example, we noted what the ROE would be if 421-a benefits or other subsidies were not available. We held constant the affordability requirements determined by our project baseline to see what affect affordability may have on a standard project without the tax exemption. Ultimately, this meant establishing 20% of the units as affordable for 35 years with an AMI ceiling of 90% and affordable unit composition requirements of 10% 3-bedroom and 15% 2-bedroom. For comparison study, we also determined the ROE of the project with only market-rate rentals, falling in line with our assumption that developers typically will not build affordable housing without the incentive and/or financial assistance to build affordable housing.

Figure 8.3a Scenario 4: Calculating ROE, Eliminating 421-a

Scenario 4: Eliminating 421-a Tax Exemption Program[40]		
	Mixed Market-rate and Affordable Units	Market-rate Units Only
Cash Flow	$ 374,461	$ 425,909
Developer's Equity	$ 8,296,821	$ 4,203,572
Return on Equity (ROE)	4.5%	10.1%
Total number of affordable units	26 units	0 Units

For *Scenario 4: Eliminating 421-a*, our analyses yield a 4.5% ROE and a 10.1% ROE respectively. The ROE for mixed market-rate and affordable units falls significantly outside our expected range of 8% - 12% ROE, while the market-rate only project stands squarely in our range. Ultimately, 421-a benefits with the lower income housing tax credit contribute to the financial feasibility of our project, increasing ROE by 4.3% to reach our baseline of 8.8% denoted in Scenario 1: Renewing 421-a without changes to the tax law.

As developers typically seek an 8% - 12% return on their investment, our assumption that affordable housing will not be built without the financial incentive holds firm. Eliminating

[40] For these findings, 421-a benefits and lower-income housing tax credits are not included.

421-a would likely mean the loss of those affordable units currently built under the 421-a program. While it is difficult to determine an annual yearly average for the number of affordable units constructed given the use of 421-a fluctuates with market conditions, we estimated 1,600 affordable units were newly constructed between 2013-2014.[41] The number of units built under 421-a totaled 7,890— a share of 64% of total new construction, with an overall average share of construction to date of 35%. While some buildings may be built without the 421-a subsidy, the number of housing units and/or the property value attached to new improvements to the land may significantly decrease as financial feasibility declines. Eliminating 421-a would thus affect the size and scope of projects and the increased property value post construction.

[41] Number based on determining affordable units from IBO data for 2013 and 2012 (see Footnote #29 on page 19). The 1,600 affordable units is an estimation based on the increase in the number of units for each 421-a program. This number may be overstated given that some 421-a projects may have completed benefits prior to 2013 and that REMIC and NPP areas under the 25-year tax exemption do not require affordable housing.

9 Recommendation and Analysis

Our analyses show that individual dimensions of affordability affect ROE by varying degrees of magnitude. Decreasing the AMI ceiling for the affordable units under 421-a had the least affect on a developer's ROE, while unit composition had the largest affect given the significant difference in rent broken down by square footage larger 3- or 2-bedroom rental units have on effective residential revenue compared to studios and 1 bedrooms. Housing advocates have proposed an increase in the percentage of affordable units to total units as a potential amendment for 421-a come 2015.[42] While this had a slightly higher affect on ROE than amending the AMI ceiling, amending the percentage of affordable units required could be highly effective in increasing the number of affordable units built under the program, made financially feasible by additional government assistance and/or high market rate rentals in strong neighborhoods.

Further detail delineating our findings may be found in the table outlining the individual dimensions of affordability. The table is arranged in order of least to highest affect on ROE with the exception of the length of time units remain affordable. While ROE is not the metric on which to determine the impact of amending the length of time requirement under 421-a, we are able to deduce the impact affordability in perpetuity would have on the project's operations and maintenance costs.

9.1 Analysis of Findings

Analytical Findings for Individual Dimensions of Affordability	
Average AMI for Affordable Units	Decreasing the AMI ceiling had the least amount of affect on a developer's ROE.
Percentage of Affordable Units	Increasing the required percentage of affordable units had a slightly larger affect on ROE than decreasing the average AMI ceiling for affordable units; this scenario is financially feasible when coupled with SGAs and may conceivably be possible in neighborhoods with strong housing markets for percentages of affordable units to total units of up to 40% to 45%.

[42] Interview with Fee, R., Campaign Coordinator, Housing Works!, April 8, 2014.
Interview with Newman, N., More Housing NYC!, April 15, 2014.

Analytical Findings for Individual Dimensions of Affordability, Cont.	
Composition of Affordable Units	The composition of units had a significantly larger affect on ROE than the other dimensions of affordability. Current 421-a law requires a mix of housing units to address the developer's likelihood of building smaller units for larger returns.
Length of Affordability	The length of affordability does not affect initial ROE for the first 15-20 years, the period prior to project refinancing. Maintenance and operating costs and subsequent returns however may be affected in the long run given the limited rent increases allowed under rent stabilization laws. While future market conditions and developer behavior are difficult to predict, without financial subsidies in some form, extending the length of affordability into perpetuity severely affects a project's ongoing financial feasibility.

Neighborhood Needs vs. ROE Yield

Determining the dimensions of affordability most needed for a specified area or neighborhood may be more accurately predicted through the joint effort of HPD and the community board in which the 421-a project is located. At present, community boards are able to review and question the eligibility of a project based upon 421-a law and may request a public hearing if the board perceives the project to be outside eligibility. With a clear understanding of what is needed for a project to be financially feasible and incentivizing to developers, community boards may be better equipped to meet the needs of a localized area and make recommendations based on the data collection of independent institutions such as the Furman Center for Urban Planning at NYU. While the 2008 amendments proposed the condition and establishment of a boundary commission to reassess the GEA every two years, our interviews informed us that this has not been thoroughly planned and implemented. An established connection between HPD and the community boards may be useful in increasing affordable housing under 421-a and limiting developer windfall when multiple government subsidies are used.

Broad assumptions may be made however that may increase affordability within the designated GEAs that subsequently will not significantly harm developer participation—increasing the percentage of affordable units and decreasing AMI may be feasible within the dynamics of our project. The project we used as an example in our proposed scenarios is limited to standard revenue streams— residential income from rents charged with laundry amenities that contribute less than .5% and limited retail space a little over 8% to net operating income (NOI). In many cases, mixed-used buildings provide significantly more nonresidential income. A more robust project may provide more room to evaluate and increase or decrease certain dimensions of affordability, depending on the strength of the market and what financing such as subsidies and/or additional revenue streams are available.

10 Conclusion and Next Steps

421-a is a highly complex tax exemption— it's original intention having been harnessed for the construction of affordable housing in strong market areas such as Manhattan and along the waterfronts of the outer boroughs. Because the tax exemption means that the city does not collect tax revenue from these properties over an extended period of time, there is growing concern over the "costs" of 421-a and the program's effectiveness in stimulating the construction of affordable housing. The challenge for the Manhattan Borough President's Office and other affordable housing supporters is to determine how 421-a can be amended to increase the construction of affordable housing.

This report demonstrated various scenarios for amending 421-a utilizing dimensions of affordability under 421-a tax law. Performing these simulations through the use of the standard *pro forma* highlighted the tension between maximizing affordability and maximizing developer participation. While any suggested amendment will ultimately take shape through political negotiations, we anticipate that our analysis will assist in further study on the mechanics of 421-a, specifically in regard to the current economic climate and conditions in the housing market. As HPD has access to the projected budgets for proposed 421-a projects, individual analysis may be run to determine the appropriate level of affordability that may be determined by neighborhood dynamics, or even on a case-by-case basis.

The 421-a tax exemption will be on the state legislature's docket in 2015, which provides affordable housing supporters the opportunity to advocate for reforming 421-a and leveraging the exemption to increase affordable housing in New York City. In order to build a compelling case for a particular reform or set of reforms, concrete and well-founded data is necessary. However, complete, consistent, and timely data on developments and units receiving 421-a is difficult to ascertain, despite the fact that those receiving the exemption are required to fulfill certain reporting stipulations. Considering this current barrier, the Manhattan Borough President's Office should continue to push for more transparency and access to data.

We found that the lack of accurate tracking of the number of 421-a units caused many challenges. Numbers provided by the Rent Guideline Board's *Housing Supply Report* differed with those supplied by DOF and IBO. These discrepancies lead to discussions on how inaccuracies may happen. Rent stabilization guidelines require voluntary self-disclosure with little repercussion if buildings owners do not comply. DOF has what may be perceived as the most accurate listing of 421-a buildings, given its task of determining the foregone tax on billable assessed value for these projects.[43] Greater communication between DOF, HPD and the Rent Guidelines Board will provide better tracking of 421-a.

Tracking affordable units under 421-a was even more challenging and required deducing the number of affordable units by program utilizing current numbers provided by IBO. This however gave little information on where these affordable units are located and the various affordability dimensions that constitute affordability under 421-a, such as the AMI ceiling and composition of specific units, complicated by the complexity of using 421-a with additional government assistance.

We identified next steps for the Manhattan Borough President's Office to consider for increasing affordable housing under the 421-a Tax Exemption Program. We have discussed many of these steps throughout the report and highlight them here now for review.

1. Establish on-going working relationships between HPD and DOF

Because HPD and DOF are both involved in different aspects of 421-a, designating one of these agencies as the lead agency for data collection and publication may be a useful initial step. If one of these agencies is given the responsibility of being the lead, then perhaps the quantity and quality of data on 421-a will be improved. Because HPD determines 421-a eligibility and also handles interactions with other affordable housing programs in the city, HPD may be the most logical candidate. (Naturally, a lead agency will request a budget to handle the responsibility.)

[43] Interview with E. Brown, Policy Analyst for Housing, Environment, and Infrastructure, Independent Budget Office, April 20, 2014.

2. Open Source Data on 421-a Units

To increase transparency and accuracy, we recommend HPD publicize detailed information on past and present buildings receiving 421-a tax benefits through data collection on the Final Certificate of Eligibility. As the lead agency, HPD may ensure functioning mechanisms are in place for collecting all relevant information on properties receiving the 421-a tax exemption. Given 421-a law requires the provision of an updated and final budget on 421-a projects to receive the Final Certificate of Eligibility, HPD has access to a great deal of information that will assist in the tracking, oversight and distribution of foregone tax and the location and dimensions of affordability such as the AMI and composition of the affordable units under 421-a.

3. Establish a 421-a Task Force

Similarly to Mayor Bloomberg's initiative in 2006, a task force of real estate and policy analyst professions may be an effective way for analyzing 421-a within current market conditions and provide recommendations on how 421-a may become more flexible. Working with the community boards, developers may be able to determine the dimensions of affordability most needed and most financially feasibility on a neighborhood-by-neighborhood or project-by-project bases.

The 421-a Tax Exemption Program offers both challenges and opportunities— greater flexibility to adjust 421-a to current market conditions will allow for stronger leveraging of the tax incentive for increased affordable housing production. This however will require on-going communication and attention by authorizing city agencies to respond to program changes effectively. As the housing market is susceptible to booms and busts, dependent on changes in interest rates, population, and housing demand, 421-a may also be more effective/relevant in times of greater economic need.

11 Baseline *Pro Forma* Detail

11.1 Program Detail and Development Cost Estimates

Program				
Total Building Gross Square Footage				154,160 sq. ft.
Residential Gross Square Footage				124,160 sq. ft.
Unit Mix	**Number of Units**	**Size (sq. ft.)**	**Net SF**	% (rounded)
Studio	49	450	22,050	38%
1-bedroom	48	700	33,600	37%
2-bedroom	19	950	18,050	15%
3-bedroom	13	1200	16,800	11%
Total	**130**			

Development Costs	Total	LIHTC	per unit	per square foot
Total Acquisition Costs	$9,500,000	$-	$73,077	$61.62
Total Hard Costs	$28,925,160	$27,990,160	$222,501	$187.63
Total Soft Costs	$10,048,598	$5,272,190	$77,297	$65.18
Development Fee	$2,923,032	$2,923,032	$22,485	$18.96
Total Development Costs	$51,396,789	$36,185,382	$395,360	$333.40

11.2 Project Sources and Uses

Sources & Uses		
Uses		percentage
Hard Costs	$28,925,160	56%
Soft Costs	$10,048,598	20%
Acquisition	$9,500,000	18%
Development Fee	$2,923,032	6%
Total Uses	**$51,396,789**	
Construction Sources		
HDC Bonds	$3,690,000	7%
HDC Recycled Cap	$33,590,000	65%
HDC Second Subsidy	$1,950,000	4%
HPD Subsidy	$1,820,000	4%
Deferred Dev Fee	$2,923,032	6%
LIHTC Equity	$153,338	0%
Gap	$7,270,419	14%
Total Construction Sources	**$51,396,789**	

11.3 Net Operating Income for Cash Flow Determination

8%	Residential		60% AMI				
	Unit Type	# of Units	Monthly Rent/Unit	Electricity Allowance	Net Rent/Unit	Total Monthly Rent	Annual Rent
	Studio	4	$837	$(49)	$788	$3,152	$37,824
	1BR	4	$897	$(50)	$847	$3,388	$40,656
	2BR	1	$1,077	$(52)	$1,025	$1,025	$12,300
	3BR	1	$1,244	$(62)	$1,182	$1,182	$14,184
	Total	**10**				**$7,565**	**$104,964**
12%	Residential		100% AMI				
	Unit Type	# of Units	Monthly Rent/Unit	Electricity Allowance	Net Rent/Unit	Total Monthly Rent	Annual Rent
	Studio	6	$1,260	$(49)	$1,211	$7,266	$87,192
	1BR	5	$1,575	$(50)	$1,525	$7,625	$91,500
	2BR	3	$1,890	$(52)	$1,838	$5,514	$66,168
	3BR	2	$2,182	$(62)	$2,120	$4,240	$50,880
	Total	**16**				**$20,405**	**$295,740**
80%	Residential		Market Rate				
	Unit Type	# of Units	Monthly Rent/Unit	Electricity Allowance	Net Rent/Unit	Total Monthly Rent	Annual Rent
	Studio	39	$1,838	$-	$1,838	$71,663	$859,950
	1BR	39	$2,800	$-	$2,800	$109,200	$1,310,400
	2BR	15	$1,504	$-	$1,504	$22,563	$270,750
	3BR	10	$1,400	$-	$1,400	$14,000	$168,000
	Super - 2BR	1	$-	$-	$-	$-	$-
	Total	**104**				**$217,425**	**$2,609,100**
	Grand Total	**130**					

Total Gross Residential Revenue					$3,009,804
Vacancy Factor	5%				$(150,490)
Effective Residential Revenue					**$2,859,314**
Laundry Income	$10	per unit/month			$15,600
Retail Income	25		$10,000	SF	$250,000
Residential Operating Expenses	$6,444	per unit			$(837,784)
Net Operating Income					$2,943,769
Debt Service					$(2,540,299)
Debt Service					$(19,500)
Cash Flow					**$393,970**
Combined Debt Service Coverage Ratio					1.15

15-Year Cash Flow

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Residential Revenue*	$2,859,314	$2,916,500	$2,974,830	$3,034,327	$3,095,013	$3,156,913	$3,220,052	$3,284,453	$3,350,142	$3,417,145
Effective Non Residential Revenue (Laundry and Retail)	$239,040	$243,821	$248,697	$253,671	$258,745	$263,919	$269,198	$274,582	$280,073	$285,675
Operating Expenses *Increase of 3% per year*	$798,386	$822,338	$847,008	$872,418	$898,591	$925,548	$953,315	$981,914	$1,011,372	$1,041,713
Net Operating Income	$2,299,968	$2,337,983	$2,376,520	$2,415,580	$2,455,167	$2,495,285	$2,535,935	$2,577,120	$2,618,844	$2,661,107
	-									
Debt Service	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568
	$19,500	$19,500	$19,500	$19,500	$19,500	$19,500	$19,500	$19,500	$19,500	$19,500
Cash Flow	$276,900	$314,916	$353,452	$392,512	$432,100	$472,217	$512,867	$554,053	$595,776	$638,039

	Year 11	Year 12	Year 13	Year 14	Year 15
Effective Residential Revenue*	$3,485,488	$3,555,197	$3,817,159	$3,893,502	$3,971,372
Effective Non Residential Revenue (Laundry and Retail)	$291,388	$297,216	$303,161	$309,224	$315,408
Operating Expenses *Increase of 3% per year*	$1,072,964	$1,105,153	$1,138,308	$1,172,457	$1,207,631
Net Operating Income	$2,703,912	$2,747,260	$2,791,154	$2,835,594	$2,880,581
Debt Service	$2,003,568	$2,003,568	$2,003,568	$2,003,568	$2,003,568
	$19,500	$19,500	$19,500	$19,500	$19,500
Cash Flow	$680,844	$724,193	$768,087	$812,527	$857,514

**Effective Residential Revenue assumes rent stabilization with 2% increase per year and 5% vacancy rate.*

12 Appendices

12.1 Appendix 1: Neighborhood Analysis

In order to see what effect neighborhood dynamics may have on a developer's ROE, we choose two neighborhoods at different locations in Manhattan to see how the market rate of a neighborhood affects a developer's ROE. Using the average rent price in selected neighborhoods, we determined the type of return the developer may expect utilizing the *pro forma* parameters set out in our baseline from *Scenario 1: Renewing 421-a without changes*. We therefore assume the use of 421-a and LIHTC subsidies for the proposed projects.

The table below shows what the average monthly rent per unit type for Manhattanville and Hudson Heights. Manhattanville has the lowest average market rate rental price for studios in Manhattan at $1,450.[44] Hudson Heights studio market rate rental price is slightly higher at $2,123. When average market rate unit rental prices for studios rose above a certain threshold, equity invested in the project was no longer required by the developer, indicating that the developer will realize significant gains when rental rates for studios rose above $2,350 for the type of building in our scenario.

Figure 12.1a Market-rate Rents by Specified Neighborhood

	Manhattanville	Hudson Heights
Unit Type	Monthly Rent/Unit	Monthly Rent/Unit
Studio	$1,450	$2,123
1BR	$1,885	$2,760
2BR	$2,356	$3,450
3BR	$2,828	$4,140

[44] Tableau Public, http://www.tableausoftware.com/public/gallery/manhattanrentals, Last Accessed: May 21, 2014

For the proposed project utilizing 421-a requirements, ROE would be subject to the market-rate capabilities of the neighborhood. For our scenario, the ROE for Manhattansville project and the same project in Hudson Heights are noted in Figure 12.1b below. The analysis shows how market-rate rents may determine 421-a feasibility or developer windfall, depending on the market strength of the neighborhood.

Figure 12.1b ROE Utilizing Market-rate Rents specified by Neighborhood

Neighborhood Analysis: ROE		
	Manhattansville	Hudson Heights
Cash Flow	$ 270,276	$ 395,927
Developer's Equity	$ 13,278,937	$ 3,418,261
Return on Equity (ROE)	2.0%	11.6%

12.2 Appendix 2: Condominium Analysis

Currently, buildings receiving 421-a benefits are predominately 1-6 unit family homes or condominiums. While our analysis focuses on rental units, we have included an analysis of co-op/condo units, which have a different set of regulatory guidelines and are more likely to mimic market rate development after initial sale. Current 421-a tax law does not restrict sale prices on condominiums, allowing the old buyer of affordable units to sell at market-rate. At present, of the 9,324 buildings receiving 421-a benefits, 2,804 buildings are condominiums. A breakdown of 421-a exemptions by property types is below.

Figure 12.2a: Distribution of 421-a Exemptions by Property Type

			Exempt Assessed Value		Tax Expenditure	
	Number of Buildings	Number of Units in Buildings with 421-a	Total	Median Per Unit	Total	Median Per Unit
1-6 Family Home	4,789	15,713	$279,517,366	$10,397	$43,600,380	$1,970
Coop Building	47	1,393	$56,796,667	$31,609	$7,447,747	$4,145
Condo Building	2,804	170,082	$4,807,566,100	$38,592	$618,646,388	$5,156
Rental Building	1,659	63,386	$3,172,072,086	$34,740	$415,953,813	$4,555
Other Property Type	25	562	$34,596,241	$33,519	$3,603,071	$3,489
Total	9,324	251,136	$8,350,548,460		$1,089,251,399	

SOURCES: IBO; Department of Finance Real Property Assessment Data (RPAD) for Final 2013 Tax Roll.

NOTES: Based on buildings, with condominium units rolled up into buildings. Tax Expenditure is exempt assessed value times tax rate.

Utilizing a *pro forma* for condominiums, we made the following assumptions:

1. This scenario is based off of a building containing 5 units
2. We assumed that the hard and soft costs of constructing the building would remain constant.

We measured return on investment by the net operating income. Net operating income determines the income received after operating expenses of the property, such as management, legal and accounting, insurance, maintenance, taxes, and utilities, is covered to determine the amount of income received from the property.

To evaluate the ROE for condo developers, we modified the formula we used for that of the rental units. Instead of cash flow, we used the net operating income captured through cash flow. When a condo developer took advantage of 421-a, their ROE was higher than when the developer did not utilize the property tax exemption. Although, the condo developer pays the property tax on the increase in value without 421-a, both the equity investment and profits increase with 421-a.

Figure 12.2b ROE for Condominiums

Condominiums Analysis: ROE		
	With 421-a	Without 421-a
Cash Flow	$220,996	$172,539
Developer's Equity	$783,099	$783,099
NOI	28.2%	22.0%

12.3 Appendix 3: Descriptives on Buildings Receiving 421-a

Figure 12.3a: Charts of Buildings Receiving 421-a Benefits, 2013

Total	$8,294,471,632	$2,489,609,545	$1,811,491,776	$2,356,913,159	$1,636,457,152

SOURCES: IBO; Department of Finance Real Property Assessment Data (RPAD) for Final 2013 Tax Roll.

NOTES: Based on buildings, with condo units rolled up into buildings. Tax Expenditure is exempt assessed value times tax rate. One building in Queens is excluded in the detailed borough tables because it may have been misclassified. Therefore, the totals in the borough table do not match the overall totals.

Manhattan	936	610	35	111	180
Queens	3,452		2,025		1,427
Staten Island	45		16		29
Total	8,524	610	4,861	111	3,741

SOURCES: IBO; Department of Finance Real Property Assessment Data (RPAD) for Final 2013 Tax Roll.

NOTES: Based on buildings, with condo units rolled up into buildings. Tax Expenditure is exempt assessed value times tax rate. One building in Queens is excluded in the detailed borough tables because it may have been misclassified. Therefore, the totals in the borough table do not match the overall totals.

Units in Buildings with 421-a Exemptions by Borough

		By Length of Exemption			
	All 421-A	10-Year	15-Year	20-Year	25-Year
Bronx	17,047		2,795		14,252
Brooklyn	129,887		39,186		90,701
Manhattan	65,281	26,297	637	29,355	8,992
Queens	37,834		27,534		10,300
Staten Island	1,085		526		559
Total	251,134	26,297	70,678	29,355	124,804

SOURCES: IBO; Department of Finance Real Property Assessment Data (RPAD) for Final 2013 Tax Roll.

NOTES: Based on buildings, with condo units rolled up into buildings. Tax Expenditure is exempt assessed value times tax rate. One building in Queens is excluded in the detailed borough tables because it may have been misclassified. Therefore, the totals in the borough table do not match the overall totals.

Exempt Assessed Value through 421-a by Borough

		By Length of Exemption			
	All 421-A	10-Year	15-Year	20-Year	25-Year
Bronx	$262,301,034		$9,108,848		$253,192,186
Brooklyn	$1,674,356,436		$1,050,841,398		$623,515,038
Manhattan	$5,326,236,418	$2,489,609,545	$34,815,434	$2,356,913,159	$444,898,280
Queens	$1,009,016,758		$702,234,406		$306,782,352
Staten Island	$22,560,986		$14,491,690		$8,069,296

Buildings Receiving 421-a in 2013		By Length of Exemption (Corresponds to Requirements)			
		10-Year	15-Year	20-Year	25-Year
		Descriptions based on 421-a prior to revisions			
	All 421-A	Manhattan between 14th and 96th streets, through Certificate Program	Outside Exclusion Zone, As-of-Right	80/20 Developments in Manhattan below 110th Street	In Neighborhood Preservation Areas, RMIC eligible locations, or 20 percent affordable
Number of Buildings	9,324	611	4,861	111	3,741
Total Exempt Assessed Value	$8,350,548,460	$2,489,617,259	$1,867,560,809	$2,356,913,159	$1,636,457,152
Total Tax Expenditure	$1,089,251,398	$316,474,031	$249,388,982	$306,861,472	$216,526,913
Number of Units	251,136	26,299	70,678	29,355	124,804
Exempt Assessed Value Per Unit					
Average	$37,743	$133,911	$51,304	$215,471	$29,035
Median	$15,871	$83,905	$10,519	$80,275	$13,432
Tax Expenditure Per Unit					
Average	$5,165	$17,034	$4,002	$27,734	$4,068
Median	$2,663	$10,879	$2,565	$10,526	$2,338

SOURCES: IBO; Department of Finance Real Property Assessment Data (RPAD) for Final 2013 Tax Roll.

NOTES: Based on buildings, with condo units rolled up into buildings. Tax Expenditure is exempt assessed value times tax rate as of June 2012 TFR.

12.4 AMI Affordability Measures, City of New York, 2014[45]

	Percentage of AMI	Monthly Rent Required to Prevent Rent-Burden	Annual Income (for a four-person household)
Extremely Low Income	0- 30%	Up to $629	< $25,150
Very Low Income	31 - 50%	$630 - $1,049	$25,151 -$41,950
Low Income	51 - 80%	$1,050 -$1,678	$41,951 - $67,120
Moderate Income	81 - 120%	$1,679 - $2,517	$67,121 - $100,680
Middle Income	121 -165%	$2,518 - $3,461	$100,681 - $138,435

[45] City of New York. *Housing New York: A Five-Borough, Ten-Year Plan*. May 2014. PDF.

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14 Summary of Stakeholder Interviews

Barahona, J., Developer, BFC Partners, April 15, 2014.

Bennett, S., Underwriter, Community Development Banking, Chase, April 24, 2015.

Bernstein, D., Partner, Seiden & Schein, P.C., April 11, 2014.

Brown, E., Policy Analyst for Housing, Environment, and Infrastructure, Independent Budget Office, April 20, 2014.

Champeny, A., Supervising Analyst for Housing, Environment, and Infrastructure, Independent Budget Office, April 17, 2014.

Fee, R., Campaign Coordinator, Housing Works!, April 8, 2014.

Lander, B., Council Member for District 39, April 26, 2014.

Mack, W., Developer, Mack-Cali Realty Corporation, May 30, 2014.

Moynahan, J., Senior Project Manager for Development for NYC Housing, New York City Department of Housing Preservation and Development,

Newman, N., More Housing NYC!, April 15, 2014.

Slattery, M., Senior Vice-President, Research, Real Estate Board of New York, April 23, 2014.

Sweeting, G., Deputy Director, Independent Budget Office, April 17, 2014.

Toporovsky, E., Senior Program Director, Enterprise Community Partners, April 13, 2014.

Wasserman, A., Research Analyst, Real Estate Board of New York, April 23, 2014.

Willis, C., Director of the Skyscraper Museum, May 3, 2014.

Willis, M., Interim Executive Director, Furman Center for Real Estate and Urban Policy, New York University, May 5, 2014.

Donte' Coleman

Donte' is originally from Baltimore, Maryland. Donte' received a B.A. in Economics with a minor in Mathematics in the spring of 2004. Following graduation, he began a Ph.D. program in Economics at the University of Tennessee, but transferred to Georgia State University to receive a Masters in Urban Policy Studies in 2009.

Professionally, Donte' currently works for the Department of Treasury in the IRS Office of Chief Counsel since September 2009. He has also serve as Treasurer for two non-profit organizations– the Tripod Scholarship Foundation, and the Burlington-Camden Achievement Foundation, the last of which he is a founding Trustee.

Donte' aspires to obtain a Ph.D. in Public Policy with focus on Finance and Economic Development. He currently lives in Jersey City, New Jersey.

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Cathy McGath

Cathy is a born and bred Midwesterner with roots in suburban Chicago and Detroit, though she's called New York City home for the past three years. In 2010 she graduated from Bennington College with a B.A. in International Relations and Political Science. Currently Cathy is pursuing an M.S. in Urban Policy Analysis and Management from the New School at the Milano School of International Affairs, Management, and Urban Policy.

Cathy's multi-faceted professional background reflects her desire to serve the public interest. Until recently, Cathy worked for the Henry Street Settlement at its permanent supportive housing building for the formerly homeless with mental illness where she held a variety of roles, including Rent and Compliance Coordinator. Cathy also worked with the Muslim Consultative Network, a nonprofit in NYC, to design and implement a leadership development program for young women at an Islamic high school in Brooklyn. Now, Cathy is an English Language Arts curriculum writer for a consulting group.

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Evan Pellegrino

Evan Pellegrino is a native of Tucson, AZ where he earned a B.A. in journalism from the University of Arizona. In southern Arizona, he reported for various outlets on topics including science, health, crime, and the environment and worked in communications to support projects and initiatives to develop sustainable design, provide affordable housing, and improve pedestrian safety.

Prior to moving to New York, Evan taught literature and history at an international school in Shanghai. He currently works at the Skyscraper Museum in Battery Park City, where he coordinates education and teaches class groups about museum exhibits. Evan is in his second semester at the New School for Public Engagement pursuing a M.S. in Urban Policy Analysis and Management.

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Marian Silliman

Marian is a second-year graduate student at The New School for Public Engagement, pursuing a M.A. in Urban Policy Analysis and Management at the Milano School for International Affairs, Management and Urban Policy. Marian has over eight-years of experience working in the nonprofit, publishing and media sectors in New York, Denver, Louisville and Boston. At present, she is a freelance writer for the Network for Teaching Entrepreneurship, an international nonprofit teaching at-risk youth entrepreneurial skills.

Before arriving at the New School, Marian acted as the Board Liaison at the Solomon R. Guggenheim Foundation and Museum. Marian graduated *Phi Beta Kappa* from Boston College with a B.A. in English Literature and Women's Studies. She currently lives in Crown Heights, Brooklyn.

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Omari Williams

In 2008, Omari received a B.A. in Political Science and a minor in Economics from Howard University. He was also a member of the Howard University Men's D-1 Soccer Team. During college he interned with the Democratic National Committee.

In 2010 Omari worked on the Vince Gray for Mayor Campaign in Washington, D.C.; and in 2012, he was a Fellow for the Obama for America Presidential Campaign. Currently, Omari is a graduate student pursuing a M.S. in Urban Policy Analysis and Management at The New School, and is owner of a media production company, Capitol Agent Media, LLC.

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